Health policy, administration and expenditure

Submission to the Senate Select Committee on Health

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This submission, prepared jointly by the George Institute for Global Health and the Menzies Centre for Health Policy sets out a number of recommendations for improving the efficiency and effectiveness of the Australian health system.

We propose a combination of 'easy-win' measures that can be implemented relatively easily and rapidly, as well as wider initiatives that encourage the use of evidence to drive investment decisions in the health system.

Waste in health care

Waste in health care is estimated to consume up to 30% of total healthcare budgets, through the widespread use of ineffective health interventions, administrative inefficiencies, and inefficient pricing [1].

Waste exists in all health care systems around the world and Australia is no exception. Exposing patients to ineffective health care not only causes harm but wastes scarce taxpayer dollars which should be used towards improving the health of all Australians.

Waste is conceptualised in two ways. Allocative inefficiency is the allocation of health resources to ineffective, unsafe or harmful activities [2], resulting in less than the best attainable health outcomes.

Waste is also defined as technical inefficiency – where the same health outcome could have been achieved with fewer inputs [2], such as medicines, tests and health professionals' time.

Medical waste can be greatly reduced or eliminated. Measurement of the extent of waste through collection, linkage and dissemination of patient level data is an essential first step to eliminating waste.

Use of this data to apply evidence-based standards to Medicare and the Pharmaceutical Benefits Scheme can and should drive improved quality of health care, and reduced waste, which could underpin an equitable and financially viable Australian health system.

Identifying and measuring waste

Allocative inefficiency in Medicare

A recent review found more than 150 high volume clinical services on the Medicare Benefits Schedule that are either unsafe, ineffective or inappropriate under certain circumstances [3]. Where new evidence emerges, the Medical Services Advisory Committee has identified and recommended the removal of ineffective Medicare services (e.g. vertebroplasty for vertebral compression fracture [4]).

But these examples are rare and much more could be done in this area. At present only about 3% of Medicare Benefits Schedule (MBS) items, representing 1% of MBS cost, have been assessed for safety, effectiveness and cost-effectiveness against contemporary evidence [5].

Much more can, and should, be done to eliminate ineffective medical services from Medicare. Existing Medicare and PBS items are currently not subject to the same rigorous cost-effectiveness analysis as new proposals for medical services and medicines [16]. This presents both an opportunity and challenge for policy makers to address ineffective or low-value health care expenditure.

The recent Commission of Audit recommended to "*review the Medicare Benefits Schedule [MBS] to identify and remove ineffective items, replace expensive items with less expensive alternatives*…".

The clinical value and cost-effectiveness of MBS funded services depends critically on the context in which these services are delivered. Inappropriate diagnostic testing [6] and health care services [7] are both ineffective and wasteful.

Diagnostic testing for Vitamin D deficiency is an exemplar case. In 2003 there were 90,000 Medicare funded Vitamin D tests. By 2013 the number of tests had blown out to a staggering 4.3 million, an increase of 4,800%. Health spending on Vitamin D testing increased from $3 million in 2003 to $145 million in 2013.

There is widespread agreement that the magnitude of the Vitamin D testing increase is not clinically justified. Expert clinical consensus states that Vitamin D testing should be restricted to high-risk patient groups, and should not be repeated for at least 3 months [8].

Government reform in concert with clinical experts can identify and control this waste. The Ontario Ministry of Health in Canada reduced Vitamin D testing to clinically appropriate levels and overall by 90%. A 90% reduction in Vitamin D testing would equate to $130 million in year-on-year savings to Australian Medicare.

The potential saving to the Government of more rigorous analysis of existing medical practices is significant. A recent analysis of US Medicare data found that up to 42% of beneficiaries received at least one (from a sample of 26) low-value health care practices in one year of analysis, at a direct cost of over $8billion [9]. Assuming the same prevalence of waste exists here, Australian Medicare would save $500million *annually* from reducing use of just 26 low-value services.

Technical efficiency in Medicare

A landmark Australian study of 22 common medical conditions, 14 of which are National Health Priority Areas, found that only 57% of adult Australians receive appropriate care for these conditions [10], similar to the United States (55%) [11].

And at least 10% of Australian hospital admissions for chronic conditions are considered preventable with more timely and appropriate non-hospital care [12].

Accordingly state and territory governments have invested in programs to reduce preventable hospitalisations, with some evidence of success [13]. However, there is significant scope for improvement in the management of chronic disease and its risk factors which could prevent many more hospitalisations.

For example, diabetes complications were the most common potentially avoidable hospitalisation (24% of the total) in 2009-10 [13]. However, among general practices participating in a quality improvement program, just 6.8 out of 17 diabetes annual cycle of care elements were recorded on average (for example glucose control, blood pressure, cholesterol levels), while only 41.5% of diabetes patients achieved evidence-based control of blood sugar level [14].

These statistics highlight challenges faced by all health systems in adapting from episodic care focused on single health conditions, to control of multiple, synergistic chronic disease risk factors for a population over time [15].

Nonetheless, variable levels of compliance with evidence-based standards of care, between health providers and across health conditions, are opportunities to improve quality and reduce waste nationally in health priority areas [10].

This is an area where significant improvements in quality of care, and associated reductions in preventable hospitalisation, can be achieved. Reporting and feedback to providers about variations in care in other OECD health systems are already being used to drive convergence towards evidence-based care across populations.

Mechanisms such as provider-level reporting and feedback on performance relative to quality standards, national target-setting for reductions in inappropriate diagnostic tests, and removing perverse financial incentives which discourage quality care, have been used to reduce waste and improve quality of health care [16].

Recommendations:

1. Re-double the efforts of the MBS Comprehensive Management Framework.

The Government has indicated, via initiatives such as the Comprehensive Management Framework of the Medicare Benefits Schedule (MBS), that it is aware of some of these issues.

But regulatory changes appear to have stalled

at the planning or implementation stage, or both. A redoubling of effort is needed in terms of (i) political will and commitment; (ii) resourcing of staff, and (iii) concerted tasking of the Comprehensive Management Framework initiative, to follow through with processes that will re-align MBS items with current evidence for appropriateness (safety, effectiveness and cost-effectiveness).

2. Expand reporting of compliance with evidence-based standards of quality care to all providers. Increase incentives to achieve improved consistency and higher levels of quality care.

Measurement and reporting of variation in clinical practice across regions and between providers is a necessary pre-condition to reducing ineffective or wasteful use of health resources, and achieving higher quality of health care.

Support to improve the overall quality of health care must be facilitated through both reporting of compliance with standards, and appropriate incentives, to improve quality and drive convergence of clinical practice with evidence-based standards.

Wasteful use of medicines

Research has highlighted where ineffective and costly use of medicines could be avoided.

Cardiovascular medicines use

Cardiovascular diseases are the most expensive disease group in Australia [17].

Like many health systems, Australia's PBS subsidises treatment for individual cardiovascular disease (CVD) risk factors, such as blood pressure and cholesterol. This strategy has been criticised as cost-ineffective because it directs the bulk of treatment for CVD risk factors towards low-risk segments of the population [18] [19].

For example, the class of cholesterol lowering agents called 'statins' are among the most expensive drugs to the PBS, but there is limited evidence for their benefit among younger patients, and those with low absolute cardiovascular risk [19].

Robust tools to estimate absolute CVD risk, based on the combination of individual CVD risk factors such as high cholesterol and hypertension, have been developed. Absolute CVD risk scores could re-direct preventive treatment of high blood pressure and cholesterol towards those at highest absolute risk of future CVD events, such as heart attack and stroke.

An Australian economic study modelled the cost-effectiveness of treating those at high absolute risk of cardiovascular disease with a single 'polypill', combining medicines to treat blood pressure and cholesterol in a single pill. This study found that the use of a polypill to prevent cardiovascular disease based on absolute risk would generate a large, immediate cost saving to the health system, and avert a large number of cardiovascular events and deaths [20].

Subsequently, the largest ever trial of a polypill – consisting of a '4 in 1' pill combining fixed-doses aspirin, blood pressure lowering, and cholesterol lowering medication was recently conducted by the George Institute and numerous other partners. This trial demonstrated that such a pill results in 43% increase in medication adherence, and a significant reduction in blood pressure and cholesterol among those at high risk of heart attack or stroke [21].

Although not yet commercially available in Australia, the polypill trialed in the study was produced by a manufacturer of generic medicines for a fraction of the cost of its individual constituent medicines. The widespread use of such a pill could potentially save many millions for the PBS.

Low back pain investigation and treatment

Back pain affects almost 80% of Australians during their lives, causes significant activity limitation, and is among the most significant work-related problem for Australians [22].

A meta-analysis of patients with acute or subacute low back pain and with no clinical features suggesting a specific underlying condition, found no differences between routine lumbar imaging (radiography, MRI, or

CT) and usual care without routine imaging in terms of pain, function, quality of life, or overall patient-rated improvement [23].

Diagnostic imaging for low back pain costs The Government many millions each year, much of which is not required according to the best evidence. Medical imaging for low back pain is currently under review by the Medical Services Advisory Committee.

Paracetamol is commonly recommended and prescribed for back pain, and is among the top 10 most used and prescribed drugs in Australia [24]. However a recent randomized trial of paracetamol for the treatment of acute lower back pain found no benefit versus placebo [25].

Restrictions on inappropriate use of diagnostic imaging and medicines could generate significant savings to The Government across Medicare and the PBS.

Resuscitation of intensive care unit patients

Similarly, landmark multinational randomized trials by Australian investigators among intensive care unit patients found that the use of more expensive colloidal solutions for patient resuscitation was no more effective than cheaper normal saline [26]. The cost of 500mls normal saline is around $0.61 whereas the same volume of colloidal solution is around $40.

Further, for a subgroup of patients, the more expensive fluid actually caused harm, and required these patients to have additional costly treatment. This research highlights where appropriate use of medicines in hospitalised patients can improve the quality and cost-effectiveness of hospital-based care.

Recommendation: Evidence-based, cost-effective utilisation of PBS medicines requires review of cost-effectiveness, especially for chronic diseases. Incorporation of absolute disease risk into PBS subsidy eligibility criteria is essential to improving overall effectiveness and cost-effectiveness of the PBS.

Non evidence-based care

Substantial and unwarranted variation exists in both the cost of care, and the intensity of health care delivery, across Australia.

A recent study found differences in the cost of common surgical procedures between hospitals of between $4,000 and $16,000. Variation between the cheapest and most expensive hospital was more than $1,500 for every hospital admission, even after taking into account differences in funding [27].

A more than nine fold difference in the rate of hospitalisation for cardiac catheterisation between the lowest and highest Medicare Local areas has recently been described [28].

This variation in clinical practice is highly unlikely to represent geospatial disparity in cardiovascular disease or casemix alone, and suggests that some clinical practice is unwarranted. Analysis across 13 OECD countries demonstrates high geographic variation among cardiac procedures both within and across countries, even after adjusting for age.

For example, studies of the United States' Medicare system have found substantial unwarranted variation in rates of diagnostic procedures [29] and surgical procedures [30].

International comparisons demonstrate wide disparities in the use of both clinical information systems and payment incentives which underpin differences in the efficiency and quality of health care [31].

Despite strong research evidence regarding waste, change in clinical practice and health policy has been slow. Research has identified barriers to the cessation of low-value care practices [32], but implementation in clinical practice remains challenging [33].

Australia's move towards the establishment of a nationally efficient price for hospital services is a welcome step towards benchmarking and standardisation of clinical practice, and may help identify opportunities to improve efficiency and reduce waste.

Recommendation:

Forge a path towards linking disparate, large, routinely collected health datasets in order to quantify waste, and support quality improvements

Measuring geographic and cost variations of care are *indirect* measures of appropriateness, and offer a crucial red flag of either inappropriate overuse of care, and/or potential underuse of necessary care. To measure appropriateness directly, however, requires an ability to measure individual patient experience through time and across providers and health care settings.

Defining the magnitude of waste in Australia is impeded by the fragmented nature of Australian health data collections. Separate data collections reside across community and hospital settings, between states and territories, and between sources of health care finance – governments, private insurance, and out-of-pocket patient contributions.

Examining patient health data across this continuum is a necessary precondition to understanding and impacting both the underuse of effective care as well as the overuse of ineffective care (waste).

Comprehensive data linkage is vital to quantify the clinical and financial experience of Australian patients and to recognise and reduce waste.

Health financing reform

Many OECD nations, including Australia, have adopted blended payment models to align health care with desired outcomes, and improve the value of medical services purchased.

The Government's Service Incentive Payments and Practice Incentive Payments [34] provide financial incentives for medical practices to improve health care quality, patient access, and health outcomes. However these financial incentives are a comparatively small component of total provider remuneration relative to comparable health systems [35].

The National Primary Health Care Strategy has identified the need to explore further expansion of blended payment models [7] to support improvements in the efficiency of health care delivery.

The Government's currently proposed changes to health financing include a $7 co-payment for General Practice visits and out-of-hospital pathology and imaging services, and a $5 increase in PBS medicine co-payments. The Government has also proposed a $145.30 increase in the PBS Safety Net ($61.80 for concessional patients), and indexation of this Safety Net at 10% above inflation for a further 3 years from the 2014-15 Budget [36].

Patient contributions to health care in Australia though out-of-pocket expenses (excluding the cost of private health insurance premiums) already comprise approximately 18% of health spending in Australia – a higher proportion than in most OECD countries and higher than the OECD median of 15.8% [37]. In a comparison across 14 OECD countries, only residents of Switzerland and the United States pay more dollars out-of-pocket for their health care [38].

Despite existing financial safety nets, socioeconomically disadvantaged Australians already face economic hardship in accessing health care. Australian research has shown that those on low incomes receiving general pharmaceutical subsidies (i.e. the working poor) spend between 5-26% of their discretionary income for between seven and nine months of each year before receiving additional subsidies [39]. Socioeconomically disadvantaged Australians are more likely to have risk factors for chronic disease [40].

Out-of-pocket costs have a direct impact on access to health care. In 2013, 14% of Australian adults reported that they did not attend the doctor and/or did not get recommended care because of cost. Amongst those living with chronic health problems, this proportion was 24% [41].

Lack of medication adherence by patients with chronic conditions is a well recognised cause of hospitalisations and excess cost ($100 billion per year in the United States for example) [42].

International evidence suggests increased patient co-payments for medicines results in poorer medication adherence and increased treatments costs for chronic conditions including diabetes, congestive heart failure, and lipid disorders [43]. Conversely, improved medication adherence, despite increased medication costs, is associated with lower overall disease-related costs [44-46].

Approximately 10% of adults referred to a specialist delay or do not keep their appointment because of cost [47]. Similarly, around 9% of adults delay or do not fill prescriptions for essential medications because they cannot afford to do so [47]. This proportion rises to over 12% in the most socioeconomically disadvantaged quintile? of the population [47].

Analysis of previous policy change to patient co-payments and PBS safety nets have already demonstrated an adverse effect on patients' compliance with use of PBS medicines. Concessional patients PBS medicine utilisation fell more than non-concessional patients, despite a lower dollar amount increase [48].

Collectively, these studies demonstrate that the individual contributions that are required of people with chronic illness can be prohibitive, consuming a substantial share of a household's available resources, particularly for those who are already economically disadvantaged [49].

For people with chronic disease, who are regular users of the health care system, the burden of out-of-pocket costs is more pronounced. Patients face copayments at various places in the system: GP and specialist appointments, medical and diagnostic tests, pathology tests.

Recent studies in populations with chronic obstructive pulmonary disease and chronic kidney disease found patients spend between $600 - 1400 per three months out-of-pocket on medical services, medications, community services and transport [50, 51].

While safety net programs cap spending on Medicare-eligible out-of-hospital care and PBS-subsidised medicines, this research shows patients often struggle to afford out-of-pocket costs before reaching safety net thresholds each year.

In addition, these patients incur substantial out-of-pocket expenses on non-insured items (e.g. medical devices, over-the-counter medications, non-PBS subsidised drugs) which contribute substantially to the financial burden of health care costs.

Given the existing burden of out-of-pocket costs found in the general population and in particular, in those with chronic disease, there is an urgent need to review the role of out-of-pocket expenditure in the current system.

Much of this expenditure results from copayments for care that is not rebated (e.g. by Medicare, private health insurance or other sources). We therefore support the recent recommendation made by the Consumer's Health Forum to improve the current system by developing a national policy on copayments, informed by community consultation and the growing body of Australian research on this issue [52].

It is striking that about 80% of general practice consultations but less than 30% of specialists' appointments for clinic care are bulk-billed [53]. The average gap between the private fee charged by a specialist and the Medicare benefit received by a patient is approximately $60, but gaps in excess of $100 or more are not uncommon.

Most private specialists do not bulk bill, and because the poor can't afford to pay gap fees in the first place, less than 4% of Extended Medicare Safety Net benefits go to the 20% of the most socioeconomically disadvantaged members of our population: in contrast, over 50% of benefits are distributed to the 20% most advantaged [54]. This is a policy failure – it is the poor who are most likely to suffer ill health, and who have the lowest discretionary income, and yet are least likely to benefit from the Extended Medicare Safety Net.

Nine Percent of adults delay or fail to fill prescriptions because they cannot afford to do so, but this percentage is over 12% in the most

socioeconomically disadvantaged fifth of the population [47].

Furthermore, Australian research has shown that those on low incomes receiving general pharmaceutical subsidies (i.e. the working poor) face a substantial financial burden with low income households foregoing the equivalent of between 5-26% of their discretionary income for between seven and nine months of the year before receiving additional subsidies [39].

We believe that a compulsory copayment for bulk-billed GP consultations, even if only $6, would exacerbate the financial barriers that economically disadvantaged Australians face in obtaining health care, further exacerbating inequities of access. Although some have argued that a 'price signal' will deter unnecessary consultations, there is little evidence to support this [55]. This also presumes that consumers know the severity and prognosis of their condition before their consultation.

However evidence of the converse exists: eliminating cost-barriers in general practice is not associated with any increase in general practitioner consultations [56]. Delayed diagnosis risks both harm and increased downstream healthcare costs. Importantly, every GP consultation is an opportunity for detecting asymptomatic disease, reducing risk, addressing unhealthy behaviour and promoting health [57]; a copayment would reduce these opportunities with potential long-term impacts on both heath and health care costs [58].

Studies of hospital admissions have demonstrated that many hospitalisations could be prevented with more timely, or more effective, ambulatory care [13, 59].

This heavy burden of out-of-pocket costs has also been demonstrated in other common chronic conditions, including cancer [60], stroke [61], kidney disease [50] and end of life care [62]. People with five or more chronic conditions spend on average five times as much on their health as those with no diagnosed chronic conditions. Each additional chronic disease adds 46% to the likelihood of a person facing severe financial difficulties due to health costs [63].

Other OECD nations have adopted different, more equitable strategies to patient copayments for health care. Examples include restricting total patient contributions to 1% of household income per annum (Germany), eliminating co-payments on medicines for those with designated chronic conditions (France), or eliminating co-payments for patients with chronic disease who participate in a disease management program (Germany) [64] [65].

Recommendation: ***Develop a national policy on patient copayments in the Australian health system. This policy should be evidence-based and underpinned by the principle of socioeconomic equity in access to health care.***

Electronic health records

The Government's review of the Personally Controlled Electronic Health Record states that $7 billion could be saved annually through the digitization of the healthcare sector in Australia [66].

Through Practice Incentive Payments for e-health, The Government has created a market resulting in high uptake of electronic health records in general practice, consistent with the best performing OECD nations [67].

Furthermore, The Government supports general practices in Australia to improve the quality of primary care through its funding of the Australian Primary Care Collaboratives Program (APCC) [68].

The APCC reports [14] provide an important link between general practice electronic health records and population risk factors for the most prevalent and costly chronic conditions in Australia (hypertension and diabetes control, for example).

One large health care provider, Kaiser Permanente, a health care provider for approximately 10 million Americans, implemented an electronic health record

(EHR) at a cost of $4 billion (US$444 per member) [69].

Kaiser Permanente used EHR information to reduce patient visits to primary care doctors by 26%, without sacrificing performance on patient satisfaction or clinical quality [70]. Moreover, Kaiser has embedded clinical standards and performance reporting into its EHR to facilitate management of population health risk factors by its clinicians across its 10 million patients [71].

The use of clinical electronic decision support provided in real-time for both providers and consumers in combination with an effective EHR has enormous potential to improve quality of care in Australia [72]

Recommendation: ***Use electronic health records in combination with decision support tools to drive improved quality use of Medicare items and PBS subsidised medicines.***

Conclusion

Medical waste represents a significant proportion of health expenditure in Australia. Eliminating waste, and improving the efficiency and cost-effectiveness of the health system, requires re-allocation of the health budget towards effective care.

The proposed Medical Research Future Fund is a step towards generating better evidence to drive health system efficiency, and free resources towards future scientific discoveries to improve the lives of all Australians.

Our submission highlights a strong body of evidence to guide approaches to the elimination of waste. These approaches can generate large savings and improved efficiency for the health system.

Implementing these approaches will require the commitment of governments, health care providers, and consumers to protect and enhance our health system for future generations.

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