

SYNOPSIS

03/13/2020

Review of “Diagnosis and management of first case of COVID-19 in Canada: lessons applied from SARS”

Article citation: Marchand-Senecal X, Kozak R, Mubareka S, Salt N, Gubbay JB, Eshaghi A, et al. Diagnosis and management of first case of COVID-19 in Canada: lessons applied from SARS. Clin Infect Dis. 2020 Mar 9 [Epub ahead of print]. Available from: <https://dx.doi.org/10.1093/cid/ciaa227>

One-Minute Summary

- The authors describe the diagnosis and management of the first case of coronavirus disease 2019 (COVID-19) in Canada, including control measures applied based on lessons from SARS.
- The patient was a 56-year-old man presenting to a Toronto emergency department after travelling from Wuhan, China, with a clinical presentation of new onset non-productive cough, fever and chest x-ray confirmation of pneumonia.
- The case was admitted to hospital for close observation and supportive management and remained stable while in the inpatient unit, with no supplemental oxygen required.
- The patient was admitted for eight days and then discharged to home isolation, which was discontinued on day 27 from symptom onset, following two negative swabs.
- The article discusses the hospital’s preparedness to safely diagnose and manage this COVID-19 patient with no transmission to: any of the 32 healthcare workers (HCWs) involved in their care, any other patients in the facility, as of 27 days after the patient’s discharge.
- Important differences in the level of preparedness for this COVID-19 case vs. the hospital’s experience in 2003 with SARS are outlined, including the following infection prevention and control (IPAC) measures implemented since SARS:
 - Placing the patient in a private negative pressure room with airborne-droplet-contact precautions immediately after triage screening
 - Minimizing and planning for aerosol-generating medical procedures
 - Minimizing staff exposure (e.g., restricting patient room entry to the most essential staff, using disposable meal trays) and restricting visitors (e.g., provide option of telephone communication)
 - Dedicating medical equipment
 - Performing terminal cleaning twice, using 0.5% hydrogen peroxide
 - Logging all HCWs caring for the patient; coordinating with occupational health and safety to monitor their health condition for 14 days after patient discharge

Additional Information

- As the duration of infectiousness for COVID-19 has yet to be ascertained, the authors suggest that the decision to discharge to home isolation needs to balance the unknown potential for further medical intervention against the ongoing risk exposure of HCWs.

PHO Reviewer's Comments

- The authors provide an excellent description of public health and IPAC preparedness for managing COVID-19 patients. The level of preparedness is particularly relevant and starkly contrasted to the extremely unprepared state of Toronto hospitals in 2003 to deal with SARS, when hundreds of HCWs and patients were infected through nosocomial transmission.
- This hospital cared for a single case with mild illness. Some of what is described may not be feasible in a scenario involving multiple simultaneous cases with severe illness. While pandemic preparedness is beyond the scope of this case description, the importance of public health and IPAC preparedness is appropriately conveyed. Healthcare facilities should incorporate the experience from this report and consider the additional preparedness procedures necessary to prepare for an influx of more severe cases.

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Review of “Diagnosis and management of first case of COVID-19 in Canada: lessons applied from SARS”. Toronto, ON: Queen’s Printer for Ontario; 2020.

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