Report from the Nurse Practitioner Reference Group

2018

Important note

The views and recommendations in this review report from the Nurse Practitioner Reference Group have been released for the purpose of seeking the views of stakeholders.

This report does not constitute the final position on these items, which is subject to:

- Consideration by the MBS Review Taskforce;

Then, if endorsed:

- Stakeholder consultation;

Then:

- Consideration by the Minister for Health; and
- Government.

Confidentiality of comments:

If you want your feedback to remain confidential please mark it as such. It is important to be aware that confidential feedback may still be subject to access under freedom of information law.

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1 Executive summary

1.1 Introduction

The Medicare Benefits Schedule (MBS) Review Taskforce (the Taskforce) is undertaking a program of work that considers how more than 5,700 items on the MBS can be aligned with contemporary clinical evidence and practice and improve health outcomes for patients. The Taskforce will also seek to identify any services that may be unnecessary, outdated or potentially unsafe.

The Taskforce is committed to providing recommendations to the Minister for Health (the Minister) that will allow the MBS to deliver on each of these four key goals:

- Affordable and universal access.
- Best-practice health services.
- Value for the individual patient.
- Value for the health system.

The Taskforce has endorsed a methodology whereby the necessary clinical review of MBS items is undertaken by clinical committees, primary care reference groups (PCRGs) and working groups.

1.2 Review of the nurse practitioner MBS items

The Nurse Practitioner Reference Group (the Reference Group) was established in 2018 to make recommendations to the Taskforce on MBS items in its area of responsibility, based on rapid evidence review and clinical expertise.

The PCRGs provide recommendations to the Taskforce in review reports. Once endorsed by the Taskforce, the review reports are released for targeted stakeholder consultation. The Taskforce then considers the revised review reports, which include stakeholder feedback, before making recommendations to the Minister for consideration by Government.

1.3 Key issues

Nurse practitioners (NPs) have been practising in Australia for 18 years and were admitted as eligible providers under the MBS nearly a decade ago. Since that time, the interaction between the MBS and the NP role has not been reviewed for functionality, relevance to consumers, or its impact on the provision of and access to high-quality health care.

Models of care provided by NPs have the primary goal of improving access to care within the MBS, particularly in priority areas including aged care, Aboriginal and/or Torres Strait Islander peoples' health, mental health, chronic condition management and primary health care. Within these models, NPs may be the primary health care provider for a consumer or may be working as part of a team.

Despite the innovation and flexibility of these models, they remain curtailed by the limited number of items for which patients may receive MBS rebates when cared for by an NP. Rebates available to patients of NPs under the MBS do not reflect contemporary NP practice in Australia. This restricted access to MBS items limits consumer choice, affects accessibility, creates fragmentation and, at times, drives unnecessary duplication and costs throughout episodes of care.

The Reference Group's recommendations are intended to address these limitations and improve patient access to high-value, best-practice primary health care. To do this, recommendations focus on ensuring that NPs are able to provide accessible and affordable services, in line with their full scope of practice.

1.4 Key recommendations

The Reference Group's recommendations are listed below, organised into four overarching themes. The Reference Group also identified four recommendations as areas of priority – Recommendations 1, 4, 8 and 9.

The Reference Group's specific recommendations are as follows.

- Support comprehensive and coordinated care for people with long-term health conditions and Aboriginal and/or Torres Strait Islander peoples.
    1. Enable patients to access MBS rebates for long-term and primary care management provided by NPs.
    2. Improve access to MBS rebates for NP services in aged care settings.
    3. Enable Domiciliary Medication Management Reviews (DMMRs) and Residential Medication Management Reviews (RMMRs) to be initiated by NPs.
- Enabling nurse practitioner care for all Australians.
    4. Significantly increase the schedule fee assigned to current MBS NP professional attendance items.
    5. Create a new MBS item for longer NP attendances to support the delivery of complex and comprehensive care.
    6. Enable patients to access MBS rebates for after-hours or emergency care provided by NPs.

7. Enable patients to access an MBS rebate for NP care received outside of a clinic setting.

- Addressing system inefficiencies caused by current MBS arrangements.

8. Remove the mandated requirement for NPs to form collaborative arrangements.
9. Remove current restrictions on MBS-rebated diagnostic imaging investigations when requested by NPs.
10. Enable patients to access MBS rebates for procedures performed by an NP.

- Improve patient access to telehealth services by expanding the scope of providers eligible to participate in consultations, and by broadening modes of communication.

11. Add general practitioners (GPs) as eligible participants in NP patient-side telehealth services.
12. Add patients in community aged care settings to residential aged care telehealth items.
13. Create new MBS items for direct NP-to-patient telehealth consultations.
14. Allow telehealth consultations to take place via telephone where clinically appropriate.

1.5 Consumer impact

The Reference Group has developed recommendations that are consistent with the Taskforce's objectives, with a primary focus on improving patient access to affordable, high-value and best-practice primary health care provided by NPs, in line with their scope of practice.

Consumer representatives on the Reference Group stressed the importance of patient choice in accessing primary care that is timely, uncomplicated, culturally safe and affordable. This is central to many of the Reference Group's recommendations.

Patients will benefit from the Reference Group's recommendations through improved access to continuity of primary care models and higher quality clinical services, particularly in aged care, chronic disease management, and rural and remote areas. This includes:

- **Improved access to primary care by an NP:** The Reference Group has recommended a series of schedule fee changes throughout the report, which will facilitate access to NP care. Enabling patients to access an MBS rebate for NP care in after-hours and out-of-clinic settings will improve access, especially where other medical practitioners may not be available (including in palliative and aged care settings).
- **Removing inefficiencies and barriers to care:** Patients cared for by NPs are limited in the MBS items they can access under current MBS arrangements. The Reference Group

has made several recommendations to enable patients to access MBS rebates for more complete episodes of care provided by NPs to reduce fragmentation and ensure high-value care and continuity of care across the health system.

- The Reference Group's recommendation to remove collaborative arrangements focuses on improving access to affordable, universal and high-value care for patients by removing the mandated need for NPs to form collaborative arrangements in accordance with legislation.
- The recommendations to enable access to MBS rebates for NP-performed procedures and NP-requested diagnostic imaging will reduce duplication, delays and inefficiencies when a patient is referred to a medical practitioner for a procedure in order to access the MBS rebate to which they are entitled.
- **Improved patient access to telehealth services:** The Reference Group has recommended a series of changes to telehealth services to improve access for patients:
    - Including GPs as eligible participants in NP patient-side telehealth services will support continuity of care through decreased wait times, particularly in remote areas where GP access is more limited.
    - Including patients in community aged care settings in residential aged care telehealth items will benefit patients in community aged care.
- Patients who are unable to undertake video communication due to poor understanding of the necessary technology or infrastructure, particularly in remote areas, will benefit from the recommendation that allows telehealth consultations to take place via telephone where clinically appropriate.

Consumers, NPs and the Australian health care system will benefit from overall increased investment in NP continuity of primary care, as recommended in this report. These benefits will accrue from high-quality, cost-effective health outcomes that benefit families and the community.

1.6 Next Steps

This report from the Reference Group is being released for stakeholder feedback simultaneously with the reports from the other reference groups.

This is to enable stakeholders to examine the issues within the overall context of primary care. In this regard the Phase One and Phase Two reports of the GPPCCC are an important part of the examination of primary care across the MBS. The two reports were released for stakeholder feedback in December 2018.

The Reference Group will consider feedback from stakeholders then provide recommendations to the Taskforce in a finalised Review Report.

The Taskforce considers the Review Reports from the reference groups and any stakeholder feedback before making recommendations, if required, to the Minister for consideration by Government.

2 About the Medicare Benefits Schedule (MBS) Review

2.1 Medicare and the MBS

2.1.1 What is Medicare?

Medicare is Australia's universal health scheme that enables all Australian residents (and some overseas visitors) to have access to a wide range of health services and medicines at little or no cost.

Introduced in 1984, Medicare has three components:

- Free public hospital services for public patients.
- Subsidised drugs covered by the Pharmaceutical Benefits Scheme (PBS).
- Subsidised health professional services listed on the MBS.

2.2 What is the MBS?

The MBS is a listing of the health professional services subsidised by the Liberal National Government. There are more than 5,700 MBS items that provide benefits to patients for a comprehensive range of services, including consultations, diagnostic tests and operations.

2.3 What is the MBS Review Taskforce?

The Government established the Taskforce as an advisory body to review all of the 5,700 MBS items to ensure they are aligned with contemporary clinical evidence and practice and improve health outcomes for patients. The Taskforce will also modernise the MBS by identifying any services that may be unnecessary, outdated or potentially unsafe. The MBS Review is clinician-led, and there are no targets for savings attached to the review.

2.3.1 What are the goals of the Taskforce?

The Taskforce is committed to providing recommendations to the Minister that will allow the MBS to deliver on each of these four key goals:

- **Affordable and universal access—**the evidence demonstrates that the MBS supports very good access to primary care services for most Australians, particularly in urban Australia. However, despite increases in the specialist workforce over the last decade,

access too many specialist services remains problematic, with some rural patients being particularly under-serviced.

- **Best practice health services**—one of the core objectives of the MBS Review is to modernise the MBS, ensuring that individual items and their descriptors are consistent with contemporary best practice and the evidence base when possible. Although the Medical Services Advisory Committee (MSAC) plays a crucial role in thoroughly evaluating new services, the vast majority of existing MBS items pre-date this process and have never been reviewed.
- **Value for the individual patient**—another core objective of the review is to have an MBS that supports the delivery of services that are appropriate to the patient's needs, provide real clinical value and do not expose the patient to unnecessary risk or expense.
- **Value for the health system**—achieving the above elements of the vision will go a long way to achieving improved value for the health system overall. Reducing the volume of services that provide little or no clinical benefit will enable resources to be redirected to new and existing services that have proven benefit and are underused, particularly for patients who cannot readily access those services currently.

2.4 The Taskforce's approach

The Taskforce is reviewing existing MBS items, with a primary focus on ensuring that individual items and usage meet the definition of best practice. Within the Taskforce's brief, there is considerable scope to review and provide advice on all aspects that would contribute to a modern, transparent and responsive system. This includes not only making recommendations about adding new items or services to the MBS, but also about an MBS structure that could better accommodate changing health service models.

The Taskforce has made a conscious decision to be ambitious in its approach, and to seize this unique opportunity to recommend changes to modernise the MBS at all levels, from the clinical detail of individual items, to administrative rules and mechanisms, to structural, whole-of-MBS issues. The Taskforce will also develop a mechanism for an ongoing review of the MBS once the current review has concluded.

As the MBS Review is clinician-led, the Taskforce decided that clinical committees should conduct the detailed review of MBS items. The Taskforce also established PCRGs to review MBS items largely provided by non-doctor health professionals. The committees and PCRGs are broad-based in their membership, and members have been appointed in an individual capacity, rather than as representatives of any organisation

2.4.1 What is a primary care reference group?

The Taskforce established the PCRGs to focus on items that are primarily or exclusively provided by non-doctor health professionals, and which have a close relationship to primary care. The MBS Review Taskforce established five PCRGs:

- Aboriginal and Torres Strait Islander Health Reference Group
- Allied Health Reference Group
- Mental Health Reference Group
- Nurse Practitioner Reference Group, and
- Participating Midwives Reference Group.

The PCRGs are similar to the clinical committees established under the MBS Review. Each PCRG reviewed in-scope items, with a focus on ensuring that individual items and usage meet the four goals of the Taskforce: affordable and universal access, best-practice health services, value for the patient and value for the health system. They also considered longer-term recommendations related to broader issues (not necessarily within the current scope of the MBS) and provided input to clinical committees, including the General Practice and Primary Care Clinical Committee (GPPCCC). Each PCRG has made recommendations directly to the Taskforce, as well as to other committees, based on clinical expertise, data, and evidence collected by members of each PCRG.

The PCRGs are unique within the MBS Review for several reasons:

- **Membership:** Similar to clinical committees, the PCRGs include a diverse set of stakeholders, as well as an ex-officio member from the MBS Review Taskforce. As the PCRGs focus on items that are primarily or exclusively provided by non-doctor health professionals, and which have a close relationship to primary care, membership includes many non-doctor health professionals, as well as an ex-officio member from the GPPCCC. Each PCRG also includes a GP, a nurse, and two consumers.
- **Connection to the GPPCCC:** As part of their mandate from the Taskforce, the PCRGs were tasked with responding to issues referred by the GPPCCC. The GPPCCC ex-officio member on each PCRG helped to strengthen the connection between the two bodies and supported communication of the PCRGs' responses back to the GPPCCC.
- **Newer items:** The items reviewed by the PCRGs have a shorter history than other items within the MBS; many were introduced only in the last decade. While this means that there is less historical data for PCRG members to draw on, it also means that there are fewer items under consideration that are no longer relevant, or that no longer promote best-practice interventions, compared to other committees.

- **Growth recommendations:** Several of the PCRGs' in-scope items have seen significant growth since their introduction, often with the potential to alleviate cost pressures on other areas of the MBS or the health system, or to increase access in low-access areas. As a result, many recommendations focus on adjusting items that are already working well, or expanding recently introduced items through increased access or expanded scope.

2.4.2 The scope of the primary care reference groups

All MBS items will be reviewed during the course of the MBS Review. Given the breadth of the review, and its timeframe, each clinical committee and PCRG developed a work plan and assigned priorities, keeping in mind the objectives of the review.

The PCRG review model approved by the Taskforce required the PCRGs to undertake three areas of work, prioritised into two groups.

- Priority 1 - Review referred key questions on draft recommendations from the GPPCCC and develop recommendations on referred in-scope MBS items.

  As part of this work, the PCRGs also reviewed and developed recommendations on referred issues from other committees or stakeholders where relevant.

- Priority 2 - Explore long-term recommendations.

  These included recommendations related to other MBS items beyond the PCRGs' areas of responsibility, recommendations outside the scope of existing MBS items, and recommendations outside the scope of the MBS, including recommendations related to non-fee-for-service approaches to health care.

3 About the Nurse Practitioner Reference Group

The Nurse Practitioner Reference Group (the Reference Group) was established in 2018 to make recommendations to the Taskforce on MBS items within its area of responsibility, based on rapid evidence review and clinical expertise.

3.1 Nurse Practitioner Reference Group members

The Reference Group consists of 13 members, whose names, positions/organisations and declared conflicts of interest are listed in Table 1.

Table 1: Nurse Practitioner Reference Group members

Name	Position/organisation	Declared conflict of interest
Assoc. Professor. Tom Buckley (Chair)	Academic Lead, Research Education, Susan Wakil School of Nursing and Midwifery, Faculty of Medicine and Health, University of Sydney; Chair of the Australian Nursing and Midwifery Accreditation Council NP Accreditation Committee	Nil
Ms Julianne Bryce	Registered Nurse; Senior Federal Professional Officer of the Australian Nursing and Midwifery Federation	Nil
Professor. Andrew Cashin	Mental Health NP; Professor of Nursing, Southern Cross University	Nil
Ms Julie Davey (Consumer representative)	Member, Stroke Foundation Consumer Council; Associate Fellow, Australasian College of Health Service Managers	Nil
Dr Christopher Helms	Primary Healthcare NP, Bridging Healthcare	Member of the Healthcare Homes Implementation Advisory Group; Member of the NP Advisory Committee for the MBS Review Taskforce; Provider of MBS-rebated in-scope services; Practitioner member of the Nursing and Midwifery Board of Australia
Mr Peter Jenkin	Palliative Care NP	Provider of MBS-rebated in-scope services
Ms Penelope Lello	Director, Deepening Change; Co-Chair and	Nil

Name	Position/organisation	Declared conflict of interest
(Consumer representative)	Board Member, Maltese Aged Care Association SA; Committee roles held Australian Medical Council; South Australian Health and Medical Research Institute; and the Department of Health and Wellbeing SA Allied Health Clinical Governance Committee, and Women's and Children's Hospital Network	
Ms Lesley Salem	NP, Primary Health, Indigenous Health	Nil
Dr Jane Truscott	NP; Senior Lecturer at the School of Nursing, Midwifery and Social Sciences, CQ University; Chairperson of the Rural Locum Assistance Program (LAP) Board	Employed at Aspen Medical (intermittently) Chair of Rural LAP
Ms Karen Booth (GPPCCC ex-officio member)	Registered Nurse and General Practice Manager; President, Australian Primary Health Care Nurse Association	Nil
Adj. Professor. Steve Hambleton (Taskforce ex-officio member)	Former Federal President of the Australian Medical Association; Chair of the Primary Health Care Advisory Group	Nil
Ms Liza Edwards (Department Advisor)	Principal Nurse Advisor, Department of Health	Nil

3.2 Conflicts of interest

All members of the Taskforce, clinical committees and PCRGs are asked to declare any conflicts of interest at the start of their involvement and reminded to update their declarations periodically. A complete list of declared conflicts of interest can be viewed in Table 1.

It is noted that some of the Reference Group members share a common conflict of interest in reviewing items that are a source of revenue for them (i.e. members claim the items under review). This conflict is inherent in a clinician-led process and, having been acknowledged by the Reference Group and the Taskforce, it was agreed that this should not prevent members from participating in the review.

3.3 Areas of responsibility of the Reference Group

The Reference Group reviewed 10 MBS items under *Category 8 Miscellaneous Services; Group M14 NPs 82200–82225*. These items cover professional attendances and telehealth services and are time tiered. In 2016/17, these items accounted for approximately 419,000 services and $13 million in benefits. Over the past five years, service volumes for these items

have grown at 42.8 per cent per year, and average benefits per service have increased by 3.8 per cent compounded annually (Figure 1). In 2016/17, attendance by a participating Nurse Practitioner (NP) lasting at least 20 minutes had the highest service volume, accounting for approximately 133,000 services.

Figure 1: Drivers of benefit growth, 2011/12 to 2016/17

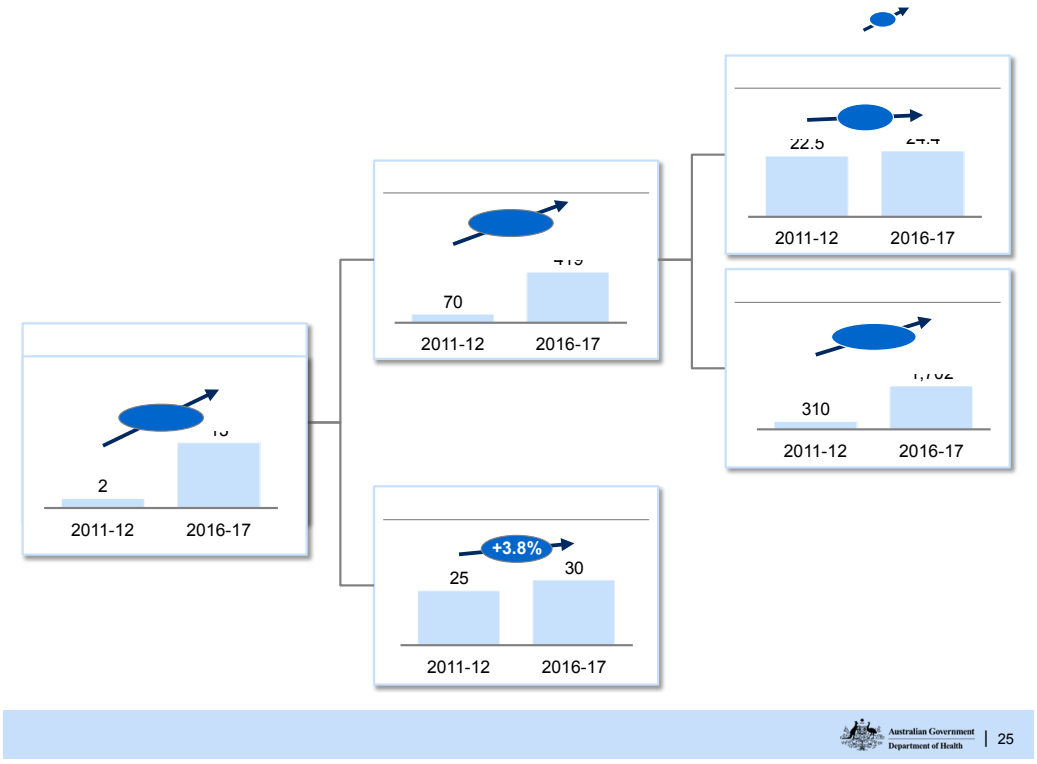
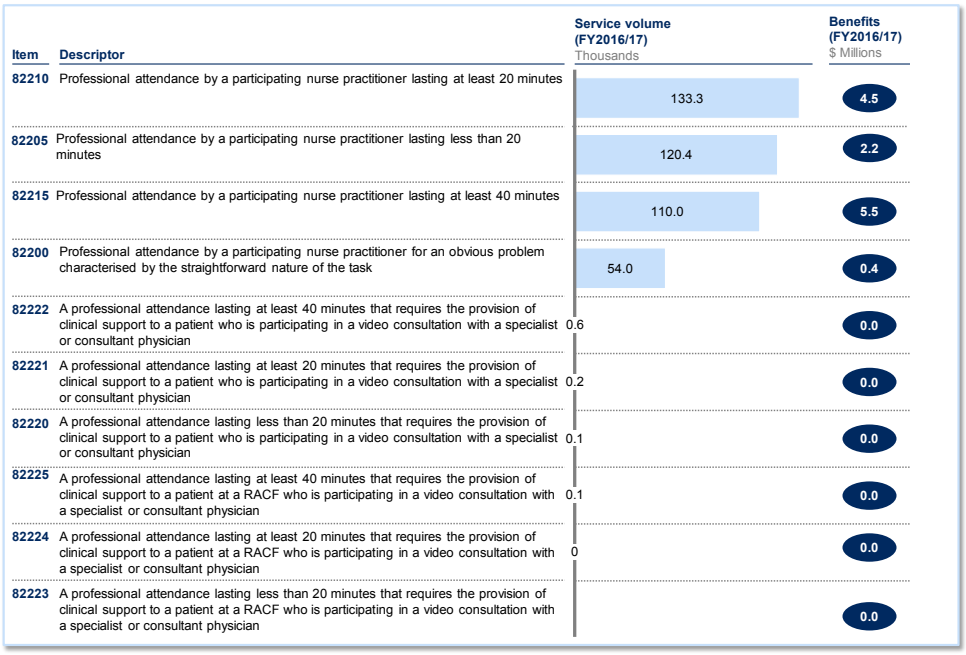


Figure 2: In-scope items by service volume, 2016/17



SOURCE: MBS data, 2011/12 – 2016-17

3.4 Summary of the Reference Group's review approach

The Reference Group completed a review of its items across four full meetings, during which it developed the recommendations and rationales contained in this report.

The review drew on various types of MBS data, including data on utilisation of items (services, benefits, patients, providers and growth rates); service provision (type of provider, geography of service provision); patients (demographics and services per patient); co-claiming or episodes of services (same-day claiming and claiming with specific items over time); and additional provider and patient-level data, when required.

The review also drew on data presented in the relevant literature and clinical guidelines, all of which are referenced in the report. Guidelines and literature were identified through peer-reviewed nursing and medical journals and other sources, such as government reports and professional societies.

4 Main themes: nurse practitioners

4.1 The role

Consistent with international experience, the NP role was implemented in Australia to improve the flexibility and capability of the nursing workforce and enable new ways of addressing identified service gaps across Australia's health care system. This initiative was driven by a clear need to improve access to care for marginalised, underserved and vulnerable populations.

An NP is a registered nurse (RN) whose registration has been endorsed by the Nursing and Midwifery Board of Australia (NMBA) under the *Health Practitioner Regulation National Law 2009* (the National Law). Endorsement as an NP signifies that the RN has completed the prescribed education and has the requisite experience to practise using the title of nurse practitioner, which is protected under the National Law. To be eligible for endorsement, an applicant must meet the NMBA's *Registration Standard: Endorsement as a Nurse Practitioner*. The minimum educational preparation for NPs is completion of a master of NP program, accredited by the Australian Nursing and Midwifery Accreditation Council (ANMAC) and approved by the NMBA.

The NP role is one career pathway within the nursing clinical career structure. The classification of NP is included in nursing pay awards and enterprise agreements linked to specific remuneration, which recognises the advanced level of practice and the additional clinical responsibilities.

4.2 The scope of practice

All health practitioners, including NPs, are expected to practice within the scope of health care delivery in which they have been educated and deemed competent. The scope of practice of the NP builds upon RN practice, enabling NPs to autonomously and collaboratively manage complete episodes of care, including wellness-focused care, as an independent primary provider of care or as part of a collaborative team.

NPs use primary and secondary health promotion and disease prevention principles in their care, as well as advanced, comprehensive assessment techniques in the screening, diagnosis and treatment of diverse acute and long-term health conditions. NP practice is evidence-based and includes the ability to request and interpret diagnostic tests; prescribe therapeutic interventions, including the prescription of medicines; and refer to other health care professionals. Collaborative and integrative in their approach, NPs use skilful and empathetic communication to facilitate person-centred care through the holistic and

encompassing nature of nursing. NPs also evaluate care provision to enhance safety and quality within health care.

NPs practise in all clinical areas, across metropolitan, rural and remote Australia, in both the public and private sectors. With appropriate education and training, an NP can provide health care services across a broad context as a primary care provider for a patient. Alternatively, an NP may have more specialised education and training to provide expert care in a particular clinical specialty, such as emergency medicine, palliative care or renal medicine. While the role is clinically focused, NPs are also expected to actively participate in research, education and leadership in clinical care.

After extensive formative work demonstrating the ability to safely and effectively translate the NP role to the Australian context, the NP title was formalised and protected in Australia in 1998 through the *Nurses Amendment Act 2003* (NP Act). The first NPs were authorised to practise in New South Wales in 2000.

Since 2000, the Australian nursing profession has established the necessary professional and regulatory requirements to support the role, including:

- Professional standards for practice (1) (2) (3).
- The NMBA registration standard for endorsement under s95 of the National Law (4).
- NP course accreditation standards developed by the ANMAC (5).
- Professional representation through the Australian College of Nursing Practitioners.

In addition, NPs were admitted as eligible Medicare providers with the ability to participate in both the MBS and PBS in 2010 (6), enabling consumers to access rebates when choosing an NP as their health care provider. NP eligibility to participate in the MBS and the PBS is enabled by the *Health Legislation Amendment (Midwives and NPs) Act 2010*.

4.3 Differences between a registered nurse and a nurse practitioner

The NP role builds on the RN scope of practice. Table 2 broadly outlines the educational, professional and experiential requirements of the RN and NP scope of practice.

Table 2: Registered nurse and nurse practitioner scope of practice

	Registered nurse (RN)	Nurse practitioner (NP)
Practice requirements		
Title protection?	Yes	Yes

	Registered nurse (RN)	Nurse practitioner (NP)
Regulation	Regulated under the National Registration and Accreditation Scheme (NRAS) by the NMBA Registration (RN): NMBA	Regulated under the NRAS by the NMBA Endorsement (NP): NMBA State/territory-based authorisation to account for jurisdictional legislation/policy where relevant (e.g. Poisons and Therapeutic Goods Acts). A total of three years full-time equivalent (FTE; 5000 hours) experience working at the advanced practice level (7) is required prior to endorsement by the NMBA.
Regulatory standards and guidelines	Registered Nurse Standards for Practice (8) NMBA Code of Conduct for Nurses (9)	Registered Nurse Standards for Practice NMBA Code of Conduct for Nurses NP Standards for Practice (9) Safety and Quality Guidelines for NPs (10)
Mandated collaborative arrangements	No	Legislated as a requirement for patient access to MBS and PBS rebates for NP services (11)
Requirements for entry into degree program	Completion of secondary education	Bachelor of nursing Postgraduate qualification at Australian Qualifications Framework (AQF) Level 8 in a relevant clinical specialty area
Experiential requirements for entry into degree program	N/A	Current general registration as an RN A minimum of two years FTE as an RN in a specified clinical field and two years FTE of current advanced nursing practice in this same clinical field
Length of education program	Three years FTE with 800 supervised clinical practice hours	Additional one to two years FTE with 300 integrated professional practice hours in addition to 5000 hours (equivalent to three years FTE) required for endorsement
Level of educational program	AQF Level 7: bachelor's degree program	RN education program + AQF Level 9: master's degree program
Scope of practice		
Formal diagnosis	No	Yes

	Registered nurse (RN)	Nurse practitioner (NP)
Prescribing	No, although allowed to supply and/or administer under limited protocol in some public-sector settings (nurse-initiated medicines, standing orders and protocols)	Yes
Request/interpret diagnostic pathology	No, although some public-sector roles facilitate access to limited diagnostic pathology under the authority of a medical practitioner.	Yes
Request/interpret diagnostic imaging	No, although some public-sector roles facilitate access to limited diagnostic imaging under the authority of a medical practitioner.	Yes
Referral to medical specialists	No	Yes
Referral to allied health	Limited to within the public sector (e.g. nurse to physio referral for in-patients)	Yes, however NP referrals to allied health care are not currently subsidised by the MBS
MBS subsidy for services	No	Yes, for time-tiered professional attendances; telehealth; limited, simple, basic point-of care pathology; and limited plain-film X-Rays and ultrasounds
PBS subsidy for eligible prescribed medicines	No	Yes, with limitations.
MBS subsidy for therapeutic and diagnostic procedures	No	No
Admission rights	No	Yes, depends on local policy

5 Recommendations

5.1 Introduction

The Reference Group's recommendations are organised into four themes:

- Supporting comprehensive and coordinated care for people with long-term health conditions and Aboriginal and/or Torres Strait Islander peoples (Section 5.2).
- Enabling nurse practitioner care for all Australians (Section 5.3).
- Addressing system inefficiencies caused by current MBS arrangements (Section 5.4).
- Improving patient access to telehealth services (Section 5.5).

A table summarising the list of items considered by the Reference Group can be found in Appendix A.

5.2 Supporting comprehensive and coordinated care for people with long-term health conditions and Aboriginal and/or Torres Strait Islander peoples

Case Study – Aboriginal and Torres Strait Islander Health

Susan is an NP working in an Aboriginal Health Service (AHS) in remote Queensland. She provides comprehensive primary and secondary health promotion and disease prevention and management services for consumers, many of whom have complex health requirements that are strongly influenced by the social determinants of health. Susan's primary health care services are augmented by the fact she has expertise in the assessment and management of people with kidney disease and diabetes. Many of her clients would greatly benefit from subsidised allied health services. In addition, many of her clients would benefit from enrolment in the Closing the Gap scheme, which provides subsidised prescriptions for Aboriginal and Torres Strait Islander clients.

Susan has infrequent and irregular access to a GP in her remote clinic. Although Susan has independently developed comprehensive management plans for her complex clients, which include referrals to allied health professionals, she is unable to appropriately operationalise them because NP referrals to allied health professionals are not currently available for rebate under the MBS. Her patients cannot afford to see the allied health specialists privately at the AHS, and the AHS cannot continue to provide these services without income generated by subsidised allied health appointments. In addition, current Department of Health policy precludes her from enrolling patients in the Closing the Gap scheme or accessing its initiatives, which results in her patients paying higher out-of-pocket costs.

1.1.1 Recommendation 1 – Enable patients to access MBS rebates for long-term and primary care management provided by NPs

The Reference Group recommends enabling patients to access MBS rebates for long-term and primary care management provided by NPs as follows:

a. amending the item 701, 703, 705 and 707 descriptors to include appropriately educated and experienced NPs as eligible providers, with proposed item descriptors (using item 701 as an example) as follows:

Items 701 – example descriptor

Professional attendance by a medical practitioner (other than a specialist or consultant physician), or a nurse practitioner, to perform a brief health assessment, lasting not more than 30 minutes and including:

(a) collection of relevant information, including taking a patient history; and

(b) a basic physical examination; and

(c) initiating interventions and referrals as indicated; and

(d) providing the patient with preventive health care advice and information.

b. amending the item 715 descriptor to include NPs as eligible providers, enabling Aboriginal and/or Torres Strait Islander patients to access MBS rebates for health assessments performed by NPs, with the proposed item descriptor as follows

Items 715

Professional attendance by a medical practitioner (other than a specialist or consultant physician), or a nurse practitioner, at consulting rooms or in another place other than a hospital or residential aged care facility, for a health assessment of a patient who is of Aboriginal or Torres Strait Islander descent - not more than once in a 9-month period.

c. amending the item 721, 723 and 732 descriptors to include:
   i. NPs as eligible providers, enabling patients to access MBS rebates for the preparation and review of chronic care management plans and the development of team care arrangements by NPs
   ii. an appropriate title that captures the intent of the chronic care management plans and team care arrangements (for example, Patient-centred Management Plan, Chronic Disease Management Plan),.and
   iii. with proposed item descriptor (using item 701 as an example) as follows:

Item 721

Professional attendance by a medical practitioner (other than a specialist or consultant physician), or a nurse practitioner, at consulting rooms or in another place other than a hospital or residential aged care facility, for a health assessment of a patient who is of Aboriginal or Torres Strait Islander descent - not more than once in a 9-month period.

Note: The Reference Group notes that this recommendation may need to be amended to reflect proposed changes by the GPPCCC.

d. amending the item 729 and 731 descriptors to include NPs, enabling patients to access MBS rebates for an NP's contribution to a multidisciplinary care plan, with proposed item descriptor (using item 729 as an example) as follows:

Item 729

Attendance by a medical practitioner (including a general practitioner, but not including a specialist or consultant physician), or a nurse practitioner, for preparation of a chronic disease management plan for a patient (other than a service associated with a service to which any of items 735 to 758 apply)

Note: The Reference Group notes that the GPPCCC referred a question on case conferencing to the Reference Group. See Appendix D for the Reference Group's response to the GPPCCC.

e. amending the item 2700 and 2701 descriptors to include appropriately trained and experienced NPs as eligible providers,
f. that no MBS item or otherwise subsidised activities relating to the planning, coordination and management of long-term health conditions (for example, Closing the Gap initiatives, Home Medicines Reviews [HMRs], integrated team care) should result in greater disadvantage for Aboriginal and/or Torres Strait Islander patients seeking and choosing an NP to manage their chronic health condition, and
g. that any future iterations of MBS items, Commonwealth-subsidised models of care, or funding arrangements relating to the primary care management and coordination of long-term health conditions should consider that an NP may be a patient's preferred primary care provider, as a safe and effective alternative to a GP.

1.1.2 Rationale 1

This recommendation focuses on ensuring high-value care for patients with long-term, chronic health conditions and Aboriginal and/or Torres Strait Islander peoples. It is intended

to avoid fragmentation, delays and other inequities in care for patients whose primary health care provider is an NP. It is based on the following.

- The burden of chronic illness is growing in Australia, placing increasing pressure on the health system. This pressure is particularly felt within the following populations:
    - Aboriginal and/or Torres Strait Islander peoples: Chronic diseases were responsible for 64 per cent of the total disease burden among Aboriginal and/or Torres Strait Islander peoples in 2011. (12) There is a high burden of avoidable death among Aboriginal and/or Torres Strait Islander peoples.
    - Homeless populations: People experiencing homelessness are less likely to access primary and preventive health services. (13) This increases the risk of later-stage diagnosis of disease (14), poor control of manageable conditions (for example, hypertension, and diabetes) and hospitalisation for preventable conditions (for example, skin or respiratory conditions).
    - Aged care: Care is provided not only in RACFs but increasingly in the home and community setting. Many of the residents of aged care facilities have complex health care needs. While the RACF population is growing rapidly, the number of GPs providing care in these facilities may be declining. (15)
- All patients, but particularly the marginalised groups outlined above, should be supported and enabled to access health care provided by appropriate models of care, including NPs (16). There are specific considerations for the Aboriginal and Torres Strait Islander Health Assessment Item 715. It is specifically focused on Aboriginal and/or Torres Strait Islander populations and is conducted across the lifespan of patients. When a medical practitioner conducts an item 715 health assessment service, it enables several important, subsidised health services. These services help mitigate the risk of developing chronic health conditions, assist with the early identification of such conditions, improve the quality of preventive care provided, and reinforce the requirement for multi-level care for this vulnerable population. This includes access to:
    - Culturally appropriate care using subsidised enhanced follow-up services offered by nurses and Aboriginal and Torres Strait Islander health practitioners. These services are rebated through MBS item 10987.
    - Subsidised enhanced care services using allied health and Aboriginal and Torres Strait Islander health workers. These services are rebated through MBS items 81300–81360. In many instances, income generated from nurses, Aboriginal and Torres Strait Islander health practitioners, and allied health workers through use of these items is not only used to pay for their professional services, but also supports Aboriginal Community Controlled Health Centres and Aboriginal Health Services.

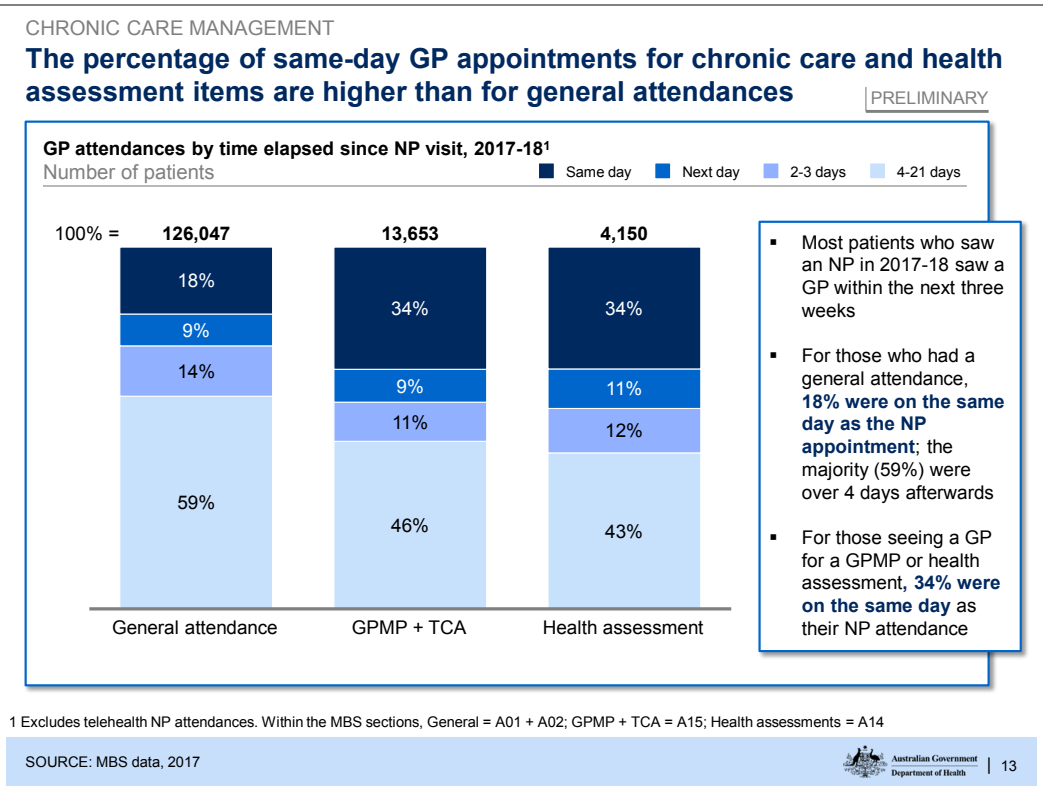
  - Closing the Gap initiatives, including integrated team care funding through primary health networks, medication supply subsidies and practice incentive program payments that enhance service delivery for all Aboriginal and/or Torres Strait Islander peoples. Importantly, practice incentive payments relating to the item 715 health assessment support ongoing infrastructure and human resource requirements for the delivery of health care for Aboriginal and/or Torres Strait Islander peoples. Excluding NPs from these initiatives results in significant disadvantage for Aboriginal Health Services using the services of NPs.

- NPs working with Aboriginal and/or Torres Strait Islander peoples, whether in metropolitan or remote health services, are unable to provide these subsidised health services because they are not considered eligible providers under MBS item 715. They are unable to facilitate subsidised allied health care, culturally safe Aboriginal and Torres Strait Islander health worker support, or Closing the Gap pharmaceutical rebates for their patients. The lack of access to these rebates results in patients receiving no clinical care, or little or fragmented clinical care, and in further marginalisation of an already vulnerable group.
- NPs in Australia provide high-quality case management, care planning and care facilitation services for people with long-term health conditions. Their ability to diagnose, request and interpret diagnostic investigations, prescribe medicines and initiate referrals to other health professionals means they are well placed to serve as a primary provider of care for people with long-term health conditions.
- Inequity in funding mechanisms should not prevent people from receiving comprehensive, evidence-based care. Current MBS restrictions limit patient choice and result in fragmented care. They also prevent health services from optimising NPs—an underutilised resource in Australia's health care system.
- Patients who choose an NP as their health care provider are unable to access MBS rebates and as a result are limited in their choice of provider. This is particularly problematic where access to a medical practitioner is limited, and for marginalised and vulnerable populations.
- Current restrictions result in fragmented and delayed care for NP patients, as the NP must refer a patient to a GP for a Chronic Disease Management Plan, Mental Health Treatment Plan or health assessment to be rebated under the MBS. While MBS data cannot indicate why a referral occurred (and whether it represented high- or low-value care), recent attendance data shows that same-day attendances with a GP following an NP attendance are higher for health assessment and GP Management Plan items than for general GP attendances (Figure 3). These restrictions unnecessary limit a patient's choice of provider in the management of their long-term health. These restrictions also

create a financial disadvantage for health services that employ NPs to meet the needs of their communities.

- This recommendation may also have advantages from a system efficiency standpoint. Increasing point-of-care access to NPs will remove the need for onward referral for additional MBS services. This will reduce the current duplication and fragmentation experienced by many patients, particularly Aboriginal and/or Torres Strait Islander peoples and those from marginalised communities, improving system efficiency.

Figure 3: Distribution of same-day attendances



Case Study – Residential Aged Care Facilities

Mark is an NP providing comprehensive clinical services to older people living in RACFs across the metropolitan area of Adelaide. He routinely sees residents who would not otherwise have access to timely primary care. A typical day may require Mark to assess, diagnose and treat minor or acute illnesses or injuries including infections, wounds, behavioural and psychological symptoms of dementia, musculoskeletal injuries and mental health episodes, or to provide end-of-life care. This can involve a range of interventions and care coordination; prescribing, titrating and/or ceasing medicines; ordering diagnostic investigations; and directly referring patients to other health professionals.

However, residents can experience delays in receiving necessary diagnostic investigations as current MBS rules do not enable NPs to initiate many common diagnostic imaging tests otherwise subsidised in primary health care, such as ultrasounds and X-rays. This leads to fragmented and unnecessary duplication of services, either requiring a second attendance by a GP, or worse, an unnecessary transfer to an emergency department.

Some residents may not have access to a GP who conducts comprehensive medical assessments or team care arrangements, including accessing allied health services. Residents then do not have their chronic health conditions proactively assessed and monitored for early signs of deterioration, increasing the incidence of acute events and hospitalisation or reducing their overall quality of life. Residents and RACF staff have asked Mark to assist in the provision of comprehensive health assessments, chronic disease management, case conferences and advance care planning. However, the allocated times for NP professional attendances (i.e. MBS items 82200–82215) are not practically useful for this care.

1.1.3 Recommendation 2 - Improve access to MBS-subsidised NP services in aged care settings

The Reference Group recommends enabling patients to access MBS rebates for NP services in aged care settings, particularly:

(i) Health assessments, which are available for residents of RACFs and those aged over 75

(ii) Health assessments for Aboriginal and/or Torres Strait Islander peoples

(iii) Managing chronic disease

(iv) Contributing to a multidisciplinary care plan, particularly for residents of RACFs (item 731), and

(v) Developing a Mental Health Treatment Plan.

Notes:

1. *This recommendation mirrors most of the recommended changes made at Recommendation 1.*
2. *This recommendation also reinforces the importance of Recommendation 5 which proposes a new item for an NP professional attendance lasting for at least 60 minutes.*

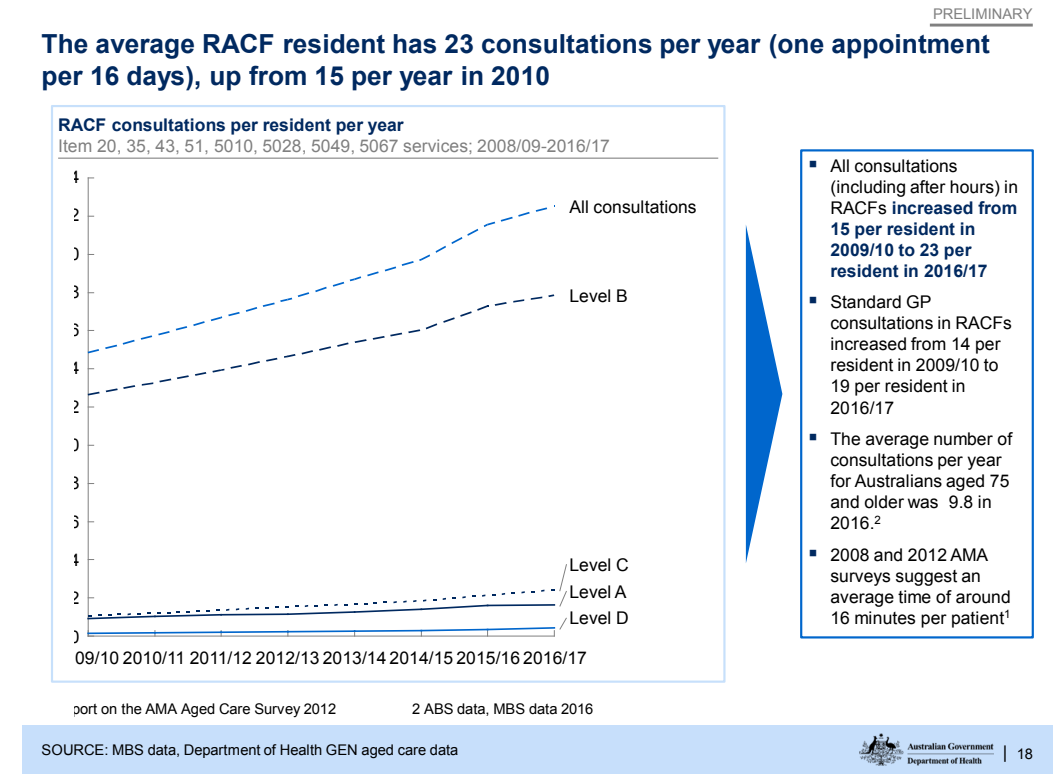
5.2.1 Rationale 2

This recommendation reiterates recommendations made elsewhere in the report to emphasise the importance of ensuring access to universal, affordable and coordinated care for long-term health conditions for patients receiving aged care services in residential and community settings. It is based on the following:

- Increasing levels of frailty and complexity in physical and mental health in aged care settings requires access to continuity of care from appropriately qualified clinicians.
- Ninety-seven per cent of permanent RACF residents (as of 30 June 2017) had medium or high-level needs for complex health care services, and 85 per cent had one or more diagnosed mental health or behavioural condition (17).

- There are limitations on the availability of primary care service provision in the aged care sector. Although MBS data shows increasing visits per patient in RACFs since 2010 (Figure 4), a recent survey of Australian GPs highlighted that over 35 per cent of the respondents who currently visit patients in RACFs intend to either not take on any new patients in RACFs, decrease their visits or stop visiting RACFs altogether (15).

Figure 4: Residential aged care facility visits by GPs



- Many patients cannot continue to receive services from their usual GP after moving into an RACF, either because they have moved outside the GP practice's boundaries, or because the GP is unable or unwilling to visit RACFs (15).
- In the absence of timely, accessible primary care, these older people are often transferred to hospital emergency departments for treatment and/or admission. Delayed intervention may also result in avoidable deterioration in the older person's health status and the subsequent need for more intensive use of health resources.
- Consumer representatives on the Reference Group also emphasised the limits this imposes on an older person's access to responsive, appropriate, quality primary care and the commensurate increase in stress for family carers and residential aged care staff.
- Permanent residents in RACFs or those receiving Home Care Packages (HCPs) in their homes cannot currently access MBS rebates for comprehensive medical assessments, Chronic Disease Management Plans or other common MBS services when these are provided by an NP.

- NPs are effective providers of preventive and long-term care in the aged care sector. For example, a study funded by the Department of Social Services, which reviewed 30 organisations using different NP models of care (18), found that NPs:
    - Spent more time with patients than GPs, and were more accessible and able to initiate more timely care.
    - Visited elderly people in their homes and thereby increased access to care for those who were not mobile or able to drive themselves to services.
    - Were able to review medicine regimes and, in some cases, reduce unnecessary polypharmacy.
    - Played strong coordination roles in bringing together health professionals and family members, and provided valuable translation of information into language the elderly person and their family could understand.
- In addition, economic efficiencies were gained through reductions in unnecessary transfers to acute health facilities, ambulance costs, hospital bed days and therefore hospital costs. The study estimated that extending the tested models of care to all aged care settings would have saved $97 million in 2013/14 from reductions in hospital bed days alone (18).

5.2.2 Recommendation 3 - Enable DMMRs and RMMRs to be initiated by NPs

The Reference Group recommends:

a. enabling patients to access MBS rebates for NP-requested medication management reviews (MMRs) and DMMRs, through items 900 and 903
b. that the same rules that apply to GP-requested medication reviews should apply to NP-requested reviews, including gaining consent from the patient or carer, giving results to the patient, and developing a plan to assist the patient with managing the medication
c. access to rebates for NP-initiated medication reviews should apply to both the NP and the pharmacy components of these reviews (whether via the MBS or a Sixth Community Pharmacy Agreement)
d. Pharmacist reports should be supplied to the NP where they are the patient's lead clinician, and
e. a copy of the DMMR/RMMR should be uploaded to My Health Record, with permission from the patient (or legal substitute decision-maker).

5.2.3 Rationale 3

This recommendation focuses on increasing access and reducing fragmentation of care. It is based on the following:

- There are a significant number of hospital admissions due to medication-related misadventure. In its 2013 literature review on medication safety, the Australian Commission on Safety and Quality in Health Care stated: "Medication-related hospital admissions have previously been estimated to comprise 2 per cent to 3 per cent of all Australian hospital admissions, with rising estimates of prevalence when sub-populations are studied. For example, 12 per cent of all medical admissions and 20 per cent to 30 per cent of all admissions in the population aged 65 years and over are estimated to be medication-related." (19).
- Increased use of DMMRs/HMRs and RMMRs can improve medication management and reduce hospital admissions by providing comprehensive care and risk management.
- These reviews are sometimes overlooked, delayed or prevented where access to a GP is limited.
- Enabling rebates for NP-requested MMRs will assist with reducing the delays in care noted above, medication misadventure and the risk of medication-related hospital admissions.
- Enabling rebates for NP-requested MMRs will also help to ensure continuity of care for patients.
- A patient's risk increases when they see multiple providers who may prescribe medications. It is essential that the patient has a lead clinician acting as care gatekeeper to help manage and coordinate their health (including management of medications), and to seek further advice as needed.
- This is particularly true for marginalised groups who have trouble accessing GP care and are often treated by NPs, providing consistency in care giving and building trusting relationships is a key concern for these groups.
- This is also true for patients in outer rural and remote areas, who may not have regular access to a GP. Some primary care clinics are managed by an NP, who functions as the senior/lead clinician and the consistent point of contact for patient care and chronic disease management coordination.

5.3 Enabling nurse practitioner care for all Australians

5.3.1 Recommendation 4 – Significantly increase the schedule fee assigned to current MBS NP professional attendance items

The Reference Group recommends significantly increasing the schedule fee assigned to current MBS NP professional attendance items (items 82200, 82205, 82210 and 82215).

5.3.2 Rationale 4

This recommendation focuses on ensuring that attendance items reflect best practice and enable the provision of high-quality care to underserved populations. It is based on the following:

- This will enable patient access and choice, and promote workforce sustainability in the primary health care setting.
- Current research highlights the role of NPs as providers of high-value primary care.
- There is a need to improve access to high-quality primary care in Australia, particularly in rural and remote areas, and for marginalised and vulnerable populations.
- In a recent study of GP clinics in northern New South Wales, almost 20 per cent of general practices could not offer an appointment, and less than 50 per cent could offer a same-day appointment (20).
- There are fewer MBS primary care attendances in rural and remote areas, compared to the rest of Australia (Figure 5).

Figure 5: MBS attendances by primary care providers, by remoteness area

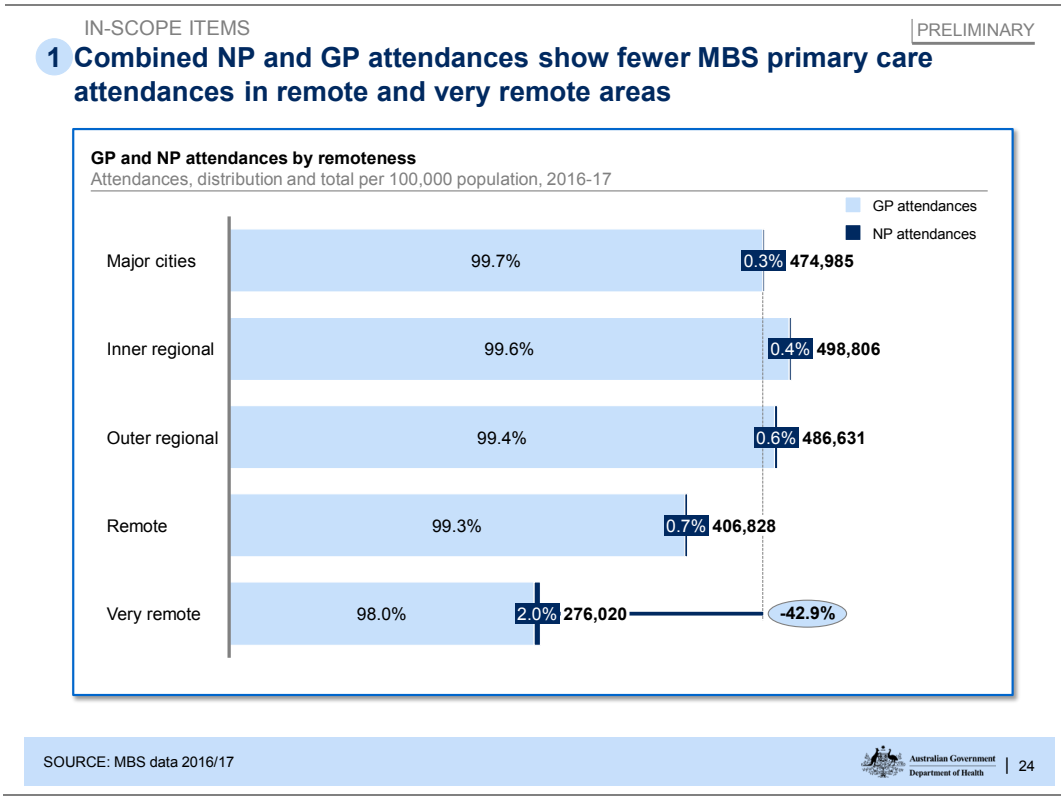
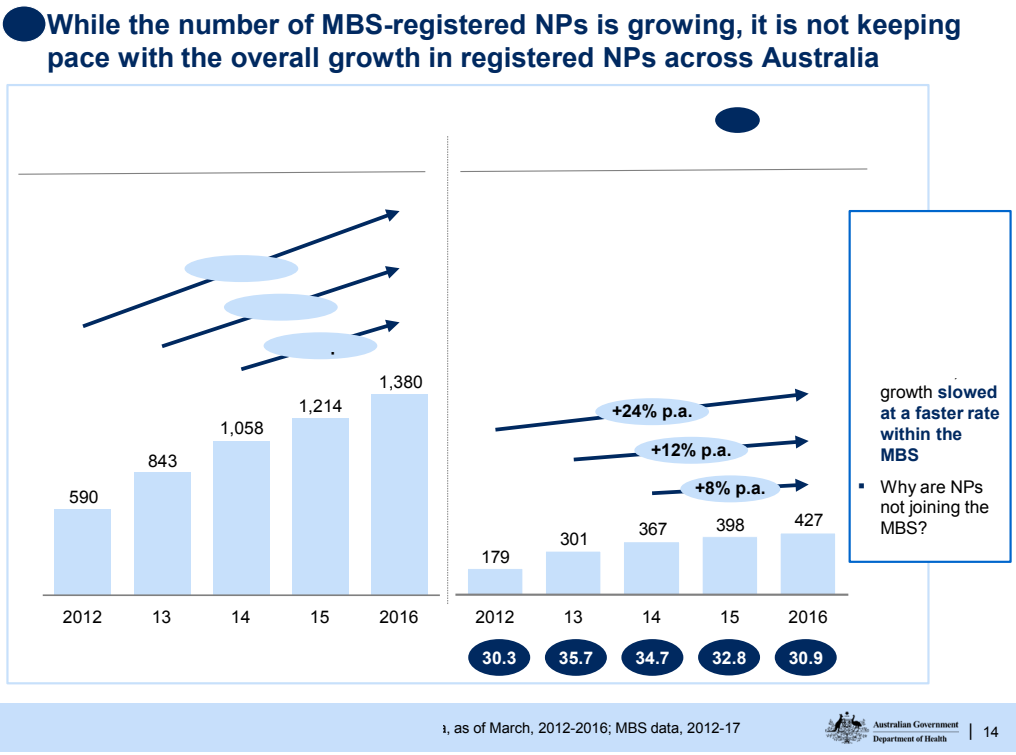
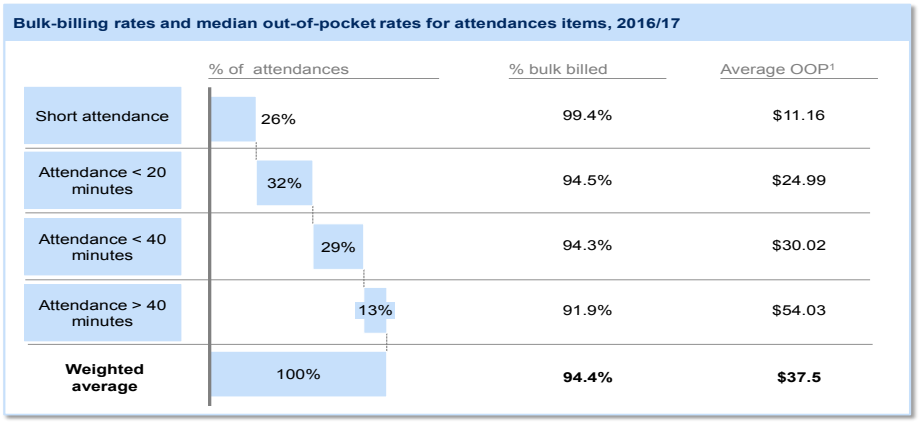


Figure 6: Growth in NPs in Australia and within the MBS



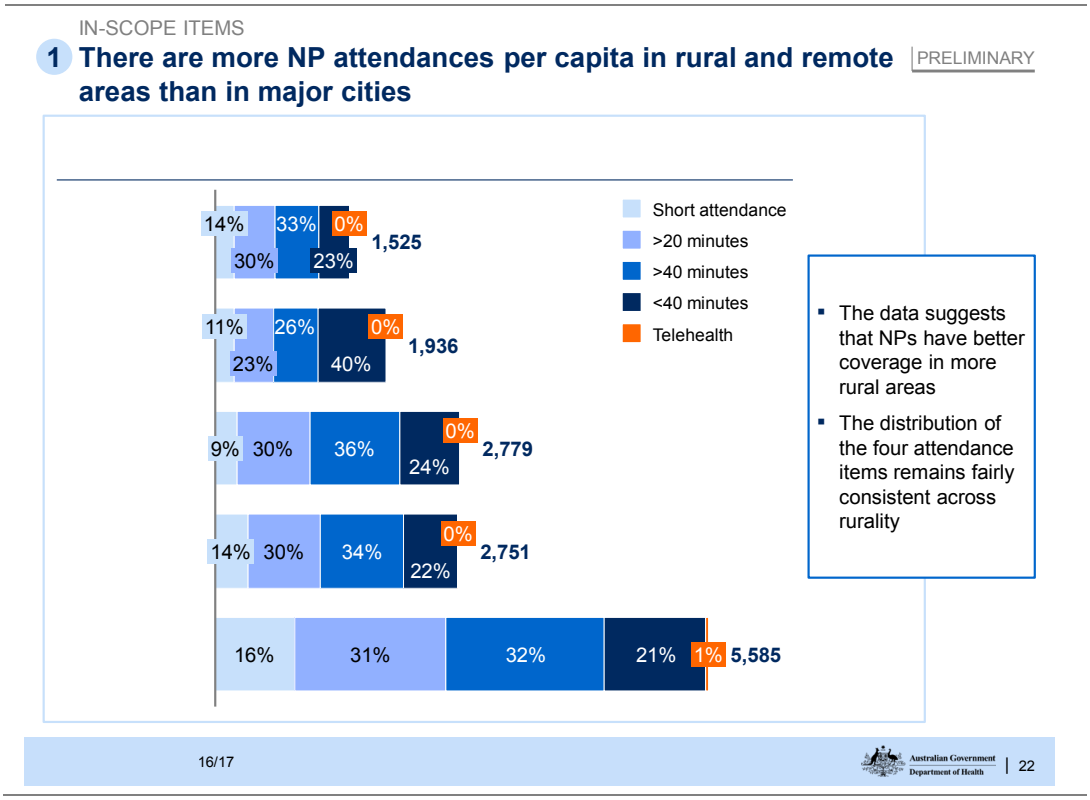
- In Australia, the NP workforce is growing, but the rate of growth is slowing. Growth of the NP workforce within the MBS is slowing more dramatically, and from a much smaller base (Figure 6).
- Financial sustainability has been identified as a major limitation for NP models of care in private practice settings, particularly when relying on a bulk-billing fee model (21).
- The majority of NP models of care find it difficult to cover the cost of providing care without charging patients out-of-pocket fees. This is counter-intuitive for NPs who are working to provide services to underserved and marginalised populations, and unnecessarily burdensome for the communities they serve. The combination of low MBS rebates and low out-of-pocket fees makes it difficult for most NP models of care to cover their costs, creating a disincentive for any employer wishing to engage an NP, such as an Aboriginal Medical Service (Figure 7).
- In a mixed-methods evaluation of NP models in aged care, a key challenge was the financial sustainability of private practice NP models due to the low MBS schedule fee assigned to NP professional attendance items. Thirty per cent of NP-led services ceased to operate due to financial non-viability (3).

Figure 7: Bulk-billing and out-of-pocket rates



- Significantly increasing rebates for NP professional attendance items will improve patients' ability to access NP services and, in turn, improve their care provider choices.
- This recommendation will improve NPs' ability to cover the costs of care provision, leading to a more financially viable model that allows them to provide services in the primary care setting, including to underserved and marginalised populations such as Aboriginal and/or Torres Strait Islander peoples, rural and remote populations, the homeless and aged patients. It would also support the rate of growth of this provider group.
- This recommendation may particularly improve rural and remote patients' access to and choice of primary care provider. MBS data shows that NPs provide a relatively high percentage of MBS services in rural and remote areas (Figure 8).

Figure 8: NP attendances by remoteness area



- This recommendation will also improve equity within the MBS fee structure, aligning NP rebates more closely with those for other practitioners with similar qualifications, expertise and experience.
- NPs receive half the per-minute rate of clinical psychologists, despite comparable levels of education (master's level) and comparable advanced practice experience requirements. The per-minute rate for a clinical psychologist providing a 50-minute session is $2.49, compared to $1.24 a minute for a 40-minute attendance by an NP (assuming the minimum appointment time for each provider; MBS, 2018).
- The NP per-minute attendance rebate rate is also less than half of the rebate rate for GPs for a 40-minute attendance, despite often undertaking similar activities during professional attendances, with evidence to suggest comparable outcomes (22) (23).
- The Reference Group recognises that this recommendation will only partially solve the issue of limited access to NP care. However, it is a vitally important component. Other recommendations in the report address additional barriers to access.

5.3.3 Recommendation 5 - Longer NP attendances to support the delivery of complex and comprehensive care

The Reference Group recommends creating a new MBS item for longer NP attendances to support the delivery of complex and comprehensive care, with the proposed item descriptor as follows:

New Item 822AA

Professional attendance by a participating NP lasting at least 60 minutes.

5.3.4 Rationale 5

This recommendation focuses on ensuring that attendance items reflect best practice and enable the provision of high-quality care to underserved populations. It is based on the following:

- The current time-tiered items for NP attendances do not reflect best practice. A range of care often needs to be provided in attendances lasting more than 60 minutes. For example:
    - Palliative care: These attendances often last for at least an hour due to the complexity of the care provided, which cannot be postponed or broken down into multiple shorter attendances. This can include a combination of pain and symptom management, psychosocial support, prescribing or adjusting multiple medications, referral to other health professionals and some procedural activities (such as insertion of urinary catheters).
    - Health care services for Aboriginal and Torres Strait Islander peoples: Many Aboriginal and/or Torres Strait Islander peoples have more than one chronic disease. Monitoring activities, engaging in a culturally safe way (which guides the location of the attendance, and the additional family, kin and community involved) and providing education on treatment and management, taking language and literacy difficulties into account, can be time-consuming to achieve the best outcomes for the patient.
    - Care for patients with dementia: Patients with dementia have cognitive impairments that make clinical assessment, shared care planning and procedural care more complicated. Longer consultation times are needed to deliver effective, best-practice care. This is relevant not just for formal cognitive screening/testing, but also for the more routine primary care attendances.
    - Specialist wound care: Consultations frequently take 60 minutes or longer to undertake various chronic wound assessment/treatments, including ankle-brachial

pressure index measurement, chronic wound debridement and effective patient education.

- Diabetes care: A specialist diabetes NP would require over 60 minutes with a patient to download and interpret data from a continuous blood glucose monitor then initiate treatment changes, including patient education. Similarly, starting a patient on an insulin pump routinely takes more than one hour.

- The length of attendances is affected by several factors, including patient age and socioeconomic status. Longer attendances are also an inherent consequence of the increasing burden of chronic disease (24).
- The cost of providing longer attendances is difficult for NPs to meet without charging high out-of-pocket costs or spreading care over multiple, shorter visits. This means that while there is a need for these services, patients are unable to access them.
- The patient rebate for an attendance of at least 40 minutes (item 82215) is already too low to be financially viable. This item cannot sustainably cover an attendance of over 60 minutes.

5.3.5 Recommendation 6 – Enable patients to access MBS rebates for after-hours or emergency care provided by NPs

The Reference Group recommends:

a. enabling patients to access MBS rebates for after-hours or emergency care provided by NPs
b. modifying MBS items that support patient access to emergency and after-hours assessment and treatment by vocationally qualified GPs and GP registrars to include care provided by NPs, examples of item numbers that should be revised include:
   (i) Items 761–769 for professional attendance (other than attendance at consulting rooms, a hospital or a residential aged care facility or a service to which another item in the table applies)
   (ii) Items 772–789 for professional attendance (other than a service to which another item applies) at a residential aged care facility (other than a professional attendance at a self-contained unit) or professional attendance at consulting rooms situated within such a complex if the patient is accommodated in the residential aged care facility (other than accommodation in a self-contained unit) by a medical practitioner—an attendance on one or more patients at one residential aged care facility on one occasion—each patient, and
   (iii) Items 585–600 for urgent attendance after hours,

and

c. applying the restrictions, controls and requirements that were introduced to MBS emergency and after-hours care in March 2018.

5.3.6 Rationale 6

This recommendation focuses on ensuring that timely, high-quality care is available to patients in the right location at the right time. It is based on the following:

- The MBS acknowledges the need for after-hours and emergency care through the existence of items that reimburse this care when provided by medical practitioners.
- The Reference Group feels that this recommendation would particularly benefit patients who require care but do not have access to readily available health practitioners after hours—for example, those in RACFs, hostels, or palliative or community nursing services.
- There are currently no MBS rebates for patients who receive emergency or after-hours assessment and care from an NP, even when the NP may be best placed to provide this care (e.g. for geographical reasons, or because of a pre-existing role in caring for the patient).
- This results in reduced access to timely, appropriate assessment and treatment. This could prevent patients from seeking the necessary care (leading to worsening health issues), or prompt them to seek care within emergency departments where their needs may be a lower priority.
- Enabling patients to access these rebates when an NP is providing care would have beneficial outcomes for patients. In particular, the Reference Group believes this change would offer patients an alternative to seeking care at emergency departments, and would have a positive effect on:
    - Achieving the goals of the Closing the Gap strategy.
    - The quality of palliative and end-of-life care.
    - Access to timely care for residents of RACFs.

5.3.7 Recommendation 7 – Enable patients to access MBS rebates for NP care received outside of a clinic setting

The Reference Group recommends enabling patients to access MBS rebates for NP care received outside of a clinic setting by creating new items for NP professional attendances (items 822BB, 822CC, 822DD and 822EE) with the proposed descriptors (using an attendance of less than 20 minutes as an example) is as follows:

New Items – Example descriptor

Professional attendance by a nurse practitioner (other than attendance at consulting rooms or a residential aged care facility or a service to which another item in the table applies) that requires a short patient history and, if necessary, limited examination and management, for an attendance on one or more patients at one place on one occasion.

Note: The Reference Group notes that these items could parallel the existing GP professional attendances for out-of-rooms visits.

5.3.8 Rationale 7

This recommendation focuses on ensuring that appropriate and sustainable primary care is available to all Australians in the right location at the right time. It is based on the following:

- Enabling rebates for care received in out-of-rooms or out-of-clinic settings would parallel the structure of GP professional attendance items.
- This structure would enable more precise records to be maintained (through MBS item number tracking) on how frequently NP services are provided in non-clinic settings.

5.4 Addressing system inefficiencies caused by current MBS arrangements

5.4.1 Recommendation 8 – Remove the mandated requirement for NPs to form collaborative arrangements

The Reference Group recommends removing the mandated requirement for NPs to form collaborative arrangements, in accordance with the *National Health (Collaborative arrangements for NPs) Determination 2010*.

5.4.2 Rationale 8

This recommendation focuses on the provision of affordable, universal and high-value care for patients, particularly in underserved areas. It is based on the following:

- A collaborative arrangement is defined as an arrangement between an eligible NP and a specified medical officer that must provide for consultation, referral and transfer of care as clinically relevant (25).
- The Reference Group noted that this recommendation has implications for NP participation in the PBS.
- Collaborative arrangements have become an impediment to growth of the NP role in improving access to quality care for all Australians. This was a key finding of the National Health and Hospitals Reform Commission (26). NPs have also reported that collaborative arrangements work against true collaboration (27) (28).

- Some of the reasons for this are:
    - Collaborative arrangements can be difficult to develop, particularly in rural and remote areas (27). The availability and accessibility of medical practitioners with whom an NP can establish the mandated collaborative arrangement—when this is the selected form of collaboration—remains a challenge in some rural and remote locations, reducing patient access to NP care. In addition, difficulty recruiting a medical practitioner to collaborate with (when that is the selected mechanism) and resistance to NP referrals has been reported by some NPs in primary care.
    - Requiring an NP to establish a collaborative agreement makes them dependent on the willingness and availability of medical practitioners to participate (when this is the selected form of arrangement), but there is no requirement for medical practitioners to do so.
    - Collaborative arrangements can affect perceptions of the autonomy of NPs as legitimate health care providers.
- The original reasons behind establishing collaborative arrangements, such as avoiding fragmented care (29) (30), do not justify the continued requirement for these arrangements.
    - Collaborative arrangements for NPs were introduced in 2010 via the *National Health (Collaborative arrangements for NPs) Determination 2010*, as a prerequisite to an NP providing health care services subsidised by the MBS (11). This was a ministerial determination made at the time of the legislative amendments to allow patient access to rebates through the MBS for NP services. Neither the presence nor the effectiveness of collaborative arrangements has been monitored by the Department or the DHS since implementation of the determination in 2010.
    - Experience over the last 18 years shows that NPs effectively collaborate without formal agreements. Collaboration is already required formally within NPs' standards of practice.
    - Collaboration is ingrained in nursing philosophy and is represented in the NMBA standards for practice for both RNs and NPs. Both sets of standards are grounded in actual (as opposed to aspirational) practice and are evidence-based (31). To meet the standards of practice (against which nurses are audited), collaborative practice must occur. A separate mandated collaborative arrangement is not required.
    - There is no evidence to suggest that collaborative arrangements increase collaboration between NPs and medical practitioners.

- Collaborative arrangements are not required in comparable countries. For example, mandated collaborative arrangements are not required for NPs practising in New Zealand.
- Medical practitioners do not face increased liability by working with NPs in the absence of collaborative arrangements. Conversely, collaborative arrangements may expose medical practitioners to increased liability (32).

- Nurses and midwives are the only health professionals required by law to establish an arrangement with a medical officer in order to participate in the MBS.

Case Study – Diagnostic Imaging

James practises as an NP in an urban homelessness clinic in the Australian Capital Territory. He is the sole health provider in a bulk-billing clinic and provides comprehensive primary health care services across the lifespan of clients.

A typical day requires James to assess, diagnose and manage long-term health conditions in his population, such as diabetes, depression, drug and alcohol dependence, and hypertension. James assesses and manages acute, minor illnesses and injuries such as upper respiratory tract and skin infections, sexually transmitted infections, musculoskeletal conditions and wounds. He provides a wide range of preventive health care services, including routine vaccinations and lifestyle modification interventions, such as smoking cessation counselling and nutrition advice.

James also cares for people with complex health requirements. However, he is frequently required to refer clients to a general practice, as current MBS rules do not enable him to initiate many common diagnostic imaging tests otherwise subsidised in primary health care, such as ultrasounds and X-rays. This causes frustration for clients, whose care experience becomes fragmented. It also involves unnecessary duplication of services. Although the general practice is willing to see patients referred by James, the practice often does not have an appointment available for several days. Clients are frustrated because they know James is sometimes able to initiate an investigation, while at other times he needs to refer them to a general practice—a visit that may not always be bulk billed. As a result, clients attending the homelessness clinic often do not continue to seek treatment for their problems, or end up attending the local public hospital emergency department to obtain imaging requests that could have been requested in James' homelessness clinic.

5.4.3 Recommendation 9 - Remove current restrictions on diagnostic imaging investigations when requested by NPs

The Reference Group recommends:

a. removing current restrictions on diagnostic imaging investigations subsidised under the MBS when requested by NPs
b. this change for NPs who are functioning as an alternative to care provided by a medical practitioner, and
c. in particular, restrictions should be removed from the following items:
   (i) Ultrasound investigations.

- General: Items 55028, 55032, 55038, 55048, 55048, 55054 and 55065.
- Cardiac: Items 55113, 55114, 55115, 55116 and 55117.
- Vascular: Items 55238, 55244, 55246, 55248, 55252, 55274, 55276, 55278 and 55292.
- Obstetrics/gynaecology: Items 55700, 55703, 55704, 55706, 55707 and 55718.

(ii) Diagnostic radiology investigations.

- Head: Items 57901, 57902, 57903, 57912, 57915, 57921, 57924, 57927, 57933, 57945, 57960, 57963, 57966 and 57969.
- Spine: Items 58100, 58103, 58106, 58108, 58109, 58112, 58115, 58120 and 58121.
- Alimentary tract and biliary system: Items 58903 and 58909.
- Localisation of foreign body: Item 59103.
- Breasts: Items 59300 and 59303.
- Tomography: Item 60100.
- Fluoroscopic exam and report: Items 60506 and 60509.

(iii) Computerised tomography imaging examinations.

- Items 56001, 56007, 56016, 56022, 56030, 56101, 56107, 56220, 56223, 56233, 56301, 56307, 56409, 56412, 56501, 56507, 56619, 56801, 56807, 57007, 57341, 57350, 57360 and 57362 and 57362.

(iv) Magnetic resonance imaging examinations.

- Items 63551, 63554 and 63560.

(v) Nuclear medicine imaging items.

- Items 61307, 61348, 61421, 61425, 61449, 61473 and 61505.

5.4.4 Rationale 9

This recommendation focuses on reducing fragmentation in care. It is based on the following:

- The Reference Group notes that this recommendation is not about increasing the NP scope of practice, as NPs can request any diagnostic investigation within their individual scope of practice. NPs are a safe and effective health workforce, with a demonstrated ability to adapt and respond to gaps in health service delivery, traverse the boundaries

of health settings, and provide affordable, accessible health care for marginalised and vulnerable populations in primary and community health care.

- Enabling patients to access an MBS rebate for diagnostic imaging investigations requested by an NP would have positive outcomes for patients. Currently, patients only receive MBS rebates for a limited number of diagnostic imaging investigations requested by an NP. In the event that a rebate is not available for a diagnostic imaging service when requested by an NP, patients must either:
    - Be referred to a medical practitioner (where available) in order to receive the rebate for diagnostic imaging services. This creates barriers to the provision of timely and appropriate health care and results in the costly duplication of services, delays and fragmented episodes of care (27) (21).
    - Forego the MBS rebate to which they are entitled and pay the full, unsubsidised cost for the diagnostic imaging service. This is an inequitable transfer of cost to the patient, who would not be required to pay the full cost if the service was provided by a GP.
    - Decide not to undertake diagnostic testing (for example, if they are not able to afford the required imaging services). This may affect patient outcomes.
- This recommendation will enable NP models of care to provide more timely and efficient health care by enabling them to work to their full potential. It will also reduce the challenges of fragmentation and duplication of care, inequitable cost burdens, and the risks of increased morbidity and/or mortality outlined above. This is particularly true in areas where NP models have been established to address existing health workforce and service delivery shortages. Allowing NPs to work to their full potential is associated with higher supply in rural and primary care health professional areas (33).
- The recommendation may also assist with the development and implementation of NP models of care that align with the original intent of the role by:
    - Supporting the provision of flexible and responsive care that adapts to identified needs in marginalised and vulnerable communities.
    - Supporting NP workforce sustainability.
    - Better enabling NPs to align their practice with supporting evidence-based guidelines in clinical care.
    - Promoting timely and effective referrals to medical specialists and consultant physicians, resulting in improved patient access to informed, specialised medical care.

5.4.5 Recommendation 10 – Enable patients to access MBS rebates for procedures performed by an NP

The Reference Group recommends:

a. enabling patients to access MBS rebates for procedures performed by an NP by changing the restrictions for diagnostic and therapeutic procedures that can be performed by GPs to also include NPs, and
b. in particular, NPs need to be able to request and/or perform the following:
   (i) Category 2 – diagnostic procedures and investigations.
      - Item 11506: Spirometry – measurement of respiratory function before and after inhalation of bronchodilator.
      - Item 11700: 12-lead electrocardiography, tracing and report.
      - Item 73811: Mantoux test.
      - Item 73839: Quantitation of HbA1c performed for diagnosis of diabetes in asymptomatic patient at high risk.
      - Item 73840: Quantitation of glycosylated haemoglobin performed in the management of established diabetes.
   (ii) Category 3 – therapeutic procedures.
      - Item 14206: Implanon insertion (hormone or living tissue implantation by cannula).
      - Item 30062: Implanon removal including suturing.
      - Item 30003: Dressing of localised burn.
      - Item 30071: Diagnostic biopsy skin or mucous membrane.
      - Item 30216: Aspiration of haematoma.
      - Item 31205: Removal of skin lesion (excluding warts and seborrheic keratoses) ≤ 10mm.
      - Item 31210: Removal of skin lesion (excluding warts and seborrheic keratoses) 11-20mm.
      - Item 31230: Removal of skin lesion (excluding warts and seborrheic keratoses) from nose, eyelid, lip, ear, digit, genitalia.
      - Item 41500: Foreign body ear – removal of (by means other than simple syringing).
      - Item 30023: Deep or extensively contaminated wound including suturing under anaesthesia.

- Item 30026: Suture < 7cm superficial not face.
- Item 30029: Suture < 7cm deep not face.
- Item 30032: Suture < 7cm deep face.
- Item 30038: Suture >7cm superficial not face.
- Item 30042: Suture >7cm deep not face
- Item 30052: Suture eyelid/nose/ear.
- Item 30061: Foreign body superficial – Removal of (inc. Cornea/Sclera).
- Item 30064: Foreign Body Subcutaneous – Removal of.
- Item 30067: Foreign Body Deep – Removal of
- 30071 Diagnostic Biopsy skin or mucous membrane.
- Item 30219: Haematoma, Furuncle, Abscess, and Lesion – Incision with drainage of.
- Items 31356–31376: Removal of skin lesions.
- Item 41500: Foreign body ear – removal of by means other than simple syringing.
- Item 41659: Foreign body nose – removal of by means other than simple probing.
- Item 42644: Foreign body Cornea/Sclera – removal of imbedded.
- Item 47915: Ingrowing nail of toe, wedge resection for, with removal of segment of nail, ungual fold and portion of the nail bed.
- Item 35503: Insertion of Intra-uterine contraceptive device (IUD).
- Item 36800: Catheterisation of the bladder.

5.4.6 Rationale 10

This recommendation focuses on reducing fragmentation in care. It is based on the following:

- This change should expand (rather than replace) the current list of procedures for which rebates already exist for NP-performed procedures.
- Under current MBS rules, rebates for most diagnostic and therapeutic procedures are not available to patients when those procedures are performed by an NP.
- NPs perform a variety of diagnostic and therapeutic procedures across all care settings, in accordance with their scope of practice.

- As with diagnostic imaging referrals, the lack of MBS rebates for diagnostic and therapeutic procedures performed by NPs can increase out-of-pocket costs for patients, perpetuate inefficiencies through duplication of care, and blur care accountability. It also imposes an unnecessary limitation on the NP workforce.
- Currently, the person receiving a procedure performed by an NP is required to pay the full cost of a procedure (without an MBS rebate), in addition to the professional attendance fee.
- Duplication, delays and inefficiencies can be created when a patient is referred to a medical practitioner for a procedure in order to be able to access the MBS rebate to which they are entitled. This practice also blurs accountability for care and limits the role of NPs as autonomous and independent health providers.
- Research in primary care has found that duplication of services (attributed to the inability of NPs to perform or request diagnostic and therapeutic items subsidised under the MBS) interrupts workflow and delays patient care (21). For example, patients may be referred to other services, including emergency departments, for some procedures because there is no adequate MBS rebate to support patients accessing this care from an NP.
- The ability to facilitate access to MBS rebates for diagnostic and therapeutic procedures performed by NPs will support more affordable, equitable and accessible care in primary health, community, rural and remote, and residential aged care settings. Vulnerable health patients are particularly affected by the lack of MBS rebates for care provided by NPs (18).
- This recommendation will also increase the financial viability of NP services by better recognising the broad range of services that NPs are able to provide. This will enable more equitable and accessible health services (18).
- Access to MBS rebates for items performed by NPs may be cost-neutral because duplication of services would be eliminated. Access to health care for the most vulnerable patients would also be improved.
- Other benefits of this recommendation may include increased professional colleague and patient satisfaction with the type of care provided, a decrease in patient waiting times due to improved access, and increased productivity as NPs are able to contribute to the overall provision of health care services (21) (22).

5.5 Improving patient access to telehealth services

5.5.1 The role of telehealth

The Reference Group acknowledged that the role of non-face-to-face communications is an increasingly important one in health services and patient care. For NPs acting as a primary

care giver, as well as those in more specialised roles, telehealth offers an opportunity to provide high-value care to patients who may not be able to see their health provider in person.

The Reference Group noted that the long-term solution for telehealth support, as part of a comprehensive suite of health services, may not be through a fee-for-service MBS. However, it felt it was important to include actionable, shorter-term recommendations for specific items, both existing and new, that could address the current service gap in telehealth.

The Reference Group considered various restrictions on proposed telehealth items in order to ensure that they are not abused, and that telehealth is only used when it is a mechanism for providing high-value care to a patient. These included:

- Rurality: Ensure that patients who use telehealth services are not easily able to access a relevant health provider for a face-to-face consultation.
- Usual practitioner: Ensure that patients receive telehealth support from a provider who is focused on the patient and is providing telehealth support because it is the best medium available (rather than being focused on telehealth and providing a service to a patient simply because the option is available).
- Follow-up care: Ensure that patients only receive telehealth support when the attendance is in relation to a clinical issue already discussed at a face-to-face consultation.
- Patient-side support: Ensure that, where relevant, an appropriate practitioner is physically in attendance with the patient during their telehealth consultation.

Ultimately, the Reference Group decided against identifying the specific conditions associated with these dimensions, as several exceptions could be found for each of them. Some suggestions are included with each of the recommendations below, as a starting place for implementation.

5.5.2 The advantages of telehealth

For patients, the main benefit of using telehealth services is increased access to health care, with non-inferior outcomes, where clinically appropriate. Evidence for this includes the following:

- Surveys have consistently found high patient satisfaction with telehealth consultations (34) (35) (36).
- Compared to usual care, a range of telehealth interventions have been found to produce at least equivalent outcomes in the management of asthma (37) (38), blood pressure (39) and depression, and in overall quality of life (40).

A systematic literature review of telehealth services in rural and remote Australia reviewed models of care and factors influencing success and sustainability. Funding for general medical and other practitioners for the provision of telehealth services is limited or non-existent (41).

In a study in the United States, the transaction costs of in-clinic consultations and telehealth presentations were compared for chronic pain management provided by community-based providers including NPs, primary care physicians and physician assistants. Although similar in terms of cost, telehealth consultations demonstrated preliminary evidence for improved patient satisfaction with treatment, improved provider satisfaction with the consultation process, reduced wait times and reduced health care utilisation (42).

5.5.3 Recommendation 11 - Add GPs as eligible participants in NP patient-side telehealth services

The Reference Group recommends:

a. adding GPs as eligible participants in NP patient-side telehealth services (items 82220, 82221 and 82222)
b. including all Aboriginal and/or Torres Strait Islander peoples, not only patients of Aboriginal Medical Services or Aboriginal Community Controlled Health Services with a 19(2) exemption, and
c. amending the item descriptors along the lines of the following example:

Item 82220 – example text

A professional attendance lasting less than 20 minutes (whether or not continuous) by a participating NP that requires the provision of clinical support to a patient who:

a) is participating in a video consultation with a specialist, consultant physician, or general practitioner; and

b) is not an admitted patient of a hospital; and

c) is located:

(i) both:

(A) within a telehealth eligible area; and

(B) at the time of the attendance - at least 15 kms by road from the specialist, consultant physician or general practitioner mentioned in paragraph (a); or

(ii) in Australia if the patient is of Aboriginal or Torres Strait Islander descent.

Note: The Reference Group recognises that this item would require GPs to have access to reimbursement for telehealth service provision, whether through an MBS item number or a different funding model.

5.5.4 Rationale 11

This recommendation focuses on increasing patient access to, and use of, telehealth services. It is based on the following:

- Telehealth services provide high-quality care options for Australians.
- GP-to-patient telehealth items with an NP on the patient side would help to fill current access gaps and allow for the provision of clinically effective, high-value services to patients, including:
    - GPs as eligible telehealth providers will increase patient access to primary care, particularly in remote areas where such access is more limited. NPs are well placed to support these telehealth services due to their relatively higher presence in remote areas (compared to GPs).
    - GPs would also decrease wait times to see the GP (by enabling consultation at the time of need), minimise cost for the patient (by mitigating the need to travel to the GP) and enhance buy-in from remote sites (43).
    - Limiting the video telehealth attendance to clinical support with a specialist or consultant physician restricts patient access to health care providers when an NP is seeking consultation with a patient and a GP. Often it is more appropriate, cost-effective and efficient to consult with a collaborating GP, rather than a specialist or consultant physician, especially for people who are geographically marginalised (living in Modified Monash Model areas 4 to 7), people in aged care and people in palliative care who are being managed at home.
- The current structure of telehealth items limits NP uptake. A survey of 73 NPs who work in primary care and access the MBS indicated that only 12 per cent had ever used telehealth items. It identified the requirement to have a specialist or consultant present as the main reason for non-use of telehealth items (44). MBS data showed that there were only 1,033 telehealth rebate claims in 2016/17 (less than 0.3 per cent of NP services for the year).
- GP telehealth items enable collaborative relationships between NPs and GPs, as NPs support from the patient side to facilitate care.
- The Royal Australian College of General Practitioners has developed clinical guidelines to enable the implementation of video consultations in general practice. These guidelines provide valuable insight and strategies to mitigate risk (45).

- Access to telehealth items for Aboriginal and/or Torres Strait Islander peoples in all regions, from urban to remote, may help to improve uptake of services where low cultural safety limits their ability to access services.

5.5.5 Recommendation 12 - Add patients in community aged care settings to residential aged care telehealth items

The Reference Group recommends adding patients in community aged care settings to residential aged care telehealth items (82223, 82224 and 82225) with the proposed descriptors as follows:

> *"… patients in receipt of, or assessed as eligible for, Government-funded Home Care Packages."*

5.5.6 Rationale 12

This recommendation focuses on increasing access to, and use of, telehealth services for patients who face difficulties accessing their primary health provider despite living in urban areas. It is based on the following:

- NPs often provide services to older people living in RACFs and those who are still living at home but in receipt of (or assessed as eligible for) Government-funded HCP.
- Patients receiving funding through the HCP program have similar levels of frailty and dependence to those living in residential aged care. Despite living in urban areas, they often have mobility and illness limitations, which impede their ability to access medical and nurse practitioner services.

5.5.7 Recommendation 13 – Create new MBS items for direct NP-to-patient telehealth consultations

The Reference Group recommends:

a. creating new MBS items for direct NP-to-patient telehealth consultations (items 8222A, 8222B and 8222C) with the proposed descriptors (using item 8222A as an example):

New Item 8222A – example text

A professional attendance lasting less than 20 minutes (whether or not continuous) by a participating NP practising in MMM 2-7 that requires the provision of clinical support to a patient who:

a) is participating in a video consultation with the NP; and

b) is not an admitted patient; and

c) is located:

(i) both:

(A) within an MMM 2-7 area; and

(B) at the time of the attendance - at least 35 kilometres from the NP's location (a); or

(ii) in Australia if the patient is of Aboriginal or Torres Strait Islander descent.

b. these items should parallel the time-tiers of existing patient-side items (i.e. less than 20 minutes, at least 20 minutes and at least 40 minutes), and
c. there should be no requirement for any particular health service professional to be patient-side.

5.5.8 Rationale 13

This recommendation focuses on increasing patient access to, and use of, telehealth services. It is based on the following:

- Telehealth services are high-quality care options for Australians.
- Telehealth sessions between an NP and a patient will improve access to timely care, reduce fragmentation, reduce or avoid the need for patients to be transferred to access required care, and allow for clinically effective, high-value services for patients. For example:
  - Telehealth services could be used for managing a patient who may already have medications/dressing available, to triage for the need for a physical consult, and/or to follow up on a face-to-face consult.
  - Telehealth services can increase access for patients in isolated areas. For example, a patient based at a cattle station will require access to care for an initial contact, for urgent or emergent care, or for follow-up care. If provided face to face, patients would face barriers including cost, travel and time away from community.

- Telehealth consultations can help improve access for patients with physical disabilities (who may find it difficult to get to an NP's office) and for patients with intellectual disabilities (who may not respond well to unfamiliar surroundings).
- Telehealth consultations can support NPs in providing primary care across the aged care sector. Enabling aged care nurses to access the support of NPs, particularly after hours, would further enhance NPs' contribution to improving health outcomes and avoid deterioration in health status for older people.

- The Reference Group acknowledges that there could be benefit in a patient-side attendance by an RN, an Aboriginal and Torres Strait Islander health worker or health practitioner, an allied health professional, an enrolled nurse, or other health care providers.

5.5.9 Recommendation 14 - Allow telehealth consultations to take place via telephone where clinically appropriate

The Reference Group recommends allowing telehealth consultations to take place via telephone where clinically appropriate (i.e. without requiring a video connection) (items 82220, 82221, 82222, 82223, 82224, 82225, 8222A, 8222B and 8222C).

5.5.10 Rationale 14

This recommendation focuses on increasing patient access to, and use of, telehealth services. It is based on the following:

- Requiring video connections between patient and practitioner has been shown to limit patient access to telehealth services (46) (47).
- Patients may be unable to undertake video communication due to:
  - Poor internet connections, often due to remoteness.
  - Lack of access to necessary technology.
  - Lack of understanding of or comfort with technology.
- Telephone communication for telehealth services offers non-inferior outcomes, where clinically appropriate (47) (48).

6 Impact statement

Both consumers and NPs are expected to benefit from the recommendations in this report. In making its recommendations, the Reference Group's primary focus was ensuring consumer access to high-quality primary care services. The Reference Group also considered the effect of its recommendations on NPs and other health professionals to ensure that they were fair and reasonable.

Patients will benefit from the Reference Group's recommendations through improved access to continuity of primary care models and higher quality clinical services, particularly in aged care, chronic disease management, and rural and remote areas. This includes:

- **Affordable, accessible primary care of choice.**
    - Significantly increasing patient rebates for services provided by NPs will improve patient access to primary care, lower costs for consumers, enable patient choice and establish access where no care options exist. This will be particularly beneficial for underserved and marginalised populations such as Aboriginal and/or Torres Strait Islander communities, the homeless and socially isolated people.
    - Consumers want real choice in their primary health care. This is not currently available consistently across Australia. In some rural and remote areas, there are few health service delivery options available.
    - Aboriginal and/or Torres Strait Islander peoples have expressed the importance of receiving primary care "on country" to feel culturally safe and to maximise their health outcomes. Inadequate MBS rebates to support access to NP services on country means that patients must often travel to seek primary care and/or experience unreasonable delays in receiving care. This can result in further deterioration of their health and/or an inability to seek the care they require. The poor outcomes that result for Aboriginal and/or Torres Strait Islander peoples who face barriers to care are preventable and could be improved by broadening access to NP services, particularly for people with chronic illness and disease.
    - Recommended changes to telehealth services seek to improve access to care by broadening the types of providers who are eligible to participate in telehealth, as well as the modes of communication that are used. These changes will provide increased opportunity for patients to receive affordable, high-value and best-practice primary health care from the practitioner of their choice.

- These changes will also improve the care experience for patients in rural and remote regions, who will be able to engage and develop a relationship with their chosen primary health care provider without travelling long distances.
- There is limited subsidised access to health care in high-priority areas that are often serviced by NPs, including aged care, mental health, palliative care and chronic disease management. This is due to the restricted number of MBS rebates available to patients when NPs provide or initiate services. Improving support for NP services through the MBS for people living in residential care will reduce unnecessary deteriorations in health status, which often occur for older Australians who experience delays in receiving care. In palliative care, changes to support NP services will provide a foundation to support improved end-of-life care and make a meaningful difference to quality of life for many Australians.
- Significantly increasing the MBS rebate for NP attendances and providing MBS rebates for NP home visits and outreach work will improve access for vulnerable patients who need timely, affordable care in non-traditional environments. Such care is often provided opportunistically, rather than through traditional visits to a general practice or consulting room. Provision of such care within the community will reduce unnecessary costs, fear and disruption for consumers, as well as any unintended consequences of emergency or hospital care.
- Allowing patients who live in residential aged care facilities (RACFs) and those who receive Commonwealth-funded community aged care in the home in all areas (Modified Monash Model areas 1–7) to access rebates for telehealth services will mean that they can be treated in their own home without the disruption, confusion, discomfort or distress of unnecessary transfer to hospital.

- **High-value, best-practice health care.**
  - Improving patient access to MBS items for services provided and initiated by NPs will maximise choice, reduce fragmentation and duplication for consumers, and reduce current inefficiencies and improve cost-effectiveness across Australia's health system.
  - The recommendations in this report support the provision of high-quality care to patients by removing artificial barriers to real collaboration between service providers, and by recognising the value of NP attendances (which last at least 60 minutes in some circumstances).
  - The recommendations will also enhance continuity of care provided by NPs, who provide high-value care to patients, as highlighted by national and international research cited throughout the report. Enabling consumers to access appropriate MBS rebates for NP services will limit the unnecessary duplication of services,

fragmentation of care, and other inefficiencies currently experienced by NP patients within existing MBS arrangements.

- Building trust with a known primary care professional reduces patients' apprehension and increases their confidence in the care provided. Patients will benefit from the availability of MBS rebates for health assessments and chronic care and team care arrangements undertaken by an NP, as well as case conferences coordinated by an NP, because they will no longer have to attend multiple appointments with another practitioner, who may not be their primary care provider, in order to receive the rebates to which they would otherwise be entitled.
- Similarly, being able to access MBS rebates for diagnostic imaging and procedures performed by NPs will assist patients in avoiding the inefficiencies, cost and inconvenience of visiting additional providers.

The Reference Group's recommendations will benefit NPs by enshrining a more accurate representation of their scope of practice in the MBS, and through increased financial recognition of the care they provide. More broadly, NPs will benefit from increased choice in working models as NP care becomes a financially and structurally viable option.

Consumers, NPs and the Australian health care system will benefit from overall increased investment in NP continuity of primary care, as recommended in this report. These benefits will accrue from high-quality, cost-effective health outcomes that benefit families and the community.

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8. Glossary

Term	Description
AHS	Aboriginal Health Services
ANMAC	Australian Nursing and Midwifery Accreditation Council
AQF	Australian Qualifications Framework
CAGR	Compound annual growth rate or the average annual growth rate over a specified time period.
Change	When referring to an item, “change” describes when the item and/or its services will be affected by the recommendations. This could result from a range of recommendations, such as: (i) specific recommendations that affect the services provided by changing item descriptors or explanatory notes; (ii) the consolidation of item numbers; and (iii) splitting item numbers (for example, splitting the current services provided across two or more items).
Delete	Describes when an item is recommended for removal from the MBS and its services will no longer be provided under the MBS.
Department, The	Department of Health
DHS	Department of Human Services
DMMR	Domiciliary Medication Management Review
FTE	Full-time equivalent
GP	General practitioner. GP is used within this report to refer to vocationally registered GPs and GP registrars who are appropriately supervised and are skilled and qualified to provide comprehensive primary care.
GPPCCC	General Practice and Primary Care Clinical Committee
HCP	Home Care Packages
High-value care	Services of proven efficacy reflecting current best medical practice, or for which the potential benefit to consumers exceeds the risk and costs.
HMR	Home Medicines Review

Inappropriate use / misuse	The use of MBS services for purposes other than those intended. This includes a range of behaviours, from failing to adhere to particular item descriptors or rules through to deliberate fraud.
Low-value care	Services that evidence suggests confer no or very little benefit to consumers; or for which the risk of harm exceeds the likely benefit; or, more broadly, where the added costs of services do not provide proportional added benefits.
MBS	Medicare Benefits Schedule
MBS item	An administrative object listed in the MBS and used for the purposes of claiming and paying Medicare benefits, consisting of an item number, service descriptor and supporting information, schedule fee and Medicare benefits.
MBS service	The actual medical consultation, procedure or test to which the relevant MBS item refers.
Minister, The	Minister for Health
Misuse (of MBS item)	The use of MBS services for purposes other than those intended. This includes a range of behaviours, from failing to adhere to particular item descriptors or rules through to deliberate fraud.
MMR	Medication management review
MSAC	Medical Services Advisory Committee
National Law	Health Practitioner Regulation National Law 2009
New service	Describes when a new service has been recommended, with a new item number. In most circumstances, new services will need to go through the MSAC. It is worth noting that implementation of the recommendation may result in more or fewer item numbers than specifically stated.
NMBA	Nursing and Midwifery Board of Australia
No change or leave unchanged	Describes when the services provided under these items will not be changed or affected by the recommendations. This does not rule out small changes in item descriptors (for example, references to other items, which may have changed as a result of the MBS Review or prior reviews).
NP	Nurse practitioner
NRAS	National Registration and Accreditation Scheme
Obsolete services / items	Services that should no longer be performed as they do not represent current clinical best practice and have been superseded by superior tests or procedures.
OOP	Out-of-pocket payment. These are health care payments that consumers are expected to make themselves (i.e. an amount not rebated by Medicare).

PBS	Pharmaceutical Benefits Scheme
PCRG	Primary care reference group
RACF	Residential aged care facility
Reference Group, The	Nurse Practitioner Reference Group of the MBS Review
RMMR	Residential Medication Management Review
RN	Registered nurse
Services average annual growth	The average growth per year, over five years to 2014/15, in utilisation of services. Also known as the compound annual growth rate (CAGR).
Taskforce, The	MBS Review Taskforce
Underserved	People who may not be able to gain entry to and receive care and services from the health care system. Factors influencing this ability include geographic, architectural, availability, transport and financial considerations, among others. Someone who is underserved may not necessarily receive less care, but they cannot receive it whenever or wherever they need it.

Appendix A Full list of in-scope items

Item	Description	Schedule fee	Services FY2016/17	Benefits FY2016/17	Services 5-year annual avg. growth
82200	Professional attendance by a participating NP for an obvious problem characterised by the straightforward nature of the task	9.60	53,990	$442,762.00	85.71%
82205	Professional attendance by a participating NP lasting less than 20 minutes	20.95	120,414	$2,152,151.20	23.74%
82210	Professional attendance by a participating NP lasting at least 20 minutes	39.75	133,334	$4,523,977.20	50.76%
82215	Professional attendance by a participating NP lasting at least 40 minutes	58.55	109,966	$5,547,413.10	63.87%
82220	A professional attendance lasting less than 20 minutes that requires the provision of clinical support to a patient who is participating in a video consultation with a specialist or consultant physician	28.30	109	$2,610.95	55.47%
82221	A professional attendance lasting at least 20 minutes that requires the provision of clinical support to a patient who is participating in a video consultation with a specialist or consultant physician	53.70	244	$11,138.60	161.38%
82222	A professional attendance lasting at least 40 minutes that requires the provision of clinical support to a patient who is participating in a video consultation with a specialist or consultant physician	78.95	593	$39,819.95	105.96%
82223	A professional attendance lasting less than 20 minutes that requires the	28.30	0	$0	N/A

Item	Description	Schedule fee	Services FY2016/17	Benefits FY2016/17	Services 5-year annual avg. growth
	provision of clinical support to a patient at a RACF who is participating in a video consultation with a specialist or consultant physician				
82224	A professional attendance lasting at least 20 minutes that requires the provision of clinical support to a patient at a RACF who is participating in a video consultation with a specialist or consultant physician	53.70	5	$228.25	20.11%
82225	A professional attendance lasting at least 40 minutes that requires the provision of clinical support to a patient at a RACF who is participating in a video consultation with a specialist or consultant physician	78.95	82	$5,506.30	82.96%

Appendix B Full list of recommendations

Recommendation 1 - Access MBS rebates for long-term and primary care management provided by NPs

The Reference Group recommends enabling patients to access MBS rebates for long-term and primary care management provided by NPs as follows:

a. amending the item 701, 703, 705 and 707 descriptors to include appropriately educated and experienced NPs as eligible providers, enabling patients to receive MBS rebates for health assessments performed by NPs, with proposed item descriptor (using item 701 as an example) as follows:

Items 701 – example descriptor

Professional attendance by a medical practitioner (other than a specialist or consultant physician), or a nurse practitioner, to perform a brief health assessment, lasting not more than 30 minutes and including:

(a) collection of relevant information, including taking a patient history; and

(b) a basic physical examination; and

(c) initiating interventions and referrals as indicated; and

(d) providing the patient with preventive health care advice and information

b. amending the item 715 descriptor to include NPs as eligible providers, enabling Aboriginal and/or Torres Strait Islander patients to access MBS rebates for health assessments performed by NPs, with the proposed item descriptor as follows

Items 715

Professional attendance by a medical practitioner (other than a specialist or consultant physician), or a nurse practitioner, at consulting rooms or in another place other than a hospital or residential aged care facility, for a health assessment of a patient who is of Aboriginal or Torres Strait Islander descent - not more than once in a 9-month period.

c. amending the item 721, 723 and 732 descriptors to include:
    i. NPs as eligible providers, enabling patients to access MBS rebates for the preparation and review of chronic care management plans and the development of team care arrangements by NPs

ii. an appropriate title that captures the intent of the chronic care management plans and team care arrangements (for example, Patient-centred Management Plan, Chronic Disease Management Plan),.and

iii. with proposed item descriptor (using item 701 as an example) as follows:

Item 721

Professional attendance by a medical practitioner (other than a specialist or consultant physician), or a nurse practitioner, at consulting rooms or in another place other than a hospital or residential aged care facility, for a health assessment of a patient who is of Aboriginal or Torres Strait Islander descent - not more than once in a 9-month period.

Note: The Reference Group notes that this recommendation may need to be amended to reflect proposed changes by the GPPCCC.

d. amending the item 729 and 731 descriptors to include NPs, enabling patients to access MBS rebates for an NP's contribution to a multidisciplinary care plan, with proposed item descriptor (using item 729 as an example) as follows:

Item 729

Attendance by a medical practitioner (including a general practitioner, but not including a specialist or consultant physician), or a nurse practitioner, for preparation of a chronic disease management plan for a patient (other than a service associated with a service to which any of items 735 to 758 apply)

Note: The Reference Group notes that the GPPCCC referred a question on case conferencing to the Reference Group. See Appendix D for the Reference Group's response to the GPPCCC.

e. amending the item 2700 and 2701 descriptors to include appropriately trained and experienced NPs as eligible providers,

f. that no MBS item or otherwise subsidised activities relating to the planning, coordination and management of long-term health conditions (for example, Closing the Gap initiatives, Home Medicines Reviews [HMRs], integrated team care) should result in greater disadvantage for Aboriginal and/or Torres Strait Islander patients seeking and choosing an NP to manage their chronic health condition, and

g. that any future iterations of MBS items, Commonwealth-subsidised models of care, or funding arrangements relating to the primary care management and coordination of long-

term health conditions should consider that an NP may be a patient's preferred primary care provider, as a safe and effective alternative to a GP.

Recommendation 2 - Improve access to MBS-subsidised NP services in aged care settings

The Reference Group recommends enabling patients to access MBS rebates for NP services in aged care settings, particularly:

(i) Health assessments, which are available for residents of RACFs and those aged over 75

(ii) Health assessments for Aboriginal and/or Torres Strait Islander peoples

(iii) Managing chronic disease

(iv) Contributing to a multidisciplinary care plan, particularly for residents of RACFs (item 731), and

(v) Developing a Mental Health Treatment Plan.

Notes:

1. *This recommendation mirrors most of the recommended changes made at Recommendation 1.*
2. *This recommendation also reinforces the importance of Recommendation 5 which proposes a new item for an NP professional attendance lasting for at least 60 minutes.*

Recommendation 3 - Enable DMMRs and RMMRs to be initiated by NPs

The Reference Group recommends:

a. enabling patients to access MBS rebates for NP-requested medication management reviews (MMRs) and DMMRs, through items 900 and 903
b. that the same rules that apply to GP-requested medication reviews should apply to NP-requested reviews, including gaining consent from the patient or carer, giving results to the patient, and developing a plan to assist the patient with managing the medication
c. access to rebates for NP-initiated medication reviews should apply to both the NP and the pharmacy components of these reviews (whether via the MBS or a Sixth Community Pharmacy Agreement)
d. Pharmacist reports should be supplied to the NP where they are the patient's lead clinician, and
e. a copy of the DMMR/RMMR should be uploaded to My Health Record, with permission from the patient (or legal substitute decision-maker).

Recommendation 4 - Increase the schedule fee assigned to current MBS NP professional attendance items

The Reference Group recommends significantly increasing the schedule fee assigned to current MBS NP professional attendance items (Items 82200, 82205, 82210 and 82215).

Recommendation 5 - Longer NP attendances to support the delivery of complex and comprehensive care

The Reference Group recommends creating a new MBS item for longer NP attendances to support the delivery of complex and comprehensive care, with the proposed item descriptor as follows:

New Item 822AA

Professional attendance by a participating NP lasting at least 60 minutes.

Recommendation 6 - Access MBS rebates for after-hours or emergency care provided by NPs

The Reference Group recommends:

a. enabling patients to access MBS rebates for after-hours or emergency care provided by NPs
b. modifying MBS items that support patient access to emergency and after-hours assessment and treatment by vocationally qualified GPs and GP registrars to include care provided by NPs, examples of item numbers that should be revised include:
    (i) Items 761–769 for professional attendance (other than attendance at consulting rooms, a hospital or a residential aged care facility or a service to which another item in the table applies)
    (ii) Items 772–789 for professional attendance (other than a service to which another item applies) at a residential aged care facility (other than a professional attendance at a self-contained unit) or professional attendance at consulting rooms situated within such a complex if the patient is accommodated in the residential aged care facility (other than accommodation in a self-contained unit) by a medical practitioner—an attendance on one or more patients at one residential aged care facility on one occasion—each patient, and
    (iii) Items 585–600 for urgent attendance after hours.
c. applying the restrictions, controls and requirements that were introduced to MBS emergency and after-hours care in March 2018.

Recommendation 7 - Access MBS rebates for NP care received outside of a clinic setting

The Reference Group recommends enabling patients to access MBS rebates for NP care received outside of a clinic setting by creating new items for NP professional attendances (items 822BB, 822CC, 822DD and 822EE) with the following descriptor (using an attendance of less than 20 minutes as an example) is as follows:

New Items – Example descriptor

Professional attendance by a nurse practitioner (other than attendance at consulting rooms or a residential aged care facility or a service to which another item in the table applies) that requires a short patient history and, if necessary, limited examination and management, for an attendance on one or more patients at one place on one occasion.

Note: The Reference Group notes that these items could parallel the existing GP professional attendances for out-of-rooms visits.

Recommendation 8 – Requirement for NPs to form collaborative arrangements

The Reference Group recommends removing the mandated requirement for NPs to form collaborative arrangements, in accordance with the *National Health (Collaborative arrangements for NPs) Determination 2010*.

Recommendation 9 - Remove current restrictions on diagnostic imaging investigations

The Reference Group recommends:

a. removing current restrictions on diagnostic imaging investigations subsidised under the MBS when requested by NPs
b. this change for NPs who are functioning as an alternative to care provided by a medical practitioner, and
c. in particular, restrictions should be removed from the following items:
   (i) Ultrasound investigations.
      - General: Items 55028, 55032, 55038, 55048, 55048, 55054 and 55065.
      - Cardiac: Items 55113, 55114, 55115, 55116 and 55117.
      - Vascular: Items 55238, 55244, 55246, 55248, 55252, 55274, 55276, 55278 and 55292.
      - Obstetrics/gynaecology: Items 55700, 55703, 55704, 55706, 55707 and 55718.

   (ii) Diagnostic radiology investigations.
      - Head: Items 57901, 57902, 57903, 57912, 57915, 57921, 57924, 57927, 57933, 57945, 57960, 57963, 57966 and 57969.
      - Spine: Items 58100, 58103, 58106, 58108, 58109, 58112, 58115, 58120 and 58121.
      - Alimentary tract and biliary system: Items 58903 and 58909.
      - Localisation of foreign body: Item 59103.

- Breasts: Items 59300 and 59303.
- Tomography: Item 60100.
- Fluoroscopic exam and report: Items 60506 and 60509.

(iii) Computerised tomography imaging examinations.

- Items 56001, 56007, 56016, 56022, 56030, 56101, 56107, 56220, 56223, 56233, 56301, 56307, 56409, 56412, 56501, 56507, 56619, 56801, 56807, 57007, 57341, 57350, 57360 and 57362 and 57362.

(iv) Magnetic resonance imaging examinations.

- Items 63551, 63554 and 63560.

(v) Nuclear medicine imaging items.

- Items 61307, 61348, 61421, 61425, 61449, 61473 and 61505.

Recommendation 10 - Access MBS rebates for procedures performed by an NP

The Reference Group recommends:

a. enabling patients to access MBS rebates for procedures performed by an NP by changing the restrictions for diagnostic and therapeutic procedures that can be performed by GPs to also include NPs, and
b. in particular, NPs need to be able to request and/or perform the following:

(iii) Category 2 – diagnostic procedures and investigations.

- Item 11506: Spirometry – measurement of respiratory function before and after inhalation of bronchodilator.
- Item 11700: 12-lead electrocardiography, tracing and report.
- Item 73811: Mantoux test.
- Item 73839: Quantitation of HbA1c performed for diagnosis of diabetes in asymptomatic patient at high risk.
- Item 73840: Quantitation of glycosylated haemoglobin performed in the management of established diabetes.

(iv) Category 3 – therapeutic procedures.

- Item 14206: Implanon insertion (hormone or living tissue implantation by cannula).
- Item 30062: Implanon removal including suturing.
- Item 30003: Dressing of localised burn.

- Item 30071: Diagnostic biopsy skin or mucous membrane.
- Item 30216: Aspiration of haematoma.
- Item 31205: Removal of skin lesion (excluding warts and seborrheic keratoses) ≤ 10mm.
- Item 31210: Removal of skin lesion (excluding warts and seborrheic keratoses) 11-20mm.
- Item 31230: Removal of skin lesion (excluding warts and seborrheic keratoses) from nose, eyelid, lip, ear, digit, genitalia.
- Item 41500: Foreign body ear – removal of (by means other than simple syringing).
- Item 30023: Deep or extensively contaminated wound including suturing under anaesthesia.
- Item 30026: Suture < 7cm superficial not face.
- Item 30029: Suture < 7cm deep not face.
- Item 30032: Suture < 7cm deep face.
- Item 30038: Suture >7cm superficial not face.
- Item 30042: Suture >7cm deep not face
- Item 30052: Suture eyelid/nose/ear.
- Item 30061: Foreign body superficial – Removal of (inc. Cornea/Sclera).
- Item 30064: Foreign Body Subcutaneous – Removal of.
- Item 30067: Foreign Body Deep – Removal of
- 30071 Diagnostic Biopsy skin or mucous membrane.
- Item 30219: Haematoma, Furuncle, Abscess, Lesion – Incision with drainage of.
- Items 31356–31376: Removal of skin lesions.
- Item 41500: Foreign body ear – removal of by means other than simple syringing.
- Item 41659: Foreign body nose – removal of by means other than simple probing.
- Item 42644: Foreign body Cornea/Sclera – removal of imbedded.
- Item 47915: Ingrowing nail of toe, wedge resection for, with removal of segment of nail, ungual fold and portion of the nail bed.
- Item 35503: Insertion of Intra-uterine contraceptive device (IUD).

- Item 36800: Catheterisation of the bladder.

Recommendation 11 - Add GPs as eligible participants in NP patient-side telehealth services

The Reference Group recommends:

a. adding GPs as eligible participants in NP patient-side telehealth services (items 82220, 82221 and 82222)
b. including all Aboriginal and/or Torres Strait Islander peoples, not only patients of Aboriginal Medical Services or Aboriginal Community Controlled Health Services with a 19(2) exemption, and
c. amending the item descriptors along the lines of the following example:

Item 82220

A professional attendance lasting less than 20 minutes (whether or not continuous) by a participating NP that requires the provision of clinical support to a patient who:

- a) is participating in a video consultation with a specialist, consultant physician, or general practitioner; and
- b) is not an admitted patient of a hospital; and
- c) is located:
  - (i) both:
    - (A) within a telehealth eligible area; and
    - (B) at the time of the attendance - at least 15 kms by road from the specialist, consultant physician or general practitioner mentioned in paragraph (a); or

  (ii) in Australia if the patient is of Aboriginal or Torres Strait Islander descent.

Note: The Reference Group recognises that this item would require GPs to have access to reimbursement for telehealth service provision, whether through an MBS item number or a different funding model.

Recommendation 12 - Add patients in community aged care settings to residential aged care telehealth items

The Reference Group recommends adding patients in community aged care settings to residential aged care telehealth items (82223, 82224 and 82225) with descriptors as follows:

"… patients in receipt of, or assessed as eligible for, Government-funded Home Care Packages."

Recommendation 13 - New MBS items for direct NP-to-patient telehealth consultations

The Reference Group recommends:

a. creating new MBS items for direct NP-to-patient telehealth consultations (items 8222A, 8222B and 8222C) with the following type of descriptors (using item 8222A as an example):

New Item 8222A

A professional attendance lasting less than 20 minutes (whether or not continuous) by a participating NP practising in MMM 2-7 that requires the provision of clinical support to a patient who:

a) is participating in a video consultation with the NP; and

b) is not an admitted patient; and

c) is located:

(i) both:

(A) within an MMM 2-7 area; and

(B) at the time of the attendance - at least 35 kilometres from the NP's location (a); or

(ii) in Australia if the patient is of Aboriginal or Torres Strait Islander descent.

Recommendation 14 - Allow telehealth consultations to take place via telephone where clinically appropriate

The Reference Group recommends allowing telehealth consultations to take place via telephone where clinically appropriate (i.e. without requiring a video connection) (items 82220, 82221, 82222, 82223, 82224, 82225, 8222A, 8222B and 8222C).

Appendix C Summary for consumers

This table describes the medical service, the recommendation(s) of the clinical experts and why the recommendation(s) has been made.

Recommendation 1: Enable patients to access MBS rebates for long-term and primary care management provided by NPs

Item (s)	What it does	Committee recommendation	What would be different	Why
701, 703, 705, 707, 715	Professional attendance by a general practitioner (GP) to perform a health assessment.	Allow patients to access MBS rebates for a health assessment performed by a nurse practitioner (NP).	Patients could access an MBS rebate for health assessments completed by NPs. Currently, rebates are only available if the assessment is done by a GP.	This would improve patients' choice and enable more access to services to manage their long-term health, particularly in rural and remote areas where there is limited access to medical practitioners.
721, 723, 732	Attendance by a general practitioner for preparation of a chronic care management plan for a patient.	Allow patients to access MBS rebates for a chronic care management plan performed by a nurse practitioner.	Patients could access an MBS rebate for chronic care management plans completed by NPs. Currently, rebates are only available if the plan is done by a GP.	This would improve patients' choice and enable more access to services to manage their long-term health, particularly in rural and remote areas where there is limited access to medical practitioners.
729, 731	Contribution or review by a general practitioner to a multidisciplinary care plan prepared by another provider.	Allow patients to access MBS rebates for a multidisciplinary care plan performed by a nurse practitioner.	Patients could access an MBS rebate when a nurse practitioner contributes to or reviews their multidisciplinary care plan. Currently, there is no MBS rebate for an NP contribution to this kind of plan.	This would improve patients' choice and enable more access to services to manage their long-term health, particularly in rural and remote areas where there is limited access to medical practitioners.

Item (s)	What it does	Committee recommendation	What would be different	Why
2700, 2701	Professional attendance by a general practitioner for the preparation of a GP Mental Health Treatment Plan for a patient (between 20 and 40 minutes, or greater than 40 minutes).	Allow preparation of a Mental Health Treatment Plan by appropriately trained nurse practitioners.	Patients could access an MBS rebate for the preparation of a Mental Health Treatment Plan when this is done by a nurse practitioner.	This would improve patients' choice and enable more access to services to manage their long-term health, particularly in rural and remote areas where there is limited access to medical practitioners.

Recommendation 2: Improve access to MBS-subsidised NP services in aged care settings

Items	What it does	Committee recommendation	What would be different	Why
Detailed in Recommendation 1	Professional attendances by a GP to perform health assessments, chronic disease management, multidisciplinary care and mental health plans.	Allow preparation of health assessments, chronic disease management, multidisciplinary care and mental health plans by a nurse practitioner in aged care settings.	Improve access to universal, affordable and coordinated care of long-term health conditions for patients receiving aged care services in residential and community settings.	Nurse practitioners can help meet the high demand for care in aged care settings. Without this, older people are often transferred to hospital emergency departments for treatment and/or admission.

Recommendation 3: Enable DMMRs and RMMRs to be initiated by NPs

Items	What it does	Committee recommendation	What would be different	Why
900, 903	Participation by a general practitioner in a DMMR for a patient living in a community setting or RMMR in a residential aged care facility.	Allow a nurse practitioner to request a DMMR or RMMR.	Patients would receive an MBS rebate when a DMMR or RMMR is requested by a nurse practitioner.	These reviews are sometimes overlooked, delayed or prevented where access to a GP is limited. Enabling rebates for NP-requested DMMRs and RMMRs would help to ensure continuity of care for patients whose lead clinician is an NP.

Recommendation 4: Significantly increase the schedule fee assigned to current MBS NP professional attendance items

Items	What it does	Committee recommendation	What would be different	Why
82200, 82205, 82210, 82215	Professional attendances by a participating nurse practitioner (time tiered).	Increase the schedule fee assigned to these NP attendance items.	This would improve patients' ability to access NP services and, in turn, their choice of care provider.	An increased rebate would improve NPs' ability to cover the costs of care. A more financially viable model will allow more NPs to provide services in the primary care setting, including to underserved and marginalised populations.

Recommendation 5: Create a new MBS item for longer NP attendances to support the delivery of complex and comprehensive care

Item	What it does	Committee recommendation	What would be different	Why
New Item 822AA	Professional attendance by a participating nurse practitioner lasting at least 60 minutes.	Create a new item.	This recommendation would ensure that attendance items reflect best practice and enable the provision of high-quality care to underserved populations.	Attendances lasting more than 60 minutes are often required for a range of care, including palliative, dementia, specialist wound and diabetes care, and health services for Aboriginal and/or Torres Strait Islander peoples.

Recommendation 6: Enable patients to access MBS rebates for after-hours or emergency care provided by NPs

Items	What it does	Committee recommendation	What would be different	Why
761, 763, 766, 769	A professional attendance (other than attendance at consulting rooms, a hospital or a residential aged care facility or a service to which another item in the table applies) lasting less than five minutes, five to 25 minutes, 25 to 45 minutes, and 45 or more minutes.	Allow treatment by a nurse practitioner.	Improve access to timely, appropriate assessment and treatment.	This would prevent patients from not accessing care (leading to worsening health issues), or seeking care within emergency departments where their needs may be a lower priority.
772, 776, 788, 789	Professional attendance (other than a service to which another item applies) at a residential aged care facility by a medical practitioner lasting less than five minutes, five to 25 minutes, 25 to 45 minutes, and 45 or more minutes.	Allow treatment by a nurse practitioner.	Improve access to timely, appropriate assessment and treatment.	This would prevent patients from not accessing care (leading to worsening health issues), or seeking care within emergency departments where their needs may be a lower priority.

Items	What it does	Committee recommendation	What would be different	Why
585–600	Professional attendance by a general practitioner on one patient on one occasion—each attendance (other than an attendance in unsociable hours) in an after-hours period.	Allow treatment by a nurse practitioner.	Improve access to timely, appropriate assessment and treatment.	This would prevent patients from not accessing care (leading to worsening health issues), or seeking care within emergency departments where their needs may be a lower priority.

Recommendation 7: Enable patients to access an MBS rebate for NP care received outside of a clinic setting

Item	What it does	Committee recommendation	What would be different	Why
New Items 822BB, 822CC, 822DD, 822EE	Attendance (other than at consulting rooms or a residential aged care facility or a service to which another item applies).	Create new items to cover care received outside of a clinic setting.	Allow patients to receive a rebate for out-of-rooms or out-of-clinic care from a nurse practitioner, similar to a GP.	This would provide appropriate and sustainable primary care to all Australians in the right location at the right time and would avoid unnecessary duplication and fragmentation of care.

Recommendation 8: Remove the mandated requirement for NPs to form collaborative arrangements

Items	What it does	Committee recommendation	What would be different	Why
All NP items	A collaborative arrangement is between an eligible NP and a specified medical officer that must provide for consultation, referral and transfer of care as clinically relevant (25).	Remove the legislative requirement for NPs to form mandated collaborative arrangements in accordance with the National Health Determination 2010 in order to participate in the MBS.	Where a mandated collaborative arrangement could not be formed, the provision of primary care would continue, avoiding fragmented care and unnecessary hospital admissions. There would be minimal risk to quality of care as NPs already collaborate effectively, as required formally within NPs' standards of practice.	Collaborative arrangements can be difficult to develop, particularly in rural and remote areas, due to the availability and accessibility of medical practitioners and their willingness to participate in these arrangements.

Recommendation 9: Remove current restrictions on diagnostic imaging investigations subsidised under the MBS when requested by NPs

Items	What it does	Committee recommendation	What would be different	Why
See Section 5.4.3 All diagnostic imaging investigations that can be requested by general practitioners.	Allows a patient rebate for diagnostic imaging.	Allow requests for diagnostic imaging by a nurse practitioner.	This would improve access to timely, appropriate diagnostic imaging as patients would not have to wait to see a GP to request diagnostic imaging and receive a rebate.	This would avoid unnecessary duplication and fragmentation of care for patients of nurse practitioners working within their scope of practice, who are functioning as an alternative to a medical practitioner.

Recommendation 10: Enable patients to access MBS rebates for procedures performed by an NP

Items	What it does	Committee recommendation	What would be different	Why
See Section 5.4.5 Category 2 – diagnostic procedures and investigations Category 3 – therapeutic procedures.	Allows a patient rebate for diagnostic and therapeutic procedures if requested by a general practitioner.	Allow requests for diagnostic and therapeutic procedures by a nurse practitioner.	This would improve access to timely, appropriate diagnostic and therapeutic procedures as patients would not have to wait to see a GP to receive these services and a rebate.	This would avoid unnecessary duplication and fragmentation of care for patients of nurse practitioners working within their scope of practice, who are functioning as an alternative to a medical practitioner.

Recommendation 11: Add GPs as eligible participants in NP patient-side telehealth services

Items	What it does	Committee recommendation	What would be different	Why
82220, 82221, 82222	A professional attendance by a participating nurse practitioner on the patient-side, supporting a patient who is participating in a videoconference with a specialist or consultant physician.	Expand the item descriptor to enable GPs to provide a telehealth consultation and include all Aboriginal and/or Torres Strait Islander peoples.	This would allow greater access to GPs for rural and remote communities that are typically serviced by NPs.	This would increase patient access to primary care and decrease wait times, particularly in remote areas where GP access is more limited.

Recommendation 12: Add patients in community aged care settings to residential aged care telehealth items

Items	What it does	Committee recommendation	What would be different	Why
82223, 82224, 82225	A professional attendance by a participating nurse practitioner on the patient-side, supporting a patient who resides in a residential aged care service and is participating in a video consultation with a specialist or consultant physician.	Expand the item descriptor to include patients in receipt of, or assessed as eligible for, Liberal National Government-funded Home Care Packages.	This would allow greater access to, and use of, telehealth services for patients who are likely to find it difficult to access their primary health care provider despite living in urban areas.	Patients receiving funding through the Home Care Packages program have similar levels of frailty and dependence to those living in residential aged care.

Recommendation 13: Create new MBS items for direct NP-to-patient telehealth consultations

Item	What it does	Committee recommendation	What would be different	Why
New Items 8222A, 8222B, 8222C	A professional attendance by a participating NP practising in Modified Monash Model areas 2–7 that requires the provision of clinical support to a patient (various durations).	Create new items to support NP-to-patient telehealth services.	Patients would be able to access an MBS rebate for a telehealth (videoconference) consultation with a nurse practitioner.	Telehealth sessions between an NP and a patient would improve access to timely care, reduce fragmentation, and reduce or avoid the need for patients to be transferred to access care.

Recommendation 14: Allow telehealth consultations to take place via telephone where clinically appropriate

Item	What it does	Committee recommendation	What would be different	Why
82220, 82221, 82222, 82223, 82224, 82225, New Items 8222A, 8222B, 8222C	A professional attendance by a participating nurse practitioner that requires the provision of clinical support to a patient who is participating in a video consultation.	Allow items for telehealth consultations to take place via telephone where clinically appropriate, instead of by videoconference.	Patients who are unable to undertake video communication (for example, due to poor internet connections, lack of access, or poor understanding of the necessary technology) could still access telehealth services.	Requiring video connections between patient and practitioner has been shown to limit patient access to telehealth services. Telephone communication can offer comparable outcomes in some situations.

Appendix D Response to referred questions from the General Practice and Primary Care Clinical Committee

29 June 2018

Dear General Practice and Primary Care Clinical Committee,

The NP Reference Group (NPRG) of the Medicare Benefits Schedule (MBS) Review has reviewed the referred questions and recommendations from the General Practice and Primary Care Clinical Committee (GPPCCC). This note summarises the discussions, feedback, and recommendations of the NPRG to the GPPCCC on the two referred questions.

In general, the NPRG notes that

- The role of the NP (NP) has continued to evolve in its contribution to health service delivery, particularly to underserved and vulnerable populations, since its implementation in 2000 and since admission as eligible providers in 2010. Despite this, the role of NPs in delivering and managing health care often remains poorly understood.

To provide context to this response, the NP Reference Group (NPRG) is providing background information describing contemporary NP practice in Australia. This will provide Committee members, the GPPCCC and the Taskforce itself with clear and concise information to support the issues and proposed solutions identified by the NPRG, both in response to questions asked by the GPPCCC and issues raised by Ministers, other MBS Review Clinical Committees and stakeholders.

The purpose of this information is threefold:

- To provide a broad overview of the underpinning requirements for NP (NP) endorsement including education and practise requirements;
- To provide a broad overview of the practice differences between Registered Nurses (RN) and NPs; and
- To provide a summary of how issues relating to the interpretation and application of current Department of Health policy and relevant legislation are often a barrier for underserved populations seeking health care from NPs.

Background

Consistent with international experience, the NP role was implemented in Australia to improve the flexibility of the health care workforce and enable new ways to compliment traditional models of health care delivery. Driving this initiative was a clear need to improve access to care for marginalised, underserved and vulnerable populations.

NPs are registered nurses who have been endorsed by the Nursing and Midwifery Board of Australia (NMBA) to practice using an expanded and extended scope of practice. The Nursing and Midwifery Accreditation Council (ANMAC) provides a concise description of that scope of practice in their 2014 consultation document[1], which was used to inform academic programmes leading to NP endorsement:

> *The scope of practice of the NP builds upon registered nurse practice, enabling NPs to manage complete episodes of care, including wellness focussed care, as a primary provider of care in collaborative teams. NPs use advanced, comprehensive assessment techniques in screening, diagnosis and treatment. They apply best available knowledge to evidenced-based practice. NPs request and interpret diagnostic tests, prescribe therapeutic interventions including the prescription of medicines, and independently refer people to healthcare professionals for conditions that would benefit from integrated and collaborative care. They accomplish this by using skilful and empathetic communication with health care consumers and health care professionals. NPs facilitate person-centred care through the holistic and encompassing nature of nursing. Finally, NPs evaluate care provision to enhance safety and quality within healthcare. Although clinically focused, NPs are also expected to actively participate in research, education and leadership as applied to clinical care.*

After extensive formative work demonstrating the ability of nursing to safely and effectively translate the NP role to the Australian context, the NP title was formalised and protected in Australia in 1998 through the *Nurses Amendment (NPs) Act*. The first NPs were authorised to practice in New South Wales in 2000.

Since 2000, the Australian nursing profession has established the necessary professional and regulatory requirements to support the role including:

- Professional standards for practice[2,3,4];

[1] Australian Nursing and Midwifery Accreditation Council. (2014). Consultation Paper 2: Review of the NP accreditation standards (pp. 47). Canberra, ACT: ANMAC.

[2] Australian Nursing and Midwifery Council. (2006). National Competency Standards for the NP (pp. 5). Canberra, ACT: ANMC.

- NMBA Registration Standard for Endorsement under s95 of the National Law[5];
- NMBA-approved NP Accreditation Standards for education courses accredited by Australian Nursing and Midwifery Accreditation Council (ANMAC)[6];
- Professional representation through establishment of the Australian College of Nursing Practitioners; and
- An empirically-established framework to inform specialty clinical learning and teaching[7,8,9].

In addition, NPs were admitted as eligible Medicare providers with the ability to participate in both the Medicare Benefits Schedule and Pharmaceutical Benefits Scheme in 2010[10].

Differences between a registered nurse and a nurse practitioner

The NP role *builds upon* the RN scope of practice. The following table broadly outlines the educational, professional and experiential requirements of the RN and NP scope of practice:

[3] Gardner, G., Carryer, J., Gardner, A., & Dunn, S. (2006). NP competency standards: Findings from collaborative Australian and New Zealand research. International Journal of Nursing Studies, 43(5), 601-610. doi:10.1016/j.ijnurstu.2005.09.002

[4] Nursing and Midwifery Board of Australia. (2014). NP Standards for Practice. Retrieved from http://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Codes-Guidelines/nurse-practitioner-standards-of-practice.aspx

[5] Nursing and Midwifery Board of Austalia. (2016). Registration standard: Endorsement as a NP. Retrieved from http://www.nursingmidwiferyboard.gov.au/Registration-Standards/Endorsement-as-a-nurse-practitioner.aspx

[6] Australian Nursing and Midwifery Accreditation Council. (2015). NP accreditation standards. Retrieved from https://www.anmac.org.au/standards-and-review/nurse-practitioner

[7] Gardner, A., Gardner, G., Coyer, F., Henderson, A., Gosby, H., & Lenson, S. (2013). Educating for Health Services Reform: Clinical Learning, Governance and Capability (CLLEVER) Study. Retrieved from http://theclleverstudy.blogspot.com.au/2013/06/welcome-to-cllever-study-cllever-study.html

[8] Helms, C., Gardner, A., & McInnes, E. (2017). Consensus on an Australian NP specialty framework using Delphi methodology: results from the CLLEVER 2 study. Journal of Advanced Nursing, 73(2), 433-447. doi:10.1111/jan.13109

[9] Helms, C. (2017). Consensus on a Specialist Clinical Learning and Teaching Framework for Australian NPs. (PhD), Australian Catholic University, Canberra, ACT.

[10] Australian Government. (2010). Health Legislation Amendment (Midwives and NPs) Bill (2010).

	Registered Nurse (RN)	NP (NP)
Practise Requirements		
Title Protection?	Yes	Yes
Regulation	• Regulated under the National Registration and Accreditation Scheme (NRAS) by the NMBA • *Registration (RN): NMBA*	• Regulated under the NRAS by the NMBA • *Endorsement (NP): NMBA* • *State/Territory-Based authorisation to account for jurisdictional legislation/policy where relevant (e.g Poisons and Therapeutic Goods Acts).* • A total of three years' FTE (5000 hours) experience working at the advanced practice level[11] is required prior to endorsement by the NMBA
Regulatory Standards and Guidelines	• Registered Nurse Standards for Practice[12] • NMBA Code of Conduct for Nurses[13]	• Registered Nurse Standards for Practice; • NMBA Code of Conduct for Nurses; PLUS • *NP Standards for Practice[14]; and* • *Safety and Quality Guidelines for NPs[15].*
Mandated Collaborative Arrangements	No	Legislated as a requirement for patient access to MBS and PBS subsidy for NP services[16].
Educational Requirements for Entry into Degree Programme	Completion of secondary education	• Bachelor of Nursing • Postgraduate qualification at Australian Qualifications Framework (AQF) Level 8 in a relevant clinical specialty area

[11] Gardner, G., Duffield, C., Doubrovsky, A., & Adams, M. (2016). Identifying advanced practice: A national survey of a nursing workforce. International Journal of Nursing Studies, 55, 60-70. doi:10.1016/j.ijnurstu.2015.12.001
[12] Nursing and Midwifery Board of Australia. (2016). Registered nurse standards for practice. Retrieved from http://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards.aspx
[13] Nursing and Midwifery Board of Australia. (2018). Code of conduct for nurses. Retrieved from http://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards.aspx
[14] Ibid.
[15] Nursing and Midwifery Board of Australia. (2016). Safety and quality guidelines for NPs. Retrieved from http://www.nursingmidwiferyboard.gov.au/Registration-and-Endorsement/Endorsements-Notations.aspx
[16] Australian Government. (2010). National Health (Collaborative arrangements for NPs) Determination (2010).

	Registered Nurse (RN)	NP (NP)
Experiential Requirements for Entry into Degree Programme	N/A	• Current general registration as a RN • A minimum of two years' full time equivalent (FTE) as a registered nurse in a specified clinical field and two years' FTE of current advanced nursing practice in this same clinical field
Length of Education Programme	3 years' FTE with 800 supervised clinical practice hours	Additional 1-2 years' FTE with 300 integrated professional practice hours in addition to 5000 hours (equivalent to 3 years EFT) required for endorsement
Level of Educational Programme	AQF Level 7: Bachelor's Degree Programme	RN education programme + AQF Level 9: Master's Degree Programme
Scope of Practice		
Diagnosis	No	YES
Prescribing	No, although allowed to supply and/or administer under limited protocol in some public sector settings.	YES
Request/Interpret Diagnostic Pathology	No, although some public sector roles facilitate access to limited diagnostic pathology under the authority of a medical practitioner.	YES
Request /Interpret Diagnostic Imaging	No, although some public sector roles facilitate access to limited diagnostic imaging under the authority of a medical practitioner.	YES
Referral to Medical Specialists	No	YES
Referral to Allied Health	Limited to within public sector (e.g. nurse to physio referral for inpatients.)	Yes, however NP referrals to allied health care not currently subsidised by MBS
MBS subsidy for services	No	Yes, for time-tiered professional attendances, telehealth, limited simple

	Registered Nurse (RN)	NP (NP)
		basic point-of care pathology, and limited plain-film X-Rays and ultrasounds.
PBS subsidy for eligible prescribed medicines	No	Yes, with limitations.
MBS subsidy for therapeutic and diagnostic procedures	No	No
Admission Rights	No	Yes, depends on local policy.

Scope of practice

With appropriate training a nurse practitioner can work as a primary care provider for a patient (eg in a Primary Care Practice) or a nurse practitioner may have the appropriate training to work as an expert in a discrete clinical area (e.g. in Emergency Medicine, Renal Medicine etc.)

The NPRG has developed feedback for both referred questions from the GPPCCC:

- **Rebates for non-doctor attendance at case conferences**
  - **Context:**
    - The GPPCCC referred two questions relating to NP attendance at case conferences to the NPRG:
      - What does the evidence say about the benefit of NPs attending case conferences?
      - To what extent do NPs currently attend case conferences? What are the main barriers to attendance?
    - Case conferences are understood to relate to items 735 to 880, and involve a minimum of three attendees. Currently, explanatory note AN.0.49 to these items notes that team members who may be included (although not rebated) in a multidisciplinary care team include a variety of allied health professionals, as well as registered nurses. This description is understood to include NPs.
  - **Suggestion:**
    - Include NPs in case conferencing MBS items 747, 750, 758 (participation as a member of a multidisciplinary case conference team in a case conference)
  - **Rationale (benefit of NP attendance at case conferences):**

- Case conferencing is an effective means of promoting care coordination in a multidisciplinary team.
- The evidence demonstrates that Australian NPs facilitate continuity of care, reduce fragmentation, improve cost savings, improve access to timely medicines, enhance education opportunities and improve the capability of the multidisciplinary team through NP-led case conferencing and care coordination. Given the value of NP-led case conferencing, it follows that NP attendance at case conferences is also high value.
  - NP-led care coordination improves the capability of multidisciplinary teams, reduces fragmentation, and helps facilitate continuity of care (Allnut 2018)
  - NPs leading case conferencing and care coordination teams leads to cost savings, timely access to medicines, enhanced education for support staff and advance care planning (Johnston et al 2016, Chapman et al 2016)
  - NPs in Australia can provide effective case management for aged care patients, reducing declines in quality of life (Arendts et al 2018)
- Effective case conferencing and care coordination has the potential to improve outcomes for populations disproportionately affected by the social determinants of ill health. NPs often work with persons disproportionately affected by the social determinants of health.
- Case conferences are also relevant for a patient whose primary health provider is an NP; in these situations, it would be counter-intuitive and inefficient for the NP not to be recognised as such across relevant MBS items.

– **Rationale (current attendance and barriers):**

- In many instances, NPs are already participating in case conferences as autonomous care providers working in collaboration with other health practitioners, including GPs. However, case conferencing that is initiated, lead and/or attended by NPs in the primary health care sector is inhibited by the restrictive nature of the current MBS items available for professional NP attendances and the inability for NPs to use existing MBS case conferencing items, which would improve the ability of NPs to facilitate and coordinate care, particularly of people with chronic and complex or comorbid disease.
- The inability of patients to access MBS subsidy for services where NPs lead, initiate or attend case conference creates a significant barrier in the in the facilitation of care by NPs in the private sector. Most directly, this reduces access for patients to subsidised care by appropriately trained health professionals, and subsequently the continuity of their care where a NP is involved in or the main provider of health care for that patient. The result is unnecessary and repeated duplication and fragmentation of care.
  - Consumer representatives on the NPRG have also emphasized that the lack of an item number and the resulting limitations on access fails to recognise patient choice of health provider, and limits quality of care particularly where a NP provides care that is otherwise not available.
  - Chavez, Dwyer and Remelet (2016) find the reimbursement and NP acceptance are significant barriers to NP practice in aged care across various healthcare settings.
- Beyond this, the lack of recognition in this space contributes to a perception that NPs have a limited role in case conferencing and care management, and fails to recognise the

role of NPs as not only members of the multidisciplinary team, but may also be a patient's primary or sole health care provider. It also creates an unnecessary barrier in building collaborative care environments with other health care providers.

- **Addition of a care facilitation item as part of allied health services referred from a GP Management Plan**
  - **Context:**
    - The GPPCCC referred two questions relating to NP attendance at case conferences to the NPRG:
      - Is there sufficient access to care facilitation services from NPs?
      - Is the benefit of care facilitation services from a NP equal to or greater than the benefit of an allied health appointment?
    - The NPRG interpreted care facilitation to mean providing support and advice to a patient in navigating their healthcare choices to maximise their ability to manage and participate in their own care, together with assessing, planning, implementing and evaluating care in partnership with the patient to meet their care needs.
    - The NPRG interpreted the second point as a question about the relative value of a care facilitation item alongside allied health referred items within the M3 section of the MBS review (items to which a patient can be referred by item 723 on team care arrangements). In other words, the question is asking whether a care facilitation item is equivalent in value to the existing allied health options available for a patient with five referred sessions from a 723.
  - **Suggestion:**
    - Create a care facilitation item for NPs (to which a patient can be referred via a 723) which would not count towards a patient's use of 5 referred allied health treatments.
    - Recognise that the role of care facilitation is more extensive than a single session, in particular where management of health problems such as chronic wounds is required.
    - Ensure that the NP item is not portrayed as an allied health item, as nursing is not considered an allied health profession. In addition, there is a risk that patient access to existing allied health items would be reduced if care facilitation by a NP was considered as allied health.
  - **Rationale:**
    - The NPRG believes there is insufficient access to care facilitation services initiated or provided by NPs. This is compounded by the lack of reimbursement available to subsidise care facilitation services led by an NP.
    - Care facilitation session made available as part of a GPMP alongside referred allied health sessions would provide high value care. Additional access to care facilitation by NPs is a gap in the MBS and goes beyond an item within Allied Health items referred to by a GPMP, not least because multiple touchpoints may be required for effective care facilitation. However, there are circumstances where a care facilitation session as part of referred allied health sessions could provide high value care.
    - More broadly, it is also necessary to recognise the variety of ways care facilitated by a NP may be utilised in the care of a patient. This includes either as an expert providing certain aspects of care or as a patient's primary care provider.

- In terms of comparing the relative value of a NP session, the net benefit of care facilitation services provided by a nurse is seen to be equal to that of a primary care provider or other allied health practitioner providing expert care. RCTs and other research demonstrate that there are no significant differences in outcomes for NPs and other primary care providers where the activity is in scope of practice for both practitioners (Laurent et al, 2004
- Each profession provides a unique lens to the prevention and management of acute and long-term health conditions associated with care facilitation services, and should not be undervalued. The *complexity* of decision-making and breadth of scope including assessment of and management of complex health problems, diagnosis, referral and initiation of treatments (including medicines) provided by NPs must be considered and reflected in an assessment of where the reimbursement of a NP care facilitation item may fall in relation to other providers.
- While care facilitation services support high-value patient care, the NPRG does not consider that care facilitation services should reduce access to existing allied health services through GPMPs. Given this, the NPRG is recommending that care facilitation be considered as a separate type of referred support under chronic care, and should not reduce the five available allied health sessions for patients with chronic care needs.

Australian College of Nurse Practitioners

Response to the MBS Review Taskforce

Report form the Nurse Practitioner Reference Group

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EXECUTIVE SUMMARY

The Australian College of Nurse Practitioners (ACNP) fully supports each of the recommendations proposed by the Nurse Practitioner Reference Group (NPRG) 2018 as part of the Medicare Benefits Schedule (MBS) Review.

The fourteen recommendations serve to improve the accessibility and availability of quality health care for Australian people, especially those in underserved and marginalised communities. The recommendations also create greater flexibility and choice for people, enabling them to access safe and high-quality healthcare delivered in the right place, at the right time.

The purpose of implementing the nurse practitioner role in Australia was to increase the flexibility of the health workforce and thereby increase access to care for Australian communities, particularly those in underserved and marginalised populations. Legislative changes in 2010, enabled eligible nurse practitioners to provide subsidised healthcare and treatment through the MBS and prescribe medications through the PBS, which has facilitated improved access to health services in community and primary care settings. Nurse practitioners provide affordable, safe, effective and accessible healthcare, often to underserved communities, particularly the aged, indigenous communities and the homeless.

The initial MBS arrangements, implemented in 2010, have not been reviewed in full since their implementation and therefore do not reflect contemporary evidence-based practice. These arrangements do not reflect the contribution and capacity of the care nurse practitioners are able to provide across the Australian Health system currently, and more importantly, into the future.

The current constraints of the MBS items and existing legislation contribute to fragmentation of care and unnecessary duplication of services, which negatively impacts on people, as well as healthcare expenditure. Implementation of these recommendations will allow nurse practitioners to navigate and provide quality care to people to the full extent of their scope of practice, improving access to care and affordability of services, without unnecessary constraints. Adoption by the Government of the fourteen recommendations proposed by the NRPG (2018) will provide nurse practitioner services greater flexibility to provide services to Australian communities, particularly marginalised and traditionally underserved populations. These recommendations will also significantly reduce the unnecessary duplication that the current arrangements create within the MBS.

The majority of nurse practitioners currently providing services subsidised by the MBS, do so in priority areas including residential aged care and rural and remote communities including aboriginal communities, mental health, chronic condition management and primary health care. The proposed recommendations relating to aged care, long-term primary care management and complex and comprehensive care, after-hours and emergency care and telehealth will modernise the MBS to ensure arrangements reflect the care currently provided by nurse practitioners and enable health consumers greater choice, and promote equity in accessing healthcare, irrespective of a person's location or socioeconomic circumstances.

ACNP RESPONSE TO THE REPORT OF THE NURSE PRACTITIONER REFERENCE GROUP (2018)

The Australian College of Nurse Practitioners (ACNP) is the national peak body for nurse practitioners, advancing nursing practice and consumer access to quality health care. There are currently 1839 endorsed nurse practitioners in Australia, and the ACNP represents over 60% of these, as well as a significant number of advanced practice nurses working towards the nurse practitioner role.

The ACNP Consultation Process

The ACNP consulted with in excess of 1000 members, receiving detailed responses from over 200 nurse practitioners in relation to this consultation. These nurse practitioners provided case examples and evidence to support each of the recommendations. A number of stakeholder organisations including consumer representative organisations, professional nursing organisations and colleges, and numerous Members of Parliament have expressed widespread support for all of the recommendations contained within this report. Member and Stakeholder contributions have been focussed firmly on improving access to quality health care for all Australian people, regardless of their circumstances, in an economically responsible manner.

The Nurse Practitioner Role

The role of the nurse practitioner is underpinned by nursing's philosophy of person-centred care. Australian nurse practitioners increase access to safe and high-quality healthcare and demonstrate significant benefits to the Australian community. They have demonstrated improved health outcomes and economic benefits for both communities and the health system more broadly. An extensive body of evidence exists to support these positive outcomes, as well as the economic benefits of the nurse practitioner role, much of it included in Appendix 1.

The Australian healthcare system has been slow to realise the full potential offered by the nurse practitioner role. This is largely due to the current legislative and regulatory restrictions placed upon nurse practitioners that significantly impedes workforce development and sustainability. The ACNP firmly believes that a commitment to reviewing and removing unnecessary barriers to the growth and development of the nurse practitioner workforce will assist towards achieving the full potential of the role, ensuring the future Australian health system has a flexible and adaptive health professional workforce capable of practising to their full scope of practice and abilities.

Access to Care

The fourteen recommendations are focused on increasing access to quality health care, and nurse practitioner services. If implemented, they will improve the affordability of nurse practitioner services, whilst still allowing for economic sustainability, and patient rebates aligned with the level and complexity of services provided. They also contribute to addressing some inequities of access to health care, particularly amongst vulnerable groups to whom nurse practitioners provide their services.

There are existing challenges in accessing timely healthcare in aged care, in rural and remote regions and within some metropolitan communities. These challenges continue to have a negative impact on the health outcomes of our communities, whilst driving up healthcare costs. Nurse practitioners and the nursing profession advocate for the rights of every person to access high quality care, wherever they may be, when they need it, and acknowledge that high quality care provided as close to the person as possible whether in a residential aged care facility (RACF) or in a person's home, is

in the best interests of the person, and promotes the economic sustainability of Australia's health care system.

Collaborative Arrangements and Collaborative Practice

The collaborative arrangements for nurse practitioners were introduced as part of The National Health (Collaborative arrangements for nurse practitioners) Determination 2010, as a mandatory requirement for nurse practitioners to become eligible providers/prescribers within the MBS and PBS. Nurse practitioners are the only health professionals that are mandated to establish collaborative arrangements to enable their patients to access the MBS and PBS. There is no system through which the effectiveness or existence of these arrangements is reviewed, or their ongoing relevance evaluated. The ongoing need for mandated collaborative arrangements is not apparent. Nursing by its nature is a profession committed to collaborative practice, and removal of the mandated requirement for collaborative arrangements will not impact on true collaboration.

A lack of clarity on the purpose, and evidence supporting the need for mandated collaborative arrangements has led to ongoing issues with diagnostic imaging, pathology and medical specialist services when requested by a nurse practitioner. Currently a number of pathology and radiology providers refuse subsidy or access to diagnostic investigations for health consumers when those investigations have been requested by eligible nurse practitioners. These refusals deny individuals care to which they are entitled, reducing access to health care, increasing risk, and generating unnecessary costs to both the individual and the health care system as repeat visits to alternative care providers are required in order to fulfil the required request. These refusals have been investigated and are based on misinterpretation of the Determination. Privacy breaches have also occurred in relation to these refusals, with results being shared by pathology and imaging providers with medical practitioners not involved in the patient's care, and without patient consent. These incidents have been reported by those affected to the appropriate bodies. Similarly, some health services and medical specialists refuse to accept referrals from nurse practitioners, unless they are in a collaborative arrangement with the medical specialist being referred to.

Removal of mandated collaborative arrangements will assist in eliminating this inequity. The ACNP has liaised extensively with the Federal Minister for Health, The Hon. Greg Hunt in relation to these issues, and continues to discuss with him the impacts on people choosing to see a nurse practitioner.

Additional Evidence

Our summary response to the fourteen recommendations from the NPRG is enclosed. The ACNP also provides additional evidence, case examples and implementation strategies to support the recommendations (Appendix 1) and further evidence (Appendices 2-4). Please do not hesitate to contact me should the ACNP be able to provide any further information.

Thank you for the opportunity to provide comment on this comprehensive and evidence-based report. The ACNP anticipates the outcome of this consultation.

Yours sincerely

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ACNP RESPONSE TO THE RECOMMENDATIONS

The ACNP endorses the fourteen recommendations of the Nurse Practitioner Reference Group (NPRG), on the basis that they facilitate increased access to health care for Australians by supporting the full utilisation and strengthening the nurse practitioner role.

Recommendation 1: Enable patients to access MBS rebates for long-term and primary care management provided by Nurse Practitioners

This recommendation will add significantly to the invaluable role nurse practitioners currently play in improving access to chronic condition disease management and primary care for the Australian community. Implementation of this recommendation will enable greater choice for people seeking healthcare, and reduce the current duplication of services that occurs when a nurse practitioner is required to refer an individual to a doctor so that they may access MBS rebates for these services, despite the nurse practitioner being fully capable of providing these services within their scope of practice. This will markedly reduce existing duplication of services by minimising unnecessary referrals, increase efficiency and most importantly assist to streamline and simplify the patient's episode of care.

Recommendation 2: Improve access to MBS-subsidised Nurse Practitioner services in aged care settings

People residing in Aged Care Facilities are unable to access rebates for many different services currently provided by nurse practitioners. Implementation of this recommendation will improve access to timely and high-quality health services for older people, where they live, in many cases avoiding the need for them to be transferred to hospital. Research provided within the Report of the NPRG highlights the significant contribution the nurse practitioner role is making within the aged care sector, together with the benefits of accessible nursing care, the expanded scope of practice, and flexibility inherent to the role. This evidence also highlights the additional benefits of nurse practitioners across aged care, which include the capacity to reduce avoidable hospital admissions and emergency department attendances, supporting palliative care in-place and reducing adverse events including medication errors.

Recommendation 3: Enable DMMRs and RMMRs to be initiated by Nurse Practitioners

Nurse practitioners complete the necessary assessments to meet the objectives of a DMMR or RMMR as a part of routine care. The ability for nurse practitioners to initiate subsidised DMMRs/RMMRs would assist to reduce service duplication and medication errors, and improve medication management in aged are settings, which are currently significant national priorities across the aged care sector in Australia. As autonomous prescribers, nurse practitioners and patients alike would benefit from facilitating access to safety and quality frameworks that improve the responsible and effective use of medicines in healthcare.

Recommendation 4: Significantly increase the schedule fee assigned to current MBS Nurse Practitioner professional attendance items

The current schedule fee assignment to MBS items available to individuals seeking care by nurse practitioners is inadequate and has not been reviewed against the actual cost of service provision since implementation almost a decade ago. The inadequacy of current arrangements is particularly acute when compared to other eligible providers with comparable experience and qualifications. In order to maintain many nurse practitioner services, individuals are often asked to pay a co-payment. While this is at times acceptable, it does have a negative impact on access for patients, including the vulnerable and marginalised populations nurse practitioners typically care for. In addition, the current scheduled fees for professional attendances are not commensurate with the acuity or complexity of services delivered by nurse practitioners. Implementation of this recommendation would therefore potentially improve access for communities by improving the viability of the role and contribute to workforce sustainability in the medium to long term. The ACNP would also recommend that the MBS subsidises 100% of the scheduled fee for vulnerable communities.

Recommendation 5: Longer nurse practitioner attendances to support the delivery of complex and comprehensive care

The comprehensive nature of the services provided by many nurse practitioners, as with many other health professionals, includes assessment, diagnostic reasoning, evaluation of care, health promotion and education, which results in many consults significantly exceeding the time allocated to the current MBS items. Nurse practitioners have a strong focus on preventative health care, as well as health promotion and education that enables and encourages people and their carers or families to participate in or self-manage their conditions. This at times, results in long consultations which may also have a positive effect in reducing unnecessary re-presentations to other providers or services, improving health and self-care, and reducing duplication of services.

Recommendation 6: Enable patients to access MBS rebates for after-hours or emergency care provided by Nurse Practitioners.

Nurse practitioners are a flexible workforce that is currently underutilised. Nurse practitioners are an adaptable workforce, and some provide 24-hour care, and or maintain a mobile or on call service, in order to meet the needs of their communities. Recognition of this needs to be reflected in the MBS items numbers available to people requiring after hours care. People within our communities do not always need, or access health care, within business hours, and may need assessment and treatment at any time, including after-hours and on weekends. It is often during these hours that people will present to an emergency department due to a lack of access to primary care services, or in fact, may delay seeking help until services are available.

After-hours care is currently not widely offered by nurse practitioners, patient rebates for after-hours or emergency care offered by nurse practitioners would facilitate innovative models in primary healthcare that reduce avoidable emergency department attendances and hospital admissions.

Recommendation 7: Enable patients to access MBS rebates for Nurse Practitioner care received outside of a clinic setting

Implementation of this recommendation would support the provision of timely, appropriate and sustainable primary care to those seeking care in situations that may fall outside of usual 'business hours' or settings. This is particularly relevant for people with disabilities that cannot afford to, or are unable to easily or safely leave their homes. The provision of these services by nurse practitioners should be enabled. This also supports the trans boundary model of care commonly provided by nurse practitioners, assisting individuals to receive care at home or within their community rather than tertiary health care facilities.

Recommendation 8: Remove the mandated requirement for Nurse Practitioners to form collaborative arrangements

The current mandated legislative requirement for nurse practitioners to seek a collaborative arrangement with a medical practitioner in order to become eligible to participate in the MBS and PBS is not linked with improved access to care, or improved health outcomes. The arrangement in itself, relates solely to the ability of a person to receive a subsidy for a health care service from the MBS (or PBS) and it does not act in any way to ensure or guide safe or evidence-based practice, true collaboration, supervision of clinical practice or mentorship. Collaborative arrangements for nurse practitioners are perhaps the most commonly misunderstood aspect of the nurse practitioner role in Australia, and this misinterpretation continues to create confusion and hamper the true integration of the role into Australia's health care system.

Collaboration is innate to the nursing profession, therefore there is no need for such a mandated requirement to be applied only to nurse practitioners. Therefore, the removal of collaborative arrangements will serve to promote and imbed the role, and enable it to realise its original intent as it has in many other countries around the world. This would be of particular benefit in areas including aged care, indigenous health and rural and remote settings.

Recommendation 9: Remove current restrictions on diagnostic imaging investigations requested by Nurse Practitioners

Implementation of this recommendation would enable individuals to access MBS rebates as entitled. Current restrictions mean that despite the fact that the scope of practice of a nurse practitioner enables them to competently, judiciously and safely refer for relevant diagnostic investigations, a person is not able to receive a MBS rebate unless they are referred by second provider. This means that an individual is then required to either pay the full, unsubsidised cost of these services, simply because they were provided by a nurse

practitioner, or seek a second consultation. As previously highlighted, this results in unnecessary duplication of professional attendance services in order to achieve the same outcome, which in turn potentially impacts on compliance and ultimately reduces access to equitable care.

Nurse practitioners in the public and private sectors currently request MRIs, CT-scans, bone-densitometry, plain X-rays and ultrasounds. Therefore, this is not an issue of patient safety, scope of practice, or patient acceptability. It is an issue of subsidy when a patient chooses a nurse practitioner as their care provider.

Recommendation 10: Enable patients to access MBS rebates for procedures performed by a Nurse Practitioner

Currently, many nurse practitioners are performing procedures within their scope of practice and skill sets, including ECGs, biopsies, pap smears and acute wound closure. However, individuals are only able to access a rebate for the professional attendance. This recommendation will see improved access to care and the reduction of duplication of services particularly in rural and remote areas, and in some circumstances, could avoid unnecessary hospital admissions and or attendances to emergency department for subsidised care.

Recommendation 11: Add GPs as eligible participants in Nurse Practitioners patient-side telehealth services

Patients in rural and remote areas, as well as aged care settings, often face significant challenges in accessing timely, convenient and affordable care. Telehealth may assist patients in consulting with a specialist, however there is an opportunity for greater emphasis on prevention in primary healthcare, as well as facilitating appropriate and comprehensive referrals to specialists by increasing access to telehealth services. In addition, this recommendation would facilitate communication and break down silos of information that naturally exist in healthcare. This recommendation will therefore increase the access of many patients to their general practitioner, with the nurse practitioner visiting the patient in their home or within a clinical or residential setting.

Recommendation 12: Add patients in community aged care settings to residential aged care telehealth items

As per the advice provided for recommendation eleven, implementation of this recommendation would potentially enable a greater level of care to be provided to people within community settings, avoiding preventable hospital admissions or emergency department presentations and create the ability for models of care to develop that would assist people to remain at home for longer, rather than becoming reliant on residential aged care services.

Recommendation 13: Create new MBS items for direct Nurse Practitioner-to-patient telehealth consultations

Increasingly nurse practitioners are the primary care providers for individuals, particularly in rural or remote locations. As with other providers, where a face to face consultation may not be feasible within the required timeframe, implementation of this recommendation would improve the ability of nurse practitioners to assess and manage health complaints, monitor progress, and evaluate a person's response to treatment. This would in turn inevitably help to avoid deterioration and unnecessary admissions to hospital. It would also reduce unnecessary travel and expense for individuals seeking care and allow indigenous people to remain on country. This is also an opportunity to enable more timely and accessible care co-ordination.

Often nurse practitioners need to conduct a review for a patient in a rural or remote location, and may not be able to visit at short notice, or within an appropriate timeframe. Some nurse practitioners with specialist skills cover a wide geographical area. Creating new MBS items for direct NP-to-patient telehealth consultations would improve the ability of nurse practitioners to monitor patient progress, and potentially contribute to avoidable patient morbidity and mortality, reduce unnecessary costs for travel expenses, and reduce unnecessary costs associated with admissions to hospital or emergency departments. This also presents an opportunity to enable more timely and accessible care co-ordination.

Recommendation 14: Allow telehealth consultations to take place via telephone where clinically appropriate

Not all patients in their home, aged care settings or in remote locations have access to other technology. Clinically appropriate telephone reviews should only occur where the person/client has already previously engaged with the health professional, and it should be predominantly used for review, or reinforcement of education.

Appendix 1

Detailed response to each recommendation including

- Supporting Evidence
- Implementation Strategies
- Case Examples and
- References

Recommendation 1: Enable patients to access MBS rebates for long-term and primary care management provided by Nurse Practitioners

The implementation of this recommendation will improve access to chronic condition disease management and primary care for the Australian community. This recommendation will enable greater choice for people seeking healthcare, and reduce the current duplication of services that occurs when a nurse practitioner is required to refer an individual to a doctor so that they may access a MBS rebate for these services, as well as associated allied health services, despite the nurse practitioner being fully capable of providing these assessments and referrals within their scope of practice.

Implementation Strategies

New item numbers unique to nurse practitioner services could be created, and this would also allow for accurate data collection on nurse practitioner services being performed, and we would strongly support a similar structure to the item numbers accessed by general practitioners.

Alternately, inclusion of nurse practitioners into the present MBS item numbers used by General Practitioners would support implementation, and we have included examples in Table 1 (appendix 2).

The MBS item numbers for general practitioners are presently under review, and the ACNP supports the recommendations made by the General Practice and Primary Care Clinical Committee in relation to Chronic Disease Management Items and Health Assessment Items. Therefore, the ACNP recommends that these changes also apply to nurse practitioners, and that the nurse practitioner item numbers are structured in a similar way.

Case Examples

Case Example 1.1
Rose is an 81-year-old who lives 105km from the nearest general practitioner, near the VIC/SA border, and is unable to travel for a Chronic Disease Management (CDM) plan. Even if transport could be arranged, she is unlikely to get an appointment due to the workload of the nearest general practitioner. A nurse practitioner has a practice in Rose's town, and there are also some allied health services available locally, some of them employed by the nurse practitioner, whose services cover three rural communities. Rose does not have the same access to CDM plans as those living closer to general practitioner services, however if the nurse practitioner was able to complete these, Rose could access appropriate local services without delay.

Case Example 1.2
Jenny is a 45-year-old woman who has a diagnosis of autism, bipolar disorder, psoriasis, asthma, sleep apnoea, diabetes, gynaecological concerns, cannabis abuse and obesity. Jenny has also been a victim of childhood sexual abuse, and in her adult life a victim of extreme family violence. She is a single mother of two adolescent children, one whom has schizophrenia. Her support needs and health care intervention needs are significant and complex. The nurse practitioner works within, and coordinates, the collaborative team of health providers required for Jenny's health care and psycho-social support. When needed the nurse practitioner facilitates hospital admissions and

advocates for Jenny to ensure the public health system understands her complex needs in relation to her disability, mental health, physical health and drug misuse.

Currently, the nurse practitioner is unable to complete a Mental Health Treatment Plan, although this is within her scope of practice, and she is co-ordinating Jenny's care, so Jenny also has to see a general practitioner. People with mental health concerns are often in situations of financial disadvantage and their health conditions complex. Their physical health is often compromised by their mental health concerns and lifestyle. Nurse practitioners are well placed to manage the overall health of this client group (Mental Health Commission of NSW 2016).

Case Example 1.3

A nurse practitioner worked for an aboriginal medical service, she was unable to access aboriginal health check and chronic disease management items for her patients/clients. The initial work up was undertaken by the nurse practitioner, who would then be required to refer to a general practitioner or Aboriginal Health Worker to approve and sign the care plan. Representing unnecessary duplication of services, this also impacts on the rapport and relationship established with the patients. Patients were also less likely to re-present to see an additional health professional just to obtain a referral, and have their assessment completed or signed off (Steven, Egger & Morgan 2018).

Case Example 1.4

Care coordination is critical to the health plan being successfully delivered for at-risk people with multiple and complex needs, multiple comorbidities and other impacting factors such as mental illness, disability, homelessness, poverty, domestic violence, problematic substance use. Successful management demands significantly more time to explain the treatment and educate the patient, especially with regard to self-management and follow-up. These direct care activities if done well, will deliver significant improvement in health outcomes and quality of life measures (Kirkman, Wilkinson & Scahill 2018).

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Recommendation 2: Improve access to MBS-subsidised Nurse Practitioner services in aged care settings

Provision of health care to people living in Residential Aged Care Facilities requires a major review, according to the evidence presented at the Royal Commission into Aged Care (Dillon 2019). Health Professionals are currently failing to meet the needs of this vulnerable population. It has been found that several important factors are contributing to this finding:

1. The number of aged care residents is growing and is projected to increase in coming years.
2. The average person living in a Residential Aged Care Facility has more chronic conditions with a higher acuity on admission to the facility (Henni et al 2019). Our population is living longer with multiple chronic diseases.
3. Residential Aged Care Facility financing supports low staff patient ratios, but the acuity of the resident has increased, requiring higher staff patient ratios, and a better skill mix.
4. Fewer general practitioners are interested in commencing or continuing RACF provision of health care in Residential Aged Care (AMA 2017 Aged Care Survey).

Nurse practitioners can support the delivery of high-quality health care in RACFs (Davey at al 2015, Arendts et al 2018, Currie et al 2019a). The present MBS item numbers do not support the provision of nurse practitioner services in Residential Aged Care (Davey et al 2015 & Currie et al 2019a). To achieve the best outcome in Aged Care, implementation of the recommendations from the Nurse Practitioner Reference Group will be essential, including Recommendations 1, 2, 3, 4, 5, 6, 8, 9, 10,11, and 14.

Access to MBS subsidised nurse practitioner services in Residential Aged Care would improve access to timely and high-quality health services for residents. Nurse practitioners are well placed to make a difference in Aged Care, and have the skills, scope of practice, and flexibility in their work to do so (Davey et al 2015). There is considerable evidence to support the benefits of nurse practitioner delivered care in Aged Care, including reduced hospital admissions, supporting palliative care in-place and reduced adverse events (Davey et al 2015, Currie et al 2019a, Henni et al 2019).

Nurse practitioners are a critical layer in the health system that is desperately needed in aged care (Henni et al 2019). Nurse practitioners provide holistic sustainable models of healthcare that produce positive outcomes for the resident (Henni et al2019). Benefits for residents include care coordination, collaboration with allied health and medical specialists, development and implementation of treatment plans, prescribing and deprescribing, ensuring follow up, provision of direct clinical care, and continuity of care (Davey et al 2015 & Currie et al 2019a). Many elderly persons spend long periods of time in emergency departments for minor health problems, these could be better managed at home or in the RACF, by nurse practitioners. Additionally, timely assessment can assist to avoid some adverse events or deterioration leading to hospital admission or presentation.

Nurse practitioners have the training and clinical leadership to assist the training and experience of the wider RACF health care workforce. Nurse practitioners support RACF patients, their families and the RACF workforce (Henni et al 2019). Building a nurse practitioner Aged Care workforce to support the required changes in Residential Aged Care will require improved access to the MBS to develop sustainable roles or practices (Davey et al 2015).

The AMA 2017 Aged Care Survey found that 65.92% of members saw there was an urgent need for more trained, experienced nurses in Aged Care, nurse practitioners are trained and experienced nurses, whose clinical leadership can support the future Aged Care nursing workforce. 13.55% of the AMA members have stopped RACF visits, 20.16% intended to decrease their RACF visits, 6.98% were not taking on new RACF patients and 8.53% will be stopping RACF visits within the next 2 years (by 2019) (AMA 2017).

Many aged care residents are brought to the emergency department in a state of early sepsis and confusion, often stemming from a simple infection such as a UTI, which if it had been detected earlier, could have been treated and had very little impact on the resident's health. One study conducted in 2015 involving two Australian emergency departments revealed that resident transfers accounted for 2.2% of all emergency department presentations, and over 17% of these were found to be avoidable (Morphet et al 2015). Further, one-third of RACF residents discharged from the emergency department could have been managed in the community (Morphet et al 2015).

RACF residents are regularly transferred to outpatient clinics for review. If nurse practitioners could perform the same review in the RACF, or by Telehealth, the additional costs of providing services within hospitals, and transporting residents could be avoided. Additionally, this is very stressful for the resident, disrupting their routine. Examples of where nurse practitioners could provide management within the RACF include insulin titration, cognitive assessment, and chronic pain assessment and management.

There are numerous opportunities for cost savings and improvements to quality of life for residents of Aged Care Facilities through enabling nurse practitioners to deliver services in Aged Care.

Implementation Strategies

As stated above this recommendation should not be a stand-alone strategy to improve the health care of RACF residents. It should be considered in conjunction with a large number of the recommendations of the Nurse Practitioner Reference Group. The ACNP recommends the need for urgent consideration of this recommendation due to the loss of general practitioners (AMA 2017) and the crisis in health care for the Aged Care patient group. The ACNP will assist in the growth of Aged Care Nurse Practitioner workforce.

New item numbers specific to nurse practitioner services should be introduced, with a similar structure to those available to General Practitioners, to allow for collection of data on nurse practitioner services. Alternately inclusion of nurse practitioners into the present MBS item numbers used by general practitioners in RACFs would also support this recommendation. The MBS item numbers for general practitioners presently include time-based consultations with the ability to see multiple residents in one day, examples are included in Table 2 (Appendix 2), and the ACNP would recommend the same ability for nurse practitioners.

The ACNP also recommends the addition of a Consultation item for over 60 minutes in Residential Aged Care Facilities.

Case Examples

Case example 2.1 – Palliative Care Nurse Practitioner

The general practitioner was not available to visit the RACF, so the facility contacted the nurse practitioner who attended. On assessment the resident was in distress, and in the terminal phase of a life limiting illness. Time was spent with the resident; the nurse practitioner listened to her fears and addressed her spiritual needs. The next of kin and staff were supported with a patient focused

palliative plan. Palliative medication was prescribed, and the general practitioner was informed. Not including travel time, the consultation took well over one hour, but every aspect of the consultation was important to the resident. Follow up daily visits were completed at the resident's request, and management of pain and other symptoms continued. The resident was unresponsive after 7 days and subsequently died. The nurse practitioner then visited to do the life extinct form. The nurse practitioner was informed by staff that the local General Practitioners don't provide this service anymore, so residents usually require hospital admission when treatment changes are required, or palliative care is required.

Case Example 2.2 Aged Care Nurse Practitioner

An elderly male is admitted to a RACF, he has metastatic bowel cancer and a partial bowel obstruction. His specialists have advised he is no longer suitable for surgery or chemotherapy. The patient has indicated he no longer wishes to return to hospital for future treatment, although his family want him to continue. The family and the resident are quite stressed in relation to the situation and their differing views on his care needs, however he is no longer able to visit his regular general practitioner to discuss his choices due to his declining mobility. A family meeting was 15organised15 to resolve the conflict in regard to his palliative treatment with the nurse practitioner, and this was successful, with the family now supporting his choices. A review of his medication and assessment of his physical and mental health occurred, and his palliative treatment plan was developed in accordance with his choices.

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Recommendation 3: Enable DMMRs and RMMRs to be initiated by Nurse Practitioners

Nurse practitioners work in primary care and aged care settings, this is a growing area of need in relation to medication safety. A medication review is an intervention that saves patients from harm, and admission to the health care system (DVA 2011, Stafford et al 2009 & Papastergiou et al 2013). Ruths et al (2003) found 76% of patients had significant medication related problems, which included adverse drug reactions, not aligning with best practice, or under-treatment. The benefit of a medication review is maximised by the timely application of the review process with prompt feed back to the prescriber and/or the multidisciplinary team (DVA 2011).

Medication Reviews (DMMR and RMMR) can currently only be initiated by a general practitioner. Low general practitioner numbers in rural areas and servicing aged care facilities could be limiting access to Medication Reviews. Limitations in timely patient access to a preventative assessment that improves both patient's health literacy on medication management and overall medication safety can have a critical effect on patient wellbeing and the cost of health care.

The present system involves the nurse practitioner identifying that a medication review is required and appropriate, through patient/client assessment and education. The nurse practitioner communicates the need for a Medication Review to the general practitioner, and the general practitioner consults the patient to complete the Review. The patient/client is often followed up again by the nurse practitioner to reinforce education. This adds many layers of complexity and cost to the system and the patient, along with extending the timelines of the process. Duplication of services and communication does not support best practice health care, and must add to the potential human error rate.

This current Medication Review process only provides access to subsidised medication reviews for populations who have access to a general practitioner, not the vulnerable groups in the community including indigenous communities, homeless people, migrants, and disability groups who may not. Nurse practitioners working in these communities have built relationships through consistent holistic care creating trust and supporting identification of need and when to initiation of these reviews.

A nurse practitioner initiated Medication Review could reduce the need for repeated reviews in the future, as the nurse practitioner model is based on holistic care with longer appointments that allow for ongoing prescriber reviews and medication education as part of routine nurse practitioner patient care.

A core activity of nurse practitioners is to de-prescribe many of the unnecessary medications taken by older people on admission to Residential Aged Care, with the consent of the resident and/or the family. Therefore, the initiation of RMMRs in Aged Care Facilities would be aligned with health care needs and be managed by nurse practitioners in collaboration with the patient, family and health care team.

Implementation Strategies

New MBS item numbers could be added specific to services provided by nurse practitioners, to allow for accurate data collection. Adding nurse practitioners to MBS item numbers 900 and 903 would also meet this recommendation, examples are included in Table 3 (Appendix 2), and we support parity.

Considering the cost to treat one fall related hip fracture compared to the cost of nurse practitioner initiated DMMR or RMMRs, this represents significant potential savings.

The full benefit of this item number may be influenced by the current restrictions on 20 reviews per month for pharmacists (Huxhagen 2017 & March 2014).

Case Examples

Case example 3.1

A nurse practitioner is working in primary care with approximately 2500 patients, almost half of these patients are over 50 years old. Approximately one third of these patients are on five or more medications, which meets the current criteria for a DMMR. With few general practitioners in the area, and only one full time general practitioner in this practice, DMMR numbers are low. Within the practice, a significant number of patients chose to see the nurse practitioner as their primary care provider. Referring to the general practitioner to complete the DMMR is duplicating care and duplicating the cost to Medicare for this referral, as well as delaying care. In rural communities where the same nurse practitioner has worked, there has been no DMMR access for the community due there being no local general practitioner. It is well known that with a multidisciplinary pharmaceutical approach, nurse practitioners can de-prescribe, and safely prescribe in the best interest of patient safety, and provide significant cost efficiencies to the PBS.

Case example 3.2

A nurse practitioner visits an elderly patient at home after discharge from hospital as she is not physically able to attend her GP clinic. Elderly patients have access to multiple home care services which support their ability to stay in their own home. However, her recent hospital admission for acute abdominal pain, urinary tract infection and chest infection has concerned her family, who have requested the nurse practitioner's assistance. Her hospital admission added two more medications to her 12 pre-existing medications. During the nurse practitioner's assessment, it became apparent that the patient was anorexic, with fluctuating confusion, reducing mobility, and a worsening respiratory condition. The nurse practitioner finds that she has been taking her inhaler capsules orally (Spiriva). This most likely accounts for her worsening respiratory condition, and increasing her risk of urinary tract infection. The nurse practitioner spends time auditing Joan's medications, and contacts the general practitioner to request a DMMR. The general practitioner is reluctant to do referral for an DMMR without seeing her, she cannot visit the general practitioner currently, so a referral is not completed.

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Recommendation 4: Significantly increase the schedule fee assigned to current MBS Nurse Practitioner professional attendance items

Patient rebates for nurse practitioner services are not currently commensurate with the level or value of the services being provided. This impacts on the out of pocket cost to the patient. If rebates are adjusted in line with nurse practitioner service value, more patients, especially those at a disadvantage, will be able to be bulk billed, and out of pocket costs reduced, increasing access to health care services. This measure will also enable nurse practitioner services to be financially viable, so access to nurse practitioner services is increased, and continues for multiple population groups in the Australian health community (Currie 2019a).

The schedule fees can be matched or benchmarked to other health practitioner Medicare item schedule fees. The schedule fee rates for the 4 nurse practitioner item numbers 82200, 82205, 82210, 82215 are less than 50% of the similar timed item number for allied health practitioners (see Table 4.1 - Appendix 2)

To sustain a primary care practice nurse practitioner practice (private practice) out of pocket fees are required (Currie et al 2019a). However, this is not always possible in the patient groups nurse practitioners most commonly provide services to: the elderly, the financially disadvantaged, rural and remote communities, indigenous communities, the homeless, and chronic disease patients with long term care needs (Currie et al 2018 & Smith et al 2019). This has been a major barrier to the growth of nurse practitioner services in this sector of the Australian health system (Currie et al 2019a & Smith et al 2019).

Nurse practitioner service costs and practice expenses are similar to expenses experienced by other health practitioners who provide services in primary or tertiary private health. However, with existing patient MBS rebates viable services/clinics are not common. Nurse practitioners have used many different measures to ensure that services continue, financially supporting the service with other income sources, limiting the services hours and working another role or job for an income or support the services with short term grants or scholarships (Currie et al 2019a, Poghosynn et al. 2019 & Davey et al. 2015). These barriers reduce the growth and sustainability of these services and do not promote the nurse practitioner role to advanced practice nurses.

The following case examples demonstrate the impact of the low patient rebates on patients, and nurse practitioner services. Nurse practitioners provide services which are not provided by other health professionals in areas of health need. These nurse practitioner services maybe popular and improve health outcomes of patients, but they are not financially sustainable (Currie et al 2019a & Smith 2019).

Case Examples

Case example 4.1

A nurse practitioner working in a successful rural primary health practice was supported by good patient numbers, two general practitioners, and an allied health practitioner team, but could not make the role financially sustainable without significant out of pocket patient costs. This rural health area was experiencing financial strain due to the drought, so limited numbers of patients could

afford to see the nurse practitioner. The nurse practitioner accepted a position at the local hospital. Within the year, one general practitioner retired, the other moved away, and the town could not find another general practitioner, so the only practice in the town closed down. All local patients now travel over 100kms to another town for primary health care or attend the hospital A&E service. The nurse practitioner is still a town resident and would operate a primary health care service if the nurse practitioner schedule fees enabled the practice to be financially viable. An operating service would also potentially attract other health practitioners back to the town, enabling greater access to primary health care for the local community.

Case example 4.2
A wound management nurse practitioner is working in a metropolitan area providing a chronic wound service, multiple local general practitioners refer patients to the nurse practitioner service. This specialty practice has had much success in healing wounds in shorter periods of time, thus reducing the health cost of future treatment (Appendix 4). With the costs of the dressing materials, many of the patients cannot afford more out of pocket costs so the service is provided one day a week and predominantly bulk billed. The nurse practitioner earns very little for these services, so supports it through full time employment in a public hospital. As a result of the limited hours, this service has a long waiting list, resulting in avoidable presentations to other services, and hospital admissions. Improvement in schedule fees for nurse practitioners could increase the hours this nurse practitioner could operate this clinic increasing access to this service, and reducing health care costs associated with avoidable presentations and prolonged healing time.

Case example 4. 3 – Women's Health Clinic
An Aboriginal Women's Health Clinic on a Queensland Island is conducted by a nurse practitioner employed by the Local Health Service. The Island is changing to an ATSI community-controlled health services model, in this service the nurse practitioner model will not be viable due to the funding gap. A recent experience demonstrates the funding gap. An appointment was made with the nurse practitioner to complete a pap smear. When the patient showed the nurse practitioner a concerning rash, it was biopsied and a referral to the local Dermatology clinic was written. After discussion and education about birth control, the patient consented to an Implanon insertion and this was also completed. The nurse practitioner could bill $49.80 for the 1-hour consult (also relates to recommendation 10). A nurse practitioner salary for the ATSI control community service would be between $61 and $67 per hour. The nurse practitioner consultation fee does not cover the salary or the consumables for the appointment. This service will not be continued after the transfer of service model. Presently no general practitioner will be able to provide the service either.

Implementation Strategies

Table 4.1 (Appendix 2) shows the benchmarking of nurse practitioner schedule fees to that of allied health practitioner MBS rebates. The allied health practitioners listed have provided constant health services to the Australian public in the primary health care sector for many years, and so have proven financially sustainable models on these rebate rates. Table 4.2 (Appendix 2) demonstrates suggested values against existing and proposed nurse practitioner time-based MBS items.

Potential benefits to improving schedule fees for nurse practitioners

- Reduced out of pocket costs, and ability to bulk bill disadvantaged patients
- Increased access to nurse practitioner services in Australian health community
- Patient choice of health care provider
- Increased specialty clinics in areas of need: Aged Care, Chronic Disease & Mental Health

- Improved satisfaction of this highly skilled and educated nursing workforce
- Development of new nurse practitioner services in areas of health care need

Cost Effectiveness

An increase in the MBS rebates available to patients/clients of nurse practitioners may not initially be considered cost effective, however if the possible outcomes of this recommendation are considered in totality it would be. A substantial increase in these MBS item number rebates could result in the significant savings to the Australian Health System. The proposed increases to patient rebates will allow for a more financially viable nurse practitioner services, therefore increasing access for patients, improving follow up services, resulting in more services where a possible cost saving may be generated (Currie et al 2019a). While it may seem that increasing rebates for time-based consultations could cost more, the increased opportunities for comprehensive patient assessment, preventative care, and patient education would offset that through savings. Patients of nurse practitioners have been shown to have improved outcomes at a lower cost (Lutfiyya et al 2017).

Cost saving examples:

1. A patient seeing a Wound Management nurse practitioner will potentially see healing of their chronic wound in 2/3 less time than in primary health care with a potential reduction in hospital visits (Appendix 2). 12 weeks of weekly nurse practitioner treatment at the increased rate would result in an increase of less than $800, which is significantly less than one hospital visit, or the cost of continued dressings by the practice nurse and general practitioner for up to 6 months.
2. A 50-year-old man with Diabetes is seeing a nurse practitioner specialising in Diabetes for regular follow up, education and timely expert management. He has a reduced HbA1C, from 11 to below 7, and now has reduced medication requirements and requires fewer additional medical interventions (Richardson 2014 & Daly 2017). The monthly nurse practitioner visits have cost the health system less than an additional $700 for the year, which would be less than one day in hospital or the costs of another prescribed medicine for one year to treat the elevated HbA1c.
3. The Weight Loss/Bariatric nurse practitioner who assists a patient lose 15kg of weight or 15% total body weight over the year, preventing the need for the patient to start both lipid management and hypertension management medication. The MBS increase would be less than $500 per year, with medication costing well above that to the PBS, and the other health practitioner appointments to treat the obesity related health issues.
4. The Paediatric nurse practitioner who treats infant skin conditions in 2 visits, with minimal need for follow up appointments. This service cost increase would be less than $200 and would likely reduce multiple presentations to general practitioner services. The present wait list for the clinic is more than 8 weeks, as the nurse practitioner supports the service by working another job.

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Recommendation 5: Longer Nurse Practitioner attendances to support the delivery of complex and comprehensive care

The recommendation proposes that a 60-minute nurse practitioner consultation should be added to the MBS. Many nurse practitioners provide services in excess of one hour, with a focus on the whole person, preventative care and education, as well as assessment and treatment of presenting problems. In specialist areas such as Palliative Care, Mental Health and Aged Care, the complexity of patient needs often leads to longer consultations (Kuluski et al 2017).

Implementation Strategies

Access to longer consultations should be applicable to all areas and settings, including consulting rooms, home visits, RACFs and non-clinic settings
Access to an appointment time of at least 60 minutes will reduce the need for some follow up appointments, as the complex assessment, diagnosis and treatment will have been completed. Table 5 (Appendix 2) reflects the suggested item wording for this longer consultation.

Although not included in this review the ACNP suggests consideration of patient rebates for nurse practitioner services in excess of 90, and/or 120 minutes due to the complexity of our patients, and the comprehensive nature of the services nurse practitioners provide.

Case Examples

Case example 5.1
A standard full assessment for Child Mental Health presentation is comprised of four 60-minute consultations. This requires a clinical assessment, interviewing both the child, parents, collecting collateral information from schools, and other health care agencies to formulation of diagnosis and plan treatment. Shorter consultations would result in the child taking more time out of school and the parents taking more time off work.

There are a limited number of these services in public health and in private practice, and this prolongs times to treatment for children, and often requires families to travel distances to access care. Increasing the access to these services with a longer item number for nurse practitioners will reduce families access issues, reduce family disruptions and reduce the family financial costs with travel, accommodation and loss of work time. Many families with a child who have significant Mental Health concerns have many competing demands and families don't manage to support their child to access necessary Psychiatric assessment and treatment unless access and flexibility in service can be offered. Early intervention is very important to preventing long term mental health concerns (ACEs 2019).

Improving access to these services will reduce the demands on these service in the public health psychiatry services, as well as the demand on general practitioners to manage these children.

Case Example 5.2
Nurse practitioners working with Aboriginal and Torres Strait Islander (ATSI) people have a definite need for a longer item number due to the complexity of many of the patients and the cultural requirements. Each consult can take a prolonged period of time, with many in these communities dealing with multiple chronic diseases and health issues.

Undertaking a comprehensive mental health and/or substance use assessment of an ATSI person within a nurse practitioner model of practice in a remote community starts with collecting already available information from the referral, arranging for an interpreter in many cases, and locating the person's house for a home visit (this will tie in with Recommendation 7). Home visits are usually required as ATSI persons are often fearful of going to the health centre because they may have seen relatives die at the 'clinic' and therefore worry about a similar fate happening to them even though the presenting issue is in most cases vastly different. The referred person is unlikely to engage with a clinician unless a 'responsible' relative is involved in the assessment. This isn't always clear from the outset; for example, the right relative might not be present and another relative will not be the appropriate person to take this role (Dudgeon et al 2013). The clinician will not necessarily be informed of this in detail so an alternative time/ place may need to be arranged.
If the correct people are present and willing to progress with the assessment process, care must be taken to do this in a culturally safe and appropriate manner. For example, there are gender-specific 'rules' that need adhering to such as dress codes for women, avoiding direct eye contact or front on positioning between men and women, etc.

Once 'trust' is established, the assessment can continue. Best practice Mental Health Assessment including taking a thorough history, Mental State Examination and Risk Assessment is lengthy and time consuming. This process will normally take an hour, even in a non-ATSI setting. Even the most straight forward treatment plan which follows on from the assessment and documentation of same will take an hour if diagnostics, medication education and prescriptions are required.

For these patients, the nurse practitioner will most like require a 90 or 120 minute consultation to achieve the best patient outcome. The longer appointment item numbers will be important to be able to continue to provide services to ATSI communities that are cost effective for these health services, as gap payments are not an option.

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Recommendation 6: Enable patients to access MBS rebates for after-hours or emergency care provided by Nurse Practitioners

Nurse practitioners have provided health care not only where, but when the Australian public need health care (Currie 2018). The Australian public need health care to be timely, not always within standard office hours. The ability to provide health care when it is need can be very important for the positive outcome for a patient. When timely primary health care options are not available, patients will attend an emergency department for services that could be otherwise attended to in primary health care. Nurse practitioners presently provide after-hours services in many emergency departments and public hospitals in Australia.

Changes in health occur at irregular times requiring the need for skilled assessment, diagnosis and treatment at any hour. Gaps in after-hours services filled by nurse practitioners could improve the care and outcomes for patients in many primary health care regions, including metropolitan, regional, rural and remote areas, especially for vulnerable populations. To ensure these services are possible, patients of nurse practitioners need access to rebates that allow for the provision of after-hours nurse practitioner services. Significant out of pocket fees for these services may not be supported by the population, who may (and do) choose to attend an emergency department as a cheaper alternative.

Implementation Strategies

New nurse practitioner item numbers would need to be developed in order to implement this recommendation, and allow for data collection. Alternately existing general practitioner item numbers for after-hours consults in consulting rooms and RACFs could be adapted.
The MBS system already has many suitable item numbers for health care provided after hours dependent on the urgency of the care required.
Tables 6.1 and 6.2 (Appendix 2) includes possible suggestions for changes to existing item numbers, or could be used for a similar structure.

Case Examples

Case Example 6.1
Peter's doctor has prescribed some oral and injectable morphine to help with his breathing. One of these can be given every two hours. Peter finds the injectable morphine helps more quickly than the oral liquid. The nursing home only has one registered nurse on duty during the day and after hours the registered nurse is on call, but she lives more than 40 minutes away. Peter often feels more anxious and finds it harder to breathe at night. He is too frightened to ask the staff to call the registered nurse to give an injection because he knows she has to be woken up and it will take a long time for her to arrive.

Peter becomes progressively weaker and more anxious. He becomes very unwell with a moist cough and dark yellow sputum on a Friday evening. He knows he needs to act quickly to avoid another hospital admission and asks the nurse to get a prescription for some antibiotics, but his regular general practitioner is not available to visit. An after-hours general practitioner service is contacted at 7pm but cannot attend until after midnight.

Peter has been admitted to the local palliative care service which has an on-call nurse practitioner available after-hours and on weekends. The nurse practitioner is contacted and arrives one hour later, assesses and diagnosis infective exacerbation of COPD requiring antibiotics, writes a prescription for the appropriate antibiotics and corticosteroid, and notifies his regular general practitioner of his condition, and the treatment plan. The medication is started before the after-hours general practitioner could attend, and a hospital transfer was avoided.

Case Example 6.2

A nurse practitioner working in a remote area health clinic was called in to see a female patient on a Sunday with a painful lower leg and mild shortness of breath on exertion. She had returned from Bali 2 days prior. She reported developing the leg pain in Bali a couple of days after landing there, she took regular paracetamol during the week there. She remembers having a similar issue 2 years ago on a holiday to Greece, after which she was admitted to hospital and had to take a tablet for a week. Her history, physical examination, and diagnostic tests including ultrasound, blood tests and ECG are completed. These confirm a DVT and a high risk of PE. She is started on Enoxaparin. After contact with the local hospital 230km away, road transport is organised, as her risk is now assessed to be lower, and does not require the RFDS. Without a nurse practitioner working on call at weekends all cases like this would require a RFDS flight costing more than $10,000.

In a 15-month period this nurse practitioner saw 125 after-hours emergencies. 40 required evacuation via mine ambulance after assessment and early treatment. In this period there was a reduction of RFDS evacuations to 2, from 42 in the previous year. This is a reduction of approx. $10,000 per flight, or $400,000. More services like this are necessary, and all of the recommendations will assist in increasing the availability of these services.

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Recommendation 7: Enable patients to access MBS rebates for Nurse Practitioner care received outside of a clinic setting

The ANCP supports the need for patients of nurse practitioners to have access to MBS rebates which facilitate the provision of care at the location, and time it is required. With the diverse population that nurse practitioners provide services to, the location of care can often be outside of a clinic setting. The provision of services in these out of clinic settings ensure the provision of patient-centred care. Locations could be grouped as follows:

a) In home visits. This would be seen to provide services for aged care patients, mental health clients, disabled or immobile patients, and patients without the ability to be seen in, or travel to a clinic or facility. This would be different from after-hours home visit service.

b) Clinics or consultations completed in non-standard clinic facilities i.e. regional clinics in town halls or rural facilities not normally used to provide health care services, or homeless or domestic violence housing facilities, ensuring the safety and mental health of the patient is priority in the provision of these services.

c) In hospital visits. The provision of health care to patients in private hospitals for specialty services including diabetes management, pain management, breast cancer care, mental health services, etc. This would support the multidisciplinary team care of these patients ensuring continuity of care, and reducing length of stay and readmission rates.

Implementation

A new range of item numbers would need to be developed in order to implement this recommendation, and collect data. Alternately, existing items numbers could be adapted, or used as a guide for structuring the new nurse practitioner items. Examples are provided in Table 7 (Appendix 2).

Case Examples

Case example 7.1
A Palliative Care nurse practitioner provides at home palliative care support for the patient wishing to die at home. At home services provide support for the patient and family members, ensuring the patient is able to stay at home with palliative team care support. This reduces the need for admission and reduces unplanned hospital admissions.

Case Example 7.2
A nurse practitioner works with clients requiring health care services in non-traditional settings such as domestic violence accommodation, community organisations, boarding houses, motels, caravan parks etc. providing health care services to patients at high risk, isolated and severely disadvantaged, with multiple and complex health needs. This supports vulnerable population groups and prevents emergency admission when possible.

Case Example 7.3
A Perioperative nurse practitioner working with surgeons at private hospitals to complete the pre, intra and post-surgical management of patients. The average surgical patient's surgical risk is increasing with more patients presenting for elective surgery with complex chronic disease and/or are older. Ensuring a good outcome requires an integrated team effort. Many types of surgeons are

finding the inclusion of a Perioperative nurse practitioner into the team improves the management of these complex patients and ensures best practice, with on time discharge from hospital and reduction in unplanned returns. The Perioperative nurse practitioner supports these complex patients with their combined generalist and surgical skills, so they require access to hospital-based MBS item numbers to ensure these services don't trigger more out of pocket costs for the patients (Coventry 2017; Rowan et al 2016; Robles et al 2011; Abraham 2011.).

Case Example 7.4

An elderly woman cared for at home by her family, had not seen her general practitioner for over two years as she was bedridden, in vegetative state, although her prescriptions were regularly provided. The patient deteriorated, so the nurse practitioner was asked to review the patient, and held a family discussion regarding the options of a transfer to hospital or palliative care review. The family requested palliative care. The patient's general practitioner was called, but was unavailable, and the practice did not offer home visits. The nurse practitioner completed the palliative care request form that requires the general practitioner's signature. The nurse practitioner contacted another general practitioner who signed the referral. The palliative care doctor visited the patient at home and reviewed the patient - palliative care services were commenced, the patient died at home in comfort, in the company of family a few days later.

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Recommendation 8: Remove the mandated requirement for Nurse Practitioners to form collaborative arrangements

Collaboration is nothing new to nursing as it is the normal practice for nurses to work in multidisciplinary teams to meet the complex health needs of client.

The Collaborative Arrangements relate to the patients/clients of nurse practitioners having access to the MBS and PBS, however the intent of the nurse practitioner role was to facilitate equity of access to health care for patients, particularly in areas of need. The condition of collaborative arrangements appears to run counter to this aim because, for some, they restrict the ability of nurse practitioners to establish themselves in private practice, or work in remote areas.

The success of a collaborative arrangement is not guaranteed and is underpinned by many variables, such as the medical practitioner's understanding of the nurse practitioner role and collaborative relationship, and their availability and willingness to collaborate. These variables present multiple impediments to nurse practitioners' clinical practice and therefore patient access to care. There is no evidence that the Collaborative Arrangements improve patient outcomes, patient safety, or cost effectiveness of nurse practitioner care.

Addressing the deficits in primary health care would realise optimisation of the nurse practitioner role, enabling full scope of practice without barriers such as the Collaborative Arrangements or limited access to MBS (Poghosyan, Boyd, & Clarke, 2016). The nurse practitioner role does increase access to care, is cost efficient and influences social change from a health care perspective (Grant, Lines, Darbyshire & Parry, 2017). Nurse practitioners are unique in their transformative approach to health care – they shape and develop services according to the needs of their patients from a holistic perspective (e.g. considering the determinants of health affecting a particular patient) (Carryer & Adams, 2017).

Removal of the Collaborative Arrangements (CA) will enable more nurse practitioner roles to develop, particularly in rural and remote areas, and in those areas where medical practitioners do not provide coverage of services, such as in Aged Care.

The ACNP strongly supports the removal of the requirements for a collaborative arrangement under the Determination. Recent objections to the removal of the Collaborative Arrangements have contained evidence of ongoing confusion and misinterpretation of the Determination. Some professional healthcare bodies erroneously view collaborative arrangements as enabling some sort of control and oversight of nurse practitioner practice, however also express concerns about the medicolegal responsibilities they may be taking on when entering a collaborative arrangement. Endorsed nurse practitioners are professionally accountable for their own practice, as determined by the Nursing and Midwifery Board of Australia.

If such restrictions on nurse practitioner practice are removed, allowing nurse practitioners to work to their full scope of practice, there are significant savings yet to be realised by the Commonwealth (Oliver et al 2014; Smith et al 2019), as well as the potential to increase access to care in regional and remote areas.

Case Examples

Case example 8.1

A nurse practitioner had been working in a rural community for 6 years. When she entered into a collaborative agreement with the general practitioner, he was very supportive and the team relationship was excellent. The general practitioner moved away and another general practitioner took his place who wasn't familiar with how nurse practitioners work. The new general practitioner decided they did not want to continue with a collaborative arrangement resulting in the nurse practitioner no longer being able to practice in that community.

This is a real risk, other examples are in rural and remote communities when general practitioners do not stay for long or where locums are used as fill ins during the general practitioner absences, nurse practitioners potentially have collaborative arrangements withdrawn and not able to work based on this.

Case example 8.2

A nurse practitioner has a collaborative arrangement with a general practitioner (written). They both know that regardless of this, and despite the fact that they work 200km apart, and never physically work together anymore, that they would (and do) call each other to discuss any patients they are unsure about. They catch up annually and 'renew' the agreement, but in actual fact, they are colleagues, and the collaborative arrangement changes nothing. The nurse practitioner also communicates with her patient's nominated general practitioner/s, with the consent of the patients, as the collaborative arrangement actually does nothing to ensure that their own general practitioner is included. The nurse practitioner routinely writes update letters to general practitioners. The nurse practitioner has patients referred by medical specialists, and patients are discharged from the local hospital into her care. Specialists truly collaborate with this nurse practitioner, and she collaborates with the wider health care team. The collaborative arrangement changes nothing at all in the nurse practitioner's actual practice, but she has had issues with it being misinterpreted; the nurse practitioner has been asked which supervising doctor she is 'reporting to'.

Case example 8.3

A nurse practitioner specialises in sexual health, sometimes patients choose this service as they feel more comfortable than with their family general practitioner for some things. The nurse practitioner communicates with the wider health care team where appropriate, and with patient consent. This practice is now closed, the nurse practitioner was unable to continue as when she was sending pathology requests and samples to the local provider (who also rented collection space in her clinic), they were not sending back the results. Upon investigation, the pathology providers were determining who the nurse practitioner would likely have a collaborative agreement with for each individual patient and sending the results there instead. The company refused to change this practice. Patients were complaining about breach of privacy. Local general practitioners were complaining that they now had an obligation to follow up patients they did not even know. The complaints and the stress associated with the breaches of patient privacy led to the closure of the practice.

Case example 8.4

Several patients of a rural nurse practitioner have been turned away by radiology providers to have their requests 'rewritten' by general practitioners.

A patient was assessed by the nurse practitioner with a suspected wrist fracture, and referred for an x-ray. This patient was turned away by the radiology provider. She was sent to a local GP clinic, to sit in another waiting room, in pain, to get another piece of paper. She did, however, return to the nurse practitioner with her films, and her story, after quite a delay, and naturally the report went to the general practitioner, not to the nurse practitioner.

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Recommendation 9: Remove current restrictions on diagnostic imaging investigations requested by Nurse Practitioners

The ACNP agrees with the recommendation of removing current restrictions on diagnostic imaging investigations subsidised under the MBS when requested by nurse practitioners.

This recommendation follows on, and should be included with Recommendation 1 and 4.
If nurse practitioners are to care for those with chronic disease, and for those marginalised and vulnerable people in our community, it is essential that they are able to provide a comprehensive service that is equitable and includes the ability of their patient to access a MBS rebate for diagnostic imaging.

As the NPRG notes "*this recommendation is not about increasing the NP scope of practice, as NPs can request any diagnostic investigation within their individual scope of practice*".
Nurse practitioners already request a wide range of diagnostic imaging in the public and private health sectors, so this does not reflect an extension to scope of practice, but it will ensure equity of access for patients.

Recommendation 9 is about health care being provided to people that is accessible for all, especially to those who are marginalised and vulnerable. This health care should be provided in a timely and cost-effective manner whilst not financially disadvantaging any person whether they are in the primary, community or public health systems.

Implementation

A table of diagnostic imaging item numbers suggested is included in Table 8 (appendix 2).

Diagnostic radiology investigations can be important to assist with diagnosis, develop a treatment plan, and help monitor a wide-ranging variety of illnesses (Health direct- diagnostic-imaging, Merli et al 2019, Taqueti et al 2017). There is also a request that Bone Densitometry be included in the diagnostic imaging investigations as this testing forms part of the clinical guidelines in the prevention and management of Osteoporosis (Osteoporosis Australia 2017).

Case Examples

Case example 9.1
A 53-year-old female presented to see the nurse practitioner. The patient's preference is to see the nurse practitioner because she works away from home and cannot access her hometown health service/GP clinic. During the consultation about an unrelated health issue, the nurse practitioner noted on examination a large nodule on the right side of her neck and suspected this could represent thyroid enlargement.
The patient was sent for an ultrasound of the neck mass to ascertain if further treatment was needed, and the report suggests possible thyroid cancer. After the test, it is arranged for the general practitioner to see the patient. The general practitioner gave the patient the results and organised an immediate referral to a specialist.
The patient was unable to seek Medicare reimbursement for the Ultrasound, as it was ordered by the nurse practitioner.
Cost to patient was $109.10
If the patient received the Medicare rebate, they would have been out of pocket $16.35.

Case example 9.2
A patient with a definitive breast lump needed to wait a week until the visiting general practitioner could sign the mammography referral, as she could not afford to pay the full cost of the test. These delays are common occurrences within the practice which detracts from best practice patient care. There is stress on the patient awaiting the delayed test, and the potential to delay treatment which could affect the patient outcome. This then has the potential of increasing the time she needs to spend away from gainful employment, family and community.

Case example 9.3
A patient who is a regular client of the nurse practitioner presents with menorrhagia and dyspareunia. The guidelines for investigation and treatment clearly map out the investigation plan, a Pelvic Ultrasound is recommended. Despite following the guidelines, the nurse practitioner has to rebook the patient with a general practitioner so a Pelvic Ultrasound request can be completed. This is an additional cost to the patient if it is not a bulk billing practitioner. Also, there is an increased waiting time to get an appointment with the general practitioner to order the test, and a burden on Medicare for duplication of services.
Cost to the patient if the nurse practitioner orders the Pelvic ultrasound is $60.00. If the Medicare rebate applied, it is $9.00.

Case example 9.4
A general practitioner and nurse practitioner work together in a local medical practice. The general practitioner was away on extended leave and asked the nurse practitioner to care for their home visit patients.
A 75-year-old man, mostly home bound, with multiple co-morbidities and poor mobility was seen by the nurse practitioner on a home visit. He was complaining of an aching leg. On examination there was minimal swelling and a positive Homan's sign. The nurse practitioner requested an Ultrasound for his leg. The Diagnostic Imaging company refused to complete the test without a general practitioner referral. The nurse practitioner contacted another general practitioner from the practice who on this occasion phoned the Diagnostic Imaging company and then sent a new referral. The nurse practitioner was included when results were sent out, and the patient continued to be managed by the nurse practitioner.
This demonstrates a waste of time in the nurse practitioner and general practitioner rearranging the referral. Also, there was a delay in diagnosis and delay in treatment which has the potential to increase recovery time or place extra burden on home care services.

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Recommendation 10: Enable patients to access MBS rebates for procedures performed by a Nurse Practitioner

Improved outcomes by increasing access, reducing patient costs and improving timely provision of services are the key benefits for this recommendation. It has been noted that the ability of nurse practitioners to provide skilled and timely treatment for patients is key to improving health outcomes.

Nurse practitioners have been performing the skills and tasks to provide holistic care of patients in emergency department since inception of the nurse practitioner role in Australia (Wilson 2008). Other nurse practitioners have the skills and training to perform many highly technical diagnostic procedures or treatment procedures (Scherzer 2017, Hains 2016, Abraham 2011, Smith 2017). The skill and ability of nurse practitioners to perform procedures is dependent on their scope of practice, however patients of nurse practitioners have little or no access to procedures performed by nurse practitioners as there are no rebates currently available.
As discussed in other recommendations nurse practitioners provide services to patient groups who don't always have access to regular primary health care, such as the elderly requiring in-home care, rural and remote communities, ATSI communities, homeless and disadvantaged population groups and people with chronic disease. The ability to provide procedures for these patient groups will improve both timely care and reduce the health care burden in some areas. One important area that a reduction in the health care burden will be in aged care. It has been noted in several of the case examples from emergency department nurse practitioners that a significant number of RACF patients are presently sent to emergency departments from RACFs for minor procedures, such as suturing or IDC insertion. These transfers could be significantly reduced by adding to procedural item numbers for patients of nurse practitioners. This would not only reflect a significant cost saving, but would reduce the psychological effects and trauma of transferring elderly residents to acute care facilities. Having nurse practitioners in RACFs providing holistic care may reduce the complexity of interventions required with early diagnosis and preventive health programs.

Implementation Strategies

The ACNP would assist with the implementation of this recommendation with supporting education on the use of procedural item numbers. The ACNP will support members to use the MBS system within the spirit of the intent for the schedule.
New procedural numbers are not required as adding nurse practitioners to existing item numbers should meet the recommendation, however it may be more useful to create a separate list to allow for data collection. Implementation of these procedure numbers should at the same rate as the primary health care item numbers as the consumables and facility costs for these procedures are the same, independent of the practitioner providing the service (Table 9 Appendix 2).

Case Examples

Case example 10.1
A nurse practitioner is providing home care visits for a patient with Multiple Sclerosis, whose husband is her carer. The patient usually self-catheterises three times per day, but due to illness has not managed it today. She is acutely uncomfortable with retention of urine, and has developed a slight fever. The nurse practitioner attends a home visit, performs the catheterisation, completes an

assessment, orders pathology, and commences antibiotics for urinary tract infection. The nurse practitioner arranges for the patient's husband to be educated in bladder catheterisation. The nurse practitioner cannot bill for a home visit, or the procedure. This episode of care prevented ambulance transport to an emergency department, and a potential hospital admission (In the past this was usually a 3-day admission). In this patient group kidney and urinary tract infections occur frequently but can become a severe health event causing complications, hospital admissions and procedures.

Over 75,000 acute UTI related hospital admissions occurred in 2015-2016 according to AIHW data. They make up 24% of the acute potential preventable hospital admissions, hence if adding nurse practitioners to the potential access for this item number decreases some hospital admissions, it is a cost-effective exercise. The average cost per admission for kidney and urinary tract infections with complications was $9,000. The average cost per admission ranged from $5,500 at one hospital to $14,600 at another hospital (AIHW 2017).

Proposed cost using NP model of care in Home visit

1) Cost of Home Visit - as per Recommendation 7 - access to item number 47 - Fee $133.50
2) Cost of procedure – currently Item 36800 Fee**:** $27.60 **Benefit:** 85% = $23.50
   Total cost = $157.50

Case example 10. 2

A nurse practitioner has a patient present after accidentally cutting his thumb with a knife at home. The nurse practitioner assesses the wound and determines that it needs suturing. Rather than sending the patient to the local emergency department, the nurse practitioner sutures the wound and organises the follow up appointment to remove the sutures and assess healing. A general practitioner is not on site in the regional practice and this episode of care is within the nurse practitioner's scope of practice.

Proposed cost using NP model of Care in Primary Care

1) At least 20-minute 82210 (recommendation 4 increased price) $52.95
2) Suturing of skin repair of wound less than 7cm superficial item number 30026 Fee**:** $52.20 **Benefit:** 85% = $44.40

Total cost to MBS $ 97.35

Cost of sending to emergency department $1608
(IHPA 2016)

Case example 10.5

A nurse practitioner who is trained and skilled in assessment, diagnosis and treatment of skin conditions including skin cancer is providing a service in primary health care with significant out of pocket cost for patients. All the pensioner and lower socio-economic patients are referred to the local public health system for lesion removal, where it is required. Other patients have their biopsies and lesion removal completed with significant out of pocket costs. With access to nurse practitioner procedural items, there would not be a need to refer many patients (unless specifically medically required e.g. too large a lesion for removal, site pre-specific, flap repair required, or needs general anaesthetic, etc.) to the public health service delaying treatment and doubling the service requirement.

Proposed cost of nurse practitioner model of care

1. Consult at least 20 minutes 82210 (limited as does not include procedure time) (recommendation 4 increased price) $52.95
2. Diagnostic Biopsy of skin Fee $52.20 85% $ 44.40 per biopsy
   Total Cost $ 97.35

Malignant skin lesion removal post pathology results

1. No consulting item number with this item
2. Malignant skin lesion removal and repair less than 6mm item number 31356 Fee $221.35 85% $188.15
3. This includes after care of when a patient wound assessment removal sutures and discuss about pathology results and continued monitoring for future skin malignancies.

Treatment $188.15

Total for treatment of one skin lesion $285.50

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Recommendations 11-14 are discussed as a group:

Recommendations 11 – 14 relate to the MBS moving to meet the health-related needs of our communities with the current technology, rather than what nurse practitioners can do or provide (Balestra 2018, Neville 2018 & Fathi 2017, Cusalk 2008). The Geography, population disbursement, and our Ageing population requires that our health system evolves with more Telehealth options.

The available Telehealth nurse practitioner item numbers are under-utilised for several reasons, including the challenge of sustaining nurse practitioner services in private practice. These recommendations to improve patient access are not stand alone, and should be considered in conjunction with all 14 Recommendations.

Recommendation 11: Add GPs as eligible participants in NP patient-side telehealth services

This recommendation will support multiple patient groups that nurse practitioners service and where access to general practitioners is limited (Balestra 2018). Such patient groups include elderly and mental health clients confined to the home, RACF patients, rural and remote clients, and other home visit clients (Balestra 2018, Cusalk 2008, Neville 2018 & Fathi 2017).
This recommendation supports several important patient/client focused health policies for Australians that support the aged care and palliative care population wanting to stay in their own home as long as possible. Immobility and the inability to access these services can prevent this choice often requiring unplanned admissions to acute care facilities or RACFs (Cusalk 2008). The use of Telehealth into RACFs may also reduce the number of general practitioners leaving RACF medicine (AMA 2017).
Telehealth general practitioner access for nurse practitioner patients in rural and remote areas could improve access to some people who don't have a general practitioner or regular general practitioner services, as general practitioners could provide services for regional areas without leaving their metropolitan clinic office. These services could also be used to support regional areas on a consistent basis, or as leave support when a general practitioner in the local area is on holidays. Having access to nurse practitioners via Telehealth would also help those general practitioners whose clients would benefit from a specialty nurse practitioner service such as Diabetes (Insulin Pumps), Paediatric mental health, Paediatric Dermatology and chronic and acute wound management.

Case Examples

Case example 11.1
A nurse practitioner visited a RACF to see a new resident with who was recovering from an acute respiratory condition. The 97-year-old male was improving on dexamethasone 4mg per day. The treating general practitioner was not able to attend the RACF for the next 3 days. The general practitioner was not comfortable to reduce the medication dosage without personally seeing the patient. A Telehealth appointment would have achieved a timely reduction of medication for this patient, avoiding potential adverse effects.

Case example 11.2
Scott is 43-year-old with a T5 incomplete spinal cord injury, requiring support with coordination of complex clinical co-morbidities. Adding a general practitioner as an eligible participant in a nurse practitioner patient-side telehealth service would significantly benefit Scott. Nurse practitioner home visits with patients such as Scott can include the general practitioner in team-based care for patients with more complex needs.

Recommendation 12: Add patients in community aged care settings to residential aged care telehealth items

Adding access to telehealth for residents in aged care facilities would potentially increase access to primary care and specialist services. Any measures that reduce the need for unplanned admissions to emergency departments and hospitals should be supported. Telehealth services that increase the access of aged care and palliative care patients to necessary health will improve patient outcomes (Balestra 2018 & Cusalk 2008).
Using Telehealth could reduce the number of RACF residents who required transfer to public and private consultant clinics in major hospitals and the appointment could be completed with the nurse practitioner able to complete the required assessments, documentation and medication changes.

Case Examples

Case example 12.1
Mrs C, an 89-year-old frail patient with dementia has a BCC on her nose. She was transferred to a private clinic for assessment of the lesion following a general practitioner referral. The transfer has resulted in marked agitation and deterioration of her mental status. She required restraint to be assessed by the surgeon. The surgeon considers the surgical treatment of this lesion to not be in the best interest of the patient. The surgery would require a prolonged dressing treatment increasing agitation for the patient, Telehealth assessment with support from a nurse practitioner could support appropriate specialist clinical decision making for patients such as Mrs C.

Case example 12.2
Presently elderly patients are required to transfer back to hospital for follow up appointment post-surgery. Telehealth appointments with the nurse practitioner could allow the patients to have the appointment in their facility with the nurse practitioner attending to the physical assessments the specialist requires and making the timely order and appointment changes.

Recommendation 13: Create new MBS items for direct Nurse Practitioner-to-patient telehealth consultations

Equity of health care is a key to the MBS system, and all patients in Australia should have access to the services provided by nurse practitioners. This is particularly important in relation to many of the specialist nurse practitioner services available, including in the areas of Diabetes, Bariatrics, Wound Management, Mental Health, Pain Management, and Renal care (this is not an exclusive list) (Balestra 2018).
This service would improve the lives of many families and carers who are supporting the health of special groups such as people receiving palliative care, and disabled or frail people. Access to a nurse practitioner via telehealth could reduce presentations to emergency departments and hospital admissions, supporting follow up care for people in rural and remote areas, and those with poor mobility.

Case Examples

Case example 13.1
Rural and remote area nurse practitioners would be enabled to complete follow up appointments with patients previously seen at clinics in other regional towns or remote properties in the week or month following their visits to assess treatment outcomes.

Case Example 13.2
Nurse practitioners working in sub specialty areas would be enabled to complete follow up appointments with patients in areas outside the normal acceptable travel distance. Being able to provide timely treatment and education for patients with ongoing health issues will improve outcomes.

Recommendation 14: Allow telehealth consultations to take place via telephone where clinically appropriate

Although Australia's technological systems are improving, the distance and geography of our country impacts on the reliability and consistency of our internet services. Consequently, nurse practitioners could be able to continue treatment using telephones as required, and where appropriate.
Some elderly clients who are receiving home care may not have access to current working internet services to support telehealth while some disadvantaged groups of clients often don't have access to internet services to support telehealth services. These groups should have access to follow up care via telephone where appropriate.

Case Examples

Case example 14.1
A nurse practitioner working in a Primary Health care setting completes follow up contact with clients who are homeless or living in accommodation in which regular internet access is not available. These clients may not able to attend regular clinic visits due to mobility, mental health or security issues.

Case example 14.2
Nurse practitioners working in Aged Care or Palliative Care completing follow up on the progress or response to the treatment instigated during a home visit, for patients with mobility issues preventing access to a clinic, but not requiring another in home consult.

Case example 14.3
A nurse practitioner working in complex diabetes care completing a follow up on progress on insulin therapy, assisting with adjustment and education to ensure effective management continues. Short follow up call, not requiring in person consult.

Implementation Strategies

Existing telehealth items for nurse practitioners could form the basis for further item numbers to be developed. The implications of recommendations 11-14 could also see the need for additional general practitioner item numbers. Tables 10-13 in Appendix 2 reflect possible changes to the telehealth items.

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Appendix 2

List of MBS Tables

Table 1 – Recommendation 1

Item	Current item descriptor	Proposed item descriptor
701	**Group**: A14 – Health Assessments **Subheading**: 1 – Health Assessments Professional attendance by a general practitioner to perform a brief health assessment, lasting not more than 30 minutes and including: (a) collection of relevant information, including taking a patient history; and (b) a basic physical examination; and (c) initiating interventions and referrals as indicated; and (d) providing the patient with preventive health care advice and information Fee: $59.35 Benefit: 100% = $59.35	**Group**: A14 – Health Assessments **Subheading**: 1 – Health Assessments Professional attendance by a general practitioner *or nurse practitioner* to perform a brief health assessment, lasting not more than 30 minutes and including: (a) collection of relevant information, including taking a patient history; and (b) a basic physical examination; and (c) initiating interventions and referrals as indicated; and (d) providing the patient with preventive health care advice and information Fee: $59.35 Benefit: 100% = $59.35 85% = $ 50.45
703	**Group**: A14 – Health Assessments **Subheading**: 1 – Health Assessments Professional attendance by a general practitioner to perform a standard health assessment, lasting more than 30 minutes but less than 45 minutes, including: (a) detailed information collection, including taking a patient history; and (b) an extensive physical examination; and (c) initiating interventions and referrals as indicated; and (d) providing a preventive health care strategy for the patient Fee: $137.90 Benefit: 100% = $137.90	**Group**: A14 – Health Assessments **Subheading**: 1 – Health Assessments Professional attendance by a general practitioner or *nurse practitioner* to perform a standard health assessment, lasting more than 30 minutes but less than 45 minutes, including: (a) detailed information collection, including taking a patient history; and (b) an extensive physical examination; and (c) initiating interventions and referrals as indicated; and (d) providing a preventive health care strategy for the patient Fee: $137.90 Benefit: 100% = $137.90 85% = $ 117.22
705	**Group**: A14 – Health Assessments **Subheading**: 1 – Health Assessments Professional attendance by a general practitioner to perform a long health assessment, lasting at least 45 minutes but less than 60 minutes, including: (a) comprehensive information collection, including taking a patient history; and (b) an extensive examination of the patient's medical condition and physical function; and (c) initiating interventions and referrals as indicated; and (d) providing a basic preventive health care management plan for the patient Fee: $190.30 Benefit: 100% = $190.30	**Group**: A14 – Health Assessments **Subheading**: 1 – Health Assessments Professional attendance by a general practitioner or *nurse practitioner* to perform a long health assessment, lasting at least 45 minutes but less than 60 minutes, including: (a) comprehensive information collection, including taking a patient history; and (b) an extensive examination of the patient's medical condition and physical function; and (c) initiating interventions and referrals as indicated; and (d) providing a basic preventive health care management plan for the patient Fee: $190.30 Benefit: 100% = $190.30 85% = $161.76
707	**Group**: A14 – Health Assessments **Subheading**: 1 – Health Assessments Professional attendance by a general practitioner to perform a prolonged health assessment (lasting at least 60 minutes) including: (a) comprehensive information collection, including taking a patient history; and (b) an extensive examination of the patient's medical condition, and physical, psychological and social function; and initiating interventions or referrals as indicated; and (d) providing a comprehensive preventive health care management plan for the patient Fee: $268.80 Benefit: 100% = $268.80	**Group**: A14 – Health Assessments **Subheading**: 1 – Health Assessments Professional attendance by a general practitioner or *nurse practitioner* to perform a prolonged health assessment (lasting at least 60 minutes) including: (a) comprehensive information collection, including taking a patient history; and (b) an extensive examination of the patient's medical condition, and physical, psychological and social function; and initiating interventions or referrals as indicated; and (d) providing a comprehensive preventive health care management plan for the patient Fee: $268.80 Benefit: 100% = $268.80 85% = $228.48

Item	Current item descriptor	Proposed item descriptor
715	**Group**: A14 – Health Assessments **Subheading**: 2 – Aboriginal And Torres Strait Islander Peoples Health Assessment Professional attendance by a general practitioner at consulting rooms or in another place other than a hospital or residential aged care facility, for a health assessment of a patient who is of Aboriginal or Torres Strait Islander descent-not more than once in a 9 month period Fee: $212.25 Benefit: 100% = $212.25	**Group**: A14 – Health Assessments **Subheading**: 2 – Aboriginal And Torres Strait Islander Peoples Health Assessment Professional attendance by a general practitioner *or nurse practitioner* at consulting rooms or in another place other than a hospital or residential aged care facility, for a health assessment of a patient who is of Aboriginal or Torres Strait Islander descent-not more than once in a 9 month period Fee: $212.25 Benefit: 100% = $212.25 85% = $180.41
721	**Group**: A15 – GP Management Plans, Team Care Arrangements, Multidisciplinary Care Plans **Subgroup**: 1 – GP Management Plans, Team Care Arrangements And Multidisciplinary Care Plans Attendance by a general practitioner for preparation of a GP management plan for a patient (other than a service associated with a service to which any of items 735 to 758 apply) Fee: $144.25 Benefit: 75% = $108.20 100% = $144.25	**Group**: A15 – Team Care Arrangements, Multidisciplinary Care Plans **Subgroup**: 1 – Team Care Arrangements And Multidisciplinary Care Plans Attendance by a general practitioner or *nurse practitioner* for preparation of a *Team Care Arrangements* for a patient (other than a service associated with a service to which any of items 735 to 758 apply) Fee: $144.25 Benefit: 75% = $108.20 100% = $144.25
723	**Group**: A15 – GP Management Plans, Team Care Arrangements, Multidisciplinary Care Plans **Subgroup**: 1 – GP Management Plans, Team Care Arrangements And Multidisciplinary Care Plans Attendance by a general practitioner to coordinate the development of team care arrangements for a patient (other than a service associated with a service to which any of items 735 to 758 apply) Fee: $114.30 Benefit: 75% = $85.75 100% = $114.30	**Group**: A15 – Team Care Arrangements, Multidisciplinary Care Plans **Subgroup**: 1 – Team Care Arrangements And Multidisciplinary Care Plans Attendance by a general practitioner or *nurse practitioner* to coordinate the development of team care arrangements for a patient (other than a service associated with a service to which any of items 735 to 758 apply) Fee: $114.30 Benefit: 75% = $85.75 100% = $114.30
732	**Group**: A15 – GP Management Plans, Team Care Arrangements, Multidisciplinary Care Plans **Subgroup**: 1 – GP Management Plans, Team Care Arrangements And Multidisciplinary Care Plans Attendance by a general practitioner to review or coordinate a review of: (a) a GP management plan prepared by a general practitioner (or an associated general practitioner) to which item 721 applies; or (b) team care arrangements which have been coordinated by the general practitioner (or an associated general practitioner) to which item 723 applies Fee: $72.05 Benefit: 75% = $54.05 100% = $72.05	**Group**: A15 – Team Care Arrangements, Multidisciplinary Care Plans **Subgroup**: 1 – Team Care Arrangements And Multidisciplinary Care Plans Attendance by a general practitioner or *nurse practitioner* to review or coordinate a review of: (a) a Team Care Arrangements prepared by a general practitioner or *nurse practitioner* (or an associated general practitioner or *nurse practitioner*) to which item 721 applies; or (b) team care arrangements which have been coordinated by the general practitioner or *nurse practitioner* (or an associated general practitioner or *nurse practitioner*) to which item 723 applies Fee: $72.05 Benefit: 75% = $54.05 100% = $72.05
729	**Group**: A15 – GP Management Plans, Team Care Arrangements, Multidisciplinary Care Plans **Subgroup**: 1 – GP Management Plans, Team Care Arrangements And Multidisciplinary Care Plans Contribution by a general practitioner to a multidisciplinary care plan prepared by another provider or a review of a multidisciplinary care plan prepared by another provider (other than a service associated with a service to which any of items 735 to 758 apply) Fee: $70.40 Benefit: 100% = $70.40	**Group**: A15 -Team Care Arrangements, Multidisciplinary Care Plans **Subgroup**: 1 Team Care Arrangements And Multidisciplinary Care Plans Contribution by a general practitioner or *nurse practitioner* to a multidisciplinary care plan prepared by another provider or a review of a multidisciplinary care plan prepared by another provider (other than a service associated with a service to which any of items 735 to 758 apply) Fee: $70.40 Benefit: 100% = $70.40 85% = $59.84

Item	Current item descriptor	Proposed item descriptor
2700	**Group**: A20 – GP Mental Health Treatment **Subgroup**: 1 – GP Mental Health Treatment Plans Professional attendance by a general practitioner (including a general practitioner who has not undertaken mental health skills training) of at least 20 minutes but less than 40 minutes in duration for the preparation of a GP mental health treatment plan for a patient Fee: $71.70 Benefit: 75% = $53.80 100% = $71.70	**Group**: A20 – PHC Mental Health Treatment **Subgroup**: 1 – PHC Mental Health Treatment Plans Professional attendance by a general practitioner or *nurse practitioner* (including a general practitioner or *nurse practitioner* who has not undertaken mental health skills training) of at least 20 minutes but less than 40 minutes in duration for the preparation of a PHC mental health treatment plan for a patient Fee: $71.70 Benefit: 75% = $53.80 100% = $71.70
2701	**Group**: A20 – GP Mental Health Treatment **Subgroup**: 1 – GP Mental Health Treatment Plans Professional attendance by a general practitioner (including a general practitioner who has not undertaken mental health skills training) of at least 40 minutes in duration for the preparation of a GP mental health treatment plan for a patient Fee: $105.55 Benefit: 75% = $79.20 100% = $105.55	**Group**: A20 – PHC Mental Health Treatment **Subgroup**: 1 – PHC Mental Health Treatment Plans Professional attendance by a general practitioner or *nurse practitioner* (including a general practitioner or *nurse practitioner* who has not undertaken mental health skills training) of at least 40 minutes in duration for the preparation of a PHC mental health treatment plan for a patient Fee: $105.55 Benefit: 75% = $79.20 100% = $105.55
10987	**Group**: M12 – Services Provided By A Practice Nurse Or Aboriginal And Torres Strait Islander Health Practitioner On Behalf Of A Medical Practitioner **Subgroup**: 3 – Services Provided By A Practice Nurse Or Aboriginal And Torres Strait Islander Health Practitioner On Behalf Of A Medical Practitioner Follow up service provided by a practice nurse or Aboriginal and Torres Strait Islander health practitioner, on behalf of a medical practitioner, for an Indigenous person who has received a health assessment if: a) The service is provided on behalf of and under the supervision of a medical practitioner; and b) the person is not an admitted patient of a hospital; and c) the service is consistent with the needs identified through the health assessment; - to a maximum of 10 services per patient in a calendar year Fee: $24.00 Benefit: 100% = $24.00	**Group**: M12 – Services Provided By A Practice Nurse Or Aboriginal And Torres Strait Islander Health Practitioner On Behalf Of A Medical Practitioner or *Nurse Practitioner* **Subgroup**: 3 – Services Provided By A Practice Nurse Or Aboriginal And Torres Strait Islander Health Practitioner On Behalf Of A Medical Practitioner or Nurse Practitioner Follow up service provided by a practice nurse or Aboriginal and Torres Strait Islander health practitioner, on behalf of a medical practitioner or *nurse practitioner* , for an Indigenous person who has received a health assessment if: a) The service is provided on behalf of and under the supervision of a medical practitioner or *nurse practitioner*; and b) the person is not an admitted patient of a hospital; and c) the service is consistent with the needs identified through the health assessment; - to a maximum of 10 services per patient in a calendar year Fee: $24.00 Benefit: 100% = $24.00 85% = $20.40

Table 2 – Recommendation 2

Item	Current item descriptor	Proposed item descriptor
90020	**Group**: A35 – Services For Patients in Residential Aged Care **Facilities** Subgroup: 2 – General Practitioner Non-Referred Attendance At A Residential Aged Care Facility Professional attendance (other than a service to which another item applies) at a residential aged care facility (other than a professional attendance at a self-contained unit) or professional attendance at consulting rooms situated within such a complex if the patient is accommodated in a residential aged care facility (other than accommodation in a self-contained unit) by a general practitioner for an obvious problem characterised by the straightforward nature of the task that requires a short patient history and, if required, limited examination and management—an attendance on one or more patients at one residential aged care facility on one occasion – each patient. Fee: $17.20 Benefit: 100% = $17.20	**Group**: A35 – Services For Patients in Residential Aged Care Facilities **Subgroup**: 2 – General Practitioner or *Nurse Practitioner* Non-Referred Attendance At A Residential Aged Care Facility Professional attendance (other than a service to which another item applies) at a residential aged care facility (other than a professional attendance at a self-contained unit) or professional attendance at consulting rooms situated within such a complex if the patient is accommodated in a residential aged care facility (other than accommodation in a self-contained unit) by a general practitioner for *nurse practitioner* or an obvious problem characterised by the straightforward nature of the task that requires a short patient history and, if required, limited examination and management—an attendance on one or more patients at one residential aged care facility on one occasion – each patient. Fee: $17.20 Benefit: 100% = $17.20 85% = $14.88
90035	**Group**: A35 – Services For Patients in Residential Aged Care Facilities **Subgroup**: 2 – General Practitioner Non-Referred Attendance At A Residential Aged Care Facility Professional attendance by a general practitioner at a residential aged care facility to residents of the facility (other than a service to which another item in the table applies), lasting less than 20 minutes and including any of the following that are clinically relevant: (a) taking a patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation—an attendance on one or more patients at one residential aged care facility on one occasion—each patient Fee: $37.60 Benefit: 100% = $37.60	**Group**: A35 – Services For Patients in Residential Aged Care Facilities **Subgroup**: 2 – General Practitioner or *Nurse Practitioner* Non-Referred Attendance At A Residential Aged Care Facility Professional attendance by a general practitioner or *nurse practitioner* at a residential aged care facility to residents of the facility (other than a service to which another item in the table applies), lasting less than 20 minutes and including any of the following that are clinically relevant: (a) taking a patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation—an attendance on one or more patients at one residential aged care facility on one occasion—each patient Fee: $37.60 Benefit: 100% = $37.60 85% = $31.96
90043	**Group**: A35 – Services For Patients in Residential Aged Care Facilities **Subgroup**: 2 – General Practitioner Non-Referred Attendance At A Residential Aged Care Facility Professional attendance by a general practitioner at a residential aged care facility to residents of the facility (other than a service to which another item in the table applies), lasting at least 20 minutes and including any of the following that are clinically relevant: (a) taking a detailed patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation—an attendance on one or more patients at one residential aged care facility on one occasion—each patient Fee: $72.80 Benefit: 100% = $72.80	**Group**: A35 – Services For Patients in Residential Aged Care Facilities **Subgroup**: 2 – General Practitioner or *Nurse Practitioner* Non-Referred Attendance At A Residential Aged Care Facility Professional attendance by a general practitioner or *nurse practitioner* at a residential aged care facility to residents of the facility (other than a service to which another item in the table applies), lasting at least 20 minutes and including any of the following that are clinically relevant: (a) taking a detailed patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation—an attendance on one or more patients at one residential aged care facility on one occasion—each patient Fee: $72.80 Benefit: 100% = $72.80 85% = 61.88

Item	Current item descriptor	Proposed item descriptor
90051	**Group:** A35 – Services For Patients in Residential Aged Care Facilities **Subgroup**: 2 – General Practitioner Non-Referred Attendance At A Residential Aged Care Facility Professional attendance by a general practitioner at a residential aged care facility to residents of the facility (other than a service to which another item in the table applies), lasting at least 40 minutes and including any of the following that are clinically relevant: (a) taking an extensive patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation—an attendance on one or more patients at one residential aged care facility on one occasion—each patient Fee: $107.15 Benefit: 100% = $107.15	**Group:** A35 – Services For Patients in Residential Aged Care Facilities **Subgroup**: 2 – General Practitioner or *Nurse Practitioner* Non-Referred Attendance At A Residential Aged Care Facility Professional attendance by a general practitioner or *nurse practitioner* at a residential aged care facility to residents of the facility (other than a service to which another item in the table applies), lasting at least 40 minutes and including any of the following that are clinically relevant: (a) taking an extensive patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation—an attendance on one or more patients at one residential aged care facility on one occasion—each patient Fee: $107.15 Benefit: 100% = $107.15 85% = $61.88

Table 3 – Recommendation 3

Item	Current item descriptor	Proposed item descriptor
900	**Group**: A17 – Domiciliary And Residential Management Reviews Participation by a general practitioner in a Domiciliary Medication Management Review (DMMR) for a patient living in a community setting, in which the general practitioner, with the patient's consent: (a) assesses the patient as: (i) having a chronic medical condition or a complex medication regimen; and (ii) not having their therapeutic goals met; and (b) following that assessment: (i) refers the patient to a community pharmacy or an accredited pharmacist for the DMMR; and (ii) provides relevant clinical information required for the DMMR; and (c) discusses with the reviewing pharmacist the results of the DMMR including suggested medication management strategies; and (d) develops a written medication management plan following discussion with the patient; and provides the written medication management plan to a community pharmacy chosen by the patient For any particular patient—applicable not more than once in each 12 month period, except if there has been a significant change in the patient's condition or medication regimen requiring a new DMMR Fee: $154.80 Benefit: 100% = $154.80	**Group**: A17 – Domiciliary And Residential Management Reviews Participation by a general practitioner or *nurse practitioner* in a Domiciliary Medication Management Review (DMMR) for a patient living in a community setting, in which the general practitioner or *nurse practitioner*, with the patient's consent: (a) assesses the patient as: (i) having a chronic medical condition or a complex medication regimen; and (ii) not having their therapeutic goals met; and (b) following that assessment: (i) refers the patient to a community pharmacy or an accredited pharmacist for the DMMR; and (ii) provides relevant clinical information required for the DMMR; and (c) discusses with the reviewing pharmacist the results of the DMMR including suggested medication management strategies; and (d) develops a written medication management plan following discussion with the patient; and provides the written medication management plan to a community pharmacy chosen by the patient For any particular patient—applicable not more than once in each 12 month period, except if there has been a significant change in the patient's condition or medication regimen requiring a new DMMR Fee: $154.80 Benefit: 100% = $154.80 85% = $131.58
903	**Group**: A17 – Domiciliary And Residential Management Reviews Participation by a general practitioner in a residential medication management review (RMMR) for a patient who is a permanent resident of a residential aged care facility-other than an RMMR for a resident in relation to whom, in the preceding 12 months, this item has applied, unless there has been a significant change in the resident's medical condition or medication management plan requiring a new RMMR Fee: $106.00 Benefit: 100% = $106.00	**Group**: A17 – Domiciliary And Residential Management Reviews Participation by a general practitioner or *nurse practitioner* in a residential medication management review (RMMR) for a patient who is a permanent resident of a residential aged care facility-other than an RMMR for a resident in relation to whom, in the preceding 12 months, this item has applied, unless there has been a significant change in the resident's medical condition or medication management plan requiring a new RMMR Fee: $106.00 Benefit: 100% = $106.00 85% = $90.10

Table 4.1 – Recommendation 4

Source: www.mbsonline.gov.au

Appointment times	Nurse Practitioner item number and 85% current benefit	Allied Health • ATSI health practitioner • Diabetic Educator • Physiotherapist • Exercise Physiologist • Audiologist • Psychologist • Podiatrist $2.52 per minute	Nurse Practitioner Recommend 85% benefit Calculated on $2.52 per minute as are the Allied Health patient rebates	General Practitioner 100% Current benefit
Short appointment	82200 $8.20		$16.63	$17.20
Less than 20 mins	82205 $17.85	$35.28	$35.28	$37.60
At least 20 mins	82210 $33.80	$52.95	$52.95	$72.8
At least 30 mins		$84.80		
At least 40 mins	82215 $49.80		$103.32	$107.15
At least 50 mins		$124.50		
At least 60 mins			$150.20	

Table 4.2 – Recommendation 4

Item	Current item descriptor	Proposed item descriptor
82200	**Group**: M14 – Nurse Practitioners **Subgroup**: 1 – Nurse Practitioners Professional attendance by a participating nurse practitioner for an obvious problem characterised by the straightforward nature of the task that requires a short patient history and, if required, limited examination and management. Fee: $9.60 Benefit: 85% = $8.20	**Group**: M14 – Nurse Practitioners **Subgroup**: 1 – Nurse Practitioners Professional attendance by a participating nurse practitioner for an obvious problem characterised by the straightforward nature of the task that requires a short patient history and, if required, limited examination and management. Fee: $ 19.57 Benefit: 85% = $16.63
82205	**Group**: M14 – Nurse Practitioners **Subgroup**: 1 – Nurse Practitioners Professional attendance by a participating nurse practitioner lasting less than 20 minutes and including any of the following: a) taking a history; b) undertaking clinical examination; c) arranging any necessary investigation; d) implementing a management plan; e) providing appropriate preventive health care, for 1 or more health related issues, with appropriate documentation. Fee: $20.95 Benefit: 85% = $17.85	**Group**: M14 – Nurse Practitioners **Subgroup**: 1 – Nurse Practitioners Professional attendance by a participating nurse practitioner lasting less than 20 minutes and including any of the following: a) taking a history; b) undertaking clinical examination; c) arranging any necessary investigation; d) implementing a management plan; e) providing appropriate preventive health care, for 1 or more health related issues, with appropriate documentation. Fee: $41.50 Benefit: 85% = $35.28

Supporting Nurse Practitioners through advocacy
resources, networking and professional development

Item	Current item descriptor	Proposed item descriptor
82210	**Group**: M14 – Nurse Practitioners **Subgroup**: 1 – Nurse Practitioners Professional attendance by a participating nurse practitioner lasting at least 20 minutes and including any of the following: a) taking a detailed history; b) undertaking clinical examination; c) arranging any necessary investigation; d) implementing a management plan; e) providing appropriate preventive health care, for 1 or more health related issues, with appropriate documentation. Fee: $39.75 Benefit: 85% = $33.80	**Group**: M14 – Nurse Practitioners **Subgroup**: 1 – Nurse Practitioners Professional attendance by a participating nurse practitioner lasting at least 20 minutes and including any of the following: a) taking a detailed history; b) undertaking clinical examination; c) arranging any necessary investigation; d) implementing a management plan; e) providing appropriate preventive health care, for 1 or more health related issues, with appropriate documentation. Fee: $62.25 Benefit: 85% = $52.95
82215	**Group**: M14 – Nurse Practitioners **Subgroup**: 1 – Nurse Practitioners Professional attendance by a participating nurse practitioner lasting at least 40 minutes and including any of the following: a) taking an extensive history; b) undertaking clinical examination; c) arranging any necessary investigation; d) implementing a management plan; e) providing appropriate preventive health care, for 1 or more health related issues, with appropriate documentation. Fee: $58.55 Benefit: 85% = $49.80	**Group**: M14 – Nurse Practitioners **Subgroup**: 1 – Nurse Practitioners Professional attendance by a participating nurse practitioner lasting at least 40 minutes and including any of the following: a) taking an extensive history; b) undertaking clinical examination; c) arranging any necessary investigation; d) implementing a management plan; e) providing appropriate preventive health care, for 1 or more health related issues, with appropriate documentation. Fee: $121.55 Benefit: 85% = $103.32

Table 5 – Recommendation 5

Item	Current item descriptor	Proposed item descriptor
8222F		**Group**: M14 – Nurse Practitioners **Subgroup**: 1 – Nurse Practitioners Professional attendance by a participating nurse practitioner lasting at least 60 minutes and including any of the following: a) comprehensive information collection including taking an extensive history; b) undertaking extensive clinical examination; c) arranging any necessary investigation; d) implementing a management plan; e) providing appropriate health promotion and preventive care, for 1 or more health related issues, with appropriate documentation. Fee: $176.70 Benefit: 85% = $150.20

Table 6.1 – Recommendation 6

Item	Current item descriptor	Proposed item descriptor
585	**Group**: A11 – Urgent Attendance After Hours **Subgroup**: 1 – Urgent Attendance – After Hours Professional attendance by a general practitioner on one patient on one occasion—each attendance (other than an attendance in unsociable hours) in an after-hours period if: (a) the attendance is requested by the patient or a responsible person in the same unbroken after-hours period; and (b) the patient's medical condition requires urgent assessment; and (c) if the attendance is at consulting rooms—it is necessary for the practitioner to return to, and specially open, the consulting rooms for the attendance Fee: $129.80 Benefit: 75% = $97.35 100% = $129.80	**Group**: A11 – Urgent Attendance After Hours **Subgroup**: 1 – Urgent Attendance – After Hours Professional attendance by a general practitioner or *nurse practitioner* on one patient on one occasion—each attendance (other than an attendance in unsociable hours) in an after-hours period if: (a) the attendance is requested by the patient or a responsible person in the same unbroken after-hours period; and (b) the patient's medical condition requires urgent assessment; and (c) if the attendance is at consulting rooms—it is necessary for the practitioner to return to, and specially open, the consulting rooms for the attendance Fee: $129.80 Benefit: 75% = $97.35 100% = $129.80
599	**Group**: A11 – Urgent Attendance After Hours **Subgroup**: 2 – Urgent Attendance Unsociable After Hours Professional attendance by a general practitioner on not more than one patient on one occasion—each attendance in unsociable hours if: (a) the attendance is requested by the patient or a responsible person in the same unbroken after-hours period; and (b) the patient's medical condition requires urgent assessment; and (c) if the attendance is at consulting rooms—it is necessary for the practitioner to return to, and specially open, the consulting rooms for the attendance Fee: $153.00 Benefit: 75% = $114.75 100% = $153.00	**Group**: A11 – Urgent Attendance After Hours **Subgroup**: 2 – Urgent Attendance Unsociable After Hours Professional attendance by a general practitioner or *nurse practitioner* on not more than one patient on one occasion—each attendance in unsociable hours if: (a) the attendance is requested by the patient or a responsible person in the same unbroken after-hours period; and (b) the patient's medical condition requires urgent assessment; and (c) if the attendance is at consulting rooms—it is necessary for the practitioner to return to, and specially open, the consulting rooms for the attendance Fee: $153.00 Benefit: 75% = $114.75 100% = $153.00
5000	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 1 – Level A Professional attendance at consulting rooms (other than a service to which another item applies) by a general practitioner for an obvious problem characterised by the straightforward nature of the task that requires a short patient history and, if required, limited examination and management-each attendance Fee: $29.00 Benefit: 100% = $29.00	**Group**: A22 – General Practitioner or Nurse Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 1 – Level A Professional attendance at consulting rooms (other than a service to which another item applies) by a general practitioner for an obvious problem characterised by the straightforward nature of the task that requires a short patient history and, if required, limited examination and management-each attendance Fee: $29.00 Benefit: 100% = $29.00
5003	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 1 – Level A Professional attendance by a general practitioner (other than attendance at consulting rooms, a hospital or a residential aged care facility or a service to which another item in the table applies) that requires a short patient history and, if necessary, limited examination and management-an attendance on one or more patients on one occasion-each patient The fee for item 5000, plus $25.95 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5000 plus $2.00 per patient.	**Group**: A22 – General Practitioner or *Nurse Practitioner* After-Hours Attendances To Which No Other Item Applies Subheading: 1 – Level A Professional attendance by a general practitioner or *nurse practitioner* (other than attendance at consulting rooms, a hospital or a residential aged care facility or a service to which another item in the table applies) that requires a short patient history and, if necessary, limited examination and management-an attendance on one or more patients on one occasion-each patient The fee for item 5000, plus $25.95 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5000 plus $2.00 per patient.

Item	Current item descriptor	Proposed item descriptor
5010	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 1 – Level A Professional attendance (other than a service to which another item applies) at a residential aged care facility (other than a professional attendance at a self-contained unit) or professional attendance at consulting rooms situated within such a complex, if the patient is accommodated in a residential aged care facility (other than accommodation in a self-contained unit) by a general practitioner for an obvious problem characterised by the straightforward nature of the task that requires a short patient history and, if required, limited examination and management-an attendance on one or more patients at one residential aged care facility on one occasion-each patient The fee for item 5000, plus $46.70 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5000 plus $3.30 per patient.	**Group**: A22 – General Practitioner or *Nurse Practitioner* After-Hours Attendances To Which No Other Item Applies Subheading: 1 – Level A Professional attendance (other than a service to which another item applies) at a residential aged care facility (other than a professional attendance at a self-contained unit) or professional attendance at consulting rooms situated within such a complex, if the patient is accommodated in a residential aged care facility (other than accommodation in a self-contained unit) by a general practitioner or *nurse practitioner* for an obvious problem characterised by the straightforward nature of the task that requires a short patient history and, if required, limited examination and management-an attendance on one or more patients at one residential aged care facility on one occasion-each patient The fee for item 5000, plus $46.70 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5000 plus $3.30 per patient.
5020	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 2 – Level B Professional attendance by a general practitioner at consulting rooms (other than a service to which another item in the table applies), lasting less than 20 minutes and including any of the following that are clinically relevant: (a) taking a patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-each attendance Fee: $49.00 Benefit: 100% = $49.00	**Group**: A22 – General Practitioner or *Nurse Practitioner* After-Hours Attendances To Which No Other Item Applies Subheading: 2 – Level B Professional attendance by a general practitioner or *nurse practitioner* at consulting rooms (other than a service to which another item in the table applies), lasting less than 20 minutes and including any of the following that are clinically relevant: (a) taking a patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-each attendance Fee: $49.00 Benefit: 100% = $49.00
5023	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 2 – Level B Professional attendance by a general practitioner (other than attendance at consulting rooms, a hospital or a residential aged care facility or a service to which another item in the table applies), lasting less than 20 minutes and including any of the following that are clinically relevant: (a) taking a patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients on one occasion-each patient The fee for item 5020, plus $25.95 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5020 plus $2.00 per patient.	**Group**: A22 – General Practitioner or Nurse Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 2 – Level B Professional attendance by a general practitioner or *nurse practitioner* (other than attendance at consulting rooms, a hospital or a residential aged care facility or a service to which another item in the table applies), lasting less than 20 minutes and including any of the following that are clinically relevant: (a) taking a patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients on one occasion-each patient The fee for item 5020, plus $25.95 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5020 plus $2.00 per patient.

Item	Current item descriptor	Proposed item descriptor
5028	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 2 – Level B Professional attendance by a general practitioner (other than a service to which another item in the table applies), at a residential aged care facility to residents of the facility, lasting less than 20 minutes and including any of the following that are clinically relevant: (a) taking a patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one residential aged care facility on one occasion-each patient The fee for item 5020, plus $46.70 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5020 plus $3.30 per patient.	**Group**: A22 – General Practitioner or *Nurse Practitioner* After-Hours Attendances To Which No Other Item Applies Subheading: 2 – Level B Professional attendance by a general practitioner or *nurse practitioner* (other than a service to which another item in the table applies), at a residential aged care facility to residents of the facility, lasting less than 20 minutes and including any of the following that are clinically relevant: (a) taking a patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one residential aged care facility on one occasion-each patient The fee for item 5020, plus $46.70 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5020 plus $3.30 per patient.
5040	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 3 – Level C Professional attendance by a general practitioner at consulting rooms (other than a service to which another item in the table applies), lasting at least 20 minutes and including any of the following that are clinically relevant: (a) taking a detailed patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-each attendance Fee: $83.95 Benefit: 100% = $83.95	**Group**: A22 – General Practitioner or *Nurse Practitioner* After-Hours Attendances To Which No Other Item Applies Subheading: 3 – Level C Professional attendance by a general practitioner or *nurse practitioner* at consulting rooms (other than a service to which another item in the table applies), lasting at least 20 minutes and including any of the following that are clinically relevant: (a) taking a detailed patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-each attendance Fee: $83.95 Benefit: 100% = $83.95 85% = $71.36
5043	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 3 – Level C Professional attendance by a general practitioner (other than attendance at consulting rooms, a hospital or a residential aged care facility or a service to which another item in the table applies), lasting at least 20 minutes and including any of the following that are clinically relevant: (a) taking a detailed patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients on one occasion-each patient The fee for item 5040, plus $25.95 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5040 plus $2.00 per patient.	**Group**: A22 – General Practitioner or *Nurse Practitioner* After-Hours Attendances To Which No Other Item Applies Subheading: 3 – Level C Professional attendance by a general practitioner or *nurse practitioner* (other than attendance at consulting rooms, a hospital or a residential aged care facility or a service to which another item in the table applies), lasting at least 20 minutes and including any of the following that are clinically relevant: (a) taking a detailed patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients on one occasion-each patient The fee for item 5040, plus $25.95 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5040 plus $2.00 per patient.

Item	Current item descriptor	Proposed item descriptor
5049	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 3 – Level C Professional attendance by a general practitioner at a residential aged care facility to residents of the facility (other than a service to which another item in the table applies), lasting at least 20 minutes and including any of the following that are clinically relevant: (a) taking a detailed patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one residential aged care facility on one occasion-each patient The fee for item 5040, plus $46.70 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5040 plus $3.30 per patient.	**Group**: A22 – General Practitioner or *Nurse Practitioner* After-Hours Attendances To Which No Other Item Applies Subheading: 3 – Level C Professional attendance by a general practitioner or *nurse practitioner* at a residential aged care facility to residents of the facility (other than a service to which another item in the table applies), lasting at least 20 minutes and including any of the following that are clinically relevant: (a) taking a detailed patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one residential aged care facility on one occasion-each patient The fee for item 5040, plus $46.70 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5040 plus $3.30 per patient.
5060	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 4 – Level D Professional attendance by a general practitioner at consulting rooms (other than a service to which another item in the table applies), lasting at least 40 minutes and including any of the following that are clinically relevant: (a) taking an extensive patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-each attendance Fee: $117.75 Benefit: 100% = $117.75	**Group**: A22 – General Practitioner or *Nurse Practitioner* After-Hours Attendances To Which No Other Item Applies Subheading: 4 – Level D Professional attendance by a general practitioner or *nurse practitioner* at consulting rooms (other than a service to which another item in the table applies), lasting at least 40 minutes and including any of the following that are clinically relevant: (a) taking an extensive patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-each attendance Fee: $117.75 Benefit: 100% = $117.75 85% = $100.09
5063	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 4 – Level D Professional attendance by a general practitioner (other than attendance at consulting rooms, a hospital or a residential aged care facility or a service to which another item in the table applies), lasting at least 40 minutes and including any of the following that are clinically relevant: (a) taking an extensive patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients on one occasion-each patient The fee for item 5060, plus $25.95 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5060 plus $2.00 per patient.	**Group**: A22 – General Practitioner or *Nurse Practitioner* After-Hours Attendances To Which No Other Item Applies Subheading: 4 – Level D Professional attendance by a general practitioner or *nurse practitioner* (other than attendance at consulting rooms, a hospital or a residential aged care facility or a service to which another item in the table applies), lasting at least 40 minutes and including any of the following that are clinically relevant: (a) taking an extensive patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients on one occasion-each patient The fee for item 5060, plus $25.95 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5060 plus $2.00 per patient.

Item	Current item descriptor	Proposed item descriptor
5067	**Group**: A22 – General Practitioner After-Hours Attendances To Which No Other Item Applies Subheading: 4 – Level D Professional attendance by a general practitioner at a residential aged care facility to residents of the facility (other than a service to which another item in the table applies), lasting at least 40 minutes and including any of the following that are clinically relevant: (a) taking an extensive patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one residential aged care facility on one occasion-each patient The fee for item 5060, plus $46.70 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5060 plus $3.30 per patient.	**Group**: A22 – General Practitioner or *Nurse Practitioner* After-Hours Attendances To Which No Other Item Applies Subheading: 4 – Level D Professional attendance by a general practitioner or *nurse practitioner* at a residential aged care facility to residents of the facility (other than a service to which another item in the table applies), lasting at least 40 minutes and including any of the following that are clinically relevant: (a) taking an extensive patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one residential aged care facility on one occasion-each patient The fee for item 5060, plus $46.70 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 5060 plus $3.30 per patient.

Table 6.2 – Recommendation 6

	Mon-Sat pm	Sunday/ PH	NP (all times)
General consult – emergency	Item 585 ($129.80) Item 10991 –rural incentive ($9.10) **Total $138.90**	Item 599 ($153) Item 10991 –rural incentive ($9.10) **Total $162.10**	82205 ($33.80) (85% rebate, 20-40 min) **Total $33.80**
Suture < 7cm Item 30026 ($52.20)	As above plus specific items **Total $191.20**	As above plus specific items **Total $214.30**	82215 $49.80, >45 min **Total $49.80**
Asthma – mild Item 11506 –spirometry ($20.55) Item 732 –R/v asthma plan $72.05)	As above plus specific items **Total $231.50**	**Total $254.70**	**Total $49.80**
Asthma – severe, evacuate. Item 11506 –spirometry ($20.55) Item 732 –r/v asthma plan ($72.05) Item 161 – critical condition (2-3 hr) evac via amb ($361.90)	As above, plus critical care attend **Total $593.40**	As above, plus critical care attend **Total $616.60**	**Total $49.80**
Multi-trauma motorcycle acc. Item 38806 –ICC insert ($133.56) Item 162 – crit care (3-4hr) evacuate via amb$506.50)	As above plus specific items **Total $778.96**	As above plus specific items **Total $802.16**	**Total $49.80**

Table 7 – Recommendation 7

Item	Current item descriptor	Proposed item descriptor
4	**Group**: A1 – General Practitioner Attendances To Which No Other Item Applies Subheading: 1 – Level A Professional attendance by a general practitioner (other than attendance at consulting rooms or a residential aged care facility or a service to which another item in the table applies) that requires a short patient history and, if necessary, limited examination and management-an attendance on one or more patients at one place on one occasion-each patient The fee for item 3, plus $26.35 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 3 plus $2.05 per patient.	**Group**: A1 – General Practitioner or *Nurse Practitioner* Attendances To Which No Other Item Applies Subheading: 1 – Level A Professional attendance by a general practitioner or *nurse practitioner* (other than attendance at consulting rooms or a residential aged care facility or a service to which another item in the table applies) that requires a short patient history and, if necessary, limited examination and management-an attendance on one or more patients at one place on one occasion-each patient The fee for item 3, plus $26.35 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 3 plus $2.05 per patient.
24	**Group**: A1 – General Practitioner Attendances To Which No Other Item Applies Subheading: 2 – Level B Professional attendance by a general practitioner (other than attendance at consulting rooms or a residential aged care facility or a service to which another item in the table applies), lasting less than 20 minutes and including any of the following that are clinically relevant: (a) taking a patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one place on one occasion-each patient The fee for item 23, plus $26.35 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 23 plus $2.05 per patient.	**Group**: A1 – General Practitioner or *Nurse Practitioner* Attendances To Which No Other Item Applies Subheading: 2 – Level B Professional attendance by a general practitioner or *nurse practitioner* (other than attendance at consulting rooms or a residential aged care facility or a service to which another item in the table applies), lasting less than 20 minutes and including any of the following that are clinically relevant: (a) taking a patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one place on one occasion-each patient The fee for item 23, plus $26.35 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 23 plus $2.05 per patient.
37	**Group**: A1 – General Practitioner Attendances To Which No Other Item Applies Subheading: 3 – Level C Professional attendance by a general practitioner (other than attendance at consulting rooms or a residential aged care facility or a service to which another item in the table applies), lasting at least 20 minutes and including any of the following that are clinically relevant: (a) taking a detailed patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one place on one occasion-each patient The fee for item 36, plus $26.35 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 36 plus $2.05 per patient.	**Group**: A1 – General Practitioner or *Nurse Practitioner* Attendances To Which No Other Item Applies Subheading: 3 – Level C Professional attendance by a general practitioner or *nurse practitioner* (other than attendance at consulting rooms or a residential aged care facility or a service to which another item in the table applies), lasting at least 20 minutes and including any of the following that are clinically relevant: (a) taking a detailed patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one place on one occasion-each patient The fee for item 36, plus $26.35 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 36 plus $2.05 per patient.

Item	Current item descriptor	Proposed item descriptor
47	**Group**: A1 – General Practitioner Attendances To Which No Other Item Applies Subheading: 4 – Level D Professional attendance by a general practitioner (other than attendance at consulting rooms or a residential aged care facility or a service to which another item in the table applies), lasting at least 40 minutes and including any of the following that are clinically relevant: (a) taking an extensive patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one place on one occasion-each patient The fee for item 44, plus $26.35 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 44 plus $2.05 per patient.	**Group**: A1 – General Practitioner or *Nurse Practitioner* Attendances To Which No Other Item Applies Subheading: 4 – Level D Professional attendance by a general practitioner or *nurse practitioner* (other than attendance at consulting rooms or a residential aged care facility or a service to which another item in the table applies), lasting at least 40 minutes and including any of the following that are clinically relevant: (a) taking an extensive patient history; (b) performing a clinical examination; (c) arranging any necessary investigation; (d) implementing a management plan; (e) providing appropriate preventive health care; for one or more health-related issues, with appropriate documentation-an attendance on one or more patients at one place on one occasion-each patient The fee for item 44, plus $26.35 divided by the number of patients seen, up to a maximum of six patients. For seven or more patients – the fee for item 44 plus $2.05 per patient.

Table 8 – Recommendation 9

Item	Current item descriptor	Proposed item descriptor
55028 55032 55038 55048 55054 55065	**Group** I1 – Ultrasound **Subgroup** 1 – General HEAD, ultrasound scan of, where: (a) the patient is referred by a medical practitioner for ultrasonic examination not being a service associated with a service to which an item in Subgroups 2 or 3 of this Group applies; and (b) the referring medical practitioner is not a member of a group of practitioners of which the providing practitioner is a member Bulk bill incentive **Fee:** $109.10 **Benefit:** 75% = $81.85 85% = $92.75 (See para IN.0.19 of explanatory notes to this Category)	**Group** I1 – Ultrasound **Subgroup** 1 – General HEAD, ultrasound scan of, where: (a) the patient is referred by a medical practitioner *or nurse practitioner* for ultrasonic examination not being a service associated with a service to which an item in Subgroups 2 or 3 of this Group applies; and (b) the referring medical practitioner is not a member of a group of practitioners of which the providing practitioner is a member Bulk bill incentive **Fee:** $109.10 **Benefit:** 75% = $81.85 85% = $92.75 (See para IN.0.19 of explanatory notes to this Category)
55113 55114 55115 55116 55117	**Group** I1 – Ultrasound **Subgroup** 2 – Cardiac M-MODE and 2 DIMENSIONAL REAL TIME ECHOCARDIOGRAPHIC EXAMINATION of the heart from at least 2 acoustic windows, with measurement of blood flow velocities across the cardiac valves using pulsed wave and continuous wave Doppler techniques, and real time colour flow mapping from at least 2 acoustic windows, with recordings on video tape or digital medium, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 3, or another item in this Subgroup (with the exception of items 55118 and 55130), applies, for the investigation of symptoms or signs of cardiac failure, or suspected or known ventricular hypertrophy or dysfunction, or chest pain I Bulk bill incentive Fee: $230.65 Benefit: 75% = $173.00 85% = $196.10	*No change required*
55238 55244 55246 55248 55252 55274 55276 55278 55292	**Group** I1 – Ultrasound **Subgroup** 3 – Vascular DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of arteries or bypass grafts in the lower limb OR of arteries and bypass grafts in the lower limb, below the inguinal ligament, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies – I Bulk bill incentive Fee: $169.50 Benefit: 75% = $127.15 85% = $144.10	*No change required*

55700 55703 55704 55706 55707 55718 55067 55069	**Group** I1 – Ultrasound **Subgroup** 5 – Obstetric And Gynaecological PELVIS OR ABDOMEN, pregnancy related or pregnancy complication, ultrasound scan of, by any or all approaches, if: (a) the patient is referred by a medical practitioner or participating midwife; and (b) the dating of the pregnancy (as confirmed by ultrasound) is less than 12 weeks of gestation; and (c) the service is not associated with a service to which an item in Subgroup 2 or 3 of this group applies; and (d) if the patient is referred by a medical practitioner – the referring medical practitioner is not a member of a group of practitioners of which the providing practitioner is a member; and (e) if the patient is referred by a participating midwife – the referring midwife does not have a business or financial arrangement with the providing practitioner; and (f) 1 or more of the following conditions are present: (i) hyperemesis gravidarum; (ii) diabetes mellitus; (iii) hypertension; (iv) toxaemia of pregnancy; (v) liver or renal disease; (vi) autoimmune disease; (vii) cardiac disease; (viii) alloimmunisation; (ix) maternal infection; (x) inflammatory bowel disease; (xi) bowel stoma; (xii) abdominal wall scarring; (xiii) previous spinal or pelvic trauma or disease; (xiv) drug dependency; (xv) thrombophilia; (xvi) significant maternal obesity; (xvii) advanced maternal age; (xviii) abdominal pain or mass; (xix) uncertain dates; (xx) high risk pregnancy; (xxi) previous post dates delivery; (xxii) previous caesarean section; (xxiii) poor obstetric history; (xxiv) suspicion of ectopic pregnancy; (xxv) risk of miscarriage; (xxvi) diminished symptoms of pregnancy; (xxvii) suspected or known cervical incompetence; (xxviii) suspected or known uterine abnormality; (xxix) pregnancy after assisted reproduction; (xxx) risk of fetal abnormality I Footnote: For nuchal translucency measurements performed when the pregnancy is dated by a crown rump length of 45 to 84mm, refer to item number 55707 I. Fee is payable only for item 55700 or item 55707, not both items. Bulk bill incentive Fee: $60.00 Benefit: 75% = $45.00 85% = $51.00	**Group** I1 – Ultrasound **Subgroup** 5 – Obstetric And Gynaecological PELVIS OR ABDOMEN, pregnancy related or pregnancy complication, ultrasound scan of, by any or all approaches, if: (a) the patient is referred by a medical practitioner *or nurse practitioner* or participating midwife; and (b) the dating of the pregnancy (as confirmed by ultrasound) is less than 12 weeks of gestation; and (c) the service is not associated with a service to which an item in Subgroup 2 or 3 of this group applies; and (d) if the patient is referred by a medical practitioner – the referring medical practitioner is not a member of a group of practitioners of which the providing practitioner is a member; and (e) if the patient is referred by a participating midwife *or nurse practitioner* – the referring midwife *or NP* does not have a business or financial arrangement with the providing practitioner; and (f) 1 or more of the following conditions are present: (i) hyperemesis gravidarum; (ii) diabetes mellitus; (iii) hypertension; (iv) toxaemia of pregnancy; (v) liver or renal disease; (vi) autoimmune disease; (vii) cardiac disease; (viii) alloimmunisation; (ix) maternal infection; (x) inflammatory bowel disease;

Item	Current item descriptor	Proposed item descriptor
57901 57902 57903 57912 57915 57921 57924 57927 57933 57945 57960 57963 57966 57969	**Group** I3 – Diagnostic Radiology **Subgroup** 3 – Radiographic Examination Of Head SKULL, not in association with item 57902 I Bulk bill incentive **Fee:** $64.50 **Benefit:** 75% = $48.40 85% = $54.85	*No change required*
58100 58103 58106 58108 58109 58112 58115 58120 58121	**Group** I3 – Diagnostic Radiology **Subgroup** 4 – Radiographic Examination Of Spine SPINE CERVICAL Bulk bill incentive Fee: $67.15 Benefit: 75% = $50.40 85% = $57.10	*No change required*
58903 58909	**Group** I3 – Diagnostic Radiology **Subgroup** 8 – Radiographic Examination Of Alimentary Tract And Biliary System PLAIN ABDOMINAL ONLY, not being a service associated with a service to which item 58909, 58912 or 58915 applies Bulk bill incentive Fee: $47.60 Benefit: 75% = $35.70 85% = $40.50	*No change required*
59103	**Group** I3 – Diagnostic Radiology **Subgroup** 9 – Radiographic Examination For Localisation Of Foreign Bodies Localisation of foreign body, if provided in conjunction with a service described in Subgroups 1 to 12 of Group I3 Bulk bill incentive Fee: $21.30 Benefit: 75% = $16.00 85% = $18.15	*No change required*

Item	Current item descriptor	Proposed item descriptor
59300 59303	**Group** I3 – Diagnostic Radiology **Subgroup** 10 – Radiographic Examination Of Breasts (Note: These items are intended for use in the investigation of a clinical abnormality of the breast/s and NOT for individual, group or opportunistic screening of asymptomatic patients) MAMMOGRAPHY OF BOTH BREASTS, if there is a reason to suspect the presence of malignancy because of: (i) the past occurrence of breast malignancy in the patient or members of the patient's family; or (ii) symptoms or indications of malignancy found on an examination of the patient by a medical practitioner. Unless otherwise indicated, mammography includes both breasts Bulk bill incentive Fee: $89.50 Benefit: 75% = $67.15 85% = $76.10	**Group** I3 – Diagnostic Radiology **Subgroup** 10 – Radiographic Examination Of Breasts (Note: These items are intended for use in the investigation of a clinical abnormality of the breast/s and NOT for individual, group or opportunistic screening of asymptomatic patients) MAMMOGRAPHY OF BOTH BREASTS, if there is a reason to suspect the presence of malignancy because of: (i) the past occurrence of breast malignancy in the patient or members of the patient's family; or (ii) symptoms or indications of malignancy found on an examination of the patient by a medical practitioner. Unless otherwise indicated, mammography includes both breasts Bulk bill incentive Fee: $89.50 Benefit: 75% = $67.15 85% = $76.10
60506 60509	**Group** I3 – Diagnostic Radiology **Subgroup** 15 – Fluoroscopic Examination FLUOROSCOPY using a mobile image intensifier, in conjunction with a surgical procedure lasting less than 1 hour, not being a service associated with a service to which another item in this Table applies I Bulk bill incentive Fee: $63.75 Benefit: 75% = $47.85 85% = $54.20	*No change required*
56001 56007 56016 56022 56030 56101 56220 56223 56301 56307 56409 56412 56501 56507 56619 56801 57007 57341 57350 57360 57362	**Group** I2 – Computed Tomography **Subgroup** 1 – Head COMPUTED TOMOGRAPHY – scan of brain without intravenous contrast medium, not being a service to which item 57001 applies I (K) (Anaes.) Fee: $195.05 Benefit: 75% = $146.30 85% = $165.80	*No change required*

Item	Current item descriptor	Proposed item descriptor
63551 63554 63560	**Group** I5 – Magnetic Resonance Imaging **Subgroup** 34 – Magnetic Resonance Imaging – For Specified Conditions referral by a medical practitioner (excluding a specialist or consultant physician) for a scan of head for a patient 16 years or older for any of the following: - unexplained seizure(s) I (Contrast) (Anaes.) - unexplained chronic headache with suspected intracranial pathology I (Contrast) (Anaes.) Bulk bill incentive Fee: $403.20 Benefit: 75% = $302.40 85% = $342.75	**Group** I5 – Magnetic Resonance Imaging **Subgroup** 34 – Magnetic Resonance Imaging – For Specified Conditions referral by a medical practitioner *or nurse practitioner* (excluding a specialist or consultant physician) for a scan of head for a patient 16 years or older for any of the following: - unexplained seizure(s) I (Contrast) (Anaes.) - unexplained chronic headache with suspected intracranial pathology I (Contrast) (Anaes.) Bulk bill incentive Fee: $403.20 Benefit: 75% = $302.40 85% = $342.75
61307 61348 61421 61425 61449 61473 61505	**Group** I4 – Nuclear Medicine Imaging **Subgroup** 1 – Nuclear medicine – non PET COMBINED STRESS AND REST, stress and re-injection or rest and redistribution myocardial perfusion study, including delayed imaging or re-injection protocol on a subsequent occasion – with single photon emission tomography and with planar imaging when undertaken I Bulk bill incentive Fee: $834.90 Benefit: 75% = $626.20 85% = $751.50	*No change required*
12306 12312 12315 12321 12320 12322	**Group** D1 – Miscellaneous Diagnostic Procedures And Investigations **Subgroup** 10 – Other Diagnostic Procedures And Investigations Bone densitometry, using dual energy X-ray absorptiometry, involving the measurement of 2 or more sites (including interpretation and reporting), for: (a) confirmation of a presumptive diagnosis of low bone mineral density made on the basis of one or more fractures occurring after minimal trauma; or (b) monitoring of low bone mineral density proven by bone densitometry at least 12 months previously; other than a service associated with a service to which item 12312, 12315 or 12321 applies For any particular patient, once only in a 24 month period Fee: $102.40 Benefit: 75% = $76.80 85% = $87.05	*No change required*

Table 9 – Recommendation 10

Item	Item descriptor	Item	Item descriptor
31361	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General Malignant skin lesion (other than a malignant skin lesion covered by item 31371, 31372, 31373, 31374, 31375 or 31376), surgical excision (other than by shave excision) and repair of, if: (a) the lesion is excised from face, neck, scalp, nipple-areola complex, distal lower limb (distal to, and including, the knee) or distal upper limb (distal to, and including, the ulnar styloid); and (b) the necessary excision diameter is less than 14 mm; and (c) the excised specimen is sent for histological examination; and (d) malignancy is confirmed from the excised specimen or previous biopsy; not in association with item 45201 Multiple Operation Rule (Anaes.) Fee: $186.70 Benefit: 75% = $140.05 85% = $158.70	31364	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General Non-malignant skin lesion (other than viral verrucae (common warts) and seborrheic keratoses), including a cyst, ulcer or scar (other than a scar removed during the surgical approach at an operation), surgical excision (other than by shave excision) and repair of, if: (a) the lesion is excised from face, neck, scalp, nipple-areola complex, distal lower limb (distal to, and including, the knee) or distal upper limb (distal to, and including, the ulnar styloid); and (b) the necessary excision diameter is 14 mm or more; and (c) the excised specimen is sent for histological examination Multiple Operation Rule (Anaes.) Fee: $168.05 Benefit: 75% = $126.05 85% = $142.85
31362	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General Non-malignant skin lesion (other than viral verrucae (common warts) and seborrheic keratoses), including a cyst, ulcer or scar (other than a scar removed during the surgical approach at an operation), surgical excision (other than by shave excision) and repair of, if: (a) the lesion is excised from face, neck, scalp, nipple-areola complex, distal lower limb (distal to, and including, the knee) or distal upper limb (distal to, and including, the ulnar styloid); and (b) the necessary excision diameter is less than 14 mm; and (c) the excised specimen is sent for histological examination; not in association with item 45201 Multiple Operation Rule (Anaes.) Fee: $133.90 Benefit: 75% = $100.45 85% = $113.85	31365	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General Malignant skin lesion (other than a malignant skin lesion covered by item 31369, 31370, 31371, 31372 or 31373), surgical excision (other than by shave excision) and repair of, if: (a) the lesion is excised from any part of the body not covered by item 31356, 31358, 31359, 31361 or 31363; and (b) the necessary excision diameter is less than 15 mm; and (c) the excised specimen is sent for histological examination; and (d) malignancy is confirmed from the excised specimen or previous biopsy; not in association with item 45201 Multiple Operation Rule (Anaes.) Fee: $158.30 Benefit: 75% = $118.75 85% = $134.60
31363	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General Malignant skin lesion (other than a malignant skin lesion covered by item 31371, 31372, 31373, 31374, 31375 or 31376), surgical excision (other than by shave excision) and repair of, if: (a) the lesion is excised from face, neck, scalp, nipple-areola complex, distal lower limb (distal to, and including, the knee) or distal upper limb (distal to, and including, the ulnar styloid); and (b) the necessary excision diameter is 14 mm or more; and (c) the excised specimen is sent for histological examination; and (d) malignancy is confirmed from the excised specimen or previous biopsy Multiple Operation Rule (Anaes.) Fee: $244.30 Benefit: 75% = $183.25 85% = $207.70	31366	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General Non-malignant skin lesion (other than viral verrucae (common warts) and seborrheic keratoses), including a cyst, ulcer or scar (other than a scar removed during the surgical approach at an operation), surgical excision (other than by shave excision) and repair of, if: (a) the lesion is excised from any part of the body not covered by item 31357, 31360, 31362 or 31364; and (b) the necessary excision diameter is less than 15 mm; and (c) the excised specimen is sent for histological examination; not in association with item 45201 Multiple Operation Rule (Anaes.) Fee: $95.45 Benefit: 75% = $71.60 85% = $81.15

Item	Item descriptor	Item	Item descriptor
30026	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General SKIN AND SUBCUTANEOUS TISSUE OR MUCOUS MEMBRANE, REPAIR OF WOUND OF, other than wound closure at time of surgery, not on face or neck, small (NOT MORE THAN 7 CM LONG), superficial, not being a service to which another item in Group T4 applies Multiple Operation Rule (Anaes.) Fee: $52.20 Benefit: 75% = $39.15 85% = $44.40	30029	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General SKIN AND SUBCUTANEOUS TISSUE OR MUCOUS MEMBRANE, REPAIR OF WOUND OF, other than wound closure at time of surgery, not on face or neck, small (NOT MORE THAN 7 CM LONG), involving deeper tissue, not being a service to which another item in Group T4 applies Multiple Operation Rule (Anaes.) Fee: $90.00 Benefit: 75% = $67.50 85% = $76.50
30032	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General SKIN AND SUBCUTANEOUS TISSUE OR MUCOUS MEMBRANE, REPAIR OF WOUND OF, other than wound closure at time of surgery, on face or neck, small (NOT MORE THAN 7 CM LONG), superficial Multiple Operation Rule (Anaes.) Fee: $82.50 Benefit: 75% = $61.90 85% = $70.15	30038	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General SKIN AND SUBCUTANEOUS TISSUE OR MUCOUS MEMBRANE, REPAIR OF WOUND OF, other than wound closure at time of surgery, not on face or neck, large (MORE THAN 7 CM LONG), superficial, not being a service to which another item in Group T4 applies Multiple Operation Rule (Anaes.) Fee: $90.00 Benefit: 75% = $67.50 85% = $76.50
30042	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General SKIN AND SUBCUTANEOUS TISSUE OR MUCOUS MEMBRANE, REPAIR OF WOUND OF, other than wound closure at time of surgery, other than on face or neck, large (MORE THAN 7 CM LONG), involving deeper tissue, other than a service to which another item in Group T4 applies Multiple Operation Rule (Anaes.) Fee: $185.60 Benefit: 75% = $139.20 85% = $157.80	30052	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General FULL THICKNESS LACERATION OF EAR, EYELID, NOSE OR LIP, repair of, with accurate apposition of each layer of tissue Multiple Operation Rule (Anaes.) (Assist.) Fee: $254.00 Benefit: 75% = $190.50 85% = $215.90
30061	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General SUPERFICIAL FOREIGN BODY, REMOVAL OF, (including from cornea or sclera), as an independent procedure Multiple Operation Rule (Anaes.) Fee: $23.50 Benefit: 75% = $17.65 85% = $20.00	30064	**Group**: T8 – Surgical Operations **Subgroup**: 1 – General SUBCUTANEOUS FOREIGN BODY, removal of, requiring incision and exploration, including closure of wound if performed, as an independent procedure Multiple Operation Rule (Anaes.) Fee: $109.90 Benefit: 75% = $82.45 85% = $93.45
41500	**Group**: T8 – Surgical Operations **Subgroup**: 8 – Ear, Nose And Throat EAR, foreign body (other than ventilating tube) in, removal of, other than by simple syringing Multiple Operation Rule (Anaes.) Fee: $82.50 Benefit: 75% = $61.90 85% = $70.15	41659	**Group**: T8 – Surgical Operations **Subgroup**: 8 – Ear, Nose And Throat NOSE, removal of FOREIGN BODY IN, other than by simple probing Multiple Operation Rule (Anaes.) Fee: $77.55 Benefit: 75% = $58.20 85% = $65.95
42644	**Group**: T8 – Surgical Operations **Subgroup**: 9 – Ophthalmology CORNEA OR SCLERA, complete removal of embedded foreign body from – not more than once on the same day by the same practitioner (excluding aftercare) Multiple Operation Rule (Anaes.) Fee: $72.15 Benefit: 75% = $54.15 85% = $61.35	47915	**Group**: T8 – Surgical Operations **Subgroup**: 15 – Orthopaedic Subheading 3 – General INGROWING NAIL OF TOE, wedge resection for, with removal of segment of nail, ungual fold and portion of the nail bed Multiple Operation Rule (Anaes.) Fee: $169.50 Benefit: 75% = $127.15 85% = $144.10
35503	**Group**: T8 – Surgical Operations **Subgroup**: 4 – Gynaecological Intra uterine contraceptive device, introduction of, if the service is not associated with a service to which another item in this Group applies (other than a service mentioned in item 30062) Multiple Operation Rule (Anaes.) Fee: $53.55 Benefit: 75% = $40.20 85% = $45.55	36800	**Group**: T8 – Surgical Operations **Subgroup**: 5 – Urological Subheading: 2 – Operations On Bladder BLADDER, catheterisation of, where no other procedure is performed Multiple Operation Rule (Anaes.) Fee: $27.60 Benefit: 75% = $20.70 85% = $23.50

Table 10 – Recommendation 11

Item	Current item descriptor	Proposed item descriptor
82220	**Group**: M14 – Nurse Practitioners **Subgroup**: 2 – Telehealth Attendance A professional attendance lasting less than 20 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician; and b) is not an admitted patient; and c) is located: (i) both: (A) within a telehealth eligible area; and (B) at the time of the attendance - at–least 15 kms by road from the specialist or consultant physician mentioned in paragraph (a); or (ii) in Australia if the patient is a patient of: (A) an Aboriginal Medical Service; or (B) an Aboriginal Community Controlled Health Service for which a direction made under subsection 19(2) of the Act applies. Telehealth Item Fee: $28.30 Benefit: 85% = $24.10	**Group**: M14 - Nurse Practitioners **Subgroup**: 2 - Telehealth Attendance A professional attendance lasting less than 20 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician or *general practitioner*; and b) is not an admitted patient; and c) is located: (i) both: (A) within a telehealth eligible area; and (B) at the time of the attendance - at–least 15 kms by road from the specialist or consultant physician or *general practitioner* mentioned in paragraph (a); or (ii) in Australia if the patient is a patient of: (A) an Aboriginal Medical Service; or (B) an Aboriginal Community Controlled Health Service for which a direction made under subsection 19(2) of the Act applies. Telehealth Item Fee: $28.30 Benefit: 85% = $24.10
82221	**Group**: M14 - Nurse Practitioners **Subgroup**: 2 - Telehealth Attendance A professional attendance lasting at least 20 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician; and b) is not an admitted patient; and c) is located: (i) both: (A) within a telehealth eligible area; and (B) at the time of the attendance - at–least 15 kms by road from the specialist or consultant physician mentioned in paragraph (a); or (ii) in Australia if the patient is a patient of: (A) an Aboriginal Medical Service; or (B) an Aboriginal Community Controlled Health Service for which a direction made under subsection 19(2) of the Act applies. Telehealth Item Fee: $53.70 Benefit: 85% = $45.65	**Group**: M14 - Nurse Practitioners **Subgroup**: 2 - Telehealth Attendance A professional attendance lasting at least 20 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician or *general practitioner*; and b) is not an admitted patient; and c) is located: (i) both: (A) within a telehealth eligible area; and (B) at the time of the attendance - at–least 15 kms by road from the specialist or consultant physician or *general practitioner* mentioned in paragraph (a); or (ii) in Australia if the patient is a patient of: (A) an Aboriginal Medical Service; or (B) an Aboriginal Community Controlled Health Service for which a direction made under subsection 19(2) of the Act applies. Telehealth Item Fee: $53.70 Benefit: 85% = $45.65
82222	**Group**: M14 - Nurse Practitioners **Subgroup**: 2 - Telehealth Attendance A professional attendance lasting at least 40 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician; and b) is not an admitted patient; and c) is located: (i) both: (A) within a telehealth eligible area; and (B) at the time of the attendance - at–least 15 kms by road from the specialist or consultant physician mentioned in paragraph (a); or (ii) in Australia if the patient is a patient of: (A) an Aboriginal Medical Service; or (B) an Aboriginal Community Controlled Health Service for which a direction made under subsection 19(2) of the Act applies. Telehealth Item Fee: $78.95 Benefit: 85% = $67.15 (See para MN.12.5 of explanatory notes to this Category) Extended Medicare Safety Net Cap: $236.85	**Group**: M14 - Nurse Practitioners **Subgroup**: 2 - Telehealth Attendance A professional attendance lasting at least 40 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician or *general practitioner*; and b) is not an admitted patient; and c) is located: (i) both: (A) within a telehealth eligible area; and (B) at the time of the attendance - at–least 15 kms by road from the specialist or consultant physician or *general practitioner* mentioned in paragraph (a); or (ii) in Australia if the patient is a patient of: (A) an Aboriginal Medical Service; or (B) an Aboriginal Community Controlled Health Service for which a direction made under subsection 19(2) of the Act applies. Telehealth Item Fee: $78.95 Benefit: 85% = $67.15 (See para MN.12.5 of explanatory notes to this Category) Extended Medicare Safety Net Cap: $236.85

Table 11 - Recommendation 12

Item	Current item descriptor	Proposed item descriptor
82223	**Group**: M14 Nurse Practitioners **Subgroup**: 3 – Telehealth Attendance At A Residential Aged Care Facility A professional attendance lasting less than 20 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician; and b) either: (i) is a care recipient receiving care in a residential care service; or (ii) is at consulting rooms situated within such a complex if the patient is a care recipient receiving care in a residential aged care service; and c) the professional attendance is not provided at a self-contained unit. Telehealth Item Fee: $28.30 Benefit: 85% = $24.10 (See para MN.12.5 of explanatory notes to this Category) Extended Medicare Safety Net Cap: $84.90	**Group**: M14 - Nurse Practitioners **Subgroup**: 3 - Telehealth Attendance At A Residential Aged Care Facility A professional attendance lasting less than 20 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician or *consultant health team in health service* or *general practitioner*; and b) either: (i) is a care recipient receiving care in a residential care service; or (ii) is at consulting rooms situated within such a complex if the patient is a care recipient receiving care in a residential aged care service; and c) the professional attendance is not provided at a self-contained unit. Telehealth Item Fee: $28.30 Benefit: 85% = $24.10 (See para MN.12.5 of explanatory notes to this Category) Extended Medicare Safety Net Cap: $84.90
82224	**Group**: M14 - Nurse Practitioners s **Subgroup**: 3 - Telehealth Attendance At A Residential Aged Care Facility A professional attendance lasting at least 20 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician; and b) either: (i) is a care recipient receiving care in a residential care service; or (ii) is at consulting rooms situated within such a complex if the patient is a care recipient receiving care in a residential aged care service; and c) the professional attendance is not provided at a self-contained unit Telehealth Item Fee: $53.70 Benefit: 85% = $45.65 (See para MN.12.5 of explanatory notes to this Category) Extended Medicare Safety Net Cap: $161.10	**Group**: M14 - Nurse Practitioners **Subgroup**: 3 - Telehealth Attendance At A Residential Aged Care Facility A professional attendance lasting at least 20 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician or *consultant health team in health service* or *general practitioner*; and b) either: (i) is a care recipient receiving care in a residential care service; or (ii) is at consulting rooms situated within such a complex if the patient is a care recipient receiving care in a residential aged care service; and c) the professional attendance is not provided at a self-contained unit Telehealth Item Fee: $53.70 Benefit: 85% = $45.65 (See para MN.12.5 of explanatory notes to this Category) Extended Medicare Safety Net Cap: $161.10
82225	**Group**: M14 - Nurse Practitioners **Subgroup**: 3 - Telehealth Attendance At A Residential Aged Care Facility A professional attendance lasting at least 40 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician; and b) either: (i) is a care recipient receiving care in a residential care service; or (ii) is at consulting rooms situated within such a complex if the patient is a care recipient receiving care in a residential aged care service; and c) the professional attendance is not provided at a self-contained unit Telehealth Item Fee: $78.95 Benefit: 85% = $67.15 (See para MN.12.5 of explanatory notes to this Category) Extended Medicare Safety Net Cap: $236.85	**Group**: M14 - Nurse Practitioners **Subgroup**: 3 - Telehealth Attendance At A Residential Aged Care Facility A professional attendance lasting at least 40 minutes (whether or not continuous) by a participating nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation with a specialist or consultant physician or *consultant health team in health service* or *general practitioner*; and b) either: (i) is a care recipient receiving care in a residential care service; or (ii) is at consulting rooms situated within such a complex if the patient is a care recipient receiving care in a residential aged care service; and c) the professional attendance is not provided at a self-contained unit Telehealth Item Fee: $78.95 Benefit: 85% = $67.15 (See para MN.12.5 of explanatory notes to this Category) Extended Medicare Safety Net Cap: $236.85

Table 12 - Recommendation 13

Item	Current item descriptor	Proposed item descriptor
8222A		**Group**: M14 - Nurse Practitioners **Subgroup**: 2 - Telehealth Attendance A professional attendance lasting less than 20 minutes (whether or not continuous) by a nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation b) is not an admitted patient, *but maybe in RACFs or home care*; and c) is located: (i) both: (A) within a telehealth eligible area; and (B) at the time of the attendance - at–least 15 kms by road from the *nurse practitioner* mentioned in paragraph (a); or (ii) in Australia if the patient is a patient of: (A) an Aboriginal Medical Service; or (B) an Aboriginal Community Controlled Health Service for which a direction made under subsection 19(2) of the Act applies. Telehealth Item Fee: $28.30 Benefit: 85% = $24.10
8222B		**Group**: M14 - Nurse Practitioners **Subgroup**: 2 - Telehealth Attendance A professional attendance lasting at least 20 minutes (whether or not continuous) by a nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation b) is not an admitted patient, *but maybe in RACFs or home care*; and c) is located: (i) both: (A) within a telehealth eligible area; and (B) at the time of the attendance - at–least 15 kms by road from the *nurse practitioner* mentioned in paragraph (a); or (ii) in Australia if the patient is a patient of: (A) an Aboriginal Medical Service; or (B) an Aboriginal Community Controlled Health Service for which a direction made under subsection 19(2) of the Act applies. Telehealth Item Fee: $53.70 Benefit: 85% = $45.65
8222C		**Group**: M14 - Nurse Practitioners **Subgroup**: 2 - Telehealth Attendance A professional attendance lasting at least 40 minutes (whether or not continuous) by a nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a video consultation b) is not an admitted patient, *but maybe in RACFs or home care*; and c) is located: (i) both: (A) within a telehealth eligible area; and (B) at the time of the attendance - at–least 15 kms by road from the *nurse practitioner* mentioned in paragraph (a); or (ii) in Australia if the patient is a patient of: (A) an Aboriginal Medical Service; or (B) an Aboriginal Community Controlled Health Service for which a direction made under subsection 19(2) of the Act applies. Telehealth Item Fee: $78.95 Benefit: 85% = $67.15

Table 13 - Recommendation 14

Item	Current item descriptor	Proposed item descriptor
8222D		**Group**: M14 - Nurse Practitioners **Subgroup**: 2 - Telehealth Attendance A professional attendance lasting less than 20 minutes (whether or not continuous) by a nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a *telephone* consultation as *video not possible*: b) is not an admitted patient, *but maybe in RACFs or home care*; and c) *the consult is follow up care not the 1st attendance with the service or for new health concern;* d) is located: (i) both: (A) within a telehealth eligible area; and (B) at the time of the attendance - at–least 15 kms by road from the *nurse practitioner* mentioned in paragraph (a); or (ii) in Australia if the patient is a patient of: (A) an Aboriginal Medical Service; or (B) an Aboriginal Community Controlled Health Service for which a direction made under subsection 19(2) of the Act applies. Telehealth Item Fee: $28.30 Benefit: 85% = $24.10
8222E		**Group**: M14 - Nurse Practitioners **Subgroup**: 2 - Telehealth Attendance A professional attendance lasting at least 20 minutes (whether or not continuous) by a nurse practitioner that requires the provision of clinical support to a patient who: a) is participating in a *telephone* consultation as *video not possible*: b) is not an admitted patient, *but maybe in RACFs or home care*; and c) *the consult is follow up care not the 1st attendance with the service or for new health concern;* d) is located: (i) both: (A) within a telehealth eligible area; and (B) at the time of the attendance - at–least 15 kms by road from the *nurse practitioner* mentioned in paragraph (a); or (ii) in Australia if the patient is a patient of: (A) an Aboriginal Medical Service; or (B) an Aboriginal Community Controlled Health Service for which a direction made under subsection 19(2) of the Act applies. Telehealth Item Fee: $53.70 Benefit: 85% = $45.65

Appendix 3

Letters of Support from

- Confidential Letter (appendix 3.1)
- VIC Chief Nurses Office (appendix 3.2)
- PHN Brisbane North (appendix 3.3)

Supporting Nurse Practitioners through advocacy
resources, networking and professional development

Appendix 3.1 Confidential Letter of Support

Supporting Nurse Practitioners through advocacy
resources, networking and professional development

Appendix 3.2 Letter from the VIC Chief Nurses Office

Safer Care Victoria

e5114364

Leanne Boase
President
Australian College of Nurse Practitioners
president@acnp.gov.au

Dear Ms Boase,

Thank you for your letter addressed to the Premier, the Hon Daniel Andrews MP, regarding the report your organisation has prepared for the Medicare Benefits Schedule (MBS) Review Taskforce. As the matter you have raised falls within the portfolio responsibilities of Jenny Mikakos MP, Minister for Health, Minister for Ambulance, your letter has been referred to her for consideration. The Minister has asked me to look into your concerns and reply on her behalf. I apologise for the delay in responding.

I would first like to acknowledge all the valuable work our Nurse Practitioners are doing to provide timely access to care in nearly every setting across rural and metropolitan Victoria. Currently we have 379 Nurse Practitioners in Victoria and can proudly boast the fastest average growth of nurse practitioner endorsements in the country.

Your report highlights that there are still significant barriers impeding our nurse practitioners from working to their full scope of practice. I am aware of the discrepancies between the revenue general practitioners and nurse practitioners can generate using MBS item numbers, but I am delighted that while your report does highlight the need for greater access to MBS items and renumeration, it remains focused on how your members might better serve the vulnerable communities they care for.

I am a firm believer in the value of advanced practice roles and understand that an active reform agenda is required to ensure roles such as yours can meet the needs of a contemporary health system. I will continue to work with my interjurisdictional colleagues to progress this important work in partnership with key stakeholders like the ACNP.

Should you have any queries, please contact Adam McKinstry, Senior Project Officer on (03) 9096 5423 or by emailing chiefclinicalofficers@safercare.vic.gov.au.

Yours sincerely

Adj. Assoc. Professor Ann Maree Keenan
Deputy Chief Executive Officer / Chief Nurse & Midwifery Officer
Safer Care Victoria
17/5/2019

VICTORIA State

Appendix 3.3 Letter from the PHN Brisbane North

phn BRISBANE NORTH
An Australian Government Initiative

Michele Smith
Executive Manager, Aged and Community Care
Brisbane North PHN
PO Box 845
Lutwyche, 4030

30 March 2019

Melanie Proper
Queensland Chapter Chair
Australian College of Nurse Practitioners

Dear Melanie

Thank you for the opportunity to provide evidence to your submission to the MBS taskforce review of item numbers relating to aged care and Nurse Practitioners.

The Brisbane North PHN supports improved access to MBS-subsidised services in aged care settings. The important role of Nurse Practitioners (NPs) in aged care settings was highlighted throughout the Geriatric Outreach Assessment Service (GOAS) pilot project. Implemented by Brisbane North PHN and Metro North Hospital and Health Service, the GOAS project aimed to improve quality of care and reduce preventable emergency department presentations through the provision of geriatric outreach services from the local hospital to residential aged care facilities (RACFs)

Throughout the implementation of the GOAS project, it was apparent that RACFs with NPs demonstrated higher levels of collaboration with the interdisciplinary team. NPs took a more holistic approach that involved not only managing the presenting condition but also looking more broadly at the resident's overall health to diagnose and treat early. RACFs with an NP were more proactive in preventing complications before they arose, compared to other RACFs that were more reactive, dealing with issues when they occurred. When clinical care was escalated to the GOAS, NPs were able to play a strong coordination role and work in close collaboration with the GOAS clinical team and GP. This led to better health outcomes for residents.

Please do not hesitate to contact me if you require any further information

Kind regards

Michele Smith
Executive Director, Aged and Community Care
Brisbane North PHN

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Partners 4 Health Ltd (ABN 55 150 102 257), trading as Brisbane North PHN
Brisbane North PHN gratefully acknowledges the financial and other support from the Australian Government Department of Health

Appendix 4

Evidence to Review MBS Item number for Complex Wounds in General Practice

Evidence to Review MBS Item number for Complex Wounds in General Practice

Aim; to review the MBS item numbers for chronic wound management in General Practice and provide data to support how collaborative partnerships with Primary, Secondary and Tertiary Care providers can improve patient quality of life in terms of:

1. Admission prevention
2. Emergency Department presentation reduction
3. Limb amputation salvage
4. Freeing Tertiary Outpatient clinic space
5. Reducing length of stay through Integrated navigator modelling
6. Costs of dressings vs unnecessary procedures

Graves et al 2014 reviewed the prevalence and incidence of chronic wounds in Australia, (1) Pressure injuries were the most common presentation comprising of 84% of the estimated 420 000 cases in hospital and residential care settings each year, then followed by venous leg ulcers (VLUs) (12%), diabetic foot ulcers (DFUs) (3%) and arterial insufficiency ulcers (1%).

Method; The following data and case reports/graphs provide and demonstrate how effective nurse practitioners are at working within the specialty of complex wounds in collaboration with the Medical Doctors and Multi-Disciplinary Teams to navigate the patient through an optimal wound journey.

Conclusions: the collaboration between specialist nurse practitioner roles/Medical Doctors and Multi-Disciplinary Teams assists the complex wounded patient to have the optimal evidence-based treatment regimes. Specialist nurse practitioner nursing assessments prevent unnecessary operations, debridements, skin grafts, antibiotic usage, emergent admissions and the nurse practitioner roles also reduce hospital length of stay, reduces amputation rates and reduce the overall costs to the GCHS despite the “overspend” on often non-transparent budgets.

Discussion

To enable this effectiveness requires investment in the personnel to utilise their advanced knowledge to enable adequate assessment, diagnosis to navigate patient care and communicate to specialist teams along with utilising technological advances, dressings, product knowledge with an adequate budget, environment and provision of resources to achieve these outcomes.

The acuity of the wound and the patient has changed from seeing a “simple” leg ulcer and applying a dressing. The nurse practitioner role provides a complete care package that takes into account the holistic, physiological, pharmaceutical, social and often psychological factors that may be impairing wound healing and communicates these to the appropriate care providers to ensure all needs of the patient.

Having a vascular nurse practitioner led collaborative wound clinic model which established within a Tertiary University teaching hospital in 2011, a collaborative partnership developed between Specialist Primary Care general practitioner and the nurse practitioner. The “Secondary Tier” Specialist general practice service had employed trained nursing staff proficient in wound care; assessment, debridement, vascular investigations, compression bandaging and were equipped with

technology i.e. Ultrasonic wound debriding devices, dopplers and supplies to manage and heal complex wounds and patients.
Having the collaboration enabled the general practitioner to take on the Specialist Wound services from all peers and provide the consistent ongoing chronic care that was required. The 1 new patient would require around 10 -12 reviews within the Tertiary setting before completely healing. The general practitioner and their team would take over most of the hard work in between, seeing patients twice a week for either Compression Bandaging, Topical Negative Pressure Dressings, Ultrasonic Wound debridement type (USWD) modalities, the consumables would be provided by the hospital where appropriate and review scheduling at the Tertiary Centres only had to happen every 3rd or 4th week.

The Medicare item number 30023 was utilised for USWD. The general practitioners were able to provide topical local anaesthetic to anaesthetise the wound bed. In most cases injectable local anaesthetics were not required and could have resulted in greater adverse outcomes especially in the neuropathic diabetic foot. The MBS stipulation reports a field block; which is greatly ambiguous.

Gold Coast

A Bundall wound clinic shuts down after Medicare funding dispute

Gold Coast Bulletin
June 27, 2016 1:00pm

A BUNDALL wound clinic has shut down after a funding dispute with Medicare.

The clinic, run out of Bundall Medical Centre, has not operated since April after Medicare discontinued funding.

Clinic co-founder and nurse Cheryl Frank said the dispute came after a tip-off to Medicare that the clinic was using topical anaesthetics as opposed to injectables.

"We believe it's an argument on semantics and also the government wanting to save money, of course," she said.

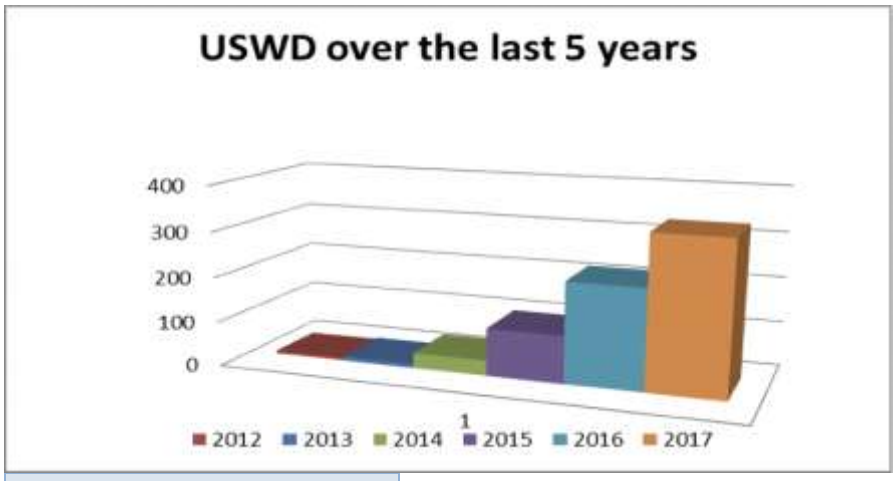
A Medicare spokeswoman would not confirm the particulars of the dispute.

But she said there were strict criteria for claims to the federal health system.

"As part of the department's role to protect the public from the costs and health risks of inappropriate practice, we monitor Medicare claims to identify medical practitioners whose servicing, ordering of tests, or prescribing appears abnormal when compared with their peers," she said.

"It is the responsibility of the treating medical practitioner to ensure that a service charged to Medicare complies with the legislative requirements."

The numbers of USWD increased, and there were not enough devices, probes and staff to perform the necessary procedure. Patients were missing out on this potential limb saving modality.



2012	2013	2014	2015	2016	2017
6	9	34	106	222	335

Examples of NP Care provision;
1) Expediting Care;
Mrs R - Referral from GP for debridement; 8/1/18 patient presents to ED 10am; request for ortho; declined : request for Vascular Surgeon; declined; Plastics to see as Urgent OPD (next available 24.1.18) was then referred to and seen by Vascular NP in ED Review in ED 3.30pm assessed; D/C with wound care plan.

F/u in VNP clinic 3 days later for USWD & compression **Wound Dressed in ED using NP Wound supplies Compression $21.53 + gel & foam $7.80 + $ 3.29 = $32.62** (Saving overnight stay on $1000)
Patient NOT admitted nor recommended OT debridement
Seen in VNP Clinic Had USWD under local topical anaesthetic. Utilised TNP dressing $190.00 (these dressings bring granulation to the surface quicker than a conventional dressing and are utilised when other alternative is a skin graft) + Compression $21.53 = $211.53
18.1.18 USWD again stop TNP dressing; Silver foam $ 25 + Compression $ 21.53 = $46.53 Cancelled plastics appt (as will not require skin graft)
25.1.18 USWD + TNP+ Compression = **$469.59 vs $16,000 (WAU for skin graft)** (Advised Admission and skin graft not required yet) nearly healing wound before even seen Plastics (earliest appt 16 days later)

2) Reduction of admissions
Mr E had multiple admissions within 2015/2016. Required 6 admissions (Dec 15 & 1 Jan 16 x 2, March, April x 2, July x 1) approx. 42 days of O/N stay for lower leg wounds, required several angioplasties.
Came under the care of VNP for wounds 29th July; did required 2 further admissions (NOT for wounds) in Oct 16 one for a rash stayed for 7 days & lethargy in Dec 2016 (20 days ON Stay).

Whilst Under VNP and team's care ensuring collaboration with NH, family, / GP nil admissions occurred. The costs of O/N stays at 62 days = $62,000 comparing with 1 year of consumable provision $2.067

The costs of consumable provision or 1 year = fortnightly reviews. Combine roll $3.47 + Sorbact 12 pieces $57.48 + 1⁄2 Prontosan $ 6.00 + 1⁄2 Box Tubifast blue $5.45

1⁄2 Box Tubigrip E $7.12 = $79.522 for 2 weeks x 26 = $ 2,067 for 1 year. These wounds may never fully heal, but simple treatment and management plans have reduced unnecessary admission for this gentleman, he remained comfortable. Having a NP consultant with Wound care that was able to go to the RACF would have though prevented the Clinic presentations

3) Innovation; reducing healing times

By utilising new technology & changing Vascular Surgical techniques, wound margins can be brought together and healing rates can be halved.
Telehealth commencement; allowing palliative patients to die at home with contained wounds and exudate in their own home; having been supplied dressings to keep them comfortable
Previously wounds were healed by scar tissue, they filled up from the base and sides and over about 3-4 months finally healed.
Now using new technologies I.E USWD / VAC / and having collaboration with Surgeons, the surgical techniques have improved so the Surgeons leave muscle flaps to bring wounds together in a much more timely manner, reducing healing times

4) Integrated care partnerships: reduced LOS
The knock-on Effect of GP / Vascular Surgeons closure of clinics reduced the availability of USWD procedure

The closure of the USWD services in the Secondary Tier primary care due to medicare shutting down the item number (following an ambiguous protocol of Field Block anaesthetisation vs Topical anaesthetisation). Whilst this service was available in the Community it allowed patients to be cared for, for several weeks obtaining optimal wound care in a GP setting this reduced unnecessary trips to hospital, reduced OPD Appointments, waiting times and reduced the inconsistency of staffing.
The majority of pts referred for Integrated care partnerships were relatively young Type 1 or 2 DM with Diabetic Foot Ulceration (DFU) + minor amputations. The patients were not eligible for NGO services (too young) they did not have any chronic wound service provision within the community, thus without this assistance the patients would have all need to come back to GCUH / Robina OPD clinics.

The average healing time for a DFU when in a shared care environment is about 21 weeks.

5) Saving Unnecessary Procedures

A) Stopping theatre debridements and unnecessary anaesthetics Traumatic AKA following MBA; Sepsis problematic

- Washout of AKA performed with TNP and prontosan irrigation dressing USWD
- 18.8.17 ; did not require OT; veraflo again ; look to closing wound Monday

1hr debidement = $102 p/m = $6,120 (not including staff + product + recovery
Using advanced technologies Vac Veraflo @ 47 /day + dressings; Specialist application required to enabled 95% wound closure in a month.

B) Theatre Debridement
Monday 14th August Surgeons offered tibial excision and further washout

- Request use of veraflo Vac to wash out cavity by NP whom applied same
- 18.8.17 did not require washout, continue with VAC

1hr debidement = $102 p/m = $6,120 (not including staff + product + recovery

Following USWD 4/9/17 the wound was able to be closed on the 15/9/17 (No further Surgery required) for limbs

C) Saving pt from having Skin Graft. LOS 17 days
L) medial thigh wound breakdown post LSV harvest for DRIL on 20.10.17 debrided in Theatre
Wound 25cm x 12cm
In 4 days the wound width was reduced by half using VAC veraflo inpt
In 10 days the wound had reduced by half utilisation of VAC dressings
In 4 weeks the wound had nearly closed; Saving further cost of Skin graft

Average cost of VAC Therapy for last 4 weeks; $2500 vs $16,000
The skin tensility when able to be brought back together is a lot more durable than grafted skin, plus the patient has not had to have another wound created. There is much less pain involved.

Having nurse practitioner models for wound care in a Tertiary setting has greatly improved patient outcomes, saved limbs, lives and provided world class wound care. The Executives have recognised this work and funding was obtained ($100,000) for 3 new USWD and 4 probes. This procedure should and could be done back in Specialist GP practices, under MBS.

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KPMG

Cost Benefit Analysis of Nurse Practitioner Models of Care

Department of Health

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November 2018

Report

Inherent Limitations

This report has been prepared as outlined in the Introduction section of the document. The services provided in connection with this engagement comprise an advisory engagement, which is not subject to assurance or other standards issued by the Australian Auditing and Assurance Standards Board and, consequently no opinions or conclusions intended to convey assurance have been expressed.

No warranty of completeness, accuracy or reliability is given in relation to the statements and representations made by, and the information and documentation provided by, stakeholders consulted as part of the process.

KPMG have indicated within this report the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within the report.

KPMG is under no obligation in any circumstance to update this report, in either oral or written form, for events occurring after the report has been issued in final form.

The findings in this report have been formed on the above basis.

Third Party Reliance

This report is solely for the purpose set out in the Introduction Section and for the Department of Health's information, and is not to be used for any other purpose without KPMG's prior written consent.

This report has been prepared at the request of the Department of Health in accordance with the terms of KPMG's engagement letter/contract dated 13 April 2018. Other than our responsibility to the Department of Health, neither KPMG nor any member or employee of KPMG undertakes responsibility arising in any way from reliance placed by a third party on this report. Any reliance placed is that party's sole responsibility.

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Contents

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List of acronyms

Acronym	Description
ACCHS	Aboriginal Community Controlled Health Service
ACNP	Australian College of Nurse Practitioners
AIHW	Australian Institute of Health and Welfare
ANMF	Australian Nursing and Midwifery Federation
BCR	Benefit cost ratio
CATSINaM	Congress of Aboriginal and Torres Strait Islander Nursing and Midwifery
CBA	Cost benefit analysis
CDM	Chronic disease management
ED	Emergency Department
EN	Enrolled nurse
FIFO	Fly in / fly out
FTE	Full time equivalent
GP	General practitioner
HCH	Health care homes
KPI	Key performance indicator
LHD	Local Health District (the term LHD has been used to describe networks of public acute health services in every state)
MBS	Medical Benefits Schedule
MM	Modified Monash Model (remoteness classification)
NMBA	Nursing and Midwifery Board of Australia
NFP	Not for profit
NP	Nurse Practitioner
PBS	Pharmaceutical Benefits Scheme
PHN	Primary Health Network
PIP	Practice Incentives Program
QALY	Quality-adjusted life year
RACF	Residential aged care facility
RACGP	Royal Australian College of General Practitioners
RCT	Randomised controlled trial
RDN	Rural Doctors Network
RFDS	Royal Flying Doctors Service
RDAA	Rural Doctors Association of Australia
RN	Registered nurse

Modified Monash Model classifications

Modified Monash Category	Inclusions	Unofficial Description*
MM 1	All areas categorised ASGS-RA1	Major City
MM 2	Areas categorised ASGS-RA 2 and ASGS-RA 3 that are in, or within 20km road distance, of a town with population >50,000.	Large Regional
MM 3	Areas categorised ASGS-RA 2 and ASGS-RA 3 that are not in MM 2 and are in, or within 15km road distance, of a town with population between 15,000 and 50,000.	Medium Regional
MM 4	Aras categorised ASGS-RA 2 and ASGS-RA3 that are not in MM 2 or Mm 3, and are in, or within 10km road distance, of a town with population between 5,000 and 15,000	Medium Regional
MM 5	All other areas in ASGS-RA 2 and 3	Small Regional
MM 6	All areas categorised ASGS-RA 4 that are not on a populated island that is separated from the mainland in the ABS geography and is more than 5km offshore	Remote
MM 7	All other areas – that being ASGS-RA 5 and areas on a populated island that is separated from the mainland in the ABS geography and is more than 5km offshore.	Very Remote

**as used by the Australian longitudinal study on women's health: https://www.alswh.org.au/images/content/pdf/InfoData/Data_Dictionary_Supplement/DDSSection5_ModMonashMod.pdf*
Source: Doctor Connect, http://www.doctorconnect.gov.au/internet/otd/publishing.nsf/content/classification-changes

Terminology

For the purposes of this report the term patient is used to encompass both individuals receiving care in primary and aged care settings, as the focus of the report is on Nurse Practitioners supporting delivery of health care within these settings.

Executive Summary

KPMG was engaged to conduct a cost benefit analysis (CBA) of Nurse Practitioner (NP) models of care in the aged care and primary health care sectors in Australia in order to identify key success factors and challenges as well as areas for potential expansion.

The NP role has emerged as a way to expand the scope of practice for nurses in order to improve access to healthcare, particularly for remote, marginalised and vulnerable populations. The ability for NPs to work both independently and collaboratively within a multidisciplinary health team, and their ability to undertake advanced clinical care, positions the role to provide flexible and affordable health services to Australian communities.

Project Objectives

The CBA provides an estimate of the costs and benefits associated with introducing a NP in primary health, residential aged care and other settings. Specifically, the objectives of the project were to:

- **Objective 1:** Conduct an assessment of NP operating models in the aged care and primary health care sectors;
- **Objective 2:** Undertake case studies to review and assess, from an economic perspective, existing NP models (i.e. residential aged care facility-based, sole operator NPs, General Practice (GP) clinic, NP clinic) with a view to identify potential new or innovative models;
- **Objective 3:** Identify potential areas of expansion for NP models within existing primary health care and aged care settings through identification of success factors and challenges;
- **Objective 4:** Identify potential areas of expansion for NP models in program areas such as Health Care Homes and aged care;
- **Objective 5:** Identify areas and costs associated with the under-utilisation of NPs; potential savings associated with the expansion of NP roles, such as reducing avoidable hospital admissions, lengths of stay, ambulance costs, and any other related operational and financial costs;
- **Objective 6:** Liaise with key stakeholders to affect a high quality response to this service requirement and within the bounds of the contractor's control;
- **Objective 7:** Investigate the recognition of NPs within the existing Medicare Benefits Schedule (MBS) parameters and detail any issues and options for change, to enable the NP workforce to work fully to their scope of practice.

A primary purpose of this research is to fill a gap in the literature regarding the financial costs and benefits associated with NP models in use across primary care and residential aged care services. As such, the case studies review and assess, from an economic perspective, existing NP business models. There are other components of NP models of care that are not covered as part of this research, but are well documented in the existing literature. This includes the quality of care delivered by NPs, and patient outcomes. The literature review provided in Appendix A touches on some of these points.

Methodology

The objectives were met through a mixed method approach including the development of an assessment framework, the collection of data and the cost benefit analysis, as follows:

Table 1: Methodological approach by project objective

Objective	Methodology Used
Objective 1	✓ Literature Review ✓ Stakeholder Consultations ✓ Case Study Site Visits A review of the eight case study sites was completed using both quantitative and qualitative data collection methods. The findings were consolidated to identify case study sites and to conduct the assessment of NP operating models.
Objective 2	✓ Case Study Site Visits ✓ Data request and analysis Eight case study site visits were completed. During these visits the project team interviewed a range of stakeholders including the NP, site leadership and other clinicians to understand the NP model from an economic perspective and to identify potential new models. The findings were consolidated to identify potential new or innovative models.
Objective 3	✓ Literature Review ✓ Stakeholder Consultations ✓ Case Study Site Visits Information was consolidated from the literature review, case study site visits, and stakeholder consultations to identify potential areas of expansion.
Objective 4	✓ Literature Review ✓ Stakeholder Consultations ✓ Case Study Site Visits Information was consolidated from the literature review, case study site visits, and stakeholder consultations to identify potential areas of expansion.
Objective 5	✓ Cost Benefit Methodology ✓ Cost Benefit Analysis A cost benefit methodology was developed and utilised to identify the costs associated with each site. The analysis was informed by the quantitative data captured from NP site visits in addition to valuations informed by literature and used to identify potential areas of under-utilisation. Site visits included two components – stakeholder interviews and observations, as well as a data request.
Objective 6	✓ Stakeholder Consultations ✓ Case Study Site Visits The project worked closely with stakeholders to deliver a high quality response.

Objective	Methodology Used
Objective 7	✓ Literature Review ✓ Stakeholder Consultations ✓ Case Study Site Visits ✓ Review of MBS data ✓ Cost Benefit Methodology ✓ Cost Benefit Analysis Information was consolidated from the literature review, stakeholder consultations, case study site visits and cost benefit analysis to investigate potential MBS parameters and detail any issues and options for change.

Source: KPMG

Literature Review

The high-level literature review provided the basis for stakeholder consultations, the development of a CBA analytical framework as well as the subsequent cost benefit analyses of the project's case study sites. In addition, the literature review supported project reporting, including this final report.

The literature review was developed through searching grey and peer-reviewed literature, reviewing literature identified and developing an outline based on areas of research.

Stakeholder Consultations

A number of stakeholder interviews were conducted in order to gain qualitative input into the development of the CBA framework. The stakeholders were determined through consultation with the Department, which resulted in seven peak bodies representing key clinical groups being identified.

Cost Benefit Framework

The Literature Review and Stakeholder Consultations informed the development of the Cost Benefit Framework. A framework guided the collection of data and the methods of analysis.

Case Study Site Visits

A list of eight sites was identified, covering off a range of models and settings (i.e. both primary health and aged care settings, different models of care, services provided and funding models, as well as both metropolitan and regional / rural sites). The case study sites were selected based on responses to a national survey of NPs, developed by the Department, and administered by the Australian College of Nurse Practitioners on behalf of the Department.

The project team visited each site to collect data guided by the Framework. Qualitative data was gathered through semi-structured interviews with key site stakeholders and observations, whilst quantitative data was provided by the site in response to a data request.

Cost benefit analysis

A financial model and CBA was completed for each case study site. The CBA took a wider health system and patient perspective. A scenario-based 'what if' analysis was also considered for sites whose income was sourced predominantly from discretionary funding rather that MBS billing. The

overall costs of the NP model were obtained from the financial model, and the benefits for each NP site were estimated using one of three broad methods and informed by the literature review, depending on the specific NP model.

Case Studies

A total of eight case study sites were investigated as part of the CBA. The sites encompassed a variety of NP models of care and included primary care settings and residential aged care settings in metropolitan and regional or remote locations. An overview of the models of care is presented in Table 2 below.

Table 2: Overview of NP models of care across case study sites

Case study site	Model	Brief description of model
Site A	NP based in hospital ED	The NP is based in the ED of a local public hospital, and acts as a link between the ED and the community (mainly in aged care). The NP attends to patients who would normally present to the ED, sets up a treatment plan and provides care to older patients living at home or in a RACF (in collaboration with GPs and specialists if required).
Site B	NP clinic	The model is a primary health NP clinic in rural Australia. Services are currently provided in a local community centre, with a main clinic due to open in the neighbouring town in the near future. Services are almost entirely provided by one NP, with a collaborating GP visiting the site one day per fortnight.
Site C	NP part of primary health care clinic	The NP operates as part of a multidisciplinary publically funded primary health care clinic with a focus on women's health and supporting Aboriginal women in the community. The NP works independently and only refers to GPs when required.
Site D	GP / NP collaborating practice	The NP model is a private practice incorporating two GPs and nine NPs who are all associates within the practice. The practice provides person-centred health care services to RACF residents.
Site E	Single operator NP	The model consists of a specialist dementia care NP who is employed by a regional health clinic. The services provided by the NP revolve almost entirely around conducting tests and assessments required to provide patients with their dementia diagnosis.
Site F	NP part of ACCHS	The NP at this site operates as part of a multidisciplinary team employed by ACCHS. The NP at this site is a generalist with specialised skills in women and child health care.
Site G	Single operator NP / contracted by RACFs	The NP operates across separate RACF sites with one day per week assigned to each. The goal is to up-skill RACF employees and improve continuity of care to residents.
Site H	NP part of ACCHS	The NP operates as part of a remote ACCHS alongside a team of FIFO specialist staff such as RFDS and Allied Health as well as State-operated community health services. The NP at this site is focused on providing primary health and aged care services to the community, including chronic disease management.

Source: site visits

The detailed case studies are provided in Section 3 of this report.

Report Findings

The key findings of this report are set out below as follows:

- key summary findings against each of the project objectives;
- other considerations;
- considerations that go beyond the immediate scope of this project.

Detailed findings are described in Section 4 of this report.

Table 3: Summary of report findings

Objective	Finding, evidence and implication
Exploration of NP operating models in the aged care and primary health care sectors	NP models are more likely to be successful where they are established to meet a clearly identified need and fill a gap in health service delivery. Stakeholder consultations and analysis of case study site data identified significant variability in NP operating models. This highlights a key strength of NP models reviewed as part of this project which relates to NPs and service providers tailoring their model to meet the specific community requirements. Stakeholder consultation revealed that individual NPs were most often involved in self-identifying community need and establishing models in response. Across both primary health care and aged care, stakeholders identified that collaboration between NPs and other clinicians, particularly GPs, was a critical success factor. Stakeholders further identified the importance of a generalist approach in rural settings and aged care (refer to recommendations made in the following sections). *Options for change* Consideration should be given to: • targeting dissemination of information to prospective and current NPs, Primary Health Networks (PHNs) and primary health care and aged care providers outlining how to develop and implement NP models in primary health care and aged care settings. This should profile better practice case studies. This should be considered based on workforce and service planning activities, as outlined above. Service planning and identified areas of need will support NPs and service providers to implement models in the aged care and primary health care settings. Further recommendations in this regard are made below. • strengthening the formal network of NPs to disseminate key success factors, particularly in relation to efficient and effective NP models of care.
Potential areas of expansion for NP models of care / Potential areas of expansion for NP models of care in program areas such as Health Care Homes and aged care	NP models can improve access to healthcare and support the management of chronic and complex health conditions, particularly for vulnerable and remote populations. While there are specific areas and settings that have been identified as opportunities to expand the NP role, increased focus is required on facilitating the implementation of NP models to address areas of need. Development of these models should be informed by the key success factors outlined in Section 4. This should be supported by: • creating and sharing a robust data and evidence base on NP models of care to address areas of need; • identifying and socialising areas of need appropriate to NP models; • considering NP models in local service and workforce planning. This would require increased coordination by key stakeholders, including the Department of Health, PHNs, the College of NPs, The Royal Australian College of General Practitioners (RACGP), and the Chief Nursing and Midwifery Officers in each jurisdiction.

Objective	Finding, evidence and implication
	Specific opportunities exist across aged care, Aboriginal Community Controlled Health Services and Remote communities. *Aged Care* Stakeholders at case study sites identified that NP models improved access to treatment, diagnosis and the patient experience of residents, and appears to support the quality and safety of care delivered by the aged care workforce. This was found to reduce hospital admissions. However, the potential to expand models was limited by the availability of NPs within the sector. As a proportion of total endorsed NPs, the number of NPs working within aged care facilities is low. Consultation with key stakeholders identified NPs working specifically within aged care as a significant gap in the NP workforce. Consideration should be given to: • communicating the benefits of NP models in aged care to RACF providers, PHN and Hospital and Health Services (focused on avoidable admissions); • identifying and documenting better practice case studies drawn from established models, including specialist dementia and palliative care along with aged care generalist models; • considering NP roles in the development of career pathways for aged care nurses. *Aboriginal Community Controlled Health Services* The case study visits identified that the NP model was implemented successfully across ACCHSs. Stakeholders specifically noted that NP models are particularly valued in providing culturally competent care and clinical expertise and improving access to care. Despite these benefits, implementing NP models faces barriers related to incomplete access to patient information and financial sustainability. Therefore consideration should be given to: • working with ACCHSs and other providers to implement mechanisms that provide NPs with the tools and information required to deliver care. For instance, this could involve providing NPs who have lead responsibility for the coordination of planned care with access to a complete view of patient information across providers (with the permission of the patient). This will support NPs to operate at the top of their scope of practice and support the coordination of patient care in communities serviced by multiple, often disconnected, service providers. Implementing these mechanisms will also support an uplift in continuity of care. • utilising existing forums (NACCHO, ACNP, CATSINaM and affiliates) to connect NPs working within the sector and communicate and educate key stakeholders on the benefits of NP models. This can be in the form of case studies of both NPs and the providers they work for. *Remote communities* The case study visits identified that NP models play a critical role in improving access to diagnosis and treatment, as well as providing coordinated and connected care for patients living in remote communities. However, there are key challenges associated with implementing NP models

Objective	Finding, evidence and implication
	in these areas due to fly-in-fly-out medical workforce, accessibility to infrastructure, recruitment and sustainability of business models. *Health Care Homes* Current reforms in primary health care enable a discussion around the involvement of NPs in new health and innovative service delivery models. One of these new models is Health Care Homes (HCH), which introduces participating primary health care providers as a home base to the patient for ongoing coordination, management and support of their chronic conditions. The case study visits identified that the NP models of care were implemented successfully in a manner that would be suited to HCH. Case study sites demonstrated evidence of NP models having an ability to deliver comprehensive care within the HCH setting. While material already exists outlining the potential of NP roles within HCH, further consideration should be given to documenting and publicising how NP models can support HCH, including through highlighting successful models.[1] Therefore consideration should be given to: • integrating education, workforce and service planning to link current and future NPs with identified areas of need. This may include working with education providers, such as universities, National Rural Health Alliance, PHNs and state and territory health departments to identify areas of need and suitable for NP models of care; • increasing the professional and financial incentives for facilitating access to NP services in rural and remote communities to mitigate the healthcare shortage being experienced. This needs to be reviewed in line with the recognition of NPs within the existing MBS considerations. Further exploration of the optimisation of the NP role is provided in the '*Future considerations* section.
Areas and costs identified with potential under-utilisation of NPs/ Potential savings associated with the expansion of NP roles	The NP workforce is unevenly distributed across Australia, whilst two PHNs have over 50 registered NPs identified in MBS records; 13 PHNs have less than 10 NPs. Based on stakeholder consultations, the distribution of NPs is largely driven by specific state and territory initiatives, rather than by a coordinated workforce and service planning activity. Based on the CBA of the case study sites, an expansion of 10 NP roles in aged care roles would cost approximately $1.5 million per year, but conservatively result in 5,000 avoided ED visits each year, and annual savings of over $5.7 million in reduced ED, hospitalisation and ambulance costs. In primary care, an expansion of 10 NP roles in rural and regional Australia, at a cost of $1.5 million per year, could conservatively improve access to care for 10,000 Australians; another 10 primary care NP roles in specifically targeted locations could provide services to over 6,000 Aboriginal and Torres Strait Islander population with limited access. The implications from this analysis are that continued expansion of NP models could deliver substantial cost savings to the healthcare system and improved access to thousands of Australians. There is sufficient patient need

[1] Department of Health (2017), FAQs about nurse practitioners http://www.health.gov.au/internet/main/publishing.nsf/Content/health-care-homes-cp/$File/FAQs-about-nurse-practitioners-Sept%202017.pdf

Objective	Finding, evidence and implication
	and service gaps to support substantial expansion of the NPs relative to current numbers.
The recognition of NPs within the existing MBS	Recognition within the existing MBS parameters was identified as the most significant limitation to the sustainability of existing NP models and their expanded use within primary and aged care settings. In particular, current parameters limited an NP's ability to work fully to their scope of practice, resulting in duplication and fragmentation of care, and an inability to provide complete episodes of care. Therefore, consideration should be given to: • the level of the MBS reimbursement relative to costs associated with the NP model; • reimbursement parameters that recognise the longer duration of many NP consults relative to GP consults when conducting services such as comprehensive health assessments or chronic disease management, for example; • the expansion of the availability of Health Assessment and Chronic Disease Management (CDM) items to suitably qualified Nurse Practitioners practicing in areas of need; • the range of other incentives available to support the development of NP models in order to support an enhanced role within primary and aged care.
Other considerations	This project identified valuable insights into the types of NP models operating across primary care and aged care settings, and the associated challenges and success factors in sustaining them. However, the lack of a reliable, complete and consistent data set to inform and assess the economic impact of NP models of care at a granular level was a significant limitation to this project. Other limitations included the following: • while aggregated administrative data such as MBS and PBS services was available at the PHN level, there were difficulties in isolating MBS/PBS data by site. This means much of the CBA was informed by semi-structured surveys and self-reported data collections that have the potential to be less accurate than administrative data; • short period of time which some NP models have been in place for mean that longer-term impacts of the NP model cannot be measured directly (e.g. improved long term patient quality of life or reduced chronic disease severity). This is a limitation on the analysis for primary care NP models in particular; the benefits for these models are based on assumptions from the literature or comparative costs of a GP-led service. On this basis, **the development of systematic data collection tools and methods required to support the NP role is considered an immediate priority**. Data collection should focus on NP workforce composition and role, breadth of services delivered, activity and outcomes associated with service delivery. This will contribute to a wider understanding of the NP model and the benefits and value it can bring to the delivery of safe, effective and efficient health care. The first step should focus on defining measures relevant to NP models of care to enable comparable, consistent and transparent approaches to data collection. Following this, embedding data

Objective	Finding, evidence and implication
	collection mechanisms into NP practice should be a priority. Achievement of this objective will support considerations outlined below.

Source: Case studies

Future considerations

In addition to the project specific findings, the overarching findings from the project have resulted in broad considerations for the Department and other key stakeholders into the future. Future considerations include:

More work is required to communicate and formalise the value of Nurse Practitioners in the delivery and commissioning of services

Stakeholder consultations identified that knowledge of NP models was variable across PHN areas. This was further supported by the analysis of PHN NP headcount data. This suggests that further work is required to embed the NP as a care provider in the delivery of care across aged care and primary health care settings. This can be achieved by increasing the awareness of PHNs and other clinical stakeholder groups of how NP models can meet identified community needs. This should have a defined focus on implementing mechanisms that foster formal and structured collaboration between NPs, PHNs and other clinical stakeholders. This will inform service planning and delivery activities, including the type and location of services. The objective should be to identify areas of unmet community needs which NP models are well suited to meet.

The NP role needs to be clarified

The use of the NP role should be commensurate with their advanced training, skills and scope of practice. The NP role is an expensive resource when underutilised or allocated to clinical and non-clinical tasks not reflective of their advanced training. Available evidence indicates that NPs undertake some lower skilled roles that can be provided by registered nurses. While the role may be sustainable, it is not reflective of the economic benefit that NPs bring to the health system. Similarly, the cost-effectiveness of NP models could be further improved by reducing the need for subsequent GP consults where appropriate. This will involve systemically addressing the barriers to NPs operating at the top of their scope of practice identified in section 4.4. As outlined in other sections of this report, it should be noted that NPs should not be regarded as a substitute for GPs but rather as an opportunity for meeting unmet needs.

Consider findings of concurrent reviews to inform future policy changes, particularly in relation to MBS billing

The MBS Review Taskforce is currently considering how services can be aligned with contemporary clinical evidence and practice and improve health outcomes for patients. The findings from this project should be considered in line with concurrent reviews, including from both the MBS Review Taskforce and its NP Reference Group.

Dedicated pathways for rural NP education and clinical professional development

NP models demonstrated the most value in economic terms in residential aged care facilities, particularly in rural and remote areas. However, NP workforce challenges are similar to those faced by other disciplines, particularly in recruiting and retaining a workforce in rural and remote areas. Therefore, dedicated education opportunities and professional development for rural and remote nurses and NPs is required to develop a pipeline of skilled and experienced NPs. This is an important factor in getting NPs ready for practice in rural and remote areas, and in increasing their skills in expertise in 'rural generalism' (i.e. being able to provide a broader spectrum of services in rural and remote areas than what may be required in metropolitan areas). Training for rural and remote NPs needs to focus on the generalist skills required to meet health care needs

of remote communities. In addition, other key barriers associated with NPs practicing in rural areas should be investigated, such as financial sustainability, infrastructure and professional support and mentoring, in order to identify mechanisms to improve their attraction and retention. This may include the implementation of incentive payments for NPs to practice in these areas, support to universities to establish a 'local' NP workforce in identified areas of need (e.g. by providing training in rural settings), and capital investment for rural providers to establish effective working spaces for NPs.

Further investigate funding models to improve model sustainability and support innovative models

Case study sites were associated with a diverse range of funding models. This included three private practices, two state-funded NP models of care, one Commonwealth funded NP role, and two models that had mixed funding from State and Commonwealth Government. Two of the private practices required their patients to pay a co-payment for services provided. Five sites had access to and received MBS reimbursements.

Evidence gathered in this project identified funding approaches have a direct impact on the configuration of the NP model, including their sustainability and innovation. A number of NPs were initially established based on a business case for a set period. The short-term nature of this approach affected the sustainability of these models and the services provided. Given the growing evidence base and the benefits associated with NP models of care across primary health care and aged care, alternative funding models, such as practice/facility incentive payments, bundled payments or blended payments, should be explored to incentivise providers to incorporate the NP role into their service delivery.

1 Introduction

KPMG was engaged to conduct a cost benefit analysis (CBA) of existing NP models of care in Australia, creating the opportunity to identify current success factors and challenges and areas for potential expansion to improve these models based on government objectives.

1.1 Background and context

Health systems around the world are facing significant pressure across the health care continuum, driven by ageing populations, the increased prevalence of chronic disease, new technologies and changing consumer expectations.[2] As governments seek to respond to these challenges, increasing focus is being given to workforce models which are able to support new, or more efficient and effective, ways of delivering care. The Nurse Practitioner (NP) role has emerged as a way to improve access to health and expand the scope of practice for nurses, particularly for remote, marginalised and vulnerable populations. The skills and experience of NPs have been leveraged across the world for over 50 years, with the role formally legislated in Australia in 1998.[3]

The ability for NPs to work autonomously and collaboratively within a multidisciplinary health team, and their ability to undertake advanced clinical care, indicates that they are well positioned to provide flexible and affordable health services to Australian communities. However, compared to international experience, the role remains under-utilised across the Australian health care system.[4]

1.2 Project Objectives

The CBA provides an estimate of the costs and benefits associated with introducing an NP in primary health, aged care and other settings. Specifically, the objectives of the project are to:

- conduct an assessment of NP operating models in the aged care and primary health care sectors;
- undertake case studies to review and assess, from an economic perspective, existing NP models (i.e. residential aged care facility-based, sole operator NPs, General Practice (GP) clinic, NP clinic) and identify potential new or innovative models;
- identify potential areas of expansion for NP models within existing primary health care and aged care settings through identification of key success factors and challenges;
- identify potential areas of expansion for NP models in program areas such as Health Care Homes and aged care;
- identify areas and costs associated with the under-utilisation of NPs; potential savings associated with the expansion of NP roles, such as reducing avoidable hospital admissions, lengths of stay, ambulance costs, and any other related operational and financial costs;

[2] Australian Parliament, https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BriefingBook44p/FundingHealthCare, accessed 29 May 2018
[3] New South Wales Government. (1998). Nurses Amendment (Nurse Practitioners) Act.
[4] Middleton, S., Gardner, A., Della, P., Lam, L., Allnutt, N., & Gardner, G. (2016). How has the profile of Australian nurse practitioners changed over time? Collegian, 23(1), 69-77.

- liaise with key stakeholders to affect a high quality response to this service requirement and within the bounds of the contractor's control;
- investigate the recognition of NPs within the existing Medicare Benefits Schedule (MBS) parameters and detail any issues and options for change, to enable the NP workforce to work to the fullest extent of their scope of practice.

A primary purpose of this research is to fill a gap in the literature regarding the financial costs and benefits associated with NP models in use across primary care and residential aged care services. As such, the case studies review and assess, from an economic perspective, existing NP business models. There are other components of NP models of care that are not covered as part of this research, but are well documented in the existing literature. This includes the quality of care delivered by NPs, and patient outcomes. The literature review provided in Appendix A touches on some of these points.

1.3 Structure of the Report

This report has five main sections:

- Section 1, *Introduction* (this section), provides a background to the project and describes the project objectives;
- Section 2, *Methodology*, outlines the approach to developing the CBA, including research and stakeholder engagement activities undertaken as well as the identification and measurement of costs and benefits;
- Section 3, *Case studies*, provides eight case studies that were developed following site visits to sites that have implemented an NP model of care;
- Section 4, *Report findings*, outlines the key findings from the CBA in response to the project objectives;
- Section 5, *Considerations going forward*, wraps up the report focusing on any additional considerations for future decision-making.

The appendices at the end of the report include:

- *Appendix A:* Literature findings;
- *Appendix B:* CBA methodology;
- *Appendix C:* Stakeholder interview questionnaire;
- *Appendix D:* Site visit questionnaire;
- *Appendix E:* PHN questionnaire;
- *Appendix F:* References.

2 Methodology

This chapter details the approach to developing the Nurse Practitioner CBA. The process included a literature review, stakeholder consultations, a financial model, as well as the CBA. The CBA was informed by the literature review and the stakeholder consultations.

2.1 Development of the CBA framework

A CBA framework was developed to provide guidance and support for the development of the CBA. The CBA framework was informed by two main activities - a literature review as well as a round of stakeholder interviews.

Literature review

The literature review was conducted to explore and provide a conceptual overview of:

- current NP models in use in Australian states and territories, as well as international models;
- roles and responsibilities and scope of practice differences between settings;
- complexity of roles and variability in models and practice settings where roles have been implemented;
- costs and benefits associated with implementing NP models across different settings (with a focus on primary healthcare and aged care).

The findings from the literature review provided the basis for stakeholder consultations, the development of a CBA analytical framework (see Appendix B) as well as the subsequent cost benefit analyses of the project's case study sites. In addition, the literature review supported project reporting, including this final report. The research summarised in this report was found using the approach outlined below. It should be noted that any changes to the methodology proposed in the original CBA analytical framework were made in response to research limitations described in this chapter.

Research, scope tools and terms

The approach to research included academic, peer-reviewed databases (e.g. PubMed, JournalSeek, CINAHL, MedlinePlus, Google Scholar) as well as grey literature (Government reports, benefit realisations plan, model guidelines) published in English between 2008 and 2018, relating to policy and practice in all Australian jurisdictions, and comparable international jurisdictions, including New Zealand, United Kingdom, United States, Canada and the Netherlands. It should be noted that while these jurisdictions may represent comparable health systems there are important regulatory differences between them which impact on local NP models of care.

A number of specific activities informed the preparation of the Literature Review, including:

- searching grey and peer-reviewed literature using the relevant search terms (e.g. Nurse Practitioner, economic evaluation, cost benefit analysis, Nurse Practitioner models of care, implementation of Nurse Practitioner models, or iterations thereof);
- reviewing the literature identified to understand the general breadth and depth of the evidence base, and to identify additional literature and studies to include in the review;

- developing a draft outline of the literature review based on the areas of research identified from the literature;
- analysing the literature relevant to each section of the review by identifying common themes and points of difference;
- preparing the literature review, drawing on the common themes identified and the points of difference, highlighting the areas most relevant to the Nurse Practitioner Economic Evaluation.

Literature review limitations

The literature review focused on NP models of care in the primary health care and aged care settings. There is a volume of Australian research reporting on NP models of care in acute care settings and while research outcomes focussing on NPs practicing in primary health care settings was found to be more limited, this appears to be an area of increasing interest.[5,6,7,8,9] This may be reflective of the more widespread utilisation of NPs in the Australian public hospital sector and also highlights a gap in existing literature that this study will attempt to address. It should further be noted that any comparisons made between countries should be taken with caution, as each country has its own regulatory and governance framework with respect to NP models of care.

Stakeholder interviews

A number of stakeholder interviews were conducted in order to gain qualitative input into the development of the CBA framework. These interviews focused on gathering contextual knowledge on the current state of the NP model which supported building a qualitative view of the existing system, and formed the basis of the CBA. The stakeholders that were interviewed as part of this consultation were identified with the Department of Health; all of them represented peak clinical or workforce groups. They included representatives from the following organisations:

- Australian College of Nurse Practitioners (ACNP)
- Chief Nursing and Midwifery Officer ACT
- Chief Nursing and Midwifery Officer QLD
- Australian Nursing and Midwifery Federation (ANMF)
- Congress of Aboriginal and Torres Strait Islander Nursing and Midwifery (CATSINaM)
- Royal Australian College of General Practitioners (RACGP)
- Rural Doctors Association of Australia (RDAA).

[5] Currie J, Chiarella M, Buckley T. Practice activities of privately-practicing nurse practitioners: Results from an Australian survey. Nurs Health Sci [Internet]. 2018 [cited 2018 Mar];20(1):16-23. In: Ovid MEDLINE(R) [Internet]. http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medl&NEWS=N&AN=28776871
[6] Currie J, Chiarella M, Buckley T. Privately practising nurse practitioners' provision of care subsidised through the Medicare Benefits Schedule and the Pharmaceutical Benefits Scheme in Australia: results from a national survey. Aust Health Rev. 2017
[7] Helms, Christopher & Crookes, Jo & Bailey, David. (2014). Financial viability, benefits and challenges of employing a nurse practitioner in general practice. Australian health review: a publication of the Australian Hospital Association. 39. 10.1071/AH13231.
[8] Currie, J., Chiarella, M., Buckley, T. (2016). Workforce characteristics of privately practicing nurse practitioners in Australia: Results from a national survey. doi: 10.1002/2327-6924.12370
[9] Verena Schadewaldt, Elizabeth McInnes, Janet E Hiller and Anne Gardner. Experiences of nurse practitioners and medical practitioners working in collaborative practice models in primary healthcare in Australia – a multiple case study using mixed methods. BMC Family Practice. 2016

A sample consultation guide with the questions asked during these interviews can be found in Appendix D.

2.2 Methodology informing the development of the CBA

The CBA itself was informed by the development of a total of eight case studies which were based on visits to sites with NP models of care in place, followed by a financial modelling and cost-benefit analysis exercise.

Case study site selection and site visits

The case study sites were selected based on responses to a national survey of NPs that was recently administered by the Australian College of Nurse Practitioners. As part of this survey, NPs described the model of care they practice within and had the option of expressing their interest in participating in this project. An extensive list of MBS data items provided by the Department was also taken into account for the prioritisation of potential sites, looking into the suburbs with the most NPs and NP services provided over the last five years. This enabled an identification of areas with high NP activity.

A list of eight sites was identified, covering off a range of models and settings (i.e. both primary health and aged care settings, different models of care, services provided and funding models, as well as both metropolitan and regional / rural sites). A high-level overview of the priority sites is provided in Table 4.

Table 4: List of priority sites selected for case studies

Case study site	Site / Model	Geographical classification*	Aged care	PHC	Aboriginal Community Controlled Health Organisation
Site A	NP based in hospital ED	MM 3	Yes	Yes	No
Site B	NP clinic	MM 6	No	Yes	No
Site C	NP part of primary health care clinic	MM 5	No	Yes	No
Site D	GP / NP collaborating practice	MM 1	Yes	No	No
Site E	Single operator NP	MM 3	Yes	No	No
Site F	NP part of ACCHS	MM 1	No	Yes	Yes
Site G	Single operator NP / contracted by RACFs	MM 1	Yes	No	No
Site H	NP part of ACCHS	MM 7	Yes	Yes	Yes

Source: KPMG / national survey of NPs
**refer page 5 for key to classifications*

The site visits focused on informing the development of the case studies. The focus was on collating information for:

- potential benefits and associated costs;
- breadth of the benefit impact;
- opportunities for further expansion, innovation and scaling;
- stakeholder perspectives about the challenges.

Stakeholders were issued an Excel data request prior to the site visit, with a range of quantitative questions related to the NP role. During the site visits, stakeholders were able to provide further detailed context to any data provided, and point out any additional datasets they had available as well as any data-related gaps and issues.

Consultation with PHNs

The relevant Primary Health Network (PHN) to each site visit was invited to participate in an interview to provide context on community need and service planning along with perspectives on the model. A total of two interviews were conducted.

The interviews formed an aspect of the CBA and are reflected in findings set out in Section 4. The consultation guide that supported these consultations is set out in Appendix E.

Financial modelling and cost benefit analysis

Financial model

A financial model and CBA was completed for each site. The financial model took the perspective of the individual site, with the aim to broadly assess each model's annual income and expenditure, and overall sustainability. Income sources included payments for consultations from patients, supported in full or in part by MBS reimbursements, and funding from other sources including PHNs, State and Federal governments. Expenditure items included the NP salary, travel costs, and site's fixed and variable costs. Data for the financial model was self-reported from the sites. A sensitivity analysis was completed to investigate sustainability of NP funding model under different rates of co-payments and average consultations per day.

Cost benefit analysis

A CBA was completed for each NP site from a wider health system and patient perspective.

The overall costs of the NP model were obtained from the financial model. No wider costs such as patient travel, or carer costs were included.

The benefits for each NP site were estimated using one of three broad methods, informed by the Literature Review, depending on the specific NP model:

- Analysis of reduced ED, hospitalisation and ambulance costs as a result of the NP model – this method was adopted for aged-care NP models where a primary focus of the site is to fill the gap between primary care and emergency departments for the care recipient, and where the avoided health service usage occurs in the same time period as the NP consult;
- Analysis of the level of funding that would be required to provide equivalent volume of service with a GP – this method was adopted for primary care NP models where the wider benefits of the model, such as improved chronic disease management and continuity of care, are difficult to measure;
- Analysis of previous literature relevant to the specific targeted treatment or cohort – this method was adopted for NP models that are particularly specialised e.g. around dementia diagnosis.

Each method is discussed in more detail below.

Reduced ED, hospitalisation and ambulance costs –residential aged care models

The benefit of reduced ED visits and hospitalisations was estimated using the following parameters:

- The number of avoided ED visits as a result of the NP model, as self-reported by the individual site. Sensitivity analysis was completed to assess the robustness of the results to this parameter;
- The share of ED visits that result in a hospitalisation: 5 percent based on AIHW emergency department data;[10]
- The share of ED visits that arrive via ambulance: 25 percent based on AIHW emergency department data;[11]
- The average costs of ED visits, hospitalisations and ambulance trips (see Table 5).

Table 5: Average cost (benefits) of ED visits, hospitalisations and transfers

Resource	Description	Value	Source
Avoided transfer to ED	Non-emergency road transport fees	Metropolitan: $325 Regional and rural: $549	Ambulance Victoria Fee Schedule (2017-18)
Avoided ED presentation	Cost (benefits) associated with ED presentation within an aged care facility in the absence of the NP model	$652	IHPA Round 20 National Hospital Data Collection (NHCDC) Cost Report
Avoided hospitalisation	Admitted acute separation admitted via an ED	$7,068	IHPA Round 20 National Hospital Data Collection (NHCDC) Cost Report

Source: as per sources presented in table

In addition, quality of life benefits from reduced ED visits and hospitalisations were captured using the following parameters from Neumann et al 2016[12]:

- disutility of an ED visit: 0.01
- disutility of a hospitalisation: 0.06.

The Quality Adjusted Life Year (QALY) gains were estimated using the utility parameters above applied to one day and three days for ED visits and hospitalisations respectively, and valued at $50,000/QALY. In Australia, funding bodies such as the Pharmaceutical Benefits Advisory Committee (PBAC) do not acknowledge an explicit cost-effectiveness threshold (a proxy for society's willingness to pay for better health), but historical decisions suggest a value of around $50,000/QALY is acceptable.[13]

Equivalent volume of service – primary care models

Primary care NP models can provide a range of benefits such as improved chronic disease management and coordination of care, and improved access to services for rural and remote populations. However these benefits are difficult to quantify, as they accrue over many years and across settings. For this evaluation, long-term outcomes and service usage data was unavailable.

In the absence of such data, the benefit of improved access to primary care services was approximated by the cost of providing the equivalent volume of service via a GP. There was no assessment possible of any difference in the patient outcomes achieved between the NP models,

[10] AIHW 2017, 'Emergency department care 2016-17: Australian hospital statistics.' Table 4.14.
[11] Australian Institute of Health and Welfare 2017. Emergency department care 2016-17: Australian hospital statistics. Health services series no. 80. Cat. No. HSE 194. Canberra: AIHW.
[12] Neumann, Peter J., et al., eds. Cost-effectiveness in health and medicine. Oxford University Press, 2016.
[13] Wang, Shuhong, Debra Gum, and Tracy Merlin. "Comparing the ICERs in Medicine Reimbursement Submissions to NICE and PBAC—Does the Presence of an Explicit Threshold Affect the ICER Proposed?" Value in Health (2018).

which typically has less expensive but longer average duration consults, and the alternative GP model, which typically has shorter average duration consults but that are more expensive. This is an area that continues to be researched.[14][15] It should also be noted that this analysis may underestimate the potential extra costs that can be required to attract a GP service to rural regions.

The cost of providing equivalent volumes of consults via a GP service was estimated using the following key parameters:

- the share of NP consults that go on to see a GP, as self-reported by the individual site. Sensitivity analysis was completed to assess the robustness of the results to this parameter;
- the average distribution of consults durations (e.g. short, <20 minutes, 20-40 minutes, 40+ minutes) for NP as self-reported by the individual site;
- the average distribution of consults durations (e.g. short, <20 minutes, 20-40 minutes, 40+ minutes) for the hypothetical GP service, derived from the Department of Health MBS statistics (see example comparison for Site B presented in Section 4.4);
- the MBS funding cost of NP consults versus GP consults as per the MBS funding agreements (see Section 4.4).

Analysis of literature – specific cohort or treatment models

As with general primary care NP models, the benefits generated by NP models targeted at specific patient cohorts or disease groups can be difficult to quantify, as they accrue over many years and over many jurisdictions. For this evaluation, long-term outcomes and service usage data was unavailable. As a result, an alternative method for such models is to evaluate previous relevant literature and determine scenarios based on outcomes delivered in similar settings in the literature. This is discussed in more detail within the individual case studies.

Limitations

There are potential limitations associated with the CBA:

- The NP sites are already established, and as a result the evaluation framework does not use a randomised control trial that is the 'gold standard' in evaluation methodology. Instead, the project adopted a framework that considers a site before and after the establishment of the NP program, or the hypothetical case where the NP model does not exist, or is replaced by a GP service. The results from the CBA should therefore be considered as indicative only.

- While aggregated administrative data such as MBS and PBS services are available at the PHN level, there are difficulties in isolating MBS / PBS data by site. This means much of the CBA was informed by semi-structured surveys and self-reported data collections that have the potential to be less accurate than administrative data. To help mitigate this, the project has completed sensitivity analysis that highlights how the CBA results vary with different input assumptions.

- Short timeframes mean that longer-term impacts of the NP model (e.g. improved long term patient quality of life or reduced chronic disease severity) cannot be measured directly, which is a limitation for primary care NP models in particular. The benefits for these models are based on assumptions from the literature or comparative costs of a GP-led service.

[14] Seale, C., Anderson, E., & Kinnersley, P. (2005). Comparison of GP and nurse practitioner consultations: an observational study. *Br J Gen Pract*, *55*(521), 938-943.
15 Marshall, D.A., Donald, F., Lacny, S.L., Reid, K., Bryant-Lukosius, D., Carter, N., Charbonneau-Smith, R., Harbman, P., Kaasalainen, S., Kilpatrick, K., Martin-Misener, R., 2015. Assessing the quality of economic evaluations of clinical nurse specialists and nurse practitioners: a systematic review of cost-effectiveness. NursingPlus Open 1, 11–17.

- In some sites, facilities were made freely available to the NP. These in-kind contributions were not included within the financial analysis or CBA. Such contributions potentially have a cost, however estimating this opportunity cost was difficult within the scope of this project. For example, the opportunity cost of free access to a facility could be the rental cost of an equivalent facility. However in some instances, such as rural areas, the facilities were otherwise vacant, suggesting a low opportunity cost. Overall, the in-kind contributions were assumed to have zero cost. It is noted that if the NPs were required to pay for these in-kind contributions, further funding would be required to ensure the sustainability of the NP business model.

3 Case Studies

This chapter provides one de-identified case study report for each of the eight case study sites visited in the context of this project. The case studies are structured as follows:

- **summary table**, outlining the call-out features of each case study;
- **model description**, describing the type of model that the NP operates in;
- **site characteristics**, outlining the unique characteristics of the NP model of care;
- **financial model**, breaking down the sources of income and expenses of the site;
- **qualitative findings**, outlining the qualitative findings from the case study such as success factors, opportunities and benefits, as well as challenges experienced;
- **cost benefit analysis**, outlining the costs and benefits of the model based on the quantitative data that was collected, including the cost benefit ratio for the relevant site.

KPMG

Case Study A

Aged Care Focus	11 Year Model Maturity
NP Role Focus The role has a focus on providing services to older people at home and care recipients in RACFs, with the aim of reducing avoidable ED visits and hospitalisations	**Catchment Demographic** The catchment geography has a high proportion of 65+ population with complex chronic conditions
Funding Model State-funded	**Key Outcomes** ↓ Reduced hospital admissions and associated reductions in functional decline ↑ Increased integrated care ↑ Increased collaboration
Success Factors Clearly identified area of need Relationship with GPs / service providers and referrers Clearly identified referral guidelines	**Challenges** Recruitment and succession planning Work/life balance
Cost Benefit Ratio 12.4	

Description of model

Introduction

The NP is employed by the hospital ED of a local public hospital and acts as a link between the ED and the community by providing primary care services to patients who would have otherwise presented to the ED.

Operating context

The service is located in a regional town (MM 3) and was established seven years ago. The community has a high proportion of residents who are older than 65 years of age. At the time of implementation, the NP had recognised a significant number of potentially avoidable ED and hospital admissions, and had created an evidence base by recording these cases. The NP identified a service gap in the community in relation to assessing older patients at home and aged care recipients before they present to ED. The objective of this NP model of care is to prevent avoidable hospitalisations, predominantly in relation to recipients of aged care services and older people at home. While being employed by the hospital ED, the NP provides patient consultations at the patient's home or care recipient's RACF.

The Service Delivery Model

The NP model of care works by intercepting patients before they present to the ED. Patients contact their GP who will issue a referral to the NP. If the patient is a resident at an RACF, RACF staff will usually contact the GP on behalf of the patient. The NP will then see patients in their own home or at their RACF. If a patient does not need to be admitted to hospital, the NP devises a treatment plan and provides care in collaboration with GPs and other health service providers if required.

The Employment Model

The NP is employed by the local hospital ED on a permanent full-time basis.

The Funding Model

The NP role is funded by the State government. Funding is provided directly to the ED.

Site characteristics

Table 6: Characteristics of the NP model – Case Study A

Characteristics of NP model	
Time since establishment	11 years
Target group	Aged care (65+)
Remoteness	MM 3
Population catchment	50,000
NP FTE on site	1.0
GP FTE on site	n/a
Employment model	Employed by hospital ED, salaried position
Funding model	State-funded
Patient co-payment	×
Access to MBS	N/A
NP salary / year	$125,000

Source: Site visit

Financial Model

Income

Funding is received from the State Government. The NP consults are not subsidised through the MBS. Patients are not charged a co-payment fee.

Expenditure

The overall costs of the site are approximately $130,000, made up predominantly of the NP's salary. There are no facility-related fixed costs as patients are seen in their own homes or RACF.

Sustainability

The financial model indicates that under current funding the NP model is financially stable, however this is dependent on State government funding.

Qualitative Findings

Success Factors

Interviews conducted during the site visit identified a range of factors critical to the successful implementation of the site's NP model of care. These are described in detail below.

Identified area of need

The NP identified a community need relating to continuity of care between GPs, RACFs and hospitals to decrease the number of potentially avoidable ED and hospital admissions. Identifying a specific gap in medical service delivery within the community is an important factor that has helped to establish this NP model, gain funding and wider support from local healthcare service providers. The identification of an area of need also helps to avoid duplication of services.

Flexibility of the NP role

The NP role has specific requirements including variable work hours and locations, the ability to work independently and the need to develop strong working relationships with GPs and other service providers. A success factor for this model is that there is a strong alignment between the NP's strengths and the requirements of the role.

Relationship with GPs / service providers

The NP has invested a significant amount of time into establishing relationships with GPs and other service providers in the community (e.g. pharmacists). This approach to establishing working relationships has led to a successful and trusted collaboration over the years, supporting better coordinated care for patients.

Clearly identified scope of practice and referral guidelines

A key aspect in forming a successful working relationship with GPs and other health professionals in the region is establishing clear guidelines surrounding scope of practice and referral guidelines, "knowing your place" and raising awareness relating to what service gap is filled by the NP. For example, the NP does not provide any services that would typically fall within the scope of practice of a registered nurse (e.g. wound care).

A generalist NP with a specialty focus

Being a generalist NP with a specialist focus on aged care is a key reason for the success of this model of care. This specialist background fosters the ability to appropriately assess patients and collaborate with GPs as well as RACFs in an informed manner.

Benefits

Stakeholders identified a number of benefits of the NP model as outlined below.

Reduced avoidable ED/hospital admissions

The implementation of the NP model of care has significantly reduced the number of avoidable admissions to the ED, as patients who would otherwise present at the ED are now treated by the NP. Data collected by the NP indicate that the number of ED admissions has reduced by almost 1,400 each year since the establishment of the model. This has flow-on benefits in reduced hospitalisations and ambulance trips.

Improved quality of life and patient experience

Treatments by an NP who sets up individual treatment plans and conducts home visits to patients has a positive impact on patients' quality of life and experience (as observed by the NP in this context), as patients are able to be treated in their home environment rather than at the hospital. The general benefits of treating patients at home rather than at the hospital (where appropriate to do so), are well documented in existing literature.

Challenges & Limitations

Site visits identified a range of challenges and limitations to the role operating as effectively as possible. These are outlined in detail below.

Work/life balance

The workload in this NP model is high, causing the NP to work more than 50 hours per week. This is a result of the high demand for the NP services provided and a lack of further NP staff to help meet this demand.

Recruitment and succession planning

The site suggests that there is scope for employing at least one additional NP, however regular advertising has not yet identified a suitable candidate. This is thought to be due to a lack of NPs in the region generally, and a lack of NPs with skills and interests in this particular model more specifically. A key challenge for this model is to ensure its sustainability over the longer term.

Cost-Benefit Analysis

Key points

- This NP model's costs related primarily to the NP's salary and job-related travel. Total costs of the model are estimated at $132,981 per year;
- The major benefits of this model are the reduction in ED admissions and associated hospitalisations and ambulance trips. It is estimated that the total benefits of the model amount to $1,645,763 per year;
- The general benefits of this model significantly outweigh its costs, with an overall benefit cost ratio of 12.4. The BCR remains high under more conservative assumptions around consults per day and ED visits avoided.

Costs

The costs of the NP model to the health care system are the costs to the State government to fund the operation of the NP program.

Benefits

Identified benefits

The benefits from the NP program are the reductions in ED visits and subsequent hospitalisations and ambulance trips, and associated improvement in patient quality of life.

Table 7: Benefit assumptions – Case Study A

Potential benefits	Site applicability	Included in CBA?
Early intervention		
Improved continuity of care		
Reduced avoidable ED/Hospital admissions	✓	Quantified in the CBA based on self-reported data from the site
Chronic disease management		
Improved quality of life	✓	Disutility of ED visit is quantified in the CBA based on evidence from the literature
Improved access to health care services for rural and regional areas	✓	Not quantified in the CBA
Improved access to health care services for Aboriginal & Torres Strait Islander cohorts		
De-prescribing		
Improved allocative efficiency of primary health care		
Up-skilling of clinical staff		
Improved patient experience	✓	Not quantified in the CBA
Improved quality & safety	✓	Not quantified in the CBA

Source: Site visit

Measuring and valuing selected benefits

The benefit of reduced ED visits and hospitalisations is estimated using the method described in Section 2. The number of avoided ED visits as a result of the NP model was 1,436 per year based on information from the site that showed an ED visit is avoided for all bar a handful of patients. A sensitivity analysis was completed for a value of 956 avoided ED visits based on four rather than six consults per day.

Benefit-cost ratio

The benefit-cost ratio (BCR) for this NP model is 12.4 which suggests the NP is saving over $12 for every dollar invested in the site. If the number of avoided ED visits is reduced to 956 per year, the BCR is 8.2.

Alignment of costs and benefits

This model has a relatively strong alignment of costs and benefits with the State government funding the model while also benefiting from reduced hospitalisations and ED visits. There is no lag time between benefit and cost.

Table 8: Cost-Benefit Analysis Summary – Case Study A

Cost-Benefit Analysis Summary		
Costs	**Annual $**	**From**
Discretionary funding	$132,981	State Government
Total	$132,981	
Benefits	**Annual $**	**To**
Reduction in GP visits	$0	
Reduction in ED visits	$936,272	State Government; PHIs; and patients
Reduction in hospitalisations	$507,482	
Reduction in ambulance trips	$197,091	
QALY gain	$4,918	Patient
Total	*$1,645,763*	
Benefit Cost Ratio	***12.4***	

Source: KPMG

KPMG

Case Study B

Primary Health Care Focus	<1 year
NP Role Focus Model in place to increase access to primary health care in the community, improve chronic disease management and reduce avoidable use of ambulance services	**Catchment Demographic** Growing ageing populations with complex chronic conditions and minimal access to health care
Funding Model Private practice	**Key Outcomes** Reduced Hospital Admissions ↑ Improved chronic disease management ↑ Increased access to primary health care
Success Factors Identified area of need Relationship with GPs / service providers	**Challenges** Recruitment and succession planning Funding Leadership, district and government support
Cost Benefit Ratio 1.1	

Description of model

Introduction

The NP has established a primary health NP clinic in rural Australia (MM 6) providing general primary health care services to the local community.

The NP model of care is a primary health NP clinic in rural Australia. The clinic was only recently established (October 2017), and services are currently provided in a local community centre with a main clinic due to open in the neighbouring town shortly. The NP also provides half a day of visiting services to a nearby small rural town without any primary healthcare services. Services are almost entirely provided by the NP, with a collaborating GP visiting the site one day per fortnight. The NP has further engaged a local physiotherapist and podiatrist to provide services as part of the clinic services.

Operating Context

The service is located in a rural Australian community (MM 6). The clinic was only recently established (October 2017), and services are currently provided in a local community centre with a main clinic about to open in the neighbouring town.

Prior to the establishment of the clinic, there was no access to primary health care in the community, with the exception of a locum GP approximately 40km away.

The Service Delivery Model

Prior to establishing the clinic, the NP recognised a community need for access to primary health services. The services are almost entirely provided by the NP, with a collaborating GP visiting the site one day per fortnight. Administrative support is available three days per week.

Employment Model

The clinic is run as a private practice by the NP.

Funding Model

As a private practice, the NP receives payments from patients for each consult. Approximately 70 percent of consults are bulk-billed (the MBS reimbursement to patients covers the entire cost of the consult), while in the remaining 30 percent, patients are charged a co-payment of $25. Patients who are under the age of 16, over the age of 65, and those who receive government benefits are eligible for bulk-billed consults.

Site characteristics

Table 9: Characteristics of the NP model – Case Study B

Characteristics of NP model	
Time since establishment	<1 year
Target group	General community
Remoteness	MM 6
Population catchment	1,200
NP FTE on site	0.6
GP FTE on site	0.1
Employment model	Own business
Funding model	Private practice
Patient co-payment	✓
Access to MBS	✓
NP salary / year	$81,776

Source: Site visit

Financial Model

Income

Funding is received from MBS rebates and a patient co-payment fee of $25, which is charged to around 30 percent of patients.

Expenditure

The overall costs of the NP model are approximately $130,000, made up predominantly of the NP's salary and administration costs. There are no facility-related fixed costs as the building is made available free of charge by the local community.

Sustainability

The financial model indicates that under current funding the NP model is financially stable, however this is dependent on charging a co-payment of $25 per consult to approximately 30 percent of patients, and the use of a facility free of charge.

Qualitative Findings

Success Factors

Stakeholders raised a number of factors that contributed to the positive outcomes of the NP model to date, despite the short time that this model has been in place for.

Identified area of need

The ability to identify a clear gap in service delivery in the region and to meet a clear need within the community is a contributor to the early successes of the NP model. A previous lack of access to primary health care as well as an absence of appropriate continuity of care has resulted in a significant uptake of their services in the region. Patients who were previously seeing locum doctors in a neighbouring town have left those services to receive primary health care services from the newly established NP clinic. This is attributed to the NP's ability to build up historical patient knowledge and a rapport with each patient over time which is something that locum doctors on a weekly contract are unable to do.

Relationship with GPs / service providers

As part of the current NP model of care, a visiting GP spends one day per fortnight on site to see patients while being available for telephone advice at all other times. While there is a desire to increase GP time at the clinic, having a GP spending at least a certain amount of time at the clinic leads to increased collaboration and communication. It contributes to better patient outcomes by being able to physically examine a patient rather than treat somebody over the phone.

Benefits

The following benefits of the NP model of care were identified during the site visit.

Improved continuity of care

The NP model improves continuity of care in the local community by providing the community with the ability to follow up on health related issues prior to seeing a specialist, and by acting as a link between the community and other health service providers in the wider region.

Chronic disease management

Chronic disease management is a key area of need for this regional community. Prior to the establishment of the NP model of care, there was no health service that could provide that type of service to patients. Chronic disease management is a key part of the services delivered daily, and there are positive health outcomes for patients and the community overall that have been observed since the establishment of the NP practice.

Improved access to health care services

Prior to the establishment of the NP practice, there was no primary care service provider in this regional community. Patients had to travel to the nearest town to see a locum GP in order to receive services. A key benefit of this NP model of care is providing a first point of call for the community which previously did not exist. The NP noted a significant increase in mental health presentations since the implementation of the NP role.

Improved patient experience

Attending locum GPs prior to the implementation of the NP model of care was a somewhat negative patient experience for the community as the locums change every few weeks and patients had to retell their stories over and over again. Providing a consistent NP health service in the community, patients feel more comfortable getting their health issues investigated and are more inclined to continue coming back with any health issues they experience.

Challenges & Limitations

The NP reported a number of challenges and limitations with respect to establishing the rural NP clinic. These are described in detail below.

Recruitment and succession planning

The NP workload related to running the practice is extremely high, even though the NP is only working 0.6 FTE in theory. This has a negative impact on the NP's work-life balance. Uptake of the new clinic has been so successful that enough capacity for a second NP role is expected to be established within the next few months, however recruitment into rural and remote communities is extremely challenging, and retention rates are low. An ideal solution would be the recruitment of an NP who is local to the area, however there is currently no other NP in the region.

Another potential solution raised was the ability to access funding to employ a local NP candidate to train and therefore ensure effective succession planning.

Delayed access to services

Due to limitations in access to MBS items, the NP is required to wait for the GP to be on site before some of services can be implemented or signed off on. This includes:

- mental health care plan sign-offs which delays access to counselling for patients;
- ordering mammography and bone density testing which delays the provision of a diagnosis for patients;
- GP Management Plan and Team Care Arrangement sign-offs which delays access to allied health services;
- access to a number of radiology services such as CT scans as well as some ultrasound and X-ray requests;
- access to some telehealth items (the NP has identified a number of telehealth items for psychiatrists and improved access for telehealth services for patient counselling through psychology services which the NP is unable to claim).

Funding

The NP clinic is sustained by MBS rebates as well as a co-payment made by patients who are older than 16, under 65 and not on a benefits scheme. Generating sufficient income to make the NP model financially viable is currently a major challenge for the site. The limited access to MBS rebate amounts pose a continuous challenge in implementing a sustainable NP model of care.

Leadership, district and government support

No support was provided from state or federal government in the establishment of the NP clinic. The NP identified a primary care service gap in the region, and set up the clinic by investing a significant amount of their own time and money into building the service. The clinic does not currently meet the Royal Australian College of General Practitioners' (RACGP) definition of a general practice, whereby at least 50 percent of a practices' services must be provided by a GP.[16] This means that the practice is not eligible for grants such as the Practice Incentives Program (PIP) which provides payments to support practices in purchasing additional equipment, upgrading facilities or offering additional payment to doctors working at the practice.[17]

[16] https://www.humanservices.gov.au/organisations/health-professionals/enablers/eligibility-pip
[17] https://www.humanservices.gov.au/organisations/health-professionals/services/medicare/practice-incentives-program

Cost-Benefit Analysis

Key points

- This NP model's costs relate primarily to the NP's salary and administration. Total costs of the model are estimated at $128,376 per year;
- The NP is currently funded through MBS rebates and patient co-payments of $25 per consult which applies to approximately 30% of all consults;
- The major benefits of this model are increased access to services for a rural population, and improved management of chronic disease and care coordination. These benefits are difficult to robustly quantify due to the long-term nature of chronic disease;
- In the absence of robust long-term outcomes data, the costs of providing equivalent volumes of service via a GP provide a proxy of the benefits delivered. Under base case assumptions, a GP-led service would be $16,000 more expensive than the NP model, suggesting a positive benefit-cost ratio of 1.1 for the NP model.

Costs

The costs of the NP model are approximately $130,000 per annum in MBS rebates and patient costs.

Benefits

Identified benefits

The benefits from the NP program are more difficult to quantify, as they include improved access to services, continuity of care and management of mental health conditions and chronic diseases for an under-serviced rural population.

Table 10: Benefit assumptions – Case Study B

Potential benefits	Site applicability	Included in CBA?
Early intervention		
Improved continuity of care	✓	Not quantified in the CBA.
Reduced avoidable ED/Hospital admissions		
Chronic disease management	✓	Not quantified in the CBA.
Improved quality of life		
Improved access to health care services for rural and regional areas	✓	Improved access for rural patients is an improvement in equity of service provision. Quantified by comparing costs of providing services via a GP
Improved access to health care services for Aboriginal & Torre Strait Islander cohorts		
De-prescribing		
Improved allocative efficiency of primary health care		
Up-skilling of clinical staff		
Improved patient experience	✓	Not quantified in the CBA.
Improved quality & safety		

Source: Site visit

Measuring and valuing selected benefits

The benefit of improved access is approximated using the GP comparison method described in section 2. The self-reported share of NP consults that go on to see a GP at this site is 10 percent. Under these assumptions, the costs of providing equivalent volume of service via a GP is $144,548 per year. A sensitivity analyses was completed with a higher rate of 20 percent.

Benefit-cost ratio

The BCR for this NP model is difficult to robustly quantify, however considering only nominal benefits of improved access delivers a BCR above 1.1. At a higher rate of NP consults that go on to see a GP, the BCR falls to 1.0.

Alignment of costs and benefits

As with most primary care models, there is a misalignment of costs and benefits in this site. Longer term health benefits will likely manifest in terms of reduced hospitalisations and emergency department visits, benefiting State governments, private health insurers and patients themselves, while the costs are borne by the Federal government and patients. This is of course not a function of the NP model but a function of Australia's current fragmented system.

Table 11: Cost-Benefit Analysis Summary – Case Study B

Cost-Benefit Analysis Summary		
Costs	**Annual $**	
MBS funding	$104,976	Federal government
Patient co-payments	$23,400	Patient
Total	$$128,376	
Benefits	**Annual $**	
Cost of providing equivalent volume of service via GP	$144,548	
Total	*$144,548*	
Benefit Cost Ratio	***1.1***	

Source: KPMG

KPMG

Case Study C

Primary Health Care	12 Year Model Maturity
NP Role Focus The role was implemented to increase access to Women's Health care for Aboriginal and Torres Strait Islander women in the community	**Catchment Demographic** The site is a regional site located with a high proportion Aboriginal and Torres Strait Islander people
Funding Model State-funded	**Key Outcomes** ↑ Increased early intervention ↑ Increased equity of access ↑ Aboriginal and Torres Strait Islander access to care
Success Factors Specialist scope of practice Strong community relationships Strong leadership and district support	**Challenges** Locum GP workforce Recruitment and Succession Planning Understanding of NP role
Cost Benefit Ratio >1	

Description of model

Introduction

The NP operates autonomously and together with a multidisciplinary publically funded primary healthcare Community Health based team. The NP delivers primary care to the community with a strong focus on Aboriginal and rural health.

Operating Context

The team at the site consists of a NP based in a Community Health Centre where there are a number of Allied Health and Community Nursing based services. The NP works autonomously seeing patients directly for consultations, diagnosis and treatment and referral to GP services for access to specific MBS items and for issues outside the scope of practice for the NP.

Service Delivery Model

The NP at this site specialises in women's health, specifically focused on improving access to Women's Health services for Aboriginal and Torres Strait Islander women in the community. The model has been in place for 12 years with the NP seeing an average of 87 patients per month, 21 of which identify as Aboriginal and Torres Strait Islander people. In addition to the NP working from the primary health clinic they have also worked in with an Aboriginal Community Health Centre in a regional centre to establish a clinic delivering diagnostic women's health procedures to the local Aboriginal and Torres Strait Islander community and for those who would otherwise be left at financial disadvantage by accessing these tests elsewhere. This specialised clinic was established in 2012 and involves a partnership agreement with the Rural Doctor's Network (RDN), the Aboriginal Medical Service and the LHD. The NPs involvement with this clinic sees patients requiring further investigation or treatment from the primary health setting directly on to this service, where the NP provides the diagnostic examination and pathology collection, thus providing a continuity of care that is otherwise not available in this space for Aboriginal and for rural women.

Employment Model

The NP is salaried by State Government on a permanent full-time basis.

The Funding Model

The health service meets the cost of the NP through its operational budget derived from public funding.

Site Characteristics

Table 12: Site characteristics – Case Study C

Characteristics of the NP model	
Time since establishment	12 Year Model Maturity
Target group	Aboriginal and Torres Strait Islander women
Remoteness	MM 5
Population catchment	6,200
NP FTE on site	1
GP FTE on site	n/a
Employment model	Salaried
Funding model	Public
Patient co-payment	×
Access to MBS	N/A
NP salary / year	120,000

Source: Site visit

Financial model

Income

Funding is received from the State Government.

Expenditure

The costs of the NP model are approximately $130,000, made up predominantly of the NP's salary. There are no facility-related fixed costs as the building is made available free of charge by the publicly funded site.

Sustainability

The financial model indicates that under current funding the NP model is financially stable, however this is dependent on discretionary State Government funding.

Qualitative Findings

Success Factors

The local NP raised a number of key factors for the successful implementation of the site's NP model of care. These are described in detail below.

Identified area of need

Prior to completing the further academic study required to become a NP, it was identified by both the Community Based Services manager and the NP that a significant gap existed in quality continuity of care for the community especially across women's and Indigenous health. This gap existed predominately due to the rural geography of the Women's Health service causing a shortage in full time GPs and a higher likelihood for locum GP workforce.

The district that the service caters for has a high proportion of Aboriginal and Torres Strait Islander people, 22.1 percent, which is higher than the national average of 2.8 percent. For this reason the NP role was established to provide improved access to women's health for culturally appropriate diagnosis, treatment and referral for all women across the population catchment, with a specific focus on Aboriginal and Torres Strait Islander women.

Implementing such a service has provided the catchment population with a continuity of care that had not previously existed across the region, and has reduced the need for women of lower socio economic groups to travel long distances away from their homes to access, sometimes basic healthcare needs such as contraception. A comprehensive Women's Health service exists for all needs and is provided in a culturally appropriate manner, safely and effectively for all women who present.

Scope of practice

The NP at this site identified their ability to work autonomously, whilst simultaneously collaborating with a range of other providers, as a key success factor in providing the best possible care to all patients. The ability to work at the upper spectrum of the NP scope of practice is predominantly due to the NPs commitment to lifelong learning, the health needs of the population, the rural setting and the periodic lack of GP services.

At this site the NP conducts the following activities autonomously:

- consultation, diagnosis and treatment for a wide range of women specific presentations;
- comprehensive gynaecological assessment;
- prescription of appropriate medications to treat a wide range of complaints specific to women;
- referral to diagnostic imaging, including ultrasound & X-ray.

The NP identified that their scope of practice has evolved over time and is directly associated with the needs of the community, and the maturity of the model.

The NP at this site has a focus on women's health, specifically Aboriginal and Torres Strait Islander women's health. This focus has been stated as a key differentiator for the model and a factor of the NPs success. By the NP focusing on this specific health care need in the community they have been able to develop relationships, rapport and trust with these patients to create a strong patient base for the service. The NP has leveraged this area of focus to perform colposcopies at an Aboriginal Medical Service clinic and has increased access to specialist healthcare that would otherwise be unavailable for rural communities.

Community relationships

A critical success factor for this particular NP role has been the long standing community relationships and connections that the NP has. First hand local community knowledge and progressing from a RN to an NP role within the community has potentiated a well-established patient base which grew further upon the NPs qualification and increased scope of practice.

The NP at this site continually goes above and beyond to build relationships with women's groups and Aboriginal and Torres Strait Islander people across the area. This activity made them a trusted member of the community and created a reputation for themselves as a skilled and efficient practitioner.

Leadership, district and government support

The NP role in this practice is publically funded and has strong support from both the Community Based Services manager and the LHD. The NP believes that the district sees the role as particularly beneficial to the rural and remote community as it is an area that has a lack of specialist services and the NP role helps to provide safe, efficient health care for the population.

Benefits

As the model has been established for a significant amount of time, stakeholders were able to identify a range of benefits outlined below.

Improved access to healthcare services

The NP has been able to support co-located staff to remain up to date on women's health, in addition to being able to provide accurate information to both co-workers and patients. The NP noted that their presence enabled access to women's health service for the rural clinic that otherwise would not exist and create a greater wait time for GP appointments and higher proportion of referrals to specialists who are located at long distances from the centre.

Improved continuity of care

As mentioned above continuity of care as a result of the NP role is a significant benefit for the local community. The NP gave an example of their ability to complete cervical screening, diagnose an abnormality early and refer for colposcopy where the NP can provide the next step in the care for that patient. This type of continuity, especially for women's health in vulnerable populations, ensures the patient feels culturally comfortable and is more likely to maintain attendance at upcoming appointments. This approach sees more women complete treatment regimens and serves to keep Aboriginal women well and out of hospital for gynaecological disease.

Increased early intervention

The NP believes that their role has enabled early intervention of health issues for patients as the rapport they have created within the community has helped vulnerable patient populations who are usually guarded about personal issues, come to the NP at an earlier stage upon presentation of symptoms. The NP gave an example where they were able to identify two patients, one with cervical cancer, another with Endometrial cancer, at an early stage, who have now been treated and are recovering. This type of early intervention saves costs for the health service and the community through reduced hospitalisations and ongoing acute medical support.

Challenges & Limitations

Further to the success factors described above, the NP detailed a range of challenges and limitations that the NP had experienced as part of the role. These are outlined in detail below.

Relationship with GPs / service providers

The NP has noted that relationships with local GPs and service providers can sometimes be problematic and slow down the patient care process. This becomes particularly apparent when referrals are required to a locum GP whom the NP has not had a chance to develop a strong relationship with, as often the GP will request to re-examine the patient rather than progress from the point of the NPs referral. This way of working creates duplication and incurs additional costs on both the practice and the patient.

The working relationships with GPs and service providers is also highly dependent on the individual's collaboration ability and understanding of the NP role. For example the NP found some GPs who were initially resistant to the NP role did not fully understand the NP scope of practice. Once the NP was able to show the efficiency gains their service could bring, the GPs became more accepting.

Specifically in the women's health area, locum GPs often do not have the time to stay up to date on the latest women's health information and in fact have moved away from providing women's

health examinations for various reasons and the NP has become a key resource to support the GPs in certain cases.

Recruitment and succession planning

A key challenge the NP at this site identified is the risk in succession planning. The NP at this site has worked in the community as an RN prior to completing the NP academic studies. Health resourcing at any level in a rural setting is difficult and the existing NP has been unsuccessful in recruiting an RN to complete the NP progression pathway. Often RNs in similar roles can meet the same salary as an NP through penalty rates which can limit the financial incentive for progression to NP. The NP progression can also be difficult due to the length of academic studies needed, perceived ambiguity around the role and high workload and increased responsibility required once in the role.

Understanding of the role

With a locum GP workforce playing a considerable part to servicing the community, the NP has encountered a range in level of understanding of the NP role. This variation in level of understanding can lead to a range in attitudes towards NPs which are difficult to manage when trying to provide quality continuity of care.

The NP noted that the two year transition period undertaken to become a NP is an opportunity to create an understanding of the potential for the role in the community where they are planning to practice. During this period, from the NPs opinion, there has been a lack of mentoring made available within the LHD for students to help in sharing the understanding of what the NP role scope of practice is. The flow on effect from this could be the variation in levels of NP scope understanding across primary health settings.

Access to reimbursement

The NP and practice Community Based Services manager identified a lack of access to Medicare benefits, as the service receives other government funding, as a key barrier to the sustainability of the model.

Cost-Benefit Analysis

Key points

- This NP model's costs relate primarily to the NP's salary. Total costs of the model are estimated at $129,548 per year;
- The NP is currently funded through discretionary State funding;
- The major benefits of this model are increased access to services including cervical cancer screening for a rural population with high population of Aboriginal and Torres Strait Islander people. These benefits are difficult to robustly quantify due to the lag between screening and long-term reductions in cancer rates.

Costs

The cost of the NP site is approximately $130,000 per annum, which is funded by the State Government.

Benefits

Identified benefits

The identified benefits of the NP model include improved access to services, screening and potential early intervention for cervical cancer, continuity of care, and management of chronic diseases for an under-serviced rural population.

Table 13: Benefit assumptions – Case study C

Benefits	Site applicability	Comments
Early Intervention	✓	The NP at this site noted the early diagnosis and referral they have been able to complete through the specialist focus area has enabled early intervention and treatment for patients. This is a qualitative benefit and has not been quantified as part of the CBA ratio
Continuity of Care	✓	The presence of a regular NP at this site has improved continuity of care. This is a qualitative benefit and has not been quantified as part of the CBA ratio
Avoidable ED/Hospital Admissions	✓	Over 40 hospital admissions have been saved through the colposcopy clinic alone after high grade cervical abnormalities have been identified and treated therefore avoiding admissions for cervical cancer alone.
Chronic Care Management	✓	Early referral for diabetes, heart disease, low physical activity and poor dietary issues have been addressed by early referral to other appropriate members of the health care team
Quality of Life	✓	Through improved continuity of care and ease of access quality of life has improved for the NPs patients. This is a qualitative benefit and has not been quantified as part of the CBA ratio
Equity of Access	✓	Through the NP presence the equity of access for vulnerable populations has improved. Through improved continuity of care and ease of access more vulnerable patients have been assessed and appropriately treated in a timely, and efficient manner. Improving health outcomes has therefore improved quality of life for the NPs patients. This is a qualitative benefit and has not been quantified as part of the CBA ratio
Aboriginal and Torres Strait Islander people healthcare access	✓	Through the NP presence the equity of access for vulnerable populations has improved. Through improved continuity of care and ease of access quality of life has improved for the NPs patients. This is a qualitative benefit and has not been quantified as part of the CBA ratio Health outcomes have improved for these patients
De-prescribing		
PHC Allocative efficiency		
Clinical Staff knowledge up skill	✓	The NP provides regular education for staff members around Gynaecology presentations
Patient experience	✓	Through improved continuity of care and ease of access quality of life has improved for the NPs patients. This is a qualitative benefit and has not been quantified as part of the CBA ratio. The Patient experience improved health outcomes, hospital avoidance and increased knowledge around there own health journey

Benefits	Site applicability	Comments
Quality & Safety	✓	The NP at this site noted the early cervical screening they have been able to complete through the specialist focus area has enabled early intervention and treatment for patients. This is a qualitative benefit and has not been quantified as part of the CBA ratio

Source: Site visit

Measuring and valuing selected benefits

Many of the benefits of the NP model accrue over the longer-term (e.g. reduced hospitalisations from prevention and early treatment for gynaecological cancers and improved chronic disease management) and therefore could not be quantified within this report. However the benefits of improved gynaecological assessment and screening for a high risk population are likely to be substantial. Cervical cancer screening has consistently been shown to be a cost-effective treatment[18], with the renewed National Cervical Screening Program (NCSP) estimated to be both cost saving and life-year savings[19]. The estimated benefits of the NCSP are so large that the government has implemented $35 bonus practice incentive payments for the screening of women between the ages of 20-69 who have not previously been screened in the past four years.[20]This service, however, is more than a cervical screening service, with the NP competent and confident to provide safe and effective early diagnosis, treatment and referral for the full range of gynaecological presentations, thus keeping Aboriginal and rural women well and out of hospital on a daily basis.

Benefit-cost ratio

The benefit-cost ratio for this NP site is difficult to determine without a complex modelling exercise. However the economic evaluations cited above consider a GP consult as part of the cost structure; a less costly NP consult would therefore result in improved cost-effectiveness, as would the targeting of high risk populations, suggesting the BCR for this site is likely to be greater than 1 and potentially substantially so.

[18] Anderson, Rob, Marion Haas, and Marian Shanahan. "The cost-effectiveness of cervical screening in Australia: what is the impact of screening at different intervals or over a different age range?." *Australian and New Zealand journal of public health* 32.1 (2008): 43-52; Kulasingam, Shalini, et al. "A cost-effectiveness analysis of adding a human papillomavirus vaccine to the Australian National Cervical Cancer Screening Program." *Sexual Health*4.3 (2007): 165-175.

[19] Canfell,K, Ms Michaela Hall, Lew, JB, Saville,M, Dr Kate Simms, Smith, M, Cancer Council Australia Cervical Cancer Screening Guidelines Working Party. Modelled evaluation of the predicted benefits, harms and cost-effectiveness of the renewed National Cervical Screening Program (NCSP) in conjunction with these guideline recommendations [Version URL: https://wiki.cancer.org.au/australiawiki/index.php?oldid=157330, cited 2018 Jul 15]. Available fromhttps://wiki.cancer.org.au/australia/Guidelines:Cervical_cancer/Screening/Modelled_evaluation_of_predicted_benefits,_harms_and_cost-effectiveness_in_renewed_NCSP. In: Cancer Council Australia Cervical Cancer Screening Guidelines Working Party. National Cervical Screening Program: Guidelines for the management of screen-detected abnormalities, screening in specific populations and investigation of abnormal vaginal bleeding. Sydney: Cancer Council Australia. Available from:https://wiki.cancer.org.au/australia/Guidelines:Cervical_cancer/Private.

[20] Department of Human Services, 2018. Practice Incentives Program Cervical Screening Incentive Guidelines. https://www.humanservices.gov.au/organisations/health-professionals/services/medicare/practice-incentives-program. Accessed July 9th 2018.

KPMG

Case Study D

Aged care focus	7 Year Model Maturity
NP Role Focus The model provides health care to RACF residents.	**Catchment Demographic** The catchment population is made up of RACF residents.
Funding Model Private practice	**Key Outcomes** ↑ Increased continuity of care ↑ Increased quality of life ↓ Reduced hospitalisations
Success Factors A person-centred model Relationship with GPs / service providers Reputation Specialty focus	**Challenges** Relationship with GPs / service providers
Cost Benefit Ratio not available	

Description of model

Introduction

This NP model of care consists of a private collaborative GP / NP practice delivering health services to residents of RACF in a metropolitan location.

Operating context

The service is located in a large Australian city (MM 1 classification). The private practice incorporates two GPs and nine NPs. The practice has been running since 2011, and the operational model has not changed substantially since. The practice has relationships with a number of RACFs who both GPs and NPs travel to provide their services.

Until recently the practice operated as a virtual practice as all services were provided externally, however a separate clinic was recently opened as the practice's headquarters. The intention is to expand the service portfolio slightly over time to include initiatives such as the Health Care Home programs.

Service Delivery Model

The main focus of the model is to provide person-centred health services to residents of RACFs. The initial three members of the practice recognised a need in RACFs to provide a better continuity of care by providing chronic case management services and by offering a holistic approach to care through involving the family of the resident.

All associates travel out to RACFs to provide their services. NPs are the key service providers for the patients and perform all assessment and case management activities, which are signed-off by the GPs as part of their collaborative agreement. Regular case management meetings are conducted involving both NPs, GPs as well as RACF staff and occasionally family members of the patient.

Employment Model

All GPs and NPs are associates of the practice; none of the clinical professionals are employees.

Funding Model

As a private practice, the NPs receive payments from patients for each consult. A proportion of these consults are reimbursed by the MBS, however patients are also charged a co-payment. No government grant funding is received.

Site characteristics

Table 14: Site characteristics – Case Study D

Characteristics of NP model	
Time since establishment	7 years
Target group	Aged care
Remoteness	MM 1
Population catchment	>1 million
NP FTE on site	9.0
GP FTE on site	2.0
Employment Model	All NPs are associates in the practice
Funding Model	Private practice
Patient co-payment	✓
Access to MBS	✓

Source: Site visit

Financial Model

Income

This NP model of care is a private practice, and all income is generated by MBS rebates as well as through patient co-payments. NPs receive a percentage of the completed items.

Data from this site was not available at the time of writing this report.

Expenditure

Data from this site was not available at the time of writing this report.

Sustainability

The site financial model indicates that the model is sustainable.

Data from this site was not available at the time of writing this report.

Qualitative Findings

Success Factors

Site visits identified a range of success factors to the NP role operating as effectively as possible. These are outlined below.

A person-centred care model

Having a person-centred care model in place that revolves around the RACF resident was a key factor contributing to the success of the clinic, for a number of reasons:

- The main objective of the model is to increase the quality of life for RACF residents and prevent any suffering at the end of their lives;
- It enables a high level of communication and collaboration among health professionals and residents' family members, and it enables the NP to tailor care plans according to each residents' individual needs;
- GPs alone would not have sufficient capacity to spend as much time with patients as NPs do.

Relationship with GPs / service providers

A key reason for success is a collaborative approach as well as clear and open communication among all parties involved in an RACF residents' care. There are a number of aspects to this approach:

- All NPs and GPs in the practice are associates rather than employees. This gives every person equal say in the business and input into the operating model as well as into the overall workload that is taken on by the practice. Clear guidelines around responsibilities, as well as mutual respect for each other and everyone's scope of practice are key elements of good collaboration.
- Clear communication with external parties are an important contributor to the success of the model. This can include RACF staff or a residents' family members, for example. Clear communication regarding the NP scope of practice, provision of guidance around residents' care plans and taking into account specific family circumstances need to be taken into account.

- There is a need for increased involvement of specialists in residents' overall care plans and case management. The practice is now offering educational opportunities for both RACF employees and clinical specialists (e.g. geriatricians) with a goal to improve inter-professional collaboration and facilitate better case management. This approach has resulted in increased levels of communication and in more work opportunities for the practice which have arisen from education sessions.

Reputation

Good reputation and word of mouth has provided the practice with a steady income stream and positive growth rates since its establishment. It is the practice's main marketing tool and a contributor to the growing success of the business.

A generalist background

This NP model of care is conducive to NPs who have a generalist background with a focus on aged and palliative care given the large number of RACF residents receiving end-of-life care as part of the services offered.

Benefits

The following benefits of the NP model of care were identified during the site visit.

Increased early intervention

The regular NP visits to RACFs and continuous follow-ups with patients have resulted in an ability to recognise and diagnose conditions earlier. This has had a positive effect on factors such as treatment duration and preventing conditions becoming more severe.

Improved continuity of care

The NP presence at NP sites has improved continuity of care, as NPs are able to follow-up on any pre-diagnosed conditions and ensure that referrals to specialists are issued when conditions get worse.

Reduced avoidable ED/hospital admissions

The NP model of care has contributed to a reduced rate of avoidable ED or hospital admissions, as any acute cases are presented to the NP prior to calling an ambulance. If a hospital admission is not necessary, the NP is able to set up a treatment plan for the patient.

Chronic case management

NPs provide chronic care management for RACF residents. This has contributed to more efficient and effective care for patients with chronic diseases, and has reduced the number of avoidable visits to the hospital or any specialists.

Improved patient satisfaction

The site reports that the NP model of care has significantly contributed to improving satisfaction for RACF residents. The reported reasons for this are:

- NPs are able to spend more time with patients than GPs which enables them to provide a more holistic model of care;
- the prevention of avoidable hospital admissions.

Challenges & Limitations

Very few limitations and barriers were raised by the practice stakeholders, as they felt that their experience overall had been mainly positive. One limitation is detailed below.

Relationship with GPs / service providers

The practice has a supportive and collaborative workplace culture and sees it as one of the key elements to their success. Being respectful and open to the NP model of care is crucial; having non-supportive GPs working in the practice has led to redundancies in the past.

Cost-Benefit Analysis

Key points

Data from this site was not available at the time of writing this report.

Costs

Data from this site was not available at the time of writing this report.

Benefits

Data from this site was not available at the time of writing this report.

Table 15: Benefit assumptions – Case Study D

Benefits	Site applicability	Assumptions
Early Intervention	n/a	n/a
Continuity of Care	n/a	n/a
Avoidable ED/Hospital Admissions	n/a	n/a
Chronic Care Management	n/a	n/a
Quality of Life	n/a	n/a
Equity of Access	n/a	n/a
Aboriginal & Torres Strait Islander Healthcare access	n/a	n/a
De-prescribing	n/a	n/a
PHC Allocative efficiency	n/a	n/a
Clinical Staff knowledge up skill	n/a	n/a
Patient experience	n/a	n/a
Quality & Safety	n/a	n/a

Source: Site visit

Benefit-cost ratio

Data from this site was not available at the time of writing this report.

Table 16: Cost-Benefit Analysis Summary – Case Study D

Cost-Benefit Analysis Summary	
Costs	**Annual $**
MBS funding	not available
Patient cost	not available
PHN	not available
State	not available
Federal	not available
Total	not available
Benefits	**Annual $**
Reduction in GP visits	not available
Reduction in ED visits	not available
Reduction in hospitalisations	not available
Reduction in ambulance trips	not available
QALY gain	not available
Total	not available
Benefit Cost Ratio	***not available***

Source: KPMG

Case Study E

Dementia care focus	4 Year Model Maturity
NP Role Focus The role aims to improve the timely diagnosis of dementia in a regional setting	**Catchment Demographic** The catchment population covers a regional area of 25,000 inhabitants with a significant burden of dementia
Funding Model Commonwealth funded	**Key Outcomes** ↑ Increased dementia diagnoses ↑ Increased continuity of care ↓ Reduced hospitalisations
Success Factors Flexibility Specialty focus Identification of need	**Challenges** Data availability and accessibility Work/life balance Knowledge of the role Leadership, district and government support
Cost Benefit Ratio 2.3	

Description of model

Introduction

The NP is employed by a regional clinic (MM 3) supported by Commonwealth Government funding. The objective of the NP model is to provide assessment for people with a cognitive impairment to explore a definitive diagnosis of dementia.

Operating Context

The service is located in a regional Australian community (MM 3). There is no access to clinical dementia specialists in the region who diagnose the condition. The NP model was established to reduce the significant waiting list of regional patients, requiring assessment and a potential diagnosis of dementia. Early diagnosis improves treatment, planning and management of the condition, and can increase the availability and level of subsidy for associated treatments.

The Service Delivery Model

The dementia NP investigates and assesses possible causes of memory loss, providing patients with a definitive dementia diagnosis, where applicable, and associated services. Services are provided in the patient's home.

Employment Model

The NP is employed by a regional Community Health Service in a salaried role.

Funding Model

The model is funded by the clinic which is supported by the Commonwealth.

Site characteristics

Table 17: Characteristics of the NP model – Case Study E

Characteristics of NP model	
Time since establishment	4 years
Target group	Dementia patients
Remoteness	MM 3
Population catchment	25,000
NP FTE on site	1.0
GP FTE on site	n/a
Employment Model	Salaried role
Funding Model	Commonwealth funded
Patient co-payment	×
Access to MBS	N/A
NP salary / year	$180,000

Source: Site visit

Financial Model

Income

The NP salary is funded by the clinic which is supported by a grant from the Federal Government. Patients are not charged a co-payment fee.

Expenditure

The overall costs of the NP model are approximately $203,000, made up predominantly of the NP's salary ($180,000) and administration costs ($23,000 to cover administration, training, professional development as well as transport and car use).

Sustainability

The financial model indicates that under current funding the NP model is financially stable, however this is dependent on discretionary Commonwealth Government funding.

Qualitative Findings

Success Factors

Interviews conducted during the site visit identified a range of factors critical to the successful implementation of the site's NP model of care. These are described in detail below.

Flexibility

Individual consultations with patients in this model can take a long time. Providing a dementia assessment involves approximately 21 cognitive and blood tests, and generally takes a minimum of three hours. In this context, it is essential for the role to be flexible enough to accommodate consultations that are significantly longer than the 40 minute consultation provided for in MBS item 82215.

Specialty focus

The NP role in dementia care is currently the only one of this type in Australia. The NP has a high level of knowledge of dementia. Other health professionals such as GPs often draw on this dementia expertise, and the NP's knowledge is a key contributor to the successful implementation and upkeep of the NP model.

Identified area of need

The ability to identify a clear gap in service delivery in the region and to meet a clear need within the community is a contributor to the early successes of the NP model. A previous lack of access to timely diagnosis of dementia has resulted in a significant uptake of the NP services in the region.

Benefits

The following benefits of the NP model of care were identified during the site visit.

Increased early intervention

The primary objective of the NP model of care is to reduce the number of patients waiting to be diagnosed with dementia. The wait list has been reduced substantially since the establishment of the NP role as well as the amount of time taken to get diagnosed with dementia. Prior to the establishment of the dementia NP role, the wait time for a dementia assessment was approximately three years, which has now been reduced to six to 12 months.

Reduced avoidable ED/hospital admissions

By diagnosing dementia earlier, the number of avoidable ED and hospital admissions has been reduced significantly. People with dementia have an increased risk of contracting infections. Diagnosing the condition earlier and putting appropriate treatment plans in place has resulted in a lower rate of acute conditions and therefore a lower rate of ED and hospital admissions.

Improved access to healthcare services

Prior to the establishment of this NP model of care, there was one geriatrician in the region able to provide access to dementia expertise. The NP role has not only provided the community with access to a healthcare professional with specialist dementia knowledge, but has also provided other healthcare services with a point of contact for any questions or issues that are related to dementia.

Challenges & limitations

Site visits identified a range of challenges and limitations to the role operating as effectively as possible. These are outlined in detail below.

Data availability and accessibility

It is currently not possible to evaluate the NP model of care and the outcomes that have been achieved using primary data, due to the lack of data around patient outcomes and health service utilisation (e.g. hospitalisations) that go beyond the NP's level of responsibility. Obtaining relevant hospitalisation data requires a significant investment of resources. Funding is not provided to support patient outcome and health service data evaluation efforts.

Work/life balance

The workload in this NP model is high, as a result of the high demand for the NP services provided and a lack of further NP staff to help meet this demand. This has resulted in a very low work-life balance and high levels of stress for the NP. This could potentially be improved decreasing administrative burden through an increased level of collaboration between government departments, the hospital, and the NP.

Knowledge of the role amongst wider service providers

There appears to be a low level of understanding among other healthcare providers (e.g. GPs or other medical specialists) in the region regarding the role of NPs in general, as well as this particular NP model of care. This lack of NP awareness is currently a barrier to reaching an optimal level of collaboration among all stakeholders involved in a dementia patient's care, as stakeholders who are unaware of the NP role in this context may inadvertently not take advantage of the benefits the role presents. The NP currently does not have any capacity to spend more time on promoting the role and raising awareness among the primary health community.

Leadership, district and government support

While the Commonwealth funds the current model of care, there is a perceived lack of engagement and interest in outcomes achieved by Commonwealth stakeholders through this model of care. While the Commonwealth funds the current model of care, there is an opportunity for a greater level of engagement by supporting and evaluating the NP model, and using evaluation outcomes to continuously improve the model of care.

MBS/PBS restrictions

The management of dementia requires cognitive and blood tests and access to certain medicines for treatment. The NP identified that a lack of availability of reimbursements for relevant MBS and PBS items limits their ability to manage the care of patients living with dementia.

Cost-Benefit Analysis

Key points

- This NP model's costs relate primarily to the NP's salary and development. Total costs of the model are estimated at $203,000 per year;
- The general benefits of this model are improved quality of life and reduced health service utilisation. Using assumptions from the literature and self-reported data from the site around reduced ED visits, the benefits are estimated at $458,480 per year;
- Overall, the model has an estimated BCR of 2.4. The BCR remains above 1 under more conservative assumptions around the value of a QALY.

Costs

The costs of the NP site are the costs of $203,000 to the Federal government and site to fund the operation of the NP program.

Benefits

Identified benefits

The benefits of this NP model are predominantly in the early diagnosis of people with dementia. The National Framework for Action on Dementia 2015-2019 notes a priority area for action is the need for timely diagnosis. Various literature highlight the likely benefits, including improved quality of life and reduced future health service utilisation, however these are difficult to robustly measure.[21]

Table 18: Benefit assumptions – Case Study E

Benefits	Site applicability	Assumptions
Early Intervention	✓	Benefit is quantified through improved quality of life and reduced ED visits and hospitalisations
Continuity of Care		
Avoidable ED/Hospital Admissions	✓	Benefit is quantified using self-reported estimates of the gains
Chronic Care Management		
Quality of Life	✓	Benefit is quantified using an estimate of the QALY gain from the literature
Equity of Access	✓	Benefit is not quantified
Aboriginal & Torres Strait Islander Healthcare access		
De-prescribing		
PHC Allocative efficiency		
Clinical Staff knowledge up skill		
Patient experience	✓	Benefit is not quantified
Quality & Safety		

Source: Site visit

[21] CEAFA, National Framework for Action on Dementia 2015-2019, https://www.ceafa.es/files/2017/05/AUSTRALIA-1.pdf, accessed November 2018.

Measuring and valuing selected benefits

The quality of life benefits are derived from the literature. Banerjee and Wittenberg note that small, realistic improvements in quality of life of between 0.01 and 0.02 QALYs per person per year[22], would ensure a United Kingdom early diagnosis and intervention service was cost-effective. Applying the lower figure to this site yields a quality of life gain of 7.2 QALYs over 720 patients, which when valued at $50,000 per QALY generates $360,000 in benefits. A sensitivity analysis is completed with a value of $25,000/QALY.

The benefits from reduced ED visits and hospitalisations are estimated using the method described in Section 2. The NP self-reports that 80 voidable ED visits and five subsequent hospitalisations are reduced each year from the timely diagnosis of dementia, which have an associated value of almost $100,000 per year.

Benefit-cost ratio

The benefit-cost ratio for this NP model is estimated at 2.3. If a lower value per QALY is adopted ($25,000/QALY instead of $50,000/QALY), the BCR falls to 1.4.

Alignment of costs and benefits

As with most primary care models, there is a misalignment of costs and benefits in this model. Longer term health benefits will likely manifest in terms of reduce hospitalisations and emergency department visits, benefiting State governments, private health insurers and patients themselves, while the costs are borne by the Federal government and the site. This is of course not a function of the NP model but a function of Australia's current fragmented system.

Table 19: Cost-Benefit Analysis summary – Case Study E

Cost-Benefit Analysis Summary		
Costs	**Annual $**	**From**
Discretionary funding	$203,000	Federal government
Total	*$203,000*	
Benefits	**Annual $**	**To**
Reduction in GP visits	$0	
Reduction in ED visits	$46,240	State government; PHIs and patients
Reduction in hospitalisations	$15,000	
Reduction in ambulance trips	$5,860	
QALY gain	$360,000	Patient
Total	*$427,100*	
Benefit Cost Ratio	***2.3***	

Source: KPMG

[22] Banerjee, Sube, and Raphael Wittenberg. "Clinical and cost effectiveness of services for early diagnosis and intervention in dementia." *International Journal of Geriatric Psychiatry: A journal of the psychiatry of late life and allied sciences* 24.7 (2009): 748-754.

KPMG

Case Study F

Women's & Children Health Focus	5 Year Model Maturity
NP Role Focus The NP is focused on women's and children's health within a holistic primary care model for Aboriginal and Torres Strait Islander patients.	**Catchment Demographic** The catchment population is Aboriginal and Torres Strait Islander people living within an urban setting.
Funding Model Commonwealth & State-funded	**Key Outcomes** ↑ Increased early intervention ↑ Quality & safety ↑ Access to care ↑ Patient experience
Success Factors Specialist scope of practice Integrated model of care Strong leadership support	**Challenges** Recruitment and Succession Planning Funding sustainability
Cost Benefit Ratio 1.1	

Description of model

Introduction

The NP is employed by an ACCHS to deliver specialist women's and children's primary care services as part of a multidisciplinary team.

Operating context

The service is located within a major city providing comprehensive primary health care services to Aboriginal and Torres Strait Islander patients.

The Service Delivery Model

The NP delivers primary health care to women and children as part of a multidisciplinary care team, including Aboriginal and Torres Strait Islander health workers, GPs and allied health professionals.

The NP was originally employed as an RN, and with the service, identified the potential for an expanded scope of practice.

The purpose of the model is to improve timely access to and continuity of care.

The Employment Model

The NP is directly employed by the ACHHS on a permanent part time basis.

The Funding Model

The ACCHS meets the cost of the NP through its operational budget supported by IAHP funding, as well as through payments from patients for each consult. MBS reimbursements are available to patients.

Site characteristics

Table 20: Site characteristics – Case Study F

Characteristics of the NP model	
Time since establishment	5 Year model maturity
Target group	Aboriginal and Torres Strait Islander population
Remoteness	MM1
Population catchment	TBC
NP FTE on site	0.75
GP FTE on site	3.0
Employment Model	Salaried
Funding Model	Commonwealth funding and MBS rebate
Patient co-payment	×
Access to MBS	✓
NP salary / year	$102,000

Source: Site visit

Financial model

Income

The Nurse Practitioner is employed on a permanent part time basis and receives a salary. The service meets the cost of the position through its operating budget supported by IAHP funding and MBS reimbursement. Patients are not charged a co-payment to access the service.

Expenditure

The overall costs of the NP model are approximately $110,000, made up of the NP's salary. There are no facility-related fixed costs attributed to the model.

Sustainability

The financial model indicates that under current funding the NP model is financially stable, however this is dependent on discretionary government funding. If the model was to rely on MBS funding, a co-payment of $53.82 for each consult would need to be charged.

Qualitative Findings

Success Factors

Interviews conducted during the site visit identified a range of factors critical to the successful implementation of the site's NP model of care. These are described in detail below.

Identified area of need

The NP model at this site evolved over time to meet an area of need, in delivering primary health care to women and children. The ACHHS employed the NP as an RN for a number of years prior to them being employed as an NP.

The NP identified a gap in family health care, particularly in relation to timely appointments for early intervention. Supported by the service they developed a business case articulating how a NP model could improve access and experience for women and children.

Scope of practice

The scope of the role has expanded over time. The NP was supported to undertake further study in order to meet identified areas of need. This included newborn checks and, Implanon and Mirena IUD insertion and removal.

Ongoing study has enabled the NP to operate at the top of their scope and through this to improve access to care and support the most efficient and appropriate use of GP resources.

A range of stakeholders identified the evolution of the model over time as a critical success factor as it allowed other team members to build their understanding and acceptance of the NP model within the service.

Generalist NP with a specialty focus

The specialist focus on women's and children's health has allowed this model to meet a specific need. It has also assisted to create clarity of purpose for the model that other members of the service's multidisciplinary team can easily understand. The NP is the recognised expert in this area within the service. Other clinical stakeholders noted that they value the NPs advice on their specialist areas and refer patients for more detailed advice and education.

Patient relationships

Over time the NP has built strong continuing relationships across the patient base. This has allowed patients to build trust to discuss sensitive areas, like sexual and reproductive health, which they may otherwise not be comfortable to raise and to refer their family and friends. Combined this has seen the NPs workload gradually increase to becoming fully booked.

Role clarity within a multidisciplinary team

The NP within this model identified the importance of ensuring that all staff at the service clearly understood the scope of practice within role. A success factor was the creation of a plain English checklist developed for reception staff to enable easy patient allocation and booking with the NP.

Other members of the multidisciplinary care team have a clear understanding of the NP role within their model of care and value the contribution to effective and efficient patient care.

Leadership commitment

There is a high level of leadership commitment to the NP model evident through:

- Support to continually develop the role to meet the needs of the service and their patients;
- Appointment to key clinical leadership groups at this site and within the regional network of ACCHS's;
- Support to connect to a network of other NPs.

Quality and safety

The NP has played an active role in clinical governance at a site and regional network level. They chair the site's clinical governance committee, a role traditionally held by a senior medical officer, and is the lead clinician of the child and family health regional team. This involvement has reinforced the understanding and value of the NP model with other senior clinical leaders.

Benefits

Improved access to healthcare services

The implementation of the NP model at this site has increased access to timely care. The NP is able to see patients independently, freeing up GP time to see more complex patient cases.

Improving PHC allocative efficiency

The NP role creates efficiency within the service model. Interviews with GP stakeholders identified the particular example of pre assessment for specialist referrals. Here the GP refers to the NP to conduct the assessment. The alternative would be for the GP to refer patients to the hospital which would require patients to wait for up to 31 days to be seen or admitted.

Improved continuity of care

The NP model supports continuity of care. Stakeholders reported that the NP has been able to build a relationship with patients that has resulted in improved attendance and adherence to treatment plans. Patients are also more likely to raise sensitive issues given the relationship of trust and to refer other family members.

Increased early intervention

Stakeholders noted the model allows for early identification of health conditions and supports patient self-management through a strong focus on education and health promotion.

Capability uplift

The NP model supports the continuing education and skill development of other members of a multidisciplinary team. Stakeholders at all levels valued access to the NP for second opinions in their specialist area.

Improved quality of life

The NP has previously measured qualitative patient experience and has seen results of less pain, more comfortable consultation environment and more time taken for consultation.

Challenges & Limitations

Site visits identified a range of challenges and limitations to the role operating as effectively as possible. These are outlined in detail below.

Further to the success factors described above, the NP detailed a range of challenges and limitations that the NP had experienced as part of the role. These are outlined in detail below.

Recruitment and succession planning

Stakeholders identified succession planning as a key challenge moving forwards. The director of health services noted that previous recruitment of NPs across other sites within the service have been challenging due to their restricted ability to offer competitive NP salaries in comparison with government salary offerings. The service has also found it challenging to identify the NP candidates with appropriate specialisations and cultural fit.

Funding

A sustainable funding base was a limitation to expanding the use of NP models at this site. Interviews indicated that compared to traditional models, the NP model was more costly to service.

This was because MBS reimbursement offset a significantly smaller proportion of total costs compared to a GP model. Analysis of the data provided demonstrates that MBS reimbursement covers approximately 20 percent of the NP costs.

Two types of challenges were raised concerning the existing MBS parameters. The first was the level of available reimbursement. The NP identified that the reimbursement available for procedural items, like Implanon and Mirena insertion, were absent compared to when a GP completed the same procedures. The second challenge is the items available to the NP model are limited to a small range of time-based item numbers.

Stakeholders also identified that there were more sources of funding available to support GP positions than NP positions. The specific example provided was employing a GP Registrar through the GP Registrar Program incurs less cost than employing a NP. In addition, the GP Registrar can also bill a wider scope of MBS items and the employer is able to build their future medical workforce.

Access to referrals

The NP at this site has found specific challenges related to their role in women's and children's health, such as limitations in referring pelvic and obstetric ultrasound exams which create a loss in continuity of care and a flow on burden for patients needing to be referred through a GP.

Stakeholders also identified a barrier to the NP (who is also a Midwife) referring pregnant patients to Hospital maternity units. This also required a GP referral, regardless of whether the NP had managed all other aspects of the patient's care.

Cost-Benefit Analysis

Key points

- This NP model's costs relate primarily to the NP's salary. Total costs of the model are estimated at $112,565 per year;
- The NP is currently funded through both MBS rebates (approximately a third of funding) and Federal IAHP funding (the remainder);
- The major benefits of this model include increased access to services for Aboriginal and Torres Strait Islander women and children in particular, efficiency of primary care service delivery, and up-skilling of clinical staff. These benefits are difficult to robustly quantify without appropriate outcomes data;
- In the absence of robust long-term outcomes data, the costs of providing equivalent volumes of service via a GP provide a proxy of the benefits delivered. Under base case assumptions, the GP-led service would be $3,000 more expensive than the NP model, suggesting a positive benefit-cost ratio of 1.1 for the NP model.

Costs

The cost of the NP site is approximately $110,000 per annum, with approximately a third funded through MBS rebates and the remainder Federal government discretionary funding (IAHP).

Benefits

Identified benefits

The major benefit of this NP model is increased access to health services for Aboriginal and Torres Strait Islander people.

Table 21: Benefit assumptions – Case Study F

Benefits	Site applicability	Comments
Early Intervention	✓	Benefit is not quantified
Continuity of Care	✓	Benefit is not quantified
Avoidable ED/Hospital Admissions		
Chronic Care Management		
Quality of Life	✓	Benefit is not quantified
Equity of Access		
Aboriginal and Torres Strait Islander Healthcare access	✓	Improved access for patients is an improvement in equity of service provision. Quantified by comparing costs of providing services via a GP
De-prescribing		
PHC Allocative efficiency	✓	Benefit is not quantified
Clinical Staff knowledge up skill	✓	Benefit is not quantified
Patient experience	✓	Benefit is not quantified
Quality & Safety	✓	Benefit is not quantified

Source: Site visit

Measuring and valuing selected benefits

The benefit of improved access is approximated using the GP comparison method described in Section 2. The self-reported share of NP consults that go on to see a GP at this site is 10 percent. Under these assumptions, the costs of providing equivalent volume of service via a GP is $115,577 per year. A sensitivity analyses was completed with a higher rate of 20 percent.

Benefit-cost ratio

The BCR for this NP site is difficult to robustly quantify, however considering only nominal benefits of improved access delivers a BCR of just above 1.0. At a higher rate of NP consults that go on to see a GP, the BCR falls to just below 1.0.

Table 22: Cost-Benefit Analysis Summary – Case Study F

Cost-Benefit Analysis Summary		
Costs	**Annual $**	**From**
MBS funding	$43,302	Federal government
Discretionary funding	$69,262	Federal governments
Total	*$112,564*	
Benefits	**Annual $**	**To**
Cost of providing equivalent volume of service via GP	$115,577	
Total		
Benefit Cost Ratio	***1.0***	

Source: KPMG

KPMG

Case Study G

Aged Care Focus	8 Week Trial Maturity
NP Role Focus Pilot of an NP model in three RACFs in order to support nursing capability and improve access to and quality of care for residents	**Catchment Demographic** Residents of three RACFs in a major city
Funding Model Private practice	**Key Outcomes** ↓ Reduce Hospital Admissions ↑ Continuity of care ↑ Clinical capability uplift
Success Factors Strong nursing staff relationships Strong leadership support	**Challenges** Recruitment and Succession Planning Funding sustainability Understanding of NP role
Cost Benefit Ratio 5.3	

Description of model

Introduction

A major residential aged care provider has contracted a specialised nurse practitioner service provider to support a pilot NP program.

Operating Context

The model is a pilot project, at early stages of implementation, across three RACFs located in a major city.

The workforce profile of each of the sites includes a mixture of AINs, RNs, ENs, visiting or co-located GPs and a clinical manager present at each site.

The Service Delivery Model

The purpose of the pilot is to measure whether an NP model can support capability uplift of nursing staff, and improve access to and quality of care for residents.

The NP operates across three sites for one day in each week. Time at each site is allocated to:

- seeing a list of residents to support diagnosis, treatment and management of health conditions;
- support, education and development of locally based nursing staff.

The residential aged care provider, working with the nurse practitioner service provider and the NP, has developed key performance indicators for the pilot associated with:

- early diagnosis, treatment and reduction of Urinary Tract Infections;
- providing end of life care for deteriorating residents, co-morbidity diagnosis and management and efficient medication management;
- managing behavioural symptoms;
- improving clinical competency of RNs and ENs.

In addition, the NP role involves identifying potential system improvements and developing models of care for particular conditions including dementia with the aim of improving the quality and safety of care.

Employment Model

The residential aged care provider has contracted with the nurse practitioner service provider on a price per hour model.

Funding Model

The aged care provider is meeting the cost of the model through an operational budget allocation to the pilot. The NP is employed by the nurse practitioner service provider. The NP service provider collects MBS reimbursements on behalf of the NP and charges the aged care provider an administration fee.

Site characteristics

Table 23: Site characteristics – Case Study G

Characteristics of the NP model	
Time since establishment	Week 8 out of 12 month Trial
Target group	Aged Care
Remoteness	MM1
Population catchment	>1 million
NP FTE on site	0.3
GP FTE on site	n/a
Employment Model	Contracted
Funding Model	Site specific and MBS rebate
Patient co-payment	✗
Access to MBS	✓
NP salary / year	$62,400 pa. (Based on $100 p/hour for 12 hours per week)

Source: Site visit

Financial model

Income

An administration fee is charged by the nurse practitioner service provider, and this is paid by the residential aged care provider. The nurse practitioner service provider then collects MBS revenue.

Expenditure

The overall cost of the NP model is primarily made up of the NP's salary, which under this model also covers travel expenses. There are no facility-related fixed costs as patients are seen at RACFs.

Sustainability

The financial model indicates that under current funding the NP model is financially stable. If the NP model was to rely on MBS funding, a co-payment of $74.63 for each consult would need to be charged.

Qualitative Findings

Success Factors

Interviews conducted during the site visit identified a range of factors critical to the successful implementation of the site's NP model of care. These are described in detail below.

Identified area of need

The pilot was implemented to lift the capability of locally based RACFs to support safe, high quality care. The aged care provider identified a need to improve the competency of nursing and assistant in nursing staff, through on the job support, learning and professional development, in order to appropriately manage the care of residents with often complex conditions.

Leadership, district and government support

The sponsor for the pilot is a senior leader at the aged care provider organisation. The sponsor has been a strong internal champion for the model.

The level of acceptance of the model across the three sites has been variable. A key success factor at sites with a high level of acceptance has been the engagement of the RACF leadership and the existing GP visiting workforce.

Strong local relationships

Building strong local understanding of the scope of the role and its benefit to local staff, visiting GPs and patients has been a critical success factor.

The provider along with the NP engaged in early communication with key local stakeholders to build this local understanding and acceptance.

Benefits

Reduction in ED / hospital admission

Stakeholders identified early evidence of a reduction in Emergency Department attendances and Hospital admissions. This has been the result of:

- earlier diagnosis and intervention to manage conditions in place;
- increased confidence and capability of local staff to manage residents in place, with the support of the NP.

The NP noted that the model has supported delivery of integrated care for patients requiring admission to hospital, as well as the provision of more detailed patient information to the hospital to support better informed, more seamless care.

Improved continuity of care

Due to the vulnerable patient population within aged care facilities, the ability for closer patient management and reduced hospitalisation also created improved continuity of care. The disruption to the patient is minimised and their ongoing care management can occur at the facility. In vulnerable populations this is particularly important as changes in patient management can cause a health episode and lead to decline in condition.

Improved skills of care staff

A key KPI for this trial is the up skilling of local staff within the aged care facilities. The NP has seen significant benefit in the first eight weeks of implementation with nursing staff becoming more clinically confident. The NP sees an ongoing opportunity to enhance clinical capacity of nursing staff and improve patient care.

Challenges & Limitations

Site visits identified a range of challenges and limitations to the role operating as effectively as possible. These are outlined in detail below.

Understanding of the role

A key learning after implementing this trial has been that the requirement for intensive effort on education around what the NP role is and how it can add value to the patients, nursing staff and GPs.

This type of pro-active education would help with the buy in of the NP role early in its implementation. The trial aimed to do this by sending out letters to key GPs prior to the

implementation of the NP role and then a face to face introduction with each facility to explain the NP role, however acceptance has been variable across sites.

Funding

The NP is currently funded through an organisation trial, this trial has focused predominately on the clinical outcomes rather than assessing the long term financial sustainability. However, a number of stakeholders identified that the current MBS parameters present a significant limitation to the model. In particular, stakeholders believed that the availability of items related to health assessments and chronic disease management would help keep patients at home for longer, enable aged care facilities to focus on the complex conditions and enhance the financial sustainability of the model.

Case Study G Cost Benefit Analysis

Key points

- This NP model's costs relate primarily to the NP's salary. Total costs of the model are estimated at $62,400 per year;
- The NP is currently funded on a contract basis;
- The major benefits of this model are the reduction in ED admissions and associated hospitalisations and ambulance trips. It is estimated that the total benefits of the model amount to $573,037 per year;
- The general benefits of this model significantly outweigh its costs, with an overall benefit cost ratio of 5.5. The BCR remains high under more conservative assumptions around consults per day and ED visits avoided.

Costs

The NP program is paid for by the aged care service provider using funds provided by the Commonwealth government. Therefore, the costs of the NP site to the health care system are the costs to the Commonwealth government to fund the operation of the NP program (indirectly via the aged care site).

Benefits

Identified benefits

The benefits from the NP program are the reductions in ED visits and subsequent hospitalisations and ambulance trips, and associated improvement in patient quality of life.

Table 24: Benefit assumptions – Case Study G

Benefits	Site applicability	Comments
Early Intervention	✓	Benefit is not quantified
Continuity of Care	✓	Benefit is not quantified
Avoidable ED/Hospital Admissions	✓	Quantified in the CBA based on self-reported data from the site
Chronic Care Management		
Quality of Life	✓	Disutility of ED visit is quantified in the CBA based on evidence from the literature
Equity of Access		
Aboriginal and Torres Strait Islander Healthcare access		
De-prescribing		
PHC Allocative efficiency	✓	Benefit is not quantified
Clinical Staff knowledge up skill	✓	Benefit is not quantified
Patient experience	✓	Benefit is not quantified
Quality & Safety		

Source: Site visit

Measuring and valuing selected benefits

The benefit of reduced ED visits and hospitalisations is estimated using the method described in Section 2. The self-reported number of avoided ED visits as a result of the NP model was estimated at 300 per year. A sensitivity analysis was completed for a value of 150 avoided ED visits.

Benefit-cost ratio

The benefit-cost ratio (BCR) for this NP site is 5.5 which suggests the NP is saving over $5 for every dollar invested in the site. If the number of avoided ED visits is reduced to 150 per year, the BCR is 2.8.

Alignment of costs and benefits

This model has a relatively strong alignment of costs and benefits with the State Government funding the model while also benefiting from reduced hospitalisations and ED visits. There is no lag time between benefit and cost.

Table 25: Cost-Benefit Analysis Summary – Case Study G

Cost-Benefit Analysis Summary		
Costs	**Annual $**	**From**
Discretionary funding	$62,400	Aged care provider
Total	*$62,400*	
Benefits	**Annual $**	**To**
Reduction in GP visits	$0	
Reduction in ED visits	$195,600	State Government; PHIs; and patients
Reduction in hospitalisations	$106,020	
Reduction in ambulance trips	$41,175	
QALY gain	$1,712	Patient
Total	*$342,795*	
Benefit Cost Ratio	***5.5***	

Source: KPMG

Case Study H

PHC delivered to Aboriginal and Torres Strait Islander People	8 Month Model Maturity
NP Role Focus The role was implemented as part of a transition of certain services to community control in a remote Aboriginal and Torres Strait Islander community in order to improve access to and continuity of primary and aged care services.	**Catchment Demographic** The catchment population is made up of 1600 mostly Aboriginal and Torres Strait Islander people in remote Australia.
Funding Model Commonwealth & State-funded	**Key Outcomes** ↑ Diagnosis and management ↑ Access to care ↑ Palliative care
Success Factors elationship with other established service providers Cultural competency Model of care	**Challenges** High reliance on fly in, fly out medical support Fragmented service delivery, with no single organisation accountable for primary care Limitations on scope and reimbursement (e.g. death certificates, Health Assessments) Access to appropriate space to support the delivery of safe care
Cost Benefit Ratio 9.7	

Description of model

Introduction

The NP is contracted to an ACCHS delivering a range of primary and aged care services in a remote location.

Operating Context

The service is located in a very remote (MM 7) Aboriginal and Torres Strait Islander community. A range of locally based and fly in fly out providers currently support the health and ageing needs to the population. The locally based services include a Hospital, a RACF and a Community Health Centre.

The LHD and ACCHS are working together to transition primary health care service delivery to community control. This involves providing services in the community and within the RACF. The transition commenced in October 2017 and is expected to complete by July 2019. The first phase involved the ACCHS taking responsibility for delivering chronic care management for the community.

The Service Delivery Model

Historically, it has been difficult to attract and retain a GP workforce in the community. For this reason, and to support appropriate chronic disease management, the ACCHS determined that a model involving a permanent GP and NP working collaboratively would best meet the needs to the community. The ACCHS also placed value on recruiting clinicians with experience within the sector able to deliver culturally competent care.

Whilst the ACCHS successfully recruited the NP, locum staff currently provide GP coverage. As a result, a modified model is in place whereby the NP provides primary care services, including treatment, diagnosis, management and referral, for 3 weeks on, 2 weeks off. A locum GP and RN provide services in the alternate weeks.

A range of other fly in fly out clinicians provide primary care to services to specific patient cohorts including child and maternal health and for certain conditions.

Employment Model

The ACCHS contracts the NP for a fixed sum on a permanent part time basis.

The Funding Model

The ACCHS meets the cost of the NP through its operational budget supported by IAHP funding, as well as through payments from patients for each consult. MBS reimbursements are available to patients.

Site characteristics

Table 26: Site Characteristics – Case Study H

Characteristics of the NP model	
Time since establishment	8 Month Model Maturity
Target group	Aboriginal and Torres Strait Islander population
Remoteness	MM 7
Population catchment	1,600
NP FTE on site	1 FIFO 3 weeks on/ 2 weeks off
GP FTE on site	Locum 2 weeks on/off
Employment Model	Contracted by ACCHS
Funding Model	Commonwealth funding and MBS rebates
Patient co-payment	×
Access to MBS	✓
NP salary / year	$117,000

Source: Site visit

Financial model

Income

The income for the NP model comes from ACCHS operational budget which is supported by IAHP funding and MBS reimbursement. Patients are not charged a co-payment fee at this organisation as their mission to improve equity of access for vulnerable populations.

Expenditure

The overall costs of the model are approximately $160,000 made up predominantly of the NP's contract, accommodation costs and costs associated with the remoteness of the site.

Sustainability

The site financial model indicates that under current funding the model is non-sustainable, this is due to the high costs of a remote workforce as well as the barriers to MBS item numbers that NPs face, such as 715 (Aboriginal and Torres Strait Islander Peoples Health Assessment), 721,723 and 732 dependent on government funding.

Qualitative Findings

Success Factors

Interviews conducted during the site visit identified a range of factors critical to the successful implementation of the site's NP model of care. These are described in detail below.

Relationship with other service providers

The NP has been able to build relationships with other established service providers in the community. Whilst these relationships are at different stage of maturity, the more mature relationships have supported the Nurse Practitioner to operate at the top of their scope of practice.

Cultural Competency

Through their experience and background, the NP is able to better understand the healthcare needs of the community and deliver culturally competent care. They were also familiar with the

models of care used within the sector and as such could play an important role in establishing a new service.

A person-centred model of care

The model of care is patient-centred and holistic. It attempts to meet or facilitate all of the primary care needs of the patient, to intervene early and to deliver care in a range of different settings. This is well suited to a NP role.

Benefits

Whilst the model is still in its establishment stages stakeholders identified a range of early benefits, outlined below.

Improving palliative care in community

Historically, the RACF transferred residents requiring palliative care to facilities outside of their community. This often resulted in distress and dislocation for the patient and their families.

For the first time, the NP role has enabled palliative care within the RACF. This has involved working closely with the resident, their family and RACF staff to identify and treat symptoms to ensure that the final stages of life can be lived as fully and comfortably as possible.

Stakeholders report a very significant positive benefit to patient-centred, culturally competent care as a result.

Improved access to healthcare services

Prior to the implementation of the NP model, there was no regular access to locally based services to diagnose and treat health conditions in the community. Stakeholders reported that delayed care, while patients waited for fly-in, fly-out services, resulted in poorer health outcomes and higher downstream costs. There was also a view that, in response to demand, visiting clinicians prioritised acute presentations over complex or chronic care management.

Whilst baseline data was not available, feedback from stakeholders indicated that the NP model role has improved access to early identification, diagnosis, treatment and referral. There was also early evidence that the NP has enabled better-targeted, enhanced patient care through identification of population level trends.

Improved patient experience

Direct consultation with patients was not possible within the scope of this project, nor was data on the experience of patients available. However, other clinicians reported that the NP model has improved patient experience, in a number of ways, including through the provision of more culturally appropriate care, greater flexibility in care setting and improved availability.

Improved quality and safety

The NP has been able to support the safe practice of other providers within the community, particularly other nursing staff operating in an isolated environment. Stakeholders reported that access to around-the-clock support was important to their confidence managing the care of complex patients. The NP has also been able to identify opportunities for improvement in practice and for more seamless hand off between providers.

Medication Management

Medication adherence is an important aspect to the management of the health of the high number of patients living with complex, chronic conditions in the community. The NP model has enabled a significant increase in the use of Webster-paks to support patients to take prescribed medication correctly.

Challenges & Limitations

Site visits identified a range of challenges and limitations to the role operating as effectively as possible. These are outlined in detail below.

High reliance on fly in, fly out medical support

The ACCHS currently relies on fly in, fly out medical support. The time spent in the community by the NP and GP usually does not overlap, and the GP is often a different person to the previous GP on site. This creates a significant challenge to utilising the NP appropriately, because:

- it is difficult to establish pathways to support patient flow and to complete assessments and management plans. This also impacts on the effectiveness of MBS billing;
- the respective roles of the NP and GP change as the individual GP changes based on previous experience working with a NP, understanding of the scope of NP roles and personal preference.

Fragmented service delivery

Currently, no single organisation is responsible for planning, delivering and monitoring primary care health services in the community. This limits the NP role through:

- incomplete access to patient information. The ACCHS and LHD have taken early positive steps to overcome part of this challenge through an agreement to share information;
- a lack of clear and established patient pathways;
- an inconsistent understanding and/or acceptance of the NP role in delivering primary health care services;
- duplication, overlap and gaps between service providers due to inconsistent communication between health services;
- no single point of accountability for ensuring all of the patient's primary health care needs are met.

Access to appropriate infrastructure

During the period of transition, access to appropriate infrastructure has been limited. The ACCHS services are currently delivered from within the existing State Government Community Health Centre. The NP has been allocated a room without access to a sink, which impacts on the safe delivery of certain procedures which require hand washing.

The transition of primary health care services to community control is expected to address the challenges listed above. However, a further final challenge to realising the full potential of the role is outside the control of the local stakeholders.

Limitations on scope and access to reimbursement

The most significant challenge to the long-term sustainability of the model identified by stakeholders were the limitations on scope and access to reimbursement.

These limitations result in the use of a NP being more costly to the ACCHS compared to traditional models. The ACCHS noted that, despite the significant benefits identified above, it was not possible to replicate this model across other communities they service because of these limitations, particularly:

- Access to item numbers for Health Assessments (715) and Chronic Disease Management (721, 732, 723, 729, 731). This activity is critical to the assessment and management of the health of Aboriginal and Torres Strait Islander patients. Within the ACCHS model, the NP plays the critical role in early detection, diagnosis and management of chronic health conditions but is unable to claim for this activity. This is particularly important in scenarios where access to a GP is limited.
- Death Certification. As identified above, the NP's role has been able to support palliative care in the RACF. A limitation to this has been the inability of the NP to sign a death certificate. There is a requirement under section 37 of the Births, Deaths and Marriage Registration Act 1996 that a Medical Certificate of Cause of Death (MCCD) can only be completed by a registered medical practitioner. In a scenario where access to a GP is limited, this has resulted in the need to delay family access to the deceased impacting on culturally appropriate end of life practices.

  In the ACNP Senate inquiry into the future of Australia's age care sector workforce it was noted that NPs practicing in aged care and/or palliative care services need recognition in State legislation in order to sign death certificates.[23]
- Close the Gap initiatives. The NP is unable to access all Close the Gap initiatives including signing patients up to CTG PIP for the ACCHS and being able to do CTG scripts for patients and having access to ITC (Integrated Team Care) funding to help patients access funding for chronic disease management.

Cost Benefit Analysis

Key points

- This NP model's costs relate primarily to the NP's contract, room costs and job-related travel. Total costs of the model are estimated at $159,800 per year;
- The NP is currently funded through a contract with ACCHS which is supported by IAHP funding and MBS reimbursement. The MBS reimbursement covers 19% of total costs;
- The major benefits of this model are improved access to primary care and chronic disease management, and associated reduced hospitalisations. It is estimated that the total benefits of the model amount to $1,554,317 per year;
- The general benefits of this model significantly outweigh its costs, with an overall benefit cost ratio of 9.7. The BCR remains high under more conservative assumptions around the number of patients who receive improved levels of access to primary care.

[23] Australian College of Nurse Practitioners. (2016) Senate inquiry into the future of Australia's aged care sector workforce

Costs

The annual NP model costs are $160,000 to the ACCHS, which are supported by IAHP funding and MBS reimbursement.

Benefits

Identified benefits

The benefits of this NP model are related to improved access to primary care, chronic disease management and improved continuity of care.

Table 27: Benefit assumptions – Case Study H

Benefits	Site applicability	Comments
Early Intervention	✓	
Continuity of Care	✓	This is a qualitative benefit and has not been quantified as part of the CBA ratio
Avoidable ED/Hospital Admissions	✓	This is a qualitative benefit and has not been quantified as part of the CBA ratio
Chronic Care Management		
Quality of Life	✓	
Equity of Access		This is a qualitative benefit and has not been quantified as part of the CBA ratio
Aboriginal and Torres Strait Islander Healthcare access		
De-prescribing		
PHC Allocative efficiency	✓	
Clinical Staff knowledge up skill	✓	This is a qualitative benefit and has not been quantified as part of the CBA ratio
Patient experience	✓	This is a qualitative benefit and has not been quantified as part of the CBA ratio
Quality & Safety		This is a qualitative benefit and has not been quantified as part of the CBA ratio

Source: Site visit

Measuring and valuing selected benefits

Zhao et al (2014) completed an in-depth economic evaluation of primary care chronic disease management for over 14,000 Indigenous residents living in remote Australian communities. It found that cohorts with medium levels of primary care (2-11 annual visits) achieved significantly better patient outcomes and reduced health service utilisations than cohorts with low levels of primary care (<2 annual visits), with return on investment ratios of $7.21 and $12.95, depending on the disease in question[24]. If the NP model in this site improves access from low to medium for 100 patients across the 1,040 annual consultations, and achieve the same rates of hospitalisation reductions as shown in Zhao et al (2014), benefits are estimated at almost $1.6 million per year in reduced hospitalisation costs. If 50 the NP model improves access for 50 patients, benefits would be $800,000.

[24] Zhao, Yuejen, et al. "Better health outcomes at lower costs: the benefits of primary care utilisation for chronic disease management in remote Indigenous communities in Australia's Northern Territory." *BMC health services research* 14.1 (2014): 463.

Benefit-cost ratio

The benefit-cost ratio for this NP site is estimated at 9.7. If access was improved for lower value number of patients (50 patients instead of 100), the BCR falls to 4.9.

Alignment of costs and benefits
As with most primary care models, there is a misalignment of costs and benefits in this site. Longer term health benefits will likely manifest in terms of reduce hospitalisations and emergency department visits, benefiting State governments, private health insurers and patients themselves, while the costs are borne by the Federal government and the site. This is of course not a function of the NP model but a function of Australia's current fragmented system.

Table 28: Cost-Benefit Analysis Summary – Case Study H

Cost-Benefit Analysis Summary	
Costs	**Annual $**
MBS funding	$29,682
Site-specific	$130,118
Total	$159,800
Benefits	**Annual $**
Reduction in hospitalisations	$1,554,317
Total	*$1,554,317*
Benefit Cost Ratio	***9.7***

Source: KPMG

KPMG

4 Findings

This chapter outlines the key findings from the CBA in response to the project objectives.[25]

4.1 NP operating models in the aged care and primary health care sectors

This section explores the range of NP operating models that were identified during the site visits, and explores key success factors and challenges raised by local stakeholders. The CBA found that the success of an NP model of care is determined by the extent to which it meets the needs of the community and fills a gap in health service delivery. The case study sites encompassed a variety of NP models of care and included primary health care settings as well as aged care settings in metropolitan and regional or remote locations. These sites were explored using a qualitative process of interviews supported by guiding questions and a quantitative data request. An overview of the models of care in place is presented in Table 29.

Table 29: Overview of NP models of care across case study sites

Case study site	Model	Brief description of model
Site A	NP based in hospital ED	The NP is based in the ED of a local public hospital, and acts as a link between the ED and the community (mainly in aged care). The NP attends to patients who would normally present to the ED, sets up a treatment plan and provides home care (in collaboration with GPs and specialists if required).
Site B	NP clinic	The model is a primary health NP clinic in rural Australia. Services are currently provided in a local community centre, with a main clinic due to open in the neighbouring town in the near future. Services are almost entirely provided by one NP, with a collaborating GP visiting the site one day per fortnight.
Site C	NP part of primary health care clinic	The NP operates as part of a multidisciplinary publically funded primary health care clinic with a focus on women's health and supporting Aboriginal women in the community. The NP works independently and only refers to GPs when required.
Site D	GP / NP collaborating practice	The NP model is a private practice incorporating two GPs and nine NPs who are all associates within the practice. The practice provides person-centred health care services to RACF residents.
Site E	Single operator NP	The model consists of a specialist dementia care NP who is employed by a regional health clinic. The services provided by the NP revolve almost entirely around conducting tests and assessments required to provide patients with their dementia diagnosis.
Site F	NP part of ACCHS	The NP at this site operates as part of a multidisciplinary team employed by ACCHS. The NP at this site is a generalist with specialised skills in women and child health care.
Site G	Single operator NP / contracted by RACFs	The NP operates across separate RACF sites with one day per week assigned to each. The goal is to up-skill RACF employees and improve continuity of care to residents.
Site H	NP part of ACCHS	The NP operates as part of a remote ACCHS alongside a team of FIFO specialist staff such as RFDS and Allied Health as well as State-operated community health services. The NP at this site is focused on providing primary health and aged care services to the community, including chronic disease management.

Source: Site visits

25 It should be noted that any potential extensions to the existing scope of practice that were identified by stakeholders were acknowledged as part of this report, however an inclusion of those extensions in the CBA was not within the feasible scope of this project.

Operating Model

There was a high level of variability in NP operating models across case study sites, highlighting the extent to which each NP model of care was tailored to the specific community requirements. The variety in operating models is captured in Table 30. The case studies found that the NP models differed in maturity, with some models having been in place for 12 years (see site C) whilst others were less mature having been in place for only eight weeks (see site G).

Geographically, NP models of care were implemented across Australia regardless of the level of remoteness. Case study sites were located in areas ranging from metropolitan to very remote (MM 1 to MM 7, using the Modified Monash Model[26]). Three sites were classified as MM 1, two sites as MM 3, and one site each as MM 5, MM 6, and MM 7.

Most sites had a focus on primary health care or aged care. Three sites provided care across both settings. Population groups differed by site, again reflecting the tailoring of NP models to meet community needs. Their focus ranged from providing primary health care to the general community, to Aboriginal and Torres Strait Islander communities, to specific patients waiting for a dementia diagnosis.

All but one case study site had only one NP incorporated into their model of case. Five models of care involved a designated GP on site working alongside NPs in a collaborative practice or clinic environment. Three models of care did not involve an on-site GP.

Table 30: Overview of site characteristics across case study sites

	Site A	Site B	Site C	Site D	Site E	Site F	Site G	Site H
Time since establishment	11 years	<1 year	12 years	7 years	4 years	5 years	<1 year	<1 year
Target group	Aged care	General community	Aboriginal and Torres Strait Islander women	Aged care	Dementia patients	Aboriginal and Torres Strait Islander population	Aged care	Aboriginal and Torres Strait Islander population
Geographical classification	MM 3	MM 6	MM 5	MM 1	MM 3	MM 1	MM 1	MM 7
Population catchment	50,000	1,200	6,200	>1 million	25,000	>1 million	>1 million	1,600
NP FTE on site	1.0	0.6	1.0	9.0	1.0	0.75	0.3	0.6
GP FTE on site	n/a	0.1	n/a	2.0	n/a	3.0	n/a	0.5

Source: KPMG / site visits

Funding model

The NP models of care were established under a variety of funding arrangements, dependent on the site and target group. Table 31 provides a high-level overview of the financial characteristics for each of the case study sites. In total, there was a spread of three private practices, two State-funded NP models of care, one Commonwealth funded NP role, and two models that had mixed funding from State and Commonwealth Government. Two of the private practices required their patients to pay a co-payment for services provided. Five sites had access to and received MBS reimbursements.

[26] Refer page 4 for key to classifications

Table 31: Overview of financial site characteristics across case study sites

	Site A	Site B	Site C	Site D	Site E	Site F	Site G	Site H
Employment model	Salaried position	Self-employed	Salaried position	Partner-ship	Salaried position	Salaried position	Con-tracted position	Con-tracted position
Funding model	State-funded	Private practice	State funded	Private practice	Common-wealth funded	Common-wealth & State-funded	Private practice	Common-wealth & State-funded
Patient co-payment	×	✓	×	✓	×	×	×	×
Access to MBS	n/a	✓	n/a	✓	n/a	✓	✓	✓
Share funding from patient (MBS reimbursed)	0%	82%	0%	not available	0%	38%	50%*	19%
Share of funding from patient (co-payment	0%	18%	0%	not available	0%	0%	0%	0%
Share of funding from State Govt	100%	0%	100%	not available	0%	0%	0%	0%
Share of funding from Comm. Govt	0%	0%	0%	not available	89%	62%	0%	81%
Share of funding from other sources	0%	0%	0%	not available	11%	0%	50%	0%

Source: KPMG / site visits
**the contractor receives the patient/MBS payments, rather than the NP*

Employment Model

The employment models were varied, and often complex (see Table 31). Most NPs were either self-employed or employed in a salaried position, however the complexities were rooted in the funding arrangements and administrative set-up of the role. Contracted positions in particular were complex in the way they had been established. For instance, Case study G depicts a model in which the NP works for RACFs, however the NP is employed through an agency who in turn contracts the NP service to the RACF. The NP role in case study H involves an NP working on a contractor rate directly for the ACCHS.

Success Factors

The CBA found that NP models of care are successful when they are targeted to the environment they operate within and define a clear model of care for the NP. More specifically, despite the variations in their operational models NP models had common themes that enabled their success.

- Each of these NP models was embedded in a community or setting where there was a clear and identifiable need for service. Most NPs reported that the establishment of their NP model was the result of their proactivity in recognising an area of need, and depended on their drive to create the role.

- The models were developed in a patient-centred and holistic approach, keeping the patient at the forefront of service delivery.
- There was a collaborative agreement between the NP and other health professionals (e.g. GPs) involved in the healthcare delivery of the model. In some instances collaboration between professionals took place in an informal way as part of a teamwork approach.
- Clarity around the NP scope of practice in the particular model of care was regarded as a critical element in enabling allocative efficiency of the healthcare services provided, and in preventing duplication of care.
- Executive support of the NP model of care from site leadership (e.g. case study F).

Despite the similarities that arose between the eight case study sites, there were also divergent, site-specific views on success factors that were reported during consultations. An example was the importance of generalist or specialist scope of NP practice. While some of the stakeholders felt that NPs should have a specialist focus, others raised that a generalist approach to care is more beneficial. This difference in opinion was particularly apparent between major cities and remote sites as remote sites noted that there was a definite requirement for generalists in these fields.

Table 32 provides a high-level overview of the key success factors that were identified by the sites.

Table 32: Overview of qualitative success factors identified across case study sites

Success Factors*	Description
Identified area of need	A service gap in the community that is filled by the NP role
Scope of practice	The procedures, actions and processes that an NP is educated, competent and enabled to undertake.
Training and interpersonal skills	Aspects of NP education and ability to act within their role
Teamwork	Working closely with GPs or other health professionals
Community & health sector relationships	Close relationships with other medical professionals or other health service providers
Specialty focus	Having a specific area of expertise within a generalist skillset
Leadership & Support	Being provided with a certain level of governance in undertaking the NP role
Person-centred care	The ability to tailor services to the specific needs of each patient
Reputation	Being well known in the community for the services provided as part of the NP role

Source: Site visits
**these success factors were identified across multiple case study sites, however may not have been identified by all of the sites*

Challenges and Limitations

Similarly to success factors, Stakeholders raised a variety of challenges and limitations to the NP role, some of which were the same or similar across sites. Common key challenges that were raised by sites are described as follows.

- The significant workload that NPs face in their role. Almost all NPs reported working significant overtime which impacted heavily on their work-life balance. This was due to the high level of flexibility required in regard to working hours (e.g. starting work early in the morning and working until late at night to see patients and complete administrative tasks), and a lack of further NP resources to take on some of the workload.
- A lack of sufficient funding and / or income was further seen as a significant barrier to success, with many NPs stating that they were struggling to remain financially viable with their business model. NPs saw a lack of access to MBS in general or to certain MBS items as a major disadvantage in securing sufficient income. Interestingly, MBS covered 93 percent of fees charged by NPs indicating that NPs do not currently charge a substantial co-payment. This may be because of access to other funding sources.
- Particular limitations in relation to MBS access included the narrow range of diagnostic imaging services, the inability to refer to allied health professionals, as well as the lack of billable items available to NPs (e.g. regarding health assessments, or chronic disease management). NPs stated that this contributes to duplication and fragmentation of care, as patients have to see other health professionals for these services. MBS-related challenges are further explored in section 4.4.
- There was a perceived lack of understanding of the NP role and their scope of practice. NPs felt that this was at times inhibiting their ability to practice to their full scope of practice and could lead to inefficiencies related to duplication of care when other health professionals do not fully understand what activities can be undertaken by the NP. This barrier was seen as less prevalent when an NP had strong relationships with other service providers.

- NPs felt that there is currently no solid evidence base for the success of implementing NP models of care due to a general lack of data in relation to outcomes achieved and services provided. Data collection was heavily dependent on the pro-activity of each NP, and was not actively supported or conducted by health care sites, or by the government. NPs felt that a more robust evidence base could potentially lead to more funding opportunities in the future.

Table 33 presents a high-level overview of the challenges and limitations that were identified by each of the case study sites.

Table 33: Overview of qualitative challenges and limitations across case study sites

Challenges & Limitations*	Description
Workload & recruitment	The amount of work to be done by the NP, and the extent to which additional resources can be hired
Lack of understanding of the role	The lack of knowledge within the community or among other health care providers about the NP's scope of practice and/or the objective of their role
Funding / Financial viability	The way in which the NP role is funded
MBS/PBS access	Lack of MBS/PBS rebates for patients seeking care from an NP
Lack of data	The lack of evidence supporting the benefits of the NP role
Community & health sector relationships	The lack of close or supportive relationships with medical professionals or other health service providers
Workplace culture	A lack of support for the NP role within the site's working environment

Source: Site visits
**these challenges & limitations were identified across multiple case study sites, however may not have been identified by all of the sites*

Options for change

Consideration should be given to:

- targeting dissemination of information to prospective and current NPs, PHNs and primary health care and aged care providers outlining how to develop and implement NP models in primary health care and aged care settings. This should profile better practice case studies. This should be considered based on workforce and service planning activities, as outlined above. Service planning and identified areas of need will support NPs and service providers to implement models in the aged care and primary health care settings. Further recommendations in this regard are made below.
- strengthening the formal network of NPs to disseminate key success factors, particularly in relation to efficient and effective NP models of care.

4.2 Potential areas of expansion for NP models of care / Potential areas of expansion for NP models of care in program areas such as Health Care Homes and aged care

This section explores potential areas of expansion for NP models of care and potential challenges related to this expansion. The opportunities for expansion were identified in close alignment with the needs of the community.

Aged Care

The case study visits identified that the NP model was implemented successfully across the RACFs. Stakeholders specifically noted the following success factors:

- **Workforce clinical support:** The NPs consulted considered the education and support of the aged care workforce as an important element to their scope of practice within the facility. Stakeholders identified that the NPs working within an aged care setting were able to support the facility staff by providing some clinical diagnoses and decision making. The effect of this was earlier and increased diagnosis and treatment of conditions on site which subsequently led to a reduced number of avoidable hospital admissions. A reduction of 1,436 ED admissions, hospital admissions and ambulance trips was self-reported by the NP in Case Study A, with an associated benefit of $1,645,763 per year.
- **Clinical expertise:** NPs in RACFs have been able to diagnose and deliver clinical care within the facility. Stakeholders recognised that this enabled NPs to support RACF employees with the delivery of safe and quality care by educating staff on the job and uplifting the skills of locally based nursing staff.

The RACFs case study sites identified a number of parameters that limited their ability to deliver efficiently, these include:

- **Sustainable business models:** Lack of access to specific MBS items such as Health Assessments for people aged 75 years and older (701,703,705,707) was raised as a significant and systemic challenge for NPs in the aged care sector. Stakeholders reported that this was a barrier to the provision of patient care due to the significant number of RACF residents that fall within this age group. Case Study F gave a specific example of practising in a RACF with no co-located GP. Without regular access to a GP, the NP is unable to complete the Health Assessment sign-off. It was noted that this challenge is outside of direct control of the NP or stakeholders involved on site, however it is also a contributing factor to fragmented delivery of health care services as patients have to see other health professionals for this service.
- **Recruitment and succession planning:** Across sites where there was scope for employing additional NPs it was suggested that the recruitment process has been mostly unsuccessful in the past. Stakeholders noted that this was due to a number of variables, with the predominant one being the general lack of NPs across the region. It was thought that a lack of NPs with skills and interest in aged care exist across the country, in addition to a general lack of dedicated training pathways for RNs to become NPs in aged care. The effect of this in the longer term is a risk to sustainability of the NP model within aged care.

Options for change

Consideration should be given to:

- communicating the benefits of NP models in aged care to RACF providers, PHN and Hospital and Health Services (focused on avoidable admissions);
- identifying and documenting better practice case studies drawn from established models, including specialist dementia and palliative care along with aged care generalist models;
- considering NP roles in the development of career pathways for aged care nurses.

Aboriginal Community Controlled Health Service

The case study visits identified that the NP model was implemented successfully across the ACCHSs. Stakeholders specifically noted the following success factors:

- **Culturally competent care:** Stakeholders reported the experience and background of the NPs within sites F and H as a critical component of delivering culturally competent care to marginalised and vulnerable populations. Case study F provided a specific example, of

increased willingness to share health concerns during consultation due to the NPs long-standing relationships with the community.

- **Clinical expertise:** The NPs considered that the clinical experience and skills they provided improved access to care within ACCHS. Stakeholders reported this as a benefit of the role in a service with limited resources and high patient demand.

The ACCHS case study sites identified a number of parameters that limited their ability to deliver their full scope of practice, these include:

- **Incomplete access to patient information:** Stakeholders identified that the incomplete patient information across primary care services created difficulty in delivering quality patient care. NPs working within rural and remote services noted that a range of different visiting providers interact with the health service and their patients. In circumstances where these providers do not record information into the local Clinical Information System it compromised the ability of the NP as the primary care provider to manage the care of patients (e.g. Case Study H).

- **Sustainable business models:** Access to specific MBS items such as Health Assessments for Aboriginal and Torres Strait Islander People (715) was raised as a significant and systemic challenge for NPs in sector. Stakeholders reported that this was a barrier to the provision of patient care and financially penalised the service. Case Study H gave a specific example of practising in an ACCHS with no co-located GP. Without regular access to a GP, the NP is unable to sign-off the 715 Health Assessment, causing a delay to patient care until the Health Assessment can be signed by a GP. It was noted that this challenge is outside of direct control of the NP or stakeholders involved on site.

Options for change

Consideration should be given to:

- working with ACCHSs and other providers to implement mechanisms that provide NPs with the tools and information required to deliver care. For instance, this could involve providing NPs who have lead responsibility for the coordination of planned care with access to a complete view of patient information across providers (with the permission of the patient). This will support NPs to operate at the top of their scope of practice and support the coordination of patient care in communities serviced by multiple, often disconnected, service providers. Implementing these mechanisms will also support an uplift in continuity of care.

- utilising existing forums (NACCHO, ACNP, CATSINaM and affiliates) to connect NPs working within the sector and communicate and educate key stakeholders on the benefits of NP models. This can be in the form of case studies of both NPs and the providers they work for.

Remote Communities

The case study visits identified that the NP model was implemented successfully across remote communities. Stakeholders specifically noted the following success factors:

- **Leadership, district and government support:** NPs working in remote communities identified strong support from health service management and LHD as a critical component to sustainable success. Case Study C provided a specific example, of support from the LHD to deliver specialist services to the remote community. The NP believed that the district sees the role as particularly beneficial to providing continuity of care for the local population.

- **Clinical expertise:** The NPs considered that the clinical experience and skills provided improved access to care in remote communities where limited other healthcare options

existed. Stakeholders reported this as a benefit of the role in a community with limited resources and high patient demand. In many cases the removal of the NP from remote communities would lead to a significant or complete reduction in access to care for the communities.

The remote case study sites identified a number of parameters that limited their ability to deliver their full scope of practice, these include:

- **Fly in fly out medical support workforce:** Leadership of remote health services identified the historical difficulty to attract and retain a medical support workforce in remote communities. Case study H provided a specific example, of challenges in the fly in fly out medical support workforce. The NP identified there was usually no overlap in time that the NP and GP are in the community and the GP is often a different person at each visit. This creates a significant challenge to utilising the NP appropriately, as understanding the scope of NP roles varies in relation to the GPs previous experience. Case study C and H identified that prior to implementation of the NP models the community had limited access to PHC, dependant on the presence of locum or fly in fly out medical support.

- **Access appropriate infrastructure:** NPs identified the ability to access appropriate infrastructure in remote communities to be limited. This limitation was identified to be linked with the relationship and understanding of the associated health service. Case study C provided a specific example of the equipment the NP uses to provide care, such as the medical bed not having been replaced for over 10 years. Through raising this issue with the associated health service, the NP is expecting replacement. Case study H also provided a specific example of the NP being allocated a room without access to a sink, which impacts on the safe delivery of certain procedures requiring hand washing. The impact of these limitations directly transfer to the delivery of quality patient care.

- **Recruitment and succession planning:** Stakeholders in remote communities identified they saw a risk in succession planning. The NPs at these sites identified health resourcing at any level in a remote setting challenging. It was thought that a lack of NPs with skills and interest in remote care exist across the country. The effect of this in the longer term is a risk to sustainability of the NP model within remote care.

- **Sustainable business models:** Access to specific MBS items such as Health Assessments for Aboriginal and Torres Strait Islander People (715) was raised as a significant and systemic challenge for NPs in the aged care sector. Stakeholders reported that this was a barrier to the provision of patient care. Case study H gave a specific example of practising in a remote community with no co-located GP. Without regular access to a GP, the NP is unable to complete the Health Assessment sign-off. It was noted that this challenge is outside of direct control of the NP or stakeholders involved on site. However, the restrictions interrupt the ability of NPs to complete their episodes of care, resulting in increased out of pocket patient costs and restrictions to their authorised scope of practice.

Health Care Homes

Current reforms in primary health care enable a discussion around the involvement of NPs in new health and innovative service delivery models. One of these new models is Health Care Homes (HCH), which introduces participating primary health care providers as a home base to the patient for ongoing coordination, management and support of their chronic conditions.

The case study visits identified that the NP models of care were implemented successfully in a manner that would be suited to HCH. Stakeholders specifically noted the following success factor:

- **Clinical expertise:** The suitability of NPs to provide high quality chronic care and chronic case management was highlighted by a range of case study sites. Case study D provided a

specific example, of their commencement into the implementation of a HCH model by registering as a trial HCH provider and slightly altering the operating model of one of their NPs to accommodate practice visits of HCH patients. The model is currently still in its infancy, however the case study site viewed it as an opportunity to showcase the approach to teamwork that is underpinning the NP model of care in their practice.

Options for change

Consideration should be given to:

- integrating education, workforce planning and service planning to link current and future NPs with identified areas of need. This may include working with education providers, such as universities, National Rural Health Alliance, PHNs and State and Territory health departments to identify areas of need and suitable for NP models of care.
- increasing the professional and financial incentives for facilitating access to NP services in rural and remote communities to mitigate the healthcare shortage being experienced. This needs to be reviewed in line with the recognition of NPs within the existing MBS considerations.

Women's health

The case study visits identified that the NP model was implemented successfully delivering women's health services through PHC. Stakeholders specifically noted the following success factors:

- **Community relationships:** Stakeholders reported that the NP role was able to create strong relationships with women's groups throughout the local service areas. Case study C identified that this activity made the NP a trusted member of the community and created a reputation as a skilled and efficient practitioner.
- **Clinical expertise:** The NPs considered that the clinical experience and skills they provided improved early intervention. Case Study C provided a specific example, of the NPs ability to identify and subsequently treat two patients with cervical cancer at an early stage, who have since entered recovery. This type of early intervention is difficult to robustly quantify due to the lag between screening and long-term reductions in cancer rates.

The case study sites focused on delivering women's health services identified a number of parameters that limited their ability to deliver their full scope of practice, these include:

- **Access to referrals:** Stakeholders identified that limitations in referrals created a loss in continuity of care and a flow-on burden for patients needing to be referred through a GP. Site F identified limitations to pelvic and obstetric ultrasound exam referrals as a key challenge to the NP model. Stakeholders also identified a barrier to the NP referring pregnant patients to Hospital maternity units. This also required a GP referral regardless of whether the NP had managed all other aspects of the patients care, resulting in increased out of pocket costs for patients and an increase in cost to the health care system.
- **Sustainable business models:** Access to specific MBS items such as procedural items, like Implanon and Mirena was raised as a significant and systemic challenge for NPs delivering women's health. Stakeholders reported that this was a barrier to the provision of patient care. Site F provided a specific example: the NP reimbursements available for procedural items, like Implanon and Mirena insertion, were absent compared to a GP completing the same procedures. This lack of access causes increasing out-of-pocket patient costs, and restricts the authorised scope of practice of the NP.

4.3 Areas and costs identified with potential under-utilisation of NPs/ Potential savings associated with the expansion of NP roles

This section explores the current size of the NP workforce, and the economic rationale for expansion of NP roles based on the CBA of existing sites.

The CBA found that, while costs and benefits of NP models are difficult to quantify, they appear to deliver a positive return on investment which was particularly strong in NP models of care in the aged care space. The implications are that continued expansion of NP models could deliver substantial cost savings to the healthcare system and improved access to care for many.

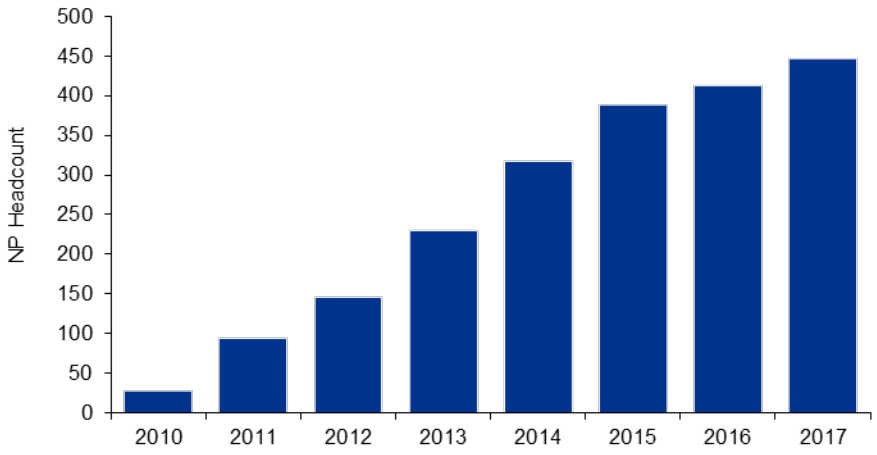
The NP workforce

Currently, there are 1,604 endorsed NPs, however not all are actively employed in an NP role.[27] The most recent available data (2017) indicates that 447 NPs completed consults that were reimbursed via the MBS, up from 412 in 2016 and 388 in 2015 (Figure 1). Growth in NP numbers appears to have slowed down since 2015. It should be noted that the data and figures presented in this section only represent those NPs that are claiming MBS items (regardless of whether they are doing so in the public or private sector). This means that NPs whose consults are not reimbursed by the MBS are not represented (half of the sites surveyed as part of this project).

On a per capita basis, there are 1.8 NPs per 100,000 population, up from 1.6 in 2015. By comparison, there are 145.0 GPs per 100,000 population, up from 139.7 GPs in 2015.[28]

The NP workforce currently makes up less than 0.08 percent of the overall health workforce employed in a registered position and 0.13 percent of the wider employed nurse and midwifery workforce.[29]

Figure 1: NP workforce

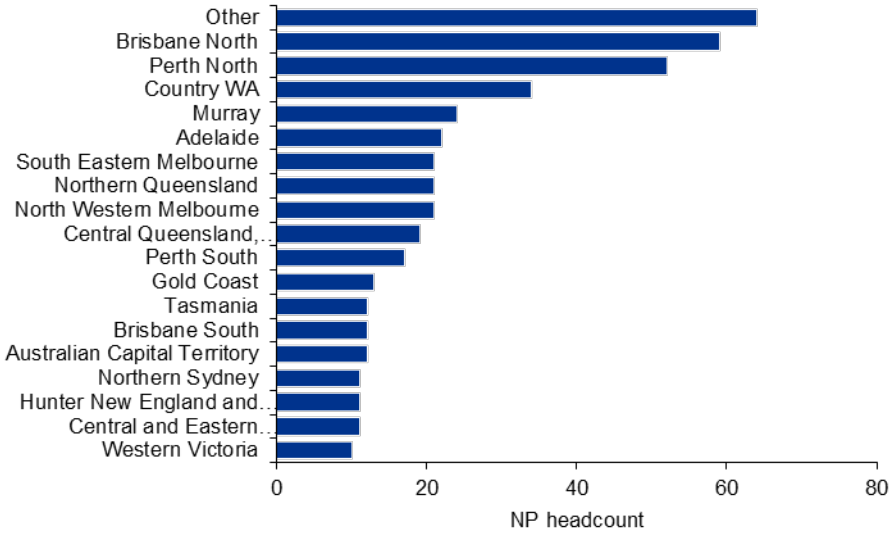


Source: DHS specific data request.

[27] Nursing and Midwifery Board of Australia (2018). Registrant data December 2017.
[28] KPMG analysis of DHS specific data request and the General Practice Workforce Statistics (accessed 20th July 2018).
[29] KPMG analysis of DHS specific data request and the National Health Workforce Dataset (accessed 20th July 2018).

The NP workforce with MBS access is unevenly distributed across Australia. Two PHNs have over 50 registered NPs identified in MBS records; 13 PHNs have less than 10 NPs.

Figure 2: NP workforce by PHN



Source: DHS specific data request.

Aged care NP workforce

Department of Health data indicates that, as of 2016, there were 53 NPs working across home or community based aged care providers.[30] Within residential aged care facilities, there were 227 NPs working across Australia.

NPs can be directly employed by residential aged care providers, or contracted in as private practice practitioners. NPs can also provide in-reach services, by being drawn on through coordinated action taken by local PHNs or via direct arrangements made by aged care organisations with local hospital networks that have nurse practitioners on staff. PHNs are funded by the Australian government to increase the efficiency and effectiveness of medical services for patients, particularly those at risk of poor health outcomes, and improving coordination of care to ensure patients receive the right care in the right place at the right time.[31] Consultation with PHNs found that NPs can play a critical role in supporting this objective.

CBA of current NP models

Across the sites, the CBA highlighted that NP models deliver a positive return on investment (Table 34). In aged care models, this return was particularly strong, due to NPs reducing ED visits and hospitalisations. The NP models saved between 500 and 1,400 ED visits per year.

The benefits of primary care NP models are more difficult to quantify, however in rural and regional settings, NP models delivered services at a lower cost than equivalent GP services, after accounting for longer average consults and a proportion of NP consultations requiring a subsequent GP consultation. There was also strong evidence in the literature for the cost-

[30] Kostas Mavromaras, Genevieve Knight, Linda Isherwood, Angela Crettenden, Joanne Flavel, Tom Karmel, Megan Moskos, Llainey Smith, Helen Walton and Zhang Wei, The Aged Care workforce 2016, Table 5.2 . See: https://agedcare.health.gov.au/sites/g/files/net1426/f/documents/03_2017/nacwcs_final_report_290317.pdf
[31] Department of Health, unpublished.

effectiveness of increased levels of primary care in a target patient group for remote Aboriginal and Torres Strait Islander populations.

Table 34: Overview of site characteristics and benefit-cost ratios across case study sites

	Site A	Site B	Site C	Site D	Site E	Site F	Site G	Site H
Target group	Aged care	General community	Aboriginal and Torres Strait Islander women	Aged care	Dementia patients	Aboriginal and Torres Strait Islander population	Aged care	Aboriginal and Torres Strait Islander population
BCR	12.4	1.1*	>1.0*	not available	2.3	1.0*	5.5	9.7

** Benefits were difficult to quantify within the scope of this research*
Source: KPMG

Identification of service needs for expansion of NP roles

The identification of a clear need for service was a success factor highlighted by the case studies. It is important then to consider if there are further service gaps that could be cost-effectively filled by an expansion of NPs.

In aged-care, there appears to be substantial need for NP models that can help reduce avoidable ED visits and hospitalisations. The AIHW reported that in 2016/17, there were almost 720,000 non-urgent and 3,200,000 semi-urgent ED visits, totalling 50 percent of all ED visits. The share increases to 58 percent in outer regional, remote and very remote areas.[32]

In primary care, access remains an issue to many Australians in rural and remote locations. The AIHW report that in major cities, 11.1 percent of people do not have a usual GP. This increases to 19.0 and 31.5 percent in outer regional and remote / very remote areas. In major cities, 3.4 percent of people cite 'no GP nearby' as the reason for not attending a GP when needed; this increases to 8.6 percent and 20.3 percent in outer regional and remote/very remote regions.[33]

In many Aboriginal and Torres Strait Islander populations, there is relatively poor access to primary care. The AIHW report that 40 statistical area level 2 areas have very limited access to Indigenous-specific primary health care services and to GPs in general; 10 of those areas have Aboriginal and Torres Strait Islander populations greater than 600.[34]

Options for change

Based on the CBA of the case study sites, an expansion of 10 NP roles in aged care would cost approximately $1.5 million per year, but conservatively result in 5,000 avoided ED visits each year, and annual savings of over $5.7 million in reduced ED, hospitalisation and ambulance costs.

In primary care, an expansion of 10 NP roles in rural and regional Australia, at a cost of $1.5 million per year, could conservatively improve access to 10,000 Australians; another 10 primary care NP roles in specifically targeted locations could provide services to over 6,000 Aboriginal and Torres Strait Islander populations with limited access.

The implications from this analysis are that continued expansion of NP models could deliver substantial cost savings to the healthcare system and improved access to thousands of

[32] AIHW 2017, 'Emergency department care 2016-17: Australian hospital statistics.' Table 3.3
[33] AIHW (Australian Institute of Health and Welfare) analysis of ABS 2016. Survey of Health Care, 2016, detailed Microdata, DataLab. Canberra: ABS. Findings based on AIHW analysis of ABS Microdata.
34 Australian Institute of Health and Welfare 2015. Spatial variation in Aboriginal and Torres Strait Islander people's access to primary health care. Cat. no. IHW 155. Canberra: AIHW.

Australians. There is sufficient patient need and service gaps to support substantial expansion of the NP workforce.

4.4 The recognition of NPs within the existing MBS

This section explores the impact of the current MBS parameters on NP scope of practice and sustainable business models.

Recognition within the existing parameters was identified as the most significant limitation to the sustainability of existing NP models and their expanded use within primary and aged care settings.

Scope of Practice

All case study sites identified that the existing MBS parameters limited NP ability to work fully to their scope of practice, resulting in duplication, fragmentation of care and inability to provide complete episodes of care. Whilst these limitations differed depending on the focus of the model a number of consistent themes were identified. These include:

- **Collaborative arrangements**
- **Referral requirements:** The NPs consulted considered that their ability to refer was an important element of their scope of practice.

  Stakeholders identified that the parameters related to referral to allied health professionals or medical specialists were a limitation to effective practice. A number of NPs emphasised the importance of their role in coordinating care to meet all of their patient's health care needs. Whilst NPs are able to make a referral to an allied health professional to support this, Medicare benefits are not be payable for those services, meaning that patients will not get reimbursed and will have significant out of pocket costs. This limitation was considered to delay care or limit management options, particularly for socio-economically disadvantaged patients with limited capacity to meet out of pocked costs.
- **Pathology and diagnostic imaging services:** Stakeholders identified that the limited range of diagnostic imaging services which attract a Medicare rebate hampered their ability to diagnose or treat patients, resulting in their inability to complete an episode of care. This included the ability to undertake point of care testing, for example HbA1c and ACR, essential to provide rapid diagnoses. This has resulted in a disruption of the continuity of care, increased cost and has created an inconvenience to the patient through the need to refer to a GP in order to request the service.

  Case Study F provided the specific example of pelvic and obstetric ultrasound exams. These exams are routinely used to support the diagnosis of conditions related to the reproductive and urinary systems, and to monitor the development of a foetus. As such, they are an important diagnostic tool in the area of women's health. Limited access to these exams has a material impact on the scope of an NP specialising in this area.
- **Available items (Health Assessments, Chronic Disease Management):** Health Assessments were identified as important tools to collect baseline information, inform care planning and drive a cycle of care, particularly for Aboriginal and Torres Strait Islander patients and the aged.

  Stakeholders reported that a lack of access to these items (Health Assessment for Aboriginal and Torres Strait Islander People, 715 and Health Assessment for people aged 75 years and older, 701, 703, 705, 707) was a very significant limitation to the use of NP models of care in ACHHSs and aged care.

The NPs considered that the collection of information, assessment and recommendations for appropriate intervention required by the assessments was within their scope of practice. However, they were unable to complete the assessment without referral to a GP. NPs further raised that Health Assessments include Home Medicine Review Assessments, which they are unable to initiate in aged care.

The need for a further appointment created the potential to delay diagnosis and the commencement of treatment and management. This problem was exacerbated in areas with limited access to GPs.

Similarly, the inability to access the CDM Medicare items (721, 732, 723, 731, and 729) was considered to be a limitation on the scope of NPs to manage the health care of people with chronic or terminal medical conditions.

This lack of access to CDM Medicare items was also seen as a barrier to having fully collaborative arrangements between an NP and a GP in a single practice. A number of stakeholders felt that NPs are often better placed to conduct longer consultations suited to the management of long-term health conditions, which would 'free up' the GP to tend to acute presentations. Access to CDM Medicare items was therefore seen as a useful consideration.

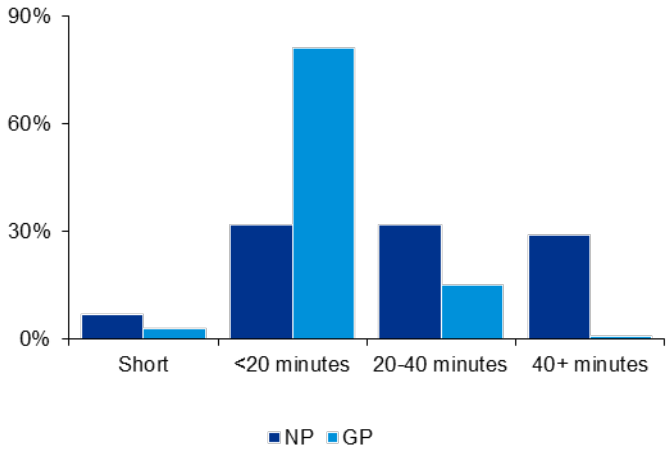
Sustainable Business Models

Stakeholders raised both the level and availability of reimbursement as limitations to the effective use of NP models.

MBS reimbursement

The analysis suggested that the current level of reimbursement available through MBS items was reported to be not sufficient to support a sustainable business model in a primary care or aged care setting. All sites that collected MBS reimbursement also relied upon other sources of funding to meet the costs of the model, including patient out of pocket payments, and State or Federal Government grants. The distribution of NP consultation levels is shown in Figure 3. The majority of NP consults are greater than 20 minutes (61%); by contrast the vast majority of GP consults are less than 20 minutes (76%). GPs were included in the analysis here as well as in Table 35 in order to provide a point of comparison to a health professional who has the skills and knowledge required to conduct activities similar to an NP.

Figure 3: Comparison of NP and GP consult durations



Source: KPMG analysis of SA3 MBS data for 2016/17

The MBS schedule (Table 35) reimburses longer consults at a higher rate, such that the dollar / minute rate of reimbursement is broadly comparable across all consults.

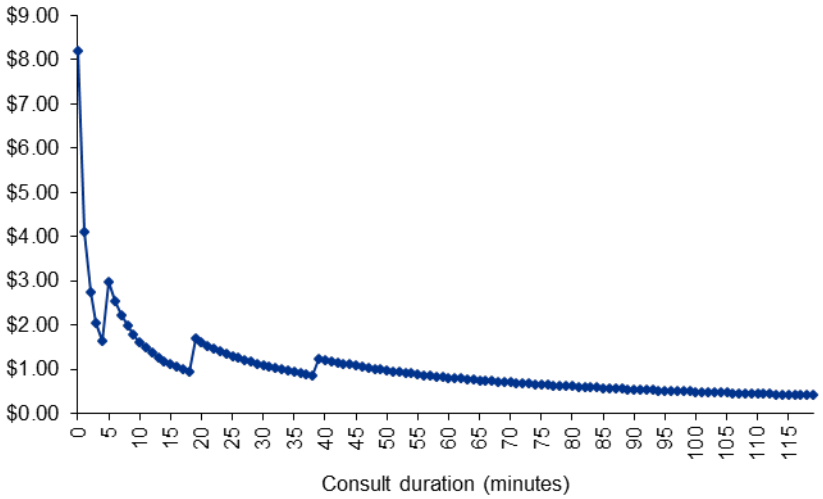
Table 35: MBS funding for NP and GP consults

Consult	NP	GP	Differential
Short	$8.20	$16.95	$8.75
<20 minutes	$17.85	$37.05	$19.20
20-40 minutes	$33.80	$71.70	$37.90
40+ minutes	$49.80	$105.55	$55.75

Source: MBS online.

However any consultations of greater than one hour are at a relative disadvantage in terms of the reimbursement per minute offered (Figure 4) This is of particular concern for NP models that have a high proportion of long consults (Site A and Site E, for example).

Figure 4: Estimated NP MBS reimbursement per minute



Source: MBS online

The overall sustainability of the NP model was further investigated in a sensitivity analysis (Table 36). This found that in the absence of external funding sources, NPs would need to average over 10 hours a day of patient consultations to cover the costs of their salary; or alternatively require patients to pay a substantial co-payment.

Table 36: Sensitivity analysis: Requirements for a sustainable NP model

	Sensitivity A Co-payment charged to all patients	Sensitivity B Co-payment charged to 50% of patients	Sensitivity C No co-payment charged
Average consultation hours per day NP consulting hours/day	5.0	5.0	10.3
Patient co-payment share Share of patients that pay a co-payment	100%	50%	0%
Patient co-payment level $/consult	$33	$66	$0

Source: KPMG analysis

In addition to the level of reimbursement, leadership at the case study sites identified the narrow scope of NP services that are available for reimbursement as a key financial limitation to the sustainability of the NP model. In some circumstances, the NP substantially completes an assessment or treatment but must refer to a GP for completion, limiting the cost-effectiveness of the service delivery. A key parameter in the CBA was the share of NP consults that require a further GP visit. As this share increases, the net benefits and allocative efficiency of the NP model decline.

Stakeholders also noted the absence of available incentives to offset the cost of the use of Nurse Practitioners within these sectors, compared to roles including Aboriginal Health Workers and Practice Nurses. In this context, the availability of Health Assessments and Chronic Disease Management (CDM) items was most commonly raised. These are discussed further in the following paragraphs.

Health Assessments

Health assessments are a particular case where MBS restrictions limit the NP model. A health assessment forms an integral component of the model of care for many services with a focus on caring for Aboriginal and Torres Strait Islander patients and the aged. Services rely on MBS reimbursement to meet the costs of delivering this activity.

Beyond this, policy and funding drivers also encourage ACCHSs to seek Medicare entitlements for the relevant services they provide, including through the establishment of national targets.

The limitation in relation to Health Assessments results in two scenarios:

- the NP substantially completes the assessment but refers to a GP for completion; or
- in the absence of a GP, the NP completes the assessment as part of good clinical practice, however the patient or service cannot claim reimbursement.

In the first scenario, the additional cost of a GP consultation in addition to the NP results in a model that is not cost-effective relative to models where a health worker or nurse collects the patient information and takes observations to support the completion of the assessment. As above, the higher the share of NP consults that must go on to see a GP, the more the allocative efficiency of the NP model is reduced.

In the second scenario, the service or patient must meet the cost of delivering this activity. There is also no reimbursement available for the range of follow-up services (up to 10 services per calendar year, 10987) or referred allied health services (up to five services per calendar year 81300, 81305, 81310, 81315, 81320, 81325, 81340, 81345, 81350, 81355 and 81360). This has the potential to have a material impact on income and means that for some services, in areas of need, the NP model is not a viable alternative to a GP.

Chronic Disease Management items

CDM items recognise that the management of health care for people with chronic or terminal conditions is ongoing, often complex, time consuming and involves a team of multidisciplinary providers. Stakeholders identified that NPs were uniquely suited to plan for and coordinate care for patients with these conditions. However, they also acknowledged care of these patients was costly, and without access to the CDM items alternative models were likely to be more cost effective for their organisation.

Options for change

This project found that NP models can address areas of need, particularly within aged care and within ACCHSs. However, limited access to MBS items reimbursement has a significant negative impact on the sustainability of these models and is likely to impede further expansion.

Therefore, consideration should be given to:

- the level of the MBS reimbursement relative to costs associated with the NP model;
- reimbursement parameters that recognise the longer duration of many NP consults relative to GP consults;
- the expansion of the availability of Health Assessment and CDM items to NPs practicing in areas of need;
- reviewing the range of other incentives available to support the development of NP models in order to support an enhanced role within primary and aged care.

4.5 Other considerations

This project identified valuable insights into the types of NP models operating across primary care and aged care settings and the associated challenges and success factors in sustaining them. However, the lack of a reliable, complete and consistent data set to inform and assess the economic impact of NP models of care at a granular level was a significant limitation in this project. Other limitations included the following:

- While aggregated administrative data such as MBS and PBS services are available at the PHN level, there are difficulties in isolating MBS/PBS data by site. This means much of the CBA was informed by semi-structured surveys and self-reported data collections that have the potential to be less accurate than administrative data.
- Short periods which some NP models have been in place for mean that longer-term impacts of the NP model (e.g. improved long term patient quality of life or reduced chronic disease severity) cannot be measured directly. This is a limitation for primary care NP models in particular; the benefits for these models are based on assumptions from the literature or comparative costs of a GP-led service.

On this basis, **the development of systematic data collection tools and methods are required to support the NP role is considered an immediate priority**. Data collection should focus on NP workforce composition and role, breadth of services delivered, activity and outcomes associated with service delivery. This will contribute to a wider understanding of the NP model and the benefits and value it can bring the delivery of safe, effective and efficient health care. The first step should focus on defining measures relevant to NP models of care to enable consistent and transparent approaches to data collection. Following this, embedding data collection mechanisms into NP practice should be a priority.

Future considerations

In addition to the project-specific findings, the overarching findings from the project have resulted in broad considerations for the Department and other key stakeholders into the future. Future considerations include:

More work is required to communicate and formalise the value of Nurse Practitioners in the delivery and commissioning of services

Stakeholder consultations identified that knowledge of NP models was variable across PHNs. This was further supported by the analysis of PHN NP headcount data, suggesting that further work is required to embed the NP as a care provider in the delivery of care across aged care and primary health care settings. This can be achieved by increasing awareness among PHNs and other clinical stakeholder groups of the potential of NP models to meet identified community needs. A defined focus on implementing tools that foster formal and structured collaboration between NPs, PHNs and other clinical stakeholders is required. This will inform service planning and delivery activities, including the type and location of services. The objective should be to identify areas of unmet community needs which NP models are well suited to meet.

The NP role needs to be clarified

The use of the NP role should be commensurate with their advanced training, skills and scope of practice. The NP role is an expensive resource when underutilised or allocated to clinical and non-clinical tasks not reflective of their advanced training. Available evidence indicates that NPs undertake some clinical and non-clinical tasks not aligned to their scope of practice and care that can be provided by registered nurses. While the role may be sustainable, it is not reflective of the economic benefit that NPs bring to the health system. Similarly, the cost-effectiveness of NP models could be improved by reducing the need for subsequent GP consults where appropriate.

This will involve systemically addressing the barriers to NP operating at the top of their scope of practice identified in section 4.4. As outlined in other sections of this report, it should be noted that NPs should not be regarded as a substitute for GPs but rather as an opportunity for meeting unmet needs.

Consider findings of concurrent reviews to inform future policy changes, particularly in relation to MBS billing

The MBS Review Taskforce is currently considering how services can be aligned with contemporary clinical evidence and practice and improve health outcomes for patients. The findings from this project should be considered in line with concurrent reviews, including from both the MBS Review Taskforce and its NP Reference Group.

Dedicated pathways for rural NP education and clinical professional development

NP models demonstrated the most value in economic terms in residential aged care facilities, particularly in rural and remote areas. However, NP workforce challenges are similar to those faced by other disciplines, particularly in recruiting and retaining a workforce in rural and remote areas. Therefore, dedicated education opportunities and professional development for rural and remote nurses and NPs is required to develop a pipeline of skilled and experienced NPs. This is an important factor in getting NPs ready for practice in rural and remote areas, and in increasing their skills in expertise in 'rural generalism' (i.e. being able to provide a broader spectrum of services in rural and remote areas than what may be required in metropolitan areas). Training for rural and remote NPs needs to focus on the generalist skills required to meet health care needs of remote communities. In addition, other key barriers associated with NPs practicing in rural areas should be investigated, such as financial sustainability, infrastructure and professional support and mentoring, in order to identify mechanisms to improve their attraction and retention. This may include the implementation of incentive payments for NPs to practice in these areas, support to universities to establish a 'local' NP workforce in identified areas of need (e.g. by providing training in rural settings), and capital investment for rural providers to establish effective working spaces for NPs.

Further investigate funding models to improve model sustainability and support innovative models

Case study sites were associated with a diverse range of funding models. This included three private practices, two State-funded NP models of care, one Commonwealth funded NP role, and two models that had mixed funding from State and Commonwealth government. Two of the private practices required their patients to pay a co-payment for services provided. Five sites had access to and received MBS reimbursements.

Evidence gathered in this project identified that funding approaches have a direct impact on the configuration of the NP model, including their sustainability and innovation. A number of NPs were initially established based on a business case for a set period. The short-term nature of this approach affected the sustainability of these models and the services provided. Given the growing evidence base and the benefits associated with NP models of care across primary health care and aged care, alternative funding models, such as practice/facility incentive payments, bundled payments or blended payments, should be explored to incentivise providers to incorporate the NP role into their service delivery.

KPMG

Appendix A – Literature finding

Overview of models of care

NP models of care can be applied to a range of settings

NP models of care can be applied to a wide range of care settings, under a variety of funding arrangements and overarching business models. This means that each NP role can be tailored to the specific needs and service gaps in a particular region or community. For the purpose of this literature review – and in the context of the overarching project – the focus of this chapter lies on providing an illustrative overview of four models of care in the primary health care or aged care sectors:

- Single operator NPs;
- NPs incorporated into a general practice;
- NP practices;
- NPs based in residential aged care facilities.

It should be noted there may be NP models of care in Australia that differ from the ones described, or are a mix of two or more of the models in this section.

Single operator NPs

This model type generally comprises models that are private (for profit), small businesses run by individual NPs. In their 2015 evaluation of the Nurse Practitioner Aged Care Models of Practice, Davey et al. found this model of care particularly relevant in sectors such as aged care or disability, where clients are often immobile and dependent on service providers who provide services within the community including home visits. Services provided as part of this model often include disease prevention and health promotion activities, such as health assessments and monitoring, medication review, wound care, and referral to other services if required.[35] The focus of single operator NP models is to integrate direct patient care relating to the management of chronic and complex illnesses with other primary healthcare activities, in the community.[36]

Timely access to community and home based care is valuable not only in the provision of care for people with chronic conditions but also plays an important role in increasing the availability of care for those with other needs including palliative care. Nurse practitioners practicing within palliative care teams provide expertise in delivering responsive care that reduces fragmentation, increases choice and supports people, their carers and families both in health care facility settings

[35] Davey, R., Clark, S., Goss, J., Parker, R., Hungerford, C., & Gibson, D. (2015). National evaluation of the nurse practitioner–Aged care models of practice initiative: summary of findings, centre for research & action in public health. Canberra, ACT: UC Health Research Institute, University of Canberra.
[36] Currie, J., Chiarella, M., & Buckley, T. (2017). Privately practising nurse practitioners' provision of care subsidised through the Medicare Benefits Schedule and the Pharmaceutical Benefits Scheme in Australia: results from a national survey. Australian Health Review.

and the community.[37] For instance, Bookbinder et al. demonstrated in their 2011 study that NPs could quickly enhance the value of hospice services to the community and lead to cost efficiencies that enabled the addition of several additional NPs to the service.[38] In addition, Chapman et al. identified the significant role that palliative care NPs play in providing specialist palliative care in RACFs decreasing hospital admissions and improving symptom management.[39]

Table 37: Overview of single operator NP practice models of care

Single operator NPs	
Funding model	Single operator NPs generate fee for service; they operate a practice as a small business. NPs in Australia are currently required to seek a Collaborative Arrangement with a specified medical officer, (in accordance with relevant legislation) in order to enable patients to receive subsidisation under the Medicare Benefits Schedule (MBS) and Pharmaceutical Benefits Scheme (PBS) for care they provide. (see section 'NPs in the Australian context' for more information on MBS eligibility for NPs in Australia).
Benefits	• Improve timely access to primary health care • Improved access to community based / home care • Improved management and monitoring of chronic and complex health conditions • Improved case management and care coordination • Provide assistance for people in navigating the health system and accessing other health and social services • Improved access to community based care after discharge from hospital to prevent avoidable readmission • Enhanced patient enablement • Improved access to health clinics / health promotion • Reduced hospitalisations • Improved early intervention.[40,41,42]
Barriers & challenges	Single operator NP models must be highly adaptable to local market conditions and client needs to succeed. As small businesses, these

[37] Bookbinder, M., Glajchen, M., McHugh, M., Higgins, P., Budis, J., Solomon, N., ... & Portenoy, R. K. (2011). Nurse practitioner-based models of specialist palliative care at home: sustainability and evaluation of feasibility. Journal of pain and symptom management, 41(1), 25-34.
[38] Bookbinder, M., Glajchen, M., McHugh, M., Higgins, P., Budis, J., Solomon, N., ... & Portenoy, R. K. (2011). Nurse practitioner-based models of specialist palliative care at home: sustainability and evaluation of feasibility. Journal of pain and symptom management, 41(1), 25-34.
[39] Chapman, M., Johnston, N., Lovell, C., Forbat, L., & Liu, W.-M. (2016). Avoiding costly hospitalisation at end of life: findings from a specialist palliative care pilot in residential care for older adults. BMJ Supportive & Palliative Care.
[40] Davey, R., Clark, S., Goss, J., Parker, R., Hungerford, C., & Gibson, D. (2015). National evaluation of the nurse practitioner–Aged care models of practice initiative: summary of findings, centre for research & action in public health. Canberra, ACT: UC Health Research Institute, University of Canberra.
[41] Frost, J., Currie, M. J., Cruickshank, M., & Northam, H. (2018). Using the lens of enablement to explore patients' experiences of Nurse Practitioner care in the Primary Health Care setting. Collegian, 25(2), 193-199. doi:https://doi.org/10.1016/j.colegn.2017.06.002
[42] Davey, R., Clark, S., Goss, J., Parker, R., Hungerford, C., & Gibson, D. (2015). National evaluation of the nurse practitioner–Aged care models of practice initiative: summary of findings, centre for research & action in public health. Canberra, ACT: UC Health Research Institute, University of Canberra.

Single operator NPs	
	models require NPs to spend a significant amount of time on business administration which in turn impacts on time spent on care provision.[43] The legislative requirement for NPs to have a collaborative agreement with a specified medical practitioner poses challenges for NPs operating under this model, as the ability to provide care subsidised by the MBS and PBS depends on the willingness and availability of medical officers to participate [44]Australian research has shown that success within this model relies on the personal commitment of both NPs and medical practitioners to navigate around system barriers. It is often reliant on a ground up approach by the NPs themselves [45,46]

NPs incorporated into a general practice

Within this type of model, NPs work alongside GPs in primary care. The practice of NPs in this setting predominately involves the provision of direct patient care including diagnosis, health promotion, referral to other health professionals, prescription of medicines, care coordination, case management and the development and initiation of care plans.[47,48] Nurse practitioners in this setting also play a role in extending the capacity and capability of the practice by providing visits at home and by attending residential aged care facilities, undertaking health assessments and reviews, functional assessments, medication reviews, identification of referral needs and development of coordinated care plans.[49]

Table 38: Overview of GP clinic models of care

GP Clinics	
Funding model	GP practices may employ or contract NPs under this model, NP activity generates income via fee for service which may be met either in part or entirely by the scheduled fee assigned to the NP MBS item available to the patient. In addition, a gap payment may also be charged. In an employed model, the general practice will incur employment related costs including Workcover, superannuation and leave. These costs remain the responsibility of the NP under a contracted model.[50]

[43] Davey, R., Clark, S., Goss, J., Parker, R., Hungerford, C., & Gibson, D. (2015). National evaluation of the nurse practitioner–Aged care models of practice initiative: summary of findings, centre for research & action in public health. Canberra, ACT: UC Health Research Institute, University of Canberra.
[44] Currie J, Chiarella M, Buckley T. Collaborative arrangements and privately practising nurse practitioners in Australia: Results from an Australian survey. Australian Health Review, 41, 533-540
[45] Schadewaldt, V. (2015). Characteristics of collaboration between nurse practitioners and medical practitioners in primary healthcare: A multiple case study using mixed methods. (Doctor of Philosophy), Australian Catholic University, Melbourne, VIC.
[46] Schadewaldt, V., McInnes, E., Hiller, J. E., & Gardner, A. (2016). Experiences of nurse practitioners and medical practitioners working in collaborative practice models in primary healthcare in Australia – a multiple case study using mixed methods. BMC Family Practice, 17, 99.
[47] Currie J, Chiarella M, Buckley T. Practice activities of privately-practicing nurse practitioners: Results from an Australian survey. Nurs Health Sci [Internet]. 2018 [cited 2018 Mar];20(1):16-23. In: Ovid MEDLINE(R) [Internet]. http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medl&NEWS=N&AN=28776871
[48] Dierick-van Daele, Angelique T. M., Steuten, L. M. G., Spreeuwenberg, C., Metsemakers, J. F. M., Vrijhoef, H. J. M., Derckx, Emmy W. C. C., . . . RS: CAPHRI School for Public Health Primary Care. (n.d.). Economic evaluation of nurse practitioners versus GPs in treating common conditions. British Journal of General Practice, 60(570), E28-E35.
[49] Davey, R., Clark, S., Goss, J., Parker, R., Hungerford, C., & Gibson, D. (2015). National evaluation of the nurse practitioner–Aged care models of practice initiative: summary of findings, centre for research & action in public health. Canberra, ACT: UC Health Research Institute, University of Canberra.
[50] King, J., Corter, A., Brewerton, R., & Watts, I. (2012). Nurse practitioners in primary care: benefits for your practice. Canberra: Australian General Practice Network, Julian King & Associates Ltd.

GP Clinics	
Benefits	• Improved access to primary care for clients who cannot leave their home or are in a care facility • Improved early identification of clients' health concerns • Provision of training to staff working in care facilities • Enhanced patient enablement • Adopt a collaborative care and information sharing approach within a multidisciplinary team environment • Reduced unscheduled GP visits to care facilities • Increased practice capacity to provide effective care.[51,52,53]
Barriers & challenges	A significant challenge for general practice wanting to introduce NPs is meeting associated costs such as salary. As GP practices are frequently operated as small businesses, approaches rely heavily on practices generating sufficient income to cover their salaries and clinics' overheads. In an Australian example, the employed NP model was not able to offset related costs as NP services could not generate sufficient income to cover their salaries.[54] (see section 'NPs in the Australian context' for more information on MBS reimbursement of NP services) There are a number of additional, recurrent costs that GP practices need to take into account when employing staff including NPs. These include (among others) provision of office space and equipment, administrative support, provision of transport and travel arrangements and financial support for professional development. Provision of office space in particular can be a significant barrier the practice is unable to generate utilise the space to generate sufficient income.[55]

NP practices

Under a sole-operator model, NPs may provide either specialised and / or more general health care services. In this setting, while care is frequently provided alongside and in collaboration with medical and allied health providers, NPs are often a person's primary care provider. NP clinics operate in rural and remote communities that have limited access to health care providers including GPs or allied health services, and with populations who are underserved (i.e. homeless, sex workers, Aboriginal and Torres Strait Islanders, refugees, etc.).[56] Primary care services provided by NPs under this model include assessment, diagnosis and management of health

[51] Davey, R., Clark, S., Goss, J., Parker, R., Hungerford, C., & Gibson, D. (2015). National evaluation of the nurse practitioner–Aged care models of practice initiative: summary of findings, centre for research & action in public health. Canberra, ACT: UC Health Research Institute, University of Canberra.
[52] Frost, J., Currie, M. J., Cruickshank, M., & Northam, H. (2018). Using the lens of enablement to explore patients' experiences of Nurse Practitioner care in the Primary Health Care setting. Collegian, 25(2), 193-199. doi:https://doi.org/10.1016/j.colegn.2017.06.002
[53] Ibid.
[54] Ibid.
[55] King, J., Corter, A., Brewerton, R., & Watts, I. (2012). Nurse practitioners in primary care: benefits for your practice. Canberra: Australian General Practice Network, Julian King & Associates Ltd.
[56] Kelly, J., Garvey, D., Biro, M. A., & Lee, S. (2017). Managing medical service delivery gaps in a socially disadvantaged rural community: a nurse practitioner led clinic. Australian Journal of Advanced Nursing, 34(June-August).

problems, medication reviews, referral to other health professionals, prescription of medication, monitoring of chronic health conditions and health promotion and disease prevention.[57]

Table 39: Overview of NP clinic models of care

NP practices	
Funding model	NP activity generates income via fee for service which may be met either in part or entirely by the scheduled fee assigned to the NP MBS item available to the patient. In addition, a gap payment may also be charged.
Potential benefits	• Increase access to primary health care, particularly in communities with limited GP access • Provide case management and care coordination • Reduce clients' need to travel away from home to receive care • Provide opportunistic care, addressing clients' care needs beyond the presented concerns and families/carers' needs • Monitor and manage chronic conditions • Enhanced patient enablement • Provide health education to clients[58,59] • Reduced hospitalisations • Improved early intervention.[60]
Barriers & challenges	In a business environment, NP clinics must be able to generate sufficient revenue to be sustainable without the clinic receiving sources of income generated by other health care providers.[61] The legislative requirement for NPs to have a collaborative agreement with a specified medical practitioner poses challenges for NPs operating under this model, as the ability to provide care subsidised by the MBS and PBS depends on the willingness and availability of medical officers to participate.[62]

NPs based in care facilities

This model involves health care facilities such as Residential Aged Care Facilities or Palliative Care Facilities utilising NPs as employees. The types of services provided under this approach are incorporated into the model of health service delivery often include and professional leadership as well as education and research in addition to direct clinical care provided by NPs.

[57] Rohrer, J. E., Garrison, G. M., & Angstman, K. B. (2012). Early return visits by pediatric primary care patients with otitis media: a retail nurse practitioner clinic versus standard medical office care. *Quality Management in Healthcare*, *21*(1), 44-47.
[58] Davey, R., Clark, S., Goss, J., Parker, R., Hungerford, C., & Gibson, D. (2015). National evaluation of the nurse practitioner–Aged care models of practice initiative: summary of findings, centre for research & action in public health. Canberra, ACT: UC Health Research Institute, University of Canberra.
[59] Frost, J., Currie, M. J., Cruickshank, M., & Northam, H. (2018). Using the lens of enablement to explore patients' experiences of Nurse Practitioner care in the Primary Health Care setting. Collegian, 25(2), 193-199. doi:https://doi.org/10.1016/j.colegn.2017.06.002
[60] Ibid.
[61] Ibid
[62] Currie J, Chiarella M, Buckley T. Collaborative arrangements and privately practising nurse practitioners in Australia: Results from an Australian survey. Australian Health Review, 41, 533-540

Table 40: Overview of care facility based NP models of care

NPs based in care facilities	
Funding model	The NP may be a salaried employee of the care facility if employed directly. The income generated by NP activity may offset employment costs directly or form part of the NP's income as part subsidy. In addition, NPs operating as sole operators may providing visiting services to the facility.
Potential benefits	• Provide care in facilities otherwise delivered in hospital • Provide leadership for care staff within organisations • Provide education and training for staff within organisations • Address gaps in care delivery to complement GP services • Provide a timely access to health care in the home or community setting • Provide and support case management and care coordination • Enhanced patient enablement • Management of residents' increasing acuity • Reduced hospitalisations of residents • Improved quality of care for residents • Identification of and intervention to prevent declining health status of residents • Improved chronic disease management.[63,64,65,66,67,68,69]
Barriers & challenges	In order to introduce NPs to a care facility, care providers must be able to cover related costs. Not many providers have the capacity to use existing funds to cover the cost of employing NPs which is a significant barrier to implementing this model.[70] An additional barrier to NPs in the aged care sector is a lack of recognition as a clinician able to facilitate funding under the Aged Care Funding Instrument (ACFI), which frequently results in the duplication of services by a GP.

Implementation of NP models in practice

Driving reform to implement the NP role must consider the ever increasing cost of healthcare, health workforce shortages, gaps in current service delivery, increasingly complex healthcare

[63] Ibid.
[64] Burl, J. B., Bonner, A., Rao, M., & Khan, A. M. (1998). Advanced Geriatric Nursing Practice: Geriatric Nurse Practitioners in Long-Term Care: Demonstration of Effectiveness in Managed Care. *Journal of the American Geriatrics Society*, *46*(4), 506-510.
[65] Frost, J., Currie, M. J., Cruickshank, M., & Northam, H. (2018). Using the lens of enablement to explore patients' experiences of Nurse Practitioner care in the Primary Health Care setting. Collegian, 25(2), 193-199.
[66] Clark, S., Parker, R., Prosser, B., & Davey, R. (2013). Aged care nurse practitioners in Australia: evidence for the development of their role. Australian Health Review, 37.
[67] Davey, R., Clark, S., Goss, J., Parker, R., Hungerford, C., & Gibson, D. (2015). National evaluation of the nurse practitioner–Aged care models of practice initiative: summary of findings, centre for research & action in public health. Canberra, ACT: UC Health Research Institute, University of Canberra.
[68] Chavez, K. S., Dwyer, A. A., & Ramelet, A.-S. (2017). International practice settings, interventions and outcomes of nurse practitioners in geriatric care: A scoping review. International Journal of Nursing Studies.
[69] Clark, S., Parker, R., Prosser, B., & Davey, R. (2013). Aged care nurse practitioners in Australia: evidence for the development of their role. Australian Health Review, 37.
[70] Ibid.

needs of communities and the high level of adaptable knowledge acquired by nurses in preparatory education programs.[71] In the local context, Australia is expected to have a national nursing shortage by 2020.[72]

Barriers to implementation

Reported barriers to implementation of NP models include resistance to change by the medical profession, regulatory and legislative restrictions and financial barriers:

- *Resistance to change* – Maier et al.'s study described the required to implement NP models of care is often lengthy and controversial, partly due to strong opposition by medical and other key stakeholders.[73] In New Zealand, for instance, the so-called Health Practitioners Bill went through its first reading in 2015, after first being proposed in 2005.[74]
- *Regulatory restrictions* – Moving to a health system that facilitates the implementation of the NP role requires regulatory and / or legislative reform to enable practices such as the prescription of medicine, however, these reforms are often also lengthy[75]
- *Financial barriers* - From a financial perspective, financing and payment policies can have a significant impact on the accessibility of health care services for patients and in turn on the effectiveness of models of care delivery in improving access to care. In a number of countries, for example the USA, fee-for-service reimbursement for NP services is commonly lower than for physicians. In Australia, patients receive 85 percent of the scheduled fee assigned to NP item numbers. In the USA however, if the NP is working alongside a medical practitioner in the same practice, the NP earns 100 percent of what the medical practitioner earns (referred to as "incident to billing"). Lower reimbursement rates may present financial disincentives for practices to utilise NPs, or for NPs to establish themselves in their own private practice noting that NP salaries are also generally lower than physician salaries.[76]

Australian adoption of NP models

NPs in the Australian context

In Australia, the role of the NP is regulated by the Nursing and Midwifery Board of Australia (NMBA). Its scope of practice is that the NP has been educated and deemed competent to perform determined by the individual NP and their employer (where relevant). The professional role is built on the foundation of the registered nurse scope of practice. Project work to develop the NP role in Australia commenced in New South Wales over 20 years ago, with the first NP endorsed to practise in 2000.[77] The NP scope in Australia includes, but is not limited to, comprehensive health assessments, diagnosis and management of health problems, referral to other health professionals, prescription of medicines, and requesting and interpretation of

[71] Buchan, J., Twigg, D., Dussault, G., Duffield, C., & Stone, P. W. (2015). Policies to sustain the nursing workforce: an international perspective. International Nursing Review, 62(2), 162-170.
[72] Ibid.
[73] Maier, C. B., & Aiken, L. H. (2016). Task shifting from physicians to nurses in primary care in 39 countries: a cross-country comparative study. European journal of public health, 26(6), 927-934.
[74] New Zealand Government 2015. Health practitioners (replacement of statutory reference to medical practitioners) bill. Government Bill 36-1 2015. http://www.legislation.govt.nz/bill/government/2015/0036/23.0/DLM6514118.html, accessed 22 April 2015.
[75] Van Meersbergen, D. Y. A. (2011). Task shifting in the Netherlands. *World Med J*, *57*(4), 126-130.
[76] Poghosyan, L., Nannini, A., Smaldone, A., Clarke, S., O'Rourke, N. C., Rosato, B. G., & Berkowitz, B. (2013). Revisiting scope of practice facilitators and barriers for primary care nurse practitioners: a qualitative investigation. Policy, Politics, & Nursing Practice, 14(1), 6-15.
[77] Scanlon, A., Cashin, A., Bryce, J., Kelly, J. G., & Buckely, T. (2016). The complexities of defining nurse practitioner scope of practice in the Australian context. Collegian, 23(1), 129-142.

diagnostic investigations.[78] An NP in the Australian context is experienced in a specialised and/or general area of clinical practice, and educated to Masters level. Currently, there are 1,604 NPs endorsed in Australia[79], although the number actually employed as an NP remains unknown. NPs work across the spectrum of health care delivery and have differing scopes of practice, which are partly governed by their local environment as well as Federal and State/Territory Government regulatory and legislative requirements.[80]

MBS funding for NPs

In recent years, the Department has taken steps to expand the use of NPs across the system.[81] This has included initiatives for the admission of NPs as eligible to participate as Medicare providers. This health policy platform has better enabled the support of the establishment of NP services in primary care. The change has allowed patients seeking care from eligible NPs to have certain medicines, pathology and diagnostic imaging services subsidised. These reforms have also allowed patients to receive rebates for some specialist medical services, when referred by a nurse practitioner.[82]

Table 41: Example - four time-tiered professional attendance NP MBS items[83]

MBS Item	Item Descriptor
82200	Professional attendance by a participating NP for an obvious problem characterised by the straightforward nature of the task that requires a short patient history and, if required, limited examination and management.
82205	Professional attendance by a participating NP lasting less than 20 minutes and including any of the following: a) taking a history b) undertaking clinical examination c) arranging any necessary investigation d) implementing a management plan e) providing appropriate preventive health care, for one or more health related issues, with appropriate documentation.
82210	Professional attendance by a participating NP lasting at least 20 minutes and including any of the following: a) taking a detailed history b) undertaking clinical examination c) arranging any necessary investigation d) implementing a management plan e) providing appropriate preventive health care, for one or more health related issues, with appropriate documentation.
82215	Professional attendance by a participating NP lasting at least 40 minutes and including any of the following: a) taking an extensive history

[78] Centre for International Economics (2013). Final report. Responsive patient centred care: The economic value and potential of Nurse Practitioners in Australia.
[79] Nursing and Midwifery Board of Australia (2018). Registrant data December 2017 http://www.nursingmidwiferyboard.gov.au/About/Statistics.aspx. Accessed 13 April 2018.
[80] Scanlon, A., Cashin, A., Bryce, J., Kelly, J. G., & Buckely, T. (2016). The complexities of defining nurse practitioner scope of practice in the Australian context. Collegian, 23(1), 129-142.
[81] Lowe, G., Plummer, V., & Boyd, L. (2013). Nurse practitioner roles in Australian healthcare settings. *Nursing Management (through 2013)*, *20*(2), 28.
[82] Scanlon et al. 2016, The complexities of def Scanlon, A., Cashin, A., Bryce, J., Kelly, J. G., & Buckely, T. (2016). The complexities of defining nurse practitioner scope of practice in the Australian context. Collegian, 23(1), 129-142.
[83] Australian Department of Health 2014. Eligible Nurse Practitioner Services, Questions and Answers. http://www.health.gov.au/internet/main/publishing.nsf/content/A6BA8E16DF92C3D0CA257BF0001FEB7B/$File/Participating%20Nurse%20Practitioners%20-%20Questions%20and%20Answers%20011112.pdf accessed 20 April 2018.

MBS Item	Item Descriptor
	b) undertaking clinical examination c) arranging any necessary investigation d) implementing a management plan e) providing appropriate preventive health care, for one or more health related issues, with appropriate documentation.

To provide services subsidised under the MBS, NPs must meet the requirements to participate as an eligible provider including the need to establish a collaborative arrangement with a specified medical officer[84]. Patients cared for by an eligible NP are entitled to reimbursement of 85 percent of the scheduled fee assigned to the relevant NP MBS consultation item.

NP services that attract a Medicare benefit are listed in the MBS by item number and description of service.[85] As an example, the four time-tiered professional attendance NP MBS items, introduced on 1 November 2010, cover a broad range of services as described in Table 41.

NPs as part of Australian primary care and aged care

It appears that majority of NPs are currently employed by State and Territory Governments in public sector. However there is a growing number of NPs providing primary health care services.[86] Nurse practitioners practicing in primary health care do so either as a generalist, or by providing a specialist nursing service, e.g. in mental health, emergency, community health, drug and alcohol services, women's health and aged care. Despite the limited numbers of NPs in primary care in Australia, international and Australian research has shown the positive outcomes of NP operating models in primary health care (PHC).[87]

In 2010-11, $18.7 million of the federal budget were allocated to support NP models in aged care across Australia. The Initiative supported the establishment and development of these models. These models represented numerous jurisdictions, locations, clients and care providers (private practitioners, aged-care providers, Medicare Locals and community clinics). The Initiative ended on 30 June 2014. A team of researchers from the University of Canberra and the Australian National University undertook an independent evaluation throughout the period of the initiative which identified a range of benefits, including economic efficiencies gained through reductions in: unnecessary transfers to acute health facilities, ambulance costs, hospital bed days and thus hospital costs. The study estimated that “if all aged care facilities had NPs visiting, the savings from reductions in hospital bed days would have been $97 million in 2013-14”.[88] This study suggests that the challenge of providing care to an increasingly ageing populating could be partly mitigated through better utilisation of NPs, who are able to deal with more complex and chronic disease management outside of high cost acute settings.

Generally speaking, there is a significant gap in the available literature in terms of case studies or articles investigating the implementation of NP models of care in Australia, particularly in

[84] Australian Department of Health 2014. Eligible Nurse Practitioner Services, Questions and Answers. http://www.health.gov.au/internet/main/publishing.nsf/content/A6BA8E16DF92C3D0CA257BF0001FEB7B/$File/Participating%20Nurse%20Practitioners%20-%20Questions%20and%20Answers%20011112.pdf accessed 20 April 2018.
[85] See www.mbsonline.gov.au
[86] Helms, C., Gardner, A., & McInnes, E. (2017). Consensus on an Australian Nurse practitioner specialty framework using Delphi methodology: results from the CLLEVER 2 study. Journal of Advanced Nursing, 73(2), 433-447.
[87] King J, Corter A, Brewerton R, Watts I (2012). Nurse practitioners in primary care: benefits for your practice, Australian General Practice Network, Auckland: Julian King & Associates Limited; Kinnect Group.
[88] Davey, R., Clark, S., Goss, J., Parker, R., Hungerford, C., & Gibson, D. (2015). National evaluation of the nurse practitioner–Aged care models of practice initiative: summary of findings, centre for research & action in public health. Canberra, ACT: UC Health Research Institute, University of Canberra.

primary care. A number of examples of Australian NP models of care have been provided in the following table.

Table 42: Implementation of NP models of care in Australia

Type of model	Examples in the literature
Single operator NPs	• A 2015 study of Australian private practice nurse practitioner (PPNP) services investigated workforce characteristics resulting from a national survey of NPs, including practice setting, level of primary healthcare demand, as well as the impact of PPNP services on patient access to care. The study suggests that PPNP have can increase patient access to primary health care, particularly in underserviced rural and remote communities.[89]
GP clinics	• Incorporating an NP in a bulk-billing healthcare cooperative in the ACT. The NP works in collaboration with all 20 GPs within the practice and has one primary mentor, the co-op medical director (NPs working in private practice who access MBS- and PBS-subsidised services for their clients require a collaborative arrangement with a participating medical practitioner). The NP has his own caseload but also receives referrals from GPs, nursing and allied health team members within the co-op. The NP has expertise in the diagnosis and management of chronic health conditions. The success of this model relies on bi-directional, collaborative working relationships amongst GPs and NPs. NPs should have a generalist scope of practice and specialist expertise in order to maximise their utility within the general practice environment.[90]
NP clinics	• An integrated chronic disease NP (ICDNP) clinic in Queensland, providing coordinated services to chronic disease patients with multiple comorbidities in a high-risk population group, conducted once a week. NPs across multiple specialties (renal, cardiac, and diabetes) collaborated to provide comprehensive chronic disease services. Patients were referred by specialist medical practitioners (renal, cardiac, or endocrine) at a nearby hospital to each NP. If the patient had two or all three chronic diseases, the NPs then referred the patient to the ICDNP clinic. The NPs worked as a team to provide specialised care, self-management strategies and education. The model was evaluated and was regarded as highly successful.[91] • Implementation of a Diabetes in Pregnancy Clinic (DIPC) at a hospital site in Tasmania, improving changes to service delivery for pregnancies complicated by diabetes in rural Tasmania where there is limited access to specialists. The NP coordinated a clinic involving an obstetrician, diabetes educator, dietician and antenatal nurse (as a 'one stop shop'). The role of the NP was not described in the literature, other than stating that the clinic was led by the NP.[92] • The NP role within a women's health centre was established in 2010, and has become an integral part of serviced delivery since. The NP focuses on the provision of health promotion, early identification and detection services (including Pap tests, well women's checks, lifestyle education and counselling). Referral to other services is key part of this role. An evaluation of the NP role indicated that the majority of services provided by the NP focus on preventative health and health promotion. In doing so, the NP enhances the health literacy of women attending, and positively impacts on women's health

[89] Currie, J., Chiarella, M., & Buckley, T. (2016). Workforce characteristics of privately practicing nurse practitioners in Australia: Results from a national survey. *Journal of the American Association of Nurse Practitioners*, *28*(10), 546-553.
[90] Helms, C., Crookes, J., & Bailey, D. (2015). Financial viability, benefits and challenges of employing a nurse practitioner in general practice. *Australian Health Review, 39(2)*, 205-210.
[91] Bonner, A., Douglas, C., Abel, C., Barnes, M., Stone, M., Heatherington, J., ... & Bashi, N. (2015). Integrated Chronic Disease Nurse Practitioner Service: Evaluation Final Report. *Integrated chronic disease nurse practitioner service-evaluation final report*, *1*(1), 1-5.
[92] Murfet, G. O., Allen, P., & Hingston, T. J. (2014). Maternal and neonatal health outcomes following the implementation of an innovative model of nurse practitioner-led care for diabetes in pregnancy. Journal of Advanced Nursing, 70(5), 1150-1163.

Type of model	Examples in the literature
	and wellbeing. The most significant impediments to the effective functioning of the NP role were the structural barriers imposed by policy and legislation at a State and Federal level. These predominantly relate to Medicare funding arrangements and access to Item Numbers.[93]
NPs based in or working with care facilities	• Davey et al. investigated residential aged-care NP models as part of their 2015 Aged Care Models of Practice evaluation. The core feature of this model type was that approved providers employed NPs to provide care to residential aged-care facility (RACF) residents. The evaluation found that RACF-based NPs improved the quality of care for residents and reduced hospitalisations.[94] • A Dementia Outreach Service (DEMOS), servicing residential aged care facilities in QLD. The DEMOS team is led by an NP specialising in dementia care, who is assisted by a number of nurses as well as (clinical) assistants. The DEMOS team works in the RACF over an extended period, providing ongoing training to staff while observing the residents' behaviours in order to make accurate assessments of what triggers behaviours of concern. The team further practices or models the new interventions with residents over the period of time they are in the RACF. The model has been evaluated, however the focus of the evaluation was on work of the team led by the NP rather than the NP.[95]

Barriers to implementation

As described earlier, the Australian NP scope of practice in general includes:

- comprehensive health assessment;
- diagnosis and management;
- referral;
- medicines prescribing;
- initiating and interpretation of diagnostic investigations.[96]

The manner in which the role of the NP is implemented in practice appears to have limited boundaries and is open to interpretation by each individual workplace, as the exact scope an NP is operating within depends on each individual NP's scope of practice.[97] Consequently, there are many possibilities of implementing NP models of care, which has resulted in certain challenges faced by NPs. For instance, misunderstandings and conflicts around roles are frequent with significant barriers to NP integration and practice[98], and result in inconsistent utilisation of NPs.[99] Furthermore, support from the medical profession has been identified as critical to the successful

[93] Elmer, S., & Stirling, C. (2013). Evaluation of the Nurse Practitioner Role at the Hobart Women's Health Centre. Hobart, TAS: University of Tasmania.
[94] Davey, R., Clark, S., Goss, J., Parker, R., Hungerford, C., & Gibson, D. (2015). National evaluation of the nurse practitioner–Aged care models of practice initiative: summary of findings, centre for research & action in public health. Canberra, ACT: UC Health Research Institute, University of Canberra.
[95] Borbasi, S., Emmanuel, E., Farrelly, B., & Ashcroft, J. (2010). A Nurse Practitioner initiated model of service delivery in caring for people with dementia. Contemporary nurse, 36(1-2), 49-60.
[96] Centre for International Economics (2013). Final report. Responsive patient centred care: The economic value and potential of Nurse Practitioners in Australia.
[97] Scanlon, A., Cashin, A., Bryce, J., Kelly, J. G., & Buckely, T. (2016). The complexities of defining nurse practitioner scope of practice in the Australian context. Collegian, 23(1), 129-142.
[98] Contandriopoulos, D., Brousselle, A., Dubois, C. A., Perroux, M., Beaulieu, M. D., Brault, I., ... & Sansgter-Gormley, E. (2015). A process-based framework to guide nurse practitioners integration into primary healthcare teams: results from a logic analysis. *BMC health services research*, *15*(1), 78.
[99] Pohl, J. M., Hanson, C., Newland, J. A., & Cronenwett, L. (2010). Analysis & commentary unleashing nurse practitioners' potential to deliver primary care and lead teams. *Health Affairs*, *29*(5), 900-905.

implementation of an NP model of care[100], however NPs have historically reported difficulties in obtaining appropriate amounts of medical buy-in. The opposition appears to be particularly strong with regard to autonomous decision making by NPs.[101]

Success factors for implementation of NP models

In their 2015 evaluation of the Australian Aged Care Models of Practice Initiative, Davey et al. identified a number of critical success factors for the implementation of NP models. These include:

- *Organisational support for NPs and the implementation of NP models:* NP models were regarded as successful when the organisation hosting the model had the financial capacity to manage ongoing costs, and when the organisation was supportive of the NPs and the model.
- *Having a strategic advocate:* ensuring a person in a position of some influence is in place to support and promote the model.
- *High-calibre NPs:* ensuring the appointment of an NP with high-level clinical skills and leadership capabilities who are able to build trusting and productive, collaborative working relationships with other health professionals.
- *Positive relationships* between NPs and health professionals to ensure an effective work environment.
- *Models tailored to the local markets and contexts:* in order to be successful, NP models should be designed and adapted to specific local environments in which they operate. Ideally, models understand and respond to the features and health needs of local communities.
- *Sound clinical governance procedures, processes and infrastructure* should be in place.
- *Mentoring and support structures:* access to both formal and informal mentoring and other professional supports is crucial for NPs in order to be able to maintain their contemporary skills and expertise.[102]

Economic evaluation of NP models

Overview of Economic Evaluations in NP Models of Care

The literature available regarding economic evaluation of NPs is growing, though historically there have been some inconsistencies between guidelines for economic evaluations in terms of their structure and recommendations.[103] These inconsistences can centre on choices of the societal versus payer perspective, selection of the reference case and discount rates for costs and outcomes. In addition to these economic evaluation model challenges, there are several other challenges in conducting economic evaluations specifically in the health service settings that have been identified through the literature review.

Firstly, how NPs models are implemented varies considerably across the globe due to the unique social, political, economic and geographic contexts of different health care systems. Health policy,

[100] Lowe, G., Plummer, V., & Boyd, L. (2013). Nurse practitioner roles in Australian healthcare settings. *Nursing Management (through 2013)*, *20*(2), 28.
[101] Heale, R. (2012). Overcoming barriers to practice: A nurse practitionerled model. *Journal of the American Association of Nurse Practitioners*, *24*(6), 358-363.
[102] Davey, R., Clark, S., Goss, J., Parker, R., Hungerford, C., & Gibson, D. (2015). National evaluation of the nurse practitioner–Aged care models of practice initiative: summary of findings, centre for research & action in public health. Canberra, ACT: UC Health Research Institute, University of Canberra.
[103] Graf von der Schulenburg, J.M., Hoffmann, C. (2000). Review of European guidelines for economic evaluation of medical technologies and pharmaceuticals.

legislation, regulation, funding arrangements, and education will also all influence the role scope and implementation.[104]

Secondly, it is difficult to generalise the findings of the economic analyses as NP roles are also highly dependent on individual attributes of the NP, organisational and practice setting contexts, area of specialisation and characteristics of the patient population.[105] This means that economic evaluations with desired outcomes such as patient satisfaction could be difficult to generalise due to personal patient preference of clinicians with certain attributes.

Finally, the effects of NP roles are often reflected in patient relevant outcomes that are less tangible and more difficult to measure, such as patient enablement, treatment adherence and satisfaction.

One study published in the International Journal of Nursing Studies described a Quality Assessment of the existing literature on economic evaluations of NPs. A total of 43 Randomised Control Trials (RCTs) were identified that focused on NP and clinical nurse specialist cost effectiveness. When applying the Quality of Health Economic Studies Score, these trials scored 39 on average (on a scale of 0 indicating extremely poor quality and 100 indicating high quality).[106].

Only three of the 43 trials (7%) met the criteria for high quality scoring between 75 and 100. Two were cost-effectiveness analyses of NPs in an outpatient setting – one examined the effect on lowering blood lipids in patients with coronary heart disease based on an RCT and one examined quality of life improvements in children with eczema. The third was a cost-effectiveness of clinical nurse specialists in an out-patient setting in patients with rheumatoid arthritis.[107] Most of the 43 RCTs scored high on specification of clear, measurable objectives, use of variable estimates from the best available source, pre-specification of subgroups for subgroup analysis, justification of conclusions and disclosure of study finding sources.

The areas of poor scoring were justification of economic model, specification of perspective of the analysis, handling of uncertainty, identification of an appropriate time horizon, specification of appropriate measurement of costs, description of primary outcome measures for the economic evaluation, use of validation reliable outcome measures, explicit description of data abstraction method for costing/resource use and outcomes and discussion of potential biases.

The economic implications of care delivered by NPs in primary care will involve examining a number of these parameters ranging from the overlap between the NP and traditional health care provider scopes of practice, current and required supply of each type of practitioner, and differences between NPs and other health care providers in productivity, resource utilisation, training costs, salaries and time in the labour force[108].

These challenges show that evaluation of the NP role is complex, with a wide range of influencing factors and limitations that will need to be carefully considered when conducting an economic evaluation of the NP model in Australia.

[104] Delamaire, M.-L., Lafortune, G. (2010). Nurses in advanced roles: a description and evaluation of experiences in 12 developed countries. OECD Health Working Papers 54
[105] Elliott, N., Begley, C., Sheaf, G., Higgins, A. (2016). Barriers and enablers to advanced practitioners' ability to enact their leadership role: a scoping review. IJNS 60, 24–45
[106] Marshall, D.A., Donald, F., Lacny, S.L., Reid, K., Bryant-Lukosius, D., Carter, N., Charbonneau-Smith, R., Harbman, P., Kaasalainen, S., Kilpatrick, K., Martin-Misener, R. (2015). Assessing the quality of economic evaluations of clinical nurse specialists and nurse practitioners: a systematic review of cost-effectiveness. NursingPlus Open 1, 11–17.
[107] Ibid.
[108] Barer, M.L., Stoddart, G.L. (1991). Toward integrated medical resource policies for Canada: report prepared for Federal/Provincial/Territorial Conference of Deputy Ministers of Health. AARN News Lett. 47, 4–8.

Economic Evaluation Models

The 'justification of economic model' described in the previous section was a low scoring segment from the Quality Assessment conducted in the International Journal of Nursing Studies. There are a range of economic evaluation models available, however each will have their own strengths and limitations when applied to the healthcare setting and in particular to the NP role. The most common types of economic evaluation model are cost-effectiveness analysis, cost-utility analysis, cost-consequence analysis, cost-benefit analysis and cost-minimisation analysis. It should be noted that there can be challenges to implementing any of these models in relation to policy restrictions in the context of Commonwealth, State/Territory, and local Government regulations.[109]

Cost Effectiveness Analysis

Cost Effectiveness Analysis assesses the costs per a single natural unit of outcome such as life years or number of recurrent events.[110] This model has been commonly used in economic evaluations of health services where it can be difficult to monetise health outcomes. The estimated cost-effectiveness of a single proposed intervention is compared with the cost effectiveness of a set of existing interventions. The potential challenge with this model arises in the limitations of using a single unit of outcome to evaluate NP roles, as commonly multiple outcomes are prevalent and will not be captured in this method.[111] This means it can be challenging to choose one unit of outcome to fully capture the benefits. The table overleaf identifies two studies, one focuses on cardio vascular disease risk reduction and the other focuses on cost effectiveness of childhood eczema treatment. Both studies have utilised this model and the types of outcomes measured and results captured from each.

Table 43: Example 1 of Cost Effectiveness Analysis

Study Setting	Cardio Vascular Disease Risk Reduction by NPs[112]
Economic Evaluation Method	Cost-Effectiveness
Evaluation Approach	Primary outcomes measures were analysed with an intention-to-treat analysis. General linear mixed models were used to model each outcome variable as a function of time and intervention group, controlling for age, sex, race, education, body mass index, insurance and an indicator of in-control for clinical outcome at baseline. A clinician time cost for each patient was calculated by multiplying the mean cost per hour of the practitioner's time by the mean time per visit by the mean number of visits. This provider cost was added to the mean total cost of drugs and laboratory testing to determine the mean total costs per patient. Cost-effectiveness was calculated using four cost-effectiveness ratios, with the cost associated with the usual care group subtracted from the cost associated with the intervention group as the numerator, and the clinical benefit (percentage of reduction in LDL-C, systolic and diastolic BP, and Hb A1c) in the

[109] van der Biezen, M., Schoonhoven, L., Wijers, N., van der Burgt, R., Wensing, M., & Laurant, M. (2016). Substitution of general practitioners by nurse practitioners in out-of-hours primary care: a quasi-experimental study. Journal of Advanced Nursing, 72(8), 1813-1824.
[110] Drummond, M.F., Sculpher, M.J., Claxton, K., Stoddart, G.L., Torrance, G.W. (2015). Methods for the Economic Evaluation of Health Care Programmes. Oxford University Press, Oxford, UK.
[111] Dieric-van Daele, A., Spreeuwenberg, C., Derckx, E.W., Metsemakers, J.F., Vrijhoef, B.J. (2008). Critical appraisal of the literature on economic evaluations of substitution of skills between professionals: a systematic literature review. J. Eval. Clin. Pract. 14 (4), 481–492.
[112] Allen, J. K., Dennison Himmelfarb, C. R., Szanton, S. L., & Frick, K. D. (2014). Cost-effectiveness of Nurse Practitioner/Community Health Worker Care to Reduce Cardiovascular Health Disparities. The Journal of Cardiovascular Nursing, 29(4), 308-314.

Study Setting	Cardio Vascular Disease Risk Reduction by NPs[112]
	usual care group subtracted from the clinical benefit in the intervention group as the denominator.
Outcomes Measured	• Laboratory Testing (Number of Test & Cost) • Medication (Number of Medication & Cost) • NP Care (Number of Visits & Cost) • Community Health Worker Care (Number of Visits & Costs) • Physician Care (Number of Visits & Costs) • Diastolic BP • Systolic BP • LDL-C • HB A_{1C}
Reported Costs & Benefits	The total cost for one year of intervention from the NP/CHW team exceeded the cost for physician care; however, the mean incremental total cost per patient (NP/CHW and physician) was only $627. The cost effectiveness reported for one year intervention were as follows: • $157 for every 1% drop in systolic BP • $190 for every 1% drop in diastolic BP • $40 per 1% drop in LDL-C • $149 per 1 % drop in Hb A_{1C} Findings showed that management of cardiovascular risk factors by NP/CHW teams that included lifestyle counselling, drug prescription and titration, and promotion of compliance is a cost effective strategy to reduce risk and address health disparities.
Limitations	The sample characteristics were skewed to be predominantly female (71%) with annual income of less than $20,000. Less than half the sample also had private health insurance.

Table 44: Example 2 of Cost Effectiveness Analysis

Study Setting	Cost-Effectiveness of care by NP for childhood eczema in Netherlands[113]
Economic Evaluation Method	Cost-Effectiveness
Evaluation Approach	The cost-effectiveness analyses, mean annual societal costs, were linked to quality of life (IDQOL and CDLQI) and to Patient Satisfaction (CSQ-8). Point estimates for the incremental cost-effectiveness ratio (ICER) were computed on complete cost-effect pairs by dividing the incremental societal costs by the incremental effects at 12 months. The percentage of patients who fell into each of the four quadrants of the cost effectiveness plane was determined. A cost effectiveness acceptability curve (CEAC) was generated representing the probability that care by the NP was

[113] Schuttelaar, M., Vermeulen, K., & Coenraads, P. (2011). Costs and cost-effectiveness analysis of treatment in children with eczema by nurse practitioner vs. dermatologist: Results of a randomized, controlled trial and a review of international costs. British Journal of Dermatology, 165(3), 600-611.

Study Setting	Cost-Effectiveness of care by NP for childhood eczema in Netherlands[113]
	more effective compared with care by the dermatologist over a range of thresholds.
Outcomes Measured	• Healthcare Costs (Visits, Phone Consultations, Prescriptions, Laboratory Tests) • Family Costs (Absence from work, Travelling expenses, out of pocket) • Quality of Life (Infants Dermatitis Quality of Life Index - IDQL & Children's Dermatology Life Quality Index - CDLQI) • Patient Satisfaction (Client Satisfaction Questionnaire – CSQ-8) • Severity of Eczema (SCORAD and SD).
Reported Costs & Benefits	IDQL • The point estimate for ICER was €925 (indicating that one point less improvement in IDQOL in the NP group compared with the dermatologist group at 12 months would save €925); • The effectiveness of the two interventions was comparable with a clear difference in costs in favour of the NP group; • 51% of the cost-effect pairs were plotted in the southwest quadrant, indicating lower costs and less effect in the NP group; • 29% of the re-samples were located in the southeast quadrant indicating lower costs and more effect in the NP group; • The CEAC showed that without additional investment, the probability that the NP is cost-effective is 80%, which decreases quickly by investment because the benefit can only be explained by lower costs and not by gained quality of life. CDLQI • For the CDLQI, the ICER was €751 per one point less improvement in CDLQI in the NP group; • 59% of the cost-effect pairs were plotted in the southwest quadrant, indicating lower costs and less effect in the NP group; • 37% of the cost-effect pairs were located in the southeast quadrant, which indicates lower costs as well as more effect in the NP group; • The CEAC showed that without additional investment, the probability that the NP is cost-effective is 96%, but this decreases quickly by investment because the benefit can only be explained by lower costs in the NP group and not by gained quality of life. CSQ-8 • For the CSQ-8, ICER was €251, which means per patient €251 lower costs per one point more satisfaction in the NP group; • 92% of the replicates were plotted in the southeast quadrant, which means that treatment by the NP gave lower costs and more satisfaction; • The CEAC showed that without additional investment, the probability that the NP is cost-effective is 94% which increases to 99% by some investment. Substituting NPs for dermatologists is both a cost saving and cost effective treatment whilst also achieving higher patient satisfaction (92% of replicates).
Limitations	Comparisons against international studies were difficult due to types of costs determined, the units and unit process and eczema severity differed between all identified studies.

Study Setting	Cost-Effectiveness of care by NP for childhood eczema in Netherlands[113]
	The time investment by the NP was almost twice that of the dermatologist which may lead to lower productivity. The parents who participated in this trial were predisposed to accept NPs, as a result of which they may have been more satisfied with NPs. It is also unclear whether satisfaction is biased by the individual NP's characteristics.

Cost-Utility Analysis

Cost-utility analysis combines several outcomes into a single composite summary health-related preference, such as the quality-adjusted life-year gained. Given that NP interventions often produce complex benefits and non-health consequences, quality adjusted life years are a useful measure to capture both.[114] The quality-adjusted life-year measure may not capture all benefits of NP roles.

Table 45: Example of Cost-Utility Analysis

Study Setting	Cost effectiveness and cost utility analysis of multidisciplinary care in patients with rheumatoid arthritis[115]
Economic Evaluation Method	Cost-Utility **It should be noted that the clinical nurse specialist role is not comparable to the role of the NP as such. Due to a lack of CUA studies focusing on NPs, this study is presented for illustrative purposes**
Evaluation Approach	The cost effectiveness analysis (CEA) and cost utility analysis (CUA) were part of a randomised controlled trial with two year follow up for patients with rheumatoid arthritis (RA). Quality of life and utility were assessed by the Rheumatoid Arthritis Quality of Life questionnaire (RAQoL), the Short Form- 6D (SF-6D), a transformed rating scale (TRS), and the time trade-off (TTO). A cost-price analysis was conducted to estimate the costs of inpatient and day patient hospitalisations. Other healthcare and non-healthcare costs were estimated from cost questionnaires. In the CEA, effectiveness was measured by the aggregate RAQoL score (defined as the area under the RAQoL curve, divided by two to correct for the two year follow up period). In the CUA, Quality Adjusted Life Years (QALYs) were estimated by the area under the SF-6D, the TRS, and the TTO utility curves. QALYs were discounted at three percent per year, to reflect the fact that later years are somewhat less important.
Outcomes Measured	• Quality of Life • Rheumatoid Arthritis Quality of Life Questionnaire – RAQoL • Short Form-6D • RAND-36 Questionnaire • Time trade-off – TTO.
Reported Costs & Benefits	Percentage of patients providing both baseline and non-baseline data for the four instruments: • RAQoL: 92% • SF-6D: 89%

[114] Safriet, B.J. (1992). Health care dollars and regulatory sense: the role of advanced practice nursing. Yale J. Reg. 9, 417

[115] Van den Hout, W. B., Tijhuis, G. J., Hazes, J. M. W., Breedveld, F. C., & Vlieland, T. V. (2003). Cost effectiveness and cost utility analysis of multidisciplinary care in patients with rheumatoid arthritis: a randomised comparison of clinical nurse specialist care, inpatient team care, and day patient team care. *Annals of the Rheumatic Diseases*, *62*(4), 308-315.

Study Setting	Cost effectiveness and cost utility analysis of multidisciplinary care in patients with rheumatoid arthritis[115]
	• TRS: 93% • TTO: 74% Over the two year follow up period, patients in all three randomisation groups improved on all four instruments. These improvements over time were already apparent after six or 12 weeks. All improvements were significant ($p<0.02$), except for the RAQoL for the clinical nurse specialist patients ($p=0.18$) and the TTO for the inpatients ($p=0.23$). Aggregated over all three types of care, the average improvements on the instruments were: • RAQoL: 1.50 (ES: 0.21) • SF-6D: 0.045 (ES: 0.49) • TRS: 0.061 (ES: 0.35) • TTO 0.046 (ES: 0.18) Over the two year follow up period, no significant differences were found on the quality of life and utility instruments for patients allocated to clinical nurse specialist care as opposed to those allocated to inpatient team care and day patient team care. Compared with inpatient and day patient team care, clinical nurse specialist care was shown to provide equivalent quality of life and utility, at lower cost. Therefore, for patients with health conditions that allow for any of the three types of care, the preferred treatment from a health-economic perspective is the care provided by the clinical nurse specialist.

Cost-Consequence Analysis

Cost-consequence analysis calls for all costs and outcomes are to be reported separately rather than in a combined form. This form of analysis can facilitate evaluation of multiple and multidimensional outcomes of nurse roles. NP roles will not necessarily have a positive effect on and/or be cost effective in terms of all outcomes. This method of disaggregated analysis will allow for asking necessary value judgements and trade-offs.[116]

No literature describing cost-consequence analysis regarding NP or Advanced Practice Nurse models of care was found in the context of this literature review.

Cost-Benefit Analysis

Cost benefit analysis values all costs and benefits in monetary units. The willingness to pay technique can be used to measure the value of an intervention as a whole. Alternatively, a discrete choice experiment which evaluates trade-offs between attributes of an intervention and its effect on choice can be used to value an intervention when cost is included as one of the attributes.[117]

[116] Kernick, D., Scott, A. (2002). Economic approaches to doctor/nurse skill mix: problems, pitfalls, and partial solutions. Br. J. Gen. Pract. 52 (474), 42–46 PMID:11791815.
[117] Bridges, J.F., Hauber, A.B., Marshall, D., Lloyd, A., Prosser, L.A., Regier, D.A., Johnson, F.R., Mauskopf, J. (2011). Conjoint analysis applications in health—a checklist: a report of the ISPOR good research practices for conjoint analysis task force. Value Health 14 (4), 403–413

Table 46: Example of Cost-Benefit Analysis

Study Setting	Geriatric NPs in Long-Term Care[118]
Economic Evaluation Method	Cost-Benefit
Evaluation Approach	A one-year retrospective data analysis on revenues and cost for 1077 HMO enrollees residing in 45 long term care facilities.
Outcomes Measured	• Utilisation and costs data (e.g. inpatient days, emergency department utilisation, skilled nursing days, ancillary services); • Revenue data (based on the age-sex-Medicaid-institutional status algorithm, combined with individual premiums to obtain aggregate revenues for the population).
Reported Costs & Benefits	The cost-benefit analysis revealed that the NP / Medical Doctor teams in aggregate were able to manage utilisation and costs to earn a $72.93 per patient per month gain compared with a per patient per month loss of $197 per patient per months for patients in the Medical Doctor Only pool. After adjusting for the total cost of the GNP program inclusive of salaries and overhead, the GNP/MD program resulted in a small loss of $2 per resident per month to the organisation. The net benefit under GNP management was calculated to be $195 per resident per month **Costs for MD only team (per resident per month)** Emergency Dept: $41.74 Hospital: $323.37 Ancillary services: $201.38 SNF: $559.58 *Total cost: $1,126.05* **Costs for NP/MD team (per resident per month** Emergency Dept: $23.06 Hospital: $223.04 Ancillary services: $199.70 SNF: $426.92 *Total cost: $872.73*
Limitations	An issue in analysing the data was the inability to address severity of illness differences between the NP/MD and the MD Only groups.

Cost-Minimisation Analysis

Cost minimisation considers only costs and is not a formal economic evaluation technique. This type of analysis can be used when outcomes in the comparison group are equivalent.[119]

It can be difficult to express many health outcomes in monetary terms. Using either of the supporting techniques mentioned can help to support the economic analysis in scenarios where multiple multidimensional and difficult to measure outcomes are prevalent.

[118] Burl, J. B., Bonner, A., Rao, M., & Khan, A. M. (1998). ADVANCING GERIATRIC NURSING PRACTICE: Geriatric Nurse Practitioners in Long-Term Care: Demonstration of Effectiveness in Managed Care. Journal of the American Geriatrics Society, 46(4), 506-510.
[119] Canadian Agency for Drugs and Technologies in Health. CADTH guidelines for the Evaluation of Health Technologies: Canada, 4th.

Table 47: Example of Cost-Minimisation Analysis

Study Setting	Dutch General Practice & Common Conditions[120]
Economic Evaluation Method	Cost Minimisation
Evaluation Approach	The cost-minimisation form of economic analysis used for this study was adopted. Analyses were performed according to the intention-to-treat principle wherein a sample of 12 NPs and 50 GPs working in 15 general practices participated (study practices). As cost data was highly skewed, estimates for costs were compared with estimates based on nonparametric clustered bootstrap (1000 replications) to check the robustness of the analysis. Both estimates gave similar results and so only the direct estimates were presented. Differences in clinical characteristics and healthcare use were analysed with Student's t test (two-sided; $\alpha = 0.05$) and $\chi 2$, where appropriate. Univariate linear regression and mixed model analyses were used to determine whether there were significant effects in scores between the intervention group and control group on the different scores after controlling for potential confounding variables.
Outcomes Measured	• Complexity of Diagnosis; • Number of Referrals; • Number of Prescriptions; • Number of Diagnostic procedures; • Direct Costs (Salary Costs, Follow Up Costs); • Indirect Costs for paid work (based on mean income of Dutch population).
Reported Costs & Benefits	Within study practices, a significant difference in direct costs appeared between the NP consultations and GP consultations: a mean difference was found in direct costs of €8.21 in favour of the NP consultations (P = 0.001). No significant difference in direct costs and productivity costs was found between NP consultations and GP consultations at study practices. Between study practices and reference practices, a significant difference was found in the direct costs within health care. The mean difference in direct costs was €3.45 per consultation in favour of the study practices (P = 0.04). Regarding the direct costs and productivity costs, the consultations in external reference practices cost less (€141.09) than those in study practices (€145.08; P = 0.09), although this was not statistically significant. Univariate linear regression revealed that direct costs were significantly associated with patients' sex (F = 4.13; P = 0.042), age (F = 24.24; P = 0.001), and type of diagnosis (F = 63.67; P<0.001). Direct costs were not significantly associated with the variable practice (meaning, patients nested within general practices). These variables explained 16.06% of the total variance (adjusted R2 = 0.40). **Cost per NP consultation (all patients)** Direct costs: €31.94 Based on salary of GP in employment: €31.94 Based on GP employed by other GPs: €31.94 Direct costs and productivity costs: €144.40 Based on salary of GP in employment: €144.40 Based on GP employed by other GPs: €144.40 **Cost per GP consultation (all patients)** Direct costs: €40.15 Based on salary of GP in employment: €38.33

[120] Dierick-van Daele, A. T., Steuten, L. M., Metsemakers, J. F., Derckx, E. W., Spreeuwenberg, C., & Vrijhoef, H. J. (2010). Economic evaluation of nurse practitioners versus GPs in treating common conditions. Br J Gen Pract, 60(570), e28-e35.

Study Setting	Dutch General Practice & Common Conditions[120]
	Based on GP employed by other GPs: €37.45 Direct costs and productivity costs: €145.87 Based on salary of GP in employment: €144.05 Based on GP employed by other GPs: €143.17
Limitations	The study was unable to gather data for follow up consultations, length of consultations or number of days of absence in the external reference practices. It was also not possible to collect data on the follow up after a referral, therefore for each referral, one initial consultation was calculated in order to count these initial consultations within the study.

Other influencing factors

The type of economic evaluation model used will require identification and consideration of a range of other influencing factors. The NP model can be implemented in and across a range of practice settings with the desired outcomes differing depending on the specific patient populations and health care systems. These additional influencing factors may include comparators/practice setting, study perspective, time horizons, discounting and economic modelling.

Comparators

When evaluating NP roles, the context of the role and type of model implemented is critical, as it will influence the identification of the comparator.

In a setting where the NP provides care that was previously the provided by a GP or other health care professional, the NP should be compared to the former providers of care.

Due to the nature of the comparator in this setting, challenges can arise when measuring outcomes as the data available covering costs and effectiveness of health care services is often insufficient for comparative purpose. An additional complication can occur in the form of varied salary and reimbursement models, as identified in the case study of the complimentary NP model, as well as the fact that some NPs may have limitations on their ability to practice to full scope, making comparisons difficult.[121]

In a model of care where the NP is a complimentary provider to usual care, the evaluation comparison should compare usual care with and without the addition of the NP.

In this scenario, the evaluation model will need to be able to isolate the impact of the role and measure the outcomes accordingly.

Study perspective

The majority of economic evaluations in the health care setting will represent the public payer perspective rather than the society perspective. The public payer perspective can limit the scope for the evaluation as it focuses only on the resources and costs within the healthcare system.[122] This means that non-health outcomes are unlikely to be measured, for example benefits such as patient satisfaction. The societal perspective includes all significant costs of the intervention, regardless of the end experiencer. This includes short and long term outcomes relevant for patients, their families and society. A societal perspective is important to capture training and

[121] Helms, C., Crookes, J., & Bailey, D. (2015). Financial viability, benefits and challenges of employing a nurse practitioner in general practice. *Australian Health Review, 39(2)*, 205-210.
[122] Goryakin, Y., Griffiths, P., Maben, J. (2011). Economic evaluation of nurse staffing and nurse substitution in health care: a scoping review. IJNS 48 (4), 501–512

productivity costs, shifts of cost to patient and savings or additional costs to other public sector agencies.

For economic evaluations focused around NPs practicing in a PHC setting, it is likely that a societal perspective will capture a broader range of potential cost and benefits.

Time horizons & discounting

The time horizon for realisation of costs and outcomes of NP intervention is likely to vary based on model of care and practice setting. If the effects of NP intervention are likely to span longer time periods beyond initial treatment, this should be accounted for within the economic evaluation model.

In a primary care setting, NPs are often focused on chronic disease management (see chapter 0 for more information). This practice scenario means it is likely that outcomes of NP intervention are likely to span a longer time horizon, meaning that a lifetime analysis may be beneficial.

When considering the time horizon of the economic evaluation, any costs and health outcomes that occur beyond one year should be discounted to present values at a rate of 1.5% per year.[123] Generally, discounting is uncommon in economic evaluations as most have a relatively short time horizon. However if the practice setting centres around chronic care and is likely to have long term outcomes, costs and health outcomes that reflect society's rate of time preference, they should be discounted to present values when they occur in the future to ensure equitable analysis.

Economic modelling

A range of economic modelling methods exist that can be utilised depending on the type of economic evaluation method chosen. Models such as decision trees, Markov modelling and simulating modelling allow for a synthesis of evidence and assumption from various sources.[124]

Modelling techniques can be used to extrapolate results of short term studies to evaluate their potential long term impacts. This methodology has not been widely used in economic studies of NP roles, however one example is a cost effectiveness study utilising the Markov model for registered nurse roles. This model was used to estimate the incremental cost effectiveness of recommended staffing versus median staffing in patients admitted to skilled nursing facilities for post-acute care. The outcomes measured from this study were life expectancy, quality adjusted life expectancy and incremental cost effectiveness.[125]

Outcome measures of NP care

The measurable outcomes of economic evaluations can vary depending on the NP practice setting and the patient characteristics. However, there are common outcomes that appear across the literature when evaluating the effectiveness of the NP role.

Cost and benefit measures

The table below provides an overview of the cost and benefit measures observed in the context of this literature review. The majority of these studies are international with very few focusing on outcomes measures in an Australian setting. Though these studies are predominately

[123] Canadian Agency for Drugs and Technologies in Health (CADTH) (2009). Addendum to CADTH's Guidelines for the Economic Evaluation of Health Technologies: Specific Guidance for Oncology Products
[124] Canadian Agency for Drugs and Technologies in Health (CADTH) (2009). Addendum to CADTH's Guidelines for the Economic Evaluation of Health Technologies: Specific Guidance for Oncology Products
[125] Ganz, D., Simmons, S., & Schnelle, J. (2005). Cost-effectiveness of recommended nurse staffing levels for short-stay skilled nursing facility patients. BMC Health Services Research, 5, 35.

international, the evidence for strong patient satisfaction and patient health outcomes is particularly strong for NP care.

Table 48: Summary of cost and benefit measures

Outcome Type	Evidence	Measures	Examples in Literature
Consultation Details	Consultation details are often found to be less costly for patients due to lower NP salaries, with average consultation length longer due to more prevalence of chronic disease management.	Number of Prescriptions	Allen et al. 2014 Dierick-van Daele et al. 2010
		Number of Visits	Allen et al. 2014
		Cost of Visits	Dierick-van Daele et al. 2010 Allen et al. 2014
		Consultation Length	Helms et al., 2015[126]
Patient Health	High level of evidence supporting equivalent patient outcomes and self-reported patient perception of health.	Diastolic BP	Allen et al. 2014 Newhouse et al., 2011[127] Horrocks et al., 2002 Browns et al., 1995
		Systolic BP	Allen et al. 2014
		LDL-C	Allen et al. 2014
		HBA1c	Allen et al. 2014
		Severity of eczema	Schuttelaar et al. 2011
Patient Satisfaction	Patients were found to be more satisfied with care provided by an NP. This result was mirrored across the primary and aged care setting.	Specifically-designed patient satisfaction survey	Horrocks et al., 2002[128] Laurant et al. 2004 Donald et al 2013 Gardner et al. 2014 Laurant et al., 2004[129] Donald et la., 2013[130] Gardner et al., 2014[131]
		CSQ-8	Schuttelaar et al. 2011
Cost-Effectiveness	In high volume, low acuity areas, NPs may be more cost effective	CEAC	Schuttelaar et al. 2011
		ICER	Schuttelaar et al. 2011

[126] Helms, C., Crookes, J., & Bailey, D. (2015). Financial viability, benefits and challenges of employing a nurse practitioner in general practice. Australian Health Review, 39(2), 205-210.
[127] Newhouse, R.P., Heindel, L., Weiner, J.P., Stanik- Hutt, J., White, K.M., Johantgen, M., Bass, E.B., Zangaro, G., Wilson, R.F., Fountain, L., Steinwachs, D.M. (2011). Advanced practice nurse outcomes 1990-2008: a systematic review. Nursing economic 29 (5), 230.
[128] Horrocks, S., Anderson, E., Salisbury, C. (2002). Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors. British Medical Journal 324 (7341), 819-823
[129] Laurant, M., Reeves, D., Hermens, R., Braspenning, J., Grol, R., Sibbald, B. (2004). Substitution of doctors by nurses in primary care. Cochrane Database of Systematic Reviews (4), Art. No.: CD001271.
[130] Donald, F., Martin-Misener, R., Carter, N., Donald, E.E., Kaasalainen, S., Wickson-Griffiths, A., Lloyd, M., Akhtar-Danesh, N., DiCenso, A. (2013). A systematic review of the effectiveness of advanced practice nurses in long-term care. Journal of Advanced Nursing 69 (10), 2148-2161
[131] Gardner, Glenn, Gardner, Anne, & O' Connell, Jane. (2014). Using the Donabedian framework to examine the quality and safety of nursing service innovation. Journal of Clinical Nursing, 23(1-2), 145-155.

Outcome Type	Evidence	Measures	Examples in Literature
	than in lower volume, high acuity departments.	Cost-Effectiveness	Carter et al., 2007 Christian et al., 2009 Allen et al. 2014
Total Cost per Patient	The cost per patient is generally equal or slightly lower when treated by an NP, usually due to lower salary cost for NPs.	Cost per Patient	Allen et al. 2014 Burl et al 1998 Dierick-van Daele et al. 2010
Quality of Life	The Quality of Life is often comparable or somewhat better with the main difference being seen in the cost of treatment.	IDQOL	Schuttelaar et al. 2011
		CDLQI	Schuttelaar et al. 2011
		RAQoL	Van den Hout et al 2003
		SF-6D	Van den Hout et al 2003
		TRS	Van den Hout et al 2003
		TTO	Van den Hout et al 2003
		QALYS	Van den Hout et al 2003
Family Costs	Absence from work, travelling expenses, and out of pocket expenses were generally lower for NP interventions.	Family Costs	Schuttelaar et al. 2011 Dierick-van Daele et al. 2010

Patient outcomes

Taking patient outcomes into consideration is an important aspect of economically evaluating NP models of care, however quantifying these outcomes can be challenging. Studies that have included patient outcomes in their assessment of NP models of care have therefore often done so by incorporating a qualitative aspect into their economic evaluation.

A 2015 evaluation by the Queensland University of Technology (QUT) focused on evaluating the extent to which patient outcomes were improved by establishing an integrated chronic disease nurse practitioner (ICDNP) clinic. Patients who were interviewed as part of the study reported a number of benefits of attending the ICDNP clinic, including:

- good communication and interaction with the healthcare professionals;
- high levels of care received;
- establishment of trust with the health professionals on site;
- improved health and better understanding of own condition;
- good continuity of care by following up with the same staff on a regular basis;
- highly personalised/individualised services;
- education presented in lay terms;

- enhanced connection with the healthcare team and service.[132]

A study of the quality and safety of an NP model implemented in an Australian setting found NP clinical care to be effective, satisfactory and safe from the perspective of patients, with patient satisfaction being particularly high in the analysis. A case review of 13 patients was conducted by a clinically qualified auditor which found that NPs conduct comprehensive patient assessments and that their clinical decision making is well supported by clinical and diagnostic information. The study also found consistent provision of education to patients and guidance on building self-care competencies. The NP practice was also found to be informed by evidence from specialty clinical guidelines and/or published research.[133]

Considerations for the CBA

The literature reviewed provided an overview of the evidence base, both nationally and internationally, that exists around the effectiveness of the NP role. KPMG has been engaged to conduct a CBA of existing NP models of care in Australia, creating the opportunity to identify improvements and potentially new models of care, to address the increasing demand for service delivery faced by the Australian healthcare system.

The effectiveness of the NP role in improving patient outcomes and satisfaction is well established in the literature reviewed. NPs have been successfully established in many international settings prior to their introduction in Australia, for instance in North America and The Netherlands. Since the role introduction nationally in 2000, the number of endorsed NPs has grown to 1,604 (as at December 2017).[134] The majority of these NPs are currently employed by State and Territory Governments in acute care settings, however there are also a smaller number of NPs providing PHC services.

Role numbers in the primary care setting and aged care setting are less prevalent as NPs have struggled to establish financially viable practices. NPs in PHC settings are required to establish a collaborative arrangement in order to provide services subsidised by the MBS.[135] Once they have this arrangement in place, patients seeking care from an NP have access to a limited number of MBS items which are focused on time tiered professional attendances, a limited range of diagnostic investigations and limited specialist referrals. Patients are not able to receive MBS subsidy for relevant procedural items performed by NPs.[136]

As described in previous chapters, the literature perceives the skill set of NPs in Australia as significant, particularly the ability of NPs to practice autonomously as part of a healthcare team utilising the role's scope of practice to perform comprehensive physical assessment, request and interpret diagnostic tests, initiate referrals to other health professionals and prescribe which together potentially positions the NP well to provide flexible, timely and high quality health care.

Various studies have been conducted identifying ways to evaluate the effectiveness and efficiency of the NP role across healthcare settings, the most prevalent of these being the cost effectiveness methodology. This model has been commonly used in economic evaluations of health services where it can be difficult to monetise health outcomes.

Economic evaluations of NP models internationally have found the role to be cost effective and achieve strong patient satisfaction. A significant gap in the literature has been found when

[132] Bonner, A., Douglas, C., Abel, C., Barnes, M., Stone, M., Heatherington, J., ... & Bashi, N. (2015). Integrated Chronic Disease Nurse Practitioner Service: Evaluation Final Report. *Integrated chronic disease nurse practitioner service-evaluation final report*, *1*(1), 1-5.
[133] Gardner, Glenn, Gardner, Anne, & O' Connell, Jane. (2014). Using the Donabedian framework to examine the quality and safety of nursing service innovation. Journal of Clinical Nursing, 23(1-2), 145-155.
[134] Nursing and Midwifery Board of Australia (2018). Registrant data December 2017 http://www.nursingmidwiferyboard.gov.au/About/Statistics.aspx. Accessed 13 April 2018.
[135] http://www.health.gov.au/internet/main/publishing.nsf/content/midwives-nurse-pract-qanda-nursepract
[136] http://www.health.gov.au/internet/main/publishing.nsf/content/midwives-nurse-pract-qanda-nursepract

searching for economic evaluation of NPs in PHC and aged care in the Australian health care setting. This is likely due to the low numbers of NPs working in these settings, however it also represents significant opportunity.

The effectiveness of NP roles can be dependent on the type and context of care, scope of practice and stage of model implementation. The objectives and methods of evaluations should reflect the complexity of the NP role that is characterised by their scope of practice, diverse health care settings, and interventions targeted to multiple groups. Studies should be designed to overcome the limitations to previous trials, such as small number of advanced comparators being evaluated, single site studies, inadequate power due to small sample size, flawed randomisation, absence of outcomes sensitive to NP roles, biased outcome assessment, losses to follow up and short follow up periods.[137]

As the costs of healthcare for chronic disease management continue to increase, the role of NP is in a pivotal position to address the need for safe, effective, patient-centred, efficient and equitable healthcare.[138]

[137] Donald, F., Kilpatrick, K., Reid, K., Carter, N., Martin-Misener, R., Bryant-Lukosius, D., Harbman, P., Kaasalainen, S., Marshall, D.A., Charbonneau-Smith, R. (2014). A systematic review of the cost-effectiveness of nurse practitioners and clinical nurse specialists: what is the quality of the evidence? Nurs. Res. Pract. 2014

[138] Schram, A. P. (2010). Medical home and the nurse practitioner: A policy analysis. The journal for nurse practitioners, 6(2), 132-139.

Appendix B – CBA framework

This analytical framework for the development of the CBA was provided to the Department prior to the development of the CBA. Any changes to the methodology proposed in this original CBA framework were made in response to research limitations described in the methodology section of the report.

Stakeholder engagement activities

We will conduct a range of stakeholder engagement activities in order to gain qualitative input into CBA, and to gather stakeholder views on any quantitative data collected as part of the review.

Two stakeholder consultation rounds will be undertaken.

The *first stakeholder consultation round* will consist of stakeholder interviews and will focus on gathering contextual knowledge on the current state of the NP model which will help us build our qualitative view of the existing system, and will form the basis of the CBA. The stakeholders we expect to consult with as part of this consultation round include:

- Departmental stakeholders at the Department of Health:
  - members of the Office of the Chief Nursing and Midwifery Officer;
  - members of the Nursing and Midwifery Strategic Reference Group;
  - members of the Workforce Data Analysis Section (Health Workforce Division);
  - members of other divisions within the Department, as deemed relevant.
- Inter-jurisdictional Government stakeholders (e.g. Chief Nurses in each State/Territory).

As part of this consultation round, we expect to identify a set of eight case study sites to investigate further. The sites will be selected based on responses to a national survey of NPs that was recently administered by the Department. As part of this survey, NPs described the model of care they work within and had the option of expressing their interest in participating in this project. A list of eight sites will then be identified with the intention of covering off a range of models and settings (i.e. both primary health and aged care settings, different models of care, services provided and funding models, as well as both metropolitan and regional / rural sites).

The *second stakeholder consultation round* will focus on conducting case studies through these site visits. The focus here will lie on collating information for:

- potential benefits and costs;
- breadth of the benefit impact;
- opportunities for further expansion, innovation and scaling;
- stakeholder perspectives about the challenges.

We expect stakeholders to be able to provide more detailed context to any data provided, and potentially point out additional datasets we may wish to include in the analysis as well as any

data-related gaps and issues. Key stakeholders we will consult with (depending on the specific site) include:

- GPs;
- NP clinics;
- Residential Aged Care Facilities.

We will further consult with national peak bodies to confirm findings from the first consultation round and from the site visits. These include:

- Australian College of Nurse Practitioners (ACNP);
- Australian Nursing & Midwifery Federation (ANMF);
- National Aboriginal Community Controlled Health Organisation (NACCHO);
- the Congress of Aboriginal and Torres Strait Islander Nurses and Midwives (CATSINaM);
- a range of Primary Health Networks (PHNs) that cover the sites that were included in the site visits.

Identification of costs and benefits

In preparation to the development of this framework, we reviewed the literature and consulted our NP expert to identify the key costs and benefits associated with the NP model of care. The literature lists two broad types of NP roles:

- Complementary – aims to improve the effectiveness of current models of care - includes an education and coordination role that helps improve adherence etc;
- Substitution – the NP provides services for some sub-cohort of patients/treatments (e.g. injections for chronic disease) that would otherwise be provided by those for whom they are substituting, e.g. GPs or physicians more broadly.

For complementary models, outcomes consider improvements in the current models of care. For substitution models of care, the literature typically focuses on the impact of NPs on health service utilisation. Below we list the most common forms of costs and benefits investigated during evaluations of NP programs.

Costs

- overall cost of NPs (note the perspective is important here – NPs can be funded from a range of different sources, including but not limited to MBS activity-based funding (MBS items 82200, 82205, 82210, 82215 and 82220; also MBS Telehealth Items for rural NPs 82220, 82221, 82222, 82223, 82224, 82225) as well as other funding from PHNs
- training costs
- administrative costs

Benefits

- reduced length of hospital stay
- fewer readmissions and unnecessary hospitalisations
- lower cost of healthcare
- improved allocation of GP resources
- reduced emergency visits
- more appropriate prescriptions and diagnostic tests

In some literature, *patient and provider data* were also gathered, including:

- mortality and morbidity

- quality of life
- satisfaction with care
- job satisfaction

Measuring costs and benefits

In Table 49 below, we discuss if/how we expect to be able to capture these costs and benefits for the CBA of the NP model.

Table 49: Potential costs and benefits

Cost/benefit	Captured or not captured	Comment
Costs		
NP costs	Captured through site and PHN semi-structured interviews	n/a
Training costs	Captured through site and PHN semi-structured interviews	n/a
Administrative costs	Captured through MBS data; and site and PHN semi-structured interviews	n/a
Benefits		
Reduced length of hospitalisation	Not captured	n/a
Fewer readmissions and unnecessary hospitalisations	Captured through semi-structured site-interviews	n/a
Lower cost of healthcare	Captured through semi-structured site interviews; PHN data and potentially econometric analysis of MBS data at PHN/SLA level	n/a
Improved allocation of GP resources	Captured through semi-structured site-interviews; PHN data and potentially econometric analysis of MBS data at PHN/SLA level	n/a
Reduced emergency visits	Captured through semi-structured site interviews	n/a
More appropriate prescriptions and diagnostic tests	Captured through semi-structured site interviews; PHN data and potentially econometric analysis of PBS data at PHN/SLA level	n/a
Mortality and morbidity	Not captured	Potentially could link mortality data by PHN to the econometric analysis if it is available?
Quality of life	Not captured	Unless PHN/site has data
Patient satisfaction	Not captured	Unless PHN/site has data
Job satisfaction	Captured in semi-structured site interviews	

Source: KPMG

Valuing costs and benefits

As per our proposal, we will value the benefits of using standard resource unit costs as detailed in Table 50 below.

Table 50: Valuing costs and benefits

Resource	Description	Value	Source
GP consultation	Cost (benefits) associated with services that could have been provided by an NP	Medicare rate GP salary	Department of Health Medicare Rebate MBS billing data Participating facility salary data
Nurse practitioner consultation	Cost (benefits) associated with services provided by an NP	Medicare rate NP salary	Ambulance Victoria Fee Schedule (2017-18)
Avoided transfer to ED	Cost (benefits) of transfer to/from ED by an ambulance	$1,204	Ambulance Victoria Fee Schedule (2017-18)
Avoided ED presentation	Cost (benefits) associated with ED presentation within an aged care facility in the absence of the NP model	$604	IHPA Round 19 National Hospital Data Collection (NHCDC) Cost Report

Perspective

KPMG suggest that the CBA be considered from the following three perspectives:

- patient – what the NP model means from the patient's perspective;
- the PHN/site– increasing the roll-out of the NP model will require the model to be cost-effective from a PHN's or site's perspective;
- healthcare funder – the overall cost-effectiveness of the NP model of care to the healthcare system.

A wider societal perspective is often recommended, however in this case there is insufficient time and resource available for patient questionnaires that can capture wider societal costs such as the impact on carers.

Evaluation framework

We have initially suggested a quasi-experimental pre-post evaluation framework that looks at sites before and after the implementation of the NP. We believe this is still a valid approach, however have been informed by the Department that it is difficult to isolate MBS/PBS data by site within this data. We will therefore need to ask the sites and the PHNs themselves if they have historical administrative data on which we can base the evaluation (in particular, data on their site 'pre' NP). If administrative data is unavailable, we will need to survey the sites and ask them about the model of care within the site pre and post the NP. This will potentially limit the CBA if it is unable to be informed by detailed data around the costs and benefits of the NP model. In this instance, the CBA may become a scenario-based analysis that broadly highlights under what circumstances the NP model can be cost-effective, rather than a definitive quantitative analysis.

Time period, discounting and net present values

KPMG have assumed that the focus for this analysis is on current NP operating models, and our evaluation will not explicitly capture future costs and benefits so that there is no need for discounting. However where scenario modelling includes an analysis of any longer term benefits from NP programs derived from the literature, a discount rate of 3% will be applied, with a sensitivity analysis at 0% and 5%.

Similarly, given the time period over which we will be analysing data from sites (potentially up to 10 years), we will adjust for price changes as per the Handbook of CBA analysis, using an appropriate index depending on the specific cost or benefit[i].

Potential survey questions for the sites

Potential questions will focus on:

- staffing (GP, nursing and support staff full-time equivalents);
- patient volumes and mix;
- funding models/healthcare costs (proportion paid through MBS, patients etc.);
- impact on GP resources;
- ED/hospitalisation outcomes if possible;
- training and administrative costs associated with the NP model of care.

A list of draft questions has been provided in Appendix A.

Econometric analysis to inform the CBA

Within some PHN areas there are active NP programs, while in others there is very little NP activity. We will therefore also complete a detailed econometric analysis of publicly available MBS data to investigate if there are any discernable impacts from NPs on resource use, patient volumes and fees charged at the PHN and SLA3 level, by comparing areas with and without NP programs

CBA for each site

The common framework listed here will be used for the CBA of each site. The results for each site will include:

- the total costs, costs per NP and costs per patient;
- the total benefits, benefits per NP and benefits per patient;
- cost-benefit ratio;
- qualitative description of the site.

Importantly, the results will be presented in consistent manner based on CBA framework, so that clear and concise comparisons can be made across the study sites.

Scenario modelling sensitivity analysis

Given the short-time frames of the evaluation and potential difficulties in accessing site specific data, there will be substantial uncertainties around the CBA results. To help evaluate these

uncertainties, and to help uncover the key factors that lead to cost-effective NP programs, we will conduct a scenario modelling sensitivity analysis. The scenarios will be based on the qualitative and quantitative data collated from each site, as well as evidence from the literature review including:

- ratio of GPs to NPs;
- funding models for NPs
- maturity of NP model;
- cost savings in ED or hospitalisations.

Performing sensitivity analysis to assess the impacts of changes in key variables on overall CBA outcomes can help inform the Department about what characterises a cost-effective NP program.

Consistency with national CBA frameworks

The CBA will be informed by better practice methods and aligned to the following frameworks:

- Commonwealth of Australia, Department of Finance and Administration, 2006, Handbook of Cost-Benefit Analysis, Financial Management Reference Material no.6;
- Victorian Government, Department of Treasury and Finance, 2009, Victorian Guide to Regulation, Version 4, Appendix C;
- Department of Treasury and Finance, 2-14, Guidelines for the evaluation of public sector initiatives.

Limitations

There are potential limitations associated with the CBA:

- The Nurse Practitioner sites are already established, and as a result the evaluation framework does not use a randomised control trial that is the 'gold standard' in evaluation methodology. Instead we adopt a pre-post quasi-evaluation framework where it is possible, that considers a site before and after the establishment of the NP program. This helps to reduce bias associated with specific site factors, however we note the potential for bias still exists. We will review our results relative to the literature to help improve the robustness of the analysis.
- While aggregated administrative data such as MBS and PBS services are available at the PHN level, there are difficulties in isolating MBS/PBS data by site. This means much of the CBA will be informed by semi-structured surveys that have the potential to be less accurate than administrative data. We will complement the survey results with sensitivity analysis that highlights how the CBA results vary with different input assumptions.
- Short timeframes mean that longer-term impacts of the NP model (e.g. improved long term patient quality of life or reduced chronic disease severity) cannot be measured directly; instead we will ask the relevant sites to assess the impact of the NP model on these outcomes; and sense check this with relevant literature that have completed longer term follow-up.

Overall, these limitations are reasonably common for pragmatic real-world CBA evaluations. There is still significant value to be gained from the CBA in highlighting the key parameters that cause the NP model be cost-effective.

Appendix C – Stakeholder interview questionnaire

The consultation guide below is one of four that were used for the initial round of consultations, however due to the similarity of questions asked only one has been provided here.

Background

KPMG has been engaged to assist the Department of Health in conducting a cost benefit analysis (CBA) of nurse practitioner (NP) models of care across primary health care (PHC) and aged care settings. The project provides the opportunity to analyse the financial and non-financial impacts of the use of NPs across primary care and aged care settings, and to consider the potential to more fully utilise the role across the system.

Scope of the project

The CBA will provide an estimate of the costs and benefits associated with introducing an NP model in primary health, aged care and other settings. Specifically, the objectives of the project are to:

- conduct an in-depth assessment of NP operating models in the aged care and PHC sectors including NP case studies;
- undertake case studies to review and assess, from an economic perspective, existing NP business models (i.e. residential aged care facility-based, independent NPs, GP clinic, NP clinic, State government-based) and identify potential new models or innovative models;
- identify potential areas of expansion for NP models in program areas such Health Care Homes and aged care;
- identify areas and costs associated with the under-utilisation of NPs, potential savings associated with the expansion of NP roles, such as avoidable hospital admissions, reduced lengths of stay, ambulance costs, and any other related operational and financial costs;
- liaise with key stakeholders to affect a high quality response to this service requirement and within the bounds of the contractor's control;

- investigate the recognition of NPs within the existing Medicare Benefits Schedule (MBS) parameters and detail any issues and options for change.

Consultation approach

As part of this project, consultations are being conducted with a range of stakeholders across the PHC and aged care sectors during April and May 2018.

Consultations will seek to explore the context and current state of the Australian NP models of care, and identify potential ways to better utilise the role. Site visits at a later stage in the project will be conducted to collate information relating to potential benefits and costs of NP models, breadth of the benefit impact, and opportunities for further expansion, innovation and scaling.

Findings from the consultation process will directly inform the development of the CBA framework, and provide context to the outcomes of the analysis.

Questionnaire

Below is an indicative list of questions we will explore with key stakeholders. They provide a guide to the content of the stakeholder consultations.

1. Can you tell us about your organisation and your role within it?
2. In general, what is your experience with Nurse Practitioner models of care and their implementation in the primary health and/or aged care sectors?
    a. What types of Nurse Practitioner models are you familiar with? (e.g. NP clinic, GP clinic, independent NPs, NPs based in care facilities etc.)
    b. What is your experience with Nurse Practitioners collaborating with clinicians and other health professionals?
3. What impact do you see Nurse Practitioners having on the quality and access to care for patients in primary health care and aged care settings?
    a. What are the key benefits associated with implementing NP models? (financial and non-financial)
    b. What are the key costs associated with implementing NP models?
    c. What are the costs that have been avoided by implementing a Nurse Practitioner model?
4. What key successes have you seen or experienced in planning and implementing Nurse Practitioner roles in primary health care and/or aged care settings?
5. What key challenges have you seen or experienced in planning and implementing Nurse Practitioner roles in primary health care and/or aged care settings?
    a. What changes would you suggest?
6. Have there been any major issues in the planning and implementation of Nurse Practitioner roles of which you are aware?
7. Have Nurse Practitioners generally enhanced the clinical capacity to provide primary health care and/or aged care? How so?
8. Are there any other opportunities for expanding the scope of practice of Nurse Practitioners in primary health care and aged care settings that have currently not been explored?
9. Is there anything else you would like to add?

Appendix D – Site visit questionnaire

Stakeholder Group	Facility leadership staff

1) How was the planning and implementation of the Nurse Practitioner model approached?
   a) Please describe the Nurse Practitioner model of care you have implemented.
   b) Please describe *why* the NP model of care was created in your context. Were there special populations or opportunities (e.g. funding, identified gaps in service provision, health conditions, underserved communities, etc.) that were specifically being targeted by the model in the planning stage?
   c) What facilitators and barriers did you experience in the planning for, and implementation of, the NP model of care?
   d) What key stakeholders did you have to garner support from, in order to plan and implement the role?
   e) How long did the role take to develop and implement? What were the key contributors to the time taken?
   f) If applicable, please describe any issues you've identified in recruiting a suitable candidate for the NP role.
   g) If applicable, please describe any additional training, certifications, policies/guidelines or credentialing processes that has been required to help develop or sustain the NP in their role.
   h) What were the expected outcomes of the NP model of care? Have these outcomes been realised? What aspects of your model do you think facilitated (or served as barriers to) those outcomes?
   i) What is the level of maturity of the Nurse Practitioner model? How long has it been in place for? Has it evolved over time (i.e. what is the model of care you had planned for, and what is it now?)
2) What impact has the Nurse Practitioner role had on:
   a) Medical/care staff work/life balance, interprofessional learning, and collaboration?
   b) Clinical governance for the organisation
   c) Costs and other benefits associated with ordering/interpreting diagnostic tests
   d) Costs and other benefits associated with prescribing/de-prescribing
   e) Costs and other benefits associated with initiating referrals to medical and allied health specialists

Stakeholder Group	Facility leadership staff

f) Costs and other benefits associated with unplanned emergency presentations and avoidable admissions to hospital?

g) Are there other identified key benefits (e.g. health outcomes, costs, etc.) for the NP model of care?

3) What governance processes did you have to create/revise to ensure the Nurse Practitioner was able to work to their full scope of practice and the capabilities of the role?

4) Should the existing model be modified? What changes would you suggest?

a) Should the existing model be expanded to other patient cohorts?

b) How would the model need to be modified (e.g. in terms of governance structures) if it was to be expanded?

5) Is the NP employed by, or contracting their services? What funding model best describes the current Nurse Practitioner model? See options below:

a) The Nurse Practitioner role is completely funded by MBS income.

b) A percentage of the Nurse Practitioner's role is funded by MBS income, the rest is covered by other funding (e.g. government funding)

c) A percentage of the Nurse Practitioner's role is funded by MBS income, the rest is covered by patient co-payments

d) The Nurse Practitioner role is wholly or partly funded by the PHN

e) The Nurse Practitioner's services are contracted by a different organisation (e.g. non-governmental organisation or private agency)

f) The Nurse Practitioner role is completely funded by public sector funding

g) Other

6) What are the direct yearly costs (e.g. FY17) related to the Nurse Practitioner(s) on site? (e.g. salaries, superannuation, room rental and required clinical equipment, etc.)

7) What are the site's yearly Nurse Practitioner training and professional development costs (e.g. FY17)?

8) What are the site's yearly administrative costs (e.g. FY17) in relation to the Nurse Practitioner role(s)? (Examples include secretarial support, computers, printers, etc.)

a) Have the site's yearly administrative costs increased or decreased since the introduction of the Nurse Practitioner role? How much has it increased/decreased by?

9) What is the yearly cost of healthcare (e.g. FY17) related to services provided by the Nurse Practitioner(s)? (e.g. number and costs of visits, MBS data)

a) If applicable, what is the cost of healthcare related to services provided by the GPs? (number and costs of visits, MBS data). What proportion of the practice site is covered by GPs as opposed to NPs?

b) If applicable, what is the costs associated with diagnostic and/or therapeutic procedures conducted by the NP (e.g. suturing and wound care, spirometry, intravenous infusions, etc.)?

10) If applicable, what is the financial impact of the Nurse Practitioner role on GP resources? (e.g. yearly MBS data before and after the implementation?)

Stakeholder Group	Facility leadership staff

a) How many consults previously conducted by a GP does the Nurse Practitioner now conduct each week? What is the average consultation time of these consults compared to the GP?

b) What is the nature of consults conducted by Nurse Practitioners as opposed to the consults conducted by GPs? (e.g. outreach services to care facilities, home visits, clinic appointments)

c) Have the number of medical practitioner (GP or specialist) consultations increased or decreased from baseline with the addition of the Nurse Practitioner role? How many consults has it increased/decreased by?

d) Have there been indirect financial benefits to GPs when collaborating with the NP (e.g. income generated from NP involvement in chronic disease management plans/reviews, team care arrangements, health assessments, etc.)

e) Are there policy restrictions to NP practise that require GP involvement/resources, so that patients can obtain necessary care? If so, what are they?

11) What types of prescriptions and diagnostic tests are ordered by Nurse Practitioner(s) on site?

a) What is the yearly volume of prescriptions and diagnostic tests ordered?

b) What percentage of these prescriptions are subsidised by the PBS, and what percentage are privately-prescribed? Are there any indications as to why medicines are privately prescribed?

c) What percentage of required diagnostic tests (e.g. pathology, imaging, ECGs, spirometry, simple basic point of care pathology tests) are subsidised by the MBS?

d) Has the volume of prescriptions and diagnostic tests changed from baseline with the addition of the Nurse Practitioner Role?

12) Have patient reported outcome measures (PROMs) or patient reported experience measures (PREMs) been measured at this site? If so, have they changed since the introduction of the Nurse Practitioner model?

a) If yes, how?

13) Have you identified any issues relating to workforce sustainability and strategies to address them (e.g. retirement, attrition)?

Stakeholder Group	Nurse Practitioners

1) What is your experience of the planning and implementation of the Nurse Practitioner model at this health service?

a) Please describe the Nurse Practitioner model of care that was planned, and how it has been implemented.

b) Please describe your level of involvement in planning for the role.

c) What opportunities or gaps in care did you see for your patients given your context of practice? Have they been realised through implementation of the role? Why or why not?

d) What is the level of maturity of your Nurse Practitioner model? How long has it been in place for? Has it evolved over time?

2) What conditions do you commonly assess, evaluate and treat? (i.e. acute illnesses injuries, chronic health conditions, preventative care)

Stakeholder Group	Facility leadership staff

3) What conditions do you commonly assess, evaluate, that subsequently require further evaluation and treatment by a medical practitioner? Why do those conditions require further evaluation by a medical practitioner?

4) What impact has the Nurse Practitioner role had on:
   a) Medical/care staff work/life balance, interprofessional learning, and collaboration?
   b) Clinical governance for the organisation
   c) Costs and other benefits associated with ordering/interpreting diagnostic tests
   d) Costs and other benefits associated with prescribing/de-prescribing
   e) Costs and other benefits associated with initiating referrals to medical and allied health specialists
   f) Costs and other benefits associated with unplanned emergency presentations and avoidable admissions to hospital?
   g) Are there other identified key benefits (e.g. health outcomes, costs, etc.) for the NP model of care?

5) What have been the health outcomes or patient benefits of implementing this model?
   a) Has the number of patient referrals for unplanned hospital admissions changed following the implementation of the NP model? How much by? What are the primary associated health condition(s) relating to these unplanned admissions?
   b) Has the number of specialist and/or allied health referrals changed following the implementation of the NP model? How much by? What have the referrals been for?
   c) Has the number of patient referrals to the emergency department changed following the implementation of the NP model? How much by? What are the primary associated health condition(s) associated with the referrals?
   d) Has continuity of care changed following the implementation of the NP model? If yes, how so?
   e) Has patient enablement changed following implementation of the NP model? If yes, how so?
   f) Has healthcare communication and information silos been addressed through implementation of the NP model? If yes, how so?
   g) Has the number of visits related to health promotion or prevention activities changed since the implementation of the NP model? If yes, how so?
   h) Has the monthly number of new patients changed since the implementation of the NP model? If yes, how so?
   i) Has the rate of new patients who return for a follow-up consultation changed since the implementation of the NP model? If yes, how so?

6) What challenges have you experienced in training for your role and putting it into practice?

7) If applicable, how has your *professional role* changed since first implementation of the role? How has your *clinical role* changed since first implementation of the role?

8) Should the existing model be modified? What changes would you suggest?
   a) Should the existing model be expanded to other patient cohorts?
   b) How would the model need to be modified (e.g. in terms of governance structures) if it was to be expanded?

Stakeholder Group	Facility leadership staff

9) Have patient reported outcome measures (PROMs) or patient reported experience measures (PREMs) been measured at this site? If so, have they changed since the introduction of the Nurse Practitioner model?
   a) If yes, how?

10) How has the legislated requirement to have a collaborative agreement when using the MBS/PBS affected your role? How has it affected patient care? How has it affected your professional relationships with others?

11) Have you identified any Commonwealth, State/Territory, or local policy restrictions that directly affect your ability to achieve your full scope of practice? If so, what are they?

12) Have you identified any Commonwealth, State/Territory, or local policy restrictions that contribute to duplication of care or information silos when involving care provided by a nurse practitioner?

13) Does your role improve access to marginalised or vulnerable populations? If so, which and how?

Stakeholder Group	GPs and other health professionals

1) What is your experience of the planning and implementation of the Nurse Practitioner model at this health service?
   a) Please describe the Nurse Practitioner model of care that was planned, and how it has been implemented.
   b) Please describe your level of involvement in planning for the role.
   c) What opportunities or gaps in care did you see for your patients given your context of practice? Have they been realised through implementation of the role? Why or why not?
   d) What is the level of maturity of the Nurse Practitioner model? How long has it been in place for? Has it evolved over time?

2) What conditions does the Nurse Practitioner commonly assess, evaluate and treat? (i.e. acute illnesses injuries, chronic health conditions, preventative care)

3) What conditions does the Nurse Practitioner commonly assess, evaluate, that subsequently require further evaluation and treatment by a medical practitioner? Why do those conditions require further evaluation by a medical practitioner?

4) What impact has the Nurse Practitioner role had on:
   a) Medical/care staff work/life balance, interprofessional learning, and collaboration?
   b) Clinical governance for the organisation
   c) Costs and other benefits associated with ordering/interpreting diagnostic tests
   d) Costs and other benefits associated with prescribing/de-prescribing
   e) Costs and other benefits associated with initiating referrals to medical and allied health specialists
   f) Costs and other benefits associated with unplanned emergency presentations and avoidable admissions to hospital?
   g) Are there other identified key benefits (e.g. health outcomes, costs, etc.) for the NP model of care?

Stakeholder Group	Facility leadership staff

5) What have been the health outcomes or patient benefits of implementing this model?
   a) Has the number of patient referrals for unplanned hospital admissions changed following the implementation of the NP model? How much by? What are the primary associated health condition(s) relating to these unplanned admissions?
   b) Has the number of specialist and/or allied health referrals changed following the implementation of the NP model? How much by? What have the referrals been for?
   c) Has the number of patient referrals to the emergency department changed following the implementation of the NP model? How much by? What are the primary associated health condition(s) associated with the referrals?
   d) Has continuity of care changed following the implementation of the NP model? If yes, how so?
   e) Has patient enablement changed following implementation of the NP model? If yes, how so?
   f) Has healthcare communication and information silos been addressed through implementation of the NP model? If yes, how so?
   g) Has the number of visits related to health promotion or prevention activities changed since the implementation of the NP model? If yes, how so?
   h) Has the monthly number of new patients changed since the implementation of the NP model? If yes, how so?
   i) Has the rate of new patients who return for a follow-up consultation changed since the implementation of the NP model? If yes, how so?
6) What have been the key successes and challenges in implementation?
7) Have there been any issues that you are aware of?
8) If applicable, how has your *professional role* changed since first implementation of the role? How has your *clinical role* changed since first implementation of the role?
9) Has the Nurse Practitioner enhanced the existing clinical team's capacity to provide unplanned urgent and primary care / aged care?
10) What have been the key benefits of this model?
   a) Have there been financial benefits for the health service?
   b) What are the costs that have been avoided by implementing this policy?
11) Should the existing model be modified? What changes would you suggest?
   a) Should the existing model be expanded to other patient cohorts?
   b) How would the model need to be modified (e.g. in terms of governance structures) if it was to be expanded?
12) Is patient satisfaction measured at this site and has it changed since the introduction of the Nurse Practitioner model?
   a) If yes, how so?
13) Have patient reported outcome measures (PROMs) or patient reported experience measures (PREMs) been measured at this site? If so, have they changed since the introduction of the Nurse Practitioner model?
   a) If yes, how?

Stakeholder Group	Facility leadership staff
14) Have you identified any issues relating to workforce sustainability and strategies to address them (e.g. retirement, attrition)?	

Appendix E – PHN questionnaire

Agenda Item	Areas of focus	Indicative times
Introductions	Introduction to the KPMG team and a broad outline of the project objectives	10 minutes
Discussion on PHN Setting	• Understanding the characteristics of the PHN catchment • PHN profile – key demographics and service needs	15 minutes
Discussion on understanding of the Nurse Practitioner role	• Awareness of NPs that operate within the PHN • Awareness of any direct or indirect involvement with NPs that operate within the PHN	15 minutes
Discussion on any specific examples that the PHN is aware of within their network	• Scope that NPs operate across within PHN • Key benefits that NP roles have created to support PHN in achieving their objective of increasing efficiency and effectiveness of medical services for patients as well as improving coordination of care. • Key costs associated with NP role implementation within the PHN • Any challenges or issues encountered with the NP role operating within the PHN • Any potential opportunities for growth identified regarding the NP role.	20 minutes

KPMG

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