There is an app for that! Communicating UV via the SunSmart app.

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Abstract. The SunSmart iPhone app was launched in November 2010. Following its success and due to demand, an Android version of the SunSmart app was launched in September 2011 with a subsequent Samsung release in 2013. As of April 2014, the mobile app has been downloaded over 112,000 times. We discuss the history and development of the SunSmart app, provide research and evaluation results and explore promotion strategies driving the successful uptake of the app Australia-wide.

App development

The SunSmart app is a practical user-friendly application of the internationally standardised Global Solar Ultraviolet (UV) Index, which indicates the degree of risk associated with different levels of UV radiation. In Australia, a graphic representation of the UV Index using a bell curve appears in the daily weather section of newspapers to communicate to Australians when sun protection is required (Figure 1).

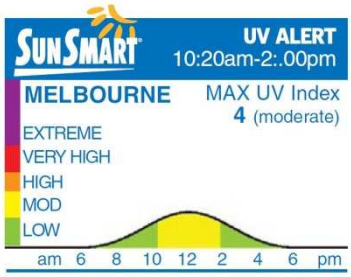

Figure 1. SunSmart UV Alert

Since 2008-09 there has been an increasing shift away from the UV Alert bell curve and maximum UV levels by SunSmart in Victoria. Research indicated that despite achieving relatively high recognition, influence on sun protection behaviour was limited.(Carter and Donovan 2007; Makin, Bonevski et al. 2010)

The aim of the app is to translate the UV Index into an easy-to-understand, useful tool with a strong call to action that enables Australians to make informed daily decisions about when to use sun protection. The app's main objective is to communicate the times of day sun protection is required (and not required) based on UV Index forecast information released by the Australian Government Bureau of Meteorology (BoM).

The app depends on a backend system that runs 24/7 processing raw UV data from BoM to continually update the UV data and alerts for over 300 locations across Australia. After processing, each UV location contains the current weather and a maximum UV value. The predicted hourly UV value is then calculated for each location using a formula.

On days when the UV is forecast to reach 3 or above, a sun protection message appears on the home screen (see figure 2a). In addition to this, users have the ability to set sun protection reminder alerts. The alerts appear in the form of a text message and can be set to be received either when the UV level reaches 3 or at a time that is convenient e.g. when they are getting ready for the day ahead.

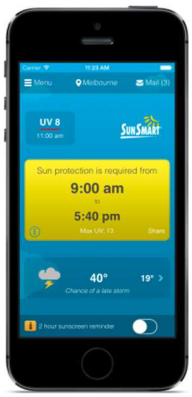

Figure 2a.
Sun protection message

Figure 2b.
No sun protection message

When there is no UV Alert issued, i.e. the UV forecast for the day is below 3, a "no sun protection required" message appears on the home screen (see figure 2b). Each message has a distinctive screen design. Users have the option of sharing the UV Alert information with friends via Twitter and Facebook.

Additional updates to the app since its launch have seen improvements to layout and accessibility and also enabled responsiveness so the app is optimised for multi-screens (i.e. iPad and tablet devices).

The app's functionality has also expanded significantly since it was first launched. It now includes:

- a seven day weather forecast, allows users to check the weather for the week ahead
- a mail box function, allows SunSmart to send a monthly message to our users
- alerts and reminders, users can personalise the time for getting a reminder about the daily sun protection times and a reminder to reapply sunscreen
- a vitamin D tracker tool, enables users to track their UV exposure to assist with vitamin D
- a sunscreen calculator, users can calculate how much sunscreen to apply, depending on clothing
- half-hourly updates on predicted UV levels, users can observe changes in real time

The Vitamin D tracker uses a number of questions to build a UV exposure profile of the user. The tracker then provides the user with feedback on sun protection and vitamin D requirements based on their input. The feedback

is based on the current vitamin D recommendations for the Victorian Department of Health.

Research and evaluation

Several past research projects highlighted that while awareness of the UV Alert bell curve was relatively high, understanding and influence on behaviour was poor.(Carter and Donovan 2007; Makin, Bonevski et al. 2010) This was particularly worrying given Australia has one of the highest rates of skin cancer in the world.

Research in 2010 in conjunction with the Health Sponsorship Council in New Zealand tested two graphical and one text based representations of the UV Index. The text based version was reported to clearly communicate the key information of when sun protection is required and when it isn't, and have a strong call to action.

This research informed the design of the app, together with an online survey of a convenience sample of iPhone users at Cancer Council Victoria and associated stakeholders in 2010. Interest in a UV Alert app was high and presenting relevant information in an easy-to-use format was seen as the most important feature of smartphone apps with interactivity and eye catching design rated as less important aspects.

In a follow-up survey 3 months after the iPhone app was launched, 87% of SunSmart iPhone app users felt that the app met or exceeded their expectations. 86% of users agreed that the app made them more aware of the times of day sun protection is required and 72% agreed that the app improved their sun protection behaviour over summer. 41% of users reported checking the app every day and a further 26% reported checking it one or more times per week. The most popular reported uses of the app were to find out general information about SunSmart and to plan ahead of time when to use sun protection.

A survey of app users in November/December 2011 conducted by RMIT University in collaboration with Centre for Behavioural Research in Cancer showed that half of the 380 users surveyed were referring to the app on a daily basis, with the remaining users checking the app at least once in the previous week. The app was used most often when 'planning to be exposed to the sun'. App information and the interface contribute to the value and satisfaction associated with the app, which in turn positively influenced behavioural intentions.

In 2013 RMIT conducted 21 in-depth interviews with SunSmart app users revealed detailed information about how people locate apps, app costs, credibility, design and content. The research also provided ideas for future directions.

App promotion

Both paid and unpaid media were utilised to promote the app since its launch. The qualitative research undertaken in 2013 highlighted that advertising/media was the most commonly reported way that users surveyed found out about the app.

Unpaid promotion of the app consisted of approaching newspapers and magazines across Australia and communications to internal and external stakeholders. This approach was highly successful with the app featuring in over 80 media articles. The SunSmart app was listed as one of the top 50 health apps by Body and Soul Magazine (health and wellbeing lift-out with national circulation of 1,928,696).

To continue to drive app downloads, a four week paid dynamic mobile advertising schedule was implemented from January 2013 that included the following platforms: Big Mobile, Nine MSN, Fairfax Digital and Student Edge (see figure 3). During the campaign period, there were almost 20,000 downloads of the app.

In January 2014, a six week radio and print advertising campaign promoting the app led to approximately 10,000 downloads of the app.

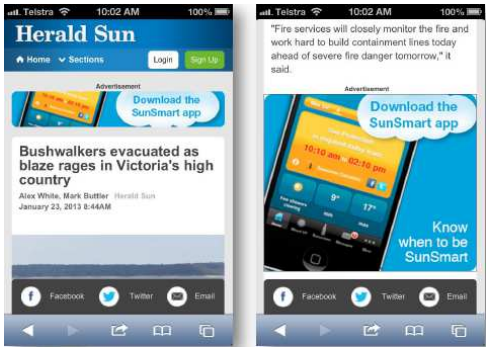

Figure 3. Examples of mobile advertising

Summary

Overall the app appears to be successful in achieving its objective of enabling Australians to make informed daily/regular decisions about when to use sun protection; therefore contributing to a reduction in skin damage, sun burn and ultimately skin cancer in Australia.

The future challenge will be to continue to update and refresh the app so it continues to be relevant and used by Australians to assist them in improving their sun protection behaviours.

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