
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Letter to the Editor

# Universal visors as a key measure to stop nosocomial transmission of SARS-CoV-2

*Sir,*

Nosocomial COVID-19 is a significant challenge in the NHS, particularly noting the limited isolation capacity to deal optimally with a respiratory viral infection. In common with other areas of the UK, there was a rapid increase in community prevalence of SARS-CoV-2 infection in North Devon in November 2020, and these high rates persisted until mid to late January 2021 (Figure 1: Community). This correlated with an increase in admissions of patients with COVID-19 to the emergency department of our hospital (Figure 1: Emergency department). At the same time, we saw a number of sequential and overlapping outbreaks of nosocomial infection in our hospital, centred on 'green' wards (wards used for patients without symptoms of COVID-19 and who had had negative SARS-CoV-2 polymerase chain reaction (PCR) tests on admission to hospital; Figure 1: Healthcare-acquired). This was associated with high rates of infection in staff from these areas (Figure 1: Staff). Contact tracing suggested that these ward outbreaks were initiated by around four separate 'superspreading' events, either from paucisymptomatic staff, or from patients who developed significant symptoms soon after admission. This seeding of infection into an area led to ongoing secondary transmission between patients and staff that was hard to control.

Visors have been reported as being a highly effective addition to fluid-resistant face masks in other settings [1]. We introduced universal visor use for patient care across the hospital in mid December 2020 and saw an almost immediate termination of hospital outbreaks in both patients and staff (Figure 1: shaded areas) in 'green' areas.

Although our experience may suggest that protection of healthcare workers' nasal and conjunctival mucosae can significantly reduce the risk of nosocomial COVID-19, we present our findings partly as a counterpoint to others who have seen similar falls in infection rates that may be attributed to wider use of FFP3 masks. Identifying a single high-impact intervention that (on its own) led to the reduction in hospital-acquired infection is problematic. Typically, it is the combined action of multiple interventions (a 'bundle') that brings control. By mid December, a large range of infection control interventions was in place in our hospital. These included rapid enhanced staff testing (using a combination of PCR and lateral flow tests); regular rescreening of all hospitalized patients; in-house contact tracing; dashboards to allow rapid case- and specimen-tracking; universal use of fluid-resistant surgical masks across the hospital; eye protection for care of patients with or suspected as having COVID-19; increased use of masks by patients; and FFP3 masks for all aerosol-generating procedures.

Since introducing universal visors, we have had two separate small clusters of infection in nursing and physiotherapy staff working on our COVID wards (non-'green' area). In both cases, affected staff had been in prolonged physical contact with a highly symptomatic patient with complex nursing requirements. There have been no infections in doctors or cleaning staff working in these areas at the time. It is noteworthy that

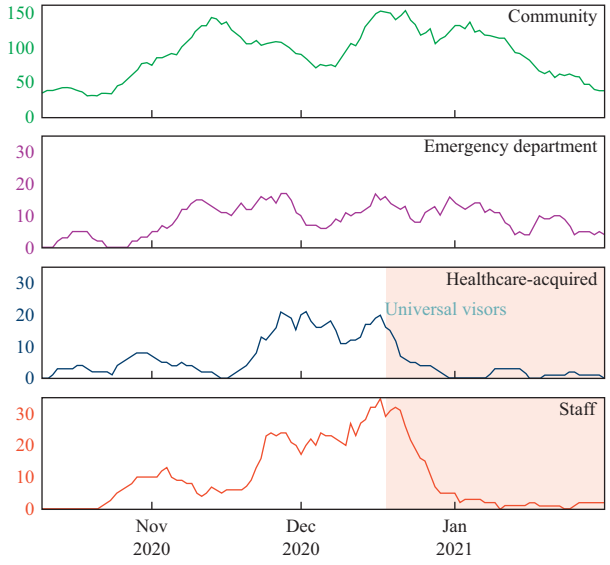


**Figure 1.** Community: rolling weekly community incidence per 100,000 population in Northern Devon. Data from https://coronavirus.data.gov.uk/. Emergency department: number of PCR tests positive for SARS-CoV-2 in previous seven days in patients attending the emergency department of North Devon District Hospital. Healthcare-acquired: number of PCR tests positive for SARS-CoV-2 in previous seven days from patients in 'green' areas of North Devon District Hospital. Staff: number of PCR tests positive for SARS-CoV-2 in previous seven days from staff working predominantly in 'green' areas. Shaded area shows introduction of universal visors for all patient care in 'green' areas.

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these latter staff groups in our hospital have been almost completely spared from infection since September 2020, despite working in areas with high numbers of patients with COVID-19.

In summary, we do not perceive a need for significant change to current guidelines for personal protective equipment in healthcare staff and specifically do not see a need for significantly wider use of FFP3 masks. Prolonged wearing of FFP3 is uncomfortable, and there is a possibility that unnecessary use distracts us from key basic infection control interventions. There may need to be more consideration as to whether respiratory protection should be enhanced when providing close personal care for highly symptomatic patients, but our experience does not support this becoming routine practice for the management of all patients with COVID-19, and certainly not more widely. There has been no clamour from nursing or medical staff in our hospital for higher use of FFP3. We would caution against using correlation of infection rates after an infection control intervention to infer causation.

**Conflict of interest statement**
None declared.

**Funding sources**
None.

## References

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