

Screening hospital patients for Covid-19 - should we be testing instead?

Andjela Arandjelovic
Medical Student
Deakin University
Waurm Ponds Campus
School of Medicine
Geelong, Victoria, Australia

Katarina Arandjelovic
Anaesthetic Registrar
Melbourne Health
Department of Anaesthesia and Pain Management
Parkville, Victoria, Australia

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Victorians are riding the 'second wave' of Covid-19, and health services are not immune to the rising tide. With clusters in major health services across Melbourne, it is likely that the incidence of workplace acquired Covid-19 will increase as it is a setting where social distancing is difficult to practice. It is therefore essential to review our Covid-19 screening practices to prevent nosocomial transmission.

Like many health services, a major Melbourne hospital utilises screening questions (Box) to determine the likelihood of patient infection with Covid-19, and consequently the need for the patient to undergo Covid-19 testing and treating staff to utilise appropriate PPE.

Box: Covid-19 screening questions of all patients admitted to hospital

1. International travel within the past 14 days?
2. Contact with confirmed Covid-19 case within the past 14 days?
3. Fever or history of fever without an obvious alternative cause?
4. Symptoms of an acute respiratory infection? (with examples)

We posit that in the setting of long-standing international travel bans, increasing community transmission of Covid-19 in Melbourne, and the rise of 'asymptomatic carriers', the aforementioned questions are of inadequate sensitivity to protect both patients and staff.

For patients, Covid-19 confers a morbidity and mortality risk. While it is understood that emergency surgery confers a mortality risk independent of underlying health status, data pooled from 24 countries has demonstrated a 16-19% 30-day mortality rate associated with Covid-19 infection among patients undergoing elective procedures (1). Several health services have pre-emptively begun testing all elective surgery patients for Covid-19 (2). As of July 15, 2020, this will be mandatory across Victoria (3).

The principle Covid-19 test in Australia involves reverse transcription polymerase chain reaction (RT-PCR) on upper respiratory tract swab samples, with demonstrated post-market operational sensitivity of 94-99% and specificity of 97-100% (4). Despite the low community prevalence, the value of the test would be precisely in its negative predictive value.

Given we are yet to see the peak of this wave, it ought be considered whether there exists a role for testing of all inpatients for Covid-19 on admission. Beyond the value to patient outcomes and limiting transmission, this broader testing may be a surrogate measure of point prevalence in the hospital catchment population.

References

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