



Mr Steve Irons MP  
PO Box 6022  
House of Representatives  
Parliament House  
Canberra ACT 2600

12 March 2014

Dear Mr Irons

Thank you for chairing the committee that is conducting the inquiry into skin cancer and revisiting this important health issue.

As a dermatologist, it is especially important to me and the patients I treat – in addition to being a health problem that is far too common in Australia.

Please find attached a submission from AMA (NSW) on skin cancer and the important role of public health programs in reducing its incidence.

Sincerely

Dr Saxon Smith  
**AMA (NSW) Vice President**

**Australian Medical Association (NSW) Ltd**

## AMA (NSW) submission to the House Health Committee to inquire into skin cancer

### Executive Summary

**AMA (NSW) supports attempts to raise awareness in the community of the risk factors for skin cancer and to close the gaps in knowledge about the condition and its causes.**

Public health campaigns play a vital role in improving rates of early diagnosis and, indeed, prevention of skin cancer. These campaigns can also be used to educate on a range of subjects including the difference between melanoma and non-melanoma skin cancer, and the proper application of sunscreen and how it and other sun protection measures work.

While skin type, prior diagnosis with skin cancer (especially at a young age), and family history all contribute to a person's skin cancer risk, the most easily controlled risk factor is exposure to UV radiation.

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

Where there is understanding of particular sun safety measures, it is often the case that people do not act on this knowledge. At other times people may take preventative measures but execute them poorly. Studies have also shown that people are more likely to adopt sun safety measures when those around them are doing the same. Regular sun behaviour surveys conducted by the Cancer Council are a good way of assessing the impact of sun protective messages and need to be continued on a regular basis.

Australia has a climate that is particularly conducive to the outdoor lifestyle that many Australians pursue. Unfortunately, most Australians are potentially at increased risk of skin cancer owing to the predominance of Anglo-Celtic and northern European genetic heritage. As a result there are significant benefits to be had through education campaigns as to how sun protection can and should be incorporated into our everyday lives, and follow up surveys to monitor effectiveness of the campaigns' messaging.

**AMA (NSW) recognises that there are numerous studies supporting the fact that Australia's health system is very good at diagnosing and treating skin cancer and pre-cancerous skin lesions.**

Very important roles are played by both family doctors and dermatologists in this respect and outcomes for patients with skin cancer in Australia compare favourably internationally. In fact, it is these community-based doctors who are making the largest contribution to early diagnosis of skin cancer.

**AMA (NSW) also recognises we are in a good position to continue to improve outcomes for skin cancer patients through improvements in diagnosis and treatment.**

Given that Australia has the highest incidence rate of skin cancer in the world, public health campaigns remain very important tools to educate the public on how to prevent it and what people should do if they think they have it. In particular, as with any kind of cancer, prevention is better than a cure and public health campaigns are an area where governments can be particularly effective.

#### Australian Medical Association (NSW) Ltd

## AMA (NSW) submission to the House Health Committee to inquire into skin cancer

### Skin cancer statistics

Sun exposure has been demonstrated to have an important role in development of all types of skin cancer.<sup>1</sup> Sunburn throughout life is an important risk factor for melanoma, particularly severe sunburns during childhood.<sup>2</sup>

Skin cancer is estimated to be the third most commonly diagnosed cancer in Australian men after prostate and bowel cancer and Australian women after breast and bowel cancer.<sup>3</sup> However, it is also one of the most easily preventable cancers. UV radiation is the most significant contributing factor to the development of skin cancer and there are a number of easy ways for people to protect themselves from exposure to it.<sup>4</sup>

An understanding of the protection offered by sunscreen and its proper application are two examples of areas where there is a gap in public knowledge. Lifetime risk factors for melanoma, such as previously having been diagnosed with a non-melanoma skin cancer or exposure to UV at a young age, are other examples of information that would be useful to be more well-known.

In fact, new research has shown people under 25 years of age who are diagnosed with non-melanoma skin cancer are 23 times more likely to develop any other form of cancer. They are also 94 times more likely to get melanoma and 93 times more likely to get salivary gland cancer.<sup>5</sup>

Genetic predisposition, as evident through strong family history for melanoma or non-melanoma skin cancer, are other important aspects that should be considered in public health messaging to fill the knowledge gap.

### Effectiveness of public health campaigns

Public health campaigns have been demonstrated to reduce the incidence of skin cancer. They are a very good, cost-effective way of reducing the number of people who suffer from this disease.

A 2002 study showed the incidence rates of non-melanoma skin cancer in Australians aged under 60 has stabilised, while they are increasing in people aged over 60. It says that this difference is consistent with the commencement of educational programs highlighting sun safety and the exposure the younger age group would have had to them.<sup>6</sup>

It is hopeful that this trend to decrease the incidence of non-melanoma skin cancer will become more obvious with time as the positive impact of educational programs becomes more apparent. However, the affected population over 60 years old will likely increase further as their sun exposure and knowledge of sun safe behaviour predates the implementation of sun safe public health campaigns.

## AMA (NSW) submission to the House Health Committee to inquire into skin cancer

### Role of public health education

Studies show people gain the lion's share of their knowledge on sun safety from the media, which serves to highlight the importance of public health campaigns on this matter. One such study on sources of information found that television (79%) is the highest followed by magazines (52%), newspapers (49%), health professionals (35%) and finally family and friends (31%).<sup>7</sup>

One study in the United Kingdom found that for 70% of the study population, the major source of information for understanding skin cancer was from the media. In the overall sample only 7% of individuals stated that their physician was their main source of information. For individuals that reported a family or personal history of skin cancer the figure increased to 15%.<sup>8</sup>

These studies indicate that television and the media more broadly are able to successfully deliver the message of sun protection. There is also the possibility of improving the distribution of knowledge about sun protection with the help of doctors. It has been noted that the effectiveness of public health campaigns is likely to benefit from the support of healthcare professionals – particularly if doctors were to recommend the use of sunscreen more often.<sup>9</sup>

### Public health education gaps

Surveys, both international and local, have consistently shown significant gaps in public knowledge about skin cancer, its connection to UV radiation, and how people can protect themselves from it. These range from the correct application of sunscreen and how it works to knowing that the tightness of the weave of clothing is more important than its colour in terms of sun protection.

Sunscreen products are tested at a 2.0mg/cm<sup>2</sup> concentration to get their labelled SPF factor. Failure to apply sunscreen in the same amount will lead to a significant decrease in the efficacy of the sunscreen. Australian primary school children of all ages have been shown to apply sunscreen at an equivalent concentration of 0.48mg/cm<sup>2</sup>.<sup>10</sup>

A 2012 UK study showed only 37% of people could identify the correct duration of protection offered by sunscreen and that nearly a third of people (29%) did not know weave of clothing is more important than colour in terms of offering sun protection. Additionally, a quarter of respondents did not identify that the thickness of application of sunscreen is important.<sup>11</sup>

A US survey found that the average sunscreen knowledge score of participants was low. In this study it was reported that women had higher knowledge scores compared to men. Considering that individuals only had a superficial understanding of SPF, it is of interest to note that the SPF value and UVA protection were considered the two most important factors when deciding what sunscreen was best. However, approximately 40% of the participants surveyed thought that sunscreen could enhance a tan and 15% believed that sunscreens are able to reverse the signs of ageing.<sup>12</sup>

## AMA (NSW) submission to the House Health Committee to inquire into skin cancer

Initial review of early data from research from Royal North Shore Hospital by AMA (NSW) Vice President, Dr Saxon Smith, into attitudes towards sun protection indicates:

- 95% of survey respondents report use of sunscreen during summer, but only 39% in Autumn, 30% in winter and 60% in spring;
- Only 14% of survey respondents report use of sunscreen on a daily basis compared with 82% only when outside;
- 51.5% of survey respondents report that they do not reapply sunscreen after 2 hours including 18% who never reapply;
- 59% of survey respondents indicate that they use 10ml or less of sunscreen as their usual application volume;
- Only 25% of survey respondents reported checking the expiry date of their sunscreen regularly, with 36% of respondents rarely or never checking the expiry date of their sunscreen;
- 53% of respondents reported not being aware that heat can affect the effectiveness of sunscreens;
- 53% don't buy a new sunscreen each summer;
- 87% of respondents indicated knowledge that UVB and UVA both contribute to skin cancer development;
- Only 11% of respondents indicated correctly that SPF 30 means they can spend 30 times longer in sun exposure before developing sunburn, which is the definition of SPF;
- 20.5% of respondents have used a solarium at some point;
- Only 41% of respondents that sunbathe report applying sunscreen prior;
- 30% of respondents report having 1-5 sunburns in the last year and 66% report no sunburns.

## Lack of consistency comparing knowledge to action

The sun protective behaviour of 5073 adults and 699 adolescents in Australia obtained through interviews yielded interesting results. For the adult group, the most common sun protective measures showed 55% wearing sunglasses, 48% wearing hats and 46% wearing clothing with longer leg cover. A much lower proportion of adults reported the use of sunscreen, wearing long sleeves or finding shade.

For the adolescent group, 25% wore sunglasses, 38% used hats, 37% applied sunscreen and 37% wore clothing with longer leg cover. Incidence of weekend sunburn was 25% for adolescent and 18% for adults which presents a concern. Adolescents in the study were 80% more likely than adults to report having been sunburnt on the weekend which could be a consequence of their lower use of sun protection.<sup>13</sup>

One Queensland study examining the similarity between sun protection behaviours and attitudes used individuals on boats as the subjects of their investigation. The study asked participants to rate the sun protective behaviours of other members on the boat. Only 17% of boat-goers reported sun protective behaviour of the others with them as good with 40% being poor and 42% considered to be okay.

## AMA (NSW) submission to the House Health Committee to inquire into skin cancer

When the participants had a positive perception of the sun protective behaviours of other members on the boat, they themselves were more likely to assert displeasure in exposing their skin to the sun, consider sunburn an acceptable risk, wear sunglasses, hat along with a long sleeved shirt and sunscreen and were ultimately less likely to report barriers to sun protection.<sup>14</sup>

## Role of dermatologists and family doctors in early detection and management of skin cancer

As Dr Megan Keaney told the roundtable for the inquiry into skin cancer in Australia last June:

I think the specialists here would agree that management of skin cancer in Australia is largely located within primary care, within general practice. The diagnosis and management of skin cancer is a core competency of general practitioners. Like other illnesses and conditions in our community, we rely upon a system that has primary care as the fundamental part of our health care system, with secondary care services provided by specialists, with GPs as the gateway to accessing those services. We rely upon general practitioners to have certain skills about working out what is within their competency to manage completely and which cases should be referred to a specialist. Our outcomes from skin cancer would suggest that, by and large, the system is working well.<sup>15</sup>

Even though the system is working well, studies show dermatologists are more accurate when it comes to diagnosing melanoma compared to non-dermatologists. Particularly when it comes to all the clinical variants of melanoma, an initial misdiagnosis can lead to a worse prognosis for the patient. It's especially important in the case of aggressive types of melanoma and a recent study has concluded that different criteria are needed to more accurately diagnose a wider range of melanoma types.<sup>16</sup>

The ongoing education of specialists, such as dermatologists and family doctors remains an important initiative to further improve early detection rates so that non-melanoma skin cancer and melanoma are detected early, treated in the most cost effective way and improve the long term outcomes of the affects patients.

In general, as non-melanoma skin cancer and melanoma are especially prevalent in the Australian population they remain expensive conditions to treat. The current MBS item numbers work well as evidenced by Australia's success in managing these conditions compared to the rest of the world. Furthermore, they provide a generally realistic guide to therapy and cost.

A number of new treatments, predominately medical therapies, have recently been introduced but tend to target advanced 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.

## AMA (NSW) submission to the House Health Committee to inquire into skin cancer

- 
- <sup>1</sup> Leiter U and Garbe C. Epidemiology of melanoma and non-melanoma skin cancer – the role of sunlight. *Adv Exp Med Biol* 2008;624:89-103
- <sup>2</sup> Dennis LK et al. Sunburns and risk of cutaneous melanoma: does age matter? A comprehensive meta-analysis. *Ann Epidemiol* 2008; 18(8):614-27
- <sup>3</sup> Australian Institute of Health and Welfare. Cancer in Australia: an overview, 2012 [Internet]. 2012 [cited 2014 Feb 12]; AIHW cat. no. CAN 70. Available from: <https://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129542353>
- <sup>4</sup> Australian Institute of Health and Welfare (AU). Skin Cancer [Internet] Bruce, ACT (Australia). [cited 2014 Feb 12]. Available from: <http://www.aihw.gov.au/cancer/skin/>
- <sup>5</sup> Ong E, Goldacre R, Hoang U, Sinclair R, Goldacre M. Subsequent Primary Malignancies in Patients with Nonmelanoma Skin Cancer in England: A National Record-Linkage Study. *Cancer Epidemiol Biomarkers Prev* March 2014 23:490-498
- <sup>6</sup> Staples M, Elwood M, Burton R, Williams J, Marks R, Giles G. Non-melanoma skin cancer in Australia: the 2002 national survey and trends since 1985. *Med J Aust* 2006, 184 (1), 6-10.  
<https://www.mja.com.au/journal/2006/184/1/non-melanoma-skin-cancer-australia-2002-national-survey-and-trends-1985> [cited 2014 Feb 12]
- <sup>7</sup> A. Gavin, R. Boyle, D. Donnelly, C. Donnelly, S. Gordon, G. McElwee, A. O’Hagan, *European Journal of Public Health* 2012, 22, 408.
- <sup>8</sup> D. P. Butler, A. Lloyd-Lavery, C. M. G. Archer, R. Turner, *Clinical and Experimental Dermatology* 2013, 38, 338.
- <sup>9</sup> Greenoak, G. and Oakley, A. *Research Review Educational Series An Update on Sunscreens II*.  
<http://www.researchreview.com.au/getmedia/d8d344d9-ee4c-447e-aab7-b604696418c6/Educational-Series-Sunscreens-Update-II-AU.pdf>. [cited 2014 Feb 27]
- <sup>10</sup> Diaz A et al. The children sunscreen study. *Arch Dermatol* 2012;148(5):606-12.
- <sup>11</sup> A. Magdum, F. Leonforte, E. McNaughton, J. Kim, T. Patel, R. Haywood, *Journal of Plastic, Reconstructive and Aesthetic Surgery* 2012, 65, 1384.
- <sup>12</sup> S. Q. Wang, S. W. Dusza, *British Journal of Dermatology* 2009 161, 28.
- <sup>13</sup> S. Dobbins, M. Wakefield, D. Hill, A. Girgis, J. F. Aitken, K. Beckmann, A. I. Reeder, N. Herd, A. Fairthorne, K.-A. Bowles, *Journal of the American Academy of Dermatology* 2008, 59, 602.
- <sup>14</sup> T. Woolley, P. Buettner, *Health Promotion Journal of Australia* 2009, 20, 107.
- <sup>15</sup> House of Representatives (AU). Standing Committee on Health and Ageing – Skin cancer in Australia: awareness, early diagnosis and management [Internet] Canberra, ACT (Australia). [cited 2014 Feb 12]. Available from: [http://parlinfo.aph.gov.au/parlInfo/download/committees/commrep/e6e6e7e7-f2e0-4f90-9a76-afc633ab1849/toc\\_pdf/Standing%20Committee%20on%20Health%20and%20Ageing\\_2013\\_06\\_21\\_2062\\_Official.pdf;fileType=application%2Fpdf#search=%22committees/commrep/e6e6e7e7-f2e0-4f90-9a76-afc633ab1849/0000%22](http://parlinfo.aph.gov.au/parlInfo/download/committees/commrep/e6e6e7e7-f2e0-4f90-9a76-afc633ab1849/toc_pdf/Standing%20Committee%20on%20Health%20and%20Ageing_2013_06_21_2062_Official.pdf;fileType=application%2Fpdf#search=%22committees/commrep/e6e6e7e7-f2e0-4f90-9a76-afc633ab1849/0000%22)
- <sup>16</sup> M. Lim, V. Mar, C. McLean, R. Wolfe and J. Kelly. “Diagnostic accuracy of malignant melanoma according to subtype. *Australasian Journal of Dermatology* 2014, 55:35-42.