

# Visits to commercial solaria by DHB Public Health Units between 1 February and 31 July 2013: summary of findings

---

## Table of Contents

1	Executive summary .....	2
2	Solarium visit objectives .....	2
2.1	Background .....	2
2.2	Solarium visits .....	3
3	Results .....	4
3.1	Overview of data received .....	4
3.2	Countrywide statistics .....	4
3.3	Detailed results from the assessments .....	5
3.3.1	Overview .....	5
3.3.2	Warning notices .....	6
3.3.3	Claim of health benefits .....	7
3.3.4	Skin assessment .....	7
3.3.5	Consent form .....	9
3.3.6	Exclusion of high risk clients .....	9
3.3.7	Eye protection .....	10
3.3.8	Hygiene .....	11
3.3.9	48 hour delay between sessions .....	12
3.3.10	Client records .....	12
3.3.11	Timer .....	13
3.3.12	Staff training .....	14
3.3.13	Operator engagement .....	15
3.3.14	Summary of findings .....	16
3.4	Other points of interest .....	17
4	Discussion .....	17
4.1	Comparison with previous assessments .....	17
4.2	Recommendations .....	18
Appendix A	Assessment form .....	19

## **1 Executive summary**

Staff from Public Health Units (PHUs) made a second round of visits to commercial solariums in their regions in the first half of 2013. These visits were initiated in 2012 to ensure that solarium operators were familiar with best practice procedures to reduce the risks from exposure to ultra-violet (UV) radiation from sunbeds.

In order to gauge the effectiveness of the visits, PHUs were requested to use a standardised assessment form which examined aspects of the solarium operation against recommendations in AS/NZS 2635:2008 *Solaria for cosmetic purposes* (the Standard). The eleven areas of operation examined mostly covered administrative and procedural aspects of the operation. Some PHUs had already commenced their visits by the time the assessment form was finalised, in which case they were free to carry on using their existing assessment schemes.

189 establishments were contacted, of which 173 had sunbeds (although some of these were reported as not being used). PHU staff visited 139 of these establishments. Some establishments were not visited for a variety of reasons, for example if the sunbed was not being used, or the manager refused to allow the visit, or the establishment reported that it was too busy to spare the time. 19 establishments said that they expected to stop offering sunbed services in the near future.

123 establishments were assessed using the standardised assessment form. Of these, over 50% were fully compliant in seven or more of the areas of operation examined. Although direct comparisons with previous surveys are not possible because different methodologies have been used, the results suggest that there is now greater compliance with the Standard. A large majority of sunbed operators welcomed the PHU visits.

It is recommended that the next full assessment not take place until 2014, by which time new regulations banning use of commercial sunbeds by under 18s should be in place. The next six-monthly visits could focus on ensuring that operators are aware of the forthcoming regulations, and that they have materials they need to help comply with the Standard.

Several PHUs again noted that patients are being referred to commercial solariums for help to alleviate skin conditions. As the UV spectrum and dose received from the sunbeds is not known, this appears inadvisable and it is recommended that this is again brought to the attention of dermatologists and GPs.

Work already commissioned by the Ministry of Health to find a simple means to quantify the effective UV output from sunbeds should be continued.

## **2 Solarium visit objectives**

### **2.1 Background**

In May 2012 the Ministry of Health (MoH) requested PHUs to visit all commercial solariums in their regions with the key objectives to:

- Visit all commercial solariums in the region covered by the PHU at least every six months;
- Provide information to operators on best practice to reduce the public health risks from using solariums;

- Make operators aware of regulatory regimes being implemented overseas, such as the ban on solarium in New South Wales from 31 December 2014.

The reason for these visits was the persistent finding, in surveys commissioned by the MoH from Consumer NZ, of generally poor compliance with the procedures recommended in the voluntary Standard AS/NZS 2635:2008 *Solaria for cosmetic purposes*. The procedures in the Standard are intended to reduce the risks arising from to exposure from the UV radiation emitted by sunbeds.

A report on the first round of visits was issued in February 2013<sup>1</sup>. While assessing compliance with the Solarium Standard was not specifically requested, many of the PHUs checked compliance with key requirements (such as refusing sessions to high risk individuals, using consent forms etc) and found that it was generally mediocre. One PHU had completed similar work in 2009/10 and found that overall there was a slight decrease in compliance with the Standard between then and 2012.

The first report recommended that a means to assess the effectiveness of the PHU visits should be developed, and if it were to be assessed during the PHU visits then a standardised assessment scheme should be prepared. This recommendation was taken up by the Ministry, along with a second recommendation to pass on examples of “good practice” methods of carrying out the visits and encouraging other PHUs to follow these.

## 2.2 Solarium visits

A package of information and support material was distributed to PHUs at the end of April 2013. This included:

- A standardised assessment form
- A spreadsheet to be used for compiling assessment results
- Notes on using the assessment form and spreadsheet
- Good practice suggestions
- Examples of consent forms and initial interview records
- Information from the UK NHS about using sunbeds in pregnancy

It was recognised that some PHUs may have already started the second round of visits, in which case there were free to continue using their existing scheme.

A copy of the assessment form is in Appendix A of this report. The spreadsheet for compiling results included the same fields as the form. The assessment examined 11 areas of operation:

- Ten of these covered administrative and procedural parts of the Standard, such as the presence of warning signs, record-keeping and exclusion of high risk individuals.
- One covered the technical requirements of the Standard on sunbed timers.

In addition, PHU staff were asked to report on the numbers of sunbeds in each establishment and, if possible, obtain an estimate of the number of sessions per week.

In two areas (4 - skin assessment and 11 – timer) PHU staff were asked to try and find out additional information: on how the skin assessment was performed, and how operators determined session times.

---

<sup>1</sup> Survey of Commercial Solaria by DHB Public Health Units Between 1 July and 31 December 2012. Summary of Findings. Available from the Ministry of Health.

Finally, section 13 of the assessment form gathered information on operator interest and engagement with the visits and risk reduction measures.

Subsequently a revised version of the spreadsheet was sent out, incorporating changes suggested by PHU staff.

As with the previous round of visits, PHU staff were encouraged to provide material to operators to help them comply with the Standard, for example, templates of consent forms and warning notices. A revised version of the *Guidelines for operators of ultraviolet (UV) tanning lamps* was also made available. The revision rearranged the content into sections covering administrative and procedural matters, development of tanning plans and technical requirements for sunbeds and their installation, and provided more detailed explanations in areas which operators often found difficult to understand.

On 5 April 2013 the Minister of Health announced the government's intention to regulate commercial sunbed operations under the Health Act 1965. While the details were still to be finalised, the Government had said that the regulations would ban use of commercial sunbeds by under 18s. PHU staff were requested to ensure that operators were aware of this decision.

## 3 Results

### 3.1 Overview of data received

The spreadsheet included opportunities for PHU staff to enter comments, and simply returning the completed spreadsheet was the main reporting requested if the spreadsheet was used. Several PHUs also prepared a brief overview of their findings. Reports received back are summarised below.

Reporting	Number of PHUs
Spreadsheet only	3
Summary report, no spreadsheet	2
Spreadsheet and summary report	6

### 3.2 Countrywide statistics

The table below presents data on all establishments throughout the country.

Characteristic	Number
Establishments contacted	189
Establishments with sunbeds	173 <sup>2</sup>
Establishments with sunbeds visited	139
Establishments reporting that they would stop operating sunbeds soon	19

Direct comparison with the previous survey was not possible, but the numbers of establishments were similar.

---

<sup>2</sup> This figure includes establishments with sunbeds which were reported as not being used

### 3.3 Detailed results from the assessments

13 PHUs filled out the spreadsheet, covering a total of 151 establishments<sup>3</sup>. This section presents results from these establishments.

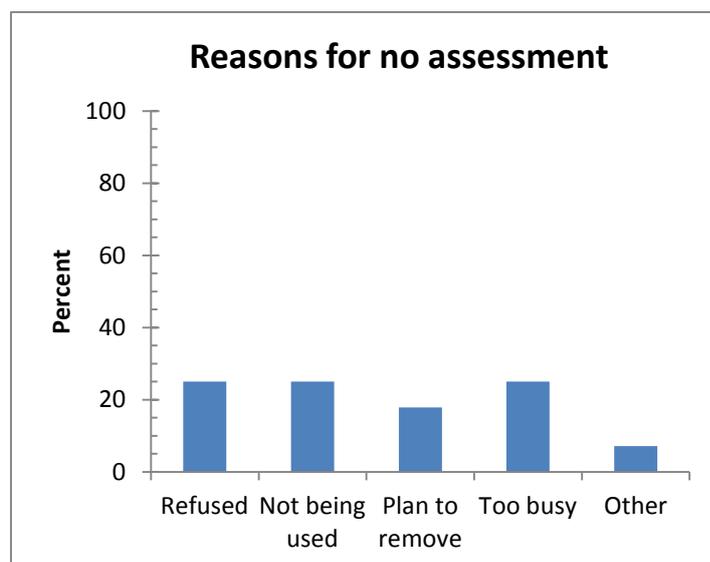
The analysis considers each section of the assessment separately. If a section was incomplete, then where possible the responses were inferred from responses to other parts of the assessment form and the section completed. If this could not be done with reasonable certainty, that section was not counted in the analysis.

#### 3.3.1 Overview

Summary data on the establishments covered in the spreadsheets is presented in the table below.

Characteristic	Number
Establishments for which information reported on spreadsheet	151
Establishments assessed	123
Establishments not assessed	28

There were several reasons given for why 28 of the establishments could not be assessed, and these are shown in the histogram below. Seven establishments (25% of the 28) simply refused, and 12 were not visited because either they said that their sunbeds were not being used, or they were planning to remove the bed.

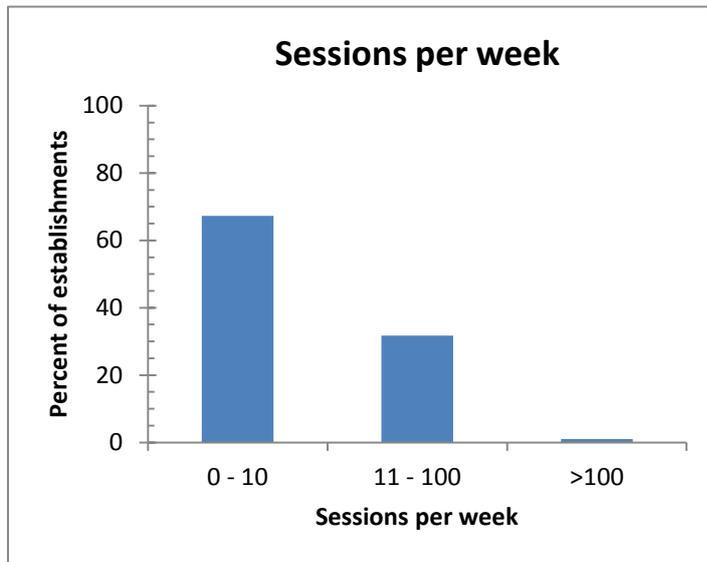


Most establishments only had one sunbed, but some had up to 8 beds. Over all the establishments for which this data was available, the average number of beds per establishment was 1.6.

There was also a wide range of use reported, ranging from zero to 315 sessions per week. These figures are estimates from the operators, so may not be completely reliable but should be

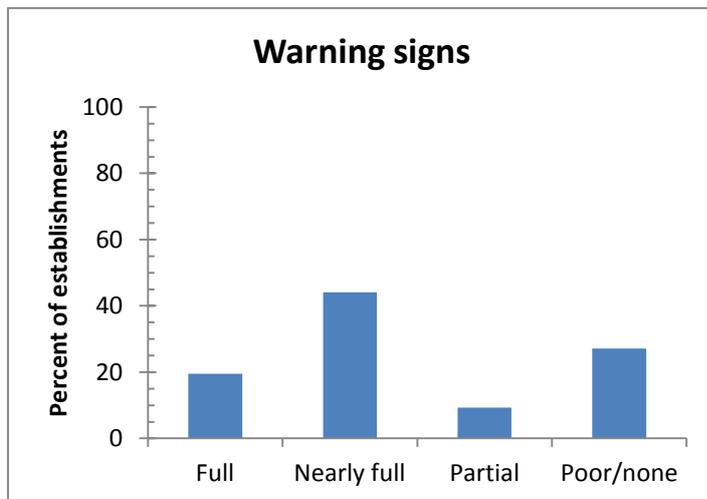
<sup>3</sup> As discussed in section 2.2, it was recognised that some PHUs may have already started the second round of visits before the assessment form and spreadsheet were sent out, in which case they were advised to continue using their own visit scheme.

sufficiently good for comparative purposes. Several operators reported that their sunbeds received more use in summer than in winter.



### 3.3.2 Warning notices

Data on compliance with the requirements in the Standard on warning notices is shown in the histogram below.



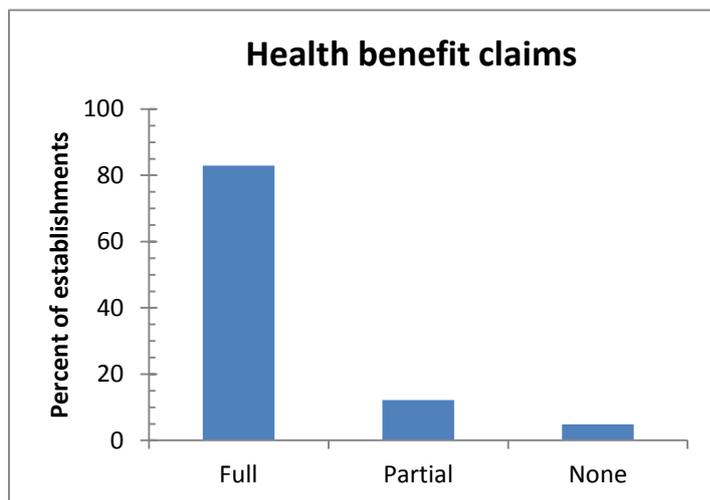
The meanings of the categories are as follows:

Category	Meaning
Full	Warning notices at reception and in each cubicle, and displayed all required information.
Nearly full	Notices contained all the required information but were displayed only at reception, or by the tanning bed, but not both.
Partial	Notices were displayed in one or both of the required places, but that some of the required information was missing.
Poor/none	Either no warning notices, or the notices were missing most of the required information.

63% of establishments had full or nearly full compliance with the requirements, but 27% had poor or no compliance.

### 3.3.3 Claim of health benefits

Data on compliance with the requirements in the Standard on claims of health benefits is shown in the histogram below.



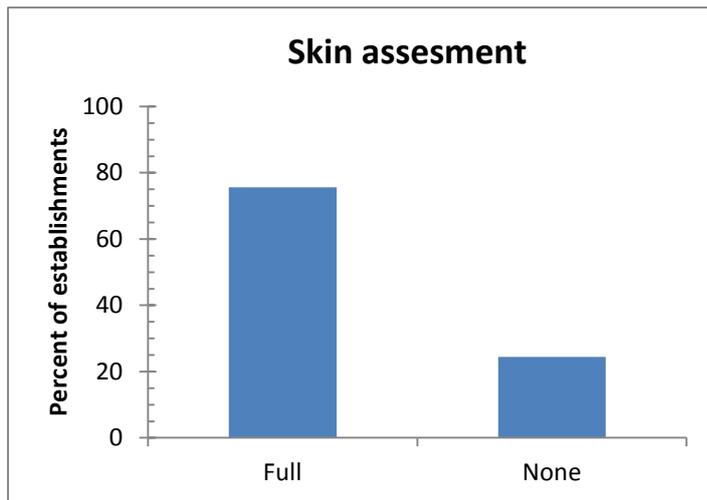
The meanings of the categories are as follows:

Category	Meaning
Full	No claims of health benefits visible, and no claims that using a sunbed was risk free.
Partial	There were either visible claims of health benefits from using a sunbed, or claims that using a sunbed was risk free.
None	There were both claims that sunbeds gave health benefits, and claims that using them was risk free.

Some operators hinted at benefits by showing posters of tanned people wearing swimwear in tropical locations. Others advocated sunbed use to protect against sunburn.

### 3.3.4 Skin assessment

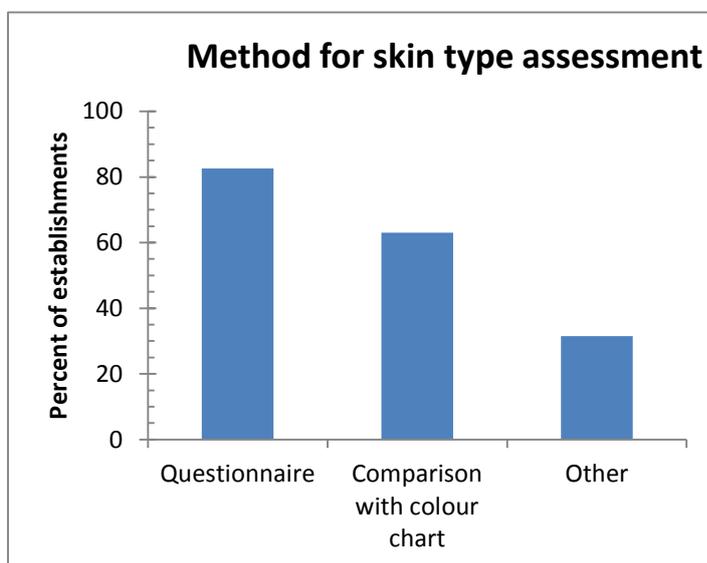
Data on evidence that establishments assessed skin types before allowing people to use a sunbed is shown in the histogram below.



The meanings of the categories are as follows:

Category	Meaning
Full	There was evidence that an establishment made a skin assessment.
None	There was no evidence that an establishment made a skin assessment.

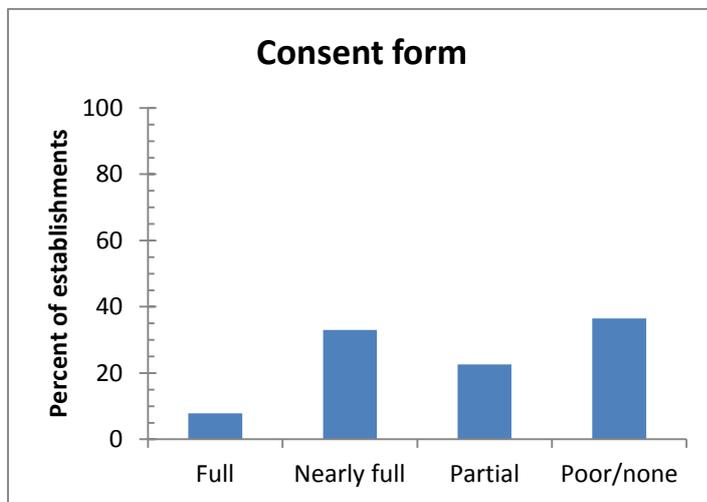
PHUs were asked to try and find out how establishments carried out the skin assessment, either using a detailed questionnaire of the type shown in the *Guidelines for operators of ultraviolet (UV) tanning lamps*, or using a simple skin colour chart, or by some other means. Results are shown in the histogram below.



Some establishments used a combination of methods, which is why the total across all methods adds up to more than 100%. From the comments entered where “other” was checked (for example, “Chart displaying tips for sun-tanning; solarium exposure guide showing the exposure times with skin type”), it appears that there was some overlap between this category and the others.

### 3.3.5 Consent form

Data on compliance with the requirements in the Standard on use of a consent form is shown in the histogram below.



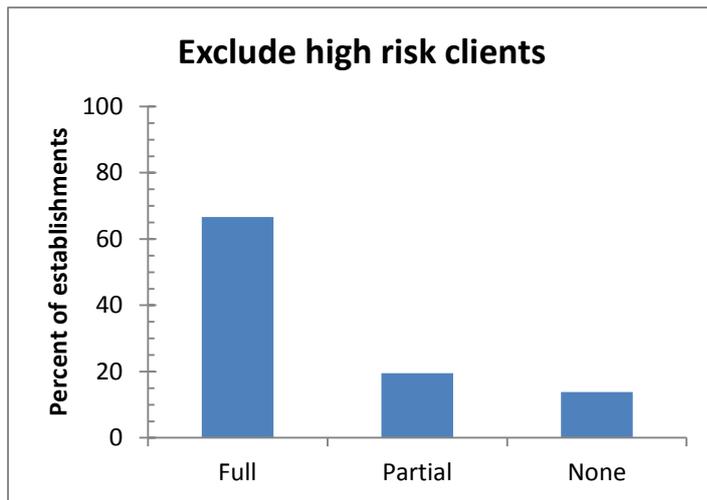
The meanings of the categories are as follows:

Category	Meaning
Full	Consent form met all the requirements in the Standard, and a copy provided to the client.
Nearly full	Consent form met all the requirements in the Standard, but client not provided with a copy.
Partial	Consent form met most of the requirements in the Standard, copy may or may not be provided to the client.
Poor/none	Either no consent form, or the form did not include most of the required information.

41% of establishments complied fully or nearly with the requirements, but 37% had poor or no compliance.

### 3.3.6 Exclusion of high risk clients

This section of the assessment looked at whether there was evidence that an establishment refused to allow under 18s, and people with skin type I, to use sunbeds. Data is shown in the histogram below.



The meanings of the categories are as follows:

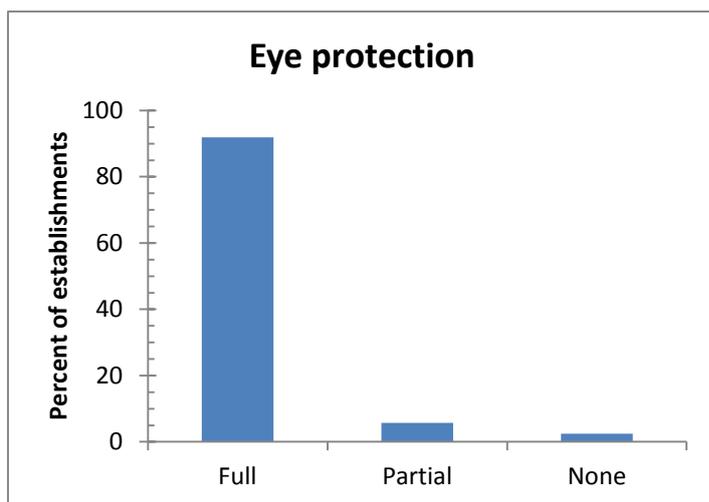
Category	Meaning
Full	Both high risk groups excluded
Partial	One or other of the high risk groups allowed to use a sunbed
None	Neither of the high risk groups excluded

Given the nature of the assessment undertaken, there inevitably needs to be reliance that the operators provide truthful replies. The package sent out to PHUs with the assessment form template noted (based on comments from PHU staff after the first round of visits) “For some sections of the form ... you will be reliant on the operator to provide honest answers. Experience from the first visits suggests that if the operator understands that this work is attempting to obtain a snapshot of how the industry is operating, and assist operators meet best practice guidelines, and not an exercise in passing judgement on individual operators, they will be frank and candid.” The fact that only 67% complied fully with this section of the assessment suggests that the responses provide a reasonable reflection of current practice.

Several solaria were reported to exclude, in addition to the high risk groups specifically mentioned in the Standard, people who burn easily, or have family history of melanoma, or have a lot of moles/sun-damaged skin. These establishments also discourage people with skin type II, and advise people on medication to visit their doctor before using a sunbed.

### 3.3.7 Eye protection

Data on compliance with the requirements in the Standard on eye protection is shown in the histogram below.



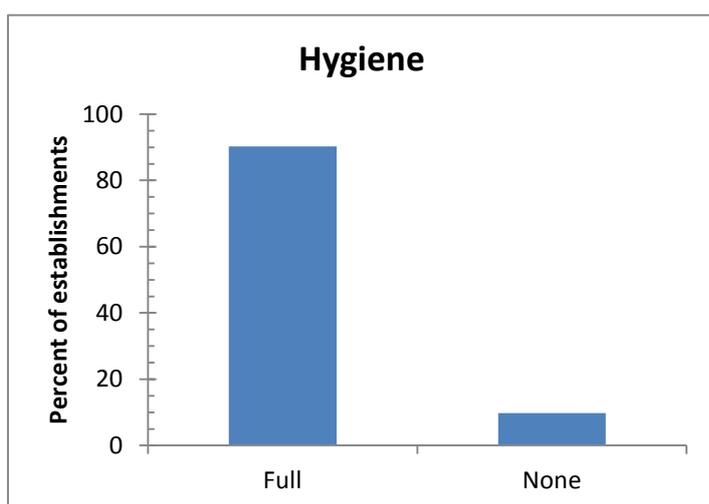
The meanings of the categories are as follows:

Category	Meaning
Full	Evidence that the establishment requires clients to wear eye protection, and that eye protection supplied by the establishment forms a seal around the eye.
Partial	Eye protection required, but does not seal well around the eye.
None	No insistence on eye protection.

There was full compliance from 92% of the establishments assessed.

### 3.3.8 Hygiene

Data on compliance with the requirements in the Standard on hygiene is shown in the histogram below.

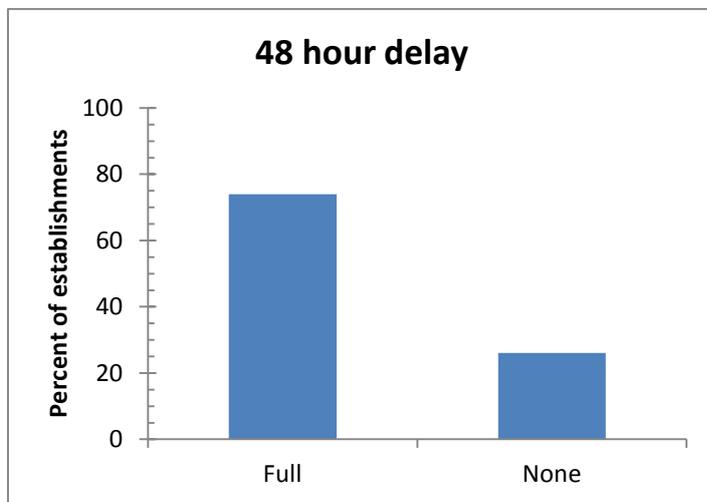


The meanings of the categories are as follows:

Category	Meaning
Full	Evidence that beds and eye protection are sanitised after use
None	No evidence that beds and eye protection are sanitised after use

### 3.3.9 48 hour delay between sessions

Data on compliance with the requirements in the Standard on there being a minimum 48 hour delay between tanning sessions is shown in the histogram below.

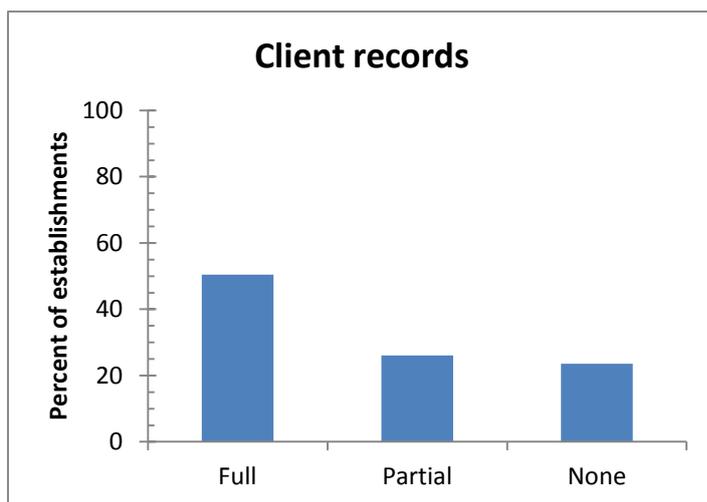


The meanings of the categories are as follows:

Category	Meaning
Full	Evidence that a 48 hour delay between sessions is enforced.
None	No evidence a 48 hour delay between sessions is enforced.

### 3.3.10 Client records

Data on compliance with the requirements in the Standard on client records is shown in the histogram below.



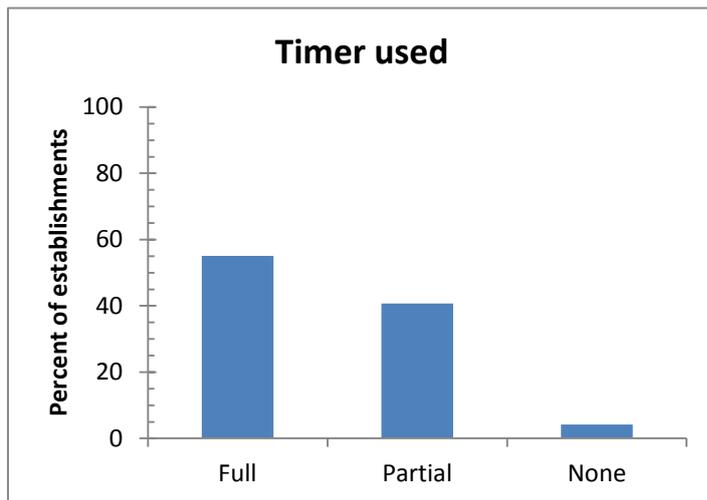
The meanings of the categories are as follows:

Category	Meaning
Full	Copies of client skin assessments, consent forms and records of sessions kept for at least two years

Category	Meaning
Partial	Only one or two of the required pieces of information is kept for at least two years
None	No records are kept

### 3.3.11 Timer

Data on compliance with the requirements in the Standard on the use of a timer to control session exposure times is shown in the histogram below.

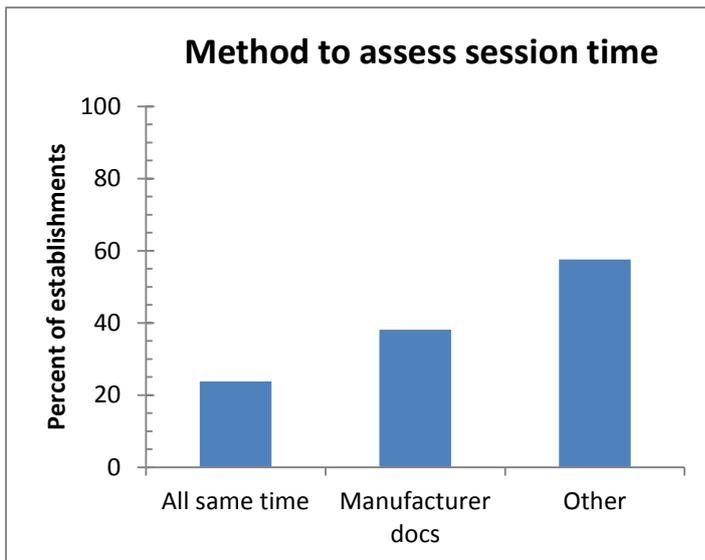


The meanings of the categories are as follows:

Category	Meaning
Full	A timer is used to control sessions, and can only be set by the operator.
Partial	A timer is used to control sessions, but can be set by the client.
None	No timer used

Several establishments allowed clients to determine their own session times.

Additional questions in this section attempted to find out how operators determined the amount of time a client should spend on the sunbed, for example, whether all clients were given the same time, whether the operator used documentation supplied by the manufacturer of the sunbed (eg a table showing exposure times as a function of skin type and/or other parameters), or whether some other means was used. The results are shown in the histogram below. As more than one option was often selected for an establishment, the total over all options adds up to more than 100%.



If “other” was selected, there was often a comment along the lines that the session time was determined based on the skin type and the number of previous session. Unfortunately, however, the information on how these factors were translated into times was not provided. For several establishments it appeared that the times were decided based on the skin type, number of previous sessions and experience of the manager. For other establishments, “other” could just mean that there was no obvious system in place to determine session times. Hence this information should be interpreted cautiously, with the main conclusion being that this is an area requiring closer examination.

One PHU report commented:

“One operator suggested that the Ministry of Health provide tables detailing exposure times for different sunbeds. The operator said the Ministry of Health should work in conjunction with sunbed manufacturers to produce tables for the 20 most commonly used sunbeds. As part of the assessment visit, the operator could be provided with the appropriate table for their sunbed detailing exposure times relevant to the sunbed they operated. This suggestion appears to have some merit as a number of operators expressed the fact that the formula for calculating exposure times was too complicated and they therefore did not use it.”

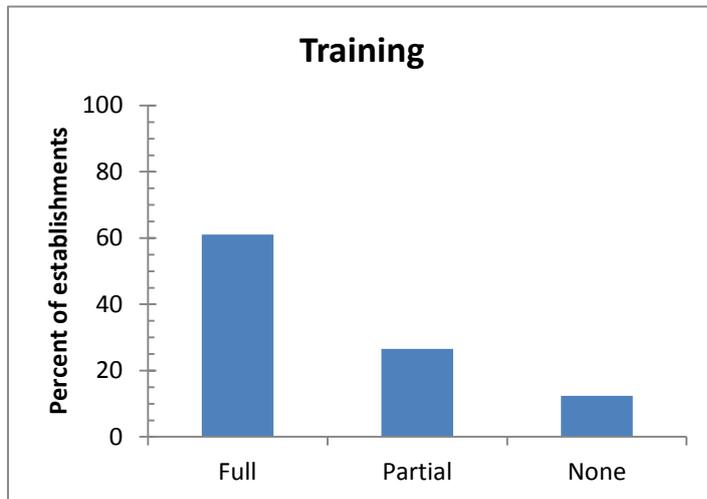
While there is some merit in this suggestion, in practice exposure times depend on the tubes being used. If the original tubes are replaced by a different model with different UV characteristics, then a different table of exposure times would be needed.

Several establishments have sunbeds which use tokens to determine the session time. Each token allows the bed to operate for a fixed number of minutes. Clients are usually provided with a number of tokens (one, two or three) depending on their skin type and number of previous sessions. While this method provides a definite control on session times, it is not ideal as it does not provide the degree of control over session times anticipated in the Standard. (For example, it does not allow a gradual increase in session times between 0.5 and 0.9 Minimum Erythema Doses.)

### 3.3.12 Staff training

Data on compliance with the requirements in the Standard on staff training is shown in the histogram below. Aspects considered were:

- Whether staff were trained on excluding high risk clients;
- Whether staff were trained on performing skin type assessments;
- Whether staff were trained on sanitising equipment;
- Whether a trained member of staff was always present when sunbeds were being used.



The meanings of the categories are as follows:

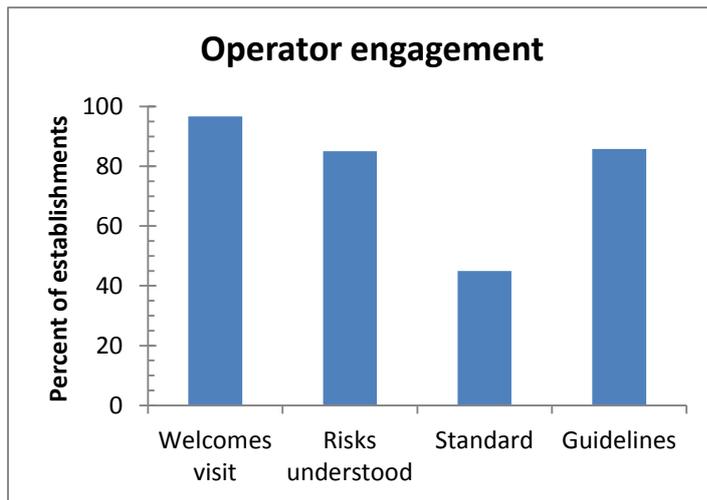
Category	Meaning
Full	Compliance in all four areas
Partial	Compliance in two or three areas
None	Compliance in one or no areas.

### 3.3.13 Operator engagement

The assessment form finished with a few questions to try and gauge operators' interest in this process. PHUs were asked to report on:

- Whether the operator welcomed the visit;
- Whether operators appeared to understand the increased risks if sunbed operations did not follow the recommendations in the Standard;
- Whether operators had a copy of the solarium Standard;
- Whether operators had a copy of the *Guidelines for operators of ultraviolet (UV) tanning lamps*.

Results are presented in the histogram below.



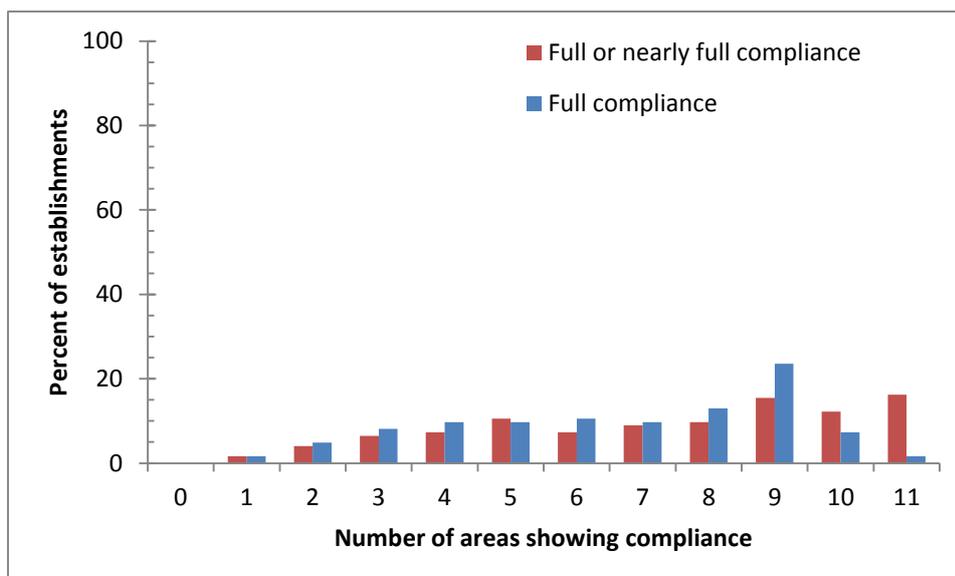
Both these results, and the comments made on the assessment forms, show that a large majority of operators is interested and keen to do a good job.

On the other hand, there were also a few comments showing a lack of interest or unwillingness to consider changes, such as:

- “Previous material [ie material left after the previous visit] still in folder, unused.”
- “Time required [to implement procedures] far outweighs any risk to clients”.
- “Most operators had a poor understanding of the standard and the implications associated with health from using sun-beds”
- “A number of operators claimed that it was a matter of individual choice whether or not a person used a sunbed and they would not alter their practices until they were legally required to do so.”

### 3.3.14 Summary of findings

The histogram below shows the percentage of establishments which was found to have full or nearly full compliance with the eleven aspects of operations which were examined. (“Nearly full” compliance means that an establishment fell into the “nearly full” category for warning notices and consent forms.) The red bars show numbers of establishments having full compliance, and the blue bars show numbers of establishments having either full or nearly full compliance. (In other words, the red bars are “included” in the blue bars.)



2% of the establishments had full compliance in all eleven areas of operation examined, whereas 16% had either full or nearly full compliance in the eleven areas.

Over 50% of establishments showed full compliance in seven or more of the areas examined, and 62% had either full or nearly full compliance in seven or more of the areas examined.

Two PHUs did not report data on the spreadsheet, but from the reports they provided it does not appear that their findings would have made any significant difference to these results.

### 3.4 Other points of interest

Several establishments mentioned to PHU staff that medical practitioners were referring patients to solarium for help to alleviate skin conditions.

A few sunbed operations were based in private homes, rather than in business premises.

## 4 Discussion

### 4.1 Comparison with previous assessments

This is the first systematic assessment of sunbed operations in New Zealand, and is primarily intended to serve as a baseline for comparison with future assessments. Any comparison with previous surveys should be made cautiously, because of the different methodologies used. Bearing this in mind, however, a comparison of the results from this round of visits with the visits made by PHUs in the second half of 2012 is presented in the table below.

Compliance area	% fully compliant PHUs 2013	% fully compliant PHUs 2012
Staff training	61	29
No health claims	83	61
Warning notices	19 (63)*	32
Skin assessment	76	38
Exclude high risk clients	67	31
Consent form	8 (41)*	51
Records kept two years	50	44

Eye protection	92	89
48 hours between sessions	74	40

\*Figure in brackets shows the percentage with either full or nearly full compliance

All areas but one show an increase in compliance, often quite a big increase. The one exception is in the use of consent forms, which shows a decrease. Whether this is because fewer establishments are using a consent form, or because in 2012 consent forms were considered compliant even if they missed a few items, cannot be ascertained. Even though comparisons may not be strictly valid, these results are encouraging.

## 4.2 Recommendations

Overall the approach taken appears to have been successful in obtaining data on sunbed operations. While there is no certainty that all operators were captured by the PHUs, it is clear that PHU staff made a big effort to locate, contact and visit operators. (On average, PHUs made 1.9 attempts per operator to make contact, with a maximum of ten attempts for one operator.) The numbers of operators is comparable to that reported on in the previous survey.

It is recommended that in the next six-monthly visits, PHUs do not repeat the assessment, but instead concentrate on ensuring that operators are aware of the forthcoming regulations and their content, and that operators have the materials and information they need to assist with compliance with the Standard. The next full assessment could be made in the first half of 2014.

It is again a concern that medical practitioners are referring patients to commercial solariums, which invariably have no measure of the UV dose or spectrum to which people are exposed while on the bed. It is recommended that should again be taken up with dermatologist and GPs.

Apart from compliance with the administrative and procedural sections of the Standard, one of the key aspects in minimising risks from the use of sunbeds is controlling the UV dose received while on the sunbed. This is a function of the UV content of the lamps, the power of the lamps and the exposure time. While the information on the determination of exposure times is admittedly imperfect, it appears as though this is an area where further work could be done. The Ministry has already commissioned some work on a means to measure lamp output, and it is recommended that this work continue to determine the feasibility of simple checks at an establishment to allow exposure times to be determined in the manner recommended in the Standard.

## Appendix A      Assessment form

PHU: \_\_\_\_\_ Assessor: \_\_\_\_\_ Date: \_\_\_\_\_

1 Establishment information	
Name of premises	
Address	
Phone	
Manager/owner	
Email	
No. of beds	
Approximate number of sessions/week	
Comments:	

2 Warning notices	Yes	No
A4 size warning notices at reception?		
A4 size warning notices in each cubicle?		
<i>Sign content:</i>		
• UV from a sunbed contributes to skin aging and skin cancer		
• Clients under 18 not accepted		
• Fair skinned clients who burn easily not accepted		
• Eye protection obligatory		
• Avoid intentional UV exposure for 48 hours after session		

3 Claims of benefits	Yes	No
No visible claims of benefits		
No visible claim that sunbed use is risk free		

4 Skin type assessment	Yes	No
Evidence that skin type assessment undertaken		
<i>For information: How is the skin type assessment done</i>		
• Detailed questionnaire?		
• Comparison with skin colour chart?		
• Other (please describe), plus any comments		

<b>5 Consent form</b>	Yes	No
Evidence that consent form used		
Copy provided to client		
<i>Consent form content:</i>		
• UV from a sunbed contributes to skin aging and skin cancer		
• Avoid intentional UV exposure for 48 hours after session		
• Eye protection obligatory		
• Fair skinned clients who burn easily not accepted		
• Clients under 18 not accepted		
• Recommendations against tanning (moles, skin cancer history, easily burn etc)		
• Warnings about medication, pregnancy, cosmetics		
Comments:		

<b>6 Exclusion of high risk clients</b>	Yes	No
Evidence that under 18s excluded		
Evidence that clients with skin type 1 excluded		

<b>7 Eye protection</b>	Yes	No
Evidence that eye protection required (supplied by solarium or client)		
Eye protection seals around eyes		

<b>8 Hygiene</b>	Yes	No
Evidence that beds and eye protection sanitised after use		

<b>9 48 hour delay between sessions</b>	Yes	No
Evidence that 48 hour interval between sessions enforced		

<b>10 Client records</b>	Yes	No
Client records kept for two years		
<i>Records content:</i>		
• Consent form		
• Skin type assessment		
• Visits/session durations		

<b>11 Timer</b>	Yes	No
Evidence that timer used to control sessions		
Only operator can set timer		
<i>For information: How are session times determined?</i>		
<ul style="list-style-type: none"> <li>• <i>All clients always give the same time?</i></li> </ul>		
<ul style="list-style-type: none"> <li>• <i>Manufacturer documentation?</i></li> </ul>		
<ul style="list-style-type: none"> <li>• <i>Other (please describe)?</i></li> </ul>		

<b>12 Training</b>	Yes	No
Staff trained on excluding high risk clients		
Staff trained to perform skin type assessment		
Staff trained on sanitising equipment		
Trained staff member always present when sunbeds used		

<b>13 Operator interest/engagement (for information)</b>	Yes	No
<i>Operator welcomes visit</i>		
<i>Operator understands health risks</i>		
<i>Operator has a copy of the Standard</i>		
<i>Operator has a copy of the NRL Guidelines</i>		
<i>Other comments (about anything):</i>		