

Skin Cancer Prevention

- 2.1 Skin cancer is often described as Australia's 'national cancer',¹ yet in 95 to 99 per cent of cases, it is a preventable disease.² 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.³
- 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'⁴ and lead to the spread of secondary cancers throughout the body.⁵ According to Melanoma Institute Australia, melanoma is the fourth most common form of cancer in

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.⁶

- 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).⁷

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.⁸ 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.⁹

- 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.¹⁰ Similar comments were made by the Australian Medical Association (NSW): 'UVR is the most significant contributing factor to the development of skin cancer'.¹¹
- 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

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.¹²

- 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.¹³
- 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.¹⁴
- 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,¹⁵ ozone,¹⁶ and cloud cover.¹⁷ 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.¹⁸
- 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.¹⁹ The UV Index ranges from 0 to 11+ and the higher the number the greater the risk of skin damage.²⁰ UV Index levels below three

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).

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

are considered by Cancer Council Australia and the BoM as safe.²¹ 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.²²

- 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.²³ The Skin & Cancer Foundation Inc also stated that UVR exposure can be more detrimental in a 'genetically susceptible population'.²⁴

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 (NCMC).²⁵ The NCMC 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'.²⁶
- 2.17 Melanoma and NMSC are listed as being among the top five most common cancers in Australia.²⁷ 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 70.²⁸ While

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'.²⁹

- 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'.³⁰ 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'.³¹
- 2.19 For persons aged 40 years or younger, data shows that the incidence of melanoma is reducing.³² Statistically, incidence rates are higher in men than women,³³ and five-year survival rates are higher in women than men.³⁴ 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.³⁵
- 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.³⁶

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'.³⁷
- 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

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.³⁸

- 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.³⁹
- 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.⁴⁰

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.⁴¹ 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,

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.⁴²

- 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.⁴³ Lower levels of Vitamin D can also be acquired through some foods such as oily fish, eggs, meat, and dietary supplements.⁴⁴
- 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.⁴⁵
- 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.⁴⁶
- 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.⁴⁷

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.⁴⁸
- 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.⁴⁹
- 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.⁵⁰ 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.⁵¹
- 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.⁵² 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,⁵³ but only ~6% of people had levels below 30nmol/L (true vitamin D deficiency).⁵⁴

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,⁵⁵ 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.⁵⁶

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.⁵⁷

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.⁵⁸ The Victorian Department of Health and Professor Lucas provided similar evidence.⁵⁹

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

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.⁶⁰ 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.⁶¹

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.⁶² 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’.⁶³

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.⁶⁴

- 2.42 A number of Government agencies also acknowledged the need for a balance.⁶⁵ 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.⁶⁶

- 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.⁶⁷

- 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.⁶⁸

- 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

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.⁶⁹

2.47 The BoM is also issuing UVR forecasts in some 650 locations around Australia.⁷⁰ 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.⁷¹

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

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

71 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 1987.⁷² It was promoted by a partnership of the Cancer Council Victoria and the Victorian Health Promotion Foundation (VicHealth) and is an ongoing campaign.⁷³
- 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.⁷⁴
- 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.⁷⁵
- 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

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.⁷⁶

- 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’.⁷⁷
- 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.⁷⁸
- 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.⁷⁹
- 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’.⁸⁰
- 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

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.⁸¹ 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.⁸²

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,⁸³ because reducing over-exposure to UVR at a younger age, reduces the risk of skin cancer later in life.⁸⁴
- 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.⁸⁵
- 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.⁸⁶
- 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.⁸⁷ VicHealth also commented that it

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'.⁸⁸

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.⁸⁹
- 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.⁹⁰

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.⁹¹
- 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'.⁹²
- 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'.⁹³ 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 2014,⁹⁴ and further increase the BoM's presence on social media.⁹⁵

- 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.⁹⁶

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'.⁹⁷ 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.⁹⁸

- 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.⁹⁹

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’.¹⁰⁰
- 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.¹⁰¹
- 2.77 In addition, surfaces such as water, sand or reflective roofs can intensify UVR exposure.¹⁰² 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’.¹⁰³
- 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’.¹⁰⁴
 - Cancer Councils and EFTPOS have created a \$1 million shade grants program targeting secondary schools. Over 370 schools had applied for a grant.¹⁰⁵ VicHealth noted that pupils in secondary schools would use shade if it was provided.¹⁰⁶

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.¹⁰⁷ 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.¹⁰⁸
- 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.¹⁰⁹
- 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'.¹¹⁰
- 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.¹¹¹
- 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

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'.¹¹²

- 2.84 The Australian Melanoma Research Foundation identified local government councils as a sector which was adopting occupational health and safety regulations.¹¹³ 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'.¹¹⁴
- 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.¹¹⁵
- 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.¹¹⁶
- 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'.¹¹⁷

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.¹¹⁸

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'.¹¹⁹
- 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'.¹²⁰
- 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'.¹²¹
- 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.¹²² 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].

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.¹²³

- 2.94 The Cancer Council ACT agreed, stating that progress was lagging in secondary schools.¹²⁴ 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.¹²⁵

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

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.¹²⁶
- 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.¹²⁷
- 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.¹²⁸
- 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.¹²⁹
- 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 UPF¹³⁰ rating of at least 40; and broad spectrum, SPF 30-plus, water-resistant sunscreen and advice around [its] application'.¹³¹ Cricket Australia also provides its employees and players with a free annual skin check.¹³²

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.¹³³
- 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.¹³⁴
- 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'.¹³⁵
- 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.¹³⁶ 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'.¹³⁷

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.

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.¹³⁸ In making this comment, the Committee notes the evidence from Professor Adele Green which highlighted the processing difficulties with reporting such a common disease.¹³⁹

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.¹⁴⁰ 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

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).¹⁴¹

- 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.¹⁴² 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 2014.¹⁴³

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.¹⁴⁴ 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

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.¹⁴⁵

- 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.**

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.