

Visits to commercial solariums by DHB Public Health Units between 1 February and 31 July 2019: summary of findings

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1 Executive summary

Staff from Public Health Units (PHUs) made a further round of visits to commercial solariums in their regions in the first half of 2019. These visits were initiated in 2012 to ensure that solarium operators are familiar with best practice procedures to reduce the risks from exposure to ultra-violet (UV) radiation from sunbeds.

PHU staff were requested to use a standardised assessment form to check 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. The same areas were examined in the first half of the years 2013 to 2018, so the effectiveness of the visits in improving compliance with the recommendations in the Standard can be gauged by comparing results from year to year.

88 establishments are believed to have sunbeds, including establishments that have sunbeds that are reported as not being used at the moment but could be in the future. This is a decrease from 94 found in 2018. 71 were assessed using the standardised assessment form. As in previous years, a few refused the visit. Several operators reported that they would probably stop offering sunbed services soon.

There was a further small improvement in compliance, and as in previous years compliance was better in Auckland (where sunbed operators are regulated under a bylaw) than in the rest of the country. Generally, however, compliance is levelling off. One area checked – using a timer that can only be set by the operator – has had consistently poor compliance since these surveys were started, and can probably only be remedied by modifying or replacing the sunbeds.

It is recommended that PHUs should ensure that their database of operators is up to date, and that they follow up on operators that have made claims of benefits from sunbed use, or the absence of risk, on websites or Facebook pages.

The work of PHU staff in undertaking these visits, and the willingness of the Auckland Council to share the findings from their visits to check compliance with the Council bylaw, is gratefully acknowledged.

2 Solarium visit objectives

2.1 Background

In May 2012 the Ministry of Health (MoH) requested PHUs to:

- Visit all commercial solaria 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 solaria;
- Make operators aware of regulatory regimes being implemented overseas, such as the ban on solaria in most Australian States 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 exposure to the UV radiation emitted by sunbeds.

Since then fourteen rounds of visits have been carried out (including the visits reported here). In order to assess the effectiveness of the visits, a standardised assessment scheme was developed to check aspects of solarium operation against recommended practices in the Standard. The scheme was first used during visits in the first half of 2013, and repeated every year since then, including the visits reported here.

As well as undertaking the systematic assessment, PHUs were also asked to ensure that solarium operators:

- are aware of legislation banning under-18s from using sunbeds;
- have resources to help them implement the administrative and procedural requirements of the Standard.

Reports on the previous visits are available from the Ministry of Health, and the reports from visits in which the standardised assessment was undertaken can also be downloaded¹.

2.2 Solarium visits

As with previous visits, a package of information and support material was distributed to PHUs. 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 on where other supporting material could be found.

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.

¹ Available at: <http://www.emfservices.co.nz/resources/uv-and-sunbeds/sunbed-operator-assessments>

- 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 three areas (skin assessment, timer and training) PHU staff were asked to try and find out additional information: on how the skin assessment was performed, how operators determined session times, and whether they kept records of staff training.

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

As with the previous rounds 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, and the Ministry's 2013 draft version of their *Guidelines for operators of ultraviolet (UV) tanning lamps*.

In Auckland the assessments were made by Council Environmental Health Officers as part of their work enforcing the Auckland Health and Hygiene bylaw. The Auckland Council kindly agreed to share these results with the MoH, and their assistance is gratefully acknowledged.

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. Most PHUs also prepared an overview of their findings, which was very helpful. Reports received are summarised below.

Reporting	Number of PHUs
Spreadsheet only	4
Spreadsheet and summary report	8

3.2 Countrywide statistics

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

Characteristic	2019	2018	2017	2016	2015	2014	2013
Establishments with sunbeds ²	88	94	112	133	123	162	173
Establishments with sunbeds visited	71	84	94	100	101 ³	145	139

The 2018 and 2019 figures and further analysis in section 3.3 of this report do not include a company that hires out sunbeds. This company is discussed separately in section 3.5.

² This figure includes establishments with sunbeds which were reported as not being used, but for which there were no plans to remove them.

³ Some establishments were visited, but no assessment, or a very incomplete assessment, carried out.

The number of establishments with sunbeds has again decreased, and several PHUs noted that operators had either ceased operating or were planning to. A few new operations have started up since 2018.

3.3 Detailed results from the assessments

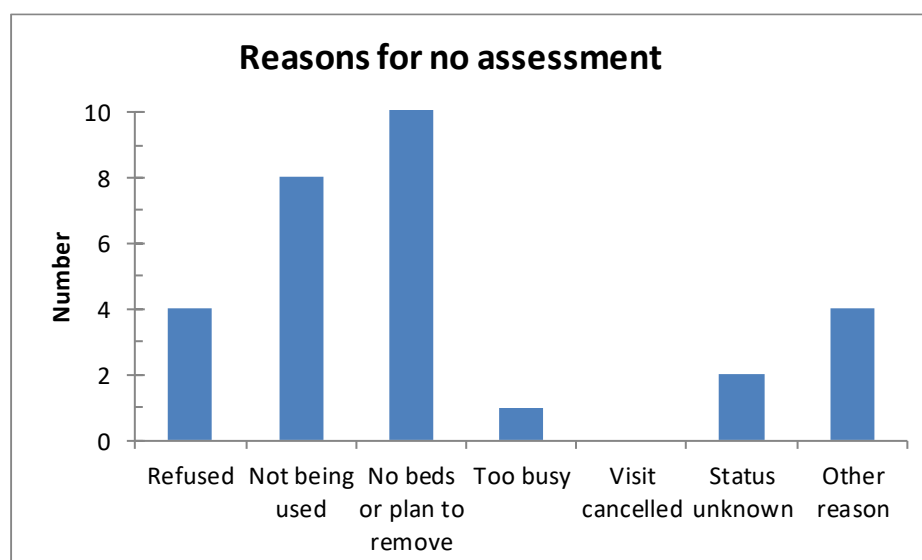
A systematic assessment was carried out on a total of 84 establishments. This section presents results from these establishments. The analysis considers each section of the assessment separately, and compares results to those found in previous years.

3.3.1 Overview

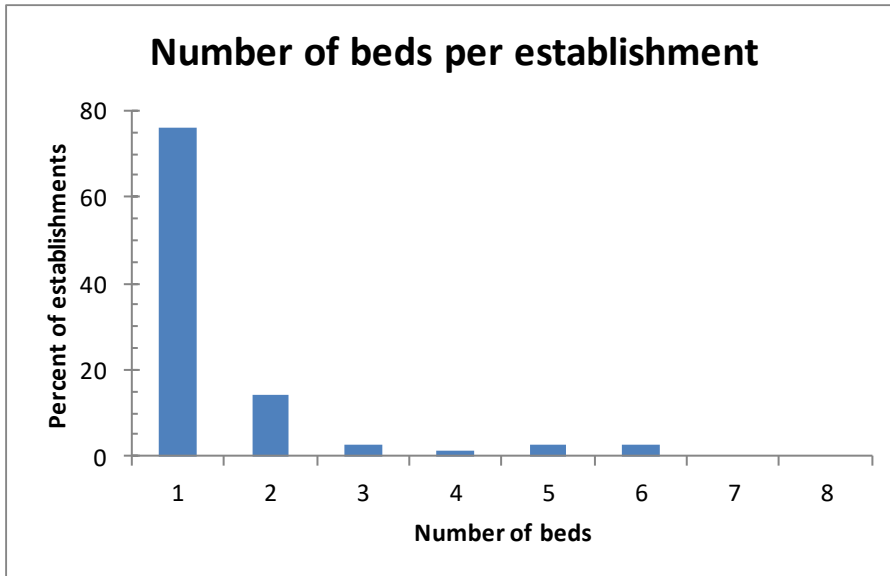
Summary data on the establishments covered in the spreadsheets is presented in the table below.

Characteristic	2019	2018	2017	2016	2015	2014	2013
Establishments for which information reported on spreadsheet	104	102	120	151	135	168	151
Establishments assessed	71	84	94	100	97	133	123
Establishments not assessed	33	18	26	51	38	35	28

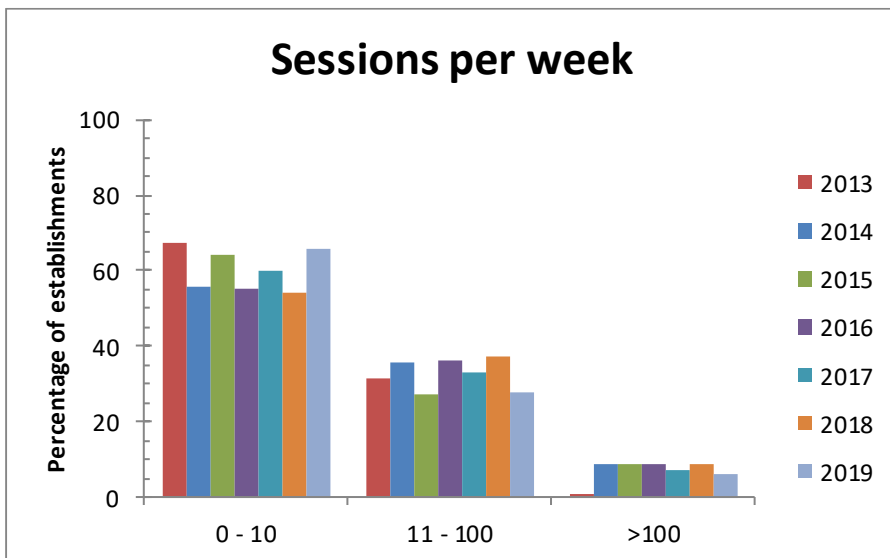
The reasons why 33 of the establishments could not be assessed are shown in the histogram below. Ten operators had removed their sunbeds or were planning to shortly. Some operators plan to replace UV lights by infra-red lights for collagen treatments. Four refused to have a visit (as several have done in previous years). Three operators shown as “other reason” in the histogram (all of whom operated a sunbed as a sideline, rather than as their main business) had gone into liquidation: one might be restarting as a gym and the future status of the others was unknown.



As has been found previously a large majority of establishments had only one sunbed (this includes establishments where the bed was reported as not being used). This data should be interpreted cautiously, however, as there was no information on the numbers of beds in many of the Auckland establishments.

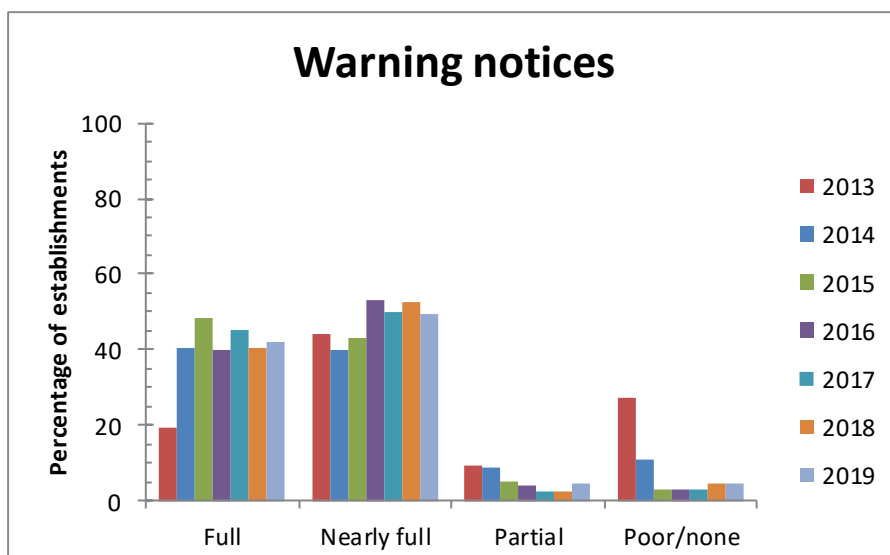


The data on sessions per week should also be interpreted cautiously for the same reason.



3.3.2 Warning notices

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



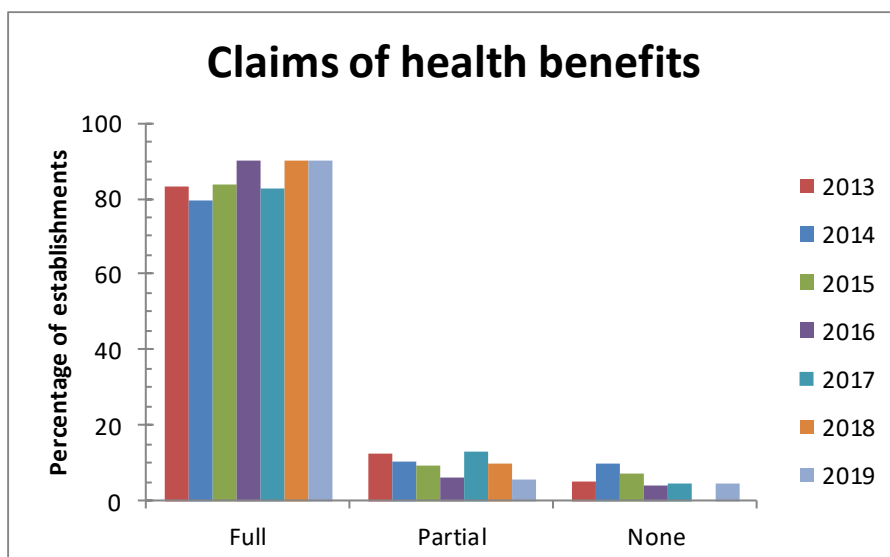
The meanings of the categories are as follows:

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 some of the required information was missing.
Poor/none	Either no warning notices, or the notices were missing most of the required information.

It was noted in 2018 that compliance appears to have plateaued over recent years, and the same is true for 2019. 91% of establishments displayed the required warning notice in at least one place.

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.



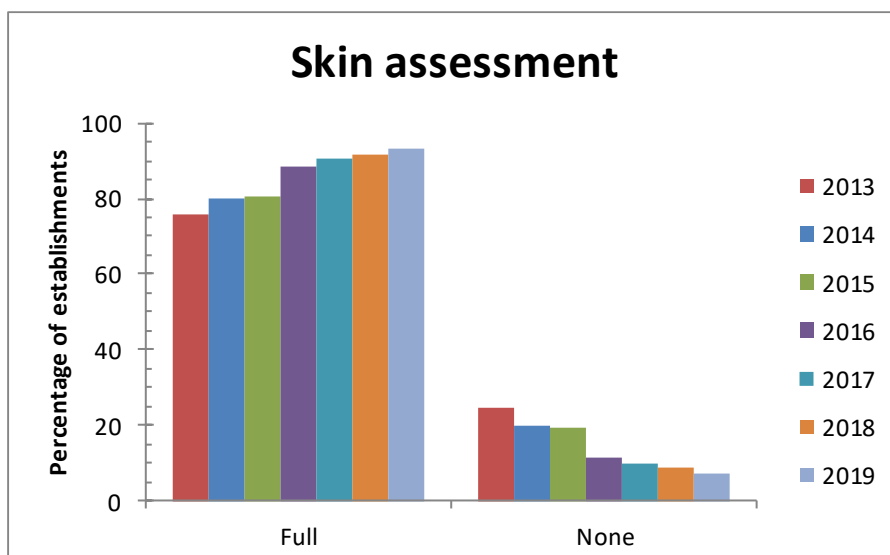
The meanings of the categories are as follows:

Category	Meaning
Full	No claims of health benefits visible, and no claims that using a sunbed is risk free.
Partial	There were either visible claims of health benefits from using a sunbed, or claims that using a sunbed was risk free (on the premises, their website or Facebook page).
None	There were both claims that sunbeds gave health benefits, and claims that using them was risk free.

A few establishments continue to make claims of health benefits on their websites (although such claims were no made on the premises). One was reported to be reluctant to remove such claims when they were displayed on other websites, and material on another operator’s website is being taken up with the Auckland council.

3.3.4 Skin assessment

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

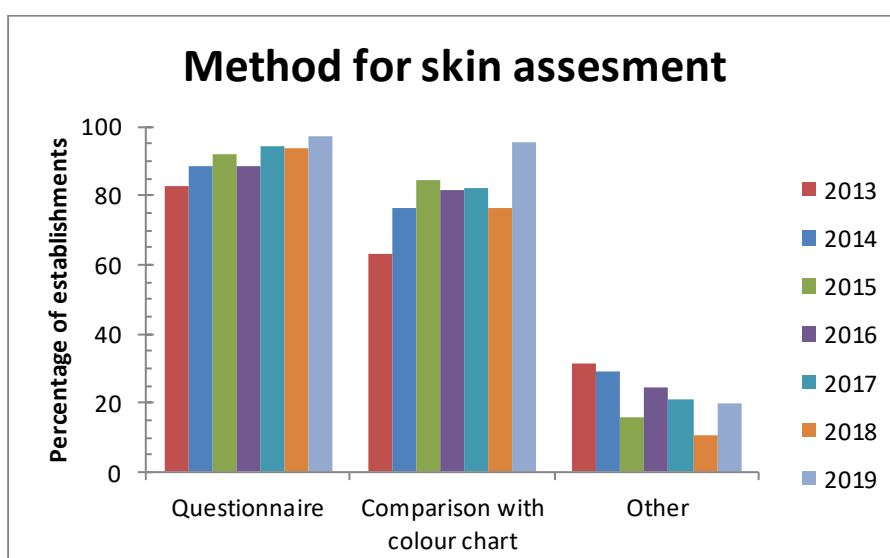


The meanings of the categories are as follows:

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.

There has been a further small improvement since 2018.

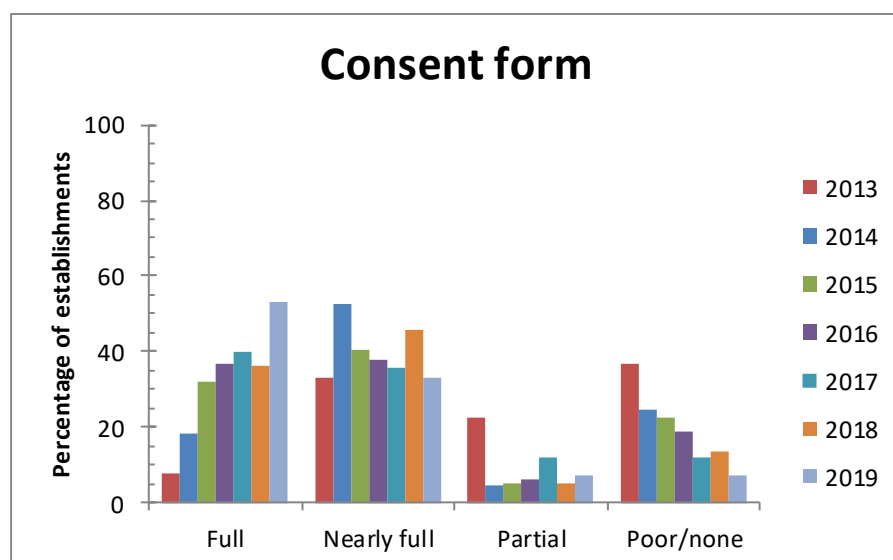
PHUs were asked to try and find out how establishments carried out the skin assessment: by using a detailed questionnaire of the type shown in the *Guidelines for operators of ultraviolet (UV) tanning lamps*, or using a simple skin colour chart, or by some other means. Results are shown in the histogram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



Some establishments use a combination of methods, which is why the total across all methods adds up to more than 100%. As in previous years, from the comments entered where “other” was checked 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.



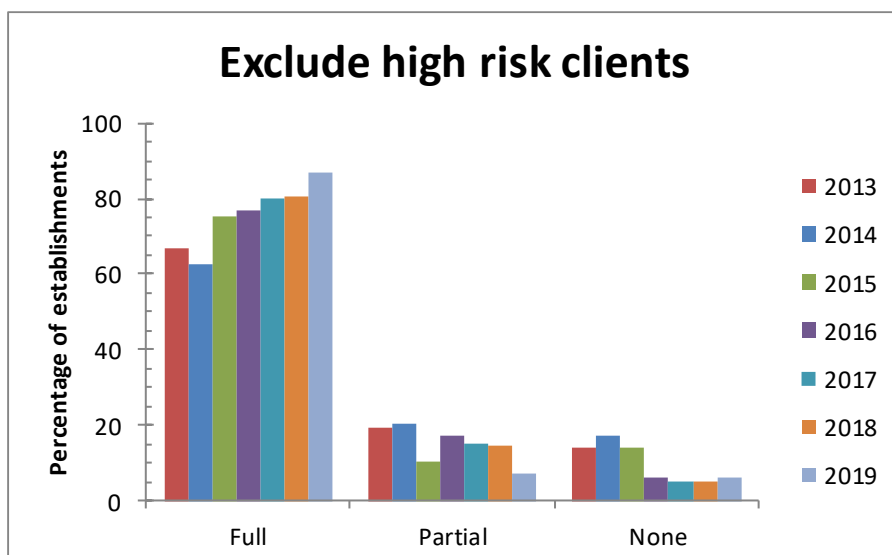
The meanings of the categories are as follows:

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.

There has been a further small increase in the number of establishments using a consent form that meets the requirements of the Standard (whether or not a copy is provided to the client). One establishment was using a form bearing the logo of the local DHB and was instructed to remove this.

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.



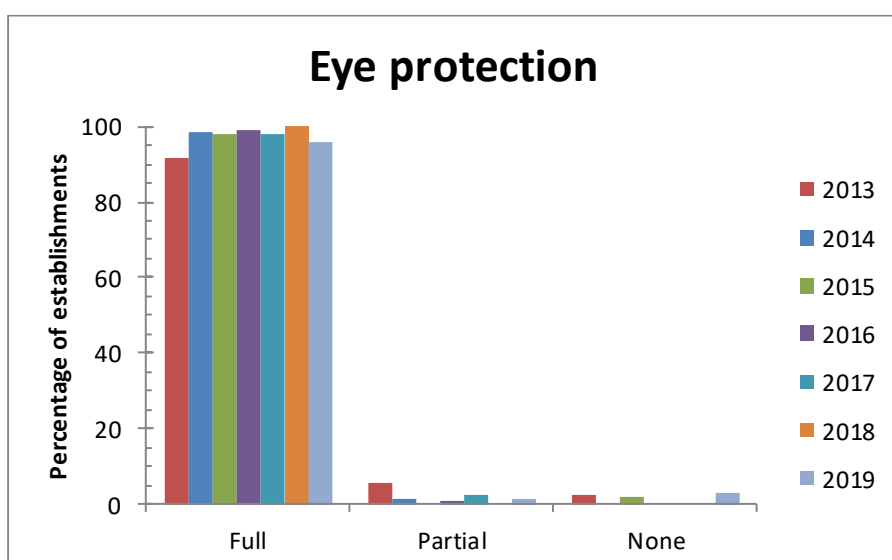
The meanings of the categories are as follows:

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

96% were considered to be refusing sunbed services to under-18s, a small increase over 2018 (92%). Two operators still displayed old signs saying that under-18s were allowed with parental permission, but appeared nevertheless to refuse under-18s. Two others were considered to be potentially allowing under-18s to use 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.



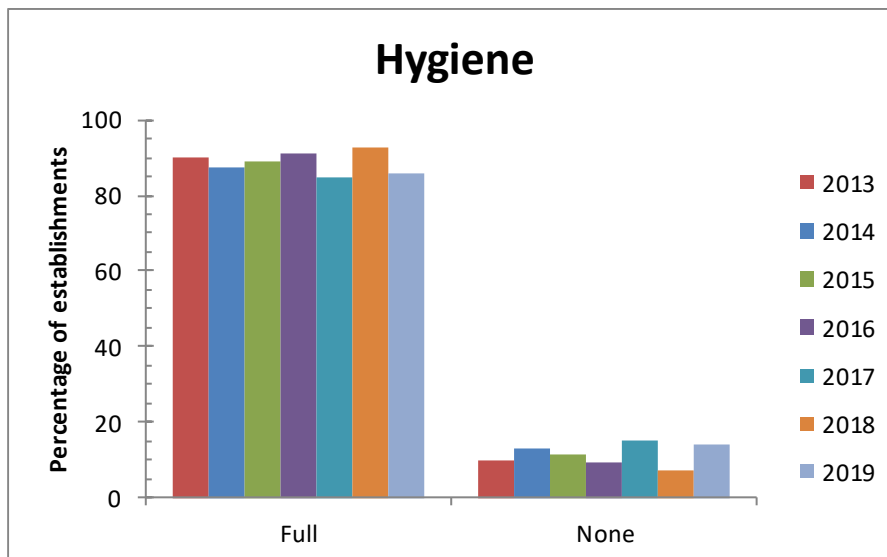
The meanings of the categories are as follows:

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.

The 100% compliance of 2018 was not maintained. One operator was reported as supplying goggles that did not form a tight seal around the eyes, and another did not appear to enforce the requirement for goggles.

3.3.8 Hygiene

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



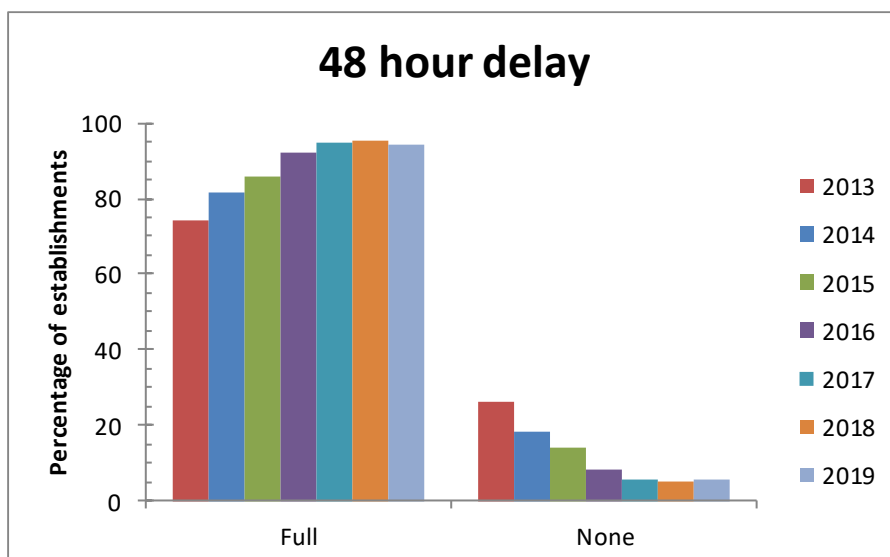
The meanings of the categories are as follows:

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

There was a small drop in the number of operators reported as complying with the hygiene requirement.

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.



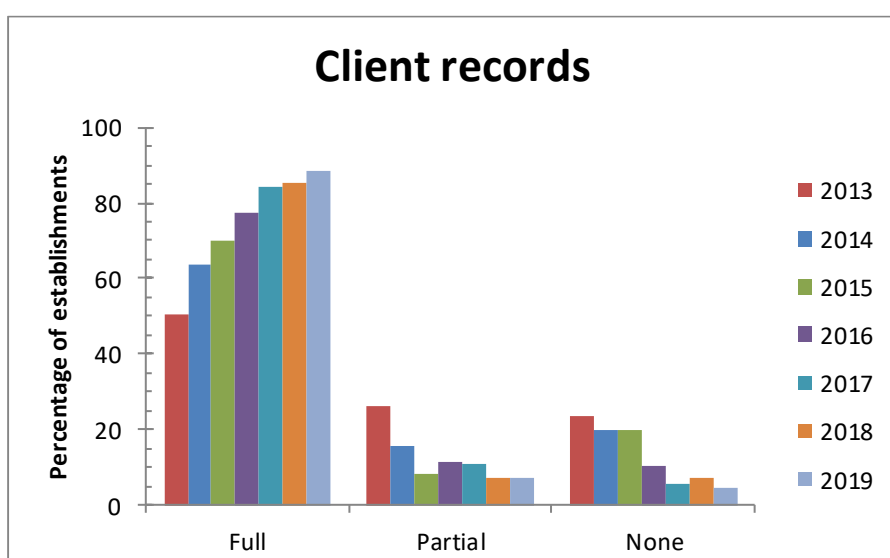
The meanings of the categories are as follows:

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

As with the exclusion of high risk clients, the data is dependent on receiving truthful responses from the operator, but there were no indications that misleading replies were being given. Compliance continues to plateau at around 95%. One operator said that they could not prevent people coming daily, and another was also considered as not enforcing the rule.

3.3.10 Client records

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



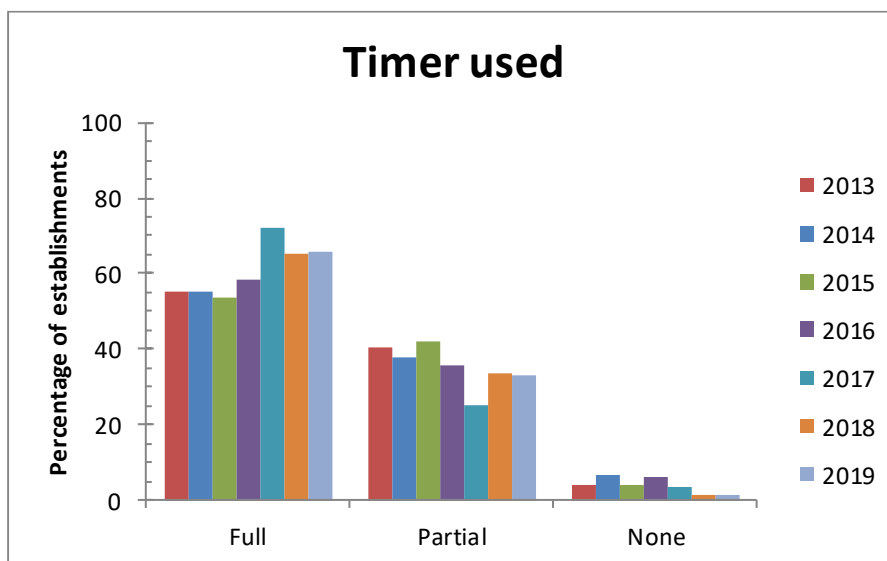
The meanings of the categories are as follows:

Category	Meaning
Full	Copies of client skin assessments, consent forms and records of sessions kept for at least two years
Partial	Only one or two of the required pieces of information is kept for at least two years
None	No records are kept

There has been a small improvement since 2018, but compliance still seems to be levelling out at around 90%.

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.

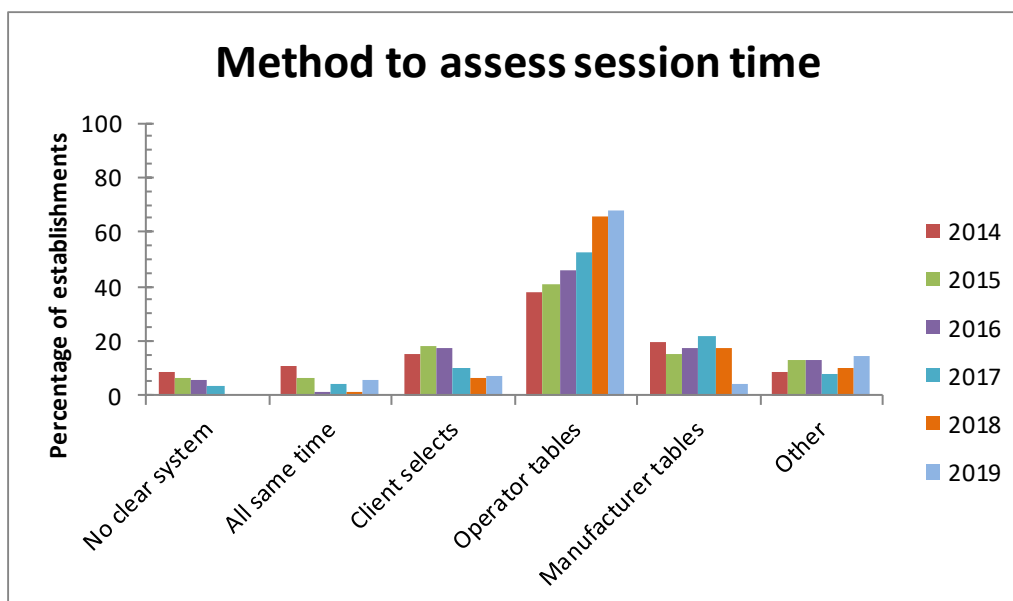


The meanings of the categories are as follows:

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

This is one area where there has been little improvement since 2013, which is probably due to non-compliant beds not being replaced.

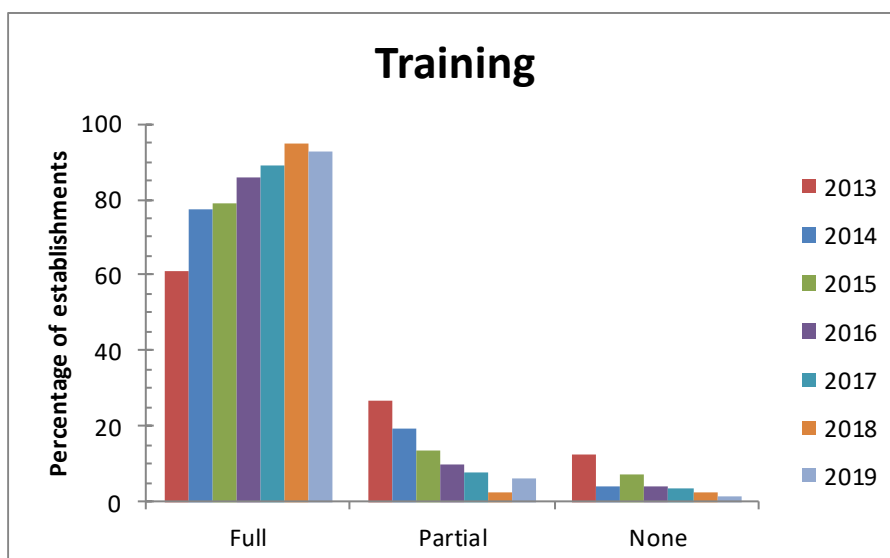
Since 2014, PHU staff were also asked to identify the main method used for determining the session time. Most use operator tables based on skin type and the number of previous sessions.



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.

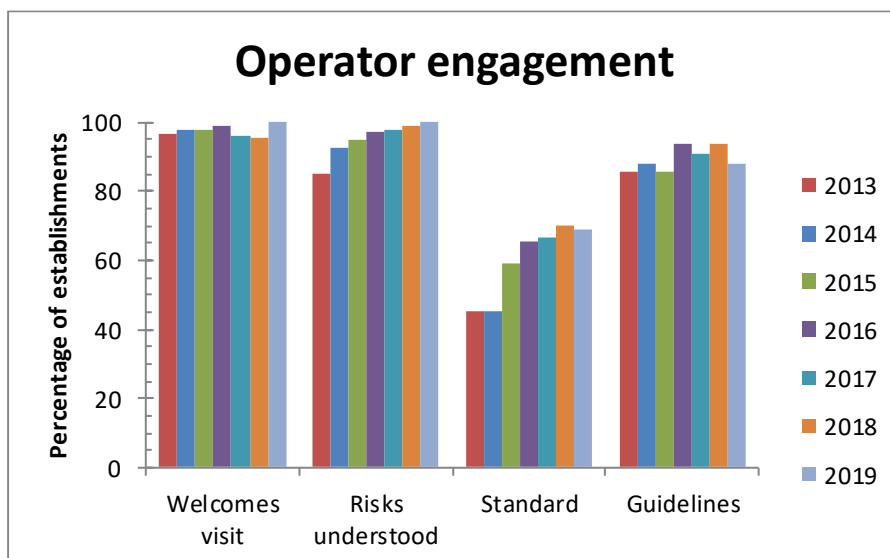
Compliance seems to have levelled off. The Standard does not require that operators maintain records of staff training, but PHUs were asked to find out whether this is done. 57% of operators do, an increase over 2018.

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 Ministry of Health’s *Guidelines for operators of ultraviolet (UV) tanning lamps*.

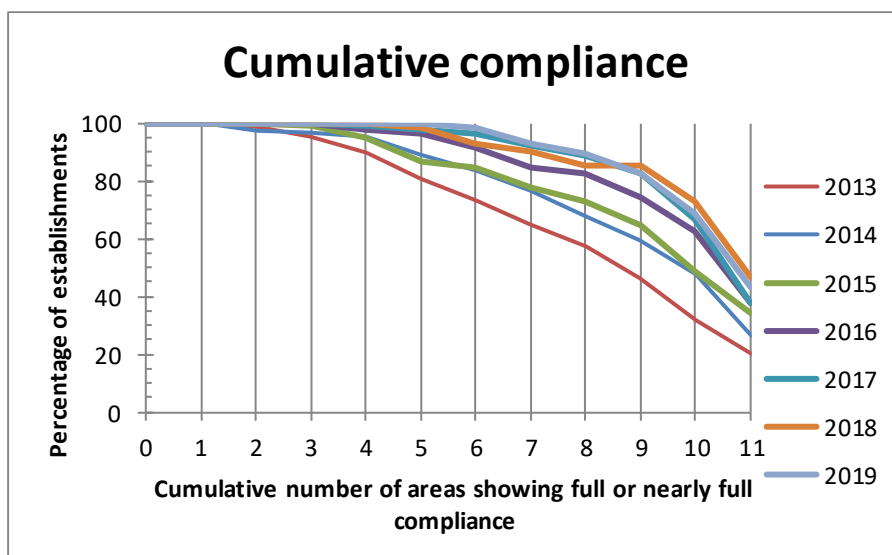
Results are presented in the histogram below.



As usual, operators appear pleased to have the visits and receive feedback, but of course the figures shown in the histogram do not include the small percentage of operators who actively refuse visits. While most appear to understand the risks, results from the previous sections show that this does not always get carried through to effective actions.

3.3.14 Summary of findings

The plot below shows the cumulative percentage of establishments which were 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/or consent forms.)



This plot shows, for example, that 43% of establishments in 2019 showed full or nearly full compliance in all eleven areas of operation assessed, a small decrease from the 47% in 2018, but an increase on the 38% recorded in 2016 and 2017. There was also a small decrease in the number of establishments showing full or nearly full compliance in 9 areas of operation (83% against 85% in 2018).

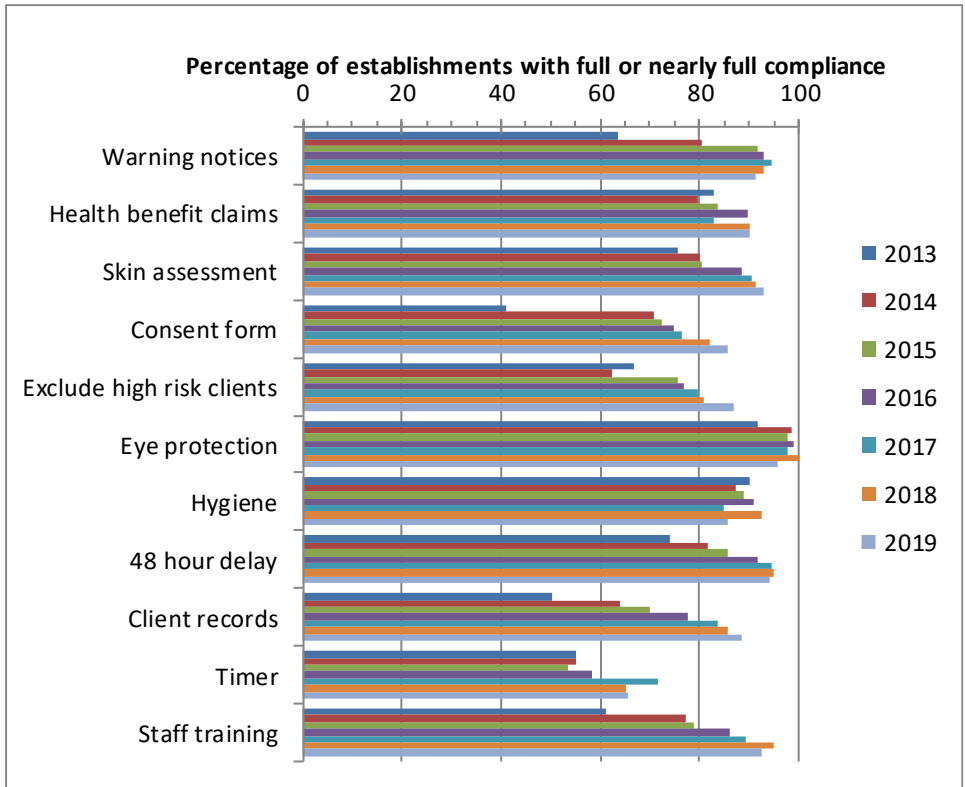
The average percentage⁴ can be used as a “figure of merit” – a single number to allow a very simple comparison of overall performance from one year to the next. The figures of merit for the seven years these visits have been running are:

Year	2019	2018	2017	2016	2015	2014	2013
Figure of merit	89.7	89.3	88.4	85.6	80.3	78.4	71.5

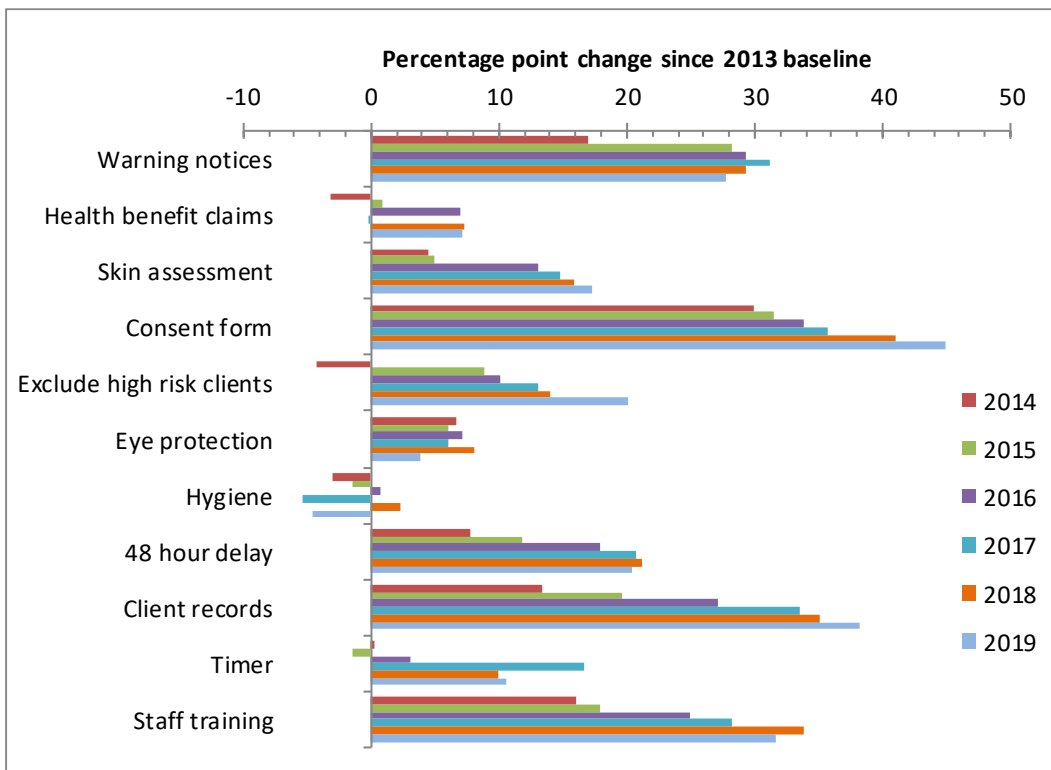
Overall, this shows that there has been a minor improvement in the past year.

The plot below shows the percentages of establishments having full or nearly full compliance in each of the eleven areas checked in the seven years that these surveys have been running.

⁴ Effectively this is the average height of the compliance curve. If every operator checked complied fully in all 11 areas assessed, the value would be 100.



Using 2013 as a baseline, changes since then are presented below. The plot shows the difference between the percentage compliance in the years 2014 to 2019 compared with 2013.



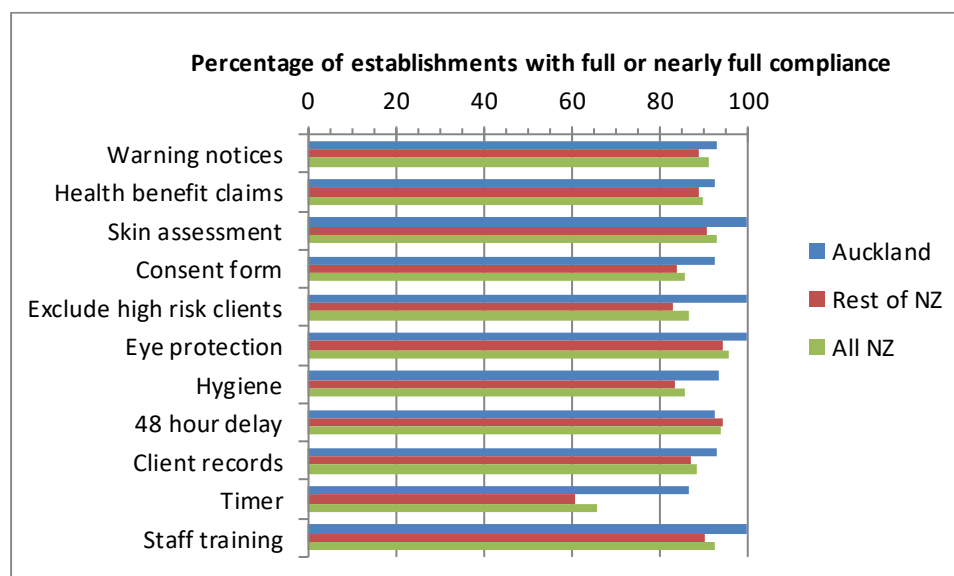
All areas of operation checked except hygiene have shown an improvement since 2013. Continuing improvements are shown in several areas, including use of consent forms, maintaining client records

and excluding high risk clients. Part of the reason that some areas (such as eye protection and hygiene) show little change from year to year is that baseline compliance was already quite high.

3.4 Comparison between Auckland and the rest of the country

Since the Auckland Health and Hygiene bylaw came into force in July 2014, these surveys have found that compliance in Auckland was better than in the rest of the country.

The results from 2019 repeat this finding, with better compliance in all but one of the 11 areas assessed, and consequently a better overall compliance “figure of merit”. The number of operators in Auckland has decreased to 17 (including one unregistered premises).



In terms of the “figure of merit” used in section 3.3.14, the values are:

Year	Auckland	Rest of NZ	All NZ
2014			78.4
2015	95.4	76.0	80.3
2016	96.6	82.8	85.6
2017	94.6	87.2	88.4
2018	98.2	87.1	89.3
2019	97.0	87.8	89.7

3.5 Sunbed hire business

A business in Christchurch hires out sunbeds. It has been inactive for several months but may resume later in the year.

Information obtained in 2018 suggested that the hire company is gradually disposing of the beds and when active only hires them out occasionally.

4 Discussion

4.1 Comparison with previous assessments

There has been a further small improvement since the assessment carried out in 2018. Compliance in Auckland was again better than the rest of the country, but generally the level of compliance has levelled out.

As in previous years there has been a small decrease in the number of operators, and others are reported to say that they may stop offering sunbed services over the next year. Most operators have a single bed and provide few sessions a week. Most sunbed sessions are provided by just a few operators. Some operators report that numbers of clients are decreasing. On the other hand one operator was reported as having spent several thousand dollars on new UV bulbs for a sunbed.

A few operators continue to make claims of benefits from sunbed use on their websites and/or Facebook pages. Some are reluctant to remove these claims while they see similar claims from other operators. A complaint about claims of benefits on the website of an Auckland operator is being followed up with the Council.

As has been noted in previous years, compliance in Auckland, which regulates sunbed operators under a bylaw, is better than in the rest of the country.

There are continuing reports of clients having been referred by doctors or skin clinics for treatment. This should be discouraged as sunbed operators are poorly placed to provide properly quantified UV exposures.

4.2 Recommendations

It is recommended that in the second half of 2019, PHUs do not need to visit operators but instead:

- Ensure that their database of establishments offering sunbed services is completely up to date. Establishments should be kept on the PHU list until it is certain that a sunbed has been disposed of. If a sunbed is sold, efforts should be made to find the buyer (even if a private buyer) to supply them with information on best practice operation.
- Follow up on operators whose websites or Facebook pages made claims of benefits, or claims that tanning is risk free.

Appendix A Assessment form

PHU: _____ Assessor: _____ Date: _____

1 Establishment information	
Name of premises	
Address	
Phone	
Alternative phone	
Number of attempts to contact	
Assessed?	Circle one: Assessed / No - Operator refused / No - Sunbeds not being used (but might be in the future) / No - no sunbeds or sunbeds will be removed soon / No - operator too busy / No - visit cancelled by operator / No - status unknown (but keep on watch list) / No - not assessed for some other reason (give the reason in the comments).
Manager/owner	
Email	
No. of beds	
Visited previously?	Yes / No
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		
Comments:		

3	Claims of benefits	Yes	No
	No visible claims of benefits (<i>answer Yes if no visible claims</i>)		
	No visible claim that sunbed use is risk free (<i>answer Yes if no visible claims</i>)		
Comments:			

4	Skin type assessment	Yes	No
	Evidence that skin type assessment undertaken		
<i>For information: How is the skin type assessment done (tick Yes for all which apply)</i>			
	<ul style="list-style-type: none"> Detailed questionnaire which is similar to Ministry example? 		
	<ul style="list-style-type: none"> Comparison with skin colour chart? 		
	<ul style="list-style-type: none"> Other (please describe), plus any comments 		

5	Consent form	Yes	No
	Evidence that consent form used		
	Copy provided to client		
<i>Consent form content:</i>			
	<ul style="list-style-type: none"> UV from a sunbed contributes to skin aging and skin cancer 		
	<ul style="list-style-type: none"> Avoid intentional UV exposure for 48 hours after session 		
	<ul style="list-style-type: none"> Eye protection obligatory 		
	<ul style="list-style-type: none"> Fair skinned clients who burn easily not accepted 		
	<ul style="list-style-type: none"> Clients under 18 not accepted 		
	<ul style="list-style-type: none"> Recommendations against tanning (moles, skin cancer history, easily burn etc) 		
	<ul style="list-style-type: none"> Warnings about medication, pregnancy, cosmetics 		
Comments:			

6	Exclusion of high risk clients	Yes	No
	Evidence that under 18s excluded		
	Evidence that clients with skin type 1 excluded		
Comments:			

7 Eye protection	Yes	No
Evidence that eye protection required (supplied by solarium or client)		
Eye protection seals around eyes		
Comments:		

8 Hygiene	Yes	No
Evidence that beds and eye protection sanitised after use		
Comments:		

9 48 hour delay between sessions	Yes	No
Evidence that 48 hour interval between sessions enforced		
Comments:		

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

11 Timer	Yes	No
Evidence that timer used to control sessions		
Only operator can set timer		
<i>For information: How are session times determined – select ONE only from:</i>		
• No clear system		
• All clients given the same time		
• Time selected by client		
• Operator's tables based on skin type, previous sessions?		
• Manufacturer/supplier tables based on skin type, previous sessions?		
• Other (please describe)?		
Comments:		

12 Training	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		
Training records kept?		
Comments:		

13 Operator interest/engagement (for information)	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 Ministry Guidelines to compliance with the Standard</i>		
<i>Other comments (about anything):</i>		

Materials provided	Yes
Consent form	
Warning sign	
Skin assessment form (questionnaire type)	
Skin assessment chart (pictorial)	
Copy of Ministry Guidelines for compliance with the Standard	
Cancer society information sheet <i>Sunbeds, solaria and sunlamps</i>	
Press release announcing regulation of sunbeds	
Information on sunbed use during pregnancy	
Other:	