Public Health Ontario | Santé publique Ontario

Infection Prevention and Control infractions and Ontario Personal Service Settings – What were the common issues in 2018 and what can we do differently?

Katherine Paphitis

David Ryding

December 16, 2021

NCCEH Environmental Health Seminar Series

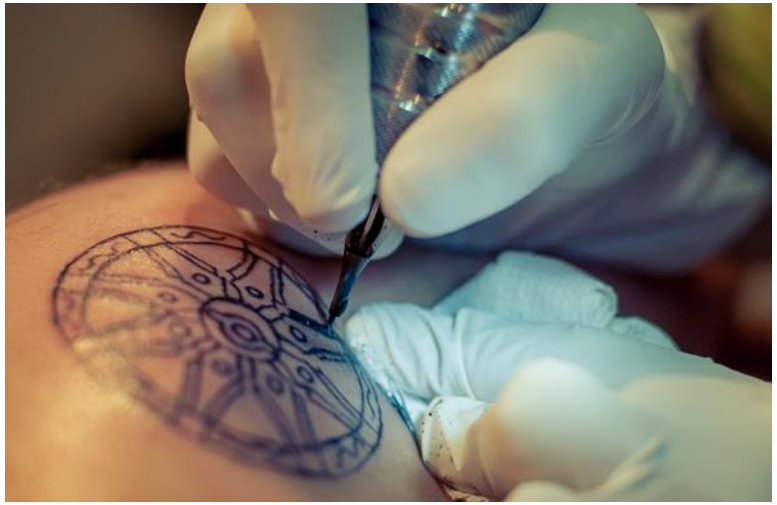
Overview

- Background
- Study objectives
- Methods
- Results
- Conclusions
- Recommendations
- Study challenges
- Question and Answers

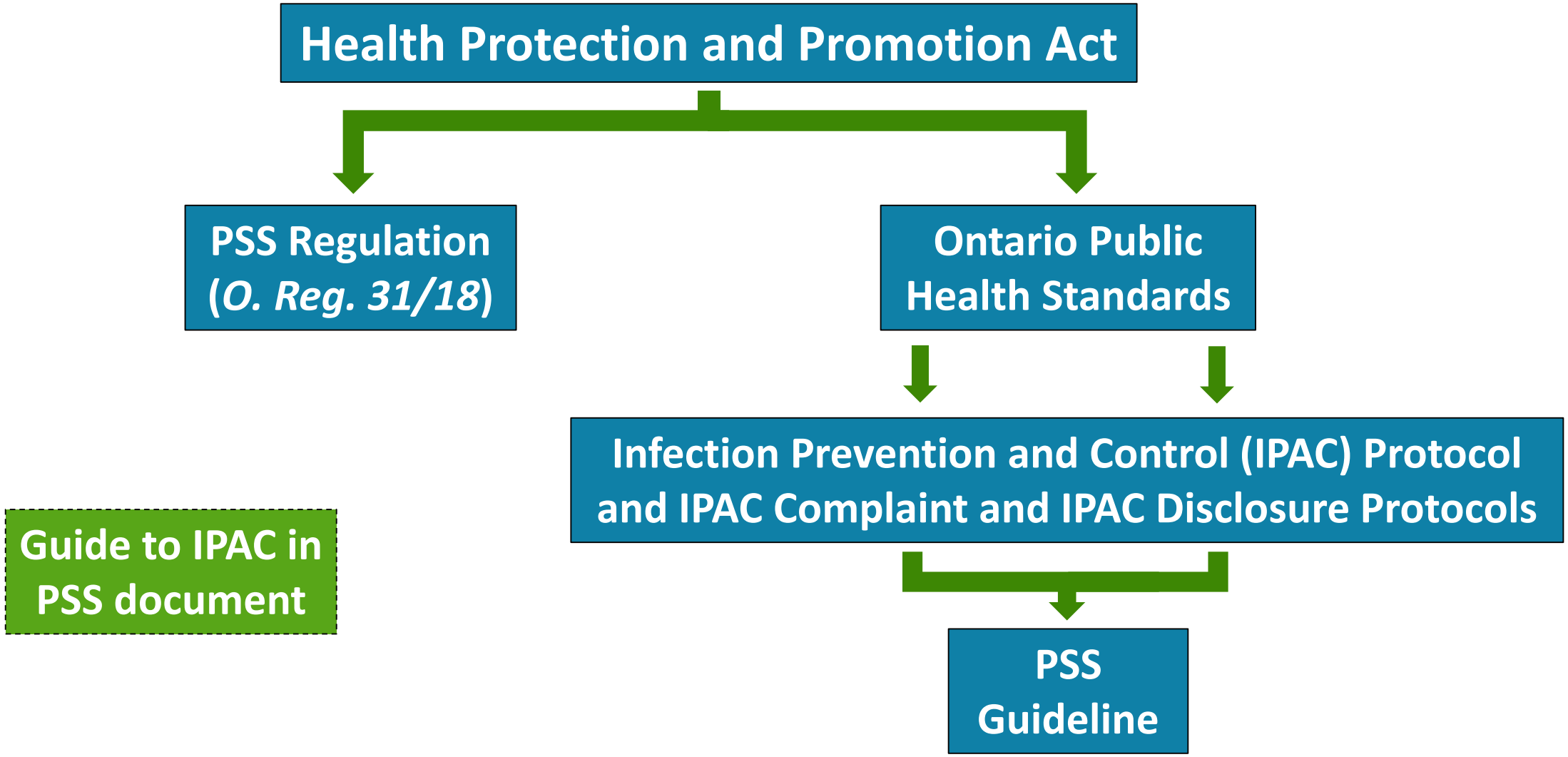
Background

"Personal service setting (PSS):

A premises at which personal services are offered where there is a risk of exposure to blood or body fluids and includes premises at which hairdressing and barbering, tattooing, body piercing, nail services, electrolysis, and other aesthetic services are offered." [1]



Legislative Framework in Ontario[1-8]

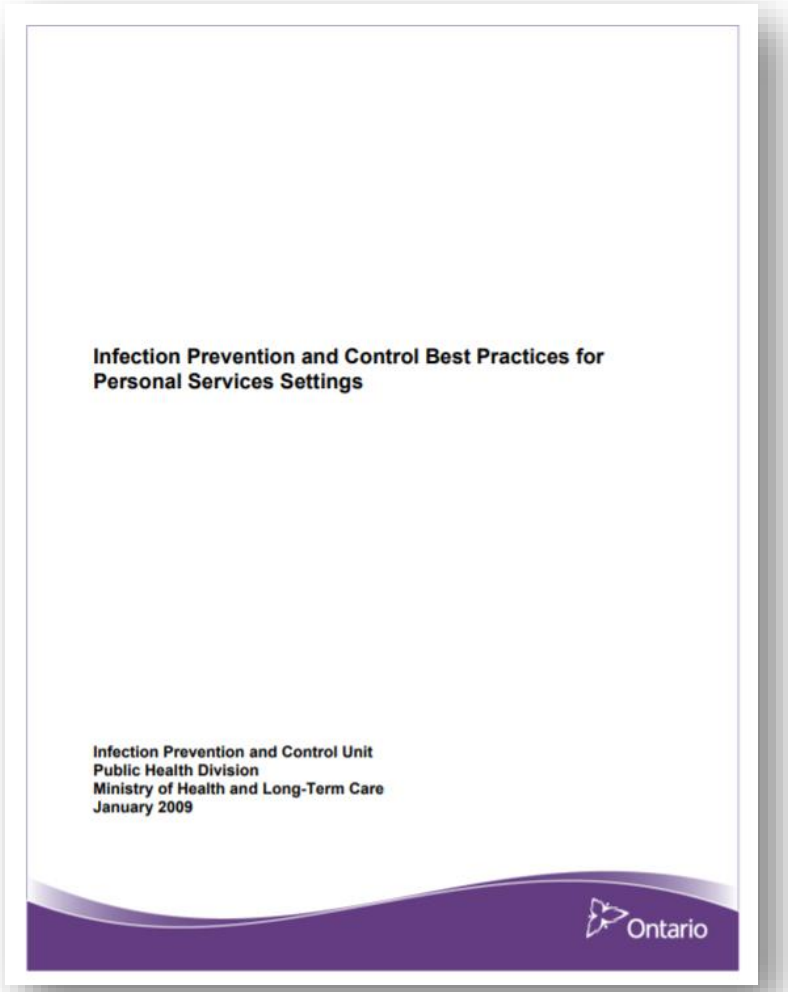


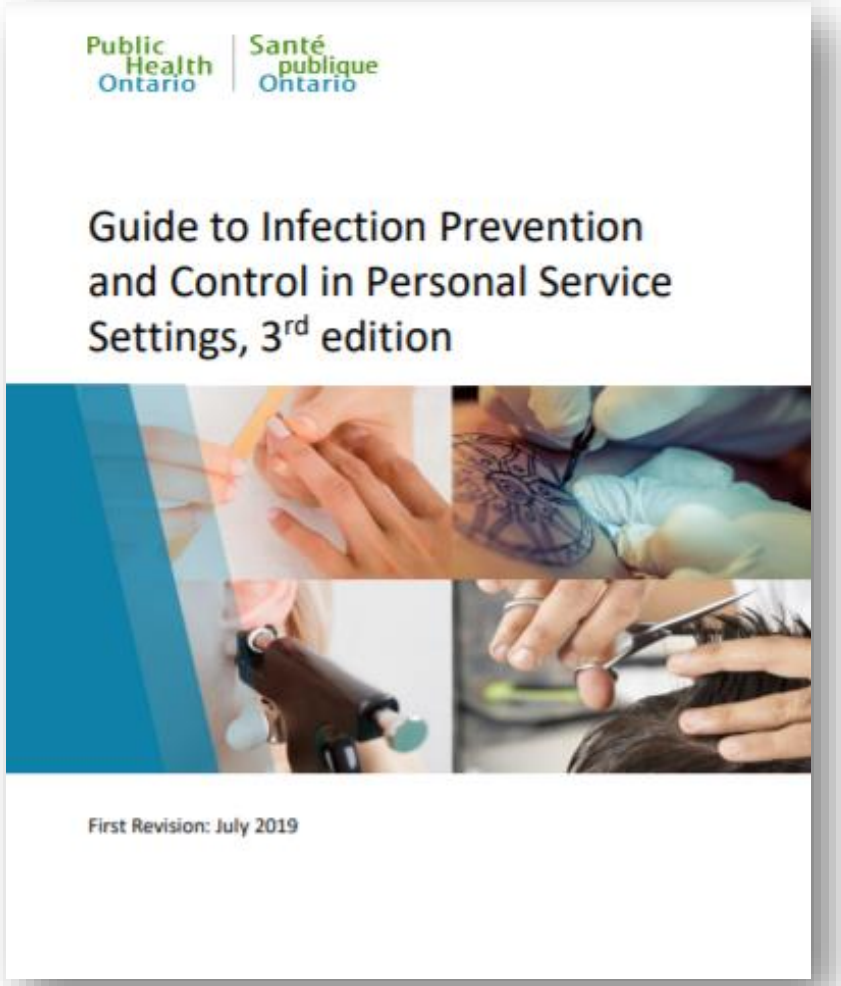
Inspection of PSS in Ontario

- Public health units inspect PSS once a year.
- Additional inspections include re-inspections, demand and complaint inspections.
- Inspections are to audit compliance with applicable legislation and IPAC best practices.
- Non-compliance may be deemed an IPAC lapse if there is the potential for infectious disease transmission.
- Public health units publicly disclose inspection results and IPAC lapses.

Source: KFL&A Public Health[9]

Guide to IPAC in PSS document





Sources: Ontario. Ministry of Health and Long-Term Care;[10] Public Health Ontario, 2019[8]

Personal services offered by Ontario PSS

- Hairdressing and barbering
- Aesthetic services: waxing, manicures, pedicures, microblading, lash/brow tinting, facials, makeup application, permanent makeup, colonics
- Tattoo and ear/body piercing
- Services vary in the degree to which they are potentially invasive.
- Risk of subsequent infection varies by service.
- There is a lack of published literature regarding the risks associated with specific services.

Instruments and equipment commonly used in PSS

Reusable instruments/equipment

- Metal/diamond/glass nail files
- Nippers
- Clippers
- Combs/brushes
- Dermal drivers/anchors
- Forceps/clamps
- Suspension hooks
- Ear lobe piercing device
- Tattoo machine

Single-use instruments/equipment

- Tattoo/piercing needles
- Buffer blocks
- Marking pens/toothpicks
- Toe dividers
- Wax applicator sticks and strips
- Styptic applicator
- Callus (credo) blades
- Plastic ink caps
- Razors

Classification of reusable instruments[11]

Table 1: Spaulding's Classification of Medical Equipment/Devices and Required Level of Processing/Reprocessing

Classification	Definition	Level of Processing/Reprocessing	Examples
Critical Equipment/ Device	Equipment/device that enters sterile tissues, including the vascular system	Cleaning followed by Sterilization	• Surgical instruments • Implants • Biopsy instruments • Foot care equipment • Eye and dental equipment
Semicritical Equipment/ Device	Equipment/device that comes in contact with non-intact skin or mucous membranes but does not penetrate them	Cleaning followed by High-Level Disinfection (as a minimum) Sterilization is preferred	• Respiratory therapy equipment • Anaesthesia equipment • Tonometer
Noncritical Equipment/ Device	Equipment/device that touches only intact skin and not mucous membranes, or does not directly touch the client/patient/resident	Cleaning followed by Low- Level Disinfection (in some cases, cleaning alone is acceptable)	• ECG machines • Oximeters • Bedpans, urinals, commodes

Source: Public Health Ontario, 2013[11]

Where do the issues lie?[12]

- Anecdotally, there seemed to be a higher number of infractions identified in premises offering aesthetics.
- Previous research found that:
  - Many technicians reported reusing instruments and single-use items.
  - Some nail technicians reported using a single set of instruments on all clients
  - There are knowledge gaps among operators regarding infection transmission and the need for reprocessing of reusable instruments.

Infection risks associated with PSS[13-15]

- Mycobacterial infections associated with pedicure thrones frequently reported.
- Re-use of single-use items may be associated with transmission of hepatitis B and C.
- Re-use of reusable items without reprocessing has been associated with transmission of bloodborne pathogens.
- Among 4,516 hepatitis C cases with at least one reported risk factor in integrated Public Health Information System (iPHIS), 33.2% of newly acquired cases reported ever having visited a PSS.

Source: York Region.[16] Contains public sector information made available under The Regional Municipality of York's Open Data Licence.

IPAC Lapses

HEALTH

Guelph nail salon clients urged by public health to get tested for HIV, hepatitis

BY MATT CARTY - GLOBAL NEWS

Posted March 3, 2020 1:12 pm
Updated March 3, 2020 1:15 pm

CANADA

Officials issue blood infection warning to London, Ont., nail salon customers

Daniela Germano
The Canadian Press

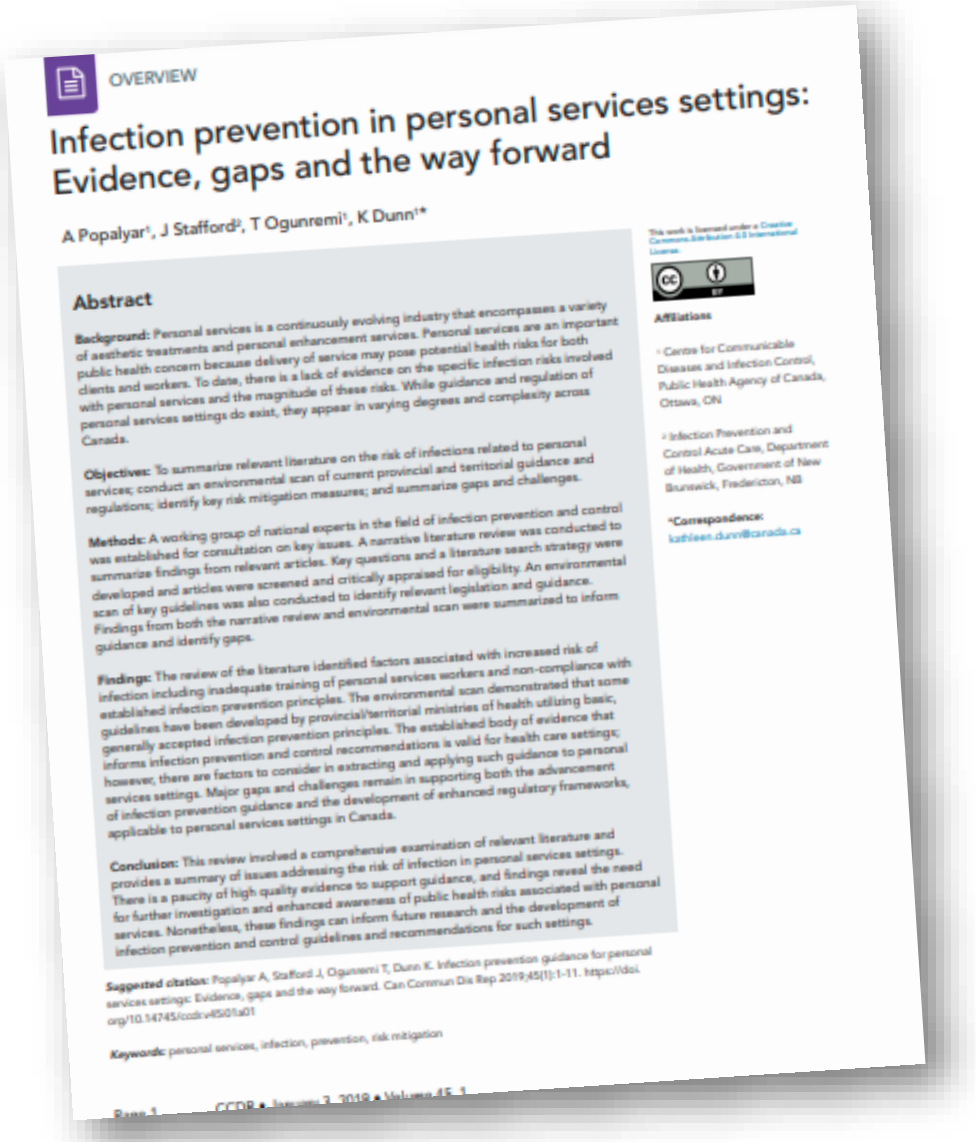
Published Wednesday, January 10, 2018 2:38PM EST
Last Updated Wednesday, January 10, 2018 7:12PM EST

Sources: Carty M;[17] Germano D[18]

Infection risks associated with PSS

CCDR call to action

*"There is a **paucity of high-quality evidence** to support guidance, and findings reveal the need for further investigation and enhanced awareness of public health risks associated with personal services"*[19]



OVERVIEW

Infection prevention in personal services settings: Evidence, gaps and the way forward

A Popalyar[1], J Stafford[2], T Ogunremi[1], K Dunn[1]*

Abstract

Background: Personal services is a continuously evolving industry that encompasses a variety of aesthetic treatments and personal enhancement services. Personal services are an important public health concern because delivery of service may pose potential health risks for both clients and workers. To date, there is a lack of evidence on the specific infection risks involved with personal services and the magnitude of these risks. While guidance and regulation of personal services settings do exist, they appear in varying degrees and complexity across Canada.

Objectives: To summarize relevant literature on the risk of infections related to personal services; conduct an environmental scan of current provincial and territorial guidance and regulations; identify key risk mitigation measures; and summarize gaps and challenges.

Methods: A working group of national experts in the field of infection prevention and control was established for consultation on key issues. A narrative literature review was conducted to summarize findings from relevant articles. Key questions and a literature search strategy were developed and articles were screened and critically appraised for eligibility. An environmental scan of key guidelines was also conducted to identify relevant legislation and guidance. Findings from both the narrative review and environmental scan were summarized to inform guidance and identify gaps.

Findings: The review of the literature identified factors associated with increased risk of infection including inadequate training of personal services workers and non-compliance with established infection prevention principles. The environmental scan demonstrated that some guidelines have been developed by provincial/territorial ministries of health utilizing basic, generally accepted infection prevention principles. The established body of evidence that informs infection prevention and control recommendations is valid for health care settings; however, there are factors to consider in extracting and applying such guidance to personal services settings. Major gaps and challenges remain in supporting both the advancement of infection prevention guidance and the development of enhanced regulatory frameworks, applicable to personal services settings in Canada.

Conclusion: This review involved a comprehensive examination of relevant literature and provides a summary of issues addressing the risk of infection in personal services settings. There is a paucity of high quality evidence to support guidance, and findings reveal the need for further investigation and enhanced awareness of public health risks associated with personal services. Nonetheless, these findings can inform future research and the development of infection prevention and control guidelines and recommendations for such settings.

Affiliations

1 Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada, Ottawa, ON

2 Infection Prevention and Control Acute Care, Department of Health, Government of New Brunswick, Fredericton, NB

*Correspondence: kathleen.dunn@canada.ca

Suggested citation: Popalyar A, Stafford J, Ogunremi T, Dunn K. Infection prevention guidance for personal services settings: Evidence, gaps and the way forward. Can Commun Dis Rep 2019;45(1):1-11. https://doi.org/10.14745/ccdr.v45i01a01

Keywords: personal services, infection, prevention, risk mitigation

Source: Popalyar A, et al.[19] License: CC BY 4.0

Objectives

- To understand the prevalence of PSS infractions in Ontario and assess if these differ by premises type.
- To describe the proportion of publicly reported IPAC lapses in PSS.
- To assess whether infractions associated with IPAC lapses in PSS are similar to those identified during routine compliance inspections.

Methods

- Open Source inspection data obtained from three geographically diverse public health units for all PSS inspections in 2018.
  - Data included inspection dates, PSS service category & inspection findings.
- IPAC lapse data obtained from all 35 public health units through public disclosure.
  - Data included total lapses, total lapses in PSS, inspection findings, implicated services.
- PSS collapsed into one of three premises types:
  - Barbering/hair
  - Aesthetics
  - Body modification

Methods

- Inspection items collapsed into 16 thematic inspection areas.
- Differences in infractions between premises types compared using the Pearson Chi-square test.
- Common infractions compared between routine inspections/re-inspections and lapses.
- Distribution of IPAC lapse reporting dates examined by season (fall, winter, spring, summer).

Results – Routine compliance inspections

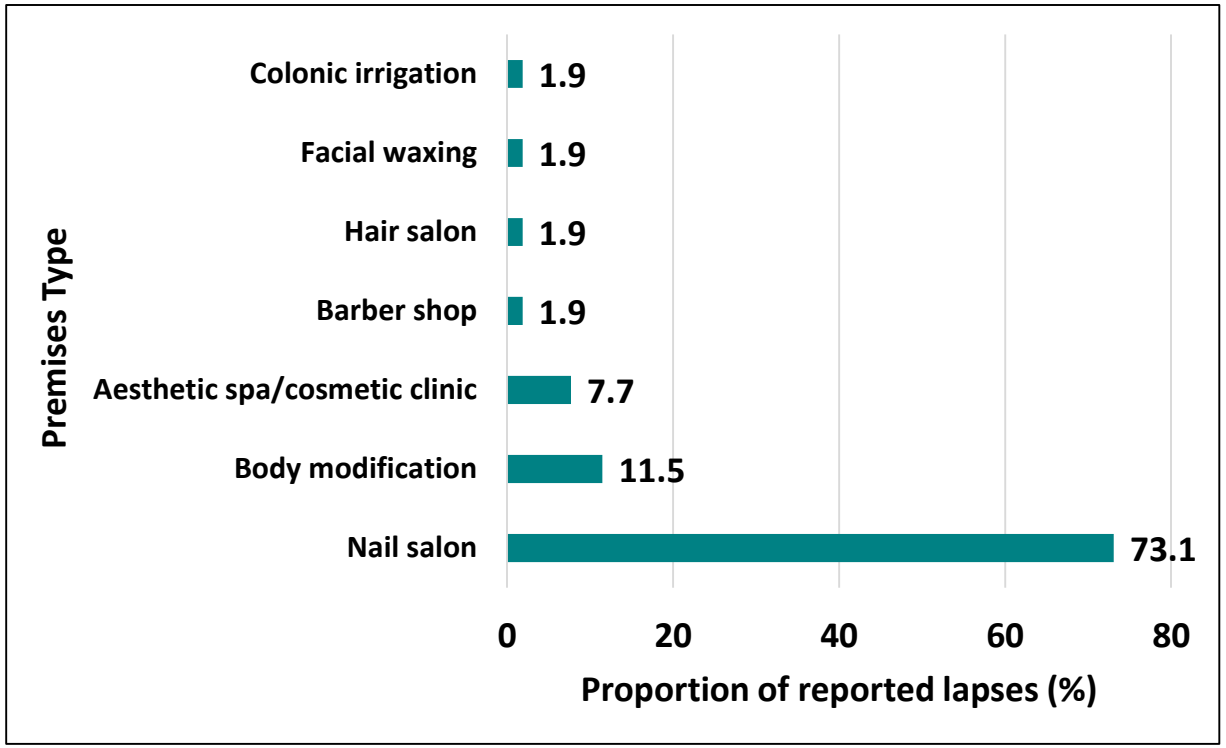
- 5,386 inspections conducted in 4,483 PSS across three public health units (PHUs) in 2018.
- 16.8% of inspections were additional inspections (demand, complaint or re-inspections).
- Premises offering aesthetic services were significantly more likely to have inspections with at least one infraction, compared to premises offering barbering/hair or body modification.

Commonly identified infractions by premises type

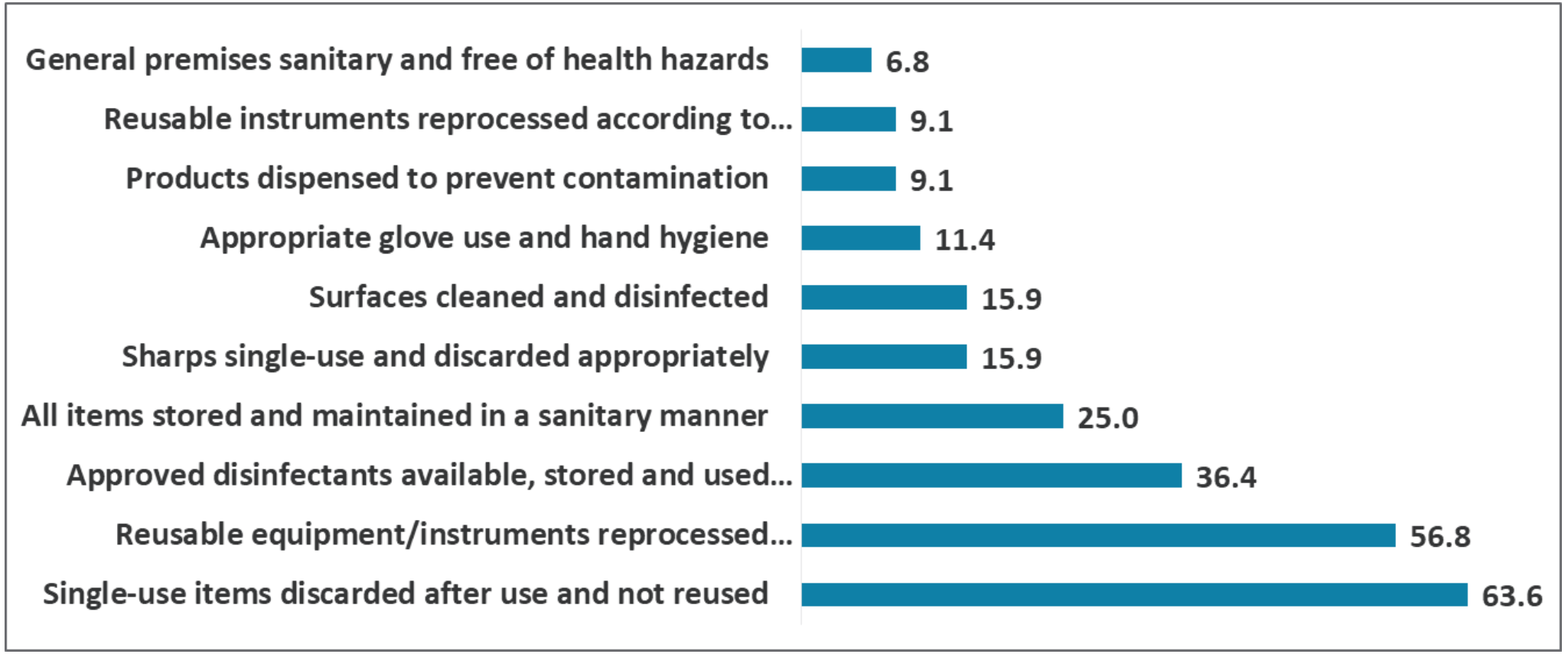
Barbering/Hair	Aesthetics	Body Modification
Failure to reprocess reusable instruments/equipment after use	Failure to reprocess reusable instruments/equipment after use	Failure to maintain appropriate documentation
Failure to have approved disinfectants on-site, and to store and use these appropriately	Failure to dispose of single-use items after use.	Failure to reprocess reusable instruments/equipment after use
Failure to store and maintain equipment/instruments in a sanitary manner	Failure to store and maintain equipment/instruments in a sanitary manner	Failure to store and maintain equipment/instruments in a sanitary manner
Failure to discard sharps into an approved sharps container after use	Failure to have approved disinfectants on-site, and to store and use these appropriately	Failure to dispose of single-use items after use
Failure to clean and disinfect surfaces	Failure to reprocess reusable instruments per instrument classification	Failure to discard sharps into an approved sharps container after use Failure to have approved disinfectants on-site, and to store and use these appropriately

Results – IPAC Lapses

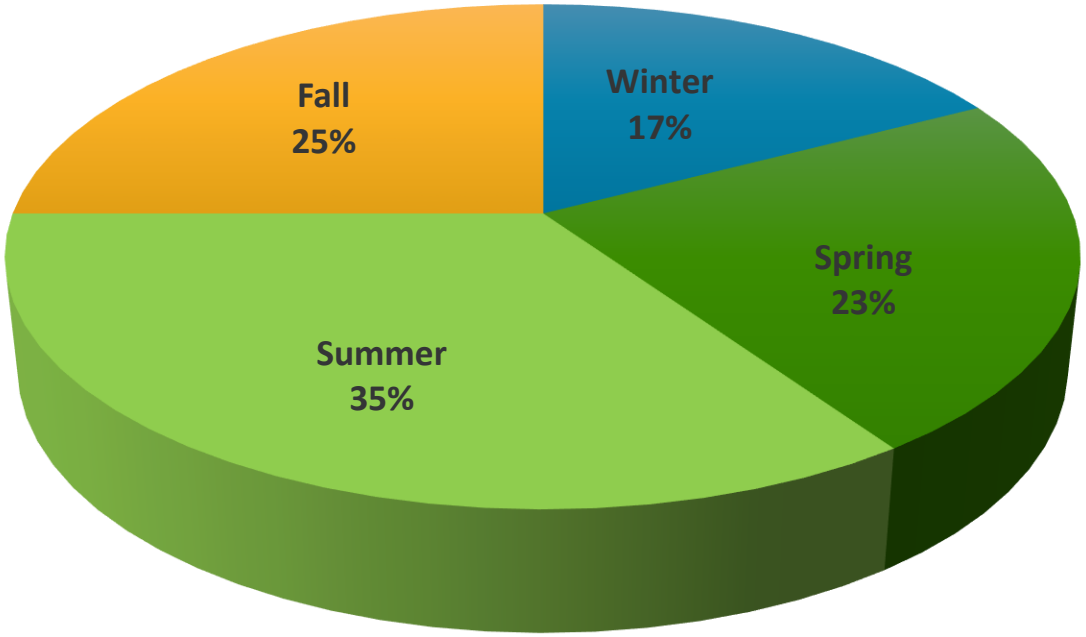
- 121 IPAC lapses disclosed
- 43.0% of lapses were in PSS
- 73.1% of PSS lapses were in a nail salon/spa
- 37.5% of PSS lapses in one PHU due to a complaint about a subsequent infection



Common infractions – IPAC lapses in PSS offering aesthetics; n=44



IPAC lapses by season



Why are there more infractions in premises offering aesthetics?

- Broad range of instruments
- Sharp instruments commonly used – increased risk of cut/puncture
- Minimal time between clients
- Single-use items cost prohibitive
- Instruments/equipment supplied by individual service provider vs. premises
- Reusable instrument reprocessing time consuming
- Lack of awareness of infection risks
- High client volume

Food for thought

- Invasive services use **sterile** instruments and equipment
  - Items sterilized or discarded after use
  - Highest level of infection prevention for current client

- Manicure/pedicure services use **cleaned and disinfected** instruments and equipment
  - Items are cleaned and disinfected or discarded after use
  - Accidental cut/puncture during semi-critical service may occur
  - Potential for infection due to non-sterile equipment

How to increase IPAC compliance?[20-22]

- Increasing frequency of inspection in food premises in Ontario did not increase compliance
- Study of healthcare workers found that attitude and risk perception are important in increasing compliance
- A study of healthcare workers in Quebec found IPAC practices influenced by an IPAC culture
- How do we create a culture of IPAC compliance?
- What are the barriers to compliance?
  - Time
  - Cleaning and disinfection processes
  - Language

Conclusions

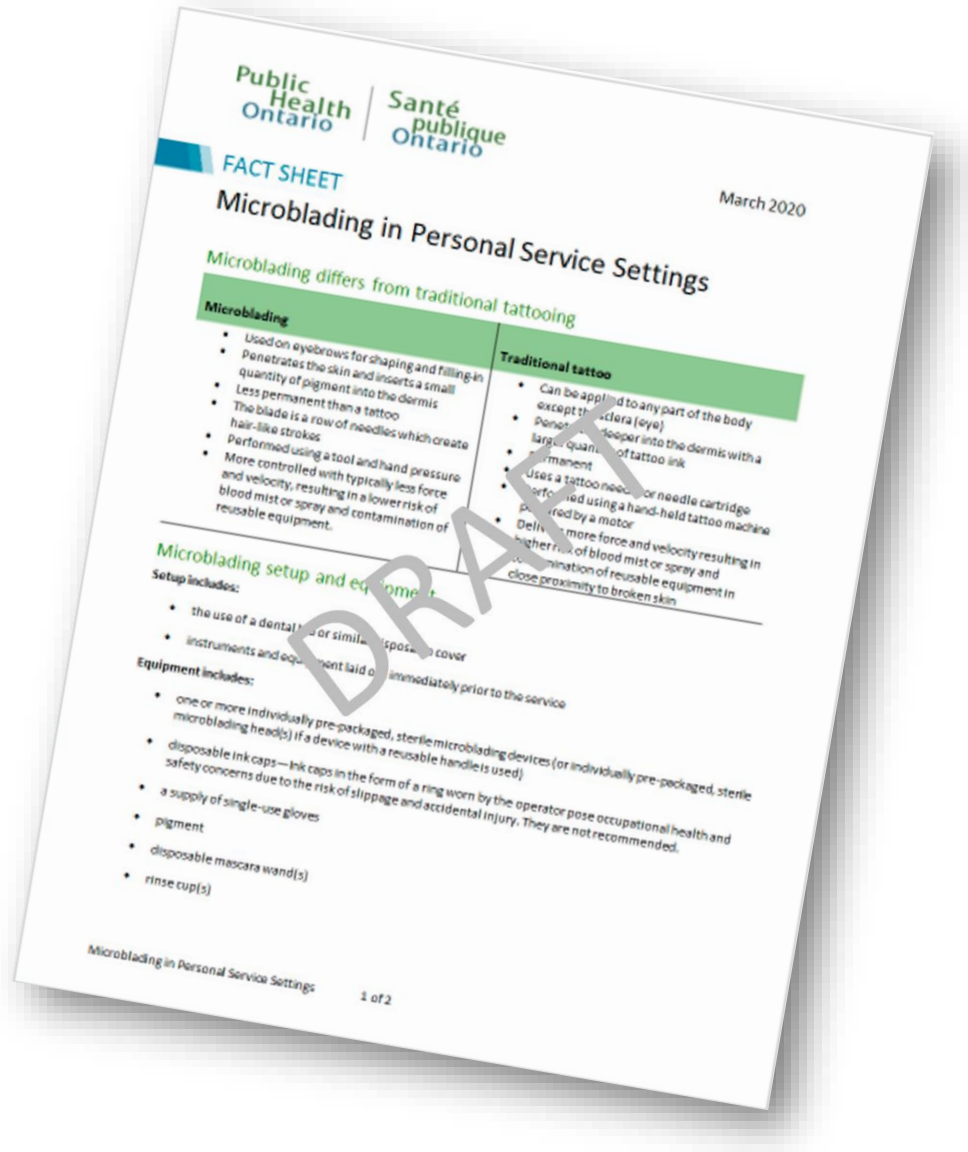
- Common infractions from routine inspections and from IPAC lapses were similar.
- Premises offering aesthetics, and particularly nail services, more commonly found to have infractions.
- Primary infraction was a failure to reprocess reusable instruments after use.
- Failure to dispose of single-use items, improper use of disinfectants and improper storage were common infractions.

Recommendations

- An emphasis on PSS operator education could improve compliance and potentially reduce the number of reported IPAC lapses.
- Identify barriers to compliance and consider how to address these.
- PHUs could consider alternate inspection frequencies, considering services offered, premises compliance and operator awareness of IPAC best practices.
- Standardization of inspection templates, premise categorization and inspection frequency algorithms could enhance consistency across PHUs

What are we doing?

- Creating service-specific resources for PHUs
- Responding to requests from PHUs
- Assisting PHUs with lapses
- Participating in provincial and national working groups
- Planning to do a follow-up survey to examine trends post-implementation of the PSS regulation and Guide to IPAC in PSS document


Public Health Ontario | Santé publique Ontario

FACT SHEET

March 2020

Microblading in Personal Service Settings

Microblading differs from traditional tattooing

Microblading	Traditional tattoo
• Used on eyebrows for shaping and filling-in • Penetrates the skin and inserts a small quantity of pigment into the dermis • Less permanent than a tattoo • The blade is a row of needles which create hair-like strokes • Performed using a tool and hand pressure • More controlled with typically less force and velocity, resulting in a lower risk of blood mist or spray and contamination of reusable equipment.	• Can be applied to any part of the body except the sclera (eye) • Penetrates deeper into the dermis with a larger quantity of tattoo ink • Permanent • Uses a tattoo needle or needle cartridge performed using a hand-held tattoo machine powered by a motor • Delivers more force and velocity resulting in higher risk of blood mist or spray and contamination of reusable equipment in close proximity to broken skin

Microblading setup and equipment

Setup includes:

- the use of a dental bib or similar disposable cover
- instruments and equipment laid out immediately prior to the service

Equipment includes:

- one or more individually pre-packaged, sterile microblading devices (or individually pre-packaged, sterile microblading head(s) if a device with a reusable handle is used)
- disposable ink caps—Ink caps in the form of a ring worn by the operator pose occupational health and safety concerns due to the risk of slippage and accidental injury. They are not recommended.
- a supply of single-use gloves
- pigment
- disposable mascara wand(s)
- rinse cup(s)

Microblading in Personal Service Settings 1 of 2

DRAFT

Source: Public Health Ontario [draft]

Challenges in data collection and analysis

- Some PHUs make routine inspection data publicly available, others do not
- Data is not always complete
- Inspection templates vary by PHU
- Service categorization varies by PHU
- Question wording varies by PHU
- Some PHUs inspect certain premises types at differing frequencies
- Trigger for IPAC lapse posting appears to vary

Publication

FREE ACCESS | Research-Article

Overview of common infection prevention and control infractions and complaints in personal service settings in Ontario in 2018: a descriptive analysis

Authors: Katherine Paphitis, MSc, CPHI(c), CIC, David Ryding, MPH, CPHI(C), CIC, Colin MacDougall, MSc, CPHI(c), Sandra Callery, RN, MHSc, CIC, Barbara Catt, RN, MEd., BScN, CIC, and Dr. Gary Garber, MD, FRCPC, FACP, FIDSA, CCPE | AUTHORS INFO & AFFILIATIONS

Publication: Environmental Health Review • 3 November 2021 • https://doi.org/10.5864/d2021-016

Source: Paphitits K, et al.[23]

References 1 of 4

1. *Health Protection and Promotion Act, RSO 1990*, c H.7. Available from: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90h07_e.htm

2. *Personal Service Settings*, O Reg 136/18. Available at: www.ontario.ca/laws/regulation/180136

3. Ontario. Minister of Health. Ontario public health standards: requirements for programs, services and accountability. Toronto, ON: Queen's Printer for Ontario; 2021. Available from: https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Ontario_Public_Health_Standards_2021.pdf

4. Ontario. Ministry of Health and Long-Term Care. Infection prevention and control complaint protocol. Toronto, ON: Queen's Printer for Ontario; 2019. Available from: https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/IPAC_Complaint_Protocol_2019_en.pdf

5. Ontario. Ministry of Health and Long-Term Care. Infection prevention and control disclosure protocol. Toronto, ON: Queen's Printer for Ontario; 2019. Available from: https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Infection_Prevention_and_Control_Disclosure_Protocol_2019_en.pdf

6. Ontario. Ministry of Health and Long-Term Care. Infection prevention and control protocol, 2019. Toronto, ON: Queen's Printer for Ontario; 2019. Available from: https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Infection_Prevention_And_Control_Protocol_2019_en.pdf

References 2 of 4

7. Ontario. Ministry of Health and Long-Term Care. Personal service settings guideline, 2019. Toronto, ON: Queen's Printer for Ontario; 2019. Available from: https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Personal_Service_Settings_Guideline_2019_en.pdf

8. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Guide to infection prevention and control in personal service settings [Internet]. 3rd ed, 1st revision. Toronto, ON: Queen's Printer for Ontario; 2019 [cited 2021 Nov 26]. Available from: https://www.publichealthontario.ca/-/media/documents/G/2019/guide-ipac-personal-service-settings.pdf

9. KFL&A Public Health. Infection control complaints and lapse disclosure [Internet]. Kingston, ON: KFLA Public Health; 2020 [cited 2021 Nov 26]. Available from: https://www.kflaph.ca/en/healthy-living/infection-control-complaints-and-lapse-disclosure.aspx

10. Ontario. Ministry of Health and Long-Term Care. Infection prevention and control best practices for personal services settings [Internet]. Toronto, ON: Queen's Printer for Ontario; 2009 [cited 2021 Nov 26]. Available from: https://collections.ola.org/mon/23007/293929.pdf

11. Ontario Agency for Health Protection and Promotion (Public Health Ontario), Provincial Infectious Diseases Advisory Committee. Best practices for cleaning, disinfection and sterilization of medical equipment/devices in all health care settings. 3rd ed. Toronto, ON: Queen's Printer for Ontario; 2013. Available from: https://www.publichealthontario.ca/-/media/documents/B/2013/bp-cleaning-disinfection-sterilization-hcs.pdf

References 3 of 4

12. Johnson IL, Dwyer JJ, Rusen ID, Shahin R, Yaffe B. Survey of infection control procedures at manicure and pedicure establishments in North York. Can J Public Health. 2001;92(2):134-7. Available from: https://doi.org/10.1007/BF03404947

13. American College of Gastroenterology. Hepatitis transmission risk needs to be studied in nail salons, barbershops, analysis suggests. Science Daily [Internet], 2011 Nov 15 [cited 2020 Feb 12]; Science News. Available from: https://www.sciencedaily.com/releases/2011/10/111031114947.htm

14. Barn P, Chen T. Infections associated with personal service establishments: aesthetics. Vancouver, BC: National Collaborating Centre for Environmental Health; 2011. Available from: www.ncceh.ca/sites/default/files/PSE_Infections_Aesthetics_Dec_2011_0.pdf

15. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Hepatitis C in Ontario, 2018: surveillance summary one year after a case definition update. Toronto, ON: Queen's Printer for Ontario; 2020. Available from: https://www.publichealthontario.ca/-/media/documents/r/2020/report-hepc-surveillance-2018.pdf

16. York Region. Be spa safe [Internet]. Newmarket, ON: Regional Municipality of York; 2021 [cited 2021 Nov 26]. Available from: https://www.york.ca/wps/wcm/connect/yorkpublic/c02ec2cd-124b-4ae3-acf5-96a54e2ec31c/Be+Spa+Safe+guide.pdf?MOD=AJPERES

17. Carty M. Guelph nail salon clients urged by public health to get tested for HIV, hepatitis [Internet]. Global News [Internet], 2020 Mar 3 [cited 2021 Nov 26]; Health. Available from: https://globalnews.ca/news/6623705/guelph-nail-salon-hiv-hepatitis/

References 4 of 4

18. Germano D. Officials issue blood-infection warning to London, Ont., nail salon customers. Globe and Mail [Internet], 2018 Jan 11 [cited 2021 Nov 26]. Available from: https://www.theglobeandmail.com/news/national/officials-issue-blood-infection-warning-to-london-ont-nail-salon-customers/article37571035/

19. Popalyar A, Stafford J, Ogunremi T, Dunn K. Infection prevention guidance for personal services settings: evidence, gaps and the way forward. Can Commun Dis Rep. 2019;45(1):1–11. Available from: https://doi.org/10.14745/ccdr.v45i01a01

20. Newbold KB, McKeary M, Hart R, Hall R. Restaurant inspection frequency and food safety compliance. J Environ Health. 2008;71(4):56-61.

21. Atif S, Lorcy A, Dubé E. Healthcare workers' attitudes to hand hygiene practices: results of a multicentre qualitative study in Quebec. Can J Infect Contr. 2019;34(1):41-9. Available from: https://ipac-canada.org/photos/custom/CJIC/CJIC_Spring2019_Atif.pdf

22. Dubé E, Lorcy A, Audy N, Desmarais N, Savard P, Soucy C, et al. Adoption of infection prevention and control practices by healthcare workers in Québec: a qualitative study. Infect Control Hosp Epidemiol. 2019;40(12):1361-6. Available from: https://doi.org/10.1017/ice.2019.269

23. Paphitits K, Ryding D, MacDougal C, Callery S, Catt B, Garber B. Overview of common infection prevention and control infractions and complaints in personal service settings in Ontario in 2018: a descriptive analysis. Environ Health Review. 2021 Nov 3 [Epub ahead of print]. Available from: https://doi.org/10.5864/d2021-016

Acknowledgements

- Ontario public health units
- Ontario Ministry of Health
- Public Health Ontario
- Katherine Paphitis
- David Ryding
- Colin MacDougall
- Sandra Callery
- Barbara Catt
- Dr. Gary Garber

For More Information About This Presentation, Contact:

David Ryding

David.Ryding@oahpp.ca

Public Health Ontario keeps Ontarians safe and healthy. Find out more at **PublicHealthOntario.ca**