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# Healthcare worker COVID-19 infections

## Summary of insights shared by health services

**Healthcare workers (HCWs) are at the frontline of the COVID-19 outbreak response and are therefore at heightened risk of infection. This summary describes insights from health services who experienced COVID-19 outbreaks among frontline staff. The insights have informed, and continue to inform, the work of the Victorian Government's Healthcare Worker Infection Prevention and Wellbeing Taskforce (the taskforce).**

### Background

A key role of the taskforce was to better understand factors contributing to COVID-19 transmissions among healthcare workers during the COVID-19 pandemic and identify examples of how these infections were prevented and managed. This document aims to share these lessons, ideas and best practice examples with the health sector and wider community.

These insights are based on interviews with 12 infection control and occupational health and safety staff from six Victorian health services, conducted by Safer Care Victoria (SCV), in collaboration with WorkSafe Victoria. Interviews were conducted in October and November 2020, following the second wave of the pandemic in Victoria. The interviews built on analysis of health service data about common contributing factors in HCW infections.

The findings are sorted into eight themes, with examples of contributing factors, how health services addressed these, and opportunities for statewide improvement that were identified. Not all approaches listed were used by all health services, as actions were based on local factors.

### The virus and testing

Some people who became infected with COVID-19 did not have symptoms. Some experienced a long period between becoming infected and testing positive or feeling unwell. This made it difficult to identify and isolate patients and staff who did not know they had COVID-19, and may be spreading it among their workplaces, families and communities. When community testing rates were high, especially during the second wave, there were sometimes lengthy delays in receiving test results.

To address this, some health services began regularly testing staff and patients, to identify infected people early. Some were able to provide priority testing and rapid results turnaround for staff and their close contacts.

### Opportunities for statewide improvement

- Reviewing the suitability of testing providers to ensure rapid turnaround times.
- Allocating testing resources based on a risk assessment.

### Safely accommodating COVID-19 patients

Most health services are physically designed to accommodate a limited number of people with infectious diseases, based on usual demand. Especially during the second wave, health services often cared for more COVID-19 patients than they could effectively isolate.

This was due to existing design features such as ventilation systems and available space, including the number of single rooms with an ensuite bathroom, and the number of 'negative pressure' rooms (the optimal room ventilation option for COVID-19 patients). This increased the risk of transmission between patients, and from patients to staff.

To address this, some health services measured and mapped airflow to identify and implement the safest patient distribution, used individual ventilation hoods for patients, and/or air cleansing units in rooms.

### Opportunities for statewide improvement

- Setting minimum standards for facilities caring for patients with confirmed or suspected COVID-19.
- Coordinated patient allocation across facilities based on capacity and capability.
- Revised strategies, standards and codes around building design and upgrades.
- Building new facilities to increase capacity.

### Patient and staff movement

Staff and patients moving through the health service (for example, between different wards, corridors, entrances/exits, lifts, stairwells, public areas etc.) increased the risk of spreading the virus.

To address this, health services focused on limiting movement. In particular, reducing contact between infected patients and high-risk staff, as well as other staff and patients. Health services used separate entry/exit routes for high-risk individuals, limited entry and exit routes, and screened all arrivals (staff, patients, and visitors). Some also cared for all new patients as though they were COVID-19 positive until they tested negative. Health services highlighted the importance of considering the process of transferring patients between health services, including clearly sharing information on their potential exposure to COVID-19.

### Caring for patients

Health services found working with COVID-19 infected patients for prolonged periods increased infection risk for individual HCWs. The risk was increased by high-risk symptoms (for example, coughing or vomiting), or high-risk patient behaviour (for example, shouting, spitting, wandering, not wearing masks, or pulling off staff PPE). Often these behaviours were due to underlying conditions (for example, dementia). Due to team-based care, and the large number of staff involved in higher-level care, each COVID-19 positive patient posed an infection risk to multiple staff. Physical distancing was not always possible due to space constraints and practical aspects of clinical care (for example, needing to touch patients).

To address these risks, some health services conducted simulations for high-risk tasks, and standardised processes for patients with both confirmed and suspected COVID-19. Some also undertook tasks outside patient rooms whenever possible, grouped tasks together and delegated tasks to reduce the number of entries into patient rooms. Some clinical tasks were adapted so staff were not face-to-face with the patient during task execution (for example, placing central lines away from the head of the bed).

### Personal protective equipment

There were few known breaches of protocol around personal protective equipment (PPE) such as masks, gowns, shields and gloves. Some staff became infected despite using full PPE. Risk factors for infection included errors in technique when removing PPE, ill-fitting PPE, discomfort leading to touching or re-adjusting masks or glasses, and some staff not having previous experience with high-level PPE. While health services did not run out of PPE, staff were anxious about PPE supplies. Delays and repeated changes in guidance for PPE, and differences in practice within and across health services, led to uncertainty about best practice.

To address these issues, some health services provided dedicated areas for putting on and taking off PPE, and a central change room for high-risk staff. They also tested how well masks fitted HCWs' faces (fit testing/checking), endeavoured to provide consistent types and brands of PPE, and tested proposed PPE changes before implementing them widely. Where possible, health services made infection control practitioners available to monitor infection control measures and suggest improvements in real time. Staff members were appointed as 'spotters' to watch over infection control practices during key activities (for example, staff putting on and removing PPE, high-risk clinical tasks and moving patients) to educate and guide staff.

### Opportunities for statewide improvement

- Coordinating PPE purchasing to ensure consistent supply.
- Purchasing a broad range of PPE for different body shapes and sizes.
- Implementing a PPE feedback process from health services to government.

### Staff wellbeing

Wellbeing was a continuous challenge for staff. High workloads and the day-to-day challenges of life in a pandemic created a high risk of staff fatigue. This was compounded by long periods wearing PPE. It took some time to shift staff attitudes and behaviours to recognise staff break areas (where staff were most often without PPE and tended to be less vigilant about infection risk) as a key risk area for spreading the virus.

To address transmission risk in break areas, some health services changed break room layout, added extra break areas, and changed staff break schedules. Some also implemented density limits, extra cleaning, mask use and staff movement tracking for break areas.

To address wellbeing issues, some health services made changes to shift times, staff ratios and rostering, conducted regular wellbeing checks, helped staff with the logistics of daily life, and sent welfare packs to staff who were isolating due to infection or potential exposure.

At a statewide level the, 'bewell. besafe' website was created by the Department of Health (DH) to give HCWs the most up to date advice, information and tools to help them be well and be safe at work. SCV launched the HCW Wellbeing Centre to:

- provide direct links to organisations, tools and resources for HCWs to support their own mental health and wellbeing
- share tools, resources and training to help organisational leaders and managers to better support their staff
- look at ways to create system-level changes and embed worker wellbeing as a priority across the broader health system.

### Managing health service staffing

Measures required to limit the spread of COVID-19 created challenges for maintaining required levels of working staff. These included rapidly identifying and responding to HCW infections, scaling up support resources, and quarantining affected staff and close contacts. Some health services found they had underestimated the extent to which staff worked across multiple sites, and the extent of their contact with other HCWs outside of work (for example, living together or carpooling). Efforts to address staff crossover were hampered by increased demand for staff, decreased staff availability and financial impacts of limiting staff members' work opportunities.

To limit staff crossover, some health services assigned staff to the same roster (one site, one health service), incentivised working at a single site and coordinated 'shift swaps' between staff who normally worked across multiple services. Some services surveyed staff to identify those who had contact with other HCWs outside of work.

## Statewide improvement opportunities

Developing surge capacity and pandemic plans for staffing, including a pool of readily available infection prevention professionals and resources.

## Managing infection prevention measures

As the pandemic unfolded, infection prevention specialists were sometimes unable to keep up with demand for their expertise. Health services had to set up infection prevention and response systems such as tracing systems and processes, communication teams, and rapid response and evaluation teams. It was challenging to do this while also meeting other complex operational needs resulting from the pandemic. Out of necessity, some staff enlisted to infection prevention and response were not experienced in these areas. Infection control efforts were also hampered by the need to manually download and link contact tracing data, gaps in available data, and staff sometimes receiving conflicting advice from the DH and their employer.

In response, health services implemented measures to better track staff movement within the service. These included contact registers at entrances, concierge desks on wards to log staff movement and using digital data sources (for example, QR codes and swipe ins) to support manual contact tracing. Some also strengthened contact tracing by allocating a single staff member to each infection event and using multiple data sources to improve contact tracing.

## Statewide improvement opportunities

- Improved communication between DH and health services, including streamlining notification and data request processes and providing direct contact details for DH staff.
- Limiting changes to guidelines, highlighting changes when they are made, and organising virtual forums and meetings to support their implementation.
- Guidance on investigating outbreaks and purchasing a unified software platform that integrates with existing software used for infection prevention and contact tracing across the state.

## Conclusion

Health services that were interviewed provided many opportunities for improvement during the second wave of COVID-19 in Victoria. These include opportunities for statewide improvements, many of which have been implemented

SCV and WorkSafe Victoria would like to thank the health services that participated in an interview and openly shared their experience and improvement opportunities for the benefit of sharing their experiences and ideas. These interviews provided a greater in-depth understanding of what health services experienced.

The limitations of this dataset highlighted the need for an adequately resourced, ongoing and standardised process for data collection, analysis and sharing of lessons learned. This will require further system-level coordination and planning, to prepare Victorian health services for a possible third wave of COVID-19 infections.

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