

Unintended consequences: Successful social marketing campaign creates health problems

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Background to the issues

- Australia has one of the highest rates of melanoma in the world
- The Slip Slop Slap campaign has been hugely successful (beginning in 1981 with Sid the Seagull)
- We now face an epidemic of vitamin D deficiency in Australia

Skin cancer - Australia

- Skin cancer in Australia is a serious health problem with about 450,000 people diagnosed annually with the main types of skin cancers.
- More than 80% of new cancer diagnoses are related to skin cancers.
- Each year 450 people die from non-melanoma skin cancers and 1250 people die from melanoma.
- Unfortunately, melanoma is most common in those aged between 15 and 45 so it devastates young people in the prime of their lives.
- Australia has one of the highest incidences of skin cancer in the world, at nearly four times the rates in Canada, the US and the UK.
- Because of its prevalence, skin cancer is the most expensive cancer.
 - It is responsible for more than one million visits to GPs, and costs in excess of \$300 million annually (Cancer Council of Australia, 2010).

Skin cancer – evidence and response

- While cancer prevention is possible, and non-melanoma skin cancers are decreasing, melanoma is actually on the increase in the Australian population (Cancer Council of Australia 2010).
- As a consequence, the SunSmart™ campaign continues apace with new campaigns being planned regularly.
- The SunSmart campaign has developed from the early Slip Slop Slap days (with Sid the Seagull) to a broad based social marketing campaign.
- Today, not only do you Slip on a hat, Slop on some sunscreen and Slap on a hat; you also Slide on your sunglasses and Seek some shade between 11 and 3.
 - These innovations in the core message, in addition to the original highly successful campaign, have been very successful at keeping Australians out of the sun.
- Skin cancers (other than melanoma) have reduced markedly (Staples et al., 2006).

Vitamin D

- What is Vitamin D?
- Vitamin D is a fat-soluble vitamin that is naturally present in very few foods, added to others, and available as a dietary supplement.
- It is also produced endogenously when ultraviolet rays from sunlight strike the skin and trigger vitamin D synthesis.
- Vitamin D obtained from sun exposure, food, and supplements is biologically inert and must undergo two hydroxylations in the body for activation.
 - The first occurs in the liver and converts vitamin D to 25-hydroxyvitamin D [25(OH)D], also known as calcidiol. The second occurs primarily in the kidney and forms the physiologically active 1,25-dihydroxyvitamin D [1,25(OH)2D], also known as calcitriol [1]. NIH (2011)
- Vitamin D deficiency or insufficiency
 - Commonly defined as levels below 20 ng/ml and 30 ng/ml respectively

Vitamin D deficiency

- However, at the same time as covering up and going out in the sun less
- Australia is now suffering from an epidemic of Vitamin D deficiencies (Holick, 2010; National Health and Medical Research Council, 2010; Nowson et al., 2004).
- In 2007 there were an estimated 60 to 70% of people with Vitamin D deficiencies (Sexton & Hall, 2007).
- Growing concern regarding Vitamin D deficiency (Youl, Janda, & Kimlin, 2009) resulting from impact of public health messages
- We argue that there are many additional risks that are currently being ignored by health officials with regard to Australia's aging population.

Vitamin D deficiency - its implications

- 60 to 70 % of Australians have Vit D deficiencies
- Usually diagnosed through association with
 - Auto immune diseases
 - Asthma and allergies
 - Breast cancers
 - Calcium deficiencies
 - Cardio vascular disease
 - Coeliac disease
 - Colorectal cancer
 - Pancreatic cancer
 - Diabetes
 - Multiple sclerosis
 - Myalgia
 - Obesity
 - Osteoporosis
 - Parathyroidism
 - Prostate cancer
 - Rheumatoid arthritis
 - Rickets

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Awareness of health stakeholders and response so far

- SunSmart appears well aware of the link between their campaign and Vitamin D deficiency as they have a page on their site devoted to avoiding Vitamin D deficiencies.
- Furthermore, the Osteoporosis Society,
- the Cancer Council
- and the Australian College of Dermatologists
- have combined to 'educate' the public regarding the need to have *some* sunshine or risk Vitamin D deficiency.
- Unfortunately, it is not clear from their educative websites, that Vitamin D deficiency has been associated with so many other health issues.

Segments of population at increased risk

- Research has demonstrated that there are populations with higher levels of risk within Australia.
- The highest risk groups are those people with lower levels of sunlight available to them
- Those who live below specific latitudes (roughly) Sydney
- veiled women,
- those of dark skin, including Australian Aboriginals,
- and those in nursing homes or aged care facilities.
- Thus, some of our most vulnerable people are at the greatest level of risk.

Aged Australians at risk

- Importantly, the burden of morbidity associated with Vitamin D deficiency falls unfairly on the aged.
- Residents in care are an increasing component of an aging population and there could be up to 86% of such residents with insufficient Vitamin D (Nowson et al., 2004).
- However, because diseases such as osteoporosis (coupled with falls), dementia, and arthritis are often associated with older aged people, there is limited motivation to ascertain if well-being can be improved with Vitamin D supplementation once patients become residents of care facilities.
- Nowson and her fellow authors (2004) indicated that Vitamin D deficiency reduced in patients in high care facilities but was at greatest risk for those in low-level care.
- However, Durvasala et al.'s (2010) work indicates that while older people understand the link between their wellbeing and exposure to the sun, they are unwilling to spend much time outside.
- A further question arises: could we keep older people out of residential care facilities with a supplement of Vitamin D before associated disease arises?

Whose job is this now?

- There are 20 bodies responsible for managing the outcomes of the Vitamin D deficiency epidemic - not spending any (significant) money on prevention as yet
- There are 3 bodies with significant market power spending upwards of \$5m per year on melanoma and skin cancer prevention (and nothing on prevention of Vit D deficiency)

Auspicing bodies

- The next slides indicates the auspicing bodies for the health issues listed above (where there was an organization available).
- It becomes clear that it is possibly 'too big' an issue to be dealt with by so many disparate organizations with competing and sometimes mutually exclusive charters.
- The good news is that this is not an intractable problem;
- Vitamin D deficiency is relatively readily solved, supplements are easily available.
- A social marketing campaign aiming to ameliorate the problem should consider the following elements.

Issue	Relationship	National	Issue	Relationship	National
<i>Autoimmune disease</i>	Increases risk, Decreases severity of symptoms	Lupus NSW www.lupusnsw.org.au ME/CFS www.mecfs.org.au	<i>Multiple sclerosis</i>	Decreases severity of symptoms	MS Society of Australia www.msaustralia.org.au
<i>Allergies</i>	Increases risk, Decreases severity of symptoms	ASCIA – Australasian Society of Clinical Immunology and Allergy www.allergy.org.au	<i>Depression</i>	Associated	Beyond Blue www.beyondblue.org.au Depression Australia www.depression.com.au
<i>Asthma</i>	Increases risk, Decreases severity of symptoms	Asthma Australia www.asthmaaustralia.org.au The Asthma Foundation www.asthmafoundation.org.au	<i>Diabetes</i>	Increases risk	Diabetes Australia www.diabetesaustralia.com.au
<i>Breast cancer</i>	Increases risk	National Breast Cancer Foundation www.nbcf.org.au	<i>Osteoporosis</i>	Increases risk, Decreases severity of symptoms	Osteoporosis Australia www.osteoporosis.org.au
<i>Calcium deficiency</i>	Increases risk, Decreases severity of symptoms	Bone Health for Life www.bonehealthforlife.org.au Osteoporosis Australia www.osteoporosis.org.au	<i>Colorectal cancer</i>	Associated	Cancer Council Australia http://www.cancer.org.au/aboutcancer/cancertypes/colorectalcancer.htm Cancer Council Victoria www.cancervic.org.au
<i>Celiac</i>	Genetic predisposition associated	The Coeliac Society of Australia www.coeliacsociety.com.au	<i>Prostate cancer</i>	Increases risk	Prostate Cancer Foundation of Australia www.prostate.org.au
			<i>Rheumatoid arthritis</i>	Associated	Arthritis Australia www.arthritisaustralia.com.au
<i>Obesity</i>	Associated	N/A	<i>Rickets</i>	Increases risk	N/A
<i>Parathyroidism</i>	Associated	N/A	<i>Muscle pain</i>	Associated	N/A

Product:

- The product needs to be considered in relation to the target audience.
- At the moment, it is clear that the key message of 'do not go in the sun' has been accepted.
- It has all the hallmarks of success.
- It is simple, easy to understand, easy to do and easy to convey.
- However, the alternative message is quite complicated:
 - if you are fair-skinned,
 - you can go in the sun for 7 minutes
 - in summer
 - between 3 and 5pm
 - and then only if the hole in the ozone layer is not too active today and you have checked with the weather bureau (UV Index).
- If you are dark skinned it is a whole other story.
- The consumer is probably confused.

Price:

- The benefit of not going in the sun currently outweighs the costs of going out.
- We are daily presented with messages regarding skin cancer from the sun (fear of the sun is engendered).
- We work in our office blocks (in the main) and going outside while the sun is shining is really difficult (reinforced fear).
- Indeed, if we live in a nursing home, we are probably not going outside at all.
- If we exercise, it is in a gym.
- If we are wearing a veil it is socially unacceptable to unveil for the purposes of sun bathing.
- Access to moderate sunshine becomes behaviourally expensive because of the adjustments required.
- At a dollar or more a day supplements become expensive.

Promotion:

- Most consumers are not aware of the implications of Vitamin D deficiency on general health and wellbeing.
- The people who do know are not telling their stories in a consumer accessible manner.
- A campaign
- incorporating elements of upstream (for funding supplements where they are required)
- and downstream (to get consumers to take supplements or go into the sun)
- is needed.
- GPs would form an integral component of the communication chain.

Place:

- There is a need for an upstream (eg lobbying for PBS for Vitamin D supplements)
- and downstream campaign (at least as far medical practitioners as advocates and primary care professionals).
- 'Taking it to the people' is necessary.

Solution/ Results – Wider Implications

- Social marketing leadership
 - Undertake targeted evaluation of SunSmart
 - Systematic review of causes of Vit D deficiency– diet and sun
 - Implications for design of environment
 - “obesogenic environment”
 - “hypovitaminosis D environment”
- We need four Ps that work
 - Moderation of the negative messaging by the cancer lobbies
 - Consider that the costs and benefits do not work in favour of Vit D
 - Health professionals need to be considered as part of the communication chain
 - Some upstream marketing is required
- We need stronger evaluation and inclusion of unintended consequences in evaluation models

Conclusions

- The problem may not be intractable
- There is much work to be done creating an integrated and interdisciplinary effort
- There are a lot of sick people who may not need to be sick

Questions

QuickTime™ and a
decompressor
are needed to see this picture.