

Desinfection at the Point of Care

Interview

Prof. Frank Guenther
Head of Hospital Hygiene
at University Hospital Marburg

“I would have liked to switch to single-use wipe dispenser systems immediately.”

At a glance:

- in 2016, hygiene experts faced a medical mystery: patients' blood samples showed contamination with an environmental germ
- after a lengthy investigation, the culprit was revealed: reusable cloth dispensers
- hygiene expert Prof. Frank Guenther explains his findings from this case

At Heidelberg University Hospital, blood samples from patients were suddenly testing positive for *Achromobacter xylosoxidans*. Prof. Frank Guenther led the inquiry into the source of infection. In 2016, he published the case in BMC Infectious Diseases. The villain: improperly reprocessed wipe dispenser systems.

1. In your 2016 publication “Pseudobacteremia outbreak of biofilm-forming *Achromobacter xylosoxidans* – environmental transmission,” you describe a sudden and significant accumulation of this pathogen in blood cultures of patients. What exactly was happening?

Prof. Frank Guenther: During one of the daily meetings of the hospital hygiene and microbiology team, it was noted that an accumulation of *Achromobacter xylosoxidans* was observed in certain intensive care areas. This is not exactly the classic germ that frequently causes infections in a normal patient clientele. That is why we were very surprised, and this discovery prompted us to typify the spatial-temporal accumulation of isolates. The result was that there were overlaps, which surprised us even more. These infections – or rather, finding evidence of this environmental pathogen in several patients at the same time – naturally led to a stressful situation for everyone involved.

2. What did you do to find the cause of the sudden accumulation and what was the result?

Guenther: First of all, in regard to hospital hygiene, we gradually excluded all possible sources and talked to the colleagues in charge of treatment. As one of the last options, only the reprocessed wipe dispenser systems remained. We microbiologically sampled the disinfectant solution in the buckets – for which special test procedures are required – and were able to detect *Achromobacter* in significant numbers, not only in the solution but also on the wipes. This at least explained how the germs were getting distributed on all surfaces close to the patient. That was part of the puzzle, but at the same time further questions arose. In the end we concluded that when blood was taken, the bottle septa were also disinfected with the wipes, so these were not actual bloodstream infections, but artificial contaminations. The mystery was solved!

3. Once the inadequately processed wipe tissue dispensers turned out to be the source of bacterial contamination of the laboratory samples, what practical conclusions could you apply?

Guenther: The facts have clearly shown that contamination of wipe dispenser system is difficult to eliminate. For me, it has been quite clear since then: Reprocessing wipes dispenser systems is not an acceptable practice in the clinical field, or only after a high reprocessing effort can such dispensers be safely used. Wipe dispenser systems need to be disposable, such as in single-use wipe systems, especially in risk areas.