

COVID-19 Outbreak Response Management

Infection Prevention and Control

Melissa Marrison*, Natasha Salt*, Jackie Potter, Shelley Mckee, Angela McGinn, Jackie Purchase, Dr. Gerald Evans



DESCRIPTION OF THE ISSUE

Background

Managing COVID-19 Outbreaks across Providence Care sites has been challenging for staff, clients, residents, volunteers and visitors. Implementing strict control measures to prevent the transmission of COVID-19 while still meeting the physical, emotional, social and spiritual needs of each person is an important but complicated task.

Issue

Early in the pandemic Infection Prevention and Control (IPAC) developed an *Outbreak Implementation Plan* to apply a standardized approach for management and control of all COVID-19 outbreaks. As COVID-19 prevalence in the community increased, we experienced 17 outbreaks from December 2021 to October 2022 across Providence Care sites. Each outbreak presented new challenges and affected how control measures could be implemented. New models of service delivery, exceptions and concessions were required for outbreaks where client/patient/resident (C/P/R) behaviours could contribute to further spread. Despite applying novel strategies to support these outbreaks, it was found that tailored measures were still effective in preventing the transmission of COVID-19. Access to whole genome sequencing with the KHSC laboratory has also supported understanding whether transmission was linked to a single event or multiple introductions.

STAKEHOLDERS

Working closely with teams such as Occupational Health Safety and Wellness, Environmental Services, Nutrition Services and Clinical Care Teams we strive to ensure appropriate measures are in place to protect staff, visitors and client/residents.

IPAC also engaged with families and visitors to follow-up with exposures as part of contact tracing and in determining acquisition.

CHANGE IDEAS

Adapting a tailored approach for outbreak management and response, allowing factors such as population, C/P/R behaviours, settings such as shared or private spaces, ventilation and infrastructure to determine which control measures should be implemented for each outbreak. Using the Outbreak Implementation Plan as guidance to manage and prevent the transmission of COVID-19 during outbreaks requires a multidisciplinary approach that involves individuals with different responsibilities to organize efforts and work collaboratively to prevent transmission. Clinical engagement of the front-line staff is also critical. The tool can be used as a reference document for all departments to see considerations to implement during an outbreak as well as the ability to track and document when and if that control measure is put in place during the outbreak.

Figure 1 lists some of IPAC's essential control measures as well as additional considerations that are listed on the Outbreak Implementation plan. Essential outbreak measures apply to all COVID-19 outbreaks across Providence Care sites. Additional considerations are control measures that may be added to enhance and provide a more aggressive outbreak response.

Figure 1 Outbreak Management Plan Checklist

Outbreak Management Plan	
Essential Outbreak Control Measures	Additional Considerations
Contact & Aerosol Precautions for all clients/residents associated with outbreak unit	
Staff to perform twice Daily Acute Respiratory Illness (ARI) symptom surveillance for all clients/residents on outbreak unit	
COVID-19 testing for all symptomatic or High risk contacts	Point prevalence testing for all affected clients/residents
Quarantine for High risk contacts and symptomatic clients/residents	Quarantine for all clients/residents on outbreak unit
Restrict General Visitors	Closed to Volunteers
Allow Designated Care Partners and Essential Visitors	Restrict Designated Care Partners
Increased cleaning and disinfection of all high touch surfaces and common areas on the unit	Closed to Admissions
No communal dining for Symptomatic and High risk contacts	No communal Dining on Unit
Group Activities Paused for duration for Outbreak	Closed to Students

*Note: Not all Control Measures/Considerations are included in this chart.

OUTCOME

Balancing IPAC risks with C/P/R needs requires careful consideration of multifactorial risks and benefits. A selection of successful examples are provided:

- 1) Quarantine/isolation is difficult for all C/P/R but when in combination with certain medical conditions or behavioural tendencies it becomes even more challenging to manage transmission on the unit. Throughout the Parkside 2 outbreak Designated Care Partners remained on the unit and improved behaviours and compliance in isolating positive and/or high risk individuals and supported staffing shortfalls.
- 2) The outbreak declared on Heritage 2 Pod A was not extended to the adjacent pods. By considering factors such as the nature of the positive cases and site specific characteristics such as private rooms and washrooms we were able to isolate the outbreak to one pod. This approach allowed the two other pods to continue with routine measures preventing unnecessary added pressures for staff, clients/residents and visitors.
- 3) A watch was issued on Providence Manor Montreal 5 (dementia/behavioural unit), based on 1 case which presented with significant risk factors for transmission. The resident was relocated to a COVID-19 unit and their contacts were segregated to a separate area where cadence for testing was also increased to improve chances of identifying cases early.
- 4) Providence Manor was able to designate a separate area to manage COVID-19 positive residents. During a multi-unit wide outbreak, the area was strategically used to isolate the residents at greatest risk of transmitting.



SUCCESS MEASURES

- ✓ Front-line workers are supported when Designated Care Partners and Essential Visitors provide essential care for their C/P/R during human resource shortages.
- ✓ High-risk activities that promote congregation are suspended to curb opportunities for further spread.
- ✓ High-risk contacts who frequently test positive are identified and isolated promptly to avoid further transmission.
- ✓ Customizing control measures means we are able to provide a better balance of keeping our C/P/R safe from infection of COVID-19 and providing a higher quality of care.

SUSTAINABILITY PLAN

- Continue to investigate outbreaks as required by legislation and use findings to improve our outbreak response management through surveillance, collaboration, innovation and education
- Continue to partner with Kingston Health Sciences Centre (KHSC) Microbiology laboratory to use whole genome sequencing in combination with contact tracing to provide a better understanding of transmission within outbreaks.
- Collaborate with Public Health and the various teams within Providence Care to identify COVID-19 exposures and/or potential sources of transmission as well as any gaps in practices that may contribute to the spread of COVID-19.

NEXT STEPS

The future will incorporate lessons learned to develop 1) fundamental/core outbreak measures and 2) adaptive measures that can be considered based on the C/P/R population. The revisions will seek input from stakeholders, including patients and families and will think beyond COVID-19, with a focus on minimizing disruption to our C/P/R, staffing, visitors and patient flow.