

Surrey Uni expose the unwashed hospital toilet users

19 July 2025



Nearly 45% of hospital toilet users fail to wash their hands, study finds

Almost one in two people using a hospital toilet did not wash their hands afterwards, according to new research from the University of Surrey – raising serious concerns about hygiene compliance in high-risk environments.

In a 19-week study conducted in partnership with Bispebjerg hospital in Denmark, sensors were installed on toilet and sink pipes to unobtrusively monitor handwashing behaviour. The results showed that 43.7% of users did not wash their hands after using the toilet, with non-compliance peaking at 61.8% on certain weeks.

Despite the emphasis on hand hygiene during the pandemic, the findings suggest that regular handwashing is still not a consistent habit – even in places where cleanliness is vital for preventing infection spread.

Dr Pablo Pereira-Doel, lead author of the study and Human Insight Lab co-lead at the University of Surrey's Business School, said:

"People may assume handwashing is second nature by now – especially in hospitals and post-Covid-19 – but our data paints a different picture. In medical settings, not washing hands can directly affect patient safety. We need well-timed reminders and campaigns to get people back on track."

The study used advanced Aguardio pipe sensors to measure temperature changes in pipes, detecting water flow from both toilets and sinks. If taps weren't used within two minutes before or four minutes after a toilet flush, the event was recorded as a failure to wash hands.

Out of 2,636 flushes monitored from two public hospital toilets, 1,153 were not followed by handwashing. Non-compliance was especially high at the start and end of the day, as well as during typical mealtimes, indicating potential windows for targeted interventions such as signage, prompts, or behavioural nudges.

Professor Benjamin Gardner, co-author of the study and MSc Behaviour Change Programme Lead at the University of Surrey's School of Psychology, said:

"A key strength of this study is that it uses accurate data obtained using sink sensors, rather than relying on people being willing and able to report whether they wash their hands. Strategies that raise awareness at the crucial point in a bathroom visit and easily understood messaging about how to wash effectively – like singing Happy Birthday twice over – can help people form handwashing habits that last."

Professor Carrie Newlands, Lead for Clinical Skills at the University of Surrey's School of Medicine, added:

"These findings are worrying but not surprising. Even simple behaviours like handwashing can lapse without reinforcement. In hospitals, lapses like these can have serious consequences – for patients and for the wider healthcare system. It's time we moved beyond posters and hand gel stations to more effective behavioural strategies."