Berkshire

davidoliver372@googlemail.com Follow David on Twitter @mancunianmedic

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ACUTE PERSPECTIVE

# David Oliver: Heed HSIB on covid transmission in hospital

David Oliver *consultant in geriatrics and acute general medicine*

The Healthcare Safety Investigation Branch (HSIB) recently published its report of a four month safety investigation into covid-19 transmission in hospitals.[1] The findings are complex and nuanced, and its recommendations are many. It has significant implications for our work, colleagues, and patients. Hospital acquired covid infection can't easily be separated from transmission to, and infection of, patients and colleagues by patient facing staff or our ability to access testing or personal protective equipment (PPE).

In July the Academy of Medical Sciences reported that "at least 10% of all covid-19 infections in England between 26 April and 7 June were among patient facing healthcare workers and resident facing social care workers."[2] It didn't give definitive data on the percentage of covid cases transmitted in hospital, noting only limited and disconnected data sources on infections acquired in hospitals. However, these infections were of particular concern since patients often had comorbid conditions that increased disease severity and mortality, while staff illness leads to workforce shortages and many staff are at risk of poor covid outcomes.

Last month a major Scottish cohort study in *The BMJ* showed that patient facing healthcare workers and their immediate families were three times as likely as the general population to be admitted to hospital with covid.[3] Meanwhile, from June onwards in England, the government has published national data on covid cases that are "probably acquired in hospital," with the percentage around 10%.[4]

In this context, the HSIB reviewed the literature on hospital covid transmission and carried out detailed fieldwork in six acute NHS hospital trusts, selected to be broadly representative. Readers won't be surprised to learn that the availability of safe, appropriate, fit tested PPE was a major issue, posing risks to patients and staff alike. Another concern was the lack of rapid, regular covid testing for staff. Although the situation may have improved since the HSIB's observation period, patchy access to testing is still reported, meaning that staff sometimes can't work.[5,6]

The HSIB noted the difficulty in trying to practise optimal infection control by separating streams and ward bases into covid and non-covid areas, given that the UK has a low number of hospital beds per 1000 people. This is compounded when beds or bays are closed to contain outbreaks. Existing staff shortages are exacerbated by sickness and self-isolation, and when agency staff consequently work on multiple wards it increases the risk of infection.

Beyond those perhaps more intuitive and familiar findings, HSIB investigators also identified significant issues with our hospital building design—not least a lack of ventilation and air circulation and the unavailability of isolation rooms in many wards. They highlighted the use of shared computer consoles, desks, workstations, and sinks, and the potential of these surfaces to transmit the virus. Similar risks were identified from shared patient equipment and the poor uptake of remote approaches to patient assessment and review, meaning missed opportunities to reduce repeated contact by numerous team members.

Perhaps more concerning is that the investigators, and the families they spoke to, noted numerous instances of patient facing staff congregating in off-ward areas, such as coffee rooms and offices, and perhaps being too casual in areas away from the bedside and wearing PPE in more public areas. They found that staff were increasingly tired, putting their own wellbeing at risk. I can't help wondering if this partly results from the relentless focus on hygiene, protection, and infection control.

So, what do we do about the findings? The design and upgrade of hospital buildings, the purchase and use of equipment, the overall capacity in our hospitals, and testing and staffing levels are not in the gift of shop floor clinical staff to solve. However, even within existing resources, they do highlight the need for us all to be more vigilant about group meetings, infection control, PPE use, care in sterilising surfaces, and avoiding unnecessary repeated patient contact by multiple professionals.

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