

Catheter infections decline after preventive efforts

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Maria Frödin, Annette Erichsen Andersson. Credit: University of Gothenburg

Patients with urinary catheters often get infections. But more comprehensive preventive efforts in health care cut the proportion affected in a group of frail elderly patients from 18 to 4 percent, a study led by University of Gothenburg researchers shows.

The study, published in the *Journal of Infection Prevention*, comprises a

total of 2,408 patients with acute hip fractures treated at Sahlgrenska University Hospital in Mölndal. In orthopedics generally, [elderly people](#) with hip fractures make up a large patient group whose hospital stays are relatively protracted.

The most frequent complication in this group is catheter-related urinary tract [infection](#) (UTI). A catheter is a thin, pliable tube inserted into the bladder to empty it when the patient is unable to do so owing, for example, to injury or surgery.

Nevertheless, as the findings from the current study show, many of these hospital-acquired infections are avoidable. Following a wide-ranging, integrated package of preventive measures, the proportion of patients getting infections over a four-year period fell from 18.4 to 4.2 percent. After adjustments, this corresponds to a 74 percent reduction.

Training and knowledge testing

The measures, described as "theory-driven," included strictly aseptic procedures that preserve the catheter's sterility better when it is inserted into the bladder. A training video for all the staff, reviewing catheter insertion step by step, was produced.

Maria Frödin, a doctoral student in health and care sciences at Sahlgrenska Academy, University of Gothenburg, and clinical nurse specialist at Sahlgrenska University Hospital, is the study's first author.

"We created what we call a standardized healthcare stage with set procedures and, what's more, brought in mandatory training in a learning lab for everyone whose job includes catheterization. It involved practicing on a dummy and also doing a knowledge test, and became like a driver's license," she explains.

Collaboration crucial

"The health professionals' collaboration and with leaders and managers has been crucial," says Annette Erichsen Andersson, Associate Professor of Nursing at Sahlgrenska Academy, University of Gothenburg, and nurse at Sahlgrenska University Hospital, who was primarily responsible for the study.

"The keys to success in this work have been collaboration and partnership. It's vital for these good results to continue after the implementation phase, and we see that they've continued to improve over time," she says.

"The fact that it's possible to reduce the number of infections and keep the levels down even in frail and [elderly patients](#) is an important conclusion, and it bodes well for the continued struggle against infections acquired in a [hospital](#) environment," Erichsen Andersson concludes.

More information: Maria Frödin et al, Effectiveness of implementing a preventive urinary catheter care bundle in hip fracture patients, *Journal of Infection Prevention* (2022). [DOI: 10.1177/17571774211060417](https://doi.org/10.1177/17571774211060417)

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