Medical Xpress

Simple measures lessen hospital-acquired COVID-19 infections, shows study

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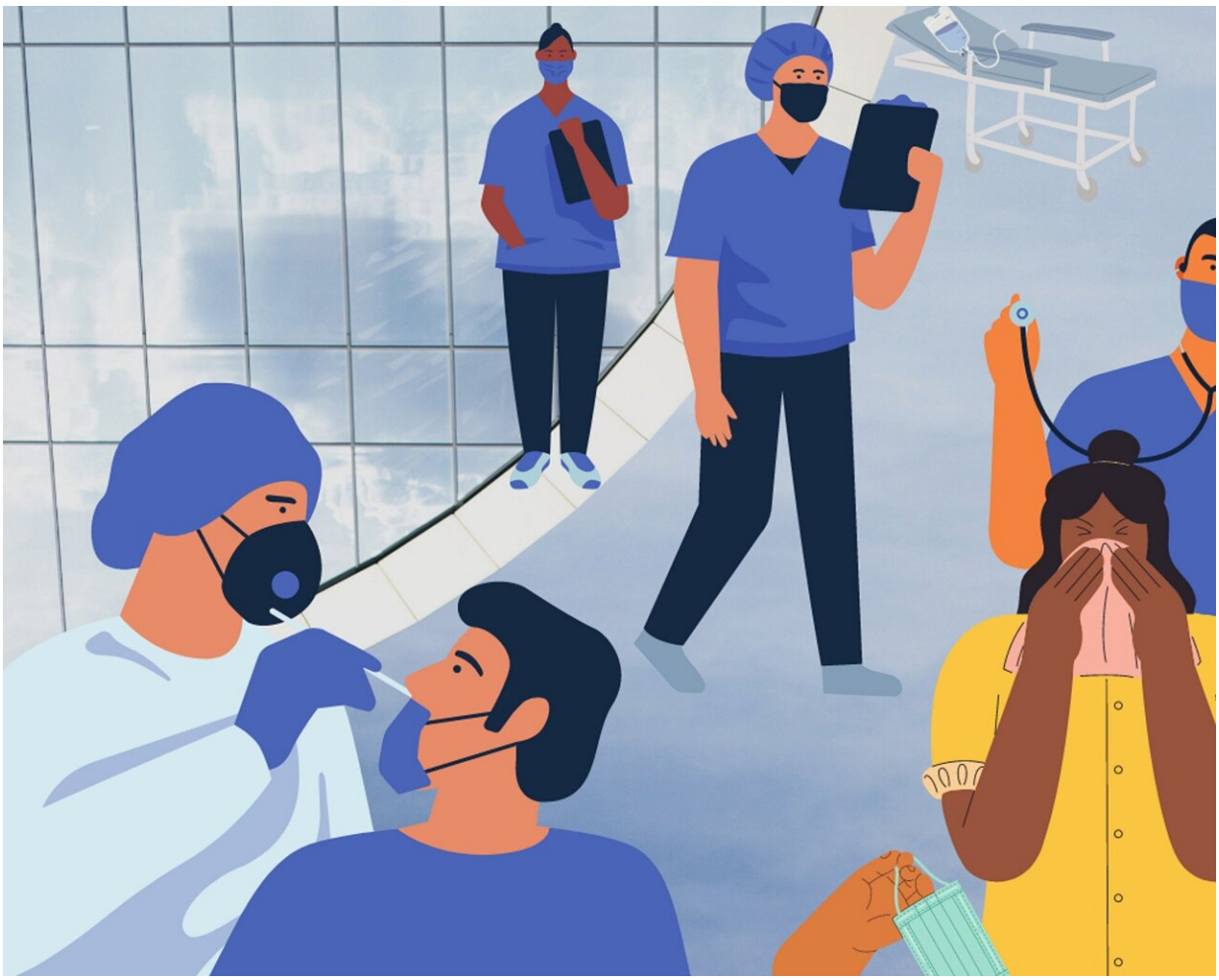

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Hospitals are places where people who are sick expect to receive treatment to feel better. Instead, for many, it has been where they contracted COVID-19, leading to further medical complications.

In a new study published in the *Journal of Hospital Infections*, Burnet researchers found simple infection control measures could save lives and reduce costs for hospitals.

These measures include testing patients for COVID-19 on admission, requiring staff to wear N95 masks in clinical areas and using Rapid Antigen Tests (RAT) or Polymerase Chain Reaction (PCR) tests to prevent transmissions.

One of the paper's lead authors, Burnet Associate Professor Nick Scott, said on average, 15–25% of patients who tested positive for COVID-19 in hospital had contracted the virus after being admitted.

"The data also showed mortality was 6 percentage points higher for people who caught COVID-19 in hospital, compared to controls who did not," he said.

The mathematical modeling in the study used data from outbreaks in Victorian hospitals and is one of the first studies to consider the economics of reducing COVID-19 infections in hospitals.

It found that although surgical masks had lower upfront costs, N95 masks offered greater protection and ultimately provided cost-saving benefits for hospitals.

Burnet mathematical modeler and lead author on the study, Fenella McAndrew, emphasized the hidden costs associated with choosing surgical masks over N95 masks in hospital settings.

"It may seem like surgical masks are the cheaper option, but when you consider extended hospital stays for patients and sick days taken by staff, it ends up being more expensive," she said.

"People shouldn't die or have medical complications from a COVID-19 infection they caught in hospital, and hospital workers shouldn't have to take sick leave due to a COVID-19 infection they caught at work."

The study assessed the cost-effectiveness of scaling up masks and testing interventions during COVID-19 outbreaks, finding that even targeting high-prevalence periods could reduce deaths and save costs.

"COVID-19 isn't going away, so there will continue to be outbreaks," Associate Professor Scott said. "My hope is this study will provide evidence to support strategies to manage COVID-19 outbreaks in hospitals in the future."

More information: F. McAndrew et al, Admission screening testing of patients and staff N95 respirators are cost-effective in reducing COVID-19 hospital-acquired infections, *Journal of Hospital Infection* (2024). DOI: 10.1016/j.jhin.2024.06.015

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