

‘Love Your Skin’ Exeter College UV Facial Scanner Project



**Project Report and Evaluation
September 2011**

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Foreword

Skin cancer rates have quadrupled in the last 40 years and now account for one-third of all new cancers in the United Kingdom. It is the second most common cancer among 15-34 year olds. Devon has the fourth highest incidence rate for malignant melanoma in the country. Approximately 80% of skin cancers could be prevented through avoiding excessive lifetime ultraviolet exposure.

Teenagers were identified as an initial target audience for the Devon Skin Cancer Prevention Strategy 2011-14, and this pilot project is an important step in establishing the evidence base in Devon on current behaviour, and finding out what works to change teenagers' attitudes and behaviour in the sun.

Through strong partnership working, this project has successfully increased awareness, knowledge and intention to adopt safe sun habits, and has opened up exciting opportunities for further work.

Dr. Virginia Pearson
Joint Director of Public Health

1. Scoping

1.1 Behavioural challenge

The upward trend of skin cancer incidence is due partly to the ageing of the population and partly to changes in behaviour that lead to increased exposure to ultraviolet radiation.

Teenagers and young adults are a high risk group for overexposure to ultraviolet radiation. Insight informs us that teenagers perceive a direct association between having a tan and being physically attractive, which links directly to self esteem in teenagers.

A Cancer Research UK study identified that 6% of 11-17 year olds have used a sunbed and a further 14.9% said that they had not done so yet but may do in the future. Sunbed use in the South West is lower than the national average, at 4.0%.¹

The challenge is to encourage teenagers to 'love their skin', to avoid burning and overexposure, and to seek safe alternatives such as using fake tan.

1.2 Local picture

The NHS Devon area has the fourth highest incidence rates of malignant melanoma in the country, 24.4 compared to 15.6 nationally and 20.6 in the South West (2006-08 pooled direct age-standardised rates per 100,000).

Skin cancer accounts for approximately one in 200 deaths in Devon and between 2006 and 2008 there were on average 246 cases of malignant melanoma per year and 40 related deaths. Rates are predicted to continue increasing, but 80% of skin cancers could be prevented through reducing exposure, so changing behaviour now could reverse the trend.

Devon has 1501 hours of sunshine per year compared to the national average of 1420, and 97% of Devon's population are of white ethnicity, compared to the national average of 88%.

The numbers of deaths from skin cancer are relatively low compared to 'big killers' such as lung cancer or heart disease. However, thousands of people have to undergo life-changing and disfiguring surgery as a result of skin cancer, and these consequences should not be underestimated. The perception needs to be broken down that skin cancer is not a 'serious' cancer with serious consequences. Using the NICE guidance estimates for

**“Teenagers
are a high risk
group for
over-
exposure”**

¹ Cancer Research UK, 'Sunbed use in children aged 11-17 in England: face to face quota sampling surveys in the National Prevalence Study and Six Cities Study', BMJ 2010; 340:c877.

the cost of diagnosing and treating skin cancer, malignant melanoma currently costs NHS Devon approximately £536,000 per year, and non-melanoma costs £2,373,000.

For more detailed background see The Devon Skin Cancer Prevention Strategy 2011-2014.

1.3 Scoping process

The scoping work began in 2009 and was delivered by the Peninsula Cancer Network, Peninsula Primary Care Trusts and Forster social marketing company. It included a review of the evidence base of effective interventions to date and engagement with stakeholders, notably across health commissioners, public health, environmental health, dermatologists, nurse specialists and trading standards. This resulted in the Peninsula Cancer Network report 'Embedding the strategic commissioning of Skin Cancer Awareness and Prevention'² which segmented the population by behaviour with supporting insights:

- Parents of young children/childcare facilities
- Parents of school children
- Sports and leisure participants and spectators
- Teenagers
- Outdoor workers
- Older people

This project targets teenagers, as identified as a priority segment for Devon in the Devon Skin Cancer Prevention Strategy 2011-14.

The evidence base identified appearance-based interventions as the most effective method to reach this group. Two examples are well summarised in the Bristol Business School Social Marketing Report 2009 and detailed as direct quotes below.³

"Mahler et al. (2008) targeted university-based adolescents and young adults with an appearance-based intervention using written information coupled with UV photographs to highlight existing skin damage from sun exposure, i.e. providing directly observable evidence of actual personal

² Forster, 'Embedding the strategic commissioning of skin cancer awareness and prevention' Peninsula Cancer Network, 2010.

³ Eagle, L. and Kemp, G., 'Social marketing-based sun protection intervention strategy for Cornwall PCT', Bristol Business School, 2009.

"Studies show an appearance-based approach works"

consequences of behaviour. Excerpts from focus groups discussing the positive aspects of sun protection were also used to address social norm issues.

Rather than try to prevent outdoor activity, the intervention provided advice on effective sun protection strategies. Not only did self-reported use of sunscreen increase significantly, but students also shared information with friends and families, thus helping to extend the impact of the intervention.”

“Olsen et al (2008 and 2007) in two separate studies targeting high school students used similar strategies to the Mahler et al study, combining educational material stressing that “teens can have fun outdoors and still protect themselves” (p. 764) with information regarding photo-ageing and UV-based facial scans. Intention to use sun screen (the only measure used) showed a significant increase.”

Evidence from a sunbed intervention targeting teenagers called “Dazzle Don’t Frazzle” commissioned by Dorset Cancer Network to Brilliant Futures, social marketing agency found that:

- computer generated images lacked credibility
- seeing actual damage through UV photography was considered effective by some
- free trials of fake or spray tan was considered effective by some
- expert, one to one advice about safe tanning was considered effective by all⁴

“There is the perception that a tan is sexy and can raise self esteem”

⁴ Brilliant Futures, ‘Developing an intervention to change sunbed behaviour’, March 2010.

1.4 Behavioural insights - teenagers⁵

- knowledge of potential dangers of excessive sun exposure does not result in sun protection-related behaviours
- there is the perception is that a tan is 'sexy' increasing perceived attractiveness and raising self-esteem
- it is 'worth' getting sunburnt in order to get a tan and that less protection is needed as a tan progresses
- the emphasis of immediate interventions should be on obtaining a tan safely as changing perceptions of the acceptability of tanning will require considerable resources to be invested over time
- teenagers and young people are most likely to respond to appearance-based appeals, including indicators of premature ageing or wrinkling
- it is important that interventions are not perceived as boring and difficult rather than making behaviour change fun, easy and popular
- individuals behave differently while on holiday

1.5 Proposition

The proposition to the teenagers was to offer a fun and interactive way of showing how overexposure to the sun or sunbeds can damage skin and encourage fake tan as an alternative.

2. Development and planning

2.1 NICE guidance

The messaging was designed according to recent NICE guidance on skin cancer prevention.⁶ This recommends:

⁵ Forster, 'Embedding the strategic commissioning of skin cancer awareness and prevention' Peninsula Cancer Network, 2010.

⁶ NICE Public Health Guidance 32 'Skin cancer: prevention using public information, sun protection resources and changes to the environment', January 2011.

- Identifying and targeting at risk groups
- Ensuring messages explain how someone can assess their own level of risk, give a range of protection options, and are simple and tailored to the target audience
- Taking into account the audience's barriers and motivators
- Keeping costs low to achieve cost-effectiveness

2.2 Aim

The aim of the project was to use a UV facial scanner with students in Exeter College, in order to increase their awareness of sun protection methods and skin cancer, and change their behaviour by adopting more safe sun habits.

2.3 Target audience

The target audience was teenage students, with a focus on beauty students as peers and influencers. Although the intervention was planned to appeal mostly to females, it was open to anyone, and males were targeted in one location in particular – at the college construction training site, in an environment that they would feel comfortable in. Staff were also invited to participate to increase reach and generate interest.

“A peer-led approach was adopted”

2.4 Objectives

- 100 students will increase their knowledge and awareness of skin cancer
- 25 students and tutors will use the UV facial scanner
- 75 students will intend to change their behaviour as a result of the intervention
- 40 students will actually change their behaviour as a result of the intervention

2.5 Intervention

The intervention consisted of a ‘mini-consultation’, beginning with the use of the UV facial scanner to reveal signs of overexposure, students were then shown how to apply fake tan and sun protection cream and left with free samples and SunSmart leaflets.

The intervention was designed in partnership with Exeter College. Timing was planned to maximise publicity around the Sunbeds (Regulation) Act 2010 that came into force in April 2011, banning under 18s from using sunbeds.

The scanner is used in the beauty industry to highlight the condition of the skin, including showing up sun damage. Although it is a relatively inexpensive, unsophisticated machine, it is very effective as a tool for highlighting skin type, damage, and for starting conversations about the effect of the sun on the skin. For more information on how the scanner works, see Appendix 1.

A peer-led approach was taken, by training up beauty students to run skin consultations on other students. The topic acted as an enhanced element of their curriculum.

2.6 Market testing

Messages were appearance-based and developed using recent NICE guidance, and tested during the Phase One training session with the beauty students. The students also developed their own 'Love Your Skin' resource to use during each consultation (see Appendix 2).

2.7 Evaluation methodology

Short-term changes in knowledge, attitude and behaviour change were measured by a pre and post intervention questionnaire (see Appendices 3 and 4). The questions were closely based on a selection from the Omnibus questionnaire, used to evaluate the SunSmart campaign, in consultation with Cancer Research UK. The South West Public Health Observatory were also consulted in the design of the questionnaire and provided valuable feedback. The evaluation form was tested during the training session and then adjusted slightly for the college-wide intervention, partly because links were made with Cornwall PCT who were doing a very similar intervention, so it made sense to merge our forms in order to be able to compare results.

**“Short term
intention to
change
behaviour
was
measured”**

A debrief with participating beauty students was planned to evaluate the model of working and capture learning.

In September, the aim is to follow-up the students who provided their contact details in order to evaluate whether their intention to change their behaviour over the summer resulted in actual behaviour change.

3. Implementation

3.1 Phase One: training and message testing (March-April 2011)

The two hour session took place with 34 beauty students at Exeter College, teaching them to identify skin type, advise on sun protection methods and use an ultraviolet facial scanner to reveal sun damage under the skin. This

was designed and run by the Skin Cancer Health Improvement Project Officer (NHS Devon), and supported by beauty tutors from the college. Students developed the 'Love Your Skin' consultation resource which was used in Phase Two. Publicity was planned to coincide with the sunbed legislation on 8th April.

3.2 Phase Two: college-wide campaign (May 2011)

The trained beauty students ran a peer-led campaign at lunchtimes for one week in May, offering 'skin consultations' using the facial scanner to show early signs of sun damage, one to one advice, printed resources, fake tan demonstrations and free samples of sunscreen. The scanner was taken to a different college site every day, including the Sowton construction site. Sessions were supported either by Sarah Bird or by one of the college beauty tutors. Publicity was planned through internal college communications, and a joint press release with the college.

“Beauty students took the scanner to construction students”

The students modelled two ways of working,

- a) one beauty student remained with the 'client' throughout the consultation process
- b) the beauty students remained on their 'station' and the client progressed round the room

The model used depended on the level of confidence of the girls involved as some did not want to lead a client all the way through the process. It also worked well to have just one or two beauty students operating the scanner per session, as the more faces they examined the better they became at talking clients through what they were seeing.

The students were very enthusiastic and arranged extra sessions to cope with the demand – even taking the scanner into tutor groups for a more intensive session.

3.3 Phase Three: behaviour change follow up (September 2011)

Follow up contact will be made to those students who agreed to be contacted to establish their actual behaviour over the summer months.

4. Evaluation results

4.1 Phase One results – knowledge, attitude and intended behaviour of beauty students undergoing training

Thirty four students attended the training, and 24 filled in evaluation questionnaires (71%). The results shaped the delivery of phase 2. The full results can be found in Appendix 4.

- After the session, 100% of respondents agreed that **“Protecting myself from too much sun is important to me”**, an increase of 25%
- Out of the nine respondents in the group who had used sunbeds in the past, **only one still intended to use sunbeds** after the session (compared to five before)
- There was an **increase in the number of actions** that participants said they would take **to protect themselves** in the sun
- 96% of respondents identified themselves as skin type I, II or III, which confirms that the intervention **successfully targeted teenagers with the risk factor of having fair skin**
- The parts of the session that had the highest impact on students were **seeing their own or someone else’s face** under the scanner, and **hearing from someone** who had experienced skin cancer.

“Seeing their face under the scanner had a high impact on the students”

4.2 Phase Two - reach

The intervention achieved the objective to reach 100 students. It reached **99 students aged 19 and under**, and an extra 38 students and tutors aged 20 and over (137 in total). Analysis here refers to the 19 and under respondents only, unless stated otherwise.

The intervention easily exceeded the objective for 25 students to use the scanner - all respondents used it.

Planned publicity extended the reach of the campaign:

- Joint press release as the sunbed legislation came into force on 8th April, resulting in coverage on ITV Westcountry News – a piece filmed at Exeter College showing the trained students using the scanner and an interview with a beauty tutor who had personal experience of having a melanoma
- Joint press release during the campaign itself resulting in coverage in the Express and Echo and other local channels.

4.3 Phase Two results - attitude

The full results can be found in Appendix 4. All results are statistically significant unless stated otherwise.

There was a positive change in attitudes towards sunbed use, with students less likely to want to use sunbeds after the intervention than before.

There was no significant change in reported attitudes to the importance of having a tan. This may be because the intervention was not aiming to dissuade teenagers from tanning, simply to use alternatives such as fake tan.

4.4 Phase Two results - intended behaviour

The objective of 75 students intending to increase their sun safe behaviour was met.

There was an **increase in the number of actions** that participants said they would take **to protect themselves** in the sun. The strongest reported intentions after using the scanner were 'Don't burn/avoid sunburn' and 'Use high factor sunscreen (factor 15+)'. This may be a reflection of the main key messages that the girls were delivering verbally, and the visual trigger of the free sunscreen samples.

The number of participants **intending to use sunscreen of SPF 15 or above in the UK increased by 19%**, from 42% before to 61% after.

The number of participants **intending to use sunscreen of SPF 15 or above abroad increased by 13%**, from 75% before to 88% after.

"The number intending to use sunscreen of SPF 15 or above in the UK increased by 19%, from 42% before to 61% after"

4.5 Qualitative feedback from debrief session

Students highlighted their top tips for running a successful session:

"Average consultation lasts about four minutes"
"Timing – don't expect interest before lunch"
"Knowing your client"
"Shock factor – display the facts and make it personal"
"Teachers bring students"
"Don't bombard with too much info, remember a few key facts"
"Helped that we were beauty students - people listened"
"Boys were interested – even in fake tan!"

"Shock factor – display the facts and make it personal"

In response to being asked when was the best time to prompt about skin cancer and protection, students reached a general agreement that this should be at the beginning with wording on the questionnaire.

4.6 Cost-effectiveness at the end of phase one and two

NICE guidance states that it is not possible to quantify the long-term savings as a result of putting measures in place to reduce the incidence of skin cancer. However, if there was a reduction in the number of cases of skin cancer, this would lead to significant savings in terms of reduced diagnosis

and treatment costs. The cost of diagnosing and treating skin cancer is currently estimated to be £2179 per registration of malignant melanoma and £1149 per registration of non-melanoma skin cancers. Based on these estimates, malignant melanoma currently costs NHS Devon £536,000 per year, and non-melanoma costs £2,373,000 per year.

The approximate total cost of the enhanced campaign without staff time was £300. From this perspective, this project would need to prevent or diagnose early one skin cancer of any type in order to make it cost effective.

The NICE costing statement states that the general provision of prevention information must be very low cost to be cost effective. It advises reinforcing national campaigns – which this campaign did.

Health promotion specialist time should be taken into account when planning delivery: six hours to plan and deliver a phase one training session, and at least ten hours to deliver a week long campaign. Twenty hours should be planned for evaluation. The costs here are difficult to quantify – however based on sessional costs of £20 an hour this is £720.

5. Learning

Unexpected impact: The plan was to minimise the more ‘negative’ messages to do with skin cancer and keep the intervention fun and positive. However, one of the beauty tutors at the college had had a malignant melanoma removed at the age of 29, so we decided to incorporate her telling her story into the Phase One training session. This turned out to be the most powerful element of the session and it should be considered whether there is scope to develop and test a project based on people who have experience of skin cancer telling their story.

Delivery: There needs to be a balance between the project being driven by the students, which has a positive impact, but also having a health professional on hand to oversee the quality of the verbal messages given out, and to answer any questions. There is a duty of care to have enough support in place if a student becomes upset or anxious as an unintended consequence of the intervention.

Since the UV scanner does not show up damage on all skin, or if the participant is wearing make-up, the person operating it needs to be skilled at getting the messages across anyway, e.g.

“Overexposure to UV is one of the biggest causes of premature ageing, so keep looking after your skin so that in the future you don’t get pigmentation, wrinkling and red patches showing up.”

“Find balance between peer-driven and having health professional to support messages”

Or

“One of the reasons we can’t see that much pigmentation on your skin is because you have skin type VI, but you still need to protect your skin and be careful not to burn, as UV exposure can still cause ageing and even skin cancer in all skin types.

Key messages: Should be included on the evaluation form and on the consultation form.

Timing and location: Ideally in a visual location, if students see what’s happening before lunch they will come after. Also good advertising is important.

Authors:

Sarah Bird
Skin Cancer Health Improvement Officer, Public Health
NHS Devon

Ruth Dale
Social Marketing Manager, Public Health
NHS Devon

With thanks to partners and contributors:

Nick Bridge, Health and Wellbeing Manager, Exeter College

Tracey Bennett, Beauty and Spa Therapy Curriculum Leader, Exeter College

Steve Brown, Assistant Director of Public Health, NHS Devon

Simon Chant, Head of Public Health Intelligence, NHS Devon

Nicola Bowtell, Information Analyst, South West Public Health Observatory

Caroline Chapman, SunSafe Coordinator, Cornwall and Isles of Scilly PCT