

**SURVEY OF KNOWLEDGE
AND INFECTION CONTROL
PRACTICES IN SALONS
OFFERING NAIL SERVICES**

Regional Public Health

This report was prepared by Helen van Mil and Annette Nesdale, on behalf of the project team:
Helen van Mil, Annette Nesdale, Jonathan Lambert, and Barbara Eddie.

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Citation: Regional Public Health. 2018. *Survey of Knowledge and Infection Control Practices in Salons Offering Nail Services*. Wellington. Regional Public Health.

Regional Public Health (2018)

www.rph.org.nz

ACKNOWLEDGEMENTS

The project team would like to thank the following organisations for their assistance with the development and implementation of the project:

- Porirua City Council
- Hutt City Council
- Masterton District Council
- New Zealand Association for Registered Beauty Therapists
- Podiatry New Zealand
- Nail and beauty salon owners and managers in the greater Wellington region.

EXECUTIVE SUMMARY

- A survey of 57 nail and beauty salons in the Wellington region was undertaken between January and July 2017 to assess the knowledge and infection prevention and control procedures within the nail industry
- A lack of recognised formal qualifications was observed in over half of the salons visited. Many staff are trained on the job, or by nail polish companies
- Nail or beauty salons with an adequate number of trained staff were twice as likely to ask clients about pre-existing health conditions
- There is limited understanding about blood borne viruses and other infections and how they are spread/controlled
- There was limited understanding about protection from hepatitis B infection. Staff are often not vaccinated, or their immunity status is unknown
- Some salons continue to use heel blades to remove calluses or hard skin, which is associated with a high risk of cutting the underlying tissue and bleeding
- There is a lack of understanding about cleaning, disinfecting, sterilising and hygienically storing instruments
- The large majority of salons have no written infection control protocols for staff to follow, or cleaning schedules
- Nail and beauty salons visited in the Wellington region are overwhelmingly supportive of some form of regulation to improve standards within the industry
- There is both a need and interest within the industry, for education and resources to be provided regarding infection control practices in nail and beauty salons that provide nail treatments.

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INTRODUCTION

Recent years have seen an increase in the popularity of pedicures, manicures and application of acrylic nails with a subsequent increase in the number of salons providing these services. In particular, there has been an increase in 'drop-in' nail salons offering lower priced services. However, many staff (1),(2) and clients have low awareness of the potential risks that these nail treatments can pose.

There is a high risk of infection from manicures and pedicures if the skin is cut or broken and there are inadequate infection control measures in place. Viral hepatitis (3),(4) bacteria (5), *mycobacterium* (6),(7),(8) and fungi can be transmitted directly to or from clients, operators and the environment via dirty hands, cuts or sores or inadequately cleaned, disinfected and sterilised equipment (9).

The full extent of harm from manicures and pedicures is not well known or researched. Infections are likely to be under recognised, under reported and infrequently come to the attention of health professionals. In addition, doctors may not ask about possible causes of infections or injuries to the hands and feet and there is no requirement for concerns to be reported to public health or other agencies. Accident Compensation Corporation (ACC) data from 2012-2017 shows only a handful of claims associated with nail salons are made each year(10). A magazine article (11) in 2013 reported ACC accepted 52 claims for accidents in nail bars and beauty salons in the previous year. The main injuries were punctures, lacerations, heel cuts and nail infections. These figures are likely to be an underrepresentation of harm from nail treatments, as many clients and possibly doctors may not be aware that some nail treatment injuries can be lodged as a claim with ACC. The ACC data is also limited. Although there are some mandatory fields in the claim form (accident date, and if the accident occurred at work) it is optional for the claimant to include a description of how the accident occurred. Nevertheless, international evidence suggests moderate to serious harm is occurring as a result of nail treatments. A case report from the UK details a manicure leading to gangrene and amputation of fingers.(12) At least two deaths have been reported in the United States.(13) Two cases of acute hepatitis B were investigated by the Dutch Municipal Health Service identifying the most probable source of infection was a piercing salon that both had visited on the same day (14). An outbreak of nine cases of acute hepatitis B in the USA were linked to podiatric care.(3) More recent reviews from the United States(15) confirm the risk for HBV/HCV transmission in nail salons cannot be excluded. Boils and skin infections due to *mycobacterium* are also occurring internationally. An outbreak of over 100 cases of *mycobacterium furunculosis* associated with footbaths was identified in a nail salon in California.(8) Environmental sampling of a variety of nail salons indicated the presence of pathogens, a buildup of organic debris and hair behind the filters in foot spas.(7),(8) Dissatisfied clients also report their experiences in the media(11) (16) and to the NZ Association of Registered Beauty Therapists (NZARBT).

Unlike many Canadian provinces and territories, (17) there are no national regulations, minimum requirements or standards for nail and beauty salons in NZ. No formal training or qualification is required to set up and operate as a nail technician in NZ unless there is a local bylaw.

Some areas in New Zealand (NZ) have local bylaws that provide for a minimum standard and annual registration of the salons and staff training. The bylaws vary, but in general cover beauty therapy treatments, tattooing, skin piercing, tanning and /or hair removal.

In 2013 The Masterton and South Wairarapa District Councils' Consolidated Bylaw 2012 was introduced. It requires the registration of beauty therapists, solarium operators, nail technicians, tattooists and skin piercers. This bylaw requires all practitioners to be trained to a recognised standard; sets out minimum physical standards for the premises and equipment, and sterilisation and disinfection be carried out using accepted methods. There is no bylaw in Wellington City, Porirua, Kāpiti Coast, Lower Hutt or Upper Hutt. Environmental Health Managers in these local councils indicate that they would be supportive of a bylaw to reduce risk to the public health but that there would need to be evidence of the risk in order to provide Councillors with justification to enact a new bylaw.

To establish a new bylaw the Local Government Act 2002 (s 155 (1)) requires a council to determine that the issue is significant and that a bylaw is the most appropriate way to address the problem. Currently the Auckland Unitary Authority, Napier City, Dunedin City, Masterton, South Wairarapa, Stratford, Ruapehu and Timaru District Councils all have a bylaw that includes licencing and inspection of beauticians, tattooists, body piercers and nail technicians. The last two bylaws were enacted in January and April 2018 respectively.

There is variation across NZ regarding other council inclination to pursue bylaws for tattooing and beauty services. Nelson City Council and Marlborough District Council chose not to pursue bylaws for beauty therapy, tattooing and skin piercings in recent years. Their reasons were that there was insufficient local evidence regarding health problems or unhygienic premises and preferring national legislation over local bylaws.

There are no local bylaws in the Wellington region, meaning baseline data on operating standards from annual registration visits does not exist.

This survey provides baseline information about infection prevention and control measures in nail and beauty salons in the Wellington region and highlights the potential benefits of regulation. Regulation of the industry would see a reduction in infection risks associated with nail services offered by nail and beauty salons. Ideally, national regulation applying across the country, would ensure consistency and efficiency. In the absence of national regulation, each council will have to introduce their own bylaw to ensure the support of safe practices within their district.

Regulations need to be supported by education and guidance on how to provide a safe service. The NZARBT has produced Health and Hygiene Guidelines which are consistent with best international practice. However, membership to NZARBT is limited to people who have a formal beauty therapy qualification and membership is voluntary.

OBJECTIVES

1. Assess infection control knowledge and practices of the nail and beauty salon operators/ managers across the region
2. Support managers/ owners to deliver services in line with best practice
3. Gather data to inform local councils, and the Ministry of Health regarding the need for a comprehensive system to protect public health
4. Assist RPH staff to understand how nail and beauty salons operate, their current infection control practices and the environmental factors that either support or hinder best practice.

SCOPE

The project scope was defined as follows.

- Nail salons and beauty salons offering nail treatments, manicures and pedicures in the greater Wellington region were invited to participate in the survey
- Owners or managers of salons were interviewed
- Education and advice was offered at the time of the inspection, particularly if any serious issues were identified.
- Participation in the survey was voluntary

GLOSSARY OF TERMS AND ABBREVIATIONS

NZARBT	New Zealand Association of Registered Beauty Therapists
RPH	Regional Public Health
TLA	Territorial Local Authority
EHO	Environmental Health Officer
MDC	Masterton District Council
FTE	Full Time Equivalent

METHODS

Project team

A project team was developed to undertake the planning of the project, comprising of:

- Helen van Mil, Health Protection Officer
- Annette Nesdale, Medical Officer of Health
- Jonathan Lambert, Health Protection Officer
- Barbara Eddie, Public Health Nurse

Ethical review

The project team were advised by the National Health and Disability Ethics Committee that the project did not require their review. Throughout the project, the interviewers emphasised that participation in the survey was voluntary. The interviewers were respectful and discrete when visiting salons; particularly if clients were present.

Capacity development

A workshop was developed for Healthy Environments and Disease Control (HEDC) staff from Regional Public Health (RPH) and local authority Environmental Health Officers (EHOs) who had expressed interest in assisting with undertaking survey visits. The workshop covered expected infection prevention and control measures for manicures, pedicures and other nail treatments, how to conduct a visit, and an introduction to the Masterton District Council (MDC) bylaw. It included speakers from RPH, MDC, and Podiatry New Zealand. A copy of the programme can be found in Appendix 1.

Survey development

A questionnaire was developed in consultation with Julie Martin, formerly of NZARBT, and an EHO from Masterton District Council. A copy of the questionnaire can be found in Appendix 2.

Visits

As nail and beauty salons are unregulated in the Wellington region, there is no list of registered premises. A search using regional telephone books and the internet identified 127 nail and beauty salons who offer nail services. Salons were contacted initially by telephone to introduce the survey and arrange a suitable appointment time. At least three attempts were made to contact each salon, including telephone and email. Salon staff were informed that the visit was voluntary. A letter outlining the survey was sent to salons by email if telephone contact could not be made. At the visit, the manager or owner of each salon was interviewed and the salons facilities equipment and cleaning procedures were reviewed. Each participating salon was provided with a copy of the NZARBT Health and Hygiene Guidelines (the Guidelines). (18) Verbal feedback was provided at the time of the visit if any issues were identified.

The visits were undertaken between January and July 2017. Visits were performed in pairs by staff from RPH, Hutt City Council, and Porirua City Council. 127 salons were identified. 57 salons were assessed, representing 45 % of the identified salons offering nail services in the greater Wellington region. Reasons for not being able to visit were:

- 10 % (13 salons) no longer operating
- 11 % (14 salons) declined to take part (or cancelled appointment)
- 21 % (27 salons) unable to make contact (or no response).

Following the visit a thank you letter was sent and further recommendations regarding disinfection and sterilisation were included (Appendix 4).

Data collection and analysis

Data was collected on a hard copy questionnaire and entered into the EpiInfo7 programme for analysis. Proportions were compared using a chi square test with the significance set at $p < 0.05$. A two tail Mantel-Haenszel was used for p values.

The following definitions were used in the analysis.

- Salons were defined as either 'nail only' or 'full beauty services'. Full beauty services included salons which provided nail services as well as facials, hair removal, hair dressing, tanning and or make up etc.
- Training qualifications were categorised into two groups;
 - Salon with adequate number of trained staff; defined as at least 75% of staff at the salon have a formal qualification (may include some staff members with more than one formal qualification). A formal qualification is the equivalent of an internationally recognised one year diploma, two year certificate, or World Standard e.g. CIDESCO (Comite International d'Esthetique et de Cosmetology).
 - Salon with inadequate number of trained staff; defined as less than 75% of staff have a formal qualification. Informal qualifications include shorter duration courses, unrecognised qualifications, and supplier training (e.g. nail polish manufacturer)
- 'Don't know' or 'no on-going training' includes salons which couldn't sufficiently describe on-going training
- Lower price salons was defined as \$40 or less for a manicure
- Adequate instrument sterilisation must include all of the following steps;
 - Wash in hot soapy water
 - Scrub or ultrasonic cleaner
 - Soak in disinfectant for required time (as specified in the manufacturer's instructions). The disinfectant also had to be within its stated use by date
 - Sterilise with a glass bead steriliser or autoclave
 - A separate note is made of those salons who then store the sterilised instruments in a suitable manner (i.e. UV cabinet, clean unused food grade plastic bag), as this is required in order to maintain the sterility
- Adequate cleaning of towels is considered as either a commercial laundry service or hot wash at 60⁰ C or higher

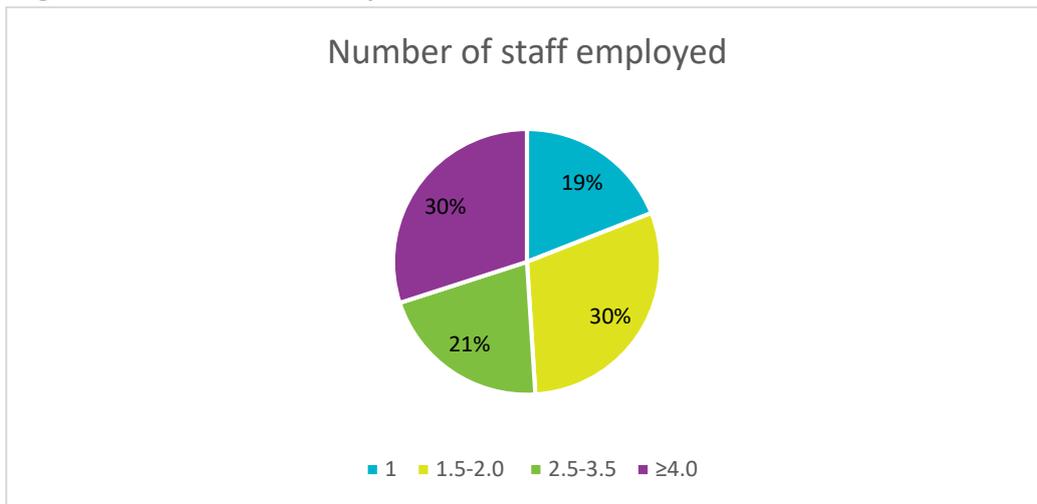
- Adequate cleaning of client areas was defined as cleaning with a suitable disinfectant, change paper/towels
- Owners/managers were asked if they used equipment that needed to be sterilised. Their response has been categorised as either 'yes' or 'no' or 'don't know'
- Adequately aware of transferrable conditions is considered as knowing about fungal, bacterial, and blood borne viral infections rather than one or two of these categories
- Suitable disinfectant solutions were defined as those capable of killing viruses and bacteria (e.g. hospital grade disinfectants), used at the correct concentration, correct contact time and within the stated use by date.

RESULTS/DATA ANALYSIS

Salon and operator characteristics

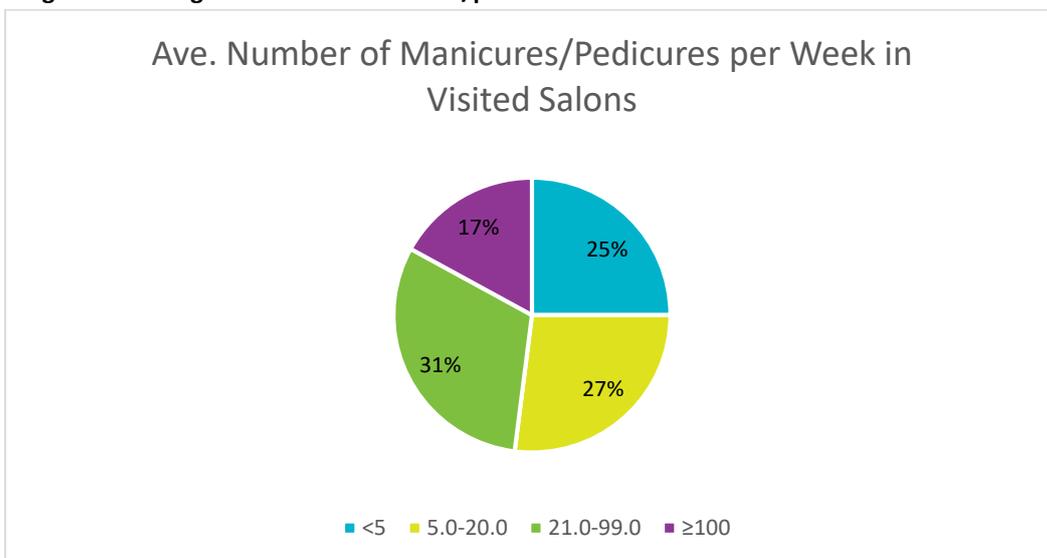
The number of staff (FTE) per salon is displayed in figure1. The FTE per salon ranged from one to 10.5, with 19% having just one staff member. A further 30% had between 1.5 and 2.0 full time equivalent staff members, 21 % employed between 2.5 and 3.5, while 30% employed more than four staff members.

Figure 1: Number of full time equivalent staff in visited salons



The combined number of pedicures and manicures performed per week (figure 2) by each salon varied from one to 245, with a median of 20 and average of 47. There were 17% of salons doing 100 or more manicures/ pedicures per week. The cost of a manicure ranged from \$23 to \$96 and a pedicure from \$35 to \$96. The average price for a manicure was \$46 and a pedicure \$54.

Figure 2: Average number of manicures/pedicures in visited salons



79% (45) of businesses offered full beauty services and 21% (12) were nail salons only. Over half of salons interviewed (32) served predominantly pre-booked clients, while 37% (21) dealt mainly with casual, 'walk-in', clients and the remaining 4% (7) had a mix of custom.

41% (29) of businesses had been operating for less than five years, with one business having only been open one month. Overall 32% (18) of salons were members of the NZARBT, while 5% (3) had never heard of the association.

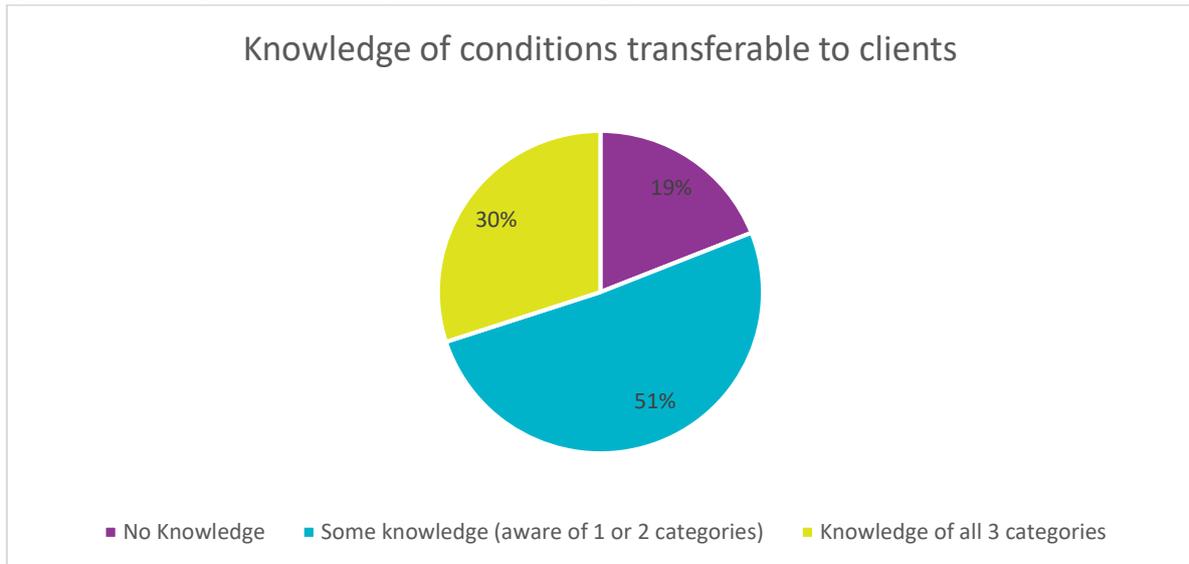
Knowledge/understanding

Owners/managers were questioned as to whether they ask clients any health questions. 68% (39) responded that they obtained health information in a variety of ways ranging from requesting clients to complete health questionnaires, visual inspection of the hands/feet, or relying on the clients to provide information if they considered it necessary. 54% (31) reported they routinely ask clients about their health conditions. Of these, 49% (28) asked about infections, 33% (19) allergies, 30% (17) problems with previous treatments, and 23% (13) about medications the client is taking. Salons with an adequate number of trained staff were almost twice as likely to ask clients health questions prior to treatment (71% compared with 38%).

Respondents reported they would not provide the manicure/pedicure if they observed the client had an infection in 39% (22) of salons. The same number reported discontinuing treatment if a client began to bleed during treatment. 16% (9) of salons commented that they were using styptic pens or other haemostatic solutions to stop superficial bleeding. The likelihood of discontinuing treatment due to infection or bleeding did not alter significantly based on having adequately trained staff, pre-booked custom, or how long the salon had been in business. However, lower priced salons were significantly less likely (approximately 2.5 times) to halt treatment than higher priced salons (21% compared with 53%).

Several questions assessed the owner/managers knowledge of the risk of infection transmission between staff and clients or between clients via inadequately cleaned instruments or equipment (e.g. foot spa). Assessment was based on knowledge of three categories of conditions; bacterial infections (skin infection/boil/abscess), viral infections (hepatitis B/hepatitis C/HIV/blood borne viruses), and fungal infections (fungus/tinea). When asked about conditions that could be transferred to clients, 19% (11) of respondents had no knowledge, 25% (14) were aware of one condition, 26% (15) of two, and 30% (17) were aware of all three categories (see figure 3). With regard to conditions that staff could acquire either from clients or equipment, 16% (9) had no knowledge, 23% (13) were aware of one, 21% (12) of two, and 40% (23) were aware of all three categories.

Figure 3: Knowledge of conditions (bacterial, viral, fungal) transferable to clients



Respondents from salons with adequately trained staff were almost twice as likely to be aware of all conditions transferable to staff but no more likely than others to be aware of conditions transferable to clients.

Only 16% (9) of salons reported that staff were fully vaccinated for Hepatitis B. When asked how they knew all their staff were vaccinated; some operators weren't able to provide an answer, one salon operator said this is an immigration requirement other responses included that staff were all vaccinated in Vietnam or that the staff member has told them they are vaccinated or sole operator who knew their own status. Less than 5% (2) said they encourage staff to have these vaccinations. No salons were paying for staff to be vaccinated. This did not vary based on training, client base, length of time in business, or average price of a manicure.

Practices

Only 30% of salons had a written cleaning schedule (see figure 4). Salons with an adequate number of trained staff were three times more likely to have a written schedule than those without an adequate number of trained staff. In keeping with lower price salons being more likely to have inadequately trained staff, these salons were also five times less likely to operate with a written cleaning schedule.

Figure 4: Premises with a written cleaning schedule



All salons had separate staff hand basins, but only 69% had separate equipment cleaning sinks. The remainder using kitchen or treatment area sinks for equipment cleaning. Hand sanitiser was available at all workstations in 61% (35) of salons.

75% (43) of nail salons visited have staff uniforms. However, less than half of these were washing uniforms daily. The remaining salons either did not state the frequency of uniform washing or reported uniform washing every two days or twice a week.

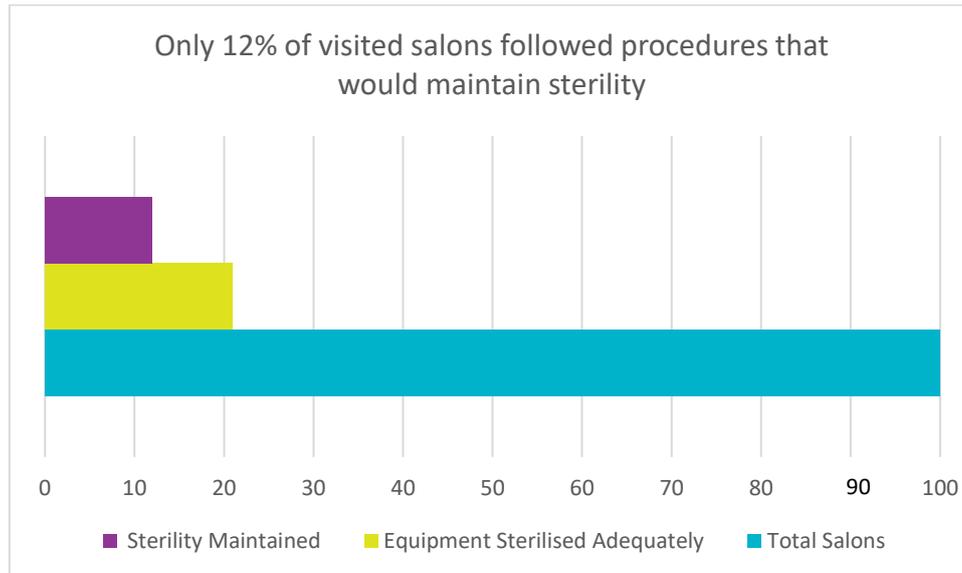
40% (23) of salons assessed could not adequately describe how they wash their towels and/or uniforms (e.g. don't know what temperature or staff wash at home as required).

Adequate cleaning of client areas (e.g. fresh paper/towels, work stations wiped down with appropriate disinfecting product) was recorded in 90% (51) of salons.

Suitable disinfectants, defined as those capable of killing both viruses and bacteria, at the right concentration and contact time, and within the use by date, were used by 86% (49) of salons. Of the 14% (8) of salons not using appropriate disinfectant, one was using an unknown chemical in an unlabelled bottle and three were using household cleaners such as 'Spray and Wipe' and three had no expiry date. One of these salons was using disinfectant at a significantly lower concentration than required by the manufacturer's instructions (this salon was also using a solution past its expiry date).

21% (12) of salons were adequately disinfecting and sterilising equipment, however, almost half (5) of these salons then failed to store or treat the equipment in such a way as to prevent recontamination (i.e. in a UV cabinet/zip lock bag). This means only 12% of salons surveyed were adequately disinfecting and maintaining the sterility of their equipment (see figure 5). Salons with trained staff were slightly more likely to have appropriate disinfection procedures, but due to the small number of salons adequately disinfecting, this is not statistically significant. Salons with mostly 'walk-in' custom were over five times less likely to be adequately disinfecting equipment than those salons with mostly pre-booked clients.

Figure 5: Disinfection and Sterilisation Procedures in Premises

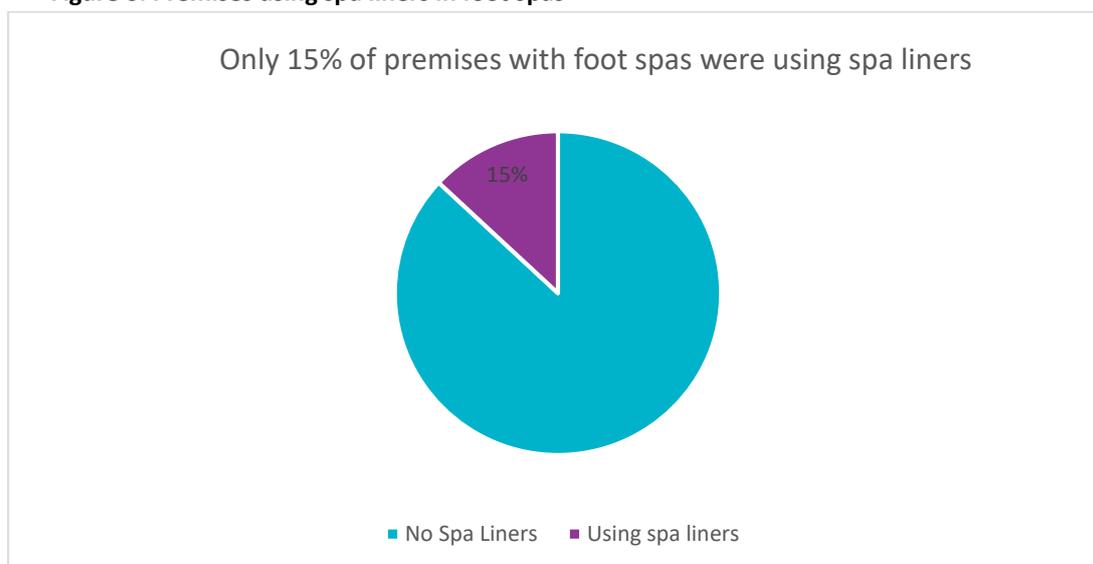


All respondent's confirmed they had equipment that required sterilising, including cuticle/nail clipper (75%), scissors (54%), any equipment that cuts or pierces the skin (26%), and 'other' equipment (32%). Only one salon was sterilising their equipment using the preferred method of an autoclave. Glass bead sterilisers were used in 14 salons, and for this study this was considered acceptable. Several operators/ managers incorrectly thought that their UV cabinet or other device such a hot air oven (temperature and time not specified) sterilised instruments.

Overgrown cuticles were pushed back with a metal cuticle pusher (72%), cut (47%), or pushed back with a rubber hoof stick instrument (16%). One operator could not describe what action was taken to deal with cuticles. These results did not vary significantly by training, client base, and length of time in business, or average cost of services.

Foot spas were used in 61% (34) of salons surveyed, but only 15% (5) of these were using spa liners (see figure 6). The remaining salons were cleaning foot spas between clients with hot soapy water, spray disinfectant, and/or scrubbing around the jets.

Figure 6: Premises using spa liners in foot spas



Heel blades to shave calluses and dry skin from feet were used in 14% (8) of salons. While an additional salon said they did not use heel blades, several were observed in the UV cabinet while officers were at the salon. None of these salons were members of the NZARBT, and were six times more likely to have staff that were not adequately trained. Salons with mostly 'walk-in' custom were eight times more likely to be using heels blades. Each of these salons was advised that heel blades should not be used by nail technicians due to the risk of infection and injury by removing too much skin. Clients with significant callus should be referred to a registered podiatrist who has the appropriate training to safely use a heel blade if required.

92% (51) salons had a first aid kit, four salons did not have a kit and there was no data for two salons. Inspecting the first aid kit was not part of the survey but some visits did review the kits. The contents of kits varied from basic, with only band aids, to a more comprehensive kit. The NZARBT recommends all salons have a first aid kit and have at least one person with a current first aid certificate on the premises at all times.

Training

47% (25) of salons were displaying staff qualifications where they could be viewed by clients, although these were not necessarily formal qualifications. In assessing training and qualifications, it was considered that slightly less than half (49%) of salons had an adequate number of trained staff (see figure 7).

Figure 7: Adequate number of trained staff in salons visited



Respondents were asked about on-going training undertaken by their staff. A third reported on-going training was in-house only (32%), while 21% (12) said their staff had none, didn't know, or were unable to satisfactorily describe any on-going training.

Lower priced salons, charging an average of \$40 or less for a manicure were over three times more likely to have an inadequate number of trained staff than those charging more than \$40. The number of years in operation (i.e. more than, or less than, five years) had no significance on the likelihood of having an adequate number of trained staff. Salons operating on a mostly 'walk-in' basis had a higher number of untrained staff, but this was not statistically significant.

Attitudes to education and regulation

Most nail salons (70%) were aware that some other regions in New Zealand have bylaws requiring the registration and inspection of nail/ beauty salons. An overwhelming 93% were supportive of a similar bylaw in the Wellington region. This figure did not vary significantly by qualification level of staff, type of salon (i.e. full beauty services versus nails only), average price, or how long the salons had been in operation. Just 5% of salons (3) expressed concern about the potential cost of regulation.

A large majority of salons stated they were interested in receiving education sessions arranged by RPH. In addition, salons were asked if they would be interested in resources being developed for nail salon staff. 89 % expressed an interest and the majority had a preference for resources to be written in English (84%). Other significant preferences included Vietnamese (25%) and Cambodian (7%).

Summary results from surveys

Table 1. Participating salons as a proportion of all salons in the specific geographic area

SALONS ASSESSED BY GEOGRAPHIC AREA	NO OF SALONS ASSESSED	% OF ALL SALONS IN AREA ASSESSED
Wellington city	27	45
Hutt city	10	30
Upper Hutt city	8	73
Porirua city	6	67
Kāpiti Coast	6	43
Total	57	N/A

Table 2. Salon and operator characteristics

SALON AND OPERATOR CHARACTERISTICS	NO OF SALONS	%
Number of staff		
• 0 - 1.0	11	19
• 1.5 – 2.0	17	30
• 2.5 – 3.5	12	21
• > 4.0	17	30
Number of manicures and pedicures combined per week		
• <5	13	25
• 5-20	14	27
• 21-99	16	31
• 100+	9	17
Average price of manicure		
• <\$30	6	11
• \$30- \$45	23	43
• >\$45	25	46
• Not recorded	3	N/A
Average price of pedicure		
• <\$30	0	0
• \$30- \$45	23	44
• >\$45	29	56
• Not recorded	5	N/A
Full beauty services are available at the salon	45	79
Custom		
• Mostly pre-booked	32	56
• Walk-in	21	37
• Mix of pre-booked and walk-in	4	7
Salons operating for less than 5 years	22	41
Member of NZARBT	18	32

Table 3. Characteristics assessed

CHARACTERISTIC OR SURVEY ITEM	NO OF SALONS	%
Health and understanding of transmissible infections		
Staff ask clients about		
• Health conditions	31	54
• Infections	28	49
• Allergies	19	33
• Problems with previous treatments	17	30
• Medications	13	23
• Other	39	68
Staff do not do a nail treatment if an infection is observed	22	39
Staff awareness of conditions transferable to clients (category 1 = Bacterial infections, category 2 = viral blood borne infections, category 3 = fungal infections)		
Knowledge of		
• None of the categories	11	19
• 1 of the above categories	14	25
• 2 of the above categories	15	26
• All 3 categories	17	30
Adequately aware of conditions transferable to staff (category 1 = Bacterial infections, category 2 = viral blood borne infections, category 3 = fungal infections)		
Knowledge of		
• None of the categories	9	16
• 1 of the above categories	13	23
• 2 of the above categories	12	21
• All 3 categories	23	40
Nail technician stops the treatment if the client bleeds	22	39
Staff are known to be fully vaccinated (hepatitis B)	9	16
Practices		
A written cleaning schedule is used	17	30
There is a separate staff hand basin	57	100
The salon has a separate sink to clean equipment sink	38	69
Hand sanitiser is available at all workstations	35	61
Staff wear a uniform/apron and it is washed daily	20	35
Towels are adequately cleaned	34	60
Adequate cleaning of client areas (i.e. fresh paper, wiped down, or adequate other)	51	90
Adequate instrument cleaning/disinfection/sterilisation	12	21
Instruments are stored or treated to prevent contamination after adequate disinfection/sterilisation.	7/12*	12 (7/57)

Disinfecting solution for equipment		
<ul style="list-style-type: none"> Suitable disinfectant solution is used No expiry date on solution Incorrect concentration Unlabelled chemical in bottle (don't know) Other solution (not suitable) is used 	49 3 1 1 3	86 5 2 2 6
Equipment identified by operator that needs to be sterilised	57	100
<ul style="list-style-type: none"> Cuticle/nail clippers Scissors Any equipment that cuts or pierces skin Other 	43 31 15 32	75 54 26 56
Salons use a foot spa	34	61
Salon who use a foot spa <u>and</u> a spa liner used	5	15
Staff deal with overgrown cuticles by		
<ul style="list-style-type: none"> Pushing the skin back with metal instrument Cutting with scissors or cuticle clippers Pushing the skin back with rubber instrument Don't know 	41 27 9 1	72 47 16 2
Staff deal with rough skin in feet by		
<ul style="list-style-type: none"> pumice metal file Heel blade 	19 13 8	33 23 14
Training		
Qualifications displayed on wall	25	47
Adequate number of trained staff		
<ul style="list-style-type: none"> Yes No 	28 29	49 51
On-going training		
<ul style="list-style-type: none"> No on-going training In-house training only 	12 18	21 32
Attitudes to education and regulation		
Salon manager has heard of bylaws in other regions	40	70
Supportive of bylaw	52	93
Worried about cost of bylaw	3	5
Interested in education sessions	49	89

Table 4. Characteristics assessed compared with level of staff training

CHARACTERISTIC OR SURVEY ITEM	ADEQUATELY TRAINED STAFF				P value
	Yes(n = 28)		No (n = 29)		
	Number	%	Number	%	
Average price of manicure* <ul style="list-style-type: none"> • <=\$40 (Low Price) • \$40 * for 3 salons price not recorded	5	18	19	66	0.0013
	21	75	9	31	
Knowledge/understanding					
Ask health questions	20	71	11	38	0.011
Ask about infections	15	54	13	45	0.51
Treatment not done if infection observed	18	49	19	51	0.9
Adequately aware of conditions transferable to clients	11	39	6	21	0.12
Adequately aware of conditions transferable to staff	15	54	8	29	0.046
Do they stop treatment if client bleeds	13	46	9	31	0.23
Staff are fully vaccinated	4	14	5	17	0.76
Practices					
Written cleaning schedule	13	46	4	14	0.007
Adequate instrument cleaning (including correct solution)	7	25	5	17	0.47
How deal with overgrown cuticle - cut	11	39	16	55	0.23
How deal with rough skin - use heel blade	1	4	7	24	0.02

Table 5. Characteristics assessed compared with booking style of salon

CHARACTERISTIC OR SURVEY ITEM	CLIENTS MOSTLY PREBOOK				P value
	Yes n=32		No n=21		
	Number	%	Number	%	
Knowledge/understanding					
Ask health questions	21	66	9	43	0.10
Ask about infections	20	63	7	33	0.4
Staff are fully vaccinated	5	16	3	14	0.89
Practices					
Written cleaning schedule	10	31	6	29	0.84
Adequate instrument cleaning	9	28	1	5	0.03
How deal with overgrown cuticle -Cut	14	44	10	47	0.78
How deal with rough skin – Heel blade	1	3	5	24	0.02
Do they stop treatment if client bleeds	14	44	7	33	0.45
Don't do if infection	22	69	11	52	0.23
Training					
Adequate training	20	63	8	38	0.08

Table 6. Characteristics assessed compared with the number of years salon has been in operation

CHARACTERISTIC OR SURVEY ITEM	SALONS IN BUSINESS MORE THAN 5 YEARS				P value
	Yes n=32		No=25		
	Number	%	Number	%	
Knowledge/understanding					
Ask health questions	19	59	12	48	0.39
Ask about infections	13	41	15	60	0.04
Staff are fully vaccinated	3	9	6	25	0.13
Practices					
Written cleaning schedule	10	31	7	28	0.79
Adequate instrument cleaning	7	22	5	20	0.86
How deal with overgrown cuticle -Cut	12	38	15	60	0.09
How deal with rough skin – Heel blade	2	6	6	24	0.06
Stop if bleed	12	38	10	40	0.85
Don't do if infection	19	59	18	72	0.32
Training					
Adequate training	16	50	12	48	0.88

Table 7. Characteristics assessed compared with average price salons charge

CHARACTERISTIC OR SURVEY ITEM	LOW PRICE SALONS (I.E. <=\$40 FOR MANICURE)				P value
	Yes n = 24		No n = 30		
	Number	%	Number	%	
Knowledge/understanding					
Ask health questions	10	42	20	67	0.07
Ask about infections	11	46	15	50	0.76
Staff are fully vaccinated	4	17	4	13	0.73
Practices					
Written cleaning schedule	2	8	14	47	0.002
Adequate instrument disinfection	4	17	8	27	0.38
Suitable disinfectant solution	21	88	27	90	0.77
How deal with overgrown cuticle - Cut	12	50	14	47	0.81
How deal with rough skin – heel blade	5	21	2	7	0.13
Do they stop treatment if client bleeds	5	21	16	53	0.02
Don't do if infection	16	67	19	63	0.80
Training					
Adequate training	5	21	21	70	0.0003

DISCUSSION

Assessment of knowledge and infection prevention and control practices in commercial nail and beauty salons in the Wellington region has not occurred previously. To our knowledge this is also the first assessment of this kind in New Zealand.

The main outcome is the identification of baseline data on infection control practices of salons in the Wellington region. The dataset also provides a benchmark of current practices in the industry, which can then be compared with other regions where regulation occurs through bylaws. The immediate value of the salon visits was that RPH staff provided feedback on any unsafe practices and other areas for improvement.

While the NZARBT has developed guidelines for the industry, only 32% of the salons visited were members of this organisation. Those salons who do not have a staff member with a qualification recognised by NZARB, are unable to join the association or access resources the association provides. There are national guidelines for the safe piercing of skin⁽¹⁹⁾ used by tattooist and skin piercers, but there is not a similar resource for other commercial beauty and personal services that can break the skin.

While many operators indicated that staff received some form of on-going training, this was often in the form of 'in-house' training, provided by nail product companies or other staff (32%). A further 21% of salons had no on-going training at all.

The results of the survey clearly indicate a need for more accessible ongoing education in the sector.

While 89% of salons interviewed expressed an interest in education sessions arranged by RPH, a significant number (19%) of salons surveyed were sole operators, meaning taking time off to attend training sessions may present difficulties. Education and support for nail salon workers has been found to be effective at improving compliance with infection control practices⁽²⁰⁾.

A lot of salons were getting some of the basic infection prevention measures wrong, with 60% reporting they would continue a treatment even if the client started bleeding.

Only 64% of salons would advise a client that a treatment could not be done that day due to a hand/foot infection in the treatment area. Both these practices put clients at high risk of infection. A lack of understanding about the potential impact of the clients existing health conditions is reflected by 46% of salons not asking clients about pre-existing health conditions. Conditions such as diabetes, some cancers or cancer treatments and poor vascular circulation put the client at higher risk of serious infection and delayed healing following an unintended cut or abrasion. With an aging population and increase in health conditions it is important that salons routinely ask about these conditions and adjust what services they offer to people at higher risk.

Responses to the cleaning of facilities, uniforms and equipment were variable. Nearly all the salons (90%) described adequate process for cleaning client areas and work stations. However, to ensure all areas are consistently cleaned every time requires a written cleaning schedule, particularly where

there are multiple staff. Salons offering lower cost manicures were five times less likely to have a written cleaning schedule. The survey did not ask if all staff are involved in salon cleaning, or if cleaning was done by a particular person or contracted to an external company. Owner / manager knowledge and practices for uniform and towel washing was not as good as it could be. Fungi like *Tinea pedis* ('Athletes Foot') and *Staphylococcus* can be spread to clients and staff through inadequate laundered towels. All salon owners or managers should understand the importance of effective laundering and have appropriate oversight within their salon.

Of greatest concern is an apparent lack of understanding of the steps required to adequately process tools that may pierce or cut the skin (e.g. nail clippers,) prior to use for the next client.

Nail clippers and scissors are considered semi-critical instruments and require a wash in soapy water, immersion in hospital grade disinfectant for required time, and then sterilisation. An autoclave is the preferred method. Only one salon was using an autoclave and 14 were using glass bead sterilisers. Adequate sterilisation is a challenge for salons; in particular the cost, ease of use and requirement for a rapid turnaround time. Glass bead sterilisers use a high temperature and offer a relatively short sterilising time and are considered acceptable for sterilisation by the NZARBT. Potential issues with glass bead sterilisers include difficulty monitoring their effectiveness, inconsistent heating resulting in cold spots, and the potential for air trapped between the beads to affect the sterilisation process. Satisfactory performance of the glass bead steriliser is dependent on the operator; allowing adequate time for the beads to reach the operating temperature, inserting instruments in to the body of the beads (not the sides where temperatures are lower), limiting number of instruments per load and allowing beads to come back to temperature before the next load(21).

Adequate processing of semi critical instruments is dependent on staff following all the required steps (washing, disinfecting, sterilising and storage). Some salons were doing the first three steps well, then storing instruments in a way that they could get contaminated e.g. stored on an open shelf near a hand basin. Only 12% of participating salons were adequately following all the steps of washing, disinfecting, sterilising and storing their equipment. Inadequate disinfection and sterilisation of equipment was seen across all types of salons, including those with suitably trained staff. Anecdotally, salon managers often believed they were following best practice and strived to achieve this, however in the absence of any minimum standards, managers don't always have the information required to achieve this. This issue is not unique to NZ, with a similar gap in knowledge and a lack of adequate infection control measures found in a Canadian survey of manicure and pedicure establishments.(1)

Almost half of salons were cutting cuticles with scissors or clippers, and this did not alter based on any of the variables considered. This increases the risk of infection through cuts and possible transference of blood borne pathogens between clients, especially in an environment where equipment may not have been adequately sterilised. The NZARBT recommends the use of a rubber hoof stick to push back cuticles rather than cutting or clipping.

Further unsafe practices, such as the use of heel blades or shavers, were observed in a significant number of salons. This can lead to permanent damage and increases the risk of infection still

further. The NZARBT explicitly bans the use of shavers by beauty therapists in its Guidelines. None of these salons were members of the NZARBT, and were six times more likely to have staff that were not adequately trained, and eight times more likely to have mostly 'walk-in' clients.

While the use of styptic pens to stop bleeding was not specifically queried, 16 % (9) of salons commented that they were using these. Styptic pens may present an infection risk from previous clients, especially if applied directly to a wound. In addition, the presence of these, and similar solutions, implies that bleeding during a treatment is of sufficient likelihood to require stock to be held onsite.

The Guidelines also require pedicure basins to be lined with a single use disposable plastic basin liner for each client and pipes to be regularly disinfected. While disinfection of pipes was not explored, only 15% of those using foot spas were using spa liners which can help reduce the risk of the spread of infection. Fungal nail and foot infections are common in the community and the whirlpool footbaths are extremely difficult to clean properly. Outbreak investigations of boils and skin infections associated with pedicures have identified mycobacterium, visible debris, slime (7) hair and skin debris (8) in the screens and pipes of footbaths.

Although not specifically queried we did not identify any salons offering fish pedicures. Internationally use of Garra Rufa fish to nibble on the dead skin on feet has been associated with infection risks. Fish pedicures are banned in several states in the United States (22) and although rated as low risk in the UK the Health Protection Agency has developed very detailed guidance on the requirements to offer a safe service (23)

That salons without adequately trained staff (51%) represent an elevated infection risk to clients is demonstrated by the comparison with those salons who do have adequately trained staff. These salons were three times less likely to have written cleaning schedules, almost half as likely to ask health questions before a treatment, and had less awareness of transmissible infections. Salons at the cheaper end of the market were more than three times more likely to have untrained staff, suggesting that lower price salons also presented an elevated infection risk.

Overall there was very poor knowledge about the risk of infection to either staff or patients. 19% of operators were not able to name any conditions that clients could get from a nail treatment and only 30% were able to identify that bacteria, viruses, or fungi could be acquired during a treatment. In answering the question operators did not have to use these specific terms. Words such as boil, infection or abscess were counted as bacterial infection, similarly hepatitis B or C, HIV were accepted for viral infections and *tinea*, athlete's foot, etc were counted for fungal infections. There also seemed to be limited understanding that staff could get infections from equipment or clients if the appropriate safe guards were not in place. This lack of knowledge about transmissible pathogens may well be a contributing factor to poor instrument processing.

Hepatitis B virus infection (HBV) is highly infectious and preventable by vaccination. However only 16% of salons reported that all their staff were fully vaccinated, only 5% encourage staff to be vaccinated and no salons pay for staff to be vaccinated. NZ staff born before 1974 will not routinely have been immunised and those born between 1974 - 1988 may not have received all the required

doses through the HBV school catch up programme. Staff from overseas may or may not be protected from HBV. Overall there seemed to be a somewhat passive approach to knowing or ensuring that staff are protected from HBV. From a health and safety perspective a more active approach to assess their staffs' protection against HBV and recommending vaccination (if susceptible) is a practicable step that operators can take to protect their staff and their clients. Both the NZARBT(18) and the NZ Immunisation Handbook(24) recommend HBV vaccination (if susceptible) for staff who perform procedures where skin penetration may occur.

Clients are potentially at risk of HBV infection from equipment that has been inadequately cleaned after exposure to blood from a staff member or prior client who is a carrier of HBV. HBV can survive on work surfaces or equipment even in the absence of visible blood contamination for more than a week. Podiatric care was the most likely cause of an outbreak of HBV in the United States. Five people developed acute HBV with the same HBV sequence as person who was had chronic HBV after all attending the same clinic on the same day (3).

There is support within the industry for regulation with an overwhelming 93% of survey participants stating they were supportive. Support for regulation across the wider appearance and personal services industry is consistent with the position of the NZARBT (25) and also members of allied industries such as tattooing (26-28). Only 5% of operators in the survey were concerned about the possible costs associated with regulation. The general feeling is that regulation would increase standards and decrease the number of cut price operators. Within the industry there is a perception that it is only cut price salons that require regulation to improve their safety. This survey identifies room for improvement in salons across the price spectrum. Just because a salon has a very professional or upmarket appearance this does not mean they are adequately cleaning their salon and equipment. Informally we are aware that the public often think that nail and beauty salons and tattoo studios are already regulated and are surprised to hear they are not. Educational resources to raise client awareness and assist customers to ask key questions about how a salon clean their instruments might be useful. This approach of the empowered customer has been used to help people chose a tattooist (29) in New Zealand and to choose a safe nail salon in the United States (30). The main limitations to this being effective for nail services are that; unlike tattoos they are perceived by the public as minimal or no risk, they are used more frequently, in addition a client may feel asking their nail technician questions about cleaning equipment could get in the way of the relaxing experience. In addition it can be difficult for clients to adequately assess the information given by the operator. The empowered customer approach would be useful to support but not replace regulation and industry education.

It is recognised that some salons surveyed would be unable to meet standards if a local bylaw had criteria similar to others currently operating in New Zealand e.g. separate equipment sink (69%). However this type of infrastructure cost should be factored into the business model when opening a salon.

The survey identified there is high turnover of salons, with a significant number (10%) ceasing to operate between being identified through the telephone directory or social media, and being contacted. An additional 41% of salons had been operating for less than 5 years. This further points

to the benefit of regulation in the industry. With new operators entering the market regularly measurable improvements could occur in relatively short space of time.

LIMITATIONS

- New Zealand does not have a national guideline for safe practice and infection prevention for manicures and pedicures. The NZARBT Health and Hygiene Guidelines, although not widely used in the industry, was used as 'best practice' in this survey.
- There was some difficulty in developing a complete list of salons in the region. Salons were identified using internet and telephone directory searches, however this may not identify all salons, particularly given the high turnover rate in the industry. Some additional salons were identified during the visits and these were included in the survey.
- Participation in the survey was voluntary and a portion of salons declined to be visited. It is unclear whether these salons would differ significantly in their knowledge and practices. However salons that are not confident in their infection prevention practices may be more likely to decline the visit.
- Several salons had staff where English was a second language. While interpreters were offered only one operator requested an interpreter. This may have introduced a comprehension issue when asking or answering questions.
- All surveys were conducted with the manager or owner of the salon. In salons which are not sole operators, there may be some variation in processes by other staff which has not been accounted for.
- This survey did not look at other potential risks to staff from exposure to solvents, lacquers, adhesives or dust.
- This survey did not look at other potential risks in the wider appearance and personal services industry.

Conclusions

This project demonstrated that a lack of knowledge and inadequate infection control is prevalent amongst the nail industry, with only 12% reporting adequate disinfection, sterilisation and storage of equipment. A significant portion of salons hire staff that have no formal qualifications, and on-going training is not the norm.

Salon operators were provided with recommendations at the visit. However the survey shows there is both a need and interest within the industry, for education sessions and resources to be provided regarding infection control practices in nail salons.

Education of staff alone is unlikely to be sufficient to bring about the required knowledge and behavioural changes, particularly given the proportion of staff without formal training and high

turnover of staff. National regulation could provide for regular inspections a legal infrastructure for corrective actions and could see minimum standards applied throughout the industry. In the absence of national regulation, local councils should pursue local bylaws to reduce risk in their communities.

These findings raise wider issues related to other unregulated areas of the beauty and appearance industry which are of higher risk and more invasive. In particular the use of laser devices, skin micro needling, eyebrow micro blading and waxing.

Recommendations

Ongoing infection prevention training and resources

- RPH to scope the potential to host an education workshop for salon managers and staff.
- RPH to explore with the NZABRT the provision of on-going training (cost-recovery) for salons with staff not able to join the NZABRT
- RPH to explore with the Ministry of Health and NZABRT the development of resources for staff in languages other than English (e.g. Vietnamese) , to reflect the language preferences within the industry

Dissemination of the survey findings

- RPH to present the survey findings at a Health Protection Forum in 2018
- RPH to share the survey results with the local council to inform consideration of local bylaws to regulate nail and beauty salons in the region
- RPH to share with the Ministry of Health the results identifying inadequate infection control procedures in many salons
- RPH to share the results with WorkSafe New Zealand with regard to worker knowledge and safety
- RPH to continue to work closely with allied partners e.g. Podiatry NZ, NZABRT, and local councils to look at long term solutions
- RPH to develop information on risks associated with manicures, pedicures and nail services to increase awareness with local health professionals

Further research

RPH to conduct the same survey in Masterton and South Wairarapa regions in 2019 to allow comparison of knowledge and practices in the industry in an area subject to bylaw regulation.

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Appendix 1

Infection Prevention and Control in Nail Bars Workshop 22 Nov 2016 1pm – 4.00pm

ITEM	DESCRIPTION	TIME
1	Introduction, Purpose of the Workshop.	1.00pm
2	Infection risk associated with nail bars, prevention and control	1.10pm
3	The podiatrists view	2.00pm
4	Afternoon tea	2.20pm
5	Implementation of Masterton District Council Bylaw	2.40pm
6	Survey format and questionnaire	3.15pm
7	Use of interpreters	3.35pm
8	Summary	3.50pm

Appendix 2. Questionnaire

Nail Manicure/ Pedicure questionnaire

Salons name:	
Address:	TLA:
Owner/Manager:	Telephone:
Name of interviewer(s)	Date of interview
Procedures done at this salon: <i>(circle all answers provided)</i>	
Manicure Pedicure Application of false nails Nail augmentation Gel nails Acrylic nails Shellac Tanning Hair dressing	
Other beauty services e.g. Waxing Makeup Facials	

At the start of the interview;

- Confirm that this is a convenient time to do the questionnaire.
- Advise the questionnaire will take approx. 60 minutes.
- Advise that we are doing questionnaires with a lot of nail and beauty salons across the greater Wellington region.
- The purpose of the questionnaire is too find out about knowledge and practices to keep customers and staff healthy and assess if a bylaw to regulate salons will be useful in our region.
- Advise that all their answers are confidential and only information that doesn't identify salons will be used.
- Advise that the visit may identify some things that they can change and increase customer and staff safety.
- Advise that you will give them some education information and feedback at the end of the questionnaire.
- If the owner / manager has requested an interpreter, check that this is still OK.
- Ask if they have any questions before the questionnaire starts.
- If a participant decides not to continue – thank them for their time and provide the education resources.

General			
How many staff (full time equivalent) do you have that do nail manicures, nail applications and pedicures?			
Approximately how many manicures _____ and pedicures _____ does your salon do per day/week?			
How long has this salon been operating? _____			
What is the standard price for a pedicure? _____ Manicure? _____ Do you offer specials(e.g. grab one)? _____			
How do you receive your customer? Mostly pre-booked (telephone or on-line) Mostly 'walk-ins' Mixture Other _____			
Do you own/ manage any other salons that offer nail/ manicure/ pedicure services? Yes or No <i>If yes specify</i> _____			
Training education and qualifications			
What qualifications do you and your staff have? <i>Enter number of staff for each category</i> Don't know _____ No formal training _____ On the job training _____ NZ 1 yr certificate in beauty therapy _____ 2 yr diploma in beauty therapy _____ CIDESCO (World stnd) _____ Other (e.g. trained by supplier i.e. Professionail or Creative Nails NZ.) _____			
How do you and staff keep your knowledge and training up to date? (Circle all answers provided) Don't know or no on-going training Attend training courses In house training Other _____			
Are staff qualifications displayed where clients can see them (e.g. on wall)?	NO	YES	N/A
Salon and equipment cleaning			
	NO	YES	N/A
Do you have a written cleaning schedule? <i>If yes ask to see it and see if it outlines what must be cleaned, how often, products to be used and who is responsible)</i>			
Can you show me the hand basin staff use to wash their hands (<i>circle which of the following apply</i>) Is it located close to work station and supplied with			

liquid soap warm and cold water Single use towels or hand dryer			
Do you have a separate equipment cleaning sink? <i>If yes circle which of the following apply</i> Sink located away from client area Brush available for cleaning			
	NO	YES	N/A
Do you have hand sanitiser available for staff? <i>If yes, circle below where it is located</i> At front desk At all work stations At some work stations Other _____			
Do staff wear gloves for any nail/ manicure or pedicure treatments/ <i>If yes, which treatments</i> _____			
Do staff wear a uniform or apron? <i>If yes how often are these washed?</i> _____			
How are towels cleaned? <i>(circle all answers provided)</i> Professional/ commercial laundry service Machine washed on site (temp >60C) _____ Other; _____			
How are client areas cleaned between clients? Don't know, no cleaning done Fresh paper put on chairs Chairs/ tables wiped down with appropriate solution Other _____			
Do staff have their own instruments (e.g. scissors, clippers, files) <i>If yes How many sets does each person have</i> _____ If salon supplies the instruments How many sets of instruments does the salon have? _____			
Do you have any equipment that is used for one client and then thrown out? <i>(Circle all answers provided)</i> Gloves Cardboard nail files Other _____			

<p>Can you tell me how you clean your scissors and nail clippers <i>(Circle all answers provided)</i></p> <p>Wash in hot soapy water Scrub with a brush Ultrasonic cleaner Rinse with running water Soak in disinfectant (usually 20-30 mins) Sterilise with glass bead steriliser, autoclave Store in UV cabinet Other _____</p>			
<p>What disinfecting solution do you use for equipment? <i>(Circle all answers provided)</i></p> <p>None, don't know Unlabelled chemical in bottle Hospital grade disinfectant Chlorine/ bleach solution Other _____</p>			
<p>What equipment that you use needs to be sterilised? <i>(Circle all answers provided)</i></p> <p>None or don't know Any equipment that cuts or pierces the skin Cuticle clippers, nail clippers Scissors Other _____</p>			
	NO	YES	N/ A
<p>Do you use foot spas? <i>If yes – Do you use disposable liners in the foot spa</i></p>			
<p>If you don't use disposable foot spa liner how do you clean the foot spa and disinfect the jets? <i>(Circle all answers provided)</i></p> <p>Don't know Not cleaned Scrub with brush Scrub around the jets Washed with hot soapy water Flushed with disinfectant solution Rinsed with water Other _____</p>			
Health			

<p>Do you ask clients any health questions before a manicure/ pedicure or nail application? <i>(Circle all answers provided)</i></p> <p>Health conditions Problems with previous treatments Infections Allergies Medications Other _____</p>
<p>What do staff do if a clients has a nail/ hand or foot infection? <i>(Circle all answers provided)</i></p> <p>Don't know Cover the area and continue the treatment on unaffected areas Advise person to see GP Advise that a nail/ pedicure treatment can't be done today Other _____</p>
<p>What conditions could customers get from a pedicure, manicure or artificial nails? <i>(Circle all answers provided)</i></p> <p>Don't know or none infections, skin infection, bacterial infection, boil, abscess Viral infection, Hepatitis B ,Hepatitis C, HIV, blood borne virus, BBV Fungus, fungal infection, tinea, athletes foot Cuts, damage to nail, damage to cuticle Other _____</p>
<p>What conditions could you/your staff get from customers <i>(circle all answers provided)</i></p> <p>Don't know or none Infections, skin infection, bacterial infection, boil, Virus infection, Hepatitis B, Hepatitis C, HIV, blood borne viruses Fungus, fungal infection, tinea, Other _____</p>
<p>What do staff do if a clients skin bleeds during a treatment? <i>(circle all answers provided)</i></p> <p>Stop the treatment, Put on gloves (if not already on) Apply pressure with a clean dressing to stop bleeding , Apply band aid or similar If serious, advice person to see GP Other _____</p>
<p>Do you have a first aid kit on site? YES NO <i>If yes ask to see the first aid kit and record if it contains appropriate supplies e.g. unopened dressings, band aids etc.</i></p>

How do staff deal with overgrown cuticle skin? *(circle all answers provided)*

Don't know

Push skin back with metal instrument

Push skin back with rubber hoof stick

Cut with scissors or cuticle clippers

Other

How do you deal with hard rough skin or calluses on feet and heels?

Pumice stone

Metal file

Heel blade/ razor to cut skin away *((if yes, at the end of the questionnaire advise that this should NOT be done due to infection risk*

Other

Do you know if you and your staff have been vaccinated or/are protected against Hepatitis B infection?
(Circle all answers provided)

No

Don't know

Yes- all staff protected - *ask how they know this.*

Some staff protected

Encourage all staff to be vaccinated

Pay for staff to be vaccinated

If education resources are developed, what languages would be most useful for you and your staff?

English

Te reo

Samoan, Tongan

Korean

Vietnamese

Filipino

Mandarin

Other

Are you a member of the New Zealand Association for Registered Beauty Therapists (NZARBT)? *(Circle all answers provided)*

Yes

No

Don't know,

I've never heard of it

Are you aware that some Councils in NZ have bylaws so that nail and beauty salons are inspected each year?
(Circle all answers provided)

<p>Yes No Don't know, I've never heard of it</p>
<p>What are your thoughts on being registered and inspected by the Council each year? (Circle all answers provided)</p> <p>Supportive of registration Opposed to registration Neutral or don't know Worried about cost of registration Other comments</p>
<p>If education sessions were offered by Public Health or your local Council would you/ your staff be interested in attending? YES NO</p> <p>Comments</p>
<p>Do you have any questions for us?</p>
<p>Overall Comments:</p>

Advise that the questionnaire has now finished and ask if they have any questions or comments

Action points:

- Shown a copy of NZBA Health and Hygiene Guidelines and web address
- Given feedback about any infection control practices at the salons.

Appendix 3. Invitation letter to participate in the survey

Regional Public Health

HAUORA Ā IWI KI TE ŪPOKO O TE IKA A MĀUI
Better health for the greater Wellington region

Date

Owner/ manager of
Address

Dear

Preventing infections during manicures and pedicures

Having a manicure or pedicure is popular and can be a relaxing and fun beauty treatment. The majority of the time clients will have a good experience, but very occasionally the client may develop an infection which is could be bad for the client as well as your business.

Regional Public Health, in association with your local council, plans to meet with all operators of pedicure/manicure businesses in the Wellington region.

Your salon has been identified from electronic advertising, and we would like to arrange a suitable day and time to meet with you. The visit will take around 30-60 mins. We would visit at a time when you were not busy. Having a visit is voluntary, though we encourage you to take part, as we want to support you and your staff to provide the best and safest service.

As part of the visit, we would like to do the following:

- Discuss with you how you manage infection prevention and control
- Provide health education materials and answer questions you may have

We will contact you in a few days to check if there is a suitable time for us to visit. We can also arrange an interpreter if needed. If you have any questions, or would like to discuss this further, please feel free to contact _____ on 04 570 _____.

Yours sincerely



Dr Annette Nesdale
Medical Officer of Health

Appendix 4: Thank you letter for survey participation

Regional Public Health

HAUORA Ā IWI KI TE ŪPOKO • O TE IKA A MĀUI
Better health for the greater Wellington region

Dear salon owner/operator,

We would like to express our sincere thanks for your time and for allowing our officers to visit your premises to complete our questionnaire.

We would be grateful if you could please take the time to read the New Zealand Association of Registered Beauty Therapists (NZARBT) Health & Hygiene Guidelines provide to you at the time of our visit.

In order to ensure the safety of your clients when conducting manicures and pedicures, it is very important that you understand how clients can become infected by harmful bacteria, viruses and fungal spores. Therefore, we recommend the following for semi critical instruments:

1. Wash and scrub semi critical instruments (clippers, scissors, cuticle pushers) in hot soapy water (use a clean toothbrush to remove any dirt or debris)
2. Immerse the instruments in a hospital grade disinfectant that is proven to kill pathogens – for example, Viraclean (note: this is low level disinfectant and will not kill spores).
3. Place semi critical instruments into an autoclave to achieve sterilisation.
4. Alternative to 3 – place instruments into a glass bead steriliser as per device manufacturer's instructions
5. Hygienically store your clean instruments either in a UV cabinet or in single use sealable sandwich bags.
6. Ensure that you have enough sets of clean instruments for use between clients as it will take time to effectively clean, disinfect and sterilize the set you have just used.

We would strongly recommend that you consider joining the NZARBT, and have included their contact details as follows: info@beautynz.org.nz or Tel: 09 579-9704.

Please note: if there is enough interest generated from operators, we may organise a workshop on infection prevention and control in nail bar settings, please let us know if you would be interested in this training.

Please don't hesitate to give us a call if you have any questions or queries.

Kind regards

Regional Public Health
Tel: 04-570-9002
Email: healthprotection@huttvalleydhb.org.nz