‘Out of the frying pan, but not into the fire’: quantifying commercial cosmetic tanning services in New Zealand to inform endgame regulation

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ABSTRACT

AIMS: In the context of possible regulation, to quantify and describe: (1) indoor tanning businesses in New Zealand; (2) sunbeds available for sale on Trade Me©.

METHOD: In January 2016, we conducted a national audit of businesses potentially providing sunbed services (solariums, beauty-salons, hairdressers, gyms and fitness centres) to assess the availability and cost of indoor tanning services (sunbeds and spray tanning). In addition, Trade Me©, New Zealand’s largest auction site for second-hand goods, was monitored for one year to determine whether ex-commercial sunbeds were being sold in the domestic market.

RESULTS: Overall, 176 businesses were currently providing sunbeds, which for most (92.4%), were supplementary to other ‘non-tanning’ services. Of 168 sunbeds for sale on TradeMe©, 42 were ex-commercial.

CONCLUSION: Given scientific evidence that there is no safe level of sunbed use for individuals of any age, a ban on commercial sunbed services would have a significant positive impact on skin cancer incidence. Since few New Zealand businesses depend on providing sunbed services, a ban would have minimal negative economic impact, affecting only a small number of businesses. There should be a total ban on the importation, manufacture, sale and rental of sunbeds for commercial or private use in New Zealand.

Excessive exposure to ultraviolet radiation (UVR), whether from sunlight or from artificial sources, such as sunbeds, causes skin cancer. In New Zealand, skin cancer is by far the most common cancer type and from it, nearly 500 New Zealanders die annually. New Zealand has the world’s highest mortality rate for cutaneous malignant melanoma (melanoma), the most deadly of the skin cancers. Yet, unlike many cancers, we know the main cause of skin cancer, and that the risk of developing a skin cancer can be mitigated by minimising exposure to ultraviolet radiation (UVR), either from sunlight or from artificial sources—such as sunbeds. Of particular relevance is the strong scientific evidence showing the association between sunbed use and both melanoma and non-melanoma skin cancers. In Australia, it has been estimated that 3.2% of melanomas and 3.5% of melanoma deaths are due to sunbed exposure. In Europe, it is estimated that 5.4% of all new cases of melanoma may be related to sunbed use and this may account for the increasing rates observed among young women. Recent legislation in Australia bans commercial sunbeds nationwide. The Health (Protection) Amendment Bill 2014 will restrict sunbed use to those 18 years and older in New Zealand. However, the scientific evidence clearly shows that there is no safe level of sunbed use for individuals of any age and so legislation does not go far enough. The Ministry of Health is concerned that a ban on commercial sunbeds may result in...
revenue loss, business closure and redundancies. The first aim of this study is to quantify the number and type of indoor tanning businesses (sunbed and/or spray tanning businesses) in New Zealand in order to estimate how large an impact the banning of commercial sunbeds would have on businesses. The Ministry of Health appears to favour licencing sunbed operators and enforcing mandatory operational practices rather than recommend a ban. One concern with this approach is that there is nothing to prevent old second-hand commercial machines being dumped onto the completely unregulated second-hand market. So, a second study aim is to assess the number of sunbeds, particularly ex-commercial ones, being sold on the second hand market.

Methods

Aim 1

In December 2016, a search of the Yellow Pages online was performed for businesses listed under “Beauty Therapy”, “Manicurists”, “Hairdressers”, “Health and Fitness Centres”, “Sporting and Recreational Facilities” and “Sun Tanning Services”. Web based searches (using Facebook, Google and The New Zealand Association of Registered Beauty Therapists (http://www.beautynz.org.nz/)) were also conducted. The Ministry of Health and Consumer New Zealand also provided their lists of sunbed operators. Businesses identified (along with their contact details and URL) were recorded in an MS Excel spreadsheet. Duplicate listings of a business were identified by using their associated phone number and/or addresses and removed from the spreadsheet. Businesses that provided services not applicable to the research question (such as swim schools) or that solely provided retail products (eg self-tanning products) were also excluded.

In January 2016, one of three trained interviewers telephoned each of the businesses identified, clearly stating that they were from the University of Otago and conducting a study on indoor tanning, and invited the person who answered the telephone to participate in the audit. At least five telephone contact attempts were made. For businesses which could not be contacted, an email/Facebook contact was attempted. An assumption was made that businesses would not provide indoor tanning if they clearly identified as barbers, hairdressing franchises providing express haircut-only services, and medi-spas providing medical beauty procedures (such as laser treatment or Botox) not traditional spa services (such as facials or waxing)—so these were not telephoned. Businesses for which the phone had been disconnected or where the business operator was away for a sizeable length of time (eg on maternity leave) were removed from the spreadsheet. Following the telephone call, a dataset of businesses providing sunbed services was created. Two businesses that clearly provided commercial sunbeds could not be contacted because one was “closed for summer” and the other only had an answerphone. However, as both had current websites that clearly showed the provision of both sunbeds and spray tanning services, these were included even though telephone contact was not made.

The information collected included the availability of sunbed or spray tanning services, the number and type (ie horizontal or vertical) of sunbeds offered and the cost of a casual sunbed session or full-body spray tan. Descriptive analyses were conducted using SPSS. Ethical approval was obtained from the University Of Otago Human Ethics Committee (D16/018 23 December 2015).

Aim 2

Trade Me©, as New Zealand’s largest auction site for second hand goods, was monitored to estimate the number of sunbeds or sunlamps, in particular, ex-commercial sunbeds being sold in the domestic market. From 10th November 2015 to 9th November 2016, inclusive, the Trade Me© category website (http://www.trademe.co.nz/health- beauty/sun-care-tanning), “Health and Beauty—sun care & tanning”, was regularly scanned for listings of sunbeds or sunlamps. Re-listings of the sunbeds were excluded. If the description of the product did not contain information on the product’s age and whether or not it had been used commercially, then the trader was asked to provide that information. Information collected on sunbeds included: the closing date of the auction, product description and age, commercial use, the cost of the product and whether it sold.
Results

Aim 1
We identified 4,827 discrete businesses offering beauty or fitness-related services where sunbeds could potentially be housed or spray tanning services provided. Of these, 4,590 (95.1%) participated in the audit (28 declined to participate, 19 respondents had poor English language skills and 190 could not be contacted).

Nationwide, we found 176 businesses offering sunbeds commercially to customers, two of these were sunbed rental companies that did not provide ‘in-house tanning services’ and four businesses reported that their sunbeds were not currently being used—these six have been removed from further analysis. Of the remaining 170 sunbed premises (with an estimated 254 units) the majority only had one sunbed (n=134) 78.8%, 17 (10.0%) had two sunbeds and two (1.2%) had three sunbeds. Only 16 premises (9.4%) had four or more sunbeds. For most sunbed businesses (92.4%), the provision of tanning services was supplementary to other services. Only 13 sunbed premises (7.6%) relied on tanning as their sole source of income, but most (n=9) of these also offered spray tanning to customers. Very few businesses (n=4) were reliant on sunbeds as their sole source of income. This audit identified 975 businesses that provided a spray tanning service, including nearly half of all beauty salons (46.6%), but far lower percentages of hairdressers (8.7%) and fitness centres (2.0%). Spray tanning is more labour intensive than the provision of sunbeds, so the cost per unit is considerably higher (approximately $45 full-body tan vs $10 per casual sunbed session).

Aim 2
Over the past 12 months we identified 168 sunbeds or sunlamps for sale on TradeMe©. At least 42 of these were confirmed as having been used commercially. Seventeen of these commercial sunbeds have sold, most for less than $250 and one for just $1. No health warnings or advice on appropriate use were provided in the description field, and at least one claim of health benefits was made regarding vitamin D and psoriasis prevention—which would seem to directly contravene the Commerce Commission Directive to not overstate the benefits of sunbed use.13

Discussion

Given that only four businesses were identified in the audit nationally, as being reliant on the provision of sunbed services as their sole source of income, we would anticipate that few, if any, job losses would result from a total ban on sunbeds. Spray tanning is an established, generally acceptable alternative service to New Zealand consumers.13 With the more labour-intensive nature of spray tanning, businesses should be able to re-orientate to providing spray tanning services in lieu of sunbeds and this may, in fact, create additional employment opportunities. As has happened in Australia, business owners could be compensated for the loss of cosmetic tanning equipment and methods for its safe disposal provided.14 This would largely reduce the risk of old and second-hand sunbeds being dumped onto the market, as it appears to be happening currently, a practice that seems likely to become more widespread if restrictions on sunbed operators are increased without the implementation of a total ban and provision of compensation. Not implementing a ban on commercial sunbeds will mean a continued and prolonged commitment for organisations working in the primary prevention of skin cancer (such as The Cancer Society and The Health Promotion Agency) to educate individual New Zealanders on the risks associated with using sunbeds. The already high and potentially increasing rates of skin cancer suggest that New Zealanders are either not well informed about the risks of solar UVR and/or artificially produced UVR or choose to ignore these risks. A survey of over 1,000 New Zealanders on their understanding of the risks associated with cancer in 2014/15 asked respondents “what increases your risk of getting melanoma”, prompts were not given. Preliminary findings suggest that only 12% of respondents reported a sunlamp or sunbed.15 Even being educated about the risk of a specific behaviour does not necessarily change that behaviour. For example, a survey of young people in New Zealand showed that despite being aware of the risks associated with sunbed use they still chose to use them.16
The main limitations of the data used to address Aim 1 is that it likely underestimates the number of sunbed premises and sunbeds available in New Zealand. There will be businesses that we have missed, businesses which declined to participate or could not be contacted. The main limitation of the data collected to address Aim 2 is that it only measures the sale of sunbeds over a short time-period on one auction site.

Conclusion
Given scientific evidence demonstrating that there is no safe level of sunbed use for individuals of any age, a ban on commercial sunbed services would have a significant positive impact on skin cancer incidence. Since few New Zealand businesses depend on providing sunbed services, a ban would have minimal negative economic impact, affecting only a small number of businesses. Spray tanning is an alternative, higher value, more labour-intensive service that is already acceptable to consumers. Businesses that offer cosmetic sunbed services are selling exposure to a type-1 carcinogen for minimal financial gain. Accordingly, there should be a total ban on the importation, manufacture, sale and rental of sunbeds for commercial or private use in New Zealand.

Competing interests:
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