

Absence of COVID-19 workplace transmission from hairdressers in Victoria, Australia

Erica Swaney^a, Brittany Murnane^a, Lauren Heard^a,
N Deborah Friedman^a and Daniel P O'Brien^{a,b,c}

^a COVID-19 Contact Tracing and Monitoring Unit, Barwon Health, Geelong, VIC, Australia

^b Department of Medicine and Infectious Diseases, Royal Melbourne Hospital, University of Melbourne, VIC, Australia

^c Corresponding author: daniel.o'brien@health.vic.gov.au

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Background

Regional Victoria has been significantly affected by the coronavirus disease 2019 (COVID-19) pandemic with more than 1200 cases recorded over 7 months from March to September 2020 in a population of about 1.6 million (incidence 75/100,000). To minimise transmission through rapid and efficient isolation of cases and quarantining of contacts, a decentralised regional contact tracing team of the Department of Health and Human Services (DHHS) was rapidly deployed at Barwon Health, in Geelong in July 2020 to serve regional Victoria.

This study describes COVID-19 exposure and the risk of transmission in hairdressing salons in regional Victoria, and facts that may mitigate the risk.

COVID-19 exposure and transmission in hairdressers

During the study period of March to September 2020, close contacts of a confirmed COVID-19 case were defined as someone spending >15 minutes face-to-face, cumulative over a week, or the sharing of a closed space for >2 hours, with a case during their infectious period (from 48 hours prior to symptom onset) without use of recommended personal protective equipment (PPE).¹ From 2 August 2020, the wearing of face coverings in public was mandatory in Victoria. Within government decreed COVID-19 restrictions in regional Victoria, hairdressers remained operational under recommended conditions to reduce transmission risks.²

In July and August 2020, four individuals working as hairdressers in regional Victoria tested positive for COVID-19, and identified as working during their infectious periods. Across four different workplaces, a total of 41 close contacts were identified. Twenty-five non-workplace contacts were also identified. All close contacts were traced by the Barwon Health team according to DHHS guidelines¹, and details of the exposure, PPE worn,

COVID-19 minimisation strategies and contact with others in the workplace were obtained. Close contacts were instructed to quarantine for 14 days, and to have a SARS-CoV-2 diagnostic PCR test on identification of being a close contact and on the 11th day after exposure or earlier if they developed symptoms.

Details of cases, their close contacts and COVID-19 workplace plans are presented in Table 1. On day 11

in each case, COVID-19 tests for all workplace close contacts remained negative. Twelve (48%) non-workplace close contacts tested positive to SARS-CoV-2. Workplace contacts were significantly less likely to be positive than non-workplace contacts (OR 0.0; 95% CI 0.0, 0.2; $p < 0.001$).

Table 1. Exposure details, close contact information and COVID workplace plans for four hairdressing salons affected by a COVID-19-infected stylist working while infectious, March to September 2020

	Case 1	Case 2	Case 3	Case 4
Location	Salon	Salon	Salon	Client homes ^a
Symptom onset	5 Aug	13 Aug	6 Aug	25 Jul
Positive SARS-Cov_2 PCR test	8 Aug	15 Aug	27 Aug	29 Jul
Days worked during Infectious period	2 4–5 Aug (pre-symptomatic)	3 11–12 Aug (pre-symptomatic) 13 Aug (symptomatic)	3 20–22 Aug (all symptomatic)	2 23 July (pre-symptomatic) 27 July (symptomatic)
Close contacts: work-related				
Staff	3	3	2	0
Direct contact (face-to-face >15 mins)	4	9	9	4
Other clients (>2 hours in same space)	1	3	3	0
Total close contacts	8	15	14	4
Number of close contacts who tested COVID-19 positive	0	0	0	0
Non-hairdresser salon close contacts				
Non-hairdresser salon close contacts	8 (3 household, 5 non-household)	6 (3 household, 3 non-household)	5 (3 household, 2 non-household)	6 (4 household, 2 non-household)
Number of close contacts who tested COVID-19 positive	0	1	5	6
Adoption of COVID-safe workplace plans				
Face masks	Surgical masks for staff and clients	Staff: cloth masks. Clients: mixture of cloth or surgical masks. Masks on/off as clients offered hot drinks. Staff did not remove masks while working and had lunch breaks alone.	Staff: either surgical or cloth mask. Positive case wore cloth mask. Clients: mixture of surgical masks or cloth masks. Clients had short periods of time with masks removed as offered refreshments. Staff did not remove masks while dealing with clients.	Stylist: No mask. 1 client wore cloth mask.
Gloves worn by staff	Yes	No	Yes	Yes
Eye protection and gowns	No	No	No	No
Staff working hours per day	5–10	5–10	4–5	Reduced appointment times by only offering haircuts

(continued)

Table 1. Exposure details, close contact information and COVID workplace plans for four hairdressing salons affected by a COVID-19-infected stylist working while infectious, March to September 2020 (continued)

	Case 1	Case 2	Case 3	Case 4
Adoption of COVID-safe workplace plans				
Staff and clients screened for COVID symptoms and contacts with confirmed COVID cases before entering workplace	No	Yes	Yes	No
Services by appointment only, client attendance just before appointment, spacing of appointments to prevent overlap, seating to ensure 1.5 m between clients, one client per 4 m ²	Yes	Yes	Yes	Yes
Employees allocated their own workspace, products and tools	Yes	No	Yes	N/A
Physical barriers installed to separate employee and clients	Yes	Yes	No	Yes
All employees and clients followed good hand hygiene practices, clients required to wash or sanitise hands on entering the workplace, surfaces or shared equipment cleaned and disinfected after use	Yes	Yes	Yes	Yes

^a Visited four client homes during infectious period.

N/A = not applicable

Findings and implications

This report describes the absence of COVID-19 transmission from infectious hairdressers to 41 workplace close contacts (staff and clients), despite the transmission of the virus to 48% of their non-workplace close contacts. This is despite three of the four hairdressers having worked during their pre-symptomatic/symptom onset period where viral loads and transmission risk are highest.³

A factor that may have prevented transmission was face mask use by most stylists and clients. Similarly, 67 clients of two hair stylists in the United States did not contract COVID-19 from encounters where both stylist and client wore masks.⁴ Previous studies show surgical masks and homemade cloth face coverings can reduce aerosolisation of virus into the air and onto surfaces.⁵ Further evidence from a systematic review suggest that face masks protect against respiratory virus transmission in community settings.⁶ Other factors that may have reduced transmission in these hairdressing settings include stylists working from behind clients,

and the implementation of COVID-19-safe minimisation plans that included screening of staff and clients, physical distancing, not sharing equipment, products or workspaces, and regular cleaning and disinfecting of hands, surfaces and shared equipment (Table 1).

Our experience suggests the risk of COVID-19 transmission in hairdresser settings where mandatory mask wearing by stylist and client and COVID-19-safe workplace guidelines are followed is low with wild-type SARS-COV-2. Despite often long interactions between stylists and clients in an indoor setting, the risk compares favourably to that in households and other settings where such measures are not commonplace. This data can help inform public health policy for hairdressing workplaces in COVID-19 affected settings, although the increased transmissibility of newer variants of concern need to be considered.

Peer review and provenance

Externally peer reviewed, not commissioned.

Competing interests

None declared.

Author contributions

ES, BM, LH all performed data collection, data analysis and wrote the first draft of the manuscript. DF reviewed the manuscript. DOB developed the concept, performed data analysis and reviewed the manuscript.

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