

COVID-19 Rapid Evidence Profile #27 (6 January 2021)

Question

What measures and approaches can protect the most vulnerable in hospitals (e.g., cancer chemotherapy patients) when outbreaks of Omicron in hospital are becoming more common?

What we found

To inform plans to protect the most vulnerable in hospital during outbreaks of Omicron, we identified evidence, as well as experiences from three countries (Denmark, South Africa and the United Kingdom) that are currently most affected by Omicron, and from all Canadian provinces and territories (see Box 1 for a description of our approach). We organized our findings using the framework below.

Organizing framework

- Vulnerable hospital inpatients to protect
 - Cancer patients
 - People who are immunocompromised
 - People with other conditions that make them vulnerable (e.g., COPD)
 - Older adults (e.g., frail elderly)
- Approaches to protecting vulnerable hospital inpatients
 - Cohorting
 - Reverse isolation rooms
 - Discharging patients to other care settings (e.g., home with supports or long-term care)
 - Other

We identified 12 evidence documents relevant to the question (two guidelines, six full systematic reviews, two rapid reviews and two single studies), of which we deemed the two guidelines and one of the full systematic reviews to be highly relevant. However, none of the highly relevant evidence documents were

Box 1: Our approach

We identified evidence addressing the question by searching the COVID-END [inventory of best evidence syntheses](#) on 5 January 2021. We identified jurisdictional experiences by searching jurisdiction-specific sources of evidence listed in the same COVID-END guide to key COVID-19 evidence sources, and by hand searching government and stakeholder websites. We selected three countries (Denmark, South Africa and the United Kingdom) because they are most affected by Omicron and therefore most likely to have implemented approaches to protect the most vulnerable in the hospital during outbreaks of Omicron.

We searched for guidelines, full systematic reviews (or review-derived products such as overviews of systematic reviews), rapid reviews, protocols for systematic reviews, and titles/questions for systematic reviews or rapid reviews that have been identified as either being conducted or prioritized to be conducted. Single studies were only included if no relevant systematic reviews were identified.

We appraised the methodological quality of full systematic reviews and rapid reviews that were deemed to be highly relevant using AMSTAR. Note that quality appraisal scores for rapid reviews are often lower because of the methodological shortcuts that need to be taken to accommodate compressed timeframes. AMSTAR rates overall quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. It is important to note that the AMSTAR tool was developed to assess reviews focused on clinical interventions, so not all criteria apply to systematic reviews pertaining to delivery, financial or governance arrangements within health systems or to broader social systems. We appraised the quality of the highly relevant guidelines using three domains in AGREE II (stakeholder involvement, rigour of development, and editorial independence) and classified guidelines as high quality if they were scored as 60% or higher on each domain.

This update of the living evidence profile was prepared in the equivalent of two days of a 'full-court press' by all involved staff.

updated during the Omicron or Delta waves of infection. We outline in narrative form below our key findings related to the question from highly relevant evidence documents, and based on experiences from other countries and from Canadian provinces and territories. Additional detail about experiences from other countries are provided in Table 1, and experiences from Canadian provinces and territories in Table 2. A detailed summary of our methods is provided in Appendix 1, the full list of included evidence documents (including those deemed of medium and low relevance) in Appendix 2, and hyperlinks for documents excluded at the final stage of reviewing in Appendix 3.

Key findings from highly relevant evidence sources

A high-quality guideline that focused on [prioritizing cancer treatments](#) was last updated on 12 February 2021. This guideline suggests:

- shared decision-making with individual patients to discuss the risks and benefits of starting, continuing or deferring systemic anticancer treatment; and
- using [NHS England's clinical guide for the management of non-coronavirus patients requiring acute treatment \(cancer\)](#).

A low-quality guideline focused on [the safety of patients on dialysis](#), but was last updated on 11 September 2020. The guideline suggests:

- cohorting;
- providing separate entrances for anyone suspected as having COVID-19; and
- treating patients as close to home as possible and moving to different units if needed to allow for effective cohorting.

The highly relevant full systematic review was of medium quality, last updated on 21 November 2020, and focused on the [management of children with cancer during the COVID-19 pandemic](#). The review indicated that preventing the spread of COVID-19 among pediatric cancer patients should include restricting access to the ward, use of separate pathways for anyone suspected or confirmed to be infected with COVID-19, postponement of non-urgent or unnecessary tests or procedures, and ensuring proper screening before chemotherapy treatment or transplantation of hematopoietic stem cells.

Key findings from the jurisdictional scan

Key findings from other countries

Our jurisdictional scans of Denmark, South Africa and the United Kingdom yielded limited insights about approaches that can be used to protect the most vulnerable in hospitals when outbreaks of Omicron in hospital are becoming more common. In Denmark and South Africa, no new or revised hospital guidelines or protocols were identified in response to outbreaks of Omicron. The most [recent guidance from December 2021 for infection prevention and control in the U.K.](#) specifies that:

- in hospitals, patients should be placed in single rooms, with ensuite facilities, and that a specialized isolation room is not necessary, but should be used if available for patients undergoing aerosol-generating procedures;
- if single/isolation rooms are not available, patients with confirmed respiratory infection can be cohorted with other patients confirmed to have the same infectious agent;
- physical distancing of two metres is recommended where patients with respiratory infections are cared for;

- if single/isolation rooms are in short supply and cohorting is not possible, patients who have excessive cough and sputum production should be prioritized for single-room placement;
- patients with other infectious agents (e.g., gastrointestinal infections) and patients with underlying health conditions who are at higher risk of severe outcomes should be prioritized for placement in single rooms;
- triaging should be undertaken prior to the patient's arrival at a care area, or as soon as possible on arrival to inform patient placement to the appropriate care area or pathway;
- patients with respiratory symptoms should be assessed in a segregated area while awaiting testing;
- patients with excessive cough and sputum production should be prioritized for placement in single rooms while awaiting testing;
- patients should not be transferred unnecessarily between care areas; and
- if an unacceptable risk of transmission remains following the risk assessment, respiratory protective equipment should be used in clinical areas where COVID-19 patients are being managed.

Key findings from Canadian provinces and territories

Our jurisdictional scans of Canadian provinces and territories also yielded limited insights related to approaches that can be used to protect the most vulnerable in hospitals during outbreaks of Omicron. Many of the provinces and territories have not updated their guidance to reflect specific concerns related to the Omicron variant, or did not provide details on specific strategies to protect vulnerable inpatients, but rather focused guidance on hospitals more generally. New or revised guidelines or protocols relevant to the question were identified in Manitoba and Ontario and specify that:

- the medically necessary transfer of patients to assist hospitals overwhelmed with COVID-19 should continue to happen;
- staff should not be caring for patients with a COVID-19 infection or patients who have been transferred from a unit that has an outbreak at the same time as caring for patients who have recovered (180 days following a positive test) or do not have COVID-19;
- if private rooms are not available, patients with COVID-19 infections can be cohorted at one end of a unit, however there should be an empty room or a room with recovered patients between this area and patients transferred from a unit with a COVID-19 outbreak or patients that do not have COVID-19;
- patients booked for hematopoietic cell therapy must be tested 24-48 hours prior to their appointment except for urgent cases;
- patients who are undergoing hemodialysis with symptoms should be tested through low-threshold approaches, and must be tested when an outbreak is declared in a hemodialysis unit; and
- routine testing of all asymptomatic patients prior to radiation or treatment is not recommended, but is up to the discretion of the clinician.

Additional guidance from Ontario not specific to the Omicron outbreak but to protecting vulnerable patients in hospital during a COVID-19 outbreak, include:

- screening patients upon arrival and ongoing monitoring during clinical sessions;
- testing of patients for COVID-19 regardless of vaccination status; and
- quick communication with infection prevention and control and leadership when positive cases are detected.

Table 1: Experiences in other countries with approaches that can protect the most vulnerable in hospitals when outbreaks of Omicron in hospital are becoming more common

Country	Summary of experiences
Denmark	<ul style="list-style-type: none"> • It is unclear whether specific approaches have been taken to protect the most vulnerable in hospitals from outbreaks of Omicron in Denmark
South Africa	<ul style="list-style-type: none"> • Although South Africa experienced a significant increase in Omicron cases in November and December 2021, data suggests that infections during the Omicron wave were less likely to lead to hospital or intensive-care unit admissions when compared to previous waves <ul style="list-style-type: none"> ○ This factor may have saved the hospital system from being severely overwhelmed as hospitals managed vulnerable patients and incoming COVID-19-positive cases during outbreaks • There were no new or revised hospital guidelines or protocols identified for South Africa in light of Omicron outbreaks in hospitals
United Kingdom	<ul style="list-style-type: none"> • The most recent guidance from December 2021 for infection prevention and control in the U.K. specifies that: <ul style="list-style-type: none"> ○ In hospitals, patients should be placed in single rooms, with ensuite facilities, and that a specialized isolation room is not necessary, but should be used if available for patients undergoing aerosol generating procedures ○ If single/isolation rooms are not available, patients with confirmed respiratory infection can be cohorted with other patients confirmed to have the same infectious agent ○ Physical distancing of two metres is recommended where patients with respiratory infections are cared for ○ If single/isolation rooms are in short supply and cohorting is not possible, patients who have excessive cough and sputum production should be prioritized for single-room placement ○ Patients with other infectious agents (e.g., gastrointestinal infections) and patients with underlying health conditions who are at higher risk of severe outcomes should be prioritized for placement in single rooms ○ Triage should be undertaken prior to the patient’s arrival at a care area, or as soon as possible on arrival to inform patient placement to the appropriate care area or pathway ○ Patients with respiratory symptoms should be assessed in a segregated area while awaiting testing ○ Patients with excessive cough and sputum production should be prioritized for placement in single rooms while awaiting testing ○ Patients should not be transferred unnecessarily between care areas ○ If an unacceptable risk of transmission remains following the risk assessment, respiratory protective equipment should be used in clinical areas where COVID-19 patients are being managed

Table 2: Experiences in Canada with approaches that can protect the most vulnerable in hospitals when outbreaks of Omicron in hospital are becoming more common

Province	Summary of experiences
British Columbia	<ul style="list-style-type: none"> • No information identified
Alberta	<ul style="list-style-type: none"> • Though not specific to vulnerable inpatients, Alberta Health Services (AHS) outlined guidelines for family/designated support persons and visitors in hospitals <ul style="list-style-type: none"> ○ As of 21 December 2021, anyone who is a close contact of someone with COVID-19, has a case in their home, or has symptoms of COVID-19, will not be permitted to access Continuing Care or AHS acute-care sites as a designated support person or visitor
Saskatchewan	<ul style="list-style-type: none"> • No information identified
Manitoba	<ul style="list-style-type: none"> • Shared Health Manitoba released guidelines on 30 December 30 2021 related to essential care partners and visitor guidelines to protect staff and populations that are most vulnerable <ul style="list-style-type: none"> ○ All essential care partners are required to show proof of full vaccination status upon entry to any acute-care facility, and in situations where an inpatient’s identified essential care partner is not fully vaccinated and an alternate partner is not available, protocol is determined on a case-by-case basis ○ Access to outpatient services such as CancerCare Manitoba for essential care partners is subject to space, activity, and patient needs, and is at the discretion of the department/facility ○ Visitor access to the orange zone (patients who have been transferred from a unit that has an outbreak) and the red zone (patients with COVID-19 infection) is not permitted, regardless of the vaccination status of the visitor ○ Red patients may have shared rooms ○ Transferring patients to other units is not recommended unless there is vacant space ○ Staff should not be caring for both red and orange or green zone patients (patients who have recovered from COVID-19) if possible • Shared Health Manitoba also released a COVID-19 Specific Disease Protocol <ul style="list-style-type: none"> ○ At 180 days from date of positivity, those recovered from COVID-19 should not be on COVID-19 units cohorted with orange/red zone patients ○ When green, orange, and red zone patients are on the same unit, cohorting red patients in one end of the unit is ideal, and there should be an empty room or a room with recovered patients (within 180 days of their positive test) between this area and orange and green patients
Ontario	<ul style="list-style-type: none"> • The Ontario Ministry of Health released interim guidance on 30 December 2021 related to testing, case contacting, and outbreak management in response to the Omicron variant surge <ul style="list-style-type: none"> ○ The guidance document indicated that routine testing of all asymptomatic patients prior to radiation or treatment is not recommended, but is up to the discretion of the clinician ○ Patients booked for hematopoietic cell therapy must be tested 24-48 hours prior to their appointment except for urgent cases

	<ul style="list-style-type: none"> ○ Patients who are undergoing hemodialysis with symptoms should be tested through low-threshold approaches, and must be tested when an outbreak is declared in a hemodialysis unit ● The Provincial Infectious Diseases Advisory Committee at Public Health Ontario released recommendations and guidance in August 2021 for infection prevention specific for variants of concerns in healthcare settings <ul style="list-style-type: none"> ○ Medically necessary transfers of patients or transfers required to assist hospitals overwhelmed with COVID-19 should continue to happen (regardless of known or unknown variant of concern (VOC) status) ● The Provincial Infectious Diseases Advisory Committee at Public Health Ontario released best practices for managing COVID-19 outbreaks in acute-care settings in July 2021 <ul style="list-style-type: none"> ○ The best-practices guide contains information on managing outbreaks in staff and high-risk outpatient areas such as hemodialysis units, infusion clinics and medical day units, and emergency departments ○ The guide recommends screening of patients upon arrival, ongoing monitoring during clinical sessions, testing for COVID-19 regardless of vaccination status, and prompting quick communication with infection prevention and control and leadership for positive cases ● The Ontario Medical Association (OMA) recommends a plan to increase the capacity within a region to address the backlog of deferred care, including establishing alternate health facilities, expanding independent health facilities, and out-of-hospital premises <ul style="list-style-type: none"> ○ Unspecific to vulnerable patients, the OMA generally recommends segregation and cohorting of spaces and patients to reduce the spread of COVID-19 within hospitals
Quebec	<ul style="list-style-type: none"> ● No information identified
New Brunswick	<ul style="list-style-type: none"> ● No information identified
Nova Scotia	<ul style="list-style-type: none"> ● Though not directly relevant to protecting vulnerable patients, Nova Scotia updated its COVID-19 protocol for additional precautions for SARS-CoV-2 in healthcare settings as of 3 January 2022 to take interim steps as a precautionary approach in light of the increased transmissibility of the Omicron variant <ul style="list-style-type: none"> ○ The protocol will apply to all healthcare settings, including hospitals, long-term care facilities, health authorities, home-care agencies, and emergency health services ○ The protocol will supplement existing occupational health, safety and wellness, infection prevention and control, and public-health measures and guidance for healthcare settings ● Nova Scotia Health has updated its COVID-19 protocols for a safe recovery in healthcare settings with tiers assigned to a Nova Scotian Health Zone based on current guidance, epidemiology and transmissibility of the Omicron variant
Prince Edward Island	<ul style="list-style-type: none"> ● No information identified
Newfoundland and Labrador	<ul style="list-style-type: none"> ● While information specific to the Omicron variant or COVID-19 was not identified, Newfoundland and Labrador has published an Outbreak Management Protocol, revised in January 2016, with an objective being to protect vulnerable populations ● Some control measures specific to healthcare facilities (pages 15-18) include those regarding environmental cleaning, patient control, restrictions for affected units/sites, admissions/transfers, staff control, and visitor precautions

Yukon	<ul style="list-style-type: none">• No information identified
Northwest Territories	<ul style="list-style-type: none">• No information identified
Nunavut	<ul style="list-style-type: none">• On 29 December 2021, Nunavut announced that it is approaching a “breaking point” regarding healthcare capacity, particularly with the increasing threat of Omicron, and are seeking federal assistance for more nurses and other healthcare professionals, staff supports, contact tracers, PPE, housing, and rapid tests as part of a strategy to safeguard the healthcare system and health of its residents

Wilson MG, Bhuiya A, Bain T, Al-Khateeb S, Mansilla C, Mehta V, Sood T, Soueidan S, Rintjema J, Waddell K, Wang A, Wang Q, Wang X, Lavis JN. COVID-19 rapid evidence profile #27: What measures and approaches can protect the most vulnerable in hospitals when outbreaks of Omicron in hospital are becoming more common? Hamilton: McMaster Health Forum, 6 January 2022.

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>> Contact us

c/o McMaster Health Forum
1280 Main St. West, M5M 4L7
Hamilton, ON, Canada L8S 4L6
+1.905.525.9140 x 22121
forum@mcmaster.ca

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COVID-END.org
@COVID_E_N_D