

EVIDENCE SYNTHESIS BRIEFING NOTE

TOPIC: PROTECTING VULNERABLE PATIENTS FROM THE COVID-19 VARIANT OMICRON IN HOSPITAL

Information finalized as of January 6, 2022.^a This Briefing Note was completed by the Research, Analysis, and Evaluation Branch (Ministry of Health) based on information provided by members of the COVID-19 Evidence Synthesis Network. Please refer to the [Methods](#) section for further information.

Purpose: This note summarizes the scientific evidence and jurisdictional information on caring for vulnerable patients (e.g., with cancer) in hospital during the Omicron wave of the pandemic, including relevant infection prevention and control (IPAC) measures.

Key Findings: Most of the information pre-dates the Omicron variant, except where indicated.

- **Delivery of Care to Vulnerable Patients during COVID-19:** Prior to the omicron wave, the United Kingdom (UK) provided guidance for: 1) the treatment of cancer patients (e.g., shared decision-making with patients to discuss the risks and benefits of starting, continuing, or deferring treatment); and 2) the safety of patients on dialysis (e.g., cohorting; providing separate entrances for anyone suspected of having COVID-19).
 - **Children with Cancer:** Prior to Omicron, recommendations for preventing the spread of COVID-19 among pediatric cancer patients included: 1) restricting access to the ward; 2) using separate pathways for anyone suspected or with confirmed COVID-19; 3) postponing non-urgent or unnecessary tests or procedures; and 4) ensuring proper screening before chemotherapy treatment or transplantation of hematopoietic stem cells.
- **Guidelines for IPAC during COVID-19:** A review of international guidelines (e.g., World Health Organization) concluded they are not yet concrete and uniform enough to be applied to hospital settings but some findings include: 1) a single isolation room recommended for pre-emptive isolation; and 2) having an isolation policy for patients with confirmed COVID-19. In the context of Omicron, UK IPAC guidance recommends that patients with other infectious agents (e.g., gastrointestinal) and patients with underlying health conditions who are at higher risk of severe outcomes should be prioritized for placement in single rooms.
 - In Manitoba, recommendations include: 1) not transferring patients to other units unless there is vacant space; and 2) not having staff care for both red/orange (patients with COVID-19 infection/patients who have been transferred from a unit that has an outbreak) or green (patients who have recovered from COVID-19) zone patients if possible.
- **Health System Approaches to Protecting Patients from Omicron:** The Australian Government is working collaboratively with public and private hospitals on options for transfers (e.g., safe cohorting onsite), where clinically indicated or supported for public health reasons. The UK National Health Service plans to set up 'Nightingale' facilities (i.e., temporary structures capable of housing around 100 patients) on the grounds of eight hospitals across the country.

Analysis for Ontario: Routine testing of all asymptomatic patients prior to radiation or treatment is at the discretion of the clinician. Patients undergoing hemodialysis with symptoms should be tested especially when an outbreak is declared in a hemodialysis unit.

Implementation Implications: In the context of the Omicron variant, the interim recommended personal protective equipment when providing direct care for patients with suspected or confirmed COVID-19 includes a fit-tested, seal-checked N95 respirator (or equivalent or greater protection), eye protection, gown, and gloves.

^a This briefing note includes current available evidence as of the noted date. It is not intended to be an exhaustive analysis, and other relevant findings may have been reported since completion.

Supporting Evidence

[Table 1](#) below summarizes the scientific evidence/guidelines on caring for vulnerable patients in hospital (e.g., cancer or immunocompromised patients, older adults) during the Omicron wave of the COVID-19 pandemic (November/December 2021 to January 2022), including relevant infection prevention and control (IPAC) measures. Information on jurisdictional approaches to protecting vulnerable patients is also discussed. Additional details are provided in [Table 2](#) (Experiences in Canada with approaches that can protect the most vulnerable in hospitals when outbreaks of Omicron in hospital occur) in the Appendix.

The following limitations should be noted:

- The scientific evidence searches were limited to systematic reviews, meta-analyses, and reviews. However, some individual studies were included if identified and relevant. Limited information was identified on the topics of interest.
- Most of the identified literature focused on COVID-19 variants prior to the emergence Omicron. This literature was included because there may be applicable lessons learned. It will be stated explicitly when Omicron-specific results are discussed.
- The methodological quality of some of the identified literature was rated using AMSTAR^b by McMaster Health Forum. These ratings are available [here](#). The methodological quality of all other sources identified is unclear as they have not been assessed by the Research, Analysis, and Evaluation Branch, which does not have the expertise to make such assessments.

Table 1: Scientific and Jurisdictional Information on Caring for Vulnerable Patients in Hospital during the Omicron Wave of the COVID-19 Pandemic

<p>Scientific Evidence</p>	<ul style="list-style-type: none"> • Guidance on Delivery of Care to Vulnerable Patients during COVID-19: Prior to the emergence of the Omicron variant, two guidelines from the United Kingdom (UK) were identified for the treatment of cancer patients and the safety of patients on dialysis during COVID-19. <ul style="list-style-type: none"> ○ Treatment for Cancer Patients: Guidelines from the National Institute for Health and Care Excellence (NICE; updated February 2021) focused on prioritizing cancer treatments including: <ul style="list-style-type: none"> ▪ Shared decision-making with individual patients to discuss the risks and benefits of starting, continuing, or deferring systemic anti-cancer treatment; and ▪ Using NHS England's clinical guide for the management of non-coronavirus patients requiring acute treatment (see section on cancer here). ○ Dialysis Service Delivery: NICE also provided guidelines (updated September 2020) that focused on the safety of patients on dialysis, which suggest: <ul style="list-style-type: none"> ▪ Cohorting; ▪ Providing separate entrances for anyone suspected of having COVID-19; and ▪ Treating patients as close to home as possible and moving to different units if needed to allow for effective cohorting.¹ • Protecting Children with Cancer: Prior to Omicron, a rapid review (medium quality; November 2020) focused on the management of children with cancer during the COVID-19
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^b 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.

	<p>pandemic. The review indicated that preventing the spread of COVID-19 among pediatric cancer patients should include: 1) restricting access to the ward and implementing hygiene measures; 2) use of separate pathways for anyone suspected or confirmed to be infected with COVID-19; 3) postponement of non-urgent or unnecessary tests or procedures; and 4) ensuring proper screening before chemotherapy treatment or transplantation of hematopoietic stem cells.²</p> <ul style="list-style-type: none"> ● Guidelines for IPAC during COVID-19: Prior to Omicron, a systematic review (December 2021) analyzed national and international infection control guidelines for preventing COVID-19 transmission within medical institutions from September 2020 (i.e., World Health Organization [WHO], Centers for Disease Control and Prevention [CDC], European Centre for Disease Prevention and Control [ECDC], and Korea Disease Control and Prevention Agency [KDCA]).³ While the systematic review concluded that the guidelines are not yet concrete and uniform enough to be applied to hospital settings, some recommendations included: <ul style="list-style-type: none"> ○ <u>Single Isolation Room:</u> WHO, CDC, and KDCA recommended a single isolated room for pre-emptive isolation; however, no organization provided recommendations for determining a specific ward for pre-emptive isolation. Each suggested a different criterion for removing pre-emptive isolation; WHO recommended the disappearance of symptoms, and the CDC recommended a single negative polymerase chain reaction (PCR) result. ○ <u>Isolation Policy for Patients with Confirmed COVID-19:</u> ECDC and KDCA recommended a single negative pressure room; they also recommended organizing a cohort isolation ward for COVID-19 patients in the case of a shortage of negative pressure rooms. All organizations recommended implementing symptom-based criteria for removing confirmed COVID-19 patients from isolation.⁴
<p>International Scan</p>	<ul style="list-style-type: none"> ● Guidelines for IPAC: McMaster Health Forum's jurisdictional scan (January 2022) of Denmark, South Africa, and the UK 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. In the context of Omicron, recent UK guidance (December 2021)^c for IPAC 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;

^c The information in this table is copied from the McMaster Health Forum [product](#) dated January 6, 2022.

	<ul style="list-style-type: none"> ○ 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.⁵ ● Patient Transfers and Cohorting: On December 31, 2021, to protect inpatients from the Omicron variant, the Australian Government announced that it is continuing to work collaboratively with states and territories on options for transfers (e.g., allowing safe cohorting onsite) to both public and private hospitals, where clinically indicated or supported for public health reasons. Part of this includes assessing options for private hospitals to be used for both care and additional workforce. <ul style="list-style-type: none"> ○ States and territories continue to assess their system capacities and are finalizing contracts with private operators, as appropriate. Private hospitals have been used for this purpose in New South Wales and Victoria, with arrangements in place in other jurisdictions to ensure residents receive the appropriate level of care needed. All states and territories can activate arrangements quickly if cases escalate and the need is warranted. This includes dedicated support for residential aged care facilities through both workforce support and private hospital beds.⁶ ● Temporary Surge Facilities: On December 30, 2021, the UK National Health Service (NHS) announced plans to set up ‘Nightingale’ facilities in response to Omicron. These are temporary structures that are capable of housing around 100 patients and are to be erected on the grounds of eight hospitals across the country. The Nightingale facilities will improve NHS resilience if the record number of COVID-19 infections leads to a surge in admissions and outstrips existing capacity. Placing the new Nightingale facilities on hospital grounds will make it easier to flexibly allocate staff and equipment if there is a surge in admissions, providing access to diagnostics and emergency care if required. NHS trusts have also been asked to identify areas, such as gyms and education centres, that can be converted to accommodate patients and more Nightingale sites could be added to create up to 4,000 ‘super surge’ beds across the country. <ul style="list-style-type: none"> ○ The move comes as hospitals are using hotels, hospices, and care homes to safely discharge as many people who are medically fit to leave as possible. ○ The new Nightingale facilities would take patients who, although not fit for discharge, need minimal support and monitoring while they recover from illness, freeing up regular ward beds to provide care for those with more intensive needs. Patients may include those recovering from COVID-19 who are no longer infectious and do not need intensive oxygen therapy. The units would be led by hospital consultants and nurses, but with other clinical and non-clinical staff brought in with rapid training to be able to perform routine checks and other tasks.⁷
<p>Canadian Scan</p>	<ul style="list-style-type: none"> ● McMaster Health Forum’s jurisdictional scan (January 2022) 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. See Table 2 for further details. Manitoba was the only

	<p>province (other than Ontario) that updated their guideline (December 30, 2021) with recommendations for protecting vulnerable patients:</p> <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 (January 2022): <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.
<p>Ontario Scan</p>	<ul style="list-style-type: none"> ● The Ontario Ministry of Health released interim guidance (December 30, 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. ○ 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.⁸ ● Additional guidance from Ontario not specific to the Omicron outbreak but to protecting vulnerable patients in hospital during a COVID-19 outbreak, include: <ul style="list-style-type: none"> ○ 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.⁹ ● A technical brief from Public Health Ontario (December 15, 2021) noted that given the undetermined impact of the Omicron variant, the interim recommended personal protective equipment (PPE) when providing direct care for patients with suspected or confirmed COVID-19 includes a fit-tested, seal-checked N95 respirator (or equivalent or greater protection), eye protection, gown, and gloves. Other appropriate PPE includes a well-fitted surgical/procedure (medical) mask, or non-fit tested respirator, eye protection, gown, and gloves for direct care of patients with suspect or confirmed COVID-19. Fit-tested N95 respirators (or equivalent or

	greater protection) should be used when aerosol-generating medical procedures are performed or anticipated to be performed on patients with suspect or confirmed COVID-19. ¹⁰
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Methods

The COVID-19 Evidence Synthesis Network is comprised of groups specializing in evidence synthesis and knowledge translation. The group has committed to provide their expertise to provide high-quality, relevant, and timely synthesized research evidence about COVID-19 to inform decision makers as the pandemic continues. The following members of the Network provided evidence synthesis products that were used to develop this Evidence Synthesis Briefing Note:

- Wilson MG, Bhuiya A, Bain T, Al-Khateeb S, Mehta V, Sood T, Soueidan S, Rintjema J, Waddell K, Wang A, Lavis JN. [COVID-19 rapid evidence profile #27: What measures, approaches can protect the most vulnerable in the hospital when outbreaks of Omicron in hospital are becoming more common?](#) Hamilton: McMaster Health Forum, 6 January 2022. Appendices for this product can be found [here](#).
- Research, Analysis and Evaluation Branch (RAEB). Summary of Approaches to Protecting Vulnerable Hospital Inpatients from the COVID-19 Variant Omicron. January 5, 2022.

For more information, please contact the [Research, Analysis and Evaluation Branch \(Ministry of Health\)](#).

APPENDIX

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^{11,d}

Province/Territory	Summary of Experience
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 December 21, 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 guidelines (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 (December 30, 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. 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.

^d The information in this table is copied from the McMaster Health Forum product dated January 6, 2022 (see [Table 2](#)).

	<ul style="list-style-type: none"> • The Provincial Infectious Diseases Advisory Committee at Public Health Ontario released recommendations and guidance (August 2021) for infection prevention specific for variants of concerns in health care 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; September 2020) 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 health care settings as of January 3, 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 health care 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 health care settings. • Nova Scotia Health has updated (December 15, 2021) its COVID-19 protocols for a safe recovery in health care 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 health care 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 December 29, 2021, Nunavut announced that it is approaching a “breaking point” regarding health care capacity, particularly with the increasing threat of Omicron, and are seeking federal assistance for more nurses and other health care professionals, staff supports, contact tracers, PPE, housing, and rapid tests as part of a strategy to safeguard the health care system and health of its residents.

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- ⁴ Jang, W, Kim, B, Kim, E.S., Song, K.H., Moon, S.M., Lee, M.J., Park, J.Y., Kim, J.Y., Shin, M.J., Lee, H., Kim, H.B. (December 27, 2021). [Are the Current Guidelines Sufficient to Establish Infection Control Strategies for COVID-19 Related Issues in Hospitals?](#) Journal of Korean Medical Science, 36 (50): e343.
- ⁵ Wilson MG, Bhuiya A, Bain T, Al-Khateeb S, Mehta V, Sood T, Soueidan S, Rintjema J, Waddell K, Wang A, Lavis JN. [COVID-19 rapid evidence profile #27: What measures, approaches can protect the most vulnerable in the hospital when outbreaks of Omicron in hospital are becoming more common?](#) Hamilton: McMaster Health Forum, 6 January 2022.
- ⁶ Australian Government, Department of Health. (December 31, 2021). [COVID Information Update.](#)
- ⁷ National Health Service (NHS). (December 30, 2021). [NHS plans new Nightingale facilities in response to Omicron.](#)
- ⁸ Wilson MG, Bhuiya A, Bain T, Al-Khateeb S, Mehta V, Sood T, Soueidan S, Rintjema J, Waddell K, Wang A, Lavis JN. [COVID-19 rapid evidence profile #27: What measures, approaches can protect the most vulnerable in the hospital when outbreaks of Omicron in hospital are becoming more common?](#) Hamilton: McMaster Health Forum, 6 January 2022.
- ⁹ Wilson MG, Bhuiya A, Bain T, Al-Khateeb S, Mehta V, Sood T, Soueidan S, Rintjema J, Waddell K, Wang A, Lavis JN. [COVID-19 rapid evidence profile #27: What measures, approaches can protect the most vulnerable in the hospital when outbreaks of Omicron in hospital are becoming more common?](#) Hamilton: McMaster Health Forum, 6 January 2022.
- ¹⁰ Public Health Ontario. (December 15, 2021). [Interim IPAC Recommendations for Use of Personal Protective Equipment for Care of Individuals with Suspect or Confirmed COVID-19.](#)
- ¹¹ Wilson MG, Bhuiya A, Bain T, Al-Khateeb S, Mehta V, Sood T, Soueidan S, Rintjema J, Waddell K, Wang A, Lavis JN. [COVID-19 rapid evidence profile #27: What measures, approaches can protect the most vulnerable in the hospital when outbreaks of Omicron in hospital are becoming more common?](#) Hamilton: McMaster Health Forum, 6 January 2022.