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The Parliament of the Commonwealth of Australia

# Skin Cancer in Australia: **Our** National Cancer

## Report on the Inquiry into Skin Cancer in Australia

House of Representatives **Standing Committee on Health**

March 2015  
Canberra

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## Chair's Foreword

Skin cancer is often referred to as Australia's 'national cancer'. Australia has the highest rate of skin cancer in the world, and current statistics indicate that two in three Australians will be diagnosed with skin cancer before the age of 70, yet 95 to 99 per cent of all skin cancers are preventable.

Statistics show that the primary campaigns are working, and a number of community organisations must be commended for their efforts. Since the iconic *Slip! Slop! Slap!* Campaign of the 1980s, primary prevention campaigns have promoted the use of sunscreen, protective clothing and limited exposure to damaging ultraviolet (UV) radiation. Current campaigns include use of new technologies to provide information about UV radiation forecasts and remind people to apply sunscreen or seek shade during certain times of the day.

A number of high profile Australians have also recently publicised their skin cancer diagnoses and treatments. Hugh Jackman and Ritchie Benaud are two of the most recent examples, with both speaking publically about the importance of primary prevention and the role of personal responsibility. Providing role models for such behaviour reinforces public awareness campaigns especially to young Australians.

However, there is still progress to be made to embed sun-smart behaviours in some sectors of the Australian population. Two notable examples raised during the Inquiry were the sun protection strategies for the outdoor workforce as well as young Australians, especially at the secondary school level. Indeed there remain pockets of the population which, although aware of the risk, have not translated this awareness into behavioural change.

Early diagnosis is critical for survival rates for skin cancer. For lesions thicker than four millimetres, the five-year survival rate is 55 per cent, but for melanomas of one millimetre or less, the five-year survival rate is almost 100 per cent.

Australia engages in population-based screening programs for breast, cervical, and bowel cancers, but relies on opportunistic screening for skin cancer. There is an opportunity for people at a high risk of skin cancer to be reminded to undertake regular skin checks as part of the notification process for bowel cancer.

This reminder approach specifically targets the age group which has also been found to be in the high risk category for skin cancer.

The Inquiry also highlighted the debate on how best to provide medical services for the diagnosis and treatment of skin cancer, whether through referrals to dermatologists or through skin cancer clinics. Skin cancer clinics have developed in response to the increased demand for skin checks, long waiting times to see dermatologists, as well as cost, distance, and time constraints. Greater assurance should be provided to the public that skin cancer clinics are staffed by general practitioners with a high level of relevant skills and experience. Accreditation for skin cancer clinics with the requirement for such clinics to be staffed by a minimum number of suitably qualified and experienced staff including dermatologists, should also be considered.

Rural and remote areas are at a particularly high risk of skin cancer due to demographics and occupation. This is compounded by the limited availability of specialist dermatologists in rural and remote areas as well as time and cost considerations. The Inquiry revealed that some of these challenges can be overcome by the use of new and emerging technologies.

Indeed, the use of new and existing technologies in diagnosing skin cancer is particularly promising. Of note are the teleconference and store and forward teledermatology. Further, the use of the dermatoscope is key to the early detection of skin cancers. However, these new and emerging technologies require sufficient training and experience to attain an appropriate level of proficiency.

Treatment and management of skin cancer involves any number of clinicians and specialists as well as a range of psycho-social and non-medical support services. For patients, navigating the multitude of clinicians and specialists can add to an already challenging and uncertain time in their lives. This is where multidisciplinary patient management becomes all the more important. Various locations around Australia have begun delivering multidisciplinary care across a range of diseases, including cancer, which draws these practitioners into a collaborative and centralised 'shared care' model. Such an approach has led to some promising treatment options for patients.

However, it is also important that Australia continues to lead global research into skin cancer and work to discover new and improved treatments. Australia has earned a global reputation for its medical research, particularly in the area of cancer research. Throughout the Inquiry, the vitality and energy of Australian medical researchers was clearly evident, and must be commended. In many fields, Australian medical researchers are leading the world's efforts to find better treatments and cures for a number of diseases. Their efforts, energy and experience should be encouraged by governments at all levels and industry alike.

Although an overall increase in the incidence of skin cancer in Australia's ageing population is likely, current trends indicate that mortality rates are likely to decrease. Australia has made great advances in preventing and treating skin cancers, but there is always room for improvement.

I thank the individuals, organisations and government agencies who contributed to this Inquiry. I also thank Committee Members for their contribution and participation throughout the Inquiry.

Steve Irons MP  
Chair







## Committee Membership

**Chair** Mr Steve Irons MP

**Deputy Chair** Mr Tim Watts MP (from 16 July 2014)

Hon Amanda Rishworth MP (until 15 July 2014)

**Members** Ms Lisa Chesters MP

Ms Melissa Parke MP (until 17.03.2014)

Ms Jill Hall MP

Dr Andrew Southcott MP

Ms Sarah Henderson MP

Mrs Ann Sudmalis MP

Mr Stephen Jones MP (from 18.03.2014)

Mr Ken Wyatt AM, MP

Mr Andrew Laming MP

## Committee Secretariat

**Secretary** Ms Stephanie Mikac (from 10.04.2014)

Mr Peter Stephens (until 9.04.2014)

**Inquiry Secretary** Dr John Carter (from 22.9.14)

Mr James Nelson (until 18.7.14)

**Research Officers** Dr Phillip Hilton

Ms Lauren Wilson

**Administrative Officers** Ms Megan Peile

Ms Carissa Skinner





## Terms of Reference

The Standing Committee on Health will inquire into melanoma and non-melanoma skin cancers and report on:

- options to improve implementation of evidence-based best practice treatment and management;
- strategies to enhance early diagnosis;
- effective strategies for prevention; and
- the need to increase levels of awareness in the community and among healthcare professionals.





## Abbreviations

AIHW	Australian Institute of Health and Welfare
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
BCC	Basal cell carcinoma
BoM	Bureau of Meteorology
GP	General Practitioner
GPwSI	General Practitioner with a Special Interest
MBS	Medicare Benefits Schedule
MDT	Multidisciplinary Team
MSAC	Medical Services Advisory Committee
NCMC	National Centre for Monitoring Cancer
NHMRC	National Health and Medical Research Council
NMSC	Non-melanoma skin cancer
PBAC	Pharmaceutical Benefits Advisory Committee
PBS	Pharmaceutical Benefits Scheme
PdCCRS	Priority-driven Collaborative Cancer Research Scheme
PGA	Professional Golfers' Association of Australia
SCC	Squamous cell carcinoma
SDDI	Sequential digital dermoscopy imaging

SPF	Sun Protection Factor
TGA	Therapeutic Goods Administration
UPF	Ultraviolet protection factor
UVR	Ultraviolet radiation
WACA	Western Australian Cricket Association
WACHS-K	Western Australia Country Health Services – Kimberley
WHO	World Health Organization



# Recommendations

## 2 Skin Cancer Prevention

### Recommendation 1

The Committee recommends that national sporting bodies and associations which engage in outdoor activities adopt sun smart policies modelled on a similar template to that of Cricket Australia and Surf Life Saving Australia incorporating aspects relevant to their sport.

### Recommendation 2

The Committee recommends that the Department of Education work with States and Territories to encourage the adoption of sun smart policies in Australia's secondary schools which would include:

- Expanding high school curricula to cover healthy sun-aware behaviours; and
- Providing more covered outdoor learning areas.

### Recommendation 3

The Committee recommends that local governments give consideration to providing extended covered (shade) areas over swimming pools.

## 3 Early Diagnosis and Training

### Recommendation 4

The Committee recommends that the Department of Health include information reminding people to seek a skin cancer check when letters are sent out as part of the National Bowel Cancer Screening Program and that information be provided by general practitioners at health assessments for people aged 75 years and older.

### Recommendation 5

The Committee recommends that the Department of Health consider the effectiveness of public awareness campaigns to increase the awareness of the need for skin checks, especially strategies to target high risk groups.

### Recommendation 6

The Committee recommends that the Royal Australian College of General Practitioners conduct an assessment of ways to provide firm assurance to the public concerning skin cancer clinics. The assessment should consider potential accreditation options as well as a requirement for such clinics to be staffed by a minimum number of suitably qualified and experienced staff including dermatologists.

### Recommendation 7

The Committee recommends that store and forward teledermatology as used by registered medical providers be included on the Medicare Benefits Schedule.

### Recommendation 8

The Committee recommends that:

- Dermatology components of the undergraduate medical curriculum be expanded; and
- Proficiency in the use of the dermatoscope be included in the practical component of all undergraduate medical courses and in rural nursing training courses.

### Recommendation 9

The Committee recommends that all sun-exposed industries incorporate mandatory sun-safety education in their induction programs.

## 4 Treatment and Management

### Recommendation 10

The Committee recommends the National Health and Medical Research Council:



■ work with relevant stakeholder to urgently update the registered *Clinical practice guidelines for the management of melanoma in Australia and New Zealand (2008)* and *Basal cell carcinoma, squamous cell carcinoma (and related lesions) – a guide to clinical management in Australia (2008)*, and that these guidelines be updated:

- ⇒ shortly after each new treatment is approved by the Therapeutic Goods Administration; or
- ⇒ as frequently as recommended by the profession after relevant consultation; and

that the Department of Health undertake research and analysis of whether clinical guidelines relating to skin cancer treatments can be placed on a digital platform, thereby allowing regular updates and quick and easy distribution of updated best practice for clinicians and practitioners.

#### **Recommendation 11**

The Committee recommends that the Department of Health work with State and Territory counterparts to:

- establish a virtual platform for the multidisciplinary treatment of skin cancer for patients located in regional and remote Australia; and
- further develop and implement best practice models for multidisciplinary care for the treatment of skin cancer patients.

#### **Recommendation 12**

The Committee recommends that the Australian Government ensure that adequate funds are provided for the non-medical support services of skin cancer patients and their families, particularly support services for those rural patients who have to travel for treatment.



## Introduction

### Background

- 1.1 Australia has the highest rate of skin cancer diagnosis globally.<sup>1</sup> Every year in Australia, skin cancers account for 80 per cent of all newly diagnosed cancers,<sup>2</sup> and more than 2000 Australians will die from this largely preventable disease.<sup>3</sup>
- 1.2 Two broad types of skin cancers can occur in humans, those being melanoma and non-melanoma.<sup>4</sup> While melanoma of the skin is 'the more serious and sometimes fatal type of skin cancer',<sup>5</sup> when found in its early stages it is 'very treatable'.<sup>6</sup>

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1 Melanoma Institute of Australia, *Melanoma Facts and Statistics*, [www.melanoma.org.au/about-melanoma/melanoma-skin-cancer-facts.html](http://www.melanoma.org.au/about-melanoma/melanoma-skin-cancer-facts.html), viewed November 2014; Department of Health, *Submission 12*, p. 4.

2 Cancer Council Australia, *Skin Cancer*, <http://www.cancer.org.au/about-cancer/types-of-cancer/skin-cancer.html>, viewed November 2014.

3 Cancer Council Australia and the Clinical Oncology Society of Australia, *Submission 26*, p. 1.

4 Melanoma Institute of Australia, *Melanoma Facts and Statistics*, [www.melanoma.org.au/about-melanoma/melanoma-skin-cancer-facts.html](http://www.melanoma.org.au/about-melanoma/melanoma-skin-cancer-facts.html), viewed November 2014.

5 Department of Health, *Submission 12*, p. 4.

6 Australian Institute of Health and Welfare, 2012, *Cancer Survival and Prevalence in Australia: period estimates from 1982 to 2010*, Cancer Series no. 69, Cat. No. CAN 65, Canberra, AIHW, p. 86.

## About the Inquiry

### Objectives and Scope

- 1.3 On 9 January 2014, the Minister for Health referred the Inquiry into Skin Cancer in Australia (the Inquiry) to the Standing Committee on Health (the Committee). A similar inquiry was referred to the Committee's predecessor Committee (the Standing Committee on Health and Ageing) in the 43<sup>rd</sup> Parliament, but lapsed with the prorogation of the Parliament in August 2013.
- 1.4 The previous inquiry titled *Inquiry into Skin Cancer in Australia: Awareness, Early Diagnosis and Management* included within its terms of reference the need to examine future projections of the estimated prevalence of both types of skin cancer (melanoma and non-melanoma). Within this inquiry the then Minister for Health also referred the need for consistency in solarium regulation across Australia, including consideration of a national ban.
- 1.5 The matter of solarium regulation and possible ban was removed from the current terms of reference as it is already being considered by the Standing Council on Health.
- 1.6 The Committee welcomed the Skin Cancer in Australia reference and wrote to the Minister for Health on 11 February 2014 seeking to expand the scope of the Inquiry to include *effective strategies for the prevention of skin cancer*. The expanded scope would ensure that the Inquiry maintained a focus on how best to meet the needs of the Australian community. The amendment to the terms of reference was formally endorsed by the Minister for Health on 3 March 2014.
- 1.7 The terms of reference for the Inquiry required the Committee to inquire into melanoma and non-melanoma skin cancers and report on:
  - options to improve implementation of evidence-based best practice treatment and management;
  - strategies to enhance early diagnosis;
  - effective strategies for prevention; and
  - the need to increase levels of awareness in the community and among healthcare professionals.

### Committee's Role

- 1.8 During the 43<sup>rd</sup> Parliament's skin cancer inquiry, the Standing Committee on Health and Ageing held a roundtable hearing on 21 June 2013 which was used to inform the 44<sup>th</sup> Parliament's Inquiry.

- 1.9 As part of its roundtable, the predecessor Committee invited contribution by a small, but relevant selection of individuals and organisations including: medical professionals, peak skin cancer bodies, and Government agencies such as the Department of Health, which included the Therapeutic Goods Administration.
- 1.10 Taking into consideration the information presented to the Committee on the incidence and prevalence of melanoma and non-melanoma skin cancer in Australia, and future projections, the 2013 roundtable canvassed issues including:
- statistics and data trends: susceptibility of males versus females in the population, age groups at high risk and mortality rates;
  - primary and secondary prevention and the need for and cost of a national awareness campaign and screening program;
  - cost of management and diagnosis taking into consideration the prevalence of melanoma and non-melanoma on older age groups (ie. pensioners), and the benefit and reduction in health care costs in treating people earlier;
  - accessibility and affordability of treatments for people with advanced melanoma of the skin generally and in rural and remote areas;
  - funding arrangements and responsibilities across jurisdictions;
  - continual review of melanoma management guidelines used by general practitioners to ensure they are: sound, contemporary, useable and used;
  - regulation and possible ban of solarium;
  - emerging new treatments, drug trials and medical research;
  - the costs involved and consideration of new drugs by the Pharmaceutical Benefits Advisory Committee and possible subsidisation of the price of drugs under the Pharmaceutical Benefits Scheme;
  - proportion of time spent training doctors in dermatology at the undergraduate and post graduate level and professional development;
  - new technology: the benefits and disadvantages of teledermatology and the transmission of still images for diagnostic purposes;
  - accuracy of diagnosis, identifying people at high risk, continued surveillance of people at high risk and related models of care;
  - opportunistic skin checks;
  - role and penetration of sun protection awareness education campaigns and related evaluation surveys; and

- mode of acquiring and acceptable levels of Vitamin D: sun exposure versus dietary supplementation.

1.11 The Committee has used the evidence gathered by its predecessor Committee to inform it during the course of this Inquiry.

## Inquiry Conduct

1.12 On 30 January 2014, the Inquiry was announced via media release, with submissions sought from relevant and interested individuals and organisations by 12 March 2014. The submissions due date was later extended to 28 March 2014. Following the closing date, and in an effort to capture as much evidence as possible for the duration of the Inquiry, the Committee agreed to receive submissions until the final hearing.

1.13 In total, the Committee received 81 submissions (including supplementary submissions) and 26 exhibits from a wide range of individuals including: medical practitioners, peak medical bodies, medical researchers, public health authorities, private companies, government agencies and patient support organisations. Submissions and exhibits received to the Inquiry are listed at Appendix A and B respectively.

1.14 The Committee held 13 public hearings across Australia as listed below. The witnesses who gave evidence at these hearings are listed at Appendix C.

<b>Skin Cancer Inquiry - Hearings 2014</b>	
<b>Date</b>	<b>Location</b>
25 and 28 March, 28 July	Canberra, ACT
14 April	Adelaide, SA
1 May	Perth, WA
2 May	Broome, WA
22 May	Brisbane, Qld
23 May	Cairns, Qld
6 June	Melbourne, Vic
29 July	Sydney, NSW
5 September	
30 July	Newcastle, NSW
8 August	Nowra, NSW

- 1.15 Copies of submissions received and transcripts of public hearings are available on the Committee's webpage at: [www.aph.gov.au/health](http://www.aph.gov.au/health).

## Report Structure

- 1.16 This report outlines the Committee's comments, findings and recommendations in relation to its skin cancer in Australia inquiry. For reader ease recommendations are made at the end of each chapter and also listed at the front of the report.
- 1.17 Chapter 2 provides a background to the nature and prevalence of skin cancer in Australia and discusses the role of sun exposure in maintaining acceptable levels of Vitamin D in the body. The chapter also reviews the primary prevention of skin cancer including awareness campaigns capturing schools, workplaces, sports and other outdoor activities.
- 1.18 Chapter 3 examines the role and usefulness of initiatives to promote the early detection of skin cancer, including screening programs, affordability and geographic access to medical services. The chapter also examines the role of the different medical services involved in diagnosing skin cancer, as well as investigating new forms of technology to assist with diagnosis.
- 1.19 Chapter 4 considers issues relating to both existing treatments for skin cancer and new treatments coming onto the market. The chapter also examines different models for the management of patients with skin cancer, particularly advanced melanoma.





## Skin Cancer Prevention

- 2.1 Skin cancer is often described as Australia's 'national cancer',<sup>1</sup> yet in 95 to 99 per cent of cases, it is a preventable disease.<sup>2</sup> Although an overall increase in the incidence of skin cancer in Australia's ageing population is likely, current trends indicate that mortality rates are likely to decrease. This decrease is attributed to long-term prevention activities, particularly those prevention activities which target younger Australian generations.<sup>3</sup>
- 2.2 This chapter examines incidence and prevalence trends, the common misconceptions and misunderstandings of the disease as well as the primary prevention activities which seek to reverse those trends.

### What is skin cancer?

- 2.3 The term skin cancer covers two groups of skin lesions: melanoma of the skin (melanoma) and non-melanoma skin cancer (NMSC). Melanoma is the more serious as it can 'metastasise'<sup>4</sup> and lead to the spread of secondary cancers throughout the body.<sup>5</sup> According to Melanoma Institute Australia, melanoma is the fourth most common form of cancer in

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1 Mr Gordon Gregory, Executive Director, National Rural Health Alliance, *Official Committee Hansard*, Canberra, 25 March 2014, p. 1; Merck Sharp & Dohme (Australia) Pty Limited, *Submission 32*, p. 3; Trans-Tasman Radiation Oncology Group, *Submission 47.1*, p. 2; Melanoma Institute Australia, *Submission 58*, p. 1.

2 Department of Health, *Submission 12*, p. 4; Australian Radiation Protection and Nuclear Safety Agency, *Submission 20*, p. 2; Cancer Council Australia and Clinical Oncology Society of Australia, *Submission 26*, p. 4.

3 Department of Health, *Submission 12*, p. 4.

4 The term metastasise refers to the spreading of these cells beyond the site of the original tumour.

5 Department of Health, *Submission 12*, p. 5.

Australian men and women (10 per cent of all cancers), and one person dies from melanoma every six hours.<sup>6</sup>

- 2.4 There are two main types of NMSCs: basal cell carcinomas (BCCs) and squamous cell carcinomas (SCCs). Both types of NMSC usually do not metastasise. NMSC is the most commonly diagnosed skin cancer in Australia and throughout the world.
- 2.5 A third group of skin lesions called keratinocyte dysplasias, though not invasive cancers, may develop into NMSCs. This category includes solar keratosis, Bowenoid keratosis and squamous cell carcinoma in-situ (Bowen's disease).<sup>7</sup>

## What are the causes of skin cancer?

- 2.6 The overwhelming majority of skin cancer is acquired from overexposure to harmful solar ultraviolet radiation (UVR) from the sun.<sup>8</sup> The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) stated:

Solar ultraviolet radiation (UVR) exposure has been identified as the cause of around 99 per cent of non-melanoma skin cancers and 95 per cent of melanoma in Australia.<sup>9</sup>

- 2.7 Cancer Australia referred to the work of the International Agency for Research on Cancer which classified UVR as a Group 1 carcinogen causing melanoma and other types of skin cancer, including BCC and SCC.<sup>10</sup> Similar comments were made by the Australian Medical Association (NSW): 'UVR is the most significant contributing factor to the development of skin cancer'.<sup>11</sup>
- 2.8 Further, the nature and frequency of exposure to UVR may place an individual at a higher risk of cancer as previously defined:

The pattern of exposure for UV radiation influences the skin cancer for which you are at greater risk. The general pattern

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6 Melanoma Institute Australia, *Submission 58*, p. 1.

7 Department of Health, *Submission 12*, p. 5.

8 Professor Adele Green, *Submission 1*, p. 1; Professor Adele Green, *Submission 1 (Attachment 1)*, p. 1; Australian Radiation Protection and Nuclear Safety Agency, *Submission 20*, p. 2; Cancer Australia, *Submission 23*, p. 5; Skin and Cancer Foundation Inc, *Submission 9*, p. 13; Australian Medical Association (NSW), *Submission 4*, p. 3; Cancer Council Australia and Clinical Oncology Society of Australia, *Submission 26*, p. 4; Cancer Australia, *Submission 23*, p. 5.

9 Australian Radiation Protection and Nuclear Safety Agency, *Submission 20*, p. 2; see also Cancer Australia, *Submission 23*, p. 5.

10 Cancer Australia, *Submission 23*, p. 5. See also Cancer Council Australia and Clinical Oncology Society of Australia, *Submission 26*, p. 4;

11 Australian Medical Association (NSW), *Submission 4*, p. 3.

suggests that consistent exposure of the type that someone who might be a consistent outdoor worker is exposed to increases the risk of squamous cell carcinoma. Office jockeys like you and me, who spend most of our time inside and then go out on the weekend recreationally and get intense exposure, are probably at more elevated risk of basal cell carcinoma and melanoma.<sup>12</sup>

- 2.9 The Bureau of Meteorology (BoM) explained that there are three different types of UVR: UVA, UVB and UVC.
- 2.10 Of the three, UVA is of a longer wavelength, causing premature ageing and wrinkling of the skin and is a cause of skin cancer. UVB is of a medium wavelength, is more dangerous than UVA, and is the major cause of skin cancers, sunburning and cataracts. UVC is of a shorter wavelength, and is 'extremely dangerous' but does not reach the surface of the Earth as it is absorbed by the atmosphere.<sup>13</sup>
- 2.11 The BoM explained:
- As sunlight passes through atmosphere, all UVC and 90 percent of UVB [is] absorbed by [the] ozone. Therefore, the UV radiation that reaches the ground is mostly UVA, with some UVB. UV varies depending on how much is absorbed in the atmosphere.<sup>14</sup>
- 2.12 The BoM stated that absorption and the subsequent amount of UVR received on the surface of the Earth differs, depending on the time of year, the time of day, position on Earth, altitude,<sup>15</sup> ozone,<sup>16</sup> and cloud cover.<sup>17</sup> UVR levels are highest under cloudless skies and heavy cloud can result in less UVR. However scattered or thin cloud cover does not reduce UVR and may even increase levels due to scattering.<sup>18</sup>
- 2.13 The strength of the UVR that reaches the Earth's surface on a particular day is measured by the UV Index – an international standard of measurement.<sup>19</sup> The UV Index ranges from 0 to 11+ and the higher the number the greater the risk of skin damage.<sup>20</sup> UV Index levels below three

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12 Mr Terry Slevin, Education and Research Director, Cancer Council Western Australia, *Official Committee Hansard*, Perth, 1 May 2014, p. 9.

13 Bureau of Meteorology, *Submission 62*, p. 2.

14 Bureau of Meteorology, *Submission 62*, p. 2.

15 There is about a 10 per cent increase in UV for each 1000m increase in altitude above sea level.

16 Ozone absorbs much UV that would otherwise reach the earth. Ozone amounts vary from day to day and seasonally.

17 Bureau of Meteorology, *Submission 62*, p. 3.

18 Bureau of Meteorology, *Submission 62*, p. 3.

19 The Bureau of Meteorology issues a daily UV Index forecast based on the predicted levels of UVR. These forecasts are available on the Bureau's website ([www.bom.gov.au](http://www.bom.gov.au)).

20 Bureau of Meteorology, *Submission 62*, p. 3.

are considered by Cancer Council Australia and the BoM as safe.<sup>21</sup> The BoM's alert system is discussed later in this chapter.

- 2.14 The Department of Health advised that UVR levels in Australia are higher than other parts of the world:

When combined with clearer atmospheric conditions and differences in ozone level, Australia is exposed to some of the strongest UV radiation levels in the world.<sup>22</sup>

- 2.15 Further, a large proportion of Australians who are fair skinned and of European descent (where there are lower levels of solar UVR) are at a genetically higher risk of developing skin cancer from exposure to UVR.<sup>23</sup> The Skin & Cancer Foundation Inc also stated that UVR exposure can be more detrimental in a 'genetically susceptible population'.<sup>24</sup>

## Incidence and Prevalence

- 2.16 Since 2009, important data and statistical information on the dominant cancers affecting Australians has been gathered by the National Centre for Monitoring Cancer (NCCMC).<sup>25</sup> The NCCMC gathers data with the aim of facilitating prompt cancer diagnostics which in turn expedites medical treatment and provides for relevant ongoing support and care. The data gathered is demographic in nature and consists of variables such as 'age, sex, indigenous status, remoteness area and socioeconomic status'.<sup>26</sup>
- 2.17 Melanoma and NMSC are listed as being among the top five most common cancers in Australia.<sup>27</sup> More specifically, NMSC is more common than melanoma with about 417 000 new cases predicted to have been diagnosed in 2010. Approximately two in three Australians will be diagnosed with NMSC by the time they reach the age of 70.<sup>28</sup> While

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21 Mr Alasdair Hainsworth, Branch Head, Hazard Prediction Services, Bureau of Meteorology, *Official Committee Hansard*, Sydney 5 September 2014, pp. 2-3.

22 Department of Health, *Submission 12*, p. 13.

23 Australian Radiation Protection and Nuclear Safety Agency, *Submission 20*, p. 2. See also, Australian Medical Association (NSW), *Submission 4*, p. 2.

24 Skin & Cancer Foundation Inc, *Submission 9*, p. 13.

25 Australian Institute of Health and Welfare, *Report Profile: National Centre for Monitoring Cancer Framework 2012*, pamphlet, AIHW, p. 4.

26 Australian Institute of Health and Welfare, *Report Profile: National Centre for Monitoring Cancer Framework 2012*, pamphlet, AIHW, p. 4.

27 Australian Institute of Health and Welfare, *Report Profile: National Centre for Monitoring Cancer Framework 2012*, pamphlet, AIHW, p. 4.

28 Department of Health, *Submission 12*, p. 5.

appearing to have a very high incidence rate, the mortality rate of NMSC 'is relatively low with 543 deaths being reported in 2011'.<sup>29</sup>

- 2.18 In 2010, there were 11 405 new cases of melanoma reported. It is estimated that in 2020 there will be 17 570 new cases of melanoma which represents a 54 per cent increase compared with the figure in 2010. Although less common than NMSC, melanoma 'results in approximately three times as many deaths, with 1544 deaths in 2011'.<sup>30</sup> Importantly however, the five year survival rate for melanoma is over 91 per cent for the period 2006 to 2010, with statistical trends showing that 'mortality is remaining low despite incidence rates increasing'.<sup>31</sup>
- 2.19 For persons aged 40 years or younger, data shows that the incidence of melanoma is reducing.<sup>32</sup> Statistically, incidence rates are higher in men than women,<sup>33</sup> and five-year survival rates are higher in women than men.<sup>34</sup> The Committee also received evidence that indicates that the incidence of new cases of melanoma is significantly higher in regional areas than in major cities.<sup>35</sup>
- 2.20 The Department of Health stated that, based on 2002 statistics, Australia has the world's highest incidence rate of skin cancer, with the incidence rates two to three times the rates found in Canada, America and Britain.<sup>36</sup>

## Common Misconceptions and Misunderstandings

- 2.21 There are a number of common misconceptions and misunderstandings within the Australian community about the cause and prevention of skin cancer. International and nationally conducted surveys have 'consistently shown significant gaps in public knowledge about skin cancer, its connection to UV radiation, and how people can protect themselves from it'.<sup>37</sup>
- 2.22 Indeed, there is the common misunderstanding that skin cancer is caused by all exposure to sunlight rather than the actual cause of excessive UVR

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29 Department of Health, *Submission 12*, p. 5.

30 Department of Health, *Submission 12*, p. 6.

31 Department of Health, *Submission 12*, p. 6.

32 Department of Health, *Submission 12*, p. 7.

33 Department of Health, *Submission 12*, p. 5.

34 Department of Health, *Submission 12*, p. 6.

35 Mr Gordon Gregory, Executive Director, National Rural Health Alliance, *Official Committee Hansard*, Canberra, 25 March 2014, p. 1.

36 Department of Health, *Submission 12*, p. 5.

37 Australian Medical Association (NSW), *Submission 4*, p. 4.

exposure (greater than UV Index Rating level 3). The Australian Medical Association (NSW) stated:

Studies have shown that people worldwide share a similar lack of understanding as to how they can protect themselves from excessive UVR exposure. Unfortunately, Australians are no exception to suffering from knowledge gaps and not acting on known risks when it comes to sun safety.<sup>38</sup>

2.23 Another misconception is that sunscreen is a complete defence to harmful exposure. Regardless of its sun protection factor (SPF) rating, sunscreen is unable to provide complete assurance against UVR exposure, so a combination of prevention measures (hat, clothing, sunglasses and seeking shade) and some behavioural change (such as limiting exposure during certain times of the day) is professionally recommended.<sup>39</sup>

2.24 The importance of primary prevention through awareness campaigns was emphasised by ARPANSA:

Educating people to stay out of the sun when solar UVR levels are high, (or to modify their behaviours and use better protection), would significantly help in reducing UVR exposures. It's been estimated that reducing lifetime exposure to UVR by 20 per cent would result in around one third fewer cases of skin cancer.<sup>40</sup>

## Sun Exposure and Vitamin D

2.25 Recently, there has been increasing debate that the success of skin protection awareness activities could lead to Vitamin D deficiencies in the Australian population.

2.26 Vitamin D is required by the body to maintain good health – particularly bone health.<sup>41</sup> Professor Michael Kimlin from the Queensland University of Technology explained:

One of the most important functions of Vitamin D is its role in the maintenance of blood serum calcium levels. This is achieved through Vitamin D increasing the rate at which dietary calcium is absorbed through the gut into the body. Essentially, low levels of Vitamin D impact your ability to absorb calcium from your diet, even if you have adequate dietary intake of calcium. As such,

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38 Australian Medical Association (NSW), *Submission 4*, p. 2.

39 Public Health Association of Australia, *Submission 27, Attachment A*, p. 3.

40 Australian Radiation Protection and Nuclear Safety Agency, *Submission 20*, p. 2.

41 Department of Health, *Submission 12*, p. 15.

Vitamin D plays an important role in the maintenance of general bone health, as low levels of Vitamin D not only reduce the body's ability to absorb calcium from the diet but also initiate the removal of calcium from the bone in order to maintain blood serum calcium levels.<sup>42</sup>

- 2.27 However, the best natural source of Vitamin D is exposure to UVR, which, as discussed throughout this report, is the main cause of skin cancer.<sup>43</sup> Lower levels of Vitamin D can also be acquired through some foods such as oily fish, eggs, meat, and dietary supplements.<sup>44</sup>
- 2.28 The amount of sunlight needed for the body to make Vitamin D varies between individuals depending on factors such as skin type and lifestyle. Geographical location may also affect the amount of sunlight needed as a result of the variability in UVR intensity across various latitudes in Australia.<sup>45</sup>
- 2.29 The Royal Australian College of General Practitioners stated the success of primary skin cancer prevention messages may be resulting in Vitamin D deficiencies throughout the population:
- Primary prevention (public health messages) has resulted in better awareness and may have stabilised rates of skin cancer. It is important that these campaigns continue. However, one consequence of their success appears to be declining healthy levels of Vitamin D in the population, resulting from lack of sun exposure.<sup>46</sup>
- 2.30 Some groups in the community are at increased risk of Vitamin D deficiency, including:
- naturally dark skinned people;
  - those who cover their skin for religious or cultural reasons;
  - the elderly;
  - babies of Vitamin D deficient mothers; and
  - people who are housebound or are in institutional care.<sup>47</sup>

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42 Professor Michael Kimlin, Chair, Cancer Prevention, Research Faculty of Health, Queensland University of Technology, *Official Committee Hansard*, Brisbane, 22 May 2014, p. 15.

43 Victorian Department of Health, *Submission 22*, p. 11; Professor Michael Kimlin, Chair, Cancer Prevention, Research Faculty of Health, Queensland University of Technology, *Official Committee Hansard*, Brisbane, 22 May 2014, p. 15.

44 Department of Health, *Submission 12*, p. 15.

45 Public Health Association, *Submission 27 – Attachment A*, pp. 3-4.

46 The Royal Australian College of General Practitioners, *Submission 10*, p. 4.

47 Public Health Association, *Submission 27 – Attachment A*, pp. 3-4. See also Victorian Department of Health, *Submission 22*, p. 11.

## Are Australians Vitamin D Deficient?

- 2.31 Recently, a number of media stories have reported that an increasing number of Australians are Vitamin D deficient. Participants in this inquiry also provided evidence that Australians are increasingly being diagnosed with Vitamin D deficiencies. For example, the Victorian Health Department stated that:
- one in 10 Victorian adults had a moderate to severe Vitamin D deficiency;
  - three in 10 adults had a mild deficiency; and
  - six in 10 had optimal or above optimal Vitamin D levels.<sup>48</sup>
- 2.32 Similarly, Professor Kimlin stated that a study of 126 otherwise healthy adults conducted in Brisbane in 2006 found that 10.2 per cent were Vitamin D deficient, and 32.3 per cent had Vitamin D levels that were considered insufficient.<sup>49</sup>
- 2.33 If left untreated, low Vitamin D or Vitamin D deficiency can have significant health effects including higher risk of musculoskeletal conditions and osteoporosis.<sup>50</sup> The Victorian Department of Health advised that although more research is needed, Vitamin D deficiency has also been linked to cancers (including colon cancer), heart disease, stroke, and autoimmune disease.<sup>51</sup>
- 2.34 However, Professor Robyn Lucas from the National Centre for Epidemiology and Population Health at the Australian National University questioned the accuracy of reports that the Australian population is Vitamin D deficient.<sup>52</sup> Rather, Professor Lucas stated:
- ... the most recent results from the Australian Health Survey, released in April 2014, were obtained from a vitamin D assay that was thoroughly tested to be both accurate and precise according to an international vitamin D standardisation program. That survey revealed that 23% of Australians over the age of 12 years had levels below 50nmol/L,<sup>53</sup> but only ~6% of people had levels below 30nmol/L (true vitamin D deficiency).<sup>54</sup>

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48 Victorian Department of Health, *Submission 22*, p. 7, see also Victorian Department of Health, *Skin Cancer Prevention Framework 2013-2017*, December 2013, included within *Submission 22*.

49 Professor Michael Kimlin, Chair, Cancer Prevention, Research Faculty of Health, Queensland University of Technology, *Official Committee Hansard*, Brisbane, 22 May 2014, p. 15.

50 Victorian Department of Health, *Submission 22*, p. 11.

51 Victorian Department of Health, *Submission 22*, p. 11.

52 Professor Robyn Lucas, *Submission 60*, p. 1.

53 Regarded as the cut-off level for 'normal'. See Professor Robyn Lucas, *Submission 60*, p. 1.

54 Professor Robyn Lucas, *Submission 60*, pp. 1-2.



2.35 Professor Lucas also stated that the Australian Health Survey found that approximately 6 per cent of Australians had excessive Vitamin D levels,<sup>55</sup> and warned that:

... adverse effects of modestly high levels of Vitamin D are now being noted, for example increased risk of prostate cancer, schizophrenia, all-cause mortality and tuberculosis. Approximately 6% of the Australian population had serum 25(OH)D levels greater than 100nmol/L in the Australian Health Survey, a level at which these adverse effects are being observed. These high levels are likely to be the result of Vitamin D supplementation in people who do not need it, rather than high levels of sun exposure, but reflect the concern, sometimes unwarranted, that the community has about Vitamin D deficiency.<sup>56</sup>

2.36 Similarly, the Department of Health stated:

One of the challenges for general practitioners is that, once a GP starts testing the patients, the reporting back from pathologists is that a large percentage of patients have abnormal tests. Once you start to see that in a group of patients where it is something of a surprise that might provide an impetus for general practitioners to continue to test patients. It has been hard to unpack some of that. There seems to be a gap between what people would reasonably say about Australians' exposure to sun and the likelihood of vitamin D deficiency and the results that are coming back when patients are tested.<sup>57</sup>

2.37 The Public Health Association advised that most Australians should achieve adequate Vitamin D levels from the sun exposure they receive from typical day-to-day outdoor activities.<sup>58</sup> The Victorian Department of Health and Professor Lucas provided similar evidence.<sup>59</sup>

## Balancing Skin Cancer Prevention and Vitamin D Requirements

2.38 A number of stakeholders discussed the need for a balanced approach to sun exposure to ensure adequate Vitamin D levels, whilst also protecting

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55 Professor Robyn Lucas, *Submission 60*, pp. 1-2.

56 Professor Robyn Lucas, *Submission 60*, p. 3.

57 Dr Megan Keaney, Acting Assistant Secretary, Medical Benefits Division, Department of Health, *Official Committee Hansard*, Canberra, 28 July 2014, p. 26.

58 Public Health Association, *Submission 27 - Attachment A*, pp. 3-4.

59 Victorian Department of Health, *Submission 22*, p. 11; Professor Robyn Lucas, *Submission 60*, p. 2.

the skin from harmful UVR and preventing skin cancers.<sup>60</sup> Professor Lucas stated:

... it is the pattern of sun exposure that is important, and that we can have safe sun exposure that minimises the risks of both skin cancer and Vitamin D deficiency. Vitamin D production, ... is highly efficient. There is very little additional Vitamin D made after the first 12-15 minutes of sun exposure – a plateau is reached. Vitamin D is made from every bit of skin exposed to the sun. This means that short periods of sun exposure to a maximal skin surface is the most efficient method of making Vitamin D. Further, if periods are short, any one cell is exposed to only a small dose of ultraviolet radiation, minimising any skin-cancer inducing damage.

2.39 Professor Lucas further advised that the safest time for sun exposure is the middle of the day but only when the length of time is also limited:

The safest time for sun exposure is the middle of the day, when the UVB dose (required for Vitamin D production) is highest and the margin of safety between beneficial and deleterious effects is thus greatest – provided people stay out in the sun for only short periods of time.<sup>61</sup>

2.40 Many organisations noted the need for nuanced public health messages and information campaigns which capture this information for limited and properly timed exposure to UVR to ensure sufficient Vitamin D whilst also protecting against the skin cancer risk.<sup>62</sup> For example, the Royal Australian College of General Practitioners stated ‘messages need to be tweaked to reassure the public that short periods of exposure maintain overall health’.<sup>63</sup>

2.41 Similarly, the Australia Melanoma Research Foundation commented:

Sufficient sun exposure to prevent Vitamin-D deficiency is important. The correctly balanced advice and public health

60 The Royal Australian College of General Practitioners, *Submission 10*, p. 4; Public Health Association, *Submission 27 – Attachment A*, pp. 3-4; Department of Health, *Submission 12*, p. 15; Australia Melanoma Research Foundation, *Submission 33.3*, p. 1; Victorian Department of Health, *Submission 22*, p. 7; Queensland Department of Health, *Submission 29*, p. 2.

61 Professor Robyn Lucas, *Submission 60*, pp. 3-4.

62 The Royal Australian College of General Practitioners, *Submission 10*, p. 4; Public Health Association, *Submission 27 – Attachment A*, pp. 3-4; Australia Melanoma Research Foundation, *Submission 33.3*, p. 1; Department of Health, *Submission 12*, p. 15; Victorian Department of Health, *Submission 22*, p. 7; Queensland Department of Health, *Submission 29*, p. 2; Mr Terry Slevin, Education and Research Director, Cancer Council Western Australia, *Official Committee Hansard*, Perth, 1 May 2014, p. 5.

63 The Royal Australian College of General Practitioners, *Submission 10*, p. 4.

message is therefore considerably important to carefully formulate.<sup>64</sup>

- 2.42 A number of Government agencies also acknowledged the need for a balance.<sup>65</sup> The Commonwealth Department of Health similarly acknowledged the need for a balance between protecting the skin from exposure to UVR (to prevent skin cancers) and the need for sun exposure to acquire Vitamin D and stated:

Sun exposure is the major contributor to Australia's high incidence of skin cancer. A balance is therefore required between the risk of skin cancer from too much sun exposure and maintaining adequate Vitamin D levels.<sup>66</sup>

- 2.43 The Queensland Department of Health agreed and added:

It is essential to create and promote consistent evidence based public health messages warning against intentional exposure to the sun in order to raise Vitamin D levels. This activity... needs to be balanced with well established sun protection messages, particularly in those parts of Australia that have high UVR levels all year round.<sup>67</sup>

- 2.44 Professor Kimilin similarly commented:

How do we balance out the competing health messages regarding sun exposure and our health? ... Balancing the messaging incorporating the climatological differences throughout Australia is our challenge... I hope we pursue a cautionary approach with regard to sun exposure, as we do not want to see increasing rates of skin cancers due to the population self-medicating with sun exposure to ensure adequate levels of vitamin D.<sup>68</sup>

- 2.45 As previously discussed, the amount of exposure needed for sufficient Vitamin D levels will depend on a number of factors, including the geographical location. As reflected in the comments of Professor Kimlin and the Queensland Department of Health's submission, the UV Index rating is far greater in some parts of Australia due to latitudinal positions. Consequently, public health messages will need to be different in each

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64 Australia Melanoma Research Foundation, *Submission 33.3*, p. 1.

65 Department of Health, *Submission 12*, p. 15; Queensland Department of Health, *Submission 29*, p. 2; Victorian Department of Health, *Submission 22*, p. 7. See also Victorian Department of Health, *Skin Cancer Prevention Framework 2013-2017*, December 2013.

66 Department of Health, *Submission 12*, p. 15.

67 Queensland Department of Health, *Submission 29*, p. 2.

68 Professor Michael Kimlin, Chair, Cancer Prevention, Research Faculty of Health, Queensland University of Technology, *Official Committee Hansard*, Brisbane, 22 May 2014, p. 16.

part of Australia depending upon the relevant UVR levels to that geographical position.

- 2.46 The Cancer Council Western Australia discussed its public health campaign to tackle this challenge, which includes installing UVR meters in a series of public places. Though the project is in its very early stages, Cancer Council Western Australia has installed five UVR meters around various sites in Western Australia. The Council stated that the program is to:

... help people understand more of the technicalities of the UV index, because of the recognition and importance of issues associated with Vitamin D ... But those are judgements based on technical knowledge of UV – at what point is it considered dangerous and at what point is it not and what is it now? Most people cannot do that... It is a technical education process because we are at the point where the technical aspects of sun protection and skin cancer prevention are far more complex.<sup>69</sup>

- 2.47 The BoM is also issuing UVR forecasts in some 650 locations around Australia.<sup>70</sup> This is discussed later in this chapter.

## Primary Prevention

- 2.48 Primary prevention requires:
- encouraging personal responsibility for adopting behaviours which minimise skin cancer risk; and
  - creating policies for providing an appropriate physical and/or working environment.

## Encouraging Personal Responsibility

### Public Awareness Campaigns

- 2.49 Public awareness campaigns which promote personal responsibility to reduce exposure to UVR are the linchpin of primary prevention. Campaigns began in earnest in 1980 with the launch by the Cancer Council Victoria of the *Slip! Slop! Slap!* public awareness campaign.<sup>71</sup>

<sup>69</sup> Mr Terry Slevin, Education and Research Director, Cancer Council Western Australia, *Official Committee Hansard*, Perth, 1 May 2014, p. 5.

<sup>70</sup> Bureau of Meteorology, *Submission 62*, p. 11.

<sup>71</sup> Department of Health, *Submission 12*, p. 12.

- 2.50 The campaign encouraged the public to ‘slip on’ long-sleeved clothing, ‘slop on’ sunscreen and ‘slap on’ a hat.
- 2.51 The SunSmart program followed in 1987.<sup>72</sup> It was promoted by a partnership of the Cancer Council Victoria and the Victorian Health Promotion Foundation (VicHealth) and is an ongoing campaign.<sup>73</sup>
- 2.52 VicHealth stated it had provided over \$16 million worth of funding for the SunSmart program in Victoria over 25 years. It added:
- SunSmart implements a combination of interventions to effect individual sun protective behaviours, along with advocacy for broader environmental and legislative change. Ninety per cent of Victorian early childhood centres and primary schools are members of the SunSmart program, and SunSmart also works in secondary schools and workplaces and with health professionals, local government and sporting clubs to promote healthy ultraviolet radiation exposure minimisation. This intensive community-level work is underpinned by population-wide media campaigns that communicate key messages and reinforce positive social norms around tanning and sun protection.<sup>74</sup>
- 2.53 The SunSmart website provides general information about promoting skin cancer awareness as well as a collection of interactive tools, including:
- a Sun Smart app – providing information about when UVR protection is needed;
  - a sunscreen calculator – advising how much sunscreen to apply;
  - a UVR widget – advising on the levels of UVR in the region by using Bureau of Meteorology weather information;
  - a Vitamin D tracker – calculating UVR exposure in comparison to Vitamin D requirements; and
  - a shade audit tool – enabling the determination of the adequacy of shade in the area.<sup>75</sup>
- 2.54 VicHealth listed the achievements of SunSmart:
- ... the incidence of rates of melanoma in both men and women under the age of 40 are declining, and it is very important to recognise that that is basically the cohort that has been exposed

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72 Department of Health, *Submission 12*, p. 12.

73 Dr Bruce Bolam, Executive Manager, Programs Group, VicHealth, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 1; VicHealth, *Submission 19*, p. 2.

74 Dr Bruce Bolam, Executive Manager, Programs Group, VicHealth, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 1.

75 SunSmart, *Tools*, <http://www.sunsmart.com.au/tools>, viewed November 2014.

over the last 26 years to the SunSmart message ... The percentage of Victorians aged 14 to 69 using sunscreen over summer weekends – that is a key prevention priority – has more than doubled over that period. Eighty per cent of Victorians understand the severity of melanoma as a health issue and its life-threatening consequences. Ninety-one per cent of children in Victorian early childhood centres are provided with hats to wear outside.<sup>76</sup>

- 2.55 VicHealth also noted that in the workplace the SunSmart message had ‘reached at least 8000 participants and significantly improved workers’ knowledge about sun exposure as a workplace hazard and how to protect themselves from the sun’.<sup>77</sup>
- 2.56 The slogans developed by the *Slip! Slop! Slap!* and *SunSmart* campaigns have formed the basis of many campaigns throughout Australia. Throughout the inquiry many organisations referred enthusiastically to these campaigns, while others ran their own programs under similar names.<sup>78</sup>
- 2.57 In 2006, the Australian Government became involved in public awareness initiatives when it established the National Skin Cancer Awareness Campaign. The campaign ran over the subsequent two summers at a cost of \$21 million and included television, print and radio advertisements targeting young people aged between 13 and 24 years.<sup>79</sup>
- 2.58 In summarising the outcomes of campaigns to date, Cancer Australia commented that there had been ‘a significant improvement in knowledge and behaviour in relation to sun exposure’ and that this may have ‘resulted in the decreasing incidence of melanoma and non-melanoma skin cancer’ in the under 60s. There remained, however, ‘a significant proportion of people who continue to sunburn and to expose themselves and their children to harmful levels of UV’.<sup>80</sup>
- 2.59 In an effort to gather further data, the Australian Government has provided \$225 000 to support a National Sun Protection Survey, conducted by Cancer Council Australia during the summer of 2013-14. This will provide comprehensive information about the population’s

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76 Dr Bruce Bolam, Executive Manager, Programs Group, VicHealth, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 1.

77 VicHealth, *Submission 19*, p. 2.

78 Ms Tamara Johnston, Community Programs Coordinator, Cancer Council NSW, *Official Committee Hansard*, Nowra, 8 August 2014, pp. 23-26; Dr Zivana Nedeljkovic, Director, Broome Doctors Practice, *Official Committee Hansard*, Broome, 2 May 2014, p. 10.

79 Department of Health, *Submission 12*, p. 14.

80 Professor Helen Zorbas, Chief Executive Officer, Cancer Australia, *Official Committee Hansard*, Canberra, 28 July 2014, p. 12.

response to prevention campaigns and program activities across Australia.<sup>81</sup> Cancer Australia predicted that the survey would provide ‘some evidence and knowledge about where to focus future prevention efforts’, in particular concentrating efforts not only on high risk groups but also on those demonstrating more risky behaviour.<sup>82</sup>

## Other Public Awareness Educators

### Schools

- 2.60 Schools have always been a major focus of campaigning. Young people are a key target group for primary prevention,<sup>83</sup> because reducing over-exposure to UVR at a younger age, reduces the risk of skin cancer later in life.<sup>84</sup>
- 2.61 VicHealth outlined a number of ways to promote awareness in secondary schools, including:
- engaging with pre-service teachers;
  - providing cross curriculum teaching resources; and
  - delivering professional development for teaching staff.<sup>85</sup>
- 2.62 School based sun safety programs typically involve the dissemination of written and visual resources, delivery of professional development, support and advice. In the Hunter Valley region of NSW, the Hunter Melanoma Foundation offers primary school children information kits and sun safety products. It has also distributed a DVD on sun safety, titled *Don't Get Cut*, to high schools in the region.<sup>86</sup>
- 2.63 The outcomes of school-based programs was highlighted by the Kimberley Pilbara Medicare Local which advised that there appeared to have been a generational change in schools – sunscreen was now provided at the door as pupils walked outside.<sup>87</sup> VicHealth also commented that it

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81 Department of Health, *Submission 12*, p. 14.

82 Professor Helen Zorbas, Chief Executive Officer, Cancer Australia, *Official Committee Hansard*, Canberra, 28 July 2014, p. 2.

83 Professor Adèle Green, *Official Committee Hansard*, Brisbane, 22 May, 2014, p. 22.

84 Dr Bruce Bolam, Executive Manager, Programs Group, VicHealth, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 4.

85 VicHealth, *Submission 19.1*, p. 3.

86 Mrs Jenny Noblet, Executive Officer, Hunter Melanoma Foundation, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 13.

87 Mr Darren Armitage, Population Health and Community Director, Kimberley Pilbara Medicare Local, *Official Committee Hansard*, Broome, 2 May 2014, p. 5.

would be unusual 'to go to childcare or to primary school and not see ... core [sun protection] behaviours embedded'.<sup>88</sup>

### Primary Health Care Professionals and Pharmacies

- 2.64 Primary healthcare professionals will always promote the need for UVR protection through providing advice during consultations and displaying awareness campaign materials in surgeries. There is also a role for the pharmacy sector.
- 2.65 Pharmacies sell sunscreens and to do this pharmacists often communicate with the general public about SPF. Pharmacists also frequently undertake health-related educational or intervention discussions with patients.<sup>89</sup>
- 2.66 Pharmacies may also host innovative special services such as interactive health kiosks. Some of these have links to the Cancer Council and provide information about different sunscreens and how to apply them.<sup>90</sup>

### Bureau of Meteorology

- 2.67 Accurate and timely data on UVR levels will inform individuals and can prompt them to take responsibility for protecting themselves and others.
- 2.68 The UVR level at a given location varies depending on several factors including absorption by the ozone layer and the atmosphere; latitude and altitude; and the season, weather and time of day.<sup>91</sup>
- 2.69 In 2005, a working group was formed between the BoM, the ARPANSA, and Cancer Council Australia to work together to issue UVR alerts when the UVR level exceeded Level 3. In 2007, UVR alert times were 'published on routine daily weather forecasts along with the maximum for each day for approximately 200 locations across Australia'.<sup>92</sup>
- 2.70 Currently, the number of primary forecast locations has been expanded to 234 and UVR information is 'published in more than 60 newspapers nationally'.<sup>93</sup> Further, UVR level information is provided on the BoM website, and the BoM Facebook page has 'over half a million followers'.

88 Dr Bruce Bolam, Executive Manager, Programs Group, VicHealth, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 4.

89 Mr Mark Douglass, National Councillor, The Pharmacy Guild of Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 17.

90 Mr Mark Douglass, National Councillor, The Pharmacy Guild of Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 20.

91 Mr Alasdair Hainsworth, Branch Head, Hazard Prediction Services, Bureau of Meteorology, *Official Committee Hansard*, Sydney, 5 September 2014, pp. 1-2.

92 Bureau of Meteorology, *Submission 62*, p. 5.

93 Bureau of Meteorology, *Submission 62*, p. 5.



There are also plans to make available a phone app by the end of 2014,<sup>94</sup> and further increase the BoM's presence on social media.<sup>95</sup>

- 2.71 The BoM advised that it undertook yearly customer satisfaction telephone surveys which found in 2013 that between 40 and 60 per cent of the general population found the data on UVR levels and sun protection times useful. The results showed there was a need to provide a better service to farmers, and that the perceived usefulness of the information provided was lowest in the Northern Territory.<sup>96</sup>

## Policies for Appropriate Physical and/or Working Environments

- 2.72 Primary skin cancer prevention can be facilitated through the provision of shade in the built environment, as well as through workplace occupational health and safety regulations, and the formal adoption of appropriate 'sun smart' practices.

### Shade

- 2.73 VicHealth noted that 'Shade alone can reduce overall exposure to UV radiation by up to 75 per cent'.<sup>97</sup> The National Rural Health Alliance, however, noted that a 2007 survey of Victorian adults found that 45 per cent:

... believed that adequate shade was hard to find at their local park or playgroup and even more difficult to find at sports grounds, with rural and regional residents finding it harder than those in metropolitan areas.<sup>98</sup>

- 2.74 The National Rural Health Alliance subsequently recommended that:
- ... shade provision in public and other spaces (where possible) across Australia takes a high priority for local government planners, especially in low socioeconomic areas where it has been shown that people are more likely to have difficulties in accessing shade and are likely to present with sunburn. The merits of having sensibly-placed shade areas cannot be overstated in the fight against skin cancer.<sup>99</sup>

94 Mr Alasdair Hainsworth, Branch Head, Hazard Prediction Services, Bureau of Meteorology, *Official Committee Hansard*, Sydney, 5 September 2014, pp. 2, 4.

95 Bureau of Meteorology, *Submission 62*, p. 11.

96 Mr Alasdair Hainsworth, Branch Head, Hazard Prediction Services, Bureau of Meteorology, *Official Committee Hansard*, Sydney, 5 September 2014, p. 3; Bureau of Meteorology, *Submission 62*, pp. 10, 11.

97 VicHealth, *Submission 19.1*, p. 3.

98 National Rural Health Alliance, *Submission 7*, p. 11.

99 National Rural Health Alliance, *Submission 7.1*, p. 3.

- 2.75 Research by ARPANSA, published in 2013, into the shade provided at 16 toddler pools in and around Melbourne found that the quality of shade protection varied greatly. Half of the pools had ‘excellent shade structures over some of the facilities and less than adequate or nothing over others, while other pools seem to have barely begun the process of providing shade’.<sup>100</sup>
- 2.76 The research noted that shade strategies for pool sites should utilise multiple forms of shading, including tree cover, in order to achieve significant reductions in UVR exposure. Further, shade alone could not provide total protection and other means were needed, such as education and policy approaches to increase sun-protective behaviours.<sup>101</sup>
- 2.77 In addition, surfaces such as water, sand or reflective roofs can intensify UVR exposure.<sup>102</sup> In this context, research into the measurement of protection provided by shade structures in popular pools indicates that there are ‘lower [protection factors] close to the water, which suggests young children would be receiving greater UVR exposures than adults under the same shade structures’.<sup>103</sup>
- 2.78 Recognition of the value of shade in the built environment has resulted in programs providing grants to increase shade cover. For example:
- The Victorian Department of Health and the Municipal Association of Victoria are providing \$4 million over four years as part of the Shade Grant Project. Councils are eligible for ‘up to \$100 000 for permanent, natural and demountable shade solutions in public spaces’ and are ‘required to work closely with sports clubs and other community groups to determine the areas most in need of shade’.<sup>104</sup>
  - Cancer Councils and EFTPOS have created a \$1 million shade grants program targeting secondary schools. Over 370 schools had applied for a grant.<sup>105</sup> VicHealth noted that pupils in secondary schools would use shade if it was provided.<sup>106</sup>

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100 Australian Radiation Protection and Safety Authority, *Exhibit 10*, p. 5: Peter Gies et al, *Shade Provision for Toddlers at Swimming Pools in Melbourne in Photochemistry and Photobiology*, 2013, 89: 968–73.

101 Australian Radiation Protection and Safety Authority, *Exhibit 10*, p. 5.

102 Professor Lin Fritschi, Curtin University, *Official Committee Hansard*, Perth, 1 May 2014, p. 12.

103 Australian Radiation Protection and Safety Authority, *Exhibit 10*, p. 5.

104 VicHealth, *Submission 19.1*, p. 4.

105 Mr David Wild, SunSmart Services Coordinator, Cancer Council ACT, *Official Committee Hansard*, Canberra, 28 July 2014, p. 6.

106 Dr Bruce Bolam, Executive Manager, Programs Group, VicHealth, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 4.

## Workplace Health and Safety

- 2.79 On 1 January 2013, new work health and safety laws commenced which were designed to facilitate harmonisation of occupational health and safety laws across Australia.<sup>107</sup> Safe Work Australia advised that the safety laws consisted of:
- ... a Model Work Health and Safety Act supported by model regulations, Codes of Practice and a National Compliance and Enforcement Policy. These laws [had] been enacted in all jurisdictions except Victoria and Western Australia.<sup>108</sup>
- 2.80 The Australian Government's business website explains that:
- Regulations are legally enforceable
  - Codes of Practice provide advice on how to meet regulatory requirements. Codes are not legally enforceable, but they can be used in courts as evidence that legal requirements have or have not been met.<sup>109</sup>
- 2.81 Safe Work Australia commented that while there were no specific regulations for ensuring there were control measures to prevent skin cancer, there was a 'general duty of care that all employers have to their workers to protect them from risks to health and safety'. This meant that if there was a risk of getting skin cancer they needed 'to provide protection'.<sup>110</sup>
- 2.82 Safe Work Australia added that inspectors were able to enforce provisions so, for example, they could write improvement notices requiring an employer to provide measures such as protective clothing for employees required to work outdoors in the sun.<sup>111</sup>
- 2.83 In August 2013, Safe Work Australia published a *Guide on exposure to solar ultraviolet radiation* which provided practical guidance for businesses and workers. It included 'control measures which [could] be used to eliminate or minimise a worker's exposure to solar UV radiation in the workplace

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107 Australian Government Business, *WHS/OH&S Acts, Regulations and Codes of Practice*, <http://www.business.gov.au/business-topics/employing-people/workplace-health-and-safety/Pages/whs-acts-regulations-and-codes-of-practice.aspx>, viewed November 2014.

108 Safe Work Australia, *Submission 50*, p. 2.

109 Australian Government Business, *WHS/OH&S Acts, Regulations and Codes of Practice*, <http://www.business.gov.au/business-topics/employing-people/workplace-health-and-safety/Pages/whs-acts-regulations-and-codes-of-practice.aspx>, viewed November 2014.

110 Ms Julia Collins, Branch Manager, Review and Engagement, Safe Work Australia, *Official Committee Hansard*, Canberra, 28 July 2014, pp. 9-10.

111 Ms Julia Collins, Branch Manager, Review and Engagement, Safe Work Australia, *Official Committee Hansard*, Canberra, 28 July 2014, p. 10.

and guidance on how to implement a sun protection program at the workplace'.<sup>112</sup>

- 2.84 The Australian Melanoma Research Foundation identified local government councils as a sector which was adopting occupational health and safety regulations.<sup>113</sup> An example was provided by Shellharbour City Council which described its UVR policy covering council workers including volunteers and contractors. This incorporated the 'UV Australia app on employee's phones and tablets. So when it is over [level] three, wearing sun protection care is compulsory'.<sup>114</sup>
- 2.85 Notwithstanding this progress, Professor Lin Fritschi of Curtin University, citing results from a national survey, stated that sun protection was more likely in a big company or if the workplace had a written sun-protection policy, but rules and regulations were not well enforced:
- If you are in a big company – more than 200 workers – you are about 50 per cent more likely to protect yourself when you are in the sun than if you are in a small company. We have rules, we have regulations, in all the different states but they are just not enforced well, as demonstrated by the fact that only one in 10 of our outdoor workers were fully protected.<sup>115</sup>
- 2.86 Although Victoria and Western Australia have not adopted the model laws, organisations within these jurisdictions provided evidence of ongoing efforts to provide sun protection for workers. For example, the Cancer Council of Western Australia reported that its survey of employers with outdoor policies had shown increasing implementation of those policies amongst its outdoor workforce.<sup>116</sup>
- 2.87 VicHealth advocated greater priority being given to UVR over-exposure as a workplace health and safety issue because it was a class one carcinogen and therefore a known cause of cancer. VicHealth added that this 'should include a dedicated code of practice and the translation to underpinning legislation mandating specified sun protection measures'.<sup>117</sup>

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112 Safe Work Australia, *Submission 50*, p. 3.

113 Professor Brendon Coventry, Research Director, Australian Melanoma Research Foundation, *Official Committee Hansard*, Adelaide, 14 April 2014, p. 15.

114 Mr Michael Fields, Manager Environment, Shell Harbour City Council, *Official Committee Hansard*, Nowra, 8 August 2014, p. 28.

115 Professor Lin Fritschi, Curtin University, *Official Committee Hansard*, Perth, 1 May 2014, p. 12.

116 Mr Terry Slevin, Education and Research Director, Cancer Council Western Australia, *Official Committee Hansard*, Perth, 1 May 2014, p. 9.

117 VicHealth, *Submission 19.1*, p. 1.

- 2.88 Support for this view was provided by Cancer Council Australia and the Clinical Oncology Society of Australia.<sup>118</sup>

### SunSmart Practices

- 2.89 Schools and sporting bodies are among the many organisations that have adopted policies and practices designed to reduce exposure to UVR.

#### Schools

- 2.90 VicHealth stated that school hours coincided with the high UVR periods of the day and so 'the school setting plays an important role in reducing UVR exposure among students, staff and the wider school community'.<sup>119</sup>
- 2.91 The Queensland Department of Health stated that schools were a prime setting to address sun safety and that a comprehensive, coordinated approach is required to incorporate a supportive physical and social environment which includes 'policy and curriculum underpinned by a shared responsibility and contribution from school management and staff, students and parents and the broader community'.<sup>120</sup>
- 2.92 Significant progress has been made in early childhood services. The Victorian Department of Health advised that some 80 per cent of its early childhood services were members of the SunSmart Early Childhood Services Program which 'requires them to provide adequate shade and to have a sun protection policy'.<sup>121</sup>
- 2.93 School uniforms are an important aspect of a school SunSmart policy. This can include headwear and long sleeves, however, not all schools allow wearing long sleeved clothes as part of the school uniform.<sup>122</sup> While the sun safety message generally works at the early education stage, older children and adolescents may be difficult to reach. VicHealth commented:

Victorian primary schools have been successful in implementing the Sun Smart Program, reinforcing sensible uniforms, a 'hats on' policy, shade, sunscreen provision and education on a healthy UV balance.

Secondary schools however, present with more complex, age-specific challenges and to date, have not been as successful in reducing UV [exposure].

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118 Cancer Council Australia/Clinical Oncology Society of Australia, *Submission 26*, p. 4.

119 VicHealth, *Submission 19.1*, p. 2.

120 Queensland Department of Health, *Submission 29*, p. 2.

121 Victorian Department of Health, *Submission 22, Attachment 1, Skin cancer prevention framework 2013–2017*, p. 15.

122 Ms Susan Gregg, *Official Committee Hansard, Cairns*, 23 May 2014, p. 8.

New Year 7 students arriving from primary school with well-established sun protection practices can, within a very short space of time, become complacent about looking after their skin.

Without the appropriate structures and policies in place, these behaviours which have been inherent to their daily life at primary school, are quickly forgotten.<sup>123</sup>

- 2.94 The Cancer Council ACT agreed, stating that progress was lagging in secondary schools.<sup>124</sup> This was supported by the Hunter Melanoma Foundation which stated:

... teens and young adults are the most difficult groups to get our message to and it does not help that high schools do not apply any of the sun-safe guidelines that the primary schools do. We would like to see more emphasis on sun-safe behaviour introduced into high schools, as well as some ultraviolet radiation education included in the science curriculum ... so they have a better understanding.<sup>125</sup>

### Sporting Organisations

- 2.95 In Australia, sport typically exposes significant numbers of players, officials and spectators to UVR. Many sports were developed in latitudes and in a climate with far lower levels of UVR and are now played in conditions that pose a skin cancer risk. Furthermore, much of the Australian population lives in coastal regions, where beaches and aquatic sports of all kind are a popular means of recreation. For this reason, sporting associations and clubs are an important focus for primary prevention interventions.
- 2.96 A prime example of how a sporting body can make a conscious contribution to primary prevention is the work of Surf Life Saving Australia.
- 2.97 Surf Life Saving Australia, with 166 000 members, is Australia's largest volunteer-based community service. Since the late 1980s it has taken a proactive approach to protecting members from solar UVR exposure. This has involved providing specially designed patrol uniforms, which include

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123 VicHealth, *Submission 19.1*, p. 2.

124 Mr David Wild, SunSmart Services Coordinator, Cancer Council ACT, *Official Committee Hansard*, Canberra, 28 July 2014, p. 4.

125 Mrs Jenny Noblet, Executive Officer, Hunter Melanoma Foundation, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 13.

- three-quarter and full-length sleeved shirts and long shorts and providing shade and sunscreen at patrol shelters.<sup>126</sup>
- 2.98 Surf life saving clubs have also liaised with cancer prevention groups such as Melanoma Institute Australia to conduct free skin checks at state lifesaving championships in NSW and have worked in partnership with cancer researchers.<sup>127</sup>
- 2.99 Surf Life Saving Australia advised that ‘sun protection is integrated into surf lifesaving resources and programs’ and that it now has in place:
- policies at national, state branch and club levels;
  - education programs at all levels;
  - fundraising to continue to provide clubs with sun shelters and appropriate uniforms; ...
  - guidelines for risk assessment at venues at which lifesaving programs are conducted, including sun protection factors.<sup>128</sup>
- 2.100 A second example of a recreational activity with large numbers of participants is cricket. Cricket Australia stated that there were 1.1 million people who played cricket, often during peak UVR times, and some 900 staff were employed by national, state and territory cricket associations.<sup>129</sup>
- 2.101 Cricket Australia has a SunSmart policy which applies ‘all year to its employees, contractors, umpires, players, selectors and other related personnel’. Cricket Australia also makes available on its website, as a resource for cricket clubs, its playing policies and guidelines – in a document titled, *Well Played*. Further, employees and related personnel who work outdoors are issued with ‘collared shirts made from close weave and a breathable fabric, with a UPF<sup>130</sup> rating of at least 40; and broad spectrum, SPF 30-plus, water-resistant sunscreen and advice around [its] application’.<sup>131</sup> Cricket Australia also provides its employees and players with a free annual skin check.<sup>132</sup>

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126 Mr Norman Farmer, General Manager, Strategic Development, Surf Life Saving Australia, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 33.

127 Mr Norman Farmer, General Manager, Strategic Development, Surf Life Saving Australia, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 33.

128 Mr Norman Farmer, General Manager, Strategic Development, Surf Life Saving Australia, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 33.

129 Mr Grant Poulter, Senior Manager, Government and Community Relations, Cricket Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 9.

130 Ultraviolet Protection Factor

131 Mr Grant Poulter, Senior Manager, Government and Community Relations, Cricket Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 10.

132 Mr Grant Poulter, Senior Manager, Government and Community Relations, Cricket Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 12.

- 2.102 As the Western Australian Cricket Association (WACA) cricket ground is one of the 'most sun-exposed stadiums in Australia', Cricket Australia provides free sunscreen to all patrons at international cricket played at that venue. Cricket Australia is also working in partnership with local government, through State and Federal support, to upgrade many community cricket and football grounds across Australia to ensure the provision of shade.<sup>133</sup>
- 2.103 Golf is another sport with high participation numbers. The Professional Golfers' Association of Australia (PGA) advised that 1.1 million people play golf at 1600 golf courses in Australia.<sup>134</sup>
- 2.104 The PGA runs an academy, a registered training organisation, which provides two or three years of academic training as well as teaching playing requirements. Sun and heat policy is part of the program. The PGA does not have a policy in place for its professional touring players but considered that sun protection is part of golfers' 'tools of the trade'.<sup>135</sup>
- 2.105 At all of its tournaments, the PGA provides sunscreen to players as well as educating them in sun safety behaviour. For the Australian Masters Tournament in addition to providing sunscreen, the PGA also provides complimentary skin checks for professional players.<sup>136</sup> The PGA added that it is very supportive of the sun-safe message and that 'most golf clubs have sun safety messaging and all golf clubs have free sunscreen for consumers'.<sup>137</sup>

## Concluding Comment

### Incidence and Prevalence

- 2.106 The Committee is of the view that close monitoring of incidence and prevalence rates of skin cancer is not only important to gauge the impact of different strategies, but also to map trends over time and to assess where public monies are best targeted in prevention and management.

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133 Mr Grant Poulter, Senior Manager, Government and Community Relations, Cricket Australia, *Official Committee Hansard*, Sydney, 5 September 2014, pp. 9, 12.

134 Mr Brian Thorburn, Chief Executive Officer, Professional Golfers' Association of Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 6.

135 Mr Brian Thorburn, Chief Executive Officer, Professional Golfers' Association of Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 6.

136 Mr Brian Thorburn, Chief Executive Officer, Professional Golfers' Association of Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 6.

137 Mr Brian Thorburn, Chief Executive Officer, Professional Golfers' Association of Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 7.



- 2.107 In light of this, the Committee believes that the Australian Government should give consideration to making NMSC a statutory reportable cancer.<sup>138</sup> In making this comment, the Committee notes the evidence from Professor Adele Green which highlighted the processing difficulties with reporting such a common disease.<sup>139</sup>

### Balancing Vitamin D and Sun Exposure

- 2.108 The Committee notes the challenge for public health campaigns in delivering messages which, at first glance, appear contradictory: the importance of UVR exposure for maintaining health Vitamin D levels, whilst also protecting from UVR overexposure to prevent skin cancer.
- 2.109 The Committee notes the work of the BoM in providing UVR forecasts for 650 locations around Australia, which will differ greatly because of their different latitudes.
- 2.110 The Committee is of the view that the public health message of prevention should capitalise on the resources of the BoM forecasts and provide better guidance on what length of time is required, and what time of day is most appropriate (based on these differing UVR forecasts), for sufficient Vitamin D levels across the average population. In this regard, the Committee commends the efforts of Cancer Council Western Australia to install UVR meters in a number of public places, and notes the opportunities of these meters to educate the public on the technicalities of the UV Index. And the Committee is of the view that this message should be promoted to and by the media, particularly during weather forecasting.
- 2.111 The Committee also notes the recent decision by the Minister for Health that, following the conclusion of a review of the Medicare Benefits Schedule (MBS) by the Medical Services Advisory Committee (MSAC), rebates for Vitamin D blood tests have been amended.
- 2.112 The Review of Vitamin D testing was initiated by the Department of Health as a result of a rapid increase in utilisation and corresponding growth in MBS expenditure.<sup>140</sup> During this Inquiry, the Department of Health stated:

The number of MBS claims for vitamin D testing has increased each year over the past ten years, from 117,474 services in 2003/04

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138 The Commonwealth Department of Health stated that as NMSC is not statutory reportable cancer, the true incidence rates of the disease are not known (*Submission 12*, p. 5).

139 Professor Adele Green, Senior Scientist, Queensland Institute of Medical Research Berghofer Medical Research Institute, *Official Committee Hansard*, Brisbane, 22 May 2014, p. 25.

140 Medical Services Advisory Committee, *0014r – Vitamin D testing*, <http://www.msac.gov.au/internet/msac/publishing.nsf/Content/0014r-public>, viewed November 2014.

to 4,331,030 claims in 2012/13. Over the same time period, a similar increase was seen in benefits paid, which rose from \$4,256,772 in 2003/04 to \$151,129,505 in 2012/13. The vast majority were bulk billed services (97% in 2012-13).<sup>141</sup>

- 2.113 The MSAC concluded that testing should be limited to 'high risk populations', including patients with deeply pigmented skin, osteoporosis, or those with a chronic lack of sun exposure for cultural, medical or residential reasons.<sup>142</sup> Following the MSAC's conclusions and subsequent recommendation to the Minister for Health, the MBS was amended to limit access to patients with specific conditions. This amendment took effect on 1 November 2014.<sup>143</sup>

### Primary Prevention

- 2.114 The National Sun Protection Survey will provide valuable direction to those involved in raising awareness of skin cancer. The Committee looks forward to the survey's results and conclusions and calls for further evidence based research.
- 2.115 Although not within this Inquiry's terms of reference, the Committee received evidence on the damaging effects of solariums. The Committee understands that a number of jurisdictions are implementing bans on commercial solaria, and that the Standing Council on Health is examining the issue.<sup>144</sup> The Committee is of the view that the matter of solaria should be acted upon, and awaits the outcomes of the Standing Council's review.
- 2.116 The Committee is impressed by the sun-safety policies of Cricket Australia and Surf Life Saving Australia and considers these are examples of best practice. The Committee urges national sporting bodies and associations which engage in outdoor activities to adopt SunSmart policies modelled on Cricket Australia's and Surf Life Saving Australia's policy.
- 2.117 The Committee also notes the leadership provided by Australia's surf lifesavers and professional cricketers by modelling sun smart behaviour during matches, but the Committee considers all major sporting codes need strong policies. Providing role models for such behaviour reinforces public awareness campaigns especially to the young. Recently retired

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141 Department of Health, *Submission 12.2*, p. 3.

142 Medical Benefits Schedule, *Group P2 – Chemical*, (November 2014 update), <http://www.health.gov.au/internet/mbsonline/publishing.nsf/Content/Downloads-2014-11>, viewed November 2014.

143 Australian Doctor, *Medicare overhaul restricts vitamin D and B12 tests*, 10 November 2014, <http://www.australiandoctor.com.au/news/latest-news/medicare-overhaul-restricts-vitamin-d-and-b12-test>, viewed November 2014.

144 For example: Victorian Department of Health, *Submission 22*, p. 2.

Australian cricketer and broadcaster Mr Ritchie Benaud revealed he is receiving treatment for skin cancer and advocates that wearing hats can reinforce the sun safety message.<sup>145</sup>

- 2.118 There is still some way to go in embedding sun-smart behaviours in sectors of the Australian population. Evidence that a significant proportion of outdoor workers are not fully sun protected is of particular concern. While there are no specific regulations concerning UVR exposure, employers have a duty of care to their outdoor workforce, and authorities have an obligation to ensure UVR protection measures are in place.

### **Recommendation 1**

- 2.119 **The Committee recommends that national sporting bodies and associations which engage in outdoor activities adopt sun smart policies modelled on a similar template to that of Cricket Australia and Surf Life Saving Australia incorporating aspects relevant to their sport.**

### **Recommendation 2**

- 2.120 **The Committee recommends that the Department of Education work with States and Territories to encourage the adoption of sun smart policies in Australia's secondary schools which would include:**
- **Expanding high school curricula to cover healthy sun-aware behaviours; and**
  - **Providing more covered outdoor learning areas.**

### **Recommendation 3**

- 2.121 **The Committee recommends that local governments give consideration to providing extended covered (shade) areas over swimming pools.**

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145 ABC News, *Richie Benaud reveals he is undergoing radiation therapy for skin cancer*, 10 November 2014, <http://www.abc.net.au/news/2014-11-10/-benaud-undergoing-therapy-for-skin-cancer/5879558>, viewed November 2014.



## Early Diagnosis and Training

### Introduction

- 3.1 The thicker and deeper a melanoma is, the more difficult it is to treat. The five-year survival rate in Australia for melanomas thicker than four millimetres is 55 per cent, in comparison to ‘almost 100 per cent survival for melanomas one millimetre or less’.<sup>1</sup>
- 3.2 Earlier diagnosis of melanoma skin cancers is therefore ‘correlated to successful patient outcomes and longer-term survival’.<sup>2</sup> Despite this correlation, no successful population-wide testing or trial has been conducted in Australia and so there is ‘insufficient evidence that screening for melanoma reduces mortality’.<sup>3</sup>
- 3.3 Taking into consideration that there is insufficient evidence which would link skin cancer screening with a reduction in mortality, the Australian approach on whether to establish a population-based screening program for skin cancer is in line with the World Health Organisation’s (WHO) criteria. This approach considers the effect of what can be achieved through a potential screening program coupled with the cost effectiveness of such a program.<sup>4</sup>
- 3.4 This chapter discusses initiatives for the early detection and diagnosis of skin cancers, improving access to specialist treatment services, and ways to improve skin cancer detection accuracy through the training of health and related service providers.

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1 Cancer Council Australia and Clinical Oncology Society of Australia, *Submission 26*, p. 3.

2 Cancer Council Australia and Clinical Oncology Society of Australia, *Submission 26*, p. 3.

3 Cancer Council Australia and Clinical Oncology Society of Australia, *Submission 26*, p. 3.

4 Dr Bernie Towler, Principal Medical Adviser, Population Health Division, *Official Committee Hansard*, Canberra, 28 March 2014, p. 12.

## Early Detection

- 3.5 Early detection and diagnosis is vital in treating skin cancers as where a skin cancer is detected and treated earlier, a patient has a more favourable longer-term prognosis. As outlined, this is especially the case for melanomas with a thickness of less than one millimetre.<sup>5</sup>

## Screening

### National Screening Program

- 3.6 The Peter MacCallum Cancer Centre commented that Australia has attempted 'a randomised trial of patients [some] getting screening and [some getting] no screening'. Unfortunately, the trial had failed mainly 'because of reimbursement issues for the general practitioners involved through Medicare'.<sup>6</sup>
- 3.7 The most compelling study showing that skin cancer screening raises awareness and assists as a preventative measure was conducted in Germany in 2008. Of this study the Peter MacCallum Cancer Centre stated:
- ...they trained up their primary care physicians to undertake screening. They did this for a period of some two years, and then they actually looked at the impact on the mortality from melanoma and compared that to the rest of Germany. There was a reduction in the mortality. Scientifically, it was not the perfect study, because it was not the randomised, perfect controlled trial that we would have liked, but it is quite compelling evidence that screening does work.<sup>7</sup>
- 3.8 HealthCert International added that the German screening program included almost 20 per cent of the eligible population. While the incidence of melanoma increased by 34 per cent during the 12-month screening program, after five years there had been a 50 per cent decrease in melanoma mortality.<sup>8</sup>
- 3.9 Professor David Whiteman commenting on the results of the German screening program, stated that:

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5 Professor David Whiteman, *Submission 3*, p. 5.

6 Professor Grant McArthur, Co-Head, Cancer Therapeutics Program; and Director, Skin and Melanoma Service, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 49.

7 Professor Grant McArthur, Co-Head, Cancer Therapeutics Program; and Director, Skin and Melanoma Service, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 49.

8 HealthCert International, *Submission 43*, p. 11.

While German data will be of interest to Australian researchers, it is difficult to gauge how applicable they will be given the profound differences in the incidence of skin cancer, the differences in medical training, and very different health systems operating in the two jurisdictions.<sup>9</sup>

3.10 The *Clinical Practice Guidelines for the Management of Melanoma in Australian and New Zealand* (the Guidelines) does not support population screening and provides that:

In the absence of substantive evidence as to its effectiveness in reducing mortality from melanoma, population-based skin screening cannot be recommended.<sup>10</sup>

3.11 Professor David Whiteman advised that it was 'extremely unlikely that a randomised trial can ever be performed in Australia, given the high prevalence of opportunistic screening in the community, and the costs involved'<sup>11</sup> in conducting a trial.

3.12 Population-based screening was not supported by a number of organisations. The Cancer Council Australia and the Clinical Oncology Society of Australia stated that there was 'insufficient evidence that screening for melanoma reduces mortality; current diagnostic practices for melanoma [were] not appropriate for screening'; and that screening for non-melanoma skin cancers was 'unlikely to ever be recommended' because long-term illness and death were rare occurrences for such cancers.<sup>12</sup>

3.13 Professor Jon Emery stated that there was 'no evidence that regular total skin examination of people who are at average risk reduces mortality', but that it was nevertheless 'occurring on a regular basis' in Australia.<sup>13</sup>

3.14 The Skin Cancer College Australasia identified several issues which mitigated against population-based screening:

- setting one year as the examination interval was 'somewhat arbitrary' because melanoma could develop into the dangerous, thicker phase in a matter of weeks or months;

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9 Professor David Whiteman, *Submission 3*, p. 6.

10 Cancer Council Australia; Australian Cancer Network; Ministry of Health, New Zealand, *Clinical Practice Guidelines for the Management of Melanoma in Australia and New Zealand*, 2008, p. 10.

11 Professor David Whiteman, *Submission 3*, pp. 5-6.

12 Cancer Council Australia and the Clinical Oncology Society of Australia, *Submission 26*, p. 3.

13 Professor Jon Emery, Professor of Primary Care Cancer Research, University of Melbourne, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 32.

- physically screening the population on a yearly basis would be prohibitively expensive; and
  - there were insufficient numbers of proficient doctors to undertake such screening.<sup>14</sup>
- 3.15 The Victorian Department of Health and Hunter Medicare Local also did not support population-based screening.<sup>15</sup>
- 3.16 A limited form of population-based screening was suggested by the Skin & Cancer Foundation Australia. It suggested incorporating skin checks into life events. For example it could be a 'compulsory component of any employment-related health assessments' and a skin assessment could be a 'compulsory requirement of all formal admissions to hospital'. Further, the government could subsidise annual skin checks for employees who worked primarily outdoors.<sup>16</sup>
- 3.17 The Department of Health further stated that there is a lot of opportunistic work that happens in the primary care space which is considered appropriate for detecting and managing people who are at low, average and high risk. Coupled with general practitioner's (GPs) guidelines on early detection and prevention of melanomas, these still 'fall short of what we would require in Australia to set-up a national screening program'.<sup>17</sup>

### Opportunistic Screening

- 3.18 Opportunistic screening which occurs when a patient visits either a GP for a health reason other than a skin cancer check or decides to visit a health practitioner specifically for a skin cancer check.
- 3.19 Opportunistic screening is again different from opportunistic diagnosis which occurs when a general practitioner notices a suspicious skin lesion when a patient attends for other reasons.<sup>18</sup>
- 3.20 Opportunistic screening requires adequate time for a skin examination when a patient visits their GP to ensure mistakes in diagnosis are not made. Dr Felix Choi commented that in a busy general practice, during a regular consultation, opportunistic screening is not a high priority, especially if the skin check equipment is not set up and ready for screening use. Dr Choi stated:

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14 Skin Cancer College Australasia, *Submission 21*, p. 2.

15 Victorian Department of Health, *Submission 22*, p. 2; Hunter Medicare Local, *Submission 54*, p. 2.

16 Skin & Cancer Foundation Australia, *Submission 17*, p. 4.

17 Dr Bernie Towler, Principal Medical Adviser, Population Health Division, Department of Health, *Official Committee Hansard*, Canberra, 28 March 2014, p. 12.

18 Professor Jon Emery, Professor of Primary Care Cancer Research, University of Melbourne, *Official Committee Hansard*, Melbourne, 6 June 2014, pp. 32–33.



... if you are rushing in doing a lot of this work, then mistakes can happen. I am not really interested in that; I am more interested in the patient's health than trying to rush an opportunistic check because you should be doing it. It is better to book them back in. But, if you are booking them back in, the reality of most people's lives is that they are too busy and they will not come back in.<sup>19</sup>

- 3.21 This view was supported by Hunter Medicare Local which, referring to a study published in 2011, noted that 'GPs nominated time constraints and competing co-morbidities as barriers to performing skin examinations'.<sup>20</sup>

## Encouraging Action

- 3.22 As noted in Chapter 2, there are two main types of public awareness campaigns: primary prevention which is aimed at preventing skin cancer by encouraging behavioural changes; and secondary prevention – aimed at monitoring and so improving the early identification of skin cancers for high risk candidates.<sup>21</sup>

- 3.23 The Skin & Cancer Foundation Australia advocated a two-level educational approach to improve the rate of early diagnosis of skin cancers complemented by public health awareness campaigns:

Firstly, population education is fundamental to understand and recognise the early indicators of both skin cancer (including self examination of naevi, chronic ulcers, growths, etc). To date, most self-examination information available to the general public is focused on identifying early signs of melanoma, with non-melanoma skin cancers remaining relatively unaddressed. Secondly, doctors (general practitioners, specialists) and allied health professionals (eg - physiotherapists, podiatrists, occupational therapists) should be formally trained and regularly updated (as a [continuing medical education] program accredited by all colleges) in the detection of skin cancers, as well as identifying high risk patients.

The two-tier educational approach should be complemented by public health awareness campaigns addressing critical messages regarding how to organise regular skin checks, and the seriousness

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19 Dr Felix Choi, *Official Committee Hansard*, Sydney, 29 July 2014, p. 32.

20 Hunter Medicare Local, *Submission 54*, p. 4.

21 High risk candidates are those who have already had some form of skin cancer and are at risk of further skin cancer.

of certain types of skin abnormalities, including pigmented lesions and non-healing ulcers.<sup>22</sup>

### Skin Checking Campaigns

- 3.24 There are several public awareness campaigns either being proposed or already in place which promote early skin cancer diagnosis. These are: *SCAN Your Skin*, *Know Your Own Skin* and *Check Mate*.

#### *SCAN Your Skin*

- 3.25 The Skin Cancer College Australasia advised that the *SCAN Your Skin*<sup>23</sup> project was launched in November 2013 with a brochure and website.<sup>24</sup> The Skin Cancer College Australasia proposed that the project become the basis for an early detection campaign and stated:

This is a strategy that utilises a simple, effective and practical tool to empower the general public to monitor their skin for lesions that may be cancerous ... This will raise the level of awareness in the community with people more aware of their own skin, and to be aware of potentially worrying lesions on their family, friends and others.<sup>25</sup>

- 3.26 The Skin Cancer College Australasia stated that it was hoping to receive funding for 'analysing the success or effectiveness of this tool in actually helping to change people's behaviour and whether or not people really can detect their own melanomas'.<sup>26</sup>

#### *Know Your Own Skin*

- 3.27 LEO Pharma advised that it had developed the *Know Your Own Skin* awareness campaign 'in conjunction with leading healthcare professionals and relevant stakeholders'. *Know Your Own Skin* was designed to supplement existing awareness campaigns and included educational materials for patients and healthcare professionals including brochures and posters, a website, a video, and an app for mobile phones. The campaign has recently been expanded to incorporate an annual *Pollie Skin Check Day* at Parliament House in Canberra.<sup>27</sup>

22 Skin & Cancer Foundation Australia, *Submission 17*, p. 3.

23 The SCAN acronym stands for: Sore, Changing, Abnormal, New. Skin Cancer College Australasia, *SCAN Your Skin*, <http://scanyourskin.org>, viewed October 2014.

24 Skin Cancer College Australasia, *SCAN Your Skin*, <http://scanyourskin.org>, viewed October 2014.

25 Skin Cancer College Australasia, *Submission 21*, pp. 1, 4, 5.

26 Dr Richard Johns, Director, *Official Committee Hansard*, Brisbane, 22 May 2014, p. 34

27 LEO Pharma, *Submission 24*, pp. 1-2.

3.28 LEO Pharma stated that since the campaign was launched in 2001 it had conducted some 30 events around the country some of which had been in conjunction with key political figures within their own electorates. LEO Pharma added:

We have reached a big proportion of the Australian population. It has been effective. We have had many hits on our website, and the app that is downloaded on smartphones has been quite successful, but we think that there is a lot more to be done in terms of increasing awareness.<sup>28</sup>

### *Check Mate*

3.29 The Hunter Melanoma Foundation launched its *Check Mate* campaign in 2012.<sup>29</sup> The website contains information on melanomas and provides the opportunity for those with melanoma to share their stories.<sup>30</sup> The campaign is targeted at men aged 40 and over. Hunter Melanoma Foundation advised:

... the message being a 10-minute skin check could save your life, and urging them to have an annual skin check. This skin campaign went to local pubs and clubs, because we thought that was the best area to target men over the age of 40. It included posters and coasters. To local GPs we sent fridge magnets and posters and our pens ... We also have two Newcastle buses on which we promote the selfie and Check Mate campaigns, and bus shelters and poster boards in the region.<sup>31</sup>

### Links with Primary Prevention Campaigns

3.30 Primary prevention campaigns – which encourage a reduction in sun exposure, often also encourage regular skin cancer checks. For example, the Commonwealth Department of Health commented that the *Dark Side of Tanning* contained detailed information about how to assess whether it was necessary to seek advice from a medical practitioner.<sup>32</sup>

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28 Ms Rosie-Marie Pennisi, Head of Medical, *Official Committee Hansard*, Brisbane, 22 May 2014, p. 51.

29 Ms Jenny Noblet, Executive Officer, Hunter Melanoma Foundation, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 13.

30 Hunter Melanoma Foundation, *Check mate before it's too late*, <http://checkmate.org.au/>, viewed October 2014.

31 Ms Jenny Noblet, Executive Officer, Hunter Melanoma Foundation, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 13.

32 Ms Jodie Grieve, Assistant Secretary, Communications Branch, People Capability and Communications Division, Department of Health, *Official Committee Hansard*, Canberra, 28 July 2014, p. 24.

- 3.31 HealthCert International recommended that the *Slip! Slop! Slap!* campaign should include a fourth step: *Screen!* This was in recognition of the fact that 'skin cancers are often found on areas of the body that are not exposed to the sun and are found often by coincidence rather than design'.<sup>33</sup>
- 3.32 Professor Jon Emery was supportive of public skin cancer prevention campaigns and stated that 'large public health campaigns showing images of skin cancer certainly increase presentations to general practice but also increase the diagnosis of melanoma'.<sup>34</sup>
- 3.33 The Royal Australian College of General Practitioners commented on a case in Rockhampton, Queensland, where there had been an unintended consequence of overdiagnosis and overtreatment following a state wide SunSmart campaign. The skin check campaign was conducted independently of the regular primary-health-care system had the effect of a tenfold increase in the number of excisions. The Royal Australian College of General Practitioners stated:

We discovered that that was associated with one of the SunSmart campaigns that was being run in the state. We analysed that with some interest and worked out that there was probably no benefit from that blip. There was an enormous increase – 10 times the number of skin excisions happening – probably because people were seeing a campaign about being sun smart. It was actually a quite confronting campaign because it showed surgical pictures – pictures of people with big lumps of skin being cut out of them. It was actually designed to shock people into wearing hats and being sun smart, but an unintended consequence was that a lot of people went off and had moles checked and had excisions thereby. We then looked to see whether the melanoma rate increased to match that blip, and it did not. There was a huge increase in the number of skin excisions without any benefit. So that is one measure of overdiagnosis, if you like, and overtreatment. So a whole lot of people had things done to them – they had scars; probably secondary infections, because a small proportion of excisions have secondary infections; the worry of it; the inconvenience; the cost – without any benefit. So when you say that there must be some benefit, there is potentially a benefit, but we do know that there

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33 HealthCert International, *Submission 43*, p. 13.

34 Professor Jon Emery, Professor of Primary Care Cancer Research, University of Melbourne, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 32.

will be harm. Knowing the balance is actually very difficult. Very often we do not know that there is a balance.<sup>35</sup>

### Public Awareness Campaign Design

3.34 The WA Country Health Service – Kimberley (WACHS – K) highlighted the importance of sun protection messages in places like the Kimberley which is ‘characterised by high risk solar exposure all year round’. The WACHS – K was of the view that ‘the best impact [from health promotion campaigns] comes when there is a synergy between the central planning and the local [health] service to ensure that there is real coordination and a common purpose’.<sup>36</sup> In this context, the WACHS – K was critical of skin check campaigns undertaken by non government organisations and instanced the 2013 campaign sponsored by the Lions Clubs in Kununurra. The WACHS – K stated:

WACHS – Kimberley is not aware of compelling evidence for the value of skin-check clinics conducted independent of the regular primary-health-care system. WACHS – Kimberley also cautions that such activity conducted outside regular health-care providers generally places an additional and unanticipated burden on overstretched health services. For example, in the Kimberley, visitors to the region might attend such a skin-check clinic, be advised to have a biopsy and then they – not surprisingly – attend a local emergency department with high expectations of immediate investigation and follow-up, but without any link to their own primary-health-care provider. As a general recommendation, any visiting service to the Kimberley is strongly encouraged to link in early with planning, with the regional director of WACHS – Kimberley and relevant managers of primary health care in the Kimberley, to complement local priorities and ensure that the capacity of the ongoing primary-health-care system that stays here can accommodate visiting initiatives.<sup>37</sup>

3.35 WACHS – K recommended that services visiting the Kimberley should link early in planning with the Regional Director and relevant primary health care managers ‘to complement local priorities and ensure the

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35 Professor Chris Del Mar, Royal Australian College of General Practitioners, *Official Committee Hansard*, Brisbane, 22 May 2014, p. 3.

36 Dr Jeanette Ward, Acting Regional Medical Director, WA Country Health Service, Kimberley *Official Committee Hansard*, Broome, 2 May 2014, p. 17.

37 Dr Jeanette Ward, Acting Regional Medical Director, WA Country Health Service, Kimberley *Official Committee Hansard*, Broome, 2 May 2014, p. 3 and WA Country Health Service – Kimberley, *Submission 44*, p. 2.

capacity of the ongoing primary care system to accommodate visiting initiatives'.<sup>38</sup>

- 3.36 Many campaign brochures and materials include images of skin cancers. The Skin Cancer College Australasia explained that it did not include images of melanomas or other skin cancers in its *SCAN Your Skin* brochure. This was to prevent patients looking at an image of a melanoma and concluding that their mole was not a melanoma because it did not look like the image. Skin Cancer College Australasia commented that:
- many websites tended to show images of advanced melanomas but patients should not wait until their skin lesion looked like it before seeking help;
  - melanomas could occur with differing appearances and in different locations; and
  - its website would contain images of skin cancers showing they had 'a range of presentations in terms of appearance, location and patient history'.<sup>39</sup>
- 3.37 Professor Jon Emery raised concerns that many images used in awareness campaigns are unrepresentative of early-stage skin cancer and stated:
- The problem is the images are usually the more extreme end of melanomas, and the thinner melanomas – the earlier ones – do not actually look anything like the more extreme ones ... I think nearly all the other public health campaigns have only shown images of superficial spreading melanomas and often the more extreme ones. I think it is a really important question about how you raise awareness of nodular ones, which do look entirely different to other melanomas.<sup>40</sup>
- 3.38 There are a variety of effective ways to deliver the skin cancer awareness message. Examples include:
- in rural and remote areas by sharing information on a face-to-face basis through community organisations, such as the Country Women's Association of Australia, Men's Sheds and clubs and other community groups;<sup>41</sup>

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38 Dr Jeanette Ward, Acting Regional Medical Director, WA Country Health Service, Kimberley *Official Committee Hansard*, Broome, 2 May 2014, p. 3 and WA Country Health Service – Kimberley, *Submission 44*, p. 2.

39 Skin Cancer College Australasia, *Submission 21*, p. 4.

40 Professor Jon Emery, Professor of Primary Care, Cancer Research, University of Melbourne, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 32.

41 National Rural Health Alliance, *Submission 7.1*, p. 4.

- via the media, such as TV, radio, print and social media,<sup>42</sup> magazines<sup>43</sup> and the internet.
- signage, such as messages on buses, billboards, and public transport shelters,<sup>44</sup> and on common items such as fridge magnets, pens, and beer coasters;<sup>45</sup>
- interactive kiosks in pharmacies coupled with awareness brochures, and advice and follow-up communication from the pharmacist;<sup>46</sup> and
- activities, such as the March against Melanoma, and Healthy Skin Awards.<sup>47</sup>

### Awareness Campaigns in the Workplace

3.39 Safe Work Australia identified farmers, plumbers, animal and horticultural workers, painters, handy persons, heavy vehicle drivers, and miners as being occupations at risk of skin cancer.<sup>48</sup> Further, the construction industry is another sun-exposed industry which by its nature, is at a greater risk of skin cancer.

3.40 The National Rural Health Alliance highlighted the risk of skin cancer for rural men and women and drew attention to the statistics for farmers. The National Rural Health Alliance stated:

The incidence of melanoma is higher for country than city men, with farmers having a 60 per cent higher death rate due to melanoma and other malignant skin cancers than the general population. Skin cancer deaths in farmers 65 years of age and over are more than double the rate of other Australians.<sup>49</sup>

3.41 Delivering awareness campaigns in rural and remote areas therefore requires a different strategy, especially for rural men who tend to have a reluctance to attend their doctors for initial consultation or follow-ups.<sup>50</sup>

42 Skin & Cancer Foundation Inc, *Submission 9*, p. 11.

43 Mrs Joanne Crotty, Awareness Education Manager, Danger Sun Overhead, Melanoma Patients Australia, *Official Committee Hansard*, Brisbane, 22 May 2014, p. 14.

44 Hunter Melanoma Foundation, *Submission 51*, p. 6.

45 Ms Jenny Noblet, Executive Officer, Hunter Melanoma Foundation, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 13.

46 Mr Mark Douglass, National Councillor, The Pharmacy Guild of Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 20.

47 Skin & Cancer Foundation Inc, *Submission 9*, p. 11.

48 Dr Jenny Job, Director, Research and Evaluation, SafeWork Australia, *Official Committee Hansard*, Canberra, 28 July 2014, p. 9.

49 National Rural Health Alliance, *Submission 7*, p. 3.

50 National Rural Health Alliance, *Submission 7.1*, p. 4.

- 3.42 Further, in regard to raising skin cancer awareness in rural and remote areas the Royal Flying Doctor Service stated:
- ... less time is spent in doctor's surgeries or similar where promotional material might be displayed, and there is often limited availability of media where awareness raising campaigns might be run.<sup>51</sup>
- 3.43 The National Rural Health Alliance commented that the standard ways of delivering health promotion campaigns such as through television advertisements, radio campaigns and billboards did not 'suit the means by which rural people tend to receive communications'. To engage with country people it was good to go to 'country shows and field days and to pubs and sports clubs'.<sup>52</sup>
- 3.44 Rural men's health could also be promoted indirectly through community groups such as the Country Women's Association of Australia. Members of the Country Women's Association of Australia could encourage and inform 'the men in their lives [to] regularly consult with health professionals'.<sup>53</sup> Health messages could also be included in country magazines which farmers will always look through during their work breaks.<sup>54</sup>
- 3.45 Professor Jon Emery cautioned that public awareness campaigns need to balance raising awareness among the complacent and raising anxiety among the informed, and stated:
- ... there is always that balance between how much you raise anxiety in those who have a generally high awareness around the symptoms against those who are much more complacent in general. That is always the challenge with these public health campaigns.<sup>55</sup>

## Health Practitioner Awareness

- 3.46 In Australia the 'vast majority of skin cancers' are diagnosed by general practitioners,<sup>56</sup> so it is these health professionals in particular who are in a

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51 Royal Flying Doctor Service, *Submission 34*, p. 3.

52 Mr Gordon Gregory, Executive Director, National Rural Health Alliance, *Official Committee Hansard*, Canberra, 25 March 2014, p. 3.

53 National Rural Health Alliance, *Submission 7.1*, p. 4.

54 Mrs Joanne Crotty, Awareness Education Manager, Danger Sun Overhead, Melanoma Patients Australia, *Official Committee Hansard*, Brisbane, 22 May 2014, p. 14.

55 Professor Jon Emery, Professor of Primary Care Cancer Research, University of Melbourne, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 35.

56 Professor Jon Emery, Professor of Primary Care Cancer Research, University of Melbourne, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 31.



position to have a 'key role in the prevention of skin cancer' by patients who are at high risk of melanoma. Professor Jon Emery explained:

...in Australia GPs diagnose the vast majority of skin cancers. Approximately one per cent of all GP consultations are for non-melanoma skin cancer. GPs play a key role in the prevention of skin cancer and identifying patients who are at high risk of melanoma. There are only very specific subgroups of patients for whom total regular skin examination is actually recommended, and yet it is a practice that is happening very widely in the population at average risk. But the college and the [National Health and Medical Research Council] have very clear guidelines around which patients regular skin examination is actually appropriate for, and GPs play an important role in identifying those patients.<sup>57</sup>

3.47 As mentioned by Professor Jon Emery, the Guidelines (referred to by GPs) encourage timely diagnosis of high risk groups in the population and also raising awareness for such individuals. The Guidelines state:

It is reasonable to posit that successful and timely diagnosis of melanoma will be enhanced if clinicians are aware of high-risk groups in the population, and that people in these groups are aware of their status.<sup>58</sup>

3.48 More specifically, the Guidelines provide assistance to GPs to consider in identifying individuals at risk and state:

Clinical assessment of future risk of melanoma [should] take into account:

- person's age and sex
- history of previous melanoma or non-melanoma skin cancer
- number of naevi (common and atypical)
- family history of melanoma
- skin and hair pigmentation
- response to sun exposure
- evidence of actinic skin damage.<sup>59</sup>

3.49 The increased risk of developing melanoma for people with a history of skin cancer was highlighted by Professor Rodney Sinclair who stated:

If you get a [basal cell carcinoma] at 25 your risk of getting a melanoma is increased by a factor of 100 ... that means your risk of

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57 Professor Jon Emery, Professor of Primary Care Cancer Research, University of Melbourne, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 31.

58 *Clinical Practice Guidelines for the Management of Melanoma in Australia and New Zealand*, p. 15.

59 *Clinical Practice Guidelines for the Management of Melanoma in Australia and New Zealand*, p. 17.

getting a melanoma is 300 per cent. It is not a matter of when you are going to get your melanoma or if you are going to get your melanoma, but how many melanomas are you going to get.<sup>60</sup>

3.50 The Guidelines recommend that:

Individuals at high risk of melanoma and their partner or carer be educated to recognise and document lesions suspicious of melanoma, and to be regularly checked by a clinician with six-monthly full body examination supported by total body photography and dermoscopy as required.<sup>61</sup>

3.51 Dr Helena Rosengren explained why regular skin checks by doctors is important and stated:

The important thing for most of these patients is not the melanoma that has just been excised, because, as I say, generally it is early, it is detecting the second one. Once one melanoma has been detected, patients often think that is what a melanoma looks like. So part of my education is actually to show them pictures of the different range of what melanomas can look like. Yes, there are the flat, dark ones. But there are also the pimply looking ones, the more reddish ones – there is a whole array of different presentations. My findings have shown that patients are not so good at picking up the second melanoma, because they have the picture stuck in their mind of what the first one looked like. That is why it is very important that we, as doctors, do the skin checks for them and look at the scar from the first excision and also check lymph nodes, where we are dealing with an invasive melanoma.<sup>62</sup>

3.52 Dr David Whiteman considered the advice provided in the Guidelines to be ‘well intentioned’, but commented that putting them into practice was ‘not straightforward since there are no validated clinical tools for reliably identifying patients at high risk of skin cancer. Instead, clinicians must make subjective assessments of risk’.<sup>63</sup>

3.53 Dr David Whiteman added that while there were a number of published risk prediction tools for melanoma, very few had been validated as they

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60 Professor Rodney Sinclair, Professor of Dermatology, University of Melbourne, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 44.

61 *Clinical Practice Guidelines for the Management of Melanoma in Australia and New Zealand*, p. 18.

62 Dr Helena Rosengren, Principal, Skin Repair Skin Cancer Clinic, Townsville, *Official Committee Hansard*, Cairns, 23 May 2014, p. 34.

63 Dr David Whiteman, *Submission 3*, p. 7.

had been ‘developed from small datasets sampled from low incidence populations’.<sup>64</sup>

3.54 The Queensland Institute of Medical Research Berghofer Cancer Research Centre was conducting a prospective 10 year research program following 43 794 people through their Medicare records looking for the development of skin cancer. The aim is to develop ‘accurate and valid tools’ for Australian patients and doctors to assess future risks of keratinocyte cancers and melanomas.<sup>65</sup>

3.55 Dr David Whiteman added that:

Such data are essential if the Australian guidelines are to be followed. Our study will provide one source of data, but will need to be replicated by other studies using other patient samples to ensure validity.<sup>66</sup>

3.56 Despite this, people at lower risk of developing skin cancer can also develop the disease,<sup>67</sup> so it is important for general practitioners to not only be aware of risk factors but also be able to recognise skin cancer lesions when presented.

## Role of Medical and Allied Health Professionals and Others in Diagnosis

3.57 There are a broad range of individuals and organisations who have a role in the early diagnosis of skin cancer – from trained clinicians to non-professionals who facilitate others in diagnosing skin cancers.

### General Practitioners

3.58 As a GP ‘is the doctor of first contact and has an ongoing relationship with his/her patients, [they] are therefore key to early diagnosis and treatment of skin cancer’.<sup>68</sup>

3.59 The Department of Health stated that ‘the diagnosis and management of skin cancer is a core competency of general practitioners’ who may treat the skin cancer themselves or make an appropriate referral for treatment’.<sup>69</sup> The Skin & Cancer Foundation Inc commented that the advantage of raising skin cancer concerns with GPs was their ability to

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64 Dr David Whiteman, *Submission 3*, p. 7.

65 Dr David Whiteman, *Submission 3*, p. 7.

66 Dr David Whiteman, *Submission 3*, p. 7.

67 Mr Clinton Heal, Chief Executive Officer, Melanoma WA, *Official Committee Hansard*, Perth, 1 May 2014, p. 26.

68 Royal Australian College of General Practitioners, *Submission 10*, p. 3.

69 Department of Health, *Submission 12*, p. 11.

take a general history, and understand the familial background of the patient.<sup>70</sup>

- 3.60 The Therapeutic Goods Administration stated that the very high prevalence of skin cancer in Australia has led to GPs who are ‘very well trained and versed in the detection and management of skin cancer ... [and] is part of the reason for’ Australia’s ‘rates of survival from melanoma in particular but also those 400-odd thousand non-melanoma skin cancers [that are estimated to] occur every year’.<sup>71</sup>
- 3.61 The Hunter Medicare Local, however, drew attention to challenges faced by GPs in screening, diagnosing and managing skin cancer in the primary care setting. Referring to work published in the *Australian Family Physician*,<sup>72</sup> the Hunter Medicare Local stated:
- ... While many GPs have become expert in performing skin checks, others feel anxious. Factors that can contribute to GPs feeling anxious include; confusingly named benign skin lesions, the variability in clinical presentation of skin cancer, concern about missing a skin cancer, desire to reduce the number of benign skin lesions excised and limited access to specialist backup, especially for those working in rural and remote settings.<sup>73</sup>

## Specialists

- 3.62 GPs unsure of a skin lesion diagnosis may refer the patient to one of the 454 practising dermatologists in Australia.<sup>74</sup> To become a specialist dermatologist – a Fellow of the Australian College of Dermatology – requires ‘successful completion of 4 [full time equivalent] years in accredited training positions (public hospital and private practice days) and examinations’.<sup>75</sup>
- 3.63 The Australasian College of Dermatologists cited four studies which showed that dermatologists were more accurate in diagnosing melanoma than non-dermatologists. The Australasian College of Dermatologists stated:
- ... in Australia a study of GPs and skin cancer clinic doctors indicated that the average number of biopsies required for

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70 Mr Chris Arnold, Executive Director, Skin & Cancer Foundation Inc, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 12.

71 Dr Anthony Hobbs, Principal Medical Adviser, Therapeutic Goods Administration, Department of Health, *Official Committee Hansard*, Canberra, 28 March 2014, p. 9.

72 *Australian Family Physician*, 2012: 41(7): pp. 464–69.

73 Hunter Medicare Local, *Submission 54*, p. 3.

74 Australasian College of Dermatologists, *Submission 15*, p. 1.

75 Australasian College of Dermatologists, *Submission 15*, p. 1.

identification of one melanoma was 30. This compared with dermatologists who required 12 excisions in one study and only 4 in another for identification of 1 melanoma. This translates to greater efficiency in the diagnosis of melanoma, evidenced by reduced number of unnecessary biopsies and hence reduced costs. Importantly, it also means diagnosis of thinner lesions and thus overall improved melanoma survival rates. The implication for mortality is important but later diagnosis will likely result in greater cost burden and loss of productive years.<sup>76</sup>

### Skin Cancer Clinics

3.64 As noted earlier there is limited time during a standard GP consultation for a full skin cancer check as a secondary purpose for visiting, especially if the issue is raised towards the end of the visit.<sup>77</sup> In addition, the long waiting times to see dermatologists, and the cost and availability of dermatologists in rural areas has led to the emergence of skin cancer clinics over time. HealthCert International explained how skin cancer clinics have developed and stated:

... the skin cancer clinic doctor model, evolved as a consequence of long waiting lists to see specialists combined with their limited geographical distribution and associated cost of consultation and or associated treatment. Beginning in the late 1990s skin cancer clinics grew to become a staple of skin cancer management in Australia.

GPs with a special interest in skin cancer ... filled the void between GPs who do not have the skills to manage more complex skin cancers, and dermatologists who have the skills but long waiting lists.<sup>78</sup>

3.65 Dr Helena Rosengren advocated for the use of skin clinics for people wishing to get skin checks because local GPs were 'not frequently offering complete checks'. They were good at looking at individual lesions and at diagnosing and non-melanoma skin cancer, but Dr Rosengren suggested GPs fell down in identifying 'the rarer presentations for melanoma, such as nodular melanomas – things that look like little pimples, pink things et cetera'.<sup>79</sup> Dr Rosengren cited research showing that GPs 'who

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76 Australasian College of Dermatologists, *Submission 15*, p. 4.

77 Dr Brett Morrison, Local Medical Officer, Molescan Skin Cancer Clinics, *Official Committee Hansard*, Cairns, 23 May 2014, p. 2.

78 HealthCert International, *Submission 43*, p. 7.

79 Dr Helena Rosengren, Principal, Skin Repair Skin Cancer Clinic, Townsville, *Official Committee Hansard*, Cairns, 23 May 2014, p. 34.

subspecialise in skin cancer have a higher use of dermatoscopy and diagnose melanoma with greater accuracy than their generalist counterparts'.<sup>80</sup>

- 3.66 Dr Siaw Ho commented that clinic doctors 'have also decided to undertake extra training in this area [the management of skin cancer] to be more effective and competent in the area of diagnosis and treatment of skin cancers'.<sup>81</sup> Dr Felix Choi also advised that it was much easier to manage skin cancers from a dedicated practice:

Many procedures can be done on the spot reducing time and need for multiple bookings. Having other colleagues who are also working there allows for more opinions about suspicious lesions.<sup>82</sup>

- 3.67 The Victorian Department of Health drew attention to criticism of skin cancer clinics by the Australasian College of Dermatologists and the Australian Society of Plastic Surgeons regarding 'diagnostic performance and appropriate patient management within skin cancer clinics of both overtreatment and under treatment issues'.<sup>83</sup> The Royal Australian College of General Practitioners, however, stated that 'general practice delivers care very effectively and efficiently and certainly just as, if not more, effectively than specialist skin clinics'.<sup>84</sup>

- 3.68 The Skin & Cancer Foundation Inc was concerned that there is a developing number of skin cancer clinics which are not staffed by (skin cancer specialist) dermatologists or plastic surgeons, 'but rather by GPs with limited skills and experience'.<sup>85</sup> The Skin & Cancer Foundation Inc stated:

The emergence of this practice is market-driven. There is an increased awareness of the risk of skin cancer, the need for regular checks, especially in the later age groups where skin cancer is prevalent. It is important for the GP to have some basic skills that would take the load off dermatologists and plastic surgeons for these routine cases. It is really valuable that they also have the skills to detect and assess, and provide treatment for the simple

80 Dr Helena Rosengren, Principal, Skin Repair Skin Cancer Clinic, *Submission 48*, p. 1, citing Rosendale C I at al., *The impact of sub specialisation and dermatoscopy use on accuracy of melanoma diagnosis among primary care doctors in Australia* in *Journal of the American Academy of Dermatology*, 2012 November; 65 (5), pp. 846-52.

81 Dr Siaw Ho, *Submission 46*, p. 2.

82 Dr Felix Choi, *Submission 18*, p. 2.

83 Victorian Department of Health, *Submission 22*, p. 2.

84 The Royal Australian College of General Practitioners, *Submission 10*, p. 4, citing Youl P H et al, *Diagnosing skin cancer in primary care: how do mainstream general practitioners compare with primary care skin cancer clinic doctors?*, in *Medical Journal of Australia* 2007; 187 (4): pp 215-20.

85 Skin & Cancer Foundation Inc, *Submission 9*, p. 10.

cases. And it is critical that they know when to refer to a skin specialist....But it is wrong for some to market themselves as specifically trained skin cancer specialists or experts when they are not.<sup>86</sup>

- 3.69 Dr Jonathan Levy, a GP, was of the view that there are many assumptions made by the specialist groups as to the skills and levels of experience in the area of skin cancer diagnosis by GPs. Dr Levy also highlighted that many GPs were highly skilled surgeons overseas and some have other relevant experience before they became GPs. Further, across the professional spectrum Dr Levy added that 'in ALL craft groups there are those who excel in some areas or are merely adequate (or less) in others'. Dr Jonathan Levy stated:

... Many GPs were highly skilled surgeons overseas, some were dermatology or plastics trainees here and still others have vast surgical experience both via hospital training or rural general practice exposure.

... However, none of this is seen; the assessment of my ability is predicated *solely* upon my membership of the General Practice craft group.

... That GPs are unable to manage anything more than basic skin cancer is clearly a fallacy as if it was asserted that *all* Dermatologists did good surgery or Plastic surgeons were *all* good skin cancer diagnosticians. These assertions are patently absurd.....as is the first.<sup>87</sup>

- 3.70 Dr Paul Fishburn suggested there needed to be a process whereby the public could assess the likely competency of skin cancer clinic doctors. Dr Fishburn suggested that to ensure that skin cancer clinic doctors were of a competent standard there 'could be a requirement to have completed Fellowship of the Skin Cancer College Australasia, or pass the Master of Medicine (Skin Cancer) degree program to achieve accreditation'. Dr Fishburn added that the Australian Medical Council should consider accrediting the Skin Cancer College Australasia because it was well placed to provide training, assessment, and accreditation of clinicians.<sup>88</sup>

- 3.71 HealthCert International commented that the National Health Service in the UK in 2000 had recognised the challenge of a short supply of

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86 Skin & Cancer Foundation Inc, *Submission 9*, p. 10.

87 Dr Jonathan Levy, *Submission 31*, pp. 1, 2.

88 Dr Paul Fishburn, *Submission 57*, p. 3.

specialists by introducing the 'GP with a Special Interest' (GPwSI). HealthCert International explained:

These GPs had to undertake additional university certified professional development and participate in continuous professional development. The GPwSI in Dermatology became a recognised additional layer of care and a resource for dermatologists. The GPwSI facilitated a reduction in waiting lists by taking ownership and management of the lower level skin cancer cases.<sup>89</sup>

- 3.72 Newcastle Skin Check, a private skin cancer clinic, acknowledged that 'not all doctors working at a skin clinic have necessarily undergone more training' which lent weight to criticisms that the public misperceived they were seeing a skin cancer specialist or expert when they visited a skin cancer clinic. The Newcastle Skin Check also stated 'there does need to be regulation of practice standards and recognition of further training'.<sup>90</sup>
- 3.73 Professor Claire Heal also supported the view that skin cancer clinics should be accredited.<sup>91</sup>

### Allied Health Professionals

- 3.74 The Skin & Cancer Foundation Australia suggested that besides GPs and specialists, allied health professionals such as physiotherapists, podiatrists and occupational therapists, 'should be formally trained and regularly updated ... in the detection of skin cancers, as well as identifying high-risk patients'.<sup>92</sup> This view was supported by Dr Siaw Ho.<sup>93</sup>
- 3.75 The National Rural Health Alliance drew attention to a current Commonwealth-funded training program for registered nurses, *A Nurse Led Skin Cancer Screening Program – Contributing to Health Reform*. Under the program, 11 registered nurses across Australia had been trained to refer suspicious skin lesions to appropriate medical specialists and to provide health education on skin cancer prevention.<sup>94</sup>
- 3.76 The Sunspot Skin Cancer Clinic suggested that paramedical services such as physiotherapy, the chiropractors and nursing services as well as pharmacies could provide its Spotcheck service to the public. The Sunspot Skin Cancer Clinic explained how its Spotcheck worked and stated:

89 HealthCert International, *Submission 43*, p. 8.

90 Newcastle Skin Check, *Submission 55*, p. 4.

91 Professor Claire Heal, Associate Professor, James Cook University, *Official Committee Hansard*, Cairns, 23 May 2014, p. 28.

92 Skin & Cancer Foundation Australia, *Submission 17*, p. 3.

93 Dr Siaw Ho, *Submission 46*, p. 2.

94 National Rural Health Alliance, *Submission 7.1*, p. 2.



The Spotcheck service involves a customer entering a pharmacy and having an image taken of a lesion of concern. Both an overview image and a dermatoscopic (magnified with glass plate contact) image are taken. Along with a brief clinical history, the images are then transmitted to a secure server where medical practitioners with training in dermatoscopy can interpret the images and suggest a diagnosis and plan of action. The customer receives a report within 24 hours, and often within 2-3 hours.<sup>95</sup>

3.77 In describing Spotcheck, the Sunspot Skin Cancer Clinic emphasised that it recognised 'the limitations of this service, and regarded it as an adjunct to the full skin check rather than a replacement'.<sup>96</sup>

3.78 The Pharmacy Guild of Australia advised that there were more than 50 pharmacies in Western Australia who were using Spotcheck. The Pharmacy Guild of Australia stated:

This service commenced in February 2014 and uses smart phone technology and a password protected secure 'app' to allow a trained staff member to take a photograph of up to 3 'spots' including sunspots, moles and freckles, at a cost to the consumer of up to \$65 depending on the number of areas assessed ... If a consumer identifies that they require more than three areas assessed, they will be referred for a comprehensive skin check by an appropriate health professional.<sup>97</sup>

3.79 The Pharmacy Guild of Australia commented that similar systems were being operated by Boots Pharmacies in Europe with more than 80 pharmacies participating, and in New Zealand where the technology was called 'Molemap'.<sup>98</sup>

3.80 The Pharmacy Guild of Australia stated that its role is to pick up those people who are being missed because not everyone wants, can afford or has time to go to a GP.<sup>99</sup> This view was supported by the Chemmart Pharmacy which offers the Spotcheck service.<sup>100</sup>

3.81 The Pharmacy Guild of Australia advocated that there should be training for those operating the Spotcheck technology and stated:

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95 Sunspot Skin Cancer Clinic, *Submission 13*, p. 2.

96 Sunspot Skin Cancer Clinic, *Submission 13*, p. 2.

97 The Pharmacy Guild of Australia, *Submission 30*, p. 2.

98 The Pharmacy Guild of Australia, *Submission 30*, p. 2.

99 Mr Mark Douglass, National Councillor, The Pharmacy Guild of Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 17.

100 Mr Jonathan Layton, Executive Director, Chemmart Pharmacy, *Official Committee Hansard*, Melbourne, 6 June 2014, p. 28.

I think any diagnostic or any collaborative relationship with anyone that you are working with should be independently certified, and the training should be applied ... there should be independent certification, it should be robust ...<sup>101</sup>

- 3.82 The Lions Cancer Institute was concerned that the pharmacy-based cancer screening was not a full-body check and could provide a false sense of security and stated:

One example that I have personal knowledge of is now available through one Pharmacy group who are promoting checking three (3) spots for \$35-00. Several of those patients have been through the Lions screening units and lesions have been found that were not checked.

... from discussions with those who have used the service it would appear that the check offered is self-selective, not full body and when the patient receives the all clear on those photos they believe they are not at further risk.<sup>102</sup>

## Others

- 3.83 Non government and community groups can become involved in diagnosis or awareness campaigns through sponsorship or facilitating a service.
- 3.84 The Lions Cancer Institute has conducted screening services in rural and remote areas in conjunction with the local Lions Clubs. The local clubs advertise and take bookings for screenings. Trips to rural and remote areas usually last four to five weeks with screening staff changed weekly. The cost, excluding some accommodation and meals, for each mobile unit is just under \$50 000.<sup>103</sup>
- 3.85 The Lions Cancer Institute noted that 'demand always exceeded availability' and described how its mobile units operated:

The mobile unit with experienced screeners can screen ninety (90) people per day, this figure will be reduced if a number of serious lesions are detected as screeners will usually seek a second opinion and will need time to ensure that patient understands the necessity to visit their nominated GP as soon as possible.<sup>104</sup>

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101 Mr Mark Douglass, National Councillor, The Pharmacy Guild of Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 17.

102 Lions Cancer Institute, *Submission 41*, p. 2.

103 Lions Cancer Institute, *Submission 41*, p. 2.

104 Lions Cancer Institute, *Submission 41*, p. 2.

- 3.86 The Lions Cancer Institute recounted that in 2010 a trip to the Western Australia Goldfields:
- ... the mobile unit screened 1,517 patients, 328 of whom were referred to their nominated GP's with 427 suspect lesions for further investigation. Of those 427 lesions, 304 were considered possible life threatening.<sup>105</sup>
- 3.87 Melanoma WA supported the Lions Cancer Institute's activities commenting that cancer screening had occurred during the Melanoma March in 2014 in Karratha; Onslow with the Wheatstone Project; and Bunbury. Forty three people had had their skin checked with eight categorised as having life threatening lesions.<sup>106</sup>
- 3.88 As noted earlier WACHS–K was critical of the value of the skin check clinic offered independent of the regular primary health care system. WACHS-K recommended that any visiting service to the Kimberley, such as that provided by the Lions Club, should at an early stage communicate with the Regional Director and relevant managers of primary health care 'to complement local priorities and ensure the capacity of the ongoing primary care system to accommodate visiting initiatives'.<sup>107</sup>

## Technology and Techniques

- 3.89 Accuracy of diagnosis is important in screening for skin cancer. Not only should cancers be detected, but also harmless abnormalities should be identified to minimise patient concern and reduce unnecessary procedures. To this end it is important that the most appropriate technology and techniques be used.

## Dermatoscopes

- 3.90 Dermatoscopes<sup>108</sup> are used to examine suspicious skin lesions. They consist of a times 10 magnifier and a light source. Older types of dermatoscope have a liquid medium between the instrument and the skin and use non-polarised light (the liquid minimises skin surface reflections). Recent dermatoscope dispense with the liquid and use polarised light. Dermatoscopes:

... are now of a suitable quality that the device brightness is comparable with the oil immersion instruments. They are more

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105 Lions Cancer Institute, *Submission 41*, p. 3.

106 Mr Clinton Heal, Chief Executive Officer, Melanoma WA, *Official Committee Hansard*, Perth, 1 May 2014, p. 27.

107 WA Country Health Service – Kimberley, *Submission 44*, p. 2.

108 A 'decent quality' dermatoscope costs between \$1200 and \$1500, Dr Anthony Azzi, Director, Newcastle Skin Check, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 4.

expensive, however they are more versatile, smaller and lighter, and multiple lesions can be examined quickly without the need for interface fluid application. Newer devices have an extendable faceplate for use with interface fluid if needed; this can improve the image quality.<sup>109</sup>

Figure 3.1 Dermatoscopes



3.91 The Skin Cancer College Australasia highlighted the improvements in diagnostic accuracy which could result from the use of a dermatoscope:

- Doctors not trained in dermoscopy will excise up to 30 moles to diagnose one melanoma.
- Doctors experienced in dermoscopy cut less than 10 moles to diagnose one melanoma ...
- Doctors trained in dermoscopy will find more melanomas at an earlier stage with fewer unnecessary excisions/histology i.e. they can improve health outcomes and save the government money.<sup>110</sup>

3.92 The Newcastle Skin Check advised that the Skin Cancer College Australasia and HealthCert International provided training in the use of the dermatoscope and stated that it is the frequency of use which determines how quickly skills are improved.<sup>111</sup> The Newcastle Skin Check stated:

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109 Dermascopy.com.au, *Dermoscopy Frequently Asked Questions*, <http://www.dermascopy.co.uk/faq.html>, viewed November 2014.

110 Skin Cancer College Australasia, *Submission 21*, p. 3.

111 Dr Alister Lilleyman, Director, Newcastle Skin Check, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 4.

To be competent takes weeks, to be good takes months, and to be an expert takes years.<sup>112</sup>

- 3.93 HealthCert International pointed to a European study which followed the outcomes of a single day training course in skin cancer detection and the use of the dermatoscope delivered to 73 GPs. The study tracked the GPs over a 16 month period during which the GPs examined 2522 patients. HealthCert stated:

The study found that doctors performing naked eye observations missed 23 malignant skin [lesions] but doctors using dermatoscopes missed only six without increasing the number of unnecessary expert consultations.<sup>113</sup>

- 3.94 Professor Scott Menzies advocated the use of sequential digital dermoscopy imaging (SDDI) where a sequence of images could be used to detect change. This would detect melanomas that experienced a change in appearance. Professor Menzies stated that SDDI 'in combination with dermoscopy reduced excisions/referrals of benign pigmented lesions by 64 percent in Australian primary care physicians'. There was also a near doubling of sensitivity – the percentage of correctly diagnosed true melanomas.<sup>114</sup>

### Digital Communications Technology

- 3.95 The use of digital communications technology has enabled health practitioners, especially those in rural and remote areas, to access specialist services. In 2011, Medicare Australia introduced *Telehealth*, a program which provided financial incentives to eligible practitioners to facilitate patients to videoconference with a specialist.<sup>115</sup> The Skin & Cancer Foundation Inc stated that, unfortunately, insufficient use of this technology was being made by rural and remote GPs and that 'only very limited take-up has been seen by dermatologists'.<sup>116</sup>
- 3.96 Teledermatology, for example Tele-Derm<sup>117</sup>, which allows rural doctors to submit digital images of affected skin and history to an experienced dermatologist. The dermatologist then reports back to the doctor 'usually

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112 Newcastle Skin Check, *Submission 55*, p. 3.

113 HealthCert International, *Submission 43*, p. 5.

114 Professor Scott Menzies, *Submission 56*, p. 1.

115 Victorian Department of Health, *Submission 22*, p. 2-3.

116 Skin & Cancer Foundation Inc, *Submission 9*, p. 10.

117 'Tele-Derm is an online resource, administered by the Australian College of Rural and Remote Medicine. Tele-Derm is 'designed primarily for rural doctors interested in obtaining practical advice on the diagnosis and management of skin disease in general practice'. National Rural Health Alliance, *Submission 7*, p. 15.

within two days with diagnosis and/or treatment options.<sup>118</sup> This technology can be referred to as ‘store and forward teledermatology’ and is similar to that employed by Spotcheck but is designed for GPs.

3.97 Teledermatology does not have a Medicare Benefits Schedule (MBS) item number so there is no funding made available to the referring doctor.<sup>119</sup>

3.98 The National Rural Health Alliance drew attention to the debate surrounding the use of teledermatology:

Some experts believe that because of the highly-visual nature of the specialty, most skin conditions can be diagnosed from an image, especially if there is some history available. Such opinions suggest that dermatological treatments can be instituted and monitored by practitioners without any specialist training, making telemedicine an ideal solution.

Contrary views are held by some medical practitioners, particularly specialists, who believe that the best medical assistance for diagnosing skin cancers entails face-to-face consultations between doctors/specialists and patients, where clinicians can study lesions and surrounding skin and access a patient’s history.<sup>120</sup>

3.99 The Victorian Department of Health advised that the Commonwealth Department of Health had identified store and forward teledermatology as ‘a viable and economic solution for doctors in rural and remote areas to access professional specialist opinions to assist in providing services to the patient’.<sup>121</sup> The National Rural Health Alliance suggested that the technology was also useful for immobile nursing home patients who had difficulties in accessing specialists.<sup>122</sup>

## Future Directions

3.100 Dr Anthony Azzi identified some of the future directions in computer software and technology for undertaking analysis of skin lesions. Dr Azzi stated:

You take a photo and the software will do an analysis of the likelihood of this lesion being a melanoma. There are new programs being developed at the moment with machines that measure the electrical impedance through a lesion to give you a

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118 National Rural Health Alliance, *Submission 7*, p. 15.

119 Victorian Department of Health, *Submission 22*, p. 3.

120 National Rural Health Alliance, *Submission 7* p. 16.

121 Department of Health, Victoria, *Submission 22*, p. 3.

122 National Rural Health Alliance, *Submission 7* p. 16.

likelihood of whether or not it is abnormal. There are other machines that look through images and slice through the skin as if you are putting it under the microscope so that you can actually look at the cells. There is one in development at the moment at the University of Queensland ... but it is another system where you apply an instrument to the skin and it looks at the likelihood of this being a melanoma.<sup>123</sup>

- 3.101 Computer systems are expensive and bulky when compared to dermatoscopes. Image resolution may be a factor as well as the limitations of the software. Further, lesions have to be first selected by an operator for examination.<sup>124</sup>

## Training Primary Health Providers

- 3.102 The present level of GP training in Australia was described by Dr Paul Fishburn, who has written dermatology and skin cancer curricula.<sup>125</sup> Dr Fishburn was of the view that the Royal Australian College of General Practitioners Fellowship program had limited training relevant to skin cancer and stated:

... dermatology training was limited to a couple of hours discussion with supervisors. There was no formal training, nor examination in the use of dermoscopy within [Royal Australian College of General Practitioners] training. This adds the requirement for GP's to attend post-graduate courses in order to become proficient at dermoscopy.<sup>126</sup>

- 3.103 The Hunter Medicare Local stated that it was 'recognised that dermatology training for medical students in Australia is considered poor by international standards'. The Hunter Medicare Local supported increased training for medical students on performing skin cancer checks.<sup>127</sup> This view was also supported by Dr Felix Choi,<sup>128</sup> and the Newcastle Skin Check.<sup>129</sup>

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123 Dr Anthony Azzi, Director, Newcastle Skin Check, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 18.

124 Dermascopy.com.au, *Dermoscopy Frequently Asked Questions*, <http://www.dermoscopy.co.uk/faq.html>, viewed November 2014.

125 Dr Paul Fishburn, *Submission 57*, p. 1.

126 Dr Paul Fishburn, *Submission 57*, p. 2.

127 Hunter Medicare Local, *Submission 54*, p. 3.

128 Dr Felix Choi, *Submission 18*, p. 1.

129 Newcastle Skin Check, *Submission 55*, p. 4.

- 3.104 Dr Paul Fishburn listed six organisations providing post graduate training in skin cancer,<sup>130</sup> and added that there is formal training and examination required to achieve Fellowship of the College of Dermatologists and the Skin Cancer College Australasia.<sup>131</sup>
- 3.105 HealthCert International advocated compulsory once-off training for GPs in dermatoscopy and extended to nurses operating in rural Australia.<sup>132</sup> The Skin & Cancer Foundation Australia supported the formal training of doctors with regular updates in the detection of skin cancers as well as identifying high-risk patients.<sup>133</sup> This view was also supported by Newcastle Skin Check.<sup>134</sup>
- 3.106 The Australian Melanoma Research Foundation suggested that a strategy to promote the early diagnosis of skin cancers could be ‘better web based education modules for GPs, medical students and specialist groups’.<sup>135</sup>
- 3.107 The Cancer Council Australia advised that it planned to ‘integrate educational modules into online clinical practice guidelines [developed] to support implementation and uptake, and reinforce content knowledge among clinicians’.<sup>136</sup>

## Concluding Comment

### Screening

- 3.108 The Committee endorses the current skin cancer screening strategies. General population screening would be prohibitively expensive and would place high demands on those undertaking the screening. Also, it may not improve outcomes given the current opportunistic and targeted screening strategy.
- 3.109 The Committee has received evidence of several campaigns promoting the need for skin cancer checks. These differ in aspects of their message and modes of delivery. The Committee notes the debate on whether to include images of cancers and which skin lesion images are appropriate.

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130 College of GP and College of Dermatologists Diploma; Master of Medicine (Skin Cancer) University of Queensland; Skin Cancer College of Australasia Diploma Dermoscopy and Skin Cancer; HealthCert/University of Queensland Weekend Courses; Skin Cancer Foundation Victoria; Skin and Cancer Foundation New South Wales.

131 Dr Paul Fishburn, *Submission 57*, p. 3.

132 HealthCert International, *Submission 43*, pp 2, 4.

133 Skin & Cancer Foundation Australia, *Submission 17*, p. 5.

134 Newcastle Skin Check, *Submission 55*, p. 4.

135 Australian Melanoma Research Foundation, *Submission 33*, p. 2.

136 Cancer Council Australia and the Clinical Oncology Society of Australia, *Submission 26*, p. 2.



- 3.110 Several witnesses supported the suggestion that a note reminding people to seek a skin cancer check be included in the bowel cancer screening invitation letter.<sup>137</sup>
- 3.111 Currently, the bowel cancer screening program is being progressively expanded and by 2020 will become a biennial screening program. At this date 'approximately four million eligible Australians will be invited annually' to have a bowel cancer check.<sup>138</sup> People aged 50 and over are being targeted by the screening program and this group is also at increased risk of developing skin cancer. It would be opportune and cost effective to remind people to seek a skin cancer check when letters are sent as part of the National Bowel Cancer Screening Program. The Committee also believes there is an opportunity for information to be provided by general practitioners at health assessments of people aged 75 years or older.
- 3.112 The Committee notes the evidence from the Hunter Melanoma Foundation that there is no structure for sharing success stories,<sup>139</sup> and considers there is a need for a systematic review of the effectiveness of screening awareness campaigns.

### Access to Medical Advice

- 3.113 The *Clinical Practice Guidelines for the Management of Melanoma in Australia and New Zealand* provide advice on identifying groups at high risk of developing skin cancer. The Committee welcomes the research undertaken by the Queensland Institute of Medical Research Berghofer Cancer Research Centre into quantifying the level of risk faced by an individual. While this research is necessarily long term in nature, there is an expectation that the research will result in a valuable tool for GPs.
- 3.114 There is debate about how best to provide medical services, whether through referrals to dermatologists, through skin cancer clinics, or a mix of both. Skin cancer clinics have developed in response to the increased

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137 Professor Adele Green, Senior Scientist, Berghofer Institute, *Official Committee Hansard*, Brisbane, 22 May 2014, p. 26; Dr Helena Rosengren, Principal, Skin Repair Skin Cancer Clinic, *Official Committee Hansard*, Cairns, 23 May 2014, p. 33; Mr Shayne Connell, Regional Manager, Cancer Council, Hunter Central Coast Region, *Official Committee Hansard*, Sydney, 5 September 2014, p. 24; Associate Professor Pablo Fernandez-Penas, Head of Research and Education, Skin & Cancer Foundation Australia, *Official Committee Hansard*, Sydney, 5 September 2014, p. 30.

138 Department of Health, *National Bowel Cancer Screening Program*, <http://www.cancerscreening.gov.au/internet/screening/publishing.nsf/Content/bowel-about>, viewed November 2014.

139 Mrs Jenny Noblet, Executive Officer, Hunter Melanoma Foundation, *Official Committee Hansard*, Newcastle, 30 July 2014, p. 14.

demand for skin cancer checks and long waiting times to see dermatologists as well as cost, distance and time constraints.

### Rural and Remote

- 3.115 Rural and remote areas of Australia pose particular challenges in combating skin cancer. Not only are there fewer specialist dermatologists, but the demographics and occupations in those areas create a higher risk profile.
- 3.116 The Committee recognises the role of pharmacies, especially those in rural and remote areas, in providing limited store and forward skin lesion evaluation services such as Spotcheck. The Committee, however, is concerned that the public might see such a service as a substitute for regular skin cancer check.
- 3.117 The Committee considers that the Pharmacy Guild of Australia should develop a protocol for pharmacies offering skin lesion checking services. This protocol should include the provision of written advice to customers on the limitations of the service and include a comment that the service is not a substitute for a complete skin check.
- 3.118 Another service of value in rural and remote areas is the provision of skin checks facilitated by organisations such as the Lions Club. These activities have undoubtedly contributed to the well-being of the local population.
- 3.119 The Committee is mindful, however, of the potential for additional demands being placed on local health services. The Committee therefore urges groups offering additional screening services, particularly in rural and remote areas, to liaise early in the planning stage with local health authorities to ensure efficient use of Health resources.

### Use of New Technology and Medical Training

- 3.120 Particularly useful technologies for GPs with limited access to specialist dermatologists are the teleconference, and store and forward teledermatology. Store and forward technology<sup>140</sup> is also used by pharmacists for initiatives such as Spotcheck. While teleconferencing is covered by an MBS item number, store and forward teledermatology is not.
- 3.121 It is clear that the use of the dermatoscope is key to the early detection of skin cancers. All GPs should be required to attain proficiency in their use.

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140 'Store and forward teledermatology' is the process whereby the patient healthcare data and still digital images are captured by a clinician, the digital images and patient data are packaged as a case file and forwarded via a telecommunications (similar to email) service to a dermatologist.

- 3.122 The undergraduate medical curriculum is subject to competing demands of various disciplines and the Committee has come to the view that the dermatology component should be expanded. A dermatoscope in the hands of a well trained person has been shown to be a highly useful tool in accurate skin cancer detection. At the very least, therefore, training in the use of the dermatoscope should be included in the curriculum. This should also be the case for those training to be rural nurses.

#### **Recommendation 4**

- 3.123 **The Committee recommends that the Department of Health include information reminding people to seek a skin cancer check when letters are sent out as part of the National Bowel Cancer Screening Program and that information be provided by general practitioners at health assessments for people aged 75 years and older.**

#### **Recommendation 5**

- 3.124 **The Committee recommends that the Department of Health consider the effectiveness of public awareness campaigns to increase the awareness of the need for skin checks, especially strategies to target high risk groups.**

#### **Recommendation 6**

- 3.125 **The Committee recommends that the Royal Australian College of General Practitioners conduct an assessment of ways to provide firm assurance to the public concerning skin cancer clinics. The assessment should consider potential accreditation options as well as a requirement for such clinics to be staffed by a minimum number of suitably qualified and experienced staff including dermatologists.**

**Recommendation 7**

- 3.126 The Committee recommends that store and forward teledermatology<sup>141</sup> as used by registered medical providers be included on the Medicare Benefits Schedule.

**Recommendation 8**

- 3.127 The Committee recommends that:
- Dermatology components of the undergraduate medical curriculum be expanded; and
  - Proficiency in the use of the dermatoscope be included in the practical component of all undergraduate medical courses and in rural nursing training courses.

**Recommendation 9**

- 3.128 The Committee recommends that all sun-exposed industries incorporate mandatory sun-safety education in their induction programs.

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141 'Store and forward teledermatology' is the process whereby the patient healthcare data and still digital images are captured by a clinician, the digital images and patient data are packaged as a case file and forwarded via a telecommunications (similar to email) service to a dermatologist.

## Treatment and Management

- 4.1 More than 750 000 Australians are treated for skin cancer each year, representing over 2000 patients each day.<sup>1</sup> Once diagnosed, the treatment and management of skin cancer involves a complex range of different health professionals including general practitioners, dermatologists, oncologists, radiologists and a multitude of other specialists. It may also include substantial non-medical or psychosocial support of patients and their families such as counselling services, the facilitation of ongoing carers, and accommodation support.
- 4.2 Although the management of this myriad of health professionals is a complex challenge to navigate for patients, practitioners and policy makers alike, proper treatment and management of the care provided has a critical impact on the outcome for patients.
- 4.3 Further, the importance of research into new treatments and treatment options for patients with skin cancer is highlighted by national statistics which indicate that the rate of skin cancer in Australia is increasing.<sup>2</sup> With increasing prevalence, comes increasing costs to the national health care system. Ongoing research into skin cancer brings with it the possibility of lifesaving treatments and improved quality of life for patients. These possibilities also may bring long-term economic savings in the treatment of Australia's 'national cancer' for the public health budget.
- 4.4 This chapter discusses these treatment and management challenges as well as these research opportunities. It addresses the following:
- existing treatment options and clinical practice guidelines;
  - other treatment challenges such as the accessibility for patients in regional and remote centres, and early treatment;

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1 Cancer Council Australia and Clinical Oncology Society of Australia, *Submission 26*, p. 1.

2 See Chapter 2 for more information on the statistics, trends and prevalence of skin cancer in Australia and globally.

- strategies of managing patients' treatment;
- psychosocial and non-medical support for patients and their families; and
- new treatments, as well as emerging research and clinical trials to further develop improved treatment options.

## Existing Treatments

- 4.5 There is a broad range of treatment approaches available to patients diagnosed with skin cancer allowing for specific protocols to be applied for individual tumour types. The most effective treatment will depend on the type of skin cancer, the stage of the disease, the severity of symptoms, and the patient's overall health.<sup>3</sup>
- 4.6 The recommended and most common treatment option for skin cancer is a complete surgical excision, and may include the removal of an appropriate margin of normal tissue.<sup>4</sup> This treatment option is considered 'the most appropriate treatment modality for both melanoma and non-melanoma skin cancers (NMSC) which provides the highest chance of curing the patient'.<sup>5</sup> However, depending on the individual patient and their presentation of melanoma or NMSC, two clinical guidelines provide further details on treatments and strategies.
- 4.7 The *Clinical Practice Guidelines for the Management of Melanoma in Australia and New Zealand (2008)* stipulates that the standard treatment for primary melanoma should be wide local excision of the skin and subcutaneous tissues around the melanoma based on the maximum Breslow thickness of the primary melanoma (that is, the thickness or depth of the melanoma is measured from the top layer of skin to the base of the tumour).
- 4.8 As stated above, further treatments of melanomas will largely depend on the stage of the disease and the severity of symptoms. Of the greatest severity, advanced melanoma (unresectable stage III to stage IV or metastatic melanoma) is an aggressive and invasive disease, with a median survival of approximately 6 to 9 months. The aim of treatment in advanced melanoma is to optimally manage each stage of disease with a view to extending overall survival. Therapies for advanced melanoma are limited and include systemic therapy (dacarbazine, fotemustine or

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3 Department of Health, *Submission 12*, p. 7.

4 Department of Health, *Submission 12*, p. 7.

5 Department of Health, *Submission 12*, p. 7.

- temozolomide), palliative care/radiotherapy, palliative surgery or no treatment.<sup>6</sup>
- 4.9 The *Basal cell carcinoma, squamous cell carcinoma (and related lesions) – a guide to clinical management in Australia (2008)* also recommends complete surgical excision with appropriate margins of normal tissue. These two clinical practice guidelines are discussed further in later parts of this chapter.
- 4.10 NMSCs may also be removed by micrographically (Mohs surgery), a highly specialised surgical technique by which individual layers of cancerous tissue are removed one at a time and examined under a microscope, by the same medical practitioner, until all cancerous tissue has been removed.<sup>7</sup> Typically used to treat high-risk or recurring NMSC on the face, Mohs surgery aims to achieve optimal clearance of a tumour whilst conserving tissue. The techniques involved with this treatment option ‘maximises cure rates for difficult tumours whilst preserving tissue function and cosmesis’.<sup>8</sup>
- 4.11 Some stakeholders also discussed non-surgical treatment options, including topical treatments and photodynamic therapy.<sup>9</sup> Some of these non-surgical treatments are supported by Australian guidelines while the efficacy of others have been questioned by regulators.<sup>10</sup>
- 4.12 Australian guidelines support a number of non-surgical techniques for the treatment of NMSCs (including solar keratosis), including, cryotherapy (direct application of liquid nitrogen to cause the destruction of cancerous tissue); curettage and diathermy/electrodesiccation (electrosurgery); topical agents or creams; photodynamic therapy; and radiotherapy.<sup>11</sup> If the cancerous cells have spread beyond the skin and sentinel lymph nodes, chemotherapy may be used to kill the cancer cells present in the patients’ body.<sup>12</sup> Importantly however, the Department of Health stated that ‘while [some] non-surgical techniques have been used in recent years for the treatment of melanoma, including imiquimod cream, cryotherapy and radiotherapy, their efficacy has not been established’.<sup>13</sup>

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6 Pharmaceutical Benefits Scheme, *PBS & Ipilimumab*, <http://www.pbs.gov.au/info/industry/listing/elements/pbac-meetings/psd/2012-11/ipilimumab>, viewed November 2014.

7 Department of Health, *Submission 12*, p. 7

8 Australasian College of Dermatologists, *Submission 15*, p. 5.

9 Australasian College of Dermatologists, *Submission 15*, p. 5.

10 Department of Health, *Submission 12*, p. 7.

11 Department of Health, *Submission 12*, p. 8.

12 Department of Health, *Submission 12*, p. 9.

13 Department of Health, *Submission 12*, p. 7. See also Trans-Tasman Radiation Oncology Group, *Submission 47.1*, p. 1.

- 4.13 A list of the full range of medications for the treatment of skin cancer (both melanoma and NMSCs) which have been approved by the Therapeutic Goods Administration (TGA) was provided in a submission from the Department of Health.<sup>14</sup>

## Clinical Practice Guidelines

- 4.14 As briefly introduced above, two clinical practice guidelines have been developed for health practitioners in Australia for the treatment and management of skin cancer: one for melanoma and one for NMSC. Both guidelines were developed and released for clinicians in 2008. Their purpose is to 'ensure as far as possible that treatment is of the same high standard wherever sought, and in both public and private systems [and therefore] need to be updated regularly to be useful to doctors and patients'.<sup>15</sup>
- 4.15 The *Clinical practice guidelines for the management of melanoma in Australia and New Zealand*, provides information about prevention, classification and staging, biopsy, treatment of primary melanoma, management of locoregionally recurrent melanoma, psychosocial issues, palliative care, and follow-up care.<sup>16</sup>
- 4.16 *Basal cell carcinoma, squamous cell carcinoma (and related lesions) – a guide to clinical management in Australia* provides information for clinicians in the treatment of NMSC, including pathology, surgical treatment, radiotherapy, cryotherapy, curettage and diathermy/electrodessication, other treatments, prevention, metastasis from NMSC and follow-up care.<sup>17</sup>
- 4.17 During the Committee's Inquiry, the relevance and efficacy of these guidelines were questioned by a number of stakeholders. The chief criticism has been that these guidelines have not been updated since an initial release in 2008.
- 4.18 Although Cancer Australia 'supports the development of clinical practice recommendations', the organisation recognised the 'need for promoting and maintaining currency of these recommendations'. Cancer Australia stated:

As these guidelines are based on evidence published to early 2007, they do not take into account new evidence, such as the role of sentinel node biopsy and the [recent] drugs... listed on the Pharmaceutical Benefits Scheme in 2013 for the treatment of

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14 Department of Health, *Submission 12*, p. 30.

15 Cancer Voices New South Wales, *Submission 59*, p. 1.

16 Cancer Australia, *Submission 23*, p. 9.

17 Cancer Australia, *Submission 23*, p. 9.



advanced melanoma. Further, new therapies for melanoma, based on research on tumour biology and targeted to the molecular profiles of tumours are likely to emerge.<sup>18</sup>

- 4.19 Cancer Australia therefore recommended that ‘new key clinical practice recommendations on the treatment and management of skin cancer for general and specialist health professionals’ be developed. Cancer Australia argued:

This would enable the incorporation of new evidence and new treatments in melanoma, including those based on greater understanding of genomics and the molecular basis of cancer, and assist health professionals in implementing evidence-based best practice care. Cancer Australia also recognises the need for promoting uptake and maintaining currency of these recommendations.<sup>19</sup>

- 4.20 However, a joint submission by Cancer Council Australia and the Clinical Oncology Society of Australia stated the challenges of updating printed guidelines:

To date, interventions to improve implementation of clinical practice guidelines to GPs have shown limited and variable effectiveness... Clinical practice guidelines aim to enhance the quality of care by promoting consistent clinical decision-making based on the best evidence. Traditional printed guidelines cannot be updated as new evidence is published; written guidelines also have other inherent cost and dissemination limitations.<sup>20</sup>

- 4.21 Cancer Council Australia and the Clinical Oncology Society of Australia were of the belief that the challenges of producing clinical practice guidelines which reflect evolving best practice can be overcome through the use of modern technology. They explained:

Development of online guidelines on a Wikimedia platform allows for content to be electronically searched by users, instantly updated by guideline developers as new evidence becomes available, widely disseminated among users online, and provided in a format in which stakeholders can comment or submit new evidence to developers at any time. ... Paper-based clinical practice guidelines for melanoma and NMSC were published separately in 2008 and have not been updated since. Both sets of guidelines require updating; Cancer Council Australia is in the

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18 Cancer Australia, *Submission 23*, p. 9.

19 Cancer Australia, *Submission 23*, p. 11.

20 Cancer Council Australia and Clinical Oncology Society of Australia, *Submission 26*, p. 2.

planning stages of the review of melanoma guidelines and will transition these to the interactive, Wikimedia platform.<sup>21</sup>

- 4.22 While the joint submission noted that in-principle acceptance of online clinical practice guidelines is high, only a small proportion of physicians regularly access them. To ensure greater clinical access and use, Cancer Council Australia and the Clinical Oncology Society of Australia indicated that they will continue to promote the benefits of online guidelines to the clinical community through all available mechanisms, including dissemination strategies for new guidelines.<sup>22</sup>
- 4.23 In addition to the concerns that the guidelines are not sufficiently up-to-date, there were also concerns that their content was not reflective of rural regional and remote general practice. The National Rural Health Alliance stated that ‘best practice clinical guidelines for general practitioners on skin cancer need to take account of the particular challenges and circumstances of people in rural and remote areas who are affected by skin cancer’.<sup>23</sup>
- 4.24 The Alliance consequently recommended that ‘best practice clinical guidelines for general practitioners on skin cancer need to take account of the particular challenges and circumstances of people in rural and remote areas who are affected by skin cancer’.<sup>24</sup> Other patient treatment and management issues associated with regional and remote locations are discussed further below.

## Other Treatment Issues

- 4.25 Two other treatment issues were discussed throughout the inquiry: the impact of regional and remoteness on patient treatment and management, and the importance of treating skin lesions early.

## Regional and Remote

- 4.26 A number of organisations discussed the additional challenges faced by regionally or remotely located patients and their access to appropriate

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21 Cancer Council Australia and Clinical Oncology Society of Australia, *Submission 26*, pp. 2-3.

22 Cancer Council Australia and Clinical Oncology Society of Australia, *Submission 26*, pp. 2-3.

23 National Rural Health Alliance, *Submission 7*, p. 20. See also, Mr Gordon Gregory, Executive Director, National Rural Health Alliance, *Official Committee Hansard*, Canberra, 25 March 2014, p. 3.

24 National Rural Health Alliance, *Submission 7*, p. 20.

treatment options.<sup>25</sup> For example, Hunter Medicare Local stated that ‘there is an inequity in access to care for people from low socioeconomic groups and those living in rural areas’.<sup>26</sup>

4.27 A similar account was provided by the Kimberley-Pilbara Medicare Local:

The major identified need in the [Kimberly-Pilbara] region relates to access to a range of efficacious health services and practitioners both at the primary and acute level to enhance the individual’s and population’s health status. The factors that contribute to this gap are seemingly simple in identification however complex to analyse and even more convoluted to redress. It is paramount to understand that for the Kimberley population each of these individual social determinants of health are intrinsically linked yet also arbitrarily to the next creating a meandering cyclical pattern of inaccessibility to improve health status.<sup>27</sup>

4.28 However, there were reports which appeared to show some duplication in the coordination of service delivery in regional and remote Australia.<sup>28</sup>

4.29 The Royal Flying Doctor Service noted that the ongoing lack of (dermatology and specialist) services in rural locations requires patients to travel ‘very large distances for treatment services, including significant personal costs’.<sup>29</sup> In the view of the Royal Flying Doctor Service, two strategies can address the difficulties faced by rural patients.

4.30 First, general practitioners (GPs) and primary care teams already located in these rural locations must be better supported. These practitioners are ‘critical in the detection, treatment and management of skin cancer’.<sup>30</sup> The role of GPs in diagnosing and treating skin cancer is discussed in chapter 3

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25 Medicare Local Hunter, *Submission 54*, p. 4; Royal Flying Doctor’s Service, *Submission 34*, p. 3; Cancer Voices South Australia, *Submission 35.1*, p. 1; Kimberley-Pilbara Medicare Local, *Submission 39*, p. 1; WA Country Health Service – Kimberley, *Submission 44*, pp. 1-4; National Rural Health Alliance, *Submission 7*, p. 15; Skin & Cancer Foundation Inc, *Submission 9*, p. 10; The Pharmacy Guild of Australia, *Submission 30*, pp. 1-2; Professor David Atkinson, *Submission 40*, p. 1; Lions Cancer Institute, *Submission 41*, p. 2; HealthCert International, *Submission 43*, p. 2; 9-10.

26 Hunter Medicare Local, *Submission 54*, p. 4.

27 Kimberley-Pilbara Medicare Local, *Submission 39*, p. 2.

28 Mr Darren Armitage, Population Health and Community Director, Kimberley Pilbara Medicare Local, *Committee Hansard*, Broome, 2 May 2014, p. 6; Dr Jeanette Ward, Acting Regional Medical Director, WA Country Health Service – Kimberley, *Committee Hansard*, Broome, 2 May 2014, pp. 16-17.

29 Royal Flying Doctor Service, *Submission 34*, p. 3.

30 Royal Flying Doctor Service, *Submission 34*, p. 3.

of this report. The second strategy proposed by the Royal Flying Doctor Service is to better utilise new technologies in telehealth.<sup>31</sup>

### Telehealth and Teledermatology

- 4.31 It was the view of a number of stakeholders that some of the challenges associated with regional and remote health care can be overcome by the possibilities brought by new technologies, particularly teledermatology.<sup>32</sup>
- 4.32 Teledermatology is the practice of dermatology using information technology and communications systems to exchange medical information between a patient, clinician and a dermatologist – at the same or different times and in different geographic locations. This transfer of information can be done in real-time via the use of video conference technology or at different times using digital images transferred via a secure web-based platform, known as ‘store and forward teledermatology’.<sup>33</sup> The capacity of teledermatology in early diagnosis was discussed in chapter 2 of this report.
- 4.33 In the ongoing treatment of skin cancer, the Australasian College of Dermatologists was of the view that:
- the adoption of telehealth in dermatology [can] service the needs of our geographically diverse population and to support primary care doctors... The use of smart – mobile devices and applications in obtaining health information by patients and to support their health care is likely to increase substantially in coming years. There is great potential to utilise the electronic environment for health education, prevention and rapid access to specialist opinion.<sup>34</sup>
- 4.34 The Victorian Department of Health also advocated for greater use of teledermatology however also noted that, as skin cancer is a ‘national issue with similar challenges faced by each state and Territory’, there is an ‘opportunity for the Commonwealth Government to drive a more coordinated response at the national level’.<sup>35</sup>
- 4.35 The Trans-Tasman Radiation Oncology Group advocated that teledermatology is best used in combination with primary health care

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31 Royal Flying Doctor Service, *Submission 34*, p. 3.

32 National Rural Health Alliance, *Submission 7*, p. 15; Skin & Cancer Foundation Inc, *Submission 9*, p. 11; The Pharmacy Guild of Australia, *Submission 30*, pp. 1-2; Professor David Atkinson, *Submission 40*, p. 1; Lions Cancer Institute, *Submission 41*, p. 2; HealthCert International, *Submission 43*, p. 2; 9-10.

33 Victorian Department of Health, *Submission 22*, p. 3.

34 Australasian College of Dermatologists, *Submission 15*, p. 6.

35 Victorian Department of Health, *Submission 22*, p. 3.

practitioners (GPs) who are generally more geographically accessible to patients. The Trans-Tasman Radiation Oncology Group stated:

Skin cancer in rural and regional centres can be neglected. It can be difficult for patients from these areas to access the most modern treatments which are available in the capital cities. A way of solving this would be to support the concept of virtual high-risk skin multidisciplinary clinics. Rural and regional GPs could send patient information such as history, physical examination, scan information and histology via e-mail to groups of specialists in the cities that could comprise at least a Surgeon, a Dermatologist, a Radiation Oncologist and a Medical Oncologist. That way they could receive a multidisciplinary team opinion. This would help to triage patients at their home address.<sup>36</sup>

- 4.36 The Trans-Tasman Radiation Oncology Group consequently recommended the creation of virtual multidisciplinary skin cancer teams for regional and rural patients.<sup>37</sup>
- 4.37 Seeking to address these broad locality challenges, the Australian Government invested \$685 million in the establishment of 26 Regional Cancer Centres and patient accommodation facilities across Australia and a further \$666.6 million in centres of excellence located in Sydney and Melbourne. According to the Commonwealth Department of Health, ‘these regional centres will improve access to surgical and radiation therapy for people living in regional Australia with melanoma’.<sup>38</sup>

## Early Treatment

- 4.38 Chapter 3 of this report discussed the importance of early diagnosis and the challenges faced by the stakeholders engaged in the diagnostic process. However, early treatment of skin cancer is also important for the prognosis of diagnosed patients.
- 4.39 The predecessor Committee’s 2013 roundtable heard evidence from Professor Rodney Daniel Sinclair where early treatment following early diagnosis can reduce the cost of treatment from \$3000 in a public hospital to \$300 in a skin cancer triage clinic.<sup>39</sup>

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36 Trans-Tasman Radiation Oncology Group, *Submission 47.1*, p. 3.

37 Trans-Tasman Radiation Oncology Group, *Submission 47.1*, p. 3.

38 Department of Health, *Submission 12*, p. 11.

39 Professor Rodney Daniel Sinclair, Evidence given to the House of Representatives Standing Committee on Health and Ageing, 43<sup>rd</sup> Parliament, *Official Committee Hansard*, Canberra, 21 June 2013, p. 10.

## Patient Management

- 4.40 For complex and serious skin cancers, patients' treatment will include a number of practitioners including GPs, dermatologists, oncologists, radiologists and other specialists. As previously noted, navigating through these complex treatments can be confusing for patients and their families.
- 4.41 The Committee heard evidence that multidisciplinary care is the best practice approach to evidence-based cancer care and leads to better outcomes for patients. Cancer Australia, a government agency, stated:
- Multidisciplinary care is the best practice approach to providing evidence-based cancer care, including skin cancer care. Multidisciplinary care is an integrated team-based approach to cancer care where medical and allied health care professionals consider all relevant treatment options and collaboratively develop an individual treatment and care plan for each patient.<sup>40</sup>
- 4.42 Accordingly, Cancer Australia developed its *Principles for Multidisciplinary Care*, providing a flexible definition of multidisciplinary care which allows for variation in implementing these principles according to the cancer type and the location of services. These principles can be summarised to include the following:
- a *team approach*, involving core disciplines integral to the provision of good care, including general practice, with input from other specialties as required
  - *communication* among team members regarding treatment planning
  - access to the *full therapeutic range* for all patients, regardless of geographical remoteness or size of institution
  - provision of care in accordance with nationally agreed *standards*;
  - *involvement of patients* in decisions about their care.<sup>41</sup>
- 4.43 Although specific to breast cancer, Cancer Australia has also developed *Principles of Shared Care* in the treatment of patients with breast cancer. These principles included a patient-centred approach; coordination, communication and continuity of care; support for primary care providers; support for specialist treatment team; and, care that is delivered according to best practice standards.<sup>42</sup>
- 4.44 Further to the work developed by Cancer Australia, a number of stakeholders have also worked to provide better patient management, and

40 Cancer Australia, *Submission 23*, p. 9.

41 Cancer Australia, *Submission 23*, p. 16.

42 Cancer Australia, *Submission 23*, p. 19.

identified various opportunities and challenges associated with coordinated care.

- 4.45 For example, Professor Alexis Andrew Miller, a registered practising senior radiation oncologist on the South Coast of New South Wales identified a practical example of an opportunity for improved patient management. Professor Miller advocated that evidence-based practice could be improved by ongoing multidisciplinary interaction between clinicians in the form of a Multidisciplinary Team (MDT) meeting to discuss particularly challenging cases. In the view of Professor Miller, this would include pathologists, radiation oncologists, doctors undertaking surgical procedures (surgeons, dermatologists, community health specialists and GPs).<sup>43</sup>
- 4.46 A MDT service for the treatment of melanoma is currently provided in Western Australia by the Western Australian Melanoma Advisory Service. This is a free, statewide, multidisciplinary service and the only melanoma-specific MDT in Western Australia. The panel of 22 doctors comprises specialists, involving dermatology; general and plastic surgery; radiation and medical oncology; and pathology. The Western Australian Melanoma Advisory Service is also staffed by a nurse coordinator who is capable of assessing and referring patients in need allied health involvement or psychological intervention.<sup>44</sup> The scope of the MDT panel is to:
- provide comprehensive advice regarding the management of complex advanced and metastatic malignant melanoma. This includes advice regarding the adequacy of surgical margins of excision for primary melanomas; the role for further investigations and staging; identifying patients potentially suitable for inclusion in clinical trials; the need for local systemic therapy; and information regarding prognosis.<sup>45</sup>
- 4.47 Similar MDT structures exist in some parts of New South Wales<sup>46</sup> and Victoria.<sup>47</sup>
- 4.48 Other opportunities identified include establishing centres of excellence in treatment and management to set protocols and draft programs with a
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43 Professor Alexis Andrew Miller, *Submission 61*, p. 1.

44 Western Australian Melanoma Advisory Service, *Submission 45*, p. 1.

45 Mrs Julie Teraci, Clinical Nurse Consultant/Coordinator, Western Australia Melanoma Advisory Service, *Official Committee Hansard*, Perth, 1 May 2014, p. 30.

46 NSW Government, *South Eastern Sydney Local Health District – Cancer Services Multidisciplinary Care*, <http://www.seslhd.health.nsw.gov.au/POWH/services/cancerservices/multicare.asp>, viewed November 2014.

47 Victorian Department of Human Services, *Alfred Health Cancer Services*, <http://humanservicesdirectory.vic.gov.au/SiteDetails.aspx?SiteID=54845>, viewed November 2014.

collaborative approach adopted in the treatment and management of patients.<sup>48</sup> Cancer Voices South Australia also recommended a 'triaging mechanism for referral to specialists, so urgent referrals are treated in a timely manner'.<sup>49</sup>

- 4.49 To better address the challenges posed by regionally and remotely located patients, the National Rural Health Alliance stated that Medicare Locals have a clear role to play in the diagnosis, prevention and management of skin care, further noting their heightened importance in regional and remote Australia.<sup>50</sup> Hunter Medicare Local was in support of this identified role, and also commented on the role that GPs have in clinical management of patients located in regional Australia.<sup>51</sup>

## Psychosocial and Non-Medical Support for Patients and their Families

- 4.50 A number of organisations raised the importance of psychosocial and non-medical support for patients of skin cancer, most particularly for melanoma.<sup>52</sup> For example, Melanoma Patients Australia stated:

Patients are (and will most likely continue to) articulate feelings of anxiety, stress and confusion in dealing with their disease. As melanoma gradually shifts to being a chronic disease in the long term, for now, melanoma must still be recognised as a serious condition and patient's referred to support and advocacy services as an integral component of their care.<sup>53</sup>

- 4.51 Similarly, the Western Australian Melanoma Advisory Service commented on the need for the management of a broad range of patients' needs:

Melanoma is not straightforward. It is not like some of the other cancers where you have got these really nicely defined treatment pathways. There are always ifs and buts. ... Melanoma has quite a big emotional impact on patients. I refer quite a bit to

48 Skin & Cancer Foundation Inc, *Submission 9*, p. 7.

49 Cancer Voices South Australia, *Submission 35.1*, p. 1.

50 National Rural Health Alliance, *Submission 7.1*, p. 5.

51 Hunter Medicare Local, *Submission 54.1*, p. 2.

52 Melanoma Patients Australia, *Submission 14*, p. 3; Mr Clinton Hall, Chief Executive Officer, Melanoma WA, *Official Committee Hansard*, Perth, 1 May 2014, p. 25; Cancer Support WA, *Submission 38*, p. 1; Cancer Voices New South Wales, *Submission 59*, p. 2; and Mr Terry Slevin, Education and Research Director, Cancer Council WA, *Official Committee Hansard*, Perth, 1 May 2014, p. 1; Western Australian Melanoma Advisory Service, *Submission 45*, p. 1..

53 Melanoma Patients Australia, *Submission 14*, p. 3.



psychologists and counsellors. Counsellors have said to me, 'Out of all of the patients I see, melanoma patients are the most anxious'.<sup>54</sup>

- 4.52 The founder of Melanoma WA, and now Chief Executive Officer, Mr Clinton Hall, was diagnosed with melanoma and, as a patient, described the important role of support services:

It was the realistic hope of seeing someone else who was living past their prognosis or their diagnosis. ... [G]etting that sense of realistic hope, I felt almost obligated to give other people the same chance to feel that... But it is to meet those people who are in front of you, so to speak, or further down the journey, so you can say I can feel and touch and see this person; they are a real person and they are living. ...

In my case I had to fall down in order to learn how to walk forward... I had pharmacological depression which was attributed to the chemotherapy and the interferon chemotherapy agent that I was on. That was a big learning curve for me. There is nothing like talking to someone who knows exactly what you are going through and that is another person living with melanoma.<sup>55</sup>

- 4.53 To ensure that skin cancer patients receive the psychosocial support they require, Cancer Support WA were of the view that health care systems should automatically trigger a range of free, psychosocial and non-medical services upon diagnosis, including:

- immediate referral to a cancer support service upon receiving a prognosis 'to ensure they are provided with immediate emotional support from a qualified counsellor';<sup>56</sup> and
- be provided with information about 'wellness and lifestyle programs [like that] offered by Cancer Support WA which may improve their outcome from cancer and help prevent recurrence'.<sup>57</sup>

- 4.54 Cancer Council WA also discussed the importance of non-medical support services in providing basic logistical support to skin cancer patients. In addition to providing a cancer helpline (which receives over 400 calls a year from skin cancer patients located in Western Australia), Cancer Council WA also provides accommodation support for those regional and

54 Mrs Julie Teraci, Clinical Nurse Consultant/Coordinator, Western Australian Melanoma Advisory Service, *Official Committee Hansard*, Perth, 1 May 2014, p. 31.

55 Mr Clinton Hall, Chief Executive Officer, Melanoma WA, *Official Committee Hansard*, Perth, 1 May 2014, p. 25.

56 Cancer Support WA, *Submission 38*, p. 1.

57 Cancer Support WA, *Submission 38*, p. 1.

rural patients who are required to travel into centres for their treatment. In the past financial year, 57 advanced melanoma patients used the accommodation services provided by the Council (out of a 4 000 guests including cancer patients and their families or carers).<sup>58</sup>

- 4.55 Melanoma WA also advocated the importance of similar psychosocial and non-medical support services being made available to the family, friends and carers of skin cancer patients:

[Patients] might be going through something but the carers have their own things that they are going through as well. It is important to really acknowledge that, without the carers and the support crew around that person – I know, for example, if my mum and dad were not coping when I was diagnosed, I would not have been very good at all. So we really want to support the supporters as well.<sup>59</sup>

- 4.56 Cancer Voices New South Wales advocated for more financial support to be dedicated to the support services required by ‘those going through a serious skin cancer journey’.<sup>60</sup>

## New Treatments and Emerging Research

- 4.57 The enormous personal and economic burden of skin cancer ‘underscores the priority for research efforts to find better ways to control these cancers’.<sup>61</sup> This section details new treatments and the emerging research which is hoped will provide life-saving treatments, improved quality of life outcomes for patients, and also reduce the economic costs of treatment to the national health budget.

### New Treatments

- 4.58 Recent advances in pharmaceutical research have led to the development of two new immunotherapy medicines to treat advanced melanoma: ipilimumab and dabrafenib.
- 4.59 As discussed, the aim of treatment in advanced melanoma is to optimally manage each stage of disease with a view to extending overall survival of approximately six to nine months. Treatment for advanced melanoma is
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58 Mr Terry Slevin, Education and Research Director, Cancer Council WA, *Official Committee Hansard*, Perth, 1 May 2014, p. 1.

59 Mr Clinton Hall, Chief Executive Officer, Melanoma WA, *Official Committee Hansard*, Perth, 1 May 2014, p. 25.

60 Cancer Voices New South Wales, *Submission 59*, p. 2.

61 Professor David Whiteman, *Submission 3*, p. 2.

limited, and includes systemic therapy, palliative care/radiotherapy, palliative surgery or no treatment.<sup>62</sup> It was stated during the Committee's inquiry that ipilimumab may prevent disease progression in 10 per cent patients for a period up to 3 years,<sup>63</sup> and extend a patient's life expectancy up to 16 months.<sup>64</sup> The Committee received similar evidence on dabrafenib in regards to extended life expectancy.<sup>65</sup>

4.60 The TGA released its *Australian Public Assessment Report on Ipilimumab* in August 2011 and referred to positive results in double-blind, controlled clinical trials. The report concluded the efficacy of ipilimumab, and the TGA subsequently approved ipilimumab for sale in Australia.<sup>66</sup> The drug was listed on the Pharmaceutical Benefits Scheme (PBS) in August 2013, however the efficacy of the drug was questioned by some stakeholders in this inquiry.<sup>67</sup>

4.61 Similarly, the TGA's *Australian Public Assessment Report of Dabrafenib* was released in January 2014 after receiving initial registration on the Australian Register of Therapeutic Goods in August 2013.<sup>68</sup> The drug was subsequently listed on the PBS in December 2013. More information on the pharmaceutical make-up, clinical trials and assessment of these drugs can be found in the TGA's reports.<sup>69</sup>

4.62 In regards to their listing on the PBS, the Department of Health stated:

Without Australian Government subsidy these drugs would cost up to \$94 000 and \$110 000 respectively per patient per year for treatment, with a further cost of up to \$230 for diagnostic testing.<sup>70</sup>

4.63 However, Melanoma Patients Australia advocated for 'improved equality of access for all Australians to potentially life saving treatments through

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62 Pharmaceutical Benefits Scheme, *PBS & Ipilimumab*, <http://www.pbs.gov.au/info/industry/listing/elements/pbac-meetings/psd/2012-11/ipilimumab>, viewed November 2014.

63 Australasian College of Dermatologists, *Submission 15*, p. 7.

64 Mr Colin Richardson, *Official Committee Hansard*, Perth, 1 May 2014, p. 42.

65 Merck Sharp & Dohme, *Submission 32*, p. 4.

66 Therapeutic Goods Administration, *Australian Public Assessment Report for Ipilimumab*, August 2011, <http://www.tga.gov.au/auspar/auspar-ipilimumab-0>, viewed November 2014.

67 Mr Martin Leonard Ashdown, Collaborating Investigator, Australian Melanoma Research Foundation, *Official Committee Hansard*, Adelaide, 14 April 2014, p. 20.

68 Therapeutic Goods Administration, *Australian Public Assessment Report for Dabrafenib*, January 2014, <http://www.tga.gov.au/auspar/auspar-dabrafenib-mesilate>, viewed November 2014.

69 Therapeutic Goods Administration, *Australian Public Assessment Report for Ipilimumab*, August 2011, <http://www.tga.gov.au/auspar/auspar-ipilimumab-0>, viewed November 2014; Therapeutic Goods Administration, *Australian Public Assessment Report for Dabrafenib*, January 2014, <http://www.tga.gov.au/auspar/auspar-dabrafenib-mesilate>, viewed November 2014.

70 Department of Health, *Submission 12*, p. 10.

the prompt listing on the PBS'.<sup>71</sup> The Department of Health explained that there can be many reasons why the time taken for PBS listing of a medicine may vary, such as:

- the drug manufacturer may decide not to make a submission to the [Pharmaceutical Benefits Advisory Committee] PBAC to list their medicine on the PBS following approval from the TGA;
- the PBAC may reject the submission for PBS listing due to the application not being clinically effective or cost effective from the evidence provided;
- the drug manufacturer may also decide not to progress PBAC recommendation to list the medicine on the PBS; and
- the drug manufacturer may not be satisfied with the PBAC recommendation (can be due to agreed priced offered or other pricing arrangements) and may pursue to reapply to the PBAC for further consideration.<sup>72</sup>

4.64 During the inquiry, the Committee received evidence on the efficacy of other treatments, including topical treatments and their affordability for patients.<sup>73</sup> Evidence was also received from stakeholders noting the important work of the PBAC and advocated that 'restrictions on prescribing these expensive drugs are deeply respected by the medical profession'.<sup>74</sup>

4.65 The Australian Medical Association (NSW) similarly stated:

A number of new treatments, predominantly medical therapies, have recently been introduced but tend to target advance stages of non-melanoma skin cancer or melanoma and are expensive. Careful consideration of these agents, as to their place and reimbursement in the Australian situation, needs to occur with all the relevant stakeholders involved. These new agents do not help in the management of the vast majority of Australians affected by non-melanoma skin cancer or melanoma and it would not be appropriate to reduce expenditure on current MBS items in relation to skin cancer to allow for increased PBS expenditure on new items.<sup>75</sup>

4.66 Responding to the new treatments discussed in submissions to the inquiry, the Department of Health stated:

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71 Melanoma Patients Australia, *Submission 14*, p. 5. See also Cancer Voices New South Wales, *Submission 59*, p. 1.

72 Department of Health, *Submission 12.2*, p. 8.

73 Cancer Council Australia and Clinical Oncology Society of Australia, *Submission 26*, p. 3; Merck & Co Inc, *Submission 63*, p. 1;

74 Professor Richard Kefford, *Submission 11*, p. 1.

75 Australian Medical Association (NSW), *Submission 4*, p. 6.

There are further submissions to be considered by the PBAC for the treatment of melanomas... However, the Australian Government does not interfere with the decision making process of the PBAC. Further, the Australian Government cannot compel a sponsor to make a submission for PBS listing to the PBAC.<sup>76</sup>

- 4.67 As many of these treatments are either being evaluated by the TGA or the PBAC, the Committee does not consider it appropriate to further engage with this evidence in the report.

## Research

- 4.68 Research into finding new skin cancer treatments, as well as the trial of different combinations of existing treatments, is critical to improvements in initial detection, early treatment and ongoing care of patients diagnosed with skin cancer. Starkly put, Melanoma Patients Australia argues that despite 'improved survival outcomes offered to some patients by these new and emerging therapies, there is still no cure for advanced melanoma'.<sup>77</sup>

- 4.69 Similarly, without investment in research, NMSC will continue to remain Australia's most costly form of cancer to treat and will continue to be an increasing burden on the healthcare system as the Australian population ages.<sup>78</sup>

- 4.70 Noting these points, a number of participants advocated for the importance of greater investment in research into skin cancer.<sup>79</sup> The Australasian College of Dermatologists recommended:

Support of dermatology research will be an important part of an integrated national skin cancer program. This should encompass research support in areas ranging from epidemiology and public health, genetics, cellular biology to clinical studies, new therapies and health economics. In this regard the wider development of academic departments in dermatology than [currently] exists ... would assist lead[ing] enhanced research activity.<sup>80</sup>

- 4.71 Specifically on melanoma research, the Melanoma Institute of Australia discussed the value that genetic and behavioural research has added to the

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76 Department of Health, *Submission 12*, p. 10.

77 Melanoma Patients Australia, *Submission 14*, p. 3.

78 LEO Phama, *Submission 24*, p. 3.

79 Melanoma Patients Australia, *Submission 14*, p. 3; LEO Phama, *Submission 24*, p. 3; Australasian College of Dermatologists, *Submission 15*, p. 6; Trans-Tasman Radiation Oncology Group, *Submission 47*, p. 2; Melanoma Institute Australia, *Submission 58*, p. 1; Cancer Voices New South Wales, *Submission 59*, p. 2.

80 Australasian College of Dermatologists, *Submission 15*, p. 6.

understanding of personal risk of melanoma. The Institute consequently recommended continued research into how more precise risk assessment and specialised surveillance for those at highest risk of melanoma may improve prevention and early detection.<sup>81</sup>

- 4.72 The Melanoma Institute of Australia also commented that recent advances in diagnosis and treatment of melanoma have come from ‘basic molecular and genomic research, which is now driving the first way of successful treatments of advanced melanoma’.<sup>82</sup> In light of these advances, the Institute recommended greater ‘strategic investment into determining the role of genomics in patient care in cancer’.<sup>83</sup> The Institute also identified an opportunity for improved collaborative platforms between clinicians and researchers.<sup>84</sup>
- 4.73 Melanoma Patients Australia recommended that epidemiological research into skin cancer should receive ongoing investment, focussing on treatments and patient management systems. Further, Melanoma Patients Australia argued for improved ‘consultation and involvement of the patient community in the development, delivery and review of skin cancer and melanoma research projects’.<sup>85</sup>
- 4.74 Cancer Australia supports ongoing research on the treatment and management of melanoma and NMSC through the Priority-driven Collaborative Cancer Research Scheme (PdCCRS). Between 2007 and 2012, the PdCCRS has supported nineteen research projects on skin cancer with a total value of \$3.83 million. Of these nineteen research projects, fifteen projects (with a total value of \$2.92 million) had a focus in melanoma, one project focused on Merkel Cell Carcinoma (total value \$0.19 million) and a further three projects addressed skin cancer in general (total value \$0.72 million). Cancer Australia advised that it plans to fund a further project this financial year supporting research into melanoma.<sup>86</sup>

## Clinical Trials in Australia

- 4.75 A number of organisations advocated the importance of research and clinical trials in working towards improved treatment options for patients.<sup>87</sup> Clinical trials drive both improved patient treatment through

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81 Melanoma Institute of Australia, *Submission 58*, p. 3.

82 Melanoma Institute of Australia, *Submission 58*, p. 3.

83 Melanoma Institute of Australia, *Submission 58*, p. 3.

84 Melanoma Institute of Australia, *Submission 58*, p. 3.

85 Melanoma Patients Australia, *Submission 14*, p. 4.

86 Cancer Australia, *Submission 23*, p. 10, pp. 20-21.

87 Trans-Tasman Radiation Oncology Group, *Submission 47*, p. 2; Melanoma Patients Australia, *Submission 14*, p. 4; Cancer Australia, *Submission 23*, p. 24.

testing the efficacy of existing treatment options to different presentations, but also can provide a firm basis for the introduction of new treatments into clinical practice. Melanoma Patients Australia stated:

Clinical trials are an integral part of the development of new and improved therapies for skin cancer and melanoma. While efforts have been made to centralise information on current clinical trials available to patients, there is still a great deal of work to be done in ensuring accuracy, currency and accessibility of the information in a patient friendly format.<sup>88</sup>

- 4.76 Similarly, the Trans-Tasman Radiation Oncology Group stated that properly regulated and reviewed clinical trials result in improved treatment and patient care. For example, one clinical trial managed by the Trans-Tasman Radiation Oncology Group found that the chance of skin cancer reappearing was reduced by approximately 30 per cent when radiotherapy followed standard surgical treatment.<sup>89</sup> Consequently, the Trans-Tasman Radiation Oncology Group recommended that clinical trials for skin cancers be expanded in Australia as the evidence gained through these trials has directly improved the treatment of these cancers and therefore delivered improved patient care and outlook.<sup>90</sup>
- 4.77 The capacity of clinical trials to improve patient care and outlook led a number of organisations to advocate for more investment in clinical trials. The Trans-Tasman Radiation Oncology Group submitted that as skin cancer is Australia's 'national cancer', specific funding for it should be a priority, especially specific funding for randomised trials in skin cancer.<sup>91</sup>
- 4.78 Currently, there are thirteen Australian clinical trials groups which receive financial support from the government agency, Cancer Australia, to conduct clinical trials in Australia for cancer research.<sup>92</sup> A number of these groups have received funding from Cancer Australia's Support for Cancer Clinical Trials Program which have specifically related to skin cancer research. These groups include, the Australia New Zealand Melanoma Trials Group, Trans-Tasman Radiation Oncology Group, Psycho-Oncology Co-operative Research Group, Primary Care Collaborative Cancer Clinical Trials Group and Australian and New Zealand Children's Haematology/Oncology Group.<sup>93</sup>

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88 Melanoma Patients Australia, *Submission 14*, p. 4.

89 Trans-Tasman Radiation Oncology Group, *Submission 47*, p. 4.

90 Trans-Tasman Radiation Oncology Group, *Submission 47*, p. 5.

91 Trans-Tasman Radiation Oncology Group, *Submission 47.1*, p. 2.

92 Cancer Australia, *Support for clinical trials*, <http://canceraustralia.gov.au/research-data/support-clinical-trials>, viewed November 2014.

93 Cancer Australia, *Submission 23*, p. 24.

- 4.79 More specifically, Cancer Australia advised it had alone funded the Australia New Zealand Melanoma Trials Group over \$2.66 million over five years (to 30 June 2013) to support the development of clinical trial protocols in melanoma. Cancer Australia will provide the Australia New Zealand Melanoma Trials Group with a further \$1.38 million over three years to 30 June 2016 to continue this important work. In addition, Cancer Australia is supporting the Genomic Cancer Clinical Trial Initiative, providing \$1.35 million (between 1 July 2013 and 30 June 2016) to establish and lead the collaborative development of mutation-specific clinical trials for mutations that are common to several tumour types.<sup>94</sup>
- 4.80 Despite this investment, the Trans-Tasman Radiation Oncology Group stated that 'there is a dearth of randomised controlled trials originating in Australia'.<sup>95</sup> As the majority of funded trials are comparison trials between one treatment and another, the Trans-Tasman Radiation Oncology Group stated that there is subsequently little known about how to treat skin cancer 'with the best oncological, functional, cosmetic and economic outcomes'.<sup>96</sup> The Trans-Tasman Radiation Oncology Group further advocated that Australia is missing an opportunity for global leadership in the skin cancer research sphere.<sup>97</sup>

## Concluding Comment

- 4.81 The Committee notes the challenges posed by treating melanoma and NMSC, the range of clinicians involved and the importance of support services in ensuring holistic patient care.
- 4.82 The Committee is also of the view that further research and clinical trials will continue to uncover improved treatment options for patients, and that this research will find long-term solutions for patients diagnosed with skin cancer.

## Clinical Practice Guidelines

- 4.83 The Committee was concerned by reports from professional bodies that the clinical practice guidelines, *Clinical practice guidelines for the management of melanoma in Australia and New Zealand* and *Basal cell carcinoma, squamous cell carcinoma (and related lesions) – a guide to clinical management in Australia* have not been updated since their initial release in 2008.

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94 Cancer Australia, *Submission 23*, p. 10.

95 Trans-Tasman Radiation Oncology Group, *Submission 47.1*, p. 1.

96 Trans-Tasman Radiation Oncology Group, *Submission 47.1*, p. 1.

97 Trans-Tasman Radiation Oncology Group, *Submission 47.1*, p. 2.



- 4.84 The Committee notes that the National Health and Medical Research Council (NHMRC) reviews registered clinical guidelines every ten years.<sup>98</sup> However, the Committee is of the view that these guidelines should be updated prior to the upcoming review in 2018.
- 4.85 The absence of updated agreed best practice and medicines which have not only been approved by the TGA, but also placed on the PBS, from these guidelines is a problem identified by many participants in the inquiry, and one that the Committee seeks to rectify.
- 4.86 The Committee therefore recommends that these guidelines be updated.
- 4.87 The *Clinical practice guidelines for the management of melanoma in Australia and New Zealand* were developed by the NHMRC, and the Committee recommends that the Council urgently update these guidelines, and continue to update them after new medicines are approved by the TGA for the treatment of skin cancers, or when consultations with the profession indicate that an update is necessary.
- 4.88 The *Basal cell carcinoma, squamous cell carcinoma (and related lesions) – a guide to clinical management in Australia* was the result of a collaborative effort by Cancer Council Australia and the Australian Cancer Network to update the then outdated *Clinical Practice Guidelines on non-melanoma skin cancer: guidelines for the treatment and management in Australia* (1992) by the NHMRC. The Committee recommends that the NHMRC seek to collaborate with Cancer Council Australia and the Australian Cancer Network to update clinical guidelines for the treatment and management of NMSC and assist with their subsequent approval by the NHMRC.
- 4.89 Although the Committee considers that these updates are critical, the Committee acknowledges that updating printed publications is an involved process, takes time, and inevitably encounters difficulties with distribution. Consequently, the Committee recommends the Department of Health further investigate whether clinical practice guidelines, particularly those relevant to this inquiry, be moved into an online platform which is amenable to more regular updates, is easily and quickly distributed and accessible.
- 4.90 In undertaking this work, the Committee recommends that the Department of Health work with the Cancer Council to benefit from its experience in this area.

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98 National Health and Medical Research Council, *How the NHMRC develops its guidelines*, <https://www.nhmrc.gov.au/guidelines/how-nhmrc-develops-its-guidelines>, viewed November 2014.

## Patients in Regional and Remote Locations

- 4.91 Evidence gained at the Committee's hearings in regional and remote locations throughout Australia revealed the extent of the challenges faced by skin cancer patients located in regional and remote Australia.
- 4.92 To assist patients, their families and carers, and the health practitioners providing treatments, the Committee is of the view that better multidisciplinary care can be provided through greater use of new technologies and virtual platforms. The Committee believes that the utility of the 26 new regional cancer centres can be maximised through such programs. The Committee also believes there is some duplication in the coordination of service delivery in these locations.

## Patient Management

- 4.93 The Committee heard compelling evidence that multidisciplinary care leads to improved outcomes for patients. The complexity of the disease, and the complexity of treatment, including psychosocial care, indicates that a multidisciplinary approach to patient care will best address these challenges.
- 4.94 Consequently, the Committee is of the view that the multidisciplinary care model should be more widely adopted throughout Australia.
- 4.95 The Committee commends the work of Cancer Australia in developing a range of multidisciplinary care policies, and is of the belief that this work can be further developed specifically in relation to skin cancer. The Committee also believes there are opportunities for Australia's regional and remote health services, including Medicare Locals, to be utilised in improved patient management for those patients located in these regions.
- 4.96 The Committee recommends that the Department of Health work with State and Territory counterparts to further develop and implement best practice models for multidisciplinary care for the treatment of skin cancer patients.

## Psychosocial and Non-Medical Support for Patients and their Families

- 4.97 The Committee notes the vital role of psychosocial and non-medical support for skin cancer patients and their families. These services – particularly for melanoma patients – ensure that the patient, and their family, friends and carers, receive holistic care and make available important support networks available which can assist in navigating such enormous personal challenges.
- 4.98 The Committee is of the view that these psychosocial and non-medical support services are particularly important for patients located in regional

or rural areas of Australia which require significant travel to treatment centres.

- 4.99 The Committee therefore recommends that the Australian Government ensure that adequate funds are provided for the non-medical support services of skin cancer patients and their families, particularly support services for those rural patients who have to travel for treatment.

### New Treatments and Emerging Research

- 4.100 As noted above, the Committee received evidence throughout its inquiry from pharmaceutical companies regarding new and emerging treatments. The Committee also notes that the efficacy of some of these treatments was questioned by other stakeholders during the inquiry. As many of these treatments are being considered by the TGA and/or the PBS (themselves independent processes from government) the Committee does not consider it appropriate to comment on these new treatments further.

### Recommendation 10

- 4.101 **The Committee recommends the National Health and Medical Research Council:**

- **work with relevant stakeholder to urgently update the registered *Clinical practice guidelines for the management of melanoma in Australia and New Zealand (2008)* and *Basal cell carcinoma, squamous cell carcinoma (and related lesions) – a guide to clinical management in Australia (2008)*, and that these guidelines be updated:**
  - ⇒ **shortly after each new treatment is approved by the Therapeutic Goods Administration; or**
  - ⇒ **as frequently as recommended by the profession after relevant consultation; and**

**that the Department of Health undertake research and analysis of whether clinical guidelines relating to skin cancer treatments can be placed on a digital platform, thereby allowing regular updates and quick and easy distribution of updated best practice for clinicians and practitioners.**

**Recommendation 11**

- 4.102 The Committee recommends that the Department of Health work with State and Territory counterparts to:
- establish a virtual platform for the multidisciplinary treatment of skin cancer for patients located in regional and remote Australia; and
  - further develop and implement best practice models for multidisciplinary care for the treatment of skin cancer patients.

**Recommendation 12**

- 4.103 The Committee recommends that the Australian Government ensure that adequate funds are provided for the non-medical support services of skin cancer patients and their families, particularly support services for those rural patients who have to travel for treatment.

**Steve Irons MP**  
**Chair**

17 March 2015



## Appendix A – Submissions

- 1 Professor Adele C Green
- 2 Faculty of Radiation Oncology, the Royal Australian and New Zealand College of Radiologists
- 3 Professor David Whiteman
- 4 Australian Medical Association (New South Wales) Limited
- 5 Ms Susan Gregg
- 6 Australian Nuclear Science and Technology Organisation
- 7 National Rural Health Alliance
- 7.1 National Rural Health Alliance
- 8 Cancer Voices Australia
- 9 Skin & Cancer Foundation Inc
- 10 The Royal Australian College of General Practitioners
- 10.1 The Royal Australian College of General Practitioners
- 11 Professor Richard Kefford
- 12 Department of Health
- 12.1 Department of Health
- 12.2 Department of Health
- 12.3 Department of Health

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- 13 Sunspot Skin Cancer Clinic
  - 14 Melanoma Patients Australia
  - 15 Australasian College of Dermatologists
  - 16 Australian Institute of Health and Welfare
  - 16.1 Australian Institute of Health and Welfare
  - 17 Skin & Cancer Foundation Australia
  - 18 Dr Felix Choi
  - 19 Victorian Health Promotion Foundation
  - 19.1 Victorian Health Promotion Foundation
  - 20 Australian Radiation Protection and Nuclear Safety Agency
  - 20.1 Australian Radiation Protection and Nuclear Safety Agency
  - 21 Skin Cancer College Australasia
  - 22 Victorian Department of Health
  - 23 Cancer Australia
  - 23.1 Cancer Australia
  - 24 LEO Pharma Pty Ltd
  - 24.1 LEO Pharma Pty Ltd
  - 25 Dr Michael Freeman
  - 25.1 Dr Michael Freeman
  - 26 Cancer Council Australia and the Clinical Oncology Society of Australia
  - 27 Public Health Association of Australia
  - 28 National Health and Medical Research Council
  - 29 Queensland Department of Health
  - 30 The Pharmacy Guild of Australia
  - 31 Dr Jonathan Levy

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- 32 Merck Sharp & Dohme (Australia) Pty Limited
  - 32.1 Merck Sharp & Dohme (Australia) Pty Limited
  - 33 Australian Melanoma Research Foundation
  - 33.1 Australian Melanoma Research Foundation
  - 33.2 Australian Melanoma Research Foundation
  - 33.3 Australian Melanoma Research Foundation
  - 34 Royal Flying Doctor Service
  - 35 Cancer Voices South Australia
  - 35.1 Cancer Voices South Australia
  - 36 Mr Terry Slevin, Cancer Council Western Australia
  - 37 Professor Mel Ziman
  - 38 Cancer Support Western Australia
  - 39 Kimberley-Pilbara Medicare Local
  - 40 Professor David Atkinson
  - 41 Lions Cancer Institute Inc.
  - 42 melanomaWA
  - 43 HealthCert International
  - 44 WA Country Health Service - Kimberley
  - 45 WA Melanoma Advisory Service
  - 46 Dr Siaw K Ho
  - 47 Trans-Tasman Radiation Oncology Group Limited
  - 47.1 Trans-Tasman Radiation Oncology Group Limited
  - 48 Dr Helena Rosengren
  - 49 CRANAplus
  - 50 Safe Work Australia

- 51 Hunter Melanoma Foundation
- 52 Dr Mark Shackleton
- 53 Associate Professor John Kelly
- 54 Hunter Medicare Local
- 54.1 Hunter Medicare Local
- 55 Newcastle Skin Check
- 56 Professor Scott Menzies
- 57 Dr Paul Fishburn
- 58 Melanoma Institute Australia
- 59 Cancer Voices New South Wales
- 60 Professor Robyn Lucas
- 61 Professor Alexis Andrew Miller
- 62 Bureau of Meteorology
- 63 Merck & Co Inc.





## Appendix B – Exhibits

- 1 Confidential
- 2 Mr Terry Slevin, Cancer Council WA  
*Cancer Council WA, 'Occupational exposure to ultraviolet (UV) radiation: Workers' compensation claims paid in Australia 2000–2009', Monograph Series 2011 – document*
- 3 Professor Lin Fritschi  
*Renee N. Carey, Deborah C. Glass, Susan Peters, Alison Reid, Gexa Benke, Timothy R. Driscoll, Lin Fritschi 'Occupational exposure to solar radiation in Australia: who is exposed and what protection do they use?' Australian and New Zealand Journal of Public Health, Vol. 38, No. 1, 2014. – document*
- 4 Melanoma Patients Australia  
*Melanoma Patients Australia, 'A guide to understanding melanoma: a starting point for people in their journey with melanoma' – document*
- 5 Professor Adèle Green  
*Michelle R. Iannacone, Danny R. Youlden, Peter D. Baade, Joanne F. Aitken and Adèle C. Green, 'Melanoma incidence trends and survival in adolescents and young adults in Queensland, Australia', International Journal of Cancer, first published online on 16 May 2014. – document*
- 6 Professor David Whiteman  
*David Whiteman, Bridie Thompson, Aaron Thrift, Catherine Olsen, 'Estimating risks of BCC and SCC: a risk prediction tool developed from a large prospective cohort study', abstract accepted by the World Skin Cancer Congress in Edinburgh for September 2014. – document*
- 7 Associate Professor John Kelly

- The Australian College of Dermatologists, 'Close to half of all melanoma deaths are from atypical spots that are sometimes overlooked', Media Release, 19 May 2014. – document*
- 8 Associate Professor John Kelly  
*Matthew J Lin, Victoria Mar, Catriona McLean, Rory Wolfe and John W Kelly, 'Diagnostic accuracy of malignant melanoma according to subtype', Australasian Journal of Dermatology, 55, 2014, pp. 35-42. – document*
- 9 Associate Professor John Kelly  
*Victoria Mar, Hugh Roberts, Rory Wolfe, Dallas R. English and John W. Kelly, 'Nodular melanoma: A distinct clinical entity and the largest contributor to melanoma deaths in Victoria, Australia', Journal of the American Academy of Dermatology, April 2013. – document*
- 10 Australian Radiation Protection and Nuclear Safety Agency  
*Gies, P., J. Makin, S. Dobbinson, J. Javorniczky, S. Henderson, R. Guilfoyle, J. Lock, 'Shade Provision for Toddlers at Swimming Pools in Melbourne', Photochemistry and Photobiology 89, 2013, pp. 968-973.*  
*Gordon L, Hirst NG, Gies PHF and Green AC, 'What impact would effective solarium regulations have in Australia', Medical Journal of Australia, 189 (No.7), 2008, pp. 375-377.*  
*Peter Gies, Colin Roy, John Javorniczky, Stuart Henderson, Lilia Lemus-Deschamps and Colin Driscoll, 'Global Solar UV Index: Australian Measurements, Forecasts and Comparison with the UK', Photochemistry and Photobiology 79, 2004, pp. 32-39.*  
*Peter Gies, 'Australia has more than enough solar UV radiation', Clinical and Experimental Optometry, 86(2), 2003, pp. 71-73.*  
*Peter Gies and Jill Wright. Measured Solar Ultraviolet Radiation Exposures of Outdoor Workers in Queensland in the Building and Construction Industry. Photochemistry and Photobiology, 78:342-348, 2003.*  
*Roy CR, Gies HP and Elliott G. "Ozone Depletion." Nature 347: 235 236, 1990.*  
*Peter Gies, John Javorniczky, Stuart Henderson, Alan McLennan, Colin Roy, Jordan Lock, Claire Lynga, Alan Melbourne and Louisa Gordon, 'UVR Emissions from Solaria in Australia and Implications for the Regulation Process', Photochemistry and Photobiology, 2011, 87: 184-190 – various documents*

- 11 Professor Rodney Sinclair  
*Rodney Sinclair, 'Skin Checks', Australian Family Physician, Vol. 41, No. 7, July 2012. – document*
- 12 Professor Rodney Sinclair  
*Eugene Liat Hui Ong, Raph Goldacre, Uy Hoang, Rodney Sinclair, and Michael Goldacre, 'Subsequent Primary Malignancies in Patients with Nonmelanoma Skin Cancer in England: A National Record-Linkage Study', Cancer Epidemiology, Biomarkers & Prevention, pp. 1–9, 2014. – document*
- 13 Professor Rodney Sinclair  
*Eshini Perera, Neiraja Gnaneswaran, Ross Jennens and Rodney Sinclair, 'Malignant Melanoma', Healthcare, 2, pp. 1–19, 2014. – document*
- 14 Merck Sharpe and Dohme (Australia)  
*MSD Pembrolizumab Clinical Activity – document*
- 15 HealthCert  
*Pamphlet, Redcliffe Skin Cancer Centre, Regular skin checks can and do save lives. Speaking notes Paul Elmslie CEO and Founder HealthCert International Tuesday 29 July 2014 Sydney.*  
*Health Cert Corporate Fact sheet*  
*Copy of paper, Management of Skin cancer in Australia, A comparison of General practice and skin cancer clinics*  
*Summary Recommendations in Brief*  
*Statistical information*  
*Copy of paper, The Impact of Subspecialisation and dermatoscopy use on accuracy of melanoma diagnosis among primary care doctors in Australia – various documents*
- 16 Hunter Cancer Research Alliance  
*Pamphlet, About Hunter Cancer Research Alliance – document*
- 17 Hunter Melanoma Foundation  
*Bag of promotional products;*  
*For children and Teenagers; Use your Melon and save your skin bag, magnet, cardboard money box, sticker, bracelet, pamphlet, game and newsletter. Don't get cut DVD.*

- For Men aged 40yrs and over; Checkmate before it's too late drink coaster, magnet and poster - promotional items*
- 18 Cancer Council Australia  
*Published economic evaluation of skin cancer prevention programs;*  
*Published position statement on screening and early detection of skin cancer.*  
– documents
- 19 The Royal Australian and New Zealand College of Radiologists  
*The Radiation Oncology Practice Standards and supplementary guide developed by the Radiation Oncology Tripartite Committee – documents*
- 20 National Health and Medical Research Council  
*Active Skin Cancer Grants including Melanoma, NHMRC Skin Cancer and Vitamin D Grants, Skin Cancer Summary, Summary of all NRMRC Cancer Funding, Letter to Health Committee – documents*
- 21 Shellharbour City Council  
*Corporate Policy: Sun Protection Policy and Fact Sheet: Summertime Guide – documents*
- 22 Bureau of Meteorology  
*SunSmart UV Alert, your daily guide to sun protection - document*  
*Think UV not heat!, There's no hiding from UV on the water - ePamphlets*  
*Average noon clear-sky UV (forecast) Index January 1979 to 2007, Average noon clear-sky UV (forecast ) Index June 1979 to 2007 - eMaps*
- 23 Skin and Cancer Foundation Australia  
*Skin and Cancer Foundation Australia – document*
- 24 Pharmacy Guild Australia  
*Chemmart Pharmacy, Example of Prescription cover for advertising/promotion of Skin Cancer checks - - documents/brochures*
- 25 Cricket Australia  
*Cricket Australia's SunSmart policy, Well Played: Australian Cricket's Playing Policies and Guidelines - documents*  
*"What to Know Before you Go" - digital brochure*

26 The Pharmacy Guild of Australia

*Community Pharmacy Alcohol Standard Drink Awareness Campaign III:  
Supplementary Final Report, Community Pharmacy Alcohol Standard Drink  
Awareness Campaign III: Final Report - documents*





## Appendix C – Hearings and Witnesses

### **Tuesday, 25 March 2014 – Canberra**

#### **National Rural Health Alliance**

Mr Gordon Gregory OAM, Executive Director

Ms Geraldine Badham, Policy Advisor

Mr Dane Morling, Policy Officer

Mrs Marion Dewar, National Secretary, Country Women's Association of Australia

### **Friday, 28 March 2014 – Canberra**

#### **Australian Institute of Health and Welfare**

Ms Lisa McGlynn, Senior Executive, Health Group

Mr Justin Harvey, Unit Head, Cancer and Screening Unit

#### **Department of Health**

Mr Nathan Smyth, First Assistant Secretary, Population Health Division

Ms Adriana Platona, Assistant Secretary

Dr Anthony Hobbs, Principal Medical Advisor, Therapeutic Goods Administration

Dr Megan Keaney, A/g Assistant Secretary, Medical Specialist Services Branch, Medical Benefits Division

Dr Bernie Towler, Principal Medical Adviser, Population Health Division

Mr Adam Davey, First Assistant Secretary, People, Capability and Communication Division

Ms Jodie Grieve, Assistant Secretary

Associate Professor Rosemary Knight, Principal Advisor, Population Health Division

Ms Alice Creelman, Assistant Secretary, Cancer and Palliative Care Branch, Population Health Division

## **Monday, 14 April 2014 – Adelaide**

### **South Australian Health and Medical Research Foundation**

Dr Caroline Miller, Director, Population Health

### **Royal Adelaide Hospital**

Professor Michael Brown, Director, Cancer Clinical Trials Unit

### **Australian Melanoma Research Foundation**

Professor Brendon Coventry, Research Director

Mr Martin Ashdown, Collaborating Investigator

### **Cancer Voices SA**

Ms Julie Marker, Acting Chair

## **Thursday, 1 May 2014 – Perth**

### **Cancer Council Western Australia**

Mr Terry Slevin, Education and Research Director

### **Private Capacity**

Professor Lin Fritschi, Curtin University

### **Private Capacity**

Professor Mel Ziman, Edith Cowan University Melanoma Research Group

### **Lions Cancer Institute**

Mr Colin Beauchamp, Chairman (via teleconference)

### **melanoma WA**

Mr Clinton Heal, Chief Executive Officer

### **WA Melanoma Advisory Service**

Ms Julie Teraci, Nurse Coordinator



**Cancer Support WA**

Ms Mandy BeckerKnox, Chief Executive Officer  
Ms Cathy Brown, Wellness Programs Manager

**Private Capacity**

Mr Colin Richardson

**Friday, 2 May 2014 – Broome****Kimberley-Pilbara Medicare Local**

Mr Darren Armitage, Population Health and Community Director

**Private Capacity**

Dr Zivana Nedeljkovic, Director, Broome Doctors Practice

**WA Country Health Service – Kimberley**

Dr Jeanette Ward, Acting Regional Medical Director  
Ms Sarah Davies, Rural Cancer Nurse Coordinator

**Broome Regional Aboriginal Medical Services**

Mr Henry Councillor, Chief Executive Officer

**Thursday, 22 May 2014 – Brisbane****Royal Australian College of General Practitioners**

Professor Chris Del Mar, Spokesperson

**Melanoma Patients Australia**

Mrs Tilly Ryan, Chief Executive Officer

**Danger Sun Overhead program**

Mrs Joanne Crotty, Awareness Education Manager

**Private Capacity**

Professor Michael Kimlin, Professor, Queensland University of Technology  
Associate Professor Rachel Neale, Senior Research fellow, QIMR Berghofer  
Medical Research Institute

**Private Capacity**

Professor Adele Green, Senior Scientist and Head of Cancer and Population Studies Group, QIMR Berghofer Medical Research Institute

**Private Capacity**

Professor David Whiteman, Head of Cancer Control Group, QIMR Berghofer Medical Research Institute

**Skin Cancer College Australasia**

Dr Damien Foong, Director and President  
Dr Richard Johns, Director

**Australian Skin Cancer Clinics / Independent Practitioner Network**

Dr Gerard Foley, Chief Medical Officer  
Dr Chris Ho, Independent Medical Practitioner

**Australia and New Zealand Melanoma Trials Group**

Professor Bryan Burmeister, Chair  
Dr Richard Johns, Director, Skin Cancer College Australasia

**LEO Pharma**

Mr Jacob Rasmussen, General Manager Australia/New Zealand  
Ms Rose-marie Pennisi, Head of Medical

**Friday, 23 May 2014 – Cairns****Private Capacity**

Dr Brett Morrison, Local Medical Practitioner, Molescan Cairns

**Private Capacity**

Ms Susan Gregg (private individual)

**Private Capacity**

Dr Neville Collins, Dermatologist, Cairns Dermatology

**CRANAplus**

Mr Christopher Cliffe, Chief Executive Officer

**Ecobiotics Group**

Dr Victoria Gordon, Chief Executive Officer and Managing Director

**Private Capacity**

Associate Professor Clare Heal, James Cook University, Mackay (via teleconference)

**Skin Repair Skin Cancer Clinic, Townsville**

Dr Helena Rosengren, Principal (via teleconference)

**Cairns Hospital**

Dr Ritwik Pandey, Medical Oncologist

Dr Luke McGhee, Radiation Oncologist

**Friday, 6 June 2014 – Melbourne****Victorian Health Promotion Foundation (VicHealth)**

Dr Bruce Bolam, Executive Manager, Programs Group

**Australian Radiation Protection and Nuclear Safety Agency**

Dr Peter Gies, Senior Ultra Violet Radiation Research Scientist

**Skin & Cancer Foundation Inc**

Associate Professor Chris Baker, President

Mr Chris Arnold, Executive Director

Mr Peter Monaghan, Director, Corporate Affairs

**Victorian Melanoma Unit, Alfred Hospital**

Associate Professor John Kelly, Founder and Director

**Chemmart Pharmacy**

Mr Johnathon Layton, Executive Director

Mrs Katie Fala, Services Manager

Dr Tony Dicker, Spotcheck Doctor

**Private Capacity**

Professor Jon Emery, Professor of Primary Care Cancer Research,  
University of Melbourne

**Sunspot Skin Cancer Clinic**

Dr Tony Dicker, Director

Dr Jonathon Levy, General Practitioner

**Private Capacity**

Professor Rodney Sinclair, Director of Dermatology, Epworth Hospital and  
University of Melbourne

**Peter McCallum Cancer Centre**

Professor Grant McArthur, Co-head Cancer Therapeutics Program /  
Director Skin and Melanoma Service, Peter MacCallum Cancer Centre

Professor Rod Hicks, Director of Cancer Imaging and Head of Molecular Imaging and Targeted Therapeutic Laboratory, Peter MacCallum Cancer Centre  
Dr Mark Shackleton

## **Monday, 28 July 2014 – Canberra**

### **Public Health Association of Australia**

Adjunct Professor Michael Moore, Chief Executive Officer  
Mr David Wild, SunSmart Services Coordinator, Cancer Council ACT

### **Safe Work Australia**

Ms Amanda Grey, Branch Manager, Policy and Services  
Ms Julia Collins, Branch Manager, Review and Engagement  
Dr Jenny Job, Director, Research

### **Cancer Australia**

Professor Helen Zorbas, Chief Executive Officer  
Ms Christine Giles, Executive Director, Public Health

### **National Health and Medical Research Council**

Professor Warwick Anderson AM, Chief Executive Officer

### **Department of Health**

Dr Nathan Smyth, First Assistant Secretary, Population Health Division  
Ms Penny Shakespeare, First Assistant Secretary, Health Workforce Division  
Ms Alice Creelman, Assistant Secretary, Population Health Division  
Ms Jodie Grieve, Assistant Secretary, Communications Branch  
Ms Adriana Platona, Assistant Secretary, Pharmaceutical Benefits Division  
Dr Megan Keaney, A/g Assistant Secretary, Medical Benefits Division  
Dr Nick Simpson, Co-Director, Clinical Evaluation Unit 4, Office of Medicines Authorisation, Therapeutic Goods Administration

## **Tuesday, 29 July 2014 – Sydney**

### **Cancer Council Australia**

Professor Ian Olver, Chief Executive Officer  
Mr Paul Grogan, Director, Advocacy  
Mrs Vanessa Rock, Committee Chair

**Melanoma Institute of Australia**

Associate Professor Jonathan Stretch, Deputy Director  
Professor Graham Mann, Co-Director Research & Committee Chairman

**The Australasian College of Dermatologists**

Associate Professor Stephen Shumack OAM, FACD, FAICD, President

**Merck Sharpe and Dohme (Australia)**

Dr Susanne Fiedler, Managing Director, Australia & New Zealand  
Mr Mark Del Cuore, Health Outcomes Manager, Australia & New Zealand  
Ms Lucia Asali, Director, Regulatory Affairs, Australia & New Zealand

**Sydney Melanoma Diagnostic Centre**

Professor Scott Menzies, Professor Medicine (Discipline of Dermatology),  
the University of Sydney

**HealthCert International**

Mr Paul Elmslie, CEO and Founder  
Associate Professor Clifford Rosendahl, Program Director, University of  
Queensland

**Private Capacity**

Dr Felix Choi, General Practitioner

**Cancer Voices Australia**

Ms Sally Crossing AM, Convenor Cancer Voices NSW

**Australian Medical Association (NSW)**

Dr Saxon Smith, President

**Royal Australian and New Zealand College of Radiologists**

Dr Dion Forstner, Dean, Faculty of Radiation Oncology

**Wednesday, 30 July 2014 – Newcastle****Hunter Medicare Local**

Ms Mia Bromley, Health Planning Manager

**Newcastle Skin Check**

Dr Alister Lilleyman, Director  
Dr Anthony Azzi, Director

**Hunter Melanoma Foundation**

Mrs Jennifer Noblet, Executive Officer

**Hunter Medical Research Institute**

Professor Stephen Ackland, Director Cancer Research Alliance  
Mr Bradley Webb, Associate Director Strategy and Engagement  
Professor Xu Dong Zhang, Melanoma Research Laboratory  
Dr Chen Chen Jiang, Melanoma Research Laboratory

**Trans-Tasman Radiation Oncology Group (TROG) Cancer Research**

Professor Gerald Fogarty, Radiation Oncologist, Calvary Mater Hospital  
Ms Joan Torony, Chief Operations Officer and Research Manager  
Mrs Melissa Crain, Technology and Quality Manager

**Surf Life Saving Australia**

Mr Norman Farmer, Surf Life Saving Adviser

**Friday, 8 August 2014 – Nowra****Private Capacity**

Dr Ian McCrossin, Dermatologist

**South Coast Cancer Network**

Professor Alexis Andrew Miller, Senior Staff Specialist, Radiation  
Oncology, Wollongong Hospital

**Private Capacity**

Mr Andrew Rust

**University of Wollongong, School of Medicine**

Professor Andrew Bonney, Roberta Williams Chair of General Practice,  
Graduate School of Medicine  
Associate Professor David Garne, Associate Dean, Community Primary,  
Remote and Regional

**Cancer Council NSW - Southern Region**

Mrs Tamara Johnston, Community Programs Coordinator, Shoalhaven and  
Kiama  
Ms Emma White, Youth Campaigns Project Officer, Cancer Programs, Skin  
Cancer Prevention, Sydney

**Shellharbour City Council**

Mr Mike Fields, Manager of Environment  
Mrs Heather Taferner, Work Health and Safety Rehabilitation Coordinator

**Private Capacity**

Dr Andrew Moss, Dermatologist

**Friday, 5 September 2014 - Sydney****Bureau of Meteorology**

Mr Vernon Carr, Head of Public, Agricultural and Marine Weather Services

Mr Alasdair Hainsworth, Branch Head, Hazard Prediction Services

**Professional Golfers' Association of Australia**

Mr Brian Thorburn, Chief Executive Officer

**Cricket Australia**

Mr Grant Poulter, Senior Manager, Government and Community Relations

**The Pharmacy Guild of Australia**

Mr Mark Douglass, National Councillor

Ms Kelly Gourlay, Manager Policy and Program Development, Primary Health Care

**Cancer Council, Hunter Central Coast Region**

Mr Shayne Connell, Regional Manager

**Skin & Cancer Foundation Australia**

Dr Alice Killen, Chief Executive Officer

Associate Professor Pablo Fernández-Peñas, Head of Research and Education