Symptom management and end-of-life care of COVID-19 residents in long-term care homes

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The current COVID-19 pandemic is causing unprecedented challenges for long-term care homes (LTCHs). There have been several clusters of SARS-CoV-2 infections within LTCHs and approximately half of all deaths in Canada to date have been in this setting. There are regional differences, however, current estimates of patients requiring intensive care unit admission range between 5-16%. Similarly, case fatality displays a broad range depending on regional differences, varying between 1.4-7.2%. Appreciating that droplet-transmitted infections such as COVID-19 are easily transmitted in an institutional setting such as LTCHs, another factor contributing to higher risk mortality includes the aggregate of dependent residents having advanced age with multiple comorbidities. Comorbidities that have been associated with severe illness and mortality include: cardiovascular disease, diabetes mellitus, hypertension, chronic lung disease, chronic kidney disease, cancer and dementias. Furthermore, in LTCHs, 61% of residents have a diagnosis of dementia, 32% have severe cognitive impairment and 40% have behaviours related to their dementia. Behaviour issues in residents can pose unique challenges at a time when physical distancing has become an imperative social prescription. The care challenges for COVID-19 positive residents in LTCHs are numerous. Those include the need to provide palliative care in place with potentially fewer opportunities for transfer to other facilities. Therefore, there is a need to provide a framework that can be utilized in LTCHs for symptom management including end-of-life care in order to continue care in place. We present a framework with considerations for respiratory symptom management and provision of palliative and end-of-life care in LTC.

Symptom Control

The following recommendations are for managing respiratory distress and end-of-life care in the COVID-19 resident in LTCHs. We prioritize symptom control in instances where treatment decisions are consistent with no cardiopulmonary resuscitation, no hospital transfer, and supportive care in place. The most common clinical features at the onset of illness from COVID-19 include fever, fatigue, dry cough, anorexia, myalgias, dyspnea, and sputum productions. COVID-19 related symptoms may advance quickly, and staff must be prepared to escalate medication dosing to match the severity of symptoms. Resources are limited and access to medications and staff may become challenging. Furthermore, administration of medications in LTCHs have limitations based on staff comfort and training around both the agents and modes of medication delivery. LTCHs are encouraged to prepare in an expeditious manner for access to essential medications (for comfort care) and training (as applicable) for staff.

General recommendations

For all residents who are experiencing respiratory distress, all non-essential medications should be discontinued. Subcutaneous and intravenous hydration may contribute to fluid overload and worsening of symptoms and as such, consideration to discontinue should occur. All symptom-control medications can be delivered parenterally, through the subcutaneous route which many LTCHs have easier access to or more familiarity, or intravenous route depending on clinical circumstances. Avoid any aerosol generating medical procedures (AGMPs) including: heated & humidified air/oxygen delivery systems, oxygen flow greater than 6 L/min via nasal cannula, high-flow nasal oxygen, continuous positive airway pressure (CPAP) or bilevel positive airway pressure (BiPAP), all nebulized treatments (ex. Bronchodilators, saline solutions), suctioning, and fans.

Symptom Management

The spectrum of symptomatic infection ranges from mild to criticals. The following recommendations focus on
key strategies to manage symptoms and end-of-life care. Treatment strategies will reflect symptom severity, prognosis, and goals of care. If residents can communicate, self-reporting of symptoms and their severity can be assessed using a validated and reliable tool as per local protocols. Residents may experience a spectrum of symptoms with ranging severity levels and for non-communicative residents there are several scales for pain assessment10.

Dyspnea

Although a resident may look short of breath, it is important to ask whether the resident feels short of breath - this will guide management. Residents should be positioned as upright as tolerated. Supplemental oxygen can be provided to hypoxic patients and in some cases can help reduce the subjective work of breathing. Supplemental oxygen delivered by nasal prongs can be titrated to symptoms not oxygen saturation. Avoid flow rates greater than 6 L/min to avoid aerosolization. Opioids are the standard for managing dyspnea. If the resident is not on opioids, consider starting low dose opioids such as morphine or hydromorphone subcutaneously every 30 minutes, prn. If greater than 3 prns are required in 24 hours, reassess and titrate the dose up as needed according to symptoms; an increase in frequency may be required if symptoms progress rapidly. Consideration should also be given for a standing dose of opioids, including continued access to prns. It's important to note that opioids do not hasten death in the context of dyspnea. If the resident is already on oral opioids, consider increasing this dose by 25%. Also, residents that have communication barriers require more frequent assessment of their symptoms for adequate symptom control. For residents in respiratory distress, non-oral routes of medication administration are preferable (e.g. subcutaneous route). Adjuvants can be used in conjunction with opioids if needed to manage dyspnea and associated anxiety, such as benzodiazepines. For severe respiratory distress, expect to use opioids and benzodiazepines simultaneously. For refractory symptoms and intolerable suffering, palliative sedation is a consideration and benzodiazepines may need to be titrated to achieve sedation in collaboration with a palliative care specialist. Follow local protocols when available but also recognize the need to develop them based on local factors and to be able to provide the required care expeditiously if symptomatic case volumes continue to mount.

Other Symptoms

Respiratory secretions can be managed with anticholinergics (e.g. scopolamine), however the clinician should be mindful that this may contribute to a drying effect which may thicken secretions contributing to difficulty clearing. If volume overloaded, diuretics can be administered via the subcutaneous route. For agitation and restlessness, considerations should be given to whether a non-sedating antipsychotic is required (e.g. haloperidol) versus a sedating antipsychotic (e.g. methotrimeprazine), both of which can be given parenterally. Non-sedating antipsychotics like haloperidol can also be used to manage nausea and vomiting. In cases where haloperidol is contraindicated, methotrimeprazine can be considered second choice for the management of agitation, distress or nausea. Pain can be managed with opioids similar to the management of dyspnea. If the resident is on scheduled opioids, considerations should be given to using laxatives per rectum as needed. We recommend, whenever possible, for each LTCH to establish a connection to local palliative care consultants who can provide guidance either in person or virtually to each LTCH community. Furthermore, planning requires stakeholder engagement but the rapidly evolving COVID-19 pandemic poses challenges for administrative bodies trying to balance policy development with urgent need of protocols. In this context, having a palliative care consultant able to help the LTCH can help alleviate these issues as well.

Psychosocial support, grief and bereavement

The uncertainty and fear related to COVID-19 is real11. The COVID-19 pandemic also presents LTCHs with a severe crisis of unknown duration. Many LTCHs also have visitor restrictions which can contribute to distress, and a risk for complicated grief and bereavement for families. The World Health Organization's definition of
palliative care underlines the need for a support system for families dealing with grief and bereavement. Some family members may require special interventions and support from social work, spiritual care and other trained clinicians. In a similar manner, many LTCH staff have long-term relationships with their residents and will be exposed to a higher frequency of recurrent distress including repeat exposure to residents experiencing severe symptoms and death and dying. These care providers grieve differently than families but grieve, nonetheless. The risk of compassion fatigue, moral distress and burnout has never been higher.

Concluding Remarks

LTCHs are at great risk and have significant needs during the COVID-19 pandemic. Residents who are actively having symptoms related to COVID-19 need meticulous symptom assessment and management. Many residents are at risk of significant morbidity and mortality during this pandemic and providing end-of-life care is paramount for residents and their families who face great adversity during these trying times. Provision of care has also to be balanced with the safety of staff and caregivers.

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