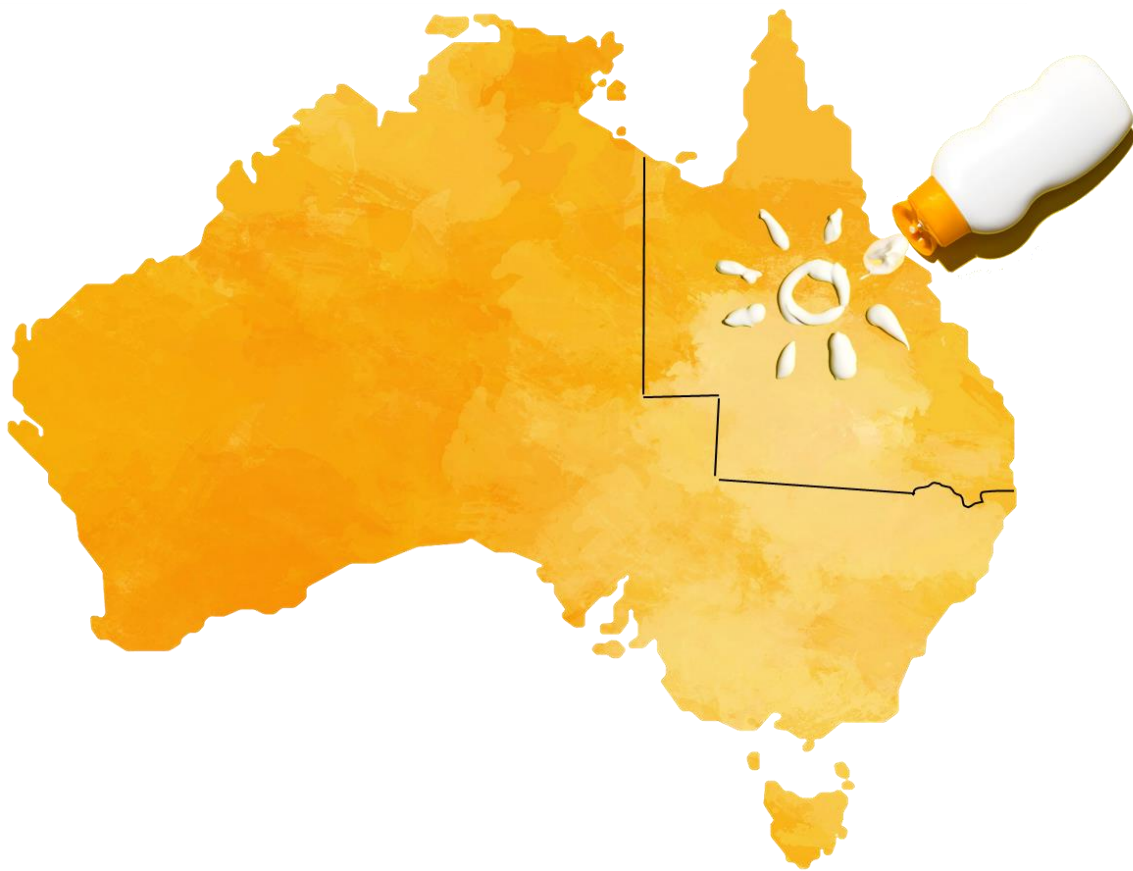




Skin Cancer Prevention Queensland: Sunscreen Industry Forum Report

November 2022



About this Report

Skin Cancer Prevention Queensland: Sunscreen Industry Forum

This report summarises the key discussion items and future directions identified in the November 2022 Skin Cancer Prevention Queensland Sunscreen Industry Forum.

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Companion Documents & Resources

- Skin Cancer Prevention Queensland: Towards a Future of Reduced Skin Cancer Burden for Queenslanders, Skin Cancer Prevention Targets (2022 – 2050), available at [Skin Cancer Prevention Targets for Queensland – ASSC](#)

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- Skin Deep Learning
- Therapeutic Goods Agency
- University of Queensland

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Background

Australia and New Zealand have the highest incidence rates of skin cancers in the world (1). Designated Australia's 'national cancer', it is estimated that 2 in 3 Australians will be diagnosed with a skin cancer during their life (2, 3). Keratinocyte cancers (KC), including basal cell carcinomas (BCC) and squamous cell carcinomas (SCC), are the most frequently diagnosed cancers in Australia, with an estimated 69% of Australians expected to have at least one excision for a KC in their lifetime (3). Melanoma is the 4th most commonly diagnosed cancer in Australia, responsible for approximately 1,500 deaths annually (4, 5).

Queensland's skin cancer incidence rates are 37% higher than the national average (6). Each year, more than 3,600 Queenslanders are diagnosed with melanoma, and over 350,000 Queenslanders are treated for non-melanoma skin cancers (6).

The high incidence of skin cancers in Queensland is largely attributable to the high ambient ultraviolet (UV) radiation that leads to high incidental exposure (7). This is coupled with the predominately fair-skinned population and inadequate practice of sun protective behaviours in a climate that is conducive to outdoor recreational activity (7). Approximately 99% of KCs and 60–90% of melanomas in Australia are directly attributable to the high ambient UV radiation seen across the continent (8, 9, 10); thus, skin cancers are largely preventable through practicing sun protective behaviours that minimise skin exposure to the sun. Notably, the “Slip! Slop! Slap!” campaign of the 1980s is one of Australia's most prominent public health interventions to protect against skin cancers (8). The premise of successful public health campaigns has been to encourage people to limit their time outdoors during periods of the day when the intensity of UV radiation is high (8, 11), as well as promote sun protective behaviours such as:

- **Slip!** on sun protective clothing (e.g., long sleeve shirts, long pants etc)
- **Slop!** on SPF 30+ or higher water-resistant sunscreen
- **Slap!** on a broad-brimmed hat
- **Seek!** shade
- **Slide!** on wraparound sunglasses

In the 40 years following the launch of the “Slip! Slop! Slap!” campaign, as well as the introduction of comprehensive polices in early childhood, schools and outdoor worker settings, notable successes have been achieved, including population-wide improvements in sun protection behaviours and decreased melanoma rates in young Australians (8). In addition, according to the National Sun Protective Survey, trend data show significant decline in intentional tanning attitudes and behaviours, particularly among adolescents (12). Unfortunately, many Australians still inadequately protect their skin against the harmful effects of UV radiation.

Sunscreen Application

Sunscreen application is one modifiable behaviour that can be adopted to safeguard against sun exposure. Current evidence demonstrates that regular sunscreen use can prevent both cutaneous SCCs (13, 14) and melanoma (15, 16). It has been estimated that regular sunscreen use prevented around 14,190 (prevented fraction [PF] 9.3%) and 1,730 (PF 14%) people from developing SCC and melanoma (respectively) in 2008 (17). Subsequent modelling suggests that:

Maintaining prevailing levels of sunscreen use could reduce skin cancer incidence by 10 – 15%, and interventions to increase sunscreen use could reduce melanoma incidence by ~10% in high incidence populations by 2032 (17).

In light of the benefits of regular sunscreen use, current recommendations advise that sunscreen should be applied every day when the UV index is predicted to reach 3 or above (18). Since the maximum daily UV index is ≥ 3 throughout the year in Queensland (19), Queenslanders are advised to apply sunscreen as part of their daily routine in all seasons to protect against sun exposure (18). Yet, sunburn is highly prevalent in Queensland, with at least 49% of adults and 45% of children surveyed via the 2020 Queensland Preventative Health Survey expressing they were sunburnt in the previous 12 months (6). Similarly, prior studies have demonstrated there is a gap in the public's knowledge of correct sunscreen application and reapplication guidelines (20). To achieve the labelled SPF and adequate protection from UV radiation, sunscreens need to be uniformly applied to the skin at a thickness of 2 mg/cm² with regular reapplication (21). However, insufficient amounts of ~0.39-1 mg/cm² are typically applied, with limited reapplication (22, 23).

Skin Cancer Prevention Queensland's Response to Sunscreen Use

In May 2022, Skin Cancer Prevention Queensland formalised a series of targets for skin cancer prevention, with the ultimate goal to reduce the incidence of each of KC and melanoma by 5% by 2030, and 25% by 2050 (Table 1). One of the interim goals to reach these targets is to improve sunscreen use such that 50% of at-risk (Fitzpatrick skin type 1 – 4) Queenslanders apply SPF 30+ sunscreen daily by 2030 (Table 1). As sunscreen usage in Queensland is currently insufficient to reach these goals, Skin Cancer Prevention Queensland convened a forum in November 2022 with relevant industry representatives universities, non-profits, and government to gain industry insights into sunscreen use and consider strategies to increase sunscreen application in Queensland. This report summarises the key discussion items and future directions identified in the forum.

Table 1: Skin Cancer Prevention Queensland’s targets for reduced skin cancer incidence.

Primary Targets	Interim Targets
<ul style="list-style-type: none"> • 5% reduction by 2030, and 25% reduction by 2050 of melanoma incidence. • 5% reduction by 2030, and 25% reduction by 2050 of keratinocyte cancer incidence. 	<ul style="list-style-type: none"> • 50% of at-risk Queenslanders (Fitzpatrick skin type 1 – 4) applying daily SPF 30+ sunscreen by 2030. • 50% of Queenslanders wearing broad-brimmed hats when outside by 2030. • 20% reduction (in each age group) in the percentage of people reporting being sunburnt in the past year by 2030.

Sunscreen Industry Forum

The sunscreen industry forum was held at the University of Queensland's Herston Oral Health Centre in Brisbane on Wednesday 23rd November 2022. The forum was convened by Skin Cancer Prevention Queensland (SCPQ) and brought together over 100 representatives from cancer control agencies, universities, research institutions, beauty brands, government departments, and sunscreen distributors and manufacturers (Box 1; hereafter referred to as the SCPQ Collaborative). Australia-based organisations that were involved with sunscreens (i.e., manufacture, distribution, advocacy etc), were invited to present at the sunscreen industry forum. The sunscreen industry forum entailed a series of presentations across three themed sessions, as well as interactive group discussions to gain better insights into sunscreen use, and ultimately consider strategies to better integrate sunscreen application into the daily routine of all Queenslanders (Table 2).

Box 1: Organisations in attendance at the Sunscreen Industry Forum

Accord, Advanced Knowledge in Skin Science (AKISS), Aesthetic Beauty Industry Council, AusCycling, Australasian College of Dermatologists, Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), Cancer Council, Cancer Society NZ, Danger Sun Overhead, Ego Pharmaceuticals, Eurofins Dermatest, Excite Science, GenesisCare, Hockey QLD, Johnson & Johnson, James Cook University (JCU), La Roche-Posay, L'Oreal, Melanoma & Skin Cancer Advocacy Network (MSCAN), Melanoma Institute Australia, Melanoma Patients Australia, Molescan, My Sun Protection, National Skin Cancer Centres (NSCC), Ochre Sun, Outdoors Queensland Ltd, Pure Indulgence, QIMR Berghofer Medical Research Institute, Queensland Health, Queensland University of Technology (QUT), Royal Australian College of General Practitioners (RACGP), Royal Melbourne Institute of Technology (RMIT), Skin Deep Learning, Sunbubs, Sundicators, Sensational Body Care, Surf Life Saving QLD, Therapeutic Goods Agency (TGA), Ultra Violette, University of Otago, University of Queensland (UQ), University of Sydney, We Are Feel Good Inc., Workplace Health & Safety QLD.

Table 2: Sunscreen Industry Forum Program

Time	Topic Overview	Presenter
Session 1: Skin Cancer and Sunscreen in Queensland		
9am – 10am	Welcome	Professor Rachel Neale <i>Co-Chair, Skin Cancer Prevention Queensland QIMR Berghofer MRI</i>
	Queensland Health’s Commitment to Reducing QLD’s Skin Cancer Burden	Simone Braithwaite <i>Acting Executive Director, Prevention Strategy Branch, Queensland Health</i>
	A Brief Overview of Skin Cancer: Burden, Causes, Control	Professor David Whiteman <i>Medical Epidemiologist, QIMR Berghofer MRI</i>
	Regulatory Compliance of Sunscreen in Australia: Therapeutic Goods Agency (TGA)	Dr Cheryl McRae and Nicole McLay <i>Assistant Secretary, Complementary and Over the Counter Medicines / Regulatory Compliance, TGA</i>
	Skin Cancer Prevention Queensland: 2030 and 2050 Targets	Professor Monika Janda <i>Co-Chair, Skin Cancer Prevention Queensland University of Queensland</i>
Session 2: Barriers, Enablers, & Communication Tactics to Improve Sunscreen Use, An Industry Perspective		
10am – 11am	Overview of Australia’s Sunscreen Industry: Accord	Rianna Goodwin <i>Senior Associate, Regulatory & Technical, Accord</i>
	Barriers and Enablers for Daily Sunscreen Use from an Industry Perspective	Dr Fabrizio Spada <i>Ego Pharmaceuticals Pty Ltd/Consumer Health Products</i>
	Effective Communication Tactics to Increase (Daily) Sunscreen Use (especially for hard-to-reach groups)	Priya Bhatti <i>Brand Manager, La Roche-Posay</i>
Session 3: Role of the Beauty Industry, GPs, Pharmacists & Community to Improve Sunscreen Use		
11:30am – 12:45pm	The role of the Aesthetic and Beauty Industry in Sunscreen and Skin Cancer Awareness	Stefanie Milla and Gay Wardle <i>The Aesthetic Beauty Industry Council</i>
	Skin Deep Learning Educational Resource Program, and its Role in Increasing Awareness of Beauty Therapists About Skin Cancer Prevention Through Sunscreen Use	Hayley Griffiths <i>CEO, Skin Deep Learning</i>
	Sunscreen Advice Sought from GPs and Pharmacists	Lynette Hunt <i>CEO, Skin Cancer College Australasia</i>
	Are Prevailing Community Standards Enough When it Comes to Advertising?	Anne Gately <i>Consumer Representative, Melanoma Patients Australia</i>
Session 4a: Panel Discussion		
1:30pm – 3.00pm	Discussion Topics: <ul style="list-style-type: none"> How can we improve sunscreen use to make it part of everyone’s daily routine? What strategies can we employ to increase sunscreen use among high-risk groups? Is inconsistent sunscreen messaging a problem? 	Facilitators: Professor Rachel Neale & Professor Monika Janda <i>Co-Chairs, Skin Cancer Prevention Queensland</i> Panel: Professor David Whiteman, Dr Fabrizio Spada, Stefanie Milla, Nicole Kratzman, Dr Jeremy Hudson, Anne Gately.
Session 4b: Group Discussion on At-Risk Settings		
1:30pm – 3.00pm	At-Risk Settings (group facilitators): <ul style="list-style-type: none"> Men (David Whiteman & Jeremy Hudson) Secondary Schools (Jodie Antrobus & Simone Braithwaite) Sports and Recreation (Sheleigh Lawler & Katrina Crompton) Individuals who like to Tan (Ken Dutton-Register and Irene Munro) Outdoor Workers (Janine Lees & Jo Crotty) Those who have problems with sunscreen (Aideen McInerney-Leo & Lynette Hunt) 	

Key Discussion Items and Future Directions

Sunscreen Regulations

In Australia, the Therapeutic Goods Agency (TGA) is responsible for regulating sunscreens that are considered to be therapeutic goods (i.e., therapeutic sunscreens) (24, 25). All therapeutic sunscreens are considered primary sunscreens and are defined as products primarily designed to protect the skin from UV radiation (e.g., broad-spectrum SPF 30+ sunscreens). Secondary sunscreens, which are products that have a primary function other than UV radiation protection (e.g., moisturisers, cosmetic skin foundations), can be classed as either therapeutic or non-therapeutic sunscreens dependent on their SPF claims and package size (i.e., SPF ≥ 15 = therapeutic; SPF < 15 with package size < 300 mL = non-therapeutic). As therapeutic sunscreens are designed to protect against UV radiation exposure and subsequent skin damage, these sunscreens are strictly regulated under *The Therapeutic Goods Act 1989*, *Australian Regulatory Guidelines for Sunscreens*, and the *Australian and New Zealand Sunscreen Standard* to ensure they are safe, efficacious and of good quality (24, 25, 26). The *Australian Regulatory Guidelines for Sunscreens* describe the regulatory requirements and standards for sunscreens (and their ingredients) regulated as therapeutic goods in Australia by the TGA under *The Therapeutic Goods Act 1989* (24, 25). The *Australian and New Zealand Sunscreen Standard* details procedures for sunscreen performance testing and labelling requirements (including new requirements for sunscreens to comply with updated ISO standards for determining SPF factor, water resistance, and UVA photoprotection) (26). Unless exempt, all therapeutic sunscreens supplied in Australia must be listed or registered in the Australian Register of Therapeutic Goods (ARTG). Most therapeutic sunscreens are listed medicines, which do not undergo a pre-market evaluation by the TGA but must only include ingredients permitted in listed medicines, as well as be manufactured under the principles of Good Manufacturing Practice (GMP) (26). Therapeutic sunscreens are required to be registered if they contain an ingredient that is not a permitted ingredient in a listed medicine, and/or if they have higher-level therapeutic indications than those permitted for use in listed medicines (e.g., claim the prevention of skin cancer) (26).



Australian regulatory guidelines for
sunscreens
ARGS

Version 3.0, May 2023



Figure 1: Australian Regulator Guidelines for Sunscreen.

Image source: [Australian regulatory guidelines for sunscreens \(tga.gov.au\)](https://www.tga.gov.au/australian-regulatory-guidelines-for-sunscreens)

Sunscreen Advertising and Marketing

The Therapeutic Goods Act 1989 and *The Therapeutic Goods Advertising Code 2021* (25, 27) regulate the way in which sunscreens are advertised. Advertisements must promote safe and proper use that is accurate and consistent with public health messaging (e.g., promote all forms of sun protection, discourage prolonged sun exposure, encourage frequent use and reapplication). It also requires therapeutic sunscreens to include any mandatory statements and health warnings, as well as meet all lawful testimonial and endorsement specifications. In Australia, the Australian Association of National Advertisers (AANA) Code of Ethics has also been adopted as part of advertising and marketing self-regulation, with the objective to ensure advertisement and marketing communications are legal, truthful, and ensure consumer trust and protection for the benefit of all of the community (28). Under Section 2.6 (Health & Safety), the code requires that advertising must not depict content that would encourage or condone unhealthy or unsafe behaviours regarding prevailing community standards (28). Prevailing community standards are defined as the community standards prevailing at the time of the advertising or marketing communication. Therefore, the AANA Code of Ethics assumes the prevailing community standards are ‘ideal’.

Prevailing community standards for sun protection in Australia are currently very poor.

Studies have shown a link between the ‘Australian national identity’ and sunburn, with sunburn sometimes viewed as a ‘national rite of passage’ (29). Additionally, a survey of 2,154 Australian adults in January 2019 found that 46% had tanned skin from sun exposure, 40% liked to get a suntan, and 31% agreed that a suntanned person looked more healthy (30). The attendees concluded that improvements to prevailing community standards for sun protection are needed to facilitate safe advertising and marketing. In this respect, the media and community play a pivotal role in shaping and changing sociocultural norms. For example, community engagement and feedback on harmful advertising in a recent Waitrose ad that was criticised for glorifying sunburns resulting in revision of the ad (31). Thus, advocating for community change has the potential to improve sun protection norms in Australia and is critical to enable targets to be met.



Figure 2: Waitrose ad showing two farmers comparing their suntans that was revised due to public concern.

Image source: [Waitrose sorry after Christmas advert criticism - BBC News](#)

Addressing Barriers to Sunscreen Use

Addressing barriers to sunscreen uptake that have been identified by consumers was a key focus of the SCPQ sunscreen industry forum. Despite well-established research that sun exposure is the leading cause of skin damage and skin cancers, some consumers remain resistant to sunscreen use. A number of barriers were discussed, including lack of knowledge and understanding regarding recommendations about application and re-application, health concerns arising from controversies and myths, sunscreen feel on skin and appearance (e.g., under makeup), skin or eye sensitivities or irritation, complacency and forgetfulness (e.g., lack of urgency), and cost and accessibility. The attendees agreed that addressing these barriers to sunscreen uptake will be vital to increasing sunscreen use.



Several potential avenues to address these barriers were discussed, which included the continued development of sunscreens with high SPF that maintain cosmetic elegance and reduce irritation, providing more accessible information about how and when to apply sunscreen, emphasising the value of daily sunscreen application, even in the absence of reapplication, simplifying the UV index and making it more readily available, addressing concerns about potential harmful effects on health, increasing availability of sunscreens in public settings, and using relevant technology to increase positive sunscreen messaging. Importantly, continual monitoring and assessment of public knowledge, assumptions, and perceptions about sunscreen were identified as vital to understanding the impact of primary prevention initiatives.

To reduce sunburn and skin cancer by 2030, key messages need to be tailored to different age groups using relevant social and traditional media platforms. For example, La Roche-Posay piloted an Instagram campaign: “*Did you know: Just 5 sunburns can increase your risk of melanoma by 80%?*” to drive behavioural changes and awareness amongst young Australian consumers with the aid of influencers who shared the message across their social media platforms (i.e., selfie exposing 5 fingers to represent 5 sunburns), with total engagement exceeding 23,000 views.

A recent review investigating the impact of social media on skin cancer prevention demonstrated that social media facilitates excellent engagement with consumers, increases public engagement with skin cancer prevention, and has the potential to improve sun protection behaviours (32). A feasibility study evaluating a social media-enabled intervention for skin cancer prevention via directed messages related to sun protection and cancer prevention, found that messaging disseminated via social media received large community engagement, resulting in improved skin cancer awareness and attitudes towards exposure to UV radiation (33). Social media now plays an important role not only in the promotion of social change (e.g., increasing sunscreen use) but as a source of public opinion on health-related information and education, and monitoring of modified behaviours and subsequent change (29, 34).

Therefore, the attendees concluded that to better engage with target cohorts (e.g., young adults at greater risk of being influenced by social media), social media platforms (e.g., Instagram, TikTok, Twitter, Facebook) need to be better utilised.



Figure 3: Influence of social media on changing behaviour. (LEFT) Viral image shared on Twitter showing the effects of regular UV-protective moisturizer application to the face versus no application to the neck. (RIGHT) Increased engagement and awareness of the importance of sunscreen application across social media (TikTok) after release of the viral photo.

Image Source: [Ageing research: rethinking primary prevention of skin cancer - Posch - 2021 - Journal of the European Academy of Dermatology and Venereology - Wiley Online Library](#)

National Sun-Safety Public Awareness

The SCPQ Collaborative also acknowledged the importance of traditional media for facilitating skin cancer awareness and prevention messaging. Importantly, the Queensland Government has committed \$8.4 million over four years (i.e., 2022-23 to 2025-26) for skin cancer prevention initiatives. The majority of these funds will be directed into primary prevention efforts, namely a state-wide public winter sun-safety campaign (early winter 2023 release date) targeting 18- to 34-year-old Queenslanders, with an additional focus towards outdoor workers and outdoor enthusiasts. Despite current recommendations to apply sunscreen to all exposed skin when the UV index is forecast to reach 3 or above (18), this has not been widely promoted. There is little information about the prevalence of this practice, but it is highly likely that it is still not widely practiced by the public. The attendees recommended that advice to apply sunscreen as part of Queenslanders' daily routine should be integrated into public health campaigns, especially considering the maximum daily UV index exceeds 3 across the entire year in Queensland (19).

Non-Medical Practitioners' Role in Skin Cancer Prevention and Awareness

Understanding the role of non-medical practitioners for improving community sunscreen usage and skin cancer awareness was another key focus of the SCPQ Forum. More specifically, the dermal, hair, cosmetic, beauty and wellness industry was identified as underutilised settings for increasing community skin cancer awareness and educating clients about sun protection. Industry representatives, including dermal therapists, hairdressers, beauticians, make-up artists, see their clientele on a routine basis and so have a unique opportunity to advise clients to regularly apply sunscreens, as well as examine and monitor their client's skin (35). Research suggests that beauticians and other non-medical professionals are willing to contribute to skin cancer awareness initiatives and surveillance (35, 36). However, a key challenge is the current lack of education and core units within aesthetic qualifications on skin cancer prevention and awareness. To better equip the dermal, hair, beauty, cosmetic and wellness industry with the required skills and training to contribute to skin cancer prevention and awareness, the SCPQ Collaborative identified the opportunity to embed information on skin cancer and sunscreen use in current units of competency for individuals studying Certificate II to Diploma level programs to support greater promotion of skin cancer prevention.

To facilitate training improvements, the attendees agreed that lobbying the government bodies that set curriculum requirements for beauty therapy and hairdressing courses to include skin cancer prevention and awareness modules was a key future priority. In Australia, these include Skills IQ, the Australian Industry and Skills Committee, and the Australian Skills Quality Authority, which all play a role in ensuring beauty therapy and hairdressing training packages equip students with the necessary industry skills and knowledge. Inclusion of these modules would allow hairdressers and beauticians to advise clients of sun protective behaviours and improve skin cancer awareness.

Importantly, the SCPQ Collaborative also recognised several current initiatives aimed at educating non-medical professionals on skin cancer prevention in practice. For example, a new training program by The Skin Cancer College Australasia (37) aims to provide non-medical professionals (e.g., hairdressers, tattoo artists, massage therapists etc) who routinely see clients' skin, knowledge to help identify skin irregularities and cautiously alert patients to seek medical advice.



Priority Settings and Groups

The SCPQ Collaborative identified several priority settings and/or populations where sun protection behaviour is suboptimal or who are at higher risk of future development of skin cancer.

Priority settings and groups include:

- Men
- Secondary schools
- Sports and recreation
- Those who like to tan and/or have issues with sunscreens
- Outdoor workers

Various barriers to sunscreen uptake were identified within each setting; these included a lack of knowledge of sunscreen application recommendations, minimal access to sunscreens, a lack of higher-level support, sunscreens that cause irritation to the eyes during outdoors sport or recreation, and a lack of role models. The forum attendees identified several initiatives for improving sunscreen adherence in these areas. For men, it will be important to tailor sunscreens to men, emphasize functionality, and to disseminate practical illustrations about how much to apply. Secondary schools should initiate peer-led school-based sun protection campaigns and have improved access to high quality sunscreens for students. In terms of professional sporting organisations, it will be vital to collaborate with the Australian Institute of Sport to improve sun-safety initiatives in sporting settings and to monitor adherence. For recreational sporting organisations that are primarily volunteer-led, it is important to ensure upper-level support to improve sun-safe initiatives. The forum identified rewards (e.g., access to subsidised shade structures) as a possible incentive for implementing sun-safety policies. Young adults are still the most likely to desire a tan, so it is important to engage with this group via relevant social media platforms and to harness the power of influencers. For example, social media campaigns illustrating the long-term consequences of sun damage and skin cancers, as well as advocacy for sunscreen use and sun protection messaging are needed. In terms of outdoor workers, it will be vital to improve organisational sun-safe legislation and workplace sun-safe initiatives. Developing sunscreens that reduce eye irritation will likely increase sunscreen uptake by outdoor workers.



Conclusions

To achieve the goal of 50% of at-risk (Fitzpatrick skin type 1 – 4) Queenslanders applying daily SPF 30+ sunscreen by 2030, the SCPQ Collaborative identified the following future initiatives and action items, including improved sunscreen messaging advising application as part of everyone’s daily routine, improvements to prevailing sun protection community standards, better educational resources for the dermal, beauty, hair and cosmetic industry to better equip their technicians with the necessary skills to spread skin cancer awareness and prevention initiatives, and targeted initiatives to improve sunscreen application in all settings (especially those of higher-risk). Importantly, improved collaboration between different sectors is critical to drive systemic changes and move towards increased sunscreen use and reduced skin cancer incidence for Queenslanders.



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