Cancer Research UK
Study of sunbed use in 11 – 17 year olds in England

Final Summary Report:
July 2009 (amended March 2010)
Executive Summary

Cancer Research UK (CR-UK) was commissioned by the National Cancer Action Team, supported by the Department of Health, to explore the extent and patterns of sunbed use among children in England.

The three key questions to be answered were:

- What is the national prevalence of sunbed use among 11-17 year olds in England?
- Is there variation in the use of sunbeds across the country?
- If young people are accessing sunbeds, how, when and where are they using them?

Cancer Research UK commissioned two quantitative studies and a qualitative project to answer these questions. Details of these studies are given at the end of the Key Findings section and in the Appendices.

This report summarises the key findings from all of the research undertaken to answer these three questions. Further main findings from the individual studies are reported in the Annex to this summary report and in the separate reports and questionnaires.

Key Findings

1) The national prevalence of sunbed use among 11-17 year olds in England

Face-to-face interviews with 3,101 children aged 11-17 years were carried out across England during February-April 2008 and during October 2008-April 2009 by BMRB Omnibus. This study found:

- A total of 185 children had used sunbeds in the weighted sample
- Overall, 6.0% of children aged 11-17 years in England said that they had used a sunbed
- 14.9% said they had not yet used a sunbed, but may do in the future
- A significantly higher proportion of 15-17 year olds (11.2%) had used sunbeds compared with 1.8% of 11-14 year olds
- Girls were significantly more likely to have used a sunbed (8.6%) compared with 3.5% of boys
- Significantly more girls (17.5%) than boys (12.5%) said they had not yet used a sunbed, but may do in the future
- Sunbed use was higher in children from the lower social grades (D and E) at 7.6% compared with 5.4% for children in the higher social grades (AB, C1 and C2 combined)
- 5.1% of children aged 11-17 years in England said they had used a sunbed in the previous 12 months, thus giving an estimate of the annual use of sunbeds

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2) The regional variation in the use of sunbeds among 11-17 year olds

The interviews of the 3,101 children across the whole of England from the BMRB Omnibus study showed:

- There was significant variation across the regions with the “North” having 11.0% of children having used a sunbed compared with 4.2% in both the “Midlands” and in the “South” (Table 1)

Table 1: Use of sunbeds across the regions in England

<table>
<thead>
<tr>
<th>Area / Region</th>
<th>No.</th>
<th>%</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>“South”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>17</td>
<td>3.2%</td>
<td>1.7% 4.7%</td>
</tr>
<tr>
<td>South East</td>
<td>32</td>
<td>4.6%</td>
<td>3.0% 6.1%</td>
</tr>
<tr>
<td>South West</td>
<td>13</td>
<td>4.0%</td>
<td>1.9% 6.1%</td>
</tr>
<tr>
<td>East Anglia</td>
<td>9</td>
<td>7.8%</td>
<td>2.9% 12.6%</td>
</tr>
<tr>
<td>“Midlands”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Midlands</td>
<td>8</td>
<td>3.7%</td>
<td>1.2% 6.3%</td>
</tr>
<tr>
<td>West Midlands</td>
<td>16</td>
<td>4.4%</td>
<td>2.3% 6.6%</td>
</tr>
<tr>
<td>“North”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yorkshire &amp; Humberside</td>
<td>22</td>
<td>7.2%</td>
<td>4.3% 10.1%</td>
</tr>
<tr>
<td>North West</td>
<td>52</td>
<td>14.1%</td>
<td>10.6% 17.7%</td>
</tr>
<tr>
<td>North</td>
<td>19</td>
<td>10.9%</td>
<td>6.3% 15.6%</td>
</tr>
</tbody>
</table>

Additionally, a further total of 6,209 children aged 11-17 years were also surveyed in face-to-face interviews across six “cities” in England between April-May 2008 and October-November 2008 by LVQ Research Ltd to explore use of sunbeds in urban areas where sunbed tanning/beauty salons are more prominent.

The six “cities” were: (i) Liverpool; (ii) Stoke & Stafford combined; (iii) Sunderland; (iv) Bath & Gloucester combined; (v) Oxford & Cambridge combined; and (vi) Southampton. The main findings were:

- A total of 673 children had used sunbeds in the weighted sample
- Half of 15-17 year old girls (49.7% ; 95% CI: 45.0%, 54.4%) in Liverpool and in Sunderland have used a sunbed
- In comparison, only 14.9% (95% CI: 12.6%, 17.2%) of 15-17 year old girls across the other 4 “cities” have used a sunbed
- More than one in five boys aged 15-17 (21.9%; 95% CI: 18.0%, 25.8%) in Liverpool and Sunderland have used a sunbed
- For both sexes, sunbed use was significantly higher in both Liverpool at 20.0% (95% CI: 17.5%, 22.4%) and Sunderland at 18.0% (95% CI: 15.6%, 20.3%) than in the other four “cities” for 11-17 year olds combined
- Overall across these “cities”, 10.8% (95% CI: 10.1%, 11.6%) of all children said they had used a sunbed at least once. This should not be used as a national prevalence estimate

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• A significantly higher proportion of 15-17 yr olds across the six “cities” had used sunbeds, 19.6% (95% CI: 18.0%, 21.1%) compared with 4.3% (95% CI 3.6%, 5.0%) of 11-14 yr olds

• Girls were significantly more likely to have used a sunbed, 14.4% (95% CI: 13.1%, 15.6%) compared with 7.3% (95% CI: 6.4%, 8.2%) of boys across these “cities”

Liverpool; Stoke & Stafford combined; and Sunderland were chosen as being areas with a relatively high number of sunbed salon outlets per population.

Bath & Gloucester combined; Oxford & Cambridge combined; and Southampton were chosen as being areas with a relatively low number of sunbed salon outlets per population.

The figures reported in the LVQ Research Ltd study for overall prevalence and the use by age and sex should not be used to represent national figures. This is because this study targeted six specific “cities” and so is not representative of behaviour over the country as a whole, which may vary between rural/urban areas, geographic location, socioeconomic deprivation, ethnic composition, age structure etc.

The LVQ Research Ltd study figures can be used as estimates of the prevalence of sunbed use in urban areas with characteristics similar to the six chosen “cities”.

Estimates for Cancer Networks are given below. These were derived by visually assigning Government Office Regions to Cancer Networks using a map of Cancer Networks obtained from the National Cancer Intelligence Network and a map of Government Office Regions obtained from the Communities and Local Government website. The estimates for the nine cities comprising the “six cities” are also given and should be used as local estimates for sunbed use within these cities (table 2).
Table 2: Use of sunbeds across the Cancer Networks and Cities in England

<table>
<thead>
<tr>
<th>Cancer Network/city if applicable</th>
<th>% use sunbed</th>
<th>95% CI</th>
<th>Regional/city estimate used</th>
</tr>
</thead>
<tbody>
<tr>
<td>N01 Lancashire and South Cumbria CN</td>
<td>14.1</td>
<td>10.6</td>
<td>17.7</td>
</tr>
<tr>
<td>N02 Greater Manchester and Cheshire CN</td>
<td>14.1</td>
<td>10.6</td>
<td>17.7</td>
</tr>
<tr>
<td>N03 Merseyside and Cheshire CN</td>
<td>14.1</td>
<td>10.6</td>
<td>17.7</td>
</tr>
<tr>
<td>Liverpool</td>
<td>20.0</td>
<td>17.5</td>
<td>22.4</td>
</tr>
<tr>
<td>N06 Yorkshire CN</td>
<td>7.2</td>
<td>4.3</td>
<td>10.1</td>
</tr>
<tr>
<td>N07 Humber and Yorkshire Coast CN</td>
<td>7.2</td>
<td>4.3</td>
<td>10.1</td>
</tr>
<tr>
<td>N08 North Trent CN</td>
<td>7.2</td>
<td>4.3</td>
<td>10.1</td>
</tr>
<tr>
<td>N11 Pan Birmingham CN</td>
<td>4.4</td>
<td>2.3</td>
<td>6.6</td>
</tr>
<tr>
<td>N12 Arden CN</td>
<td>4.4</td>
<td>2.3</td>
<td>6.6</td>
</tr>
<tr>
<td>N20 Mount Vernon CN</td>
<td>7.8</td>
<td>2.9</td>
<td>12.6</td>
</tr>
<tr>
<td>N21 West London CN</td>
<td>3.2</td>
<td>1.7</td>
<td>4.7</td>
</tr>
<tr>
<td>N22 North London CN</td>
<td>3.2</td>
<td>1.7</td>
<td>4.7</td>
</tr>
<tr>
<td>N23 North East London CN</td>
<td>3.2</td>
<td>1.7</td>
<td>4.7</td>
</tr>
<tr>
<td>N24 South East London CN</td>
<td>3.2</td>
<td>1.7</td>
<td>4.7</td>
</tr>
<tr>
<td>N25 South West London CN</td>
<td>3.2</td>
<td>1.7</td>
<td>4.7</td>
</tr>
<tr>
<td>N26 Peninsula CN</td>
<td>4.0</td>
<td>1.9</td>
<td>6.1</td>
</tr>
<tr>
<td>N27 Dorset CN</td>
<td>4.0</td>
<td>1.9</td>
<td>6.1</td>
</tr>
<tr>
<td>N28 Avon, Somerset and Wiltshire CN</td>
<td>4.0</td>
<td>1.9</td>
<td>6.1</td>
</tr>
<tr>
<td>Bath</td>
<td>6.6</td>
<td>5.1</td>
<td>8.1</td>
</tr>
<tr>
<td>N29 3 Counties CN</td>
<td>4.0</td>
<td>1.9</td>
<td>6.1</td>
</tr>
<tr>
<td>Gloucester</td>
<td>6.6</td>
<td>5.1</td>
<td>8.1</td>
</tr>
<tr>
<td>N30 Thames Valley CN</td>
<td>4.6</td>
<td>3.0</td>
<td>6.1</td>
</tr>
<tr>
<td>Oxford</td>
<td>7.5</td>
<td>5.9</td>
<td>9.1</td>
</tr>
<tr>
<td>N31 Central South Coast CN</td>
<td>4.6</td>
<td>3.0</td>
<td>6.1</td>
</tr>
<tr>
<td>Southampton</td>
<td>6.2</td>
<td>4.7</td>
<td>7.7</td>
</tr>
<tr>
<td>N32 Surrey, West Sussex &amp; Hampshire CN</td>
<td>4.6</td>
<td>3.0</td>
<td>6.1</td>
</tr>
<tr>
<td>N33 Sussex CN</td>
<td>4.6</td>
<td>3.0</td>
<td>6.1</td>
</tr>
<tr>
<td>N34 Kent and Medway CN</td>
<td>4.6</td>
<td>3.0</td>
<td>6.1</td>
</tr>
<tr>
<td>N35 Greater Midlands</td>
<td>4.4</td>
<td>2.3</td>
<td>6.6</td>
</tr>
<tr>
<td>Stoke/Stafford</td>
<td>6.8</td>
<td>5.2</td>
<td>8.3</td>
</tr>
<tr>
<td>N36 North of England CN</td>
<td>10.9</td>
<td>6.3</td>
<td>15.6</td>
</tr>
<tr>
<td>Sunderland</td>
<td>18.0</td>
<td>15.6</td>
<td>20.3</td>
</tr>
<tr>
<td>N37 Anglia CN</td>
<td>7.8</td>
<td>2.9</td>
<td>12.6</td>
</tr>
<tr>
<td>Cambridge</td>
<td>7.5</td>
<td>5.9</td>
<td>9.1</td>
</tr>
<tr>
<td>N38 Essex CN</td>
<td>7.8</td>
<td>2.9</td>
<td>12.6</td>
</tr>
<tr>
<td>N39 East Midlands CN</td>
<td>3.7</td>
<td>1.2</td>
<td>6.3</td>
</tr>
</tbody>
</table>

* Due to the fact that a minority of the North Trent Cancer Network boundary overlaps both the Yorkshire and the Humber and East Midlands Government Office regions the East Midlands estimate could also be used 3.7% (95% CI 1.2%, 6.3%)

**Due to the fact that a minority of the 3 Counties cancer network boundary overlaps both the South West and West Midlands Government office regions the West Midlands estimate could also be used 4.4% (95% CI 2.3%, 6.6%)

***Due to the fact that a minority of the Central South Coast Cancer Network overlaps with the South West Government office region the South West estimate could also be used 4.0% (95% CI 1.9%, 6.1%)
3) Patterns of sunbed use in 11-17 year olds

Frequency and place of use for sunbed users:

From the BMRB Omnibus study of 3,101 children it was shown that of those who had used a sunbed, nationally:

- 16.8% (95% CI: 11.4%, 22.1%) said they used a sunbed at least once a week
- And cumulatively, 26.5% (95% CI: 20.1%, 32.8%) children said they used a sunbed at least once a month
- The majority of children had used a sunbed at a tanning/beauty salon or gym/leisure centre at 76.8% (95% CI: 70.7%, 82.8%)
- 23.2% (95% CI: 17.2%, 29.3%) of children said that they had used a sunbed at home

From the LVQ Research Ltd study of 6,209 children in the six “cities” it was shown that of those who had used a sunbed:

- Three out of five children in Sunderland use them at least once a week (61.6% 95% CI: 54.6%, 68.6%)
- Two out of five children in Liverpool (42.6%; 95% CI: 35.8%, 49.3%) use a sunbed at least once a week
- Nearly half of all children (46.3%; CI: 42.6%, 50.1%) used one in the last month

Supervision of sunbed use:

From the BMRB study of 3,101 children it was shown that:

- Of the children who said they had used a sunbed in a tanning/beauty salon or gym/leisure centre, 21.8% (95% CI: 15.0%, 28.6%) had said they had been unsupervised

And, of the children who were supervised:

- 60.8% (95% CI: 50.0%, 71.5%) were given information on how to use the sunbed; whilst 25.3% (95% CI: 15.7%, 34.9%) were given information on the harm sunbeds can cause
- Only 11.4% (95% CI: 4.4%, 18.4%) were shown how to use the sunbed and told about the harm sunbeds can cause
- However, 25.3% (95% CI: 15.7%, 34.9%) of those who said they had been supervised, said that they had received no information on how to use the sunbed, nor on the harm sunbeds can cause

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Qualitative exploration of sunbed use:

To investigate this further, Cancer Research UK commissioned CM Insight to undertake focus groups with young sunbed users in six locations across England in January 2009.

The objectives of the focus groups were:

- To further explore, qualitatively, under 18s’ reasons for using sunbeds, patterns of sunbed usage, and to gain an understanding of the sunbed outlets they choose to use, and what factors motivate their choice
- To unpack the whole sunbed experience, from beginning to end
- Specifically, to investigate the level of supervision in sunbed outlets used by under 18s
- To assess knowledge of the health risks associated with sunbeds, and awareness of coverage/ campaigns in this area.

12 mini groups were held:

Each with 5 - 6 respondents (total 69) and with some friendship pairs

All were females aged 15-17

Main findings:

- All participants used sunbeds frequently
- There is plenty of encouragement, even pressure, from multiple sources, for girls in this age group to use sunbeds
- It is easy, quick, and very cheap to use them
- Although gaining a tan is a key reason for under 18s using sunbeds, it is not the only motivator, the ‘means’ itself can be a prompt as well as the ‘end’
- Moreover, sunbeds are not necessarily ‘effective’ tan producers, which can encourage more reckless use
- All know the health risks, but rationalise their behaviour; they are often comforted by not being the heaviest of users (even those using regularly, e.g. 3+ times a week) as they always compare themselves to someone they know who uses them more often
- Supervision is often minimal; rules are typically lax and the girls themselves are complicit in this; e.g. going under age, not reading safety information, etc
- Yet there is evidence they would like stricter rules, as they would feel more cared for as an individual if these existed
Details about the research studies

(all available at http://info.cancerresearchuk.org/cancerstats/types/skin/sunbeds/index.htm)

- **Part A: Cancer Research UK Study of Sunbed Use in 11-17 year olds in England – the “National Prevalence” Study:** the final analysis of the BMRB Omnibus study of national prevalence of sunbed use by 11-17 year olds in England, along with a detailed explanation of the methodology.
- **Part B: Cancer Research UK Study of Sunbed Use in 11-17 year olds in England – the “Six Cities” Study:** a full report of the quantitative research undertaken to explore and establish the regional variation across six “cities” in England by LVQ Research Ltd.
- **Part C: Cancer Research UK Study of Sunbed Use in 11-17 year olds in England – Qualitative Study:** presentation of the work carried out by CM Insight with young sunbed users.
- **BMRB Questionnaire:** the questionnaire used by BMRB Omnibus to undertake the National Prevalence Study.
- **LVQ Questionnaire:** the questionnaire used by LVQ Research Ltd to undertake the Six Cities Study.
- **Appendix 1:** the pilot scoping study undertaken by both BMRB Omnibus and LVQ Research Ltd on the use of sunbeds by under 18s, reported in August 2008. This provides the findings from the analysis as well as a description of the background and methodologies.
- **Appendix 2:** the interim report of the national prevalence from the BMRB Omnibus study, reported in February 2009. This is based on findings for Great Britain.

Note that the original analysis for the national prevalence estimate had been planned to be reported for Great Britain, with a target sample of over 3,500 11-17 year olds. However, the analysis of the use of sunbeds in the constituent countries across Great Britain showed considerable variation, with England having lower use than Scotland and Wales (table 3).

**Table 3: Use of sunbeds in Great Britain and the constituent countries**

<table>
<thead>
<tr>
<th>Region</th>
<th>%</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Britain</td>
<td>6.8%</td>
<td>5.9%</td>
</tr>
<tr>
<td>England</td>
<td>5.9%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Scotland</td>
<td>13.6%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Wales</td>
<td>10.6%</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

In the interests of answering the questions posed in the Cancer Reform Strategy, focus of the final analytical report therefore focused on analyses for England only.

**Background**

Over 10,400 cases of malignant melanoma were recorded in the UK in 2006, with 10% of cases being diagnosed in the under 35s and 30% in the under 50s. Incidence rates of this form of skin cancer have quadrupled since the 1970s. Around 2000 people a year die from malignant melanoma in the UK. Experts believe that, along
with binge tanning on foreign holidays, using sunbeds is one of the main reasons for the rapidly rising rates of malignant melanoma.

SunSmart is the national campaign aimed at promoting behaviour change to prevent skin cancer and to raise awareness of the early signs of the disease. It is commissioned by the UK Health Departments and run by Cancer Research UK.

Cancer Research UK has been concerned about the prevalence of sunbed use, particularly by young people, for a number of years. In 2008, the SunSmart campaign had a particular focus on sunbed use, and aimed to highlight the risks associated with sunbed use and to discourage their use.

**Policy developments surrounding sunbeds and skin cancer**

Cancer Research UK welcomed the publication of the Cancer Reform Strategy in 2007 and the commitment to take further action to help prevent skin cancer.

On sunbeds, the Cancer Reform Strategy committed to ‘reviewing options for regulation of the industry and as a first step [to]...gather more information about the number and distribution of sunbeds and the scale of sunbed use by minors.’

This research project was designed to meet the Cancer Reform Strategy commitment to gather information about the scale of sunbed use by young people.

Cancer Research UK has funded a study to map the distribution of sunbed salons across England and to undertake some detailed work on salon distribution in the South West region. This research has been undertaken by the South West Public Health Observatory and was published in November 2009 (http://www.swpho.nhs.uk/skincancerhub/resource/_inc_enable.aspx?ENABLE=HGL6598DVQ4).

The Committee on Medical Aspects of Radiation in the Environment (COMARE) published its report on the health effects on sunbed use in June 2009. It made the following assertions and recommendations:

- The association of skin cancer with exposure to the sun has been the subject of a number of campaigns but only recently has similar attention been given to sunbed use
- The number of commercial sunbed outlets in the UK is growing
- There is evidence of increasing sunbed use by children and young adults in the UK in both supervised and unstaffed (coin operated) commercial outlets
- Exposure to UV radiation, whatever the source, is capable of inducing all types of skin cancer, photoageing and other types of medical conditions such as cataracts. It can also produce severe burns
- Current sunbed technology can result in exposure to UV radiation doses greater than that from the midday Mediterranean sun
- The health risks associated with sunbed use far outweigh the perceived benefits, the majority of which are psychological and cosmetic
- The use of sunbeds is not associated with added protection from the sun and the practice of using sunbeds to synthesise vitamin D is not recommended due to the cancer risk and high frequency of side effects
- Regulation is required on the commercial use of sunbeds. This would include the prohibition of the use of commercial sunbeds by the under 18s and the prohibition on the sale or hire of sunbeds to the under 18s

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• The Committee also recommends the prohibition of unsupervised and/or self-determined operation of sunbeds in commercial outlets
• All commercial outlets should be licensed and registered, with equipment that adheres to the British Standard and be staffed at all times with trained, competent personnel
• Local Authorities should be required to inspect commercial outlets and be provided with sanctioning powers if licensing is introduced
• Salons would be required to provide clients with detailed written information on the health risks associated with the use of sunbeds and staff must ensure that adequate protective eyewear is provided for client use
• Commercial outlets and sunbed retailers should be prohibited from promoting unproven or net health benefits of sunbed use
• Funding for campaigns raising the awareness of risk factors for skin cancer should be reviewed in line with other national health campaigns. Stronger publicity campaigns on the risks from UV exposure, particularly targeted towards children, are recommended.
• Further research is required into the associated risks of melanomas and non-melanoma skin cancers arising from sunbed use. The Committee also recommends additional research into potential eye damage resulting from the use of sunbeds without adequate eye protection. There is a need to establish background knowledge of the psychology for tanning and how behaviour may be changed.

Conclusions

Nationally, 6% of 11-17 year olds have used a sunbed which equates to an estimated quarter of a million (263,857) 11-17 year olds having used a sunbed in England.

(This was obtained by applying the estimate of 6.0% sunbed use in 11-17 year olds for England to projected 2008 populations from the Government Actuary Department: http://www.gad.gov.uk/Demography%20Data/Population/2006/england/weng06singyear.xls.).

5.1% of 11-17 yr olds have used a sunbed in the previous 12 months, meaning that an estimated 226,774 children had used a sunbed in England in the previous year.

Girls are significantly more likely to use sunbeds than boys.

There is real variation across the country with 11.0% of children in the “North” using a sunbed compared with 4.2% in the “Midlands” and “South”.

It is likely that other urban areas in the north, such as Manchester, Leeds, Sheffield and Newcastle, will have similarly high rates of use in girls aged 15-17 (i.e. half of them) to those seen in Liverpool and Sunderland.

The majority of children have used a sunbed at a tanning/beauty salon or gym/leisure centre, but more than a fifth have used them at home.

Any health messages need to be targeted at parents as well as at children.

The findings of the qualitative focus groups help to better understand how to target these messages.
Cancer Research UK has had a longstanding interest in skin cancer prevention, and a concern about sunbed use.

We hope that all of the research undertaken during the past 18 months and reported on sunbed use across England, alongside the COMARE report will assist policymakers as they develop proposals in this area.

ANNEX

Further key findings from all of the research

1) The BMRB Omnibus study – the “National Prevalence” Study

Cancer Research UK commissioned BMRB Omnibus to conduct a survey of young people. A total of 3,101 children aged 11-17 years were surveyed in face-to-face interviews across England during the period from 21/02/2008-23/04/2008 (855 in pilot data) and the period from 09/10/2008-21/04/2009 (2,246 in full study data).

Sunbed use:

- Overall, 6.0% of children aged 11-17 years said that they had used a sunbed
- 14.9% said they had not yet used a sunbed, but may do in the future
- Significantly more 15-17 year olds (11.2%) had used sunbeds than 11-14 year olds (1.8%)
- 5.1% of children aged 11-17 years in England said they had used a sunbed in the previous 12 months, thus giving an estimate of the annual use of sunbeds by children
- Girls were significantly more likely to have used a sunbed (8.6%) than boys (3.5%)
- Significantly more girls (17.5%) than boys (12.5%) said they had not yet used a sunbed, but may do in the future
- Sunbed use was higher in children from the lowest social grades (D and E) at 7.6% compared with 5.4% for children in the higher social grades (AB, C1 and C2 combined)
- There was significant variation across the regions with the “North” having 11.0% of children having used a sunbed compared with 4.2% in both the “Midlands” and in the “South”
- Of those who had used a sunbed, 16.8% (95%CI: 11.4, 22.1%) said they used a sunbed at least once a week
- And cumulatively, 26.5% (95%CI: 20.1%, 32.8%) children said they used a sunbed at least once a month
- Of those who had used a sunbed, the majority of children had used a tanning/beauty salon or gym/leisure centre at 76.8% (95%CI: 70.7%, 82.8%)
• Of those who had used a sunbed, 23.2% (95%CI: 17.2%, 29.3%) of children said that they had used a sunbed at home

Supervision of sunbed use:

• Of the children who had used a sunbed in a tanning/beauty salon or gym/leisure centre, 21.8% (95%CI: 15.0%, 28.6%) had said they had been unsupervised

• Of the children who were supervised, 74.7% (95%CI: 65.1%, 84.3%) said that they were given some form of information or advice

• Of the children who were supervised, 60.8% (95%CI: 50.0%, 71.5%) were given information on how to use the sunbed

• Of the children who were supervised, only 25.3% (95%CI: 15.7%, 34.9%) were given information on the harm sunbeds can cause

• Of the children who were supervised, only 11.4% (95%CI: 4.4%, 18.4%) were shown how to use the sunbed and told about the harm sunbeds can cause

• Of the children who said they had been supervised, 25.3% (95%CI: 15.7%, 34.9%) said that they had received no information on how to use the sunbed, nor on the harm sunbeds can cause

2) The LVQ Research Ltd study – the “Six Cities” Study

A total of 6,209 children aged 11-17 years were surveyed in face-to-face interviews across six “cities” in England over the five-week period from 19/04/2008-12/05/2008 (2,506 in pilot data) and five-week period from 17/10/2008-16/11/2008 (3,703 in full survey data) by LVQ Research Ltd.

The six “cities” were: (i) Liverpool; (ii) Stoke & Stafford combined; (iii) Sunderland; (iv) Bath & Gloucester combined; (v) Oxford & Cambridge combined; and (vi) Southampton. The first three “cities” were chosen as being areas with a relatively high number of high sunbed salon outlets per population; the latter three “cities” were chosen as being areas with a relatively low number of sunbed salon outlets per size of the population. It was necessary to combine the data for Stoke & Stafford, Bath & Gloucester and Oxford & Cambridge together to obtain the numbers of necessary interviews (approx 1,000) in each area; these cities were selected to be combined as they had similar demographics to those of the original cities.

The average national prevalence of 6% obtained from the 3,101 children interviewed as part of the BMRB national survey analysis, reported in July 2009, should be used as the national prevalence figure. This is because we have been targeting six specific “cities” and so would not necessarily be representative of behaviour over the country as a whole, which may vary between rural and urban areas as well as geographic location, socioeconomic deprivation, ethnic composition, age structure etc.
Key results from this analysis:

Sunbed use

- Overall, 10.8% (95% CI: 10.1%, 11.6%) of all children said they had used a sunbed at least once. This should not be used as a national prevalence estimate.

- Half of all 15-17 year old girls (49.7%; 95% CI: 45.0%, 54.4%) in Liverpool and Sunderland have used a sunbed.

- More than one in five boys aged 15-17 (21.9%; 95% CI: 18.0%, 25.8%) in Liverpool and Sunderland have used a sunbed.

- For both sexes, sunbed use was significantly higher in both Liverpool at 20.0% (95% CI: 17.5%, 22.4%) and Sunderland at 18.0% (95% CI: 15.6%, 20.3%) than in the other four "cities" for 11-17 year olds combined.

- A significantly higher proportion of 15-17 yr olds across the six "cities" had used sunbeds (19.6%; 95% CI: 18.0%, 21.1%) compared with 4.3% (3.6%, 5.0%) of 11-14 yr olds.

- Girls were significantly more likely to have used a sunbed, 14.4% (95% CI: 13.1%, 15.6%) compared with 7.3% (95% CI: 6.4%, 8.2%) of boys across the “cities”.

For sunbed users only

- Three out of five children in Sunderland who use sunbeds use them at least one a week (61.6%; 95% CI: 54.6%, 68.6%).

- Two out of five sunbed-using children in Liverpool (42.6%; 95% CI: 35.8%, 49.3%) use a sunbed at least once a week.

- Nearly half of all children (46.3%; CI: 42.6%, 50.1%) who said they had used a sunbed, used one in the last month.

Supervision of sunbed use

- A quarter of children (24.7%; 95% CI: 21.0%, 28.4%) said they were unsupervised when they used tanning equipment in either a tanning/beauty salon or gym/leisure centre.

- For those who were supervised, 75.9% (70.1%, 81.6%) were shown how to use the sunbed.

- For those who were supervised, 40.8% (34.2%, 47.4%) were given information on the harm sunbeds can cause.

- One in five children who said they were supervised, 19.9% (14.5%, 25.2%), said they were neither shown how to use the sunbed nor given any information about the harm sunbeds can cause.

March 2010
3) The qualitative focus group project undertaken by CM Insight

Cancer Research UK commissioned CM Insight to undertake focus groups with young sunbed users in six locations across England between 07/01/2009 – 15/01/2009.

The objectives of the focus groups were:

- To further explore, qualitatively, under 18s’ reasons for using sunbeds, patterns of sunbed usage, and to gain an understanding of the sunbed outlets they choose to use, and what factors motivate their choice
- To unpack the whole sunbed experience, from beginning to end
- Specifically, to investigate the level of supervision in sunbed outlets used by under 18s
- To assess knowledge of the health risks associated with sunbeds, and awareness of coverage/ campaigns in this area.

12 mini groups were held:

Each with 5-6 respondents (total 69) and with some friendship pairs

All were females aged 15-17

The groups lasted 90 minutes

All had used a sunbed (in a commercial outlet) in the past 9 months

Two were held in each of six cities:

- Stoke on Trent
- Brighton
- Bushey (North London)
- Newcastle
- Solihull
- Liverpool

The discussion covered:

- A warm up exercise (draw sunbed outlet known best)
- Key reasons for using sunbeds
- Patterns of usage; visited alone or with companions
- First usage
- Sunbed outlets; pros and cons; differences, and reasons for choosing
- The sunbed experience in detail: practicalities and feelings
- Supervision and rules
- Health and Safety information
- Health risk awareness
- Who do they trust to provide credible information about safety?
- SunSmart/ media awareness
- Also covered: sunbathing; fake tans; skin types

March 2010
Main findings:

- All participants used sunbeds frequently
- There is plenty of encouragement, even pressure, from multiple sources, for girls in this age group to use sunbeds
- It is easy, quick, and very cheap to use them
- Although gaining a tan is a key reason for under 18s using sunbeds, it is not the only motivator, the ‘means’ itself can be a prompt as well as the ‘end’
- Moreover, sunbeds are not necessarily ‘effective’ tan producers, which can encourage more reckless use
- All know the health risks, but rationalise their behaviour; they are often comforted by not being the heaviest of users (even those using regularly, e.g. 3+ times a week) as they always compare themselves to someone they know who uses them more often
- Supervision is often minimal; rules are typically lax and the girls themselves are complicit in this; e.g. going under age, not reading safety information, etc
- Yet there is evidence they would like stricter rules, as they would feel more cared for as an individual if these existed

Key Insights and implications

- Sunbed outlets vary considerably in their levels of supervision, though the majority have relatively little
  - The most supervised are larger tanning/beauty salons; the least are where sunbeds are ‘tacked on’ to another establishment
  - Key areas of rule bending, or lack of rules, are around age of user; number of minutes; use of eye protection; record keeping; and communicating health and safety information
  - Many of the girls themselves collude with the laxness, flouting what rules there are, and not bothering to read health and safety guidance
  - But there is evidence many users would like to feel in safe hands, and would appreciate the ‘service’ aspect of supervision
  - A two-pronged approach to ‘change’ in relation to use of unsupervised outlets is needed:
    - Tightening industry regulations
    - Messages creating an overt link between ‘unsupervised’ and ‘uncaring’ may lead some users to the better supervised outlets
- Simple ‘tan seeking’ is only part of sunbed usage; some users are more motivated by wanting to do ‘something’ to counteract looks they dislike; some seem to be responding to fears around an insubstantial identity (tan = a comforting ‘uniform’, or a possible solution for their wish for more ‘definition’?)
- The ‘visit’ to sunbeds can itself be an attraction; it constitutes an antidote to boredom and confers a sense of grown-up ness
- Some of the more sporadic boredom-prompted use of sunbeds does not really deliver a tan
- The actual experience also has many inherent discomforts
- Fake tan has its place, but is by no means an answer for all
- Patterns of usage vary, with only a minority visiting regularly throughout the year
- Many limit their minutes; but use can still be heavy. Most know of cases where people have been more reckless in this respect by using more
- Most have the option of making a comfortable comparison of themselves with others, and seeing themselves as not the most at risk
  - All users aware of a link between sunbeds and skin cancer - but they have a number of ways of rationalising their behaviour in spite of it
- Older sisters and mothers play a critical part in introducing girls to sunbeds