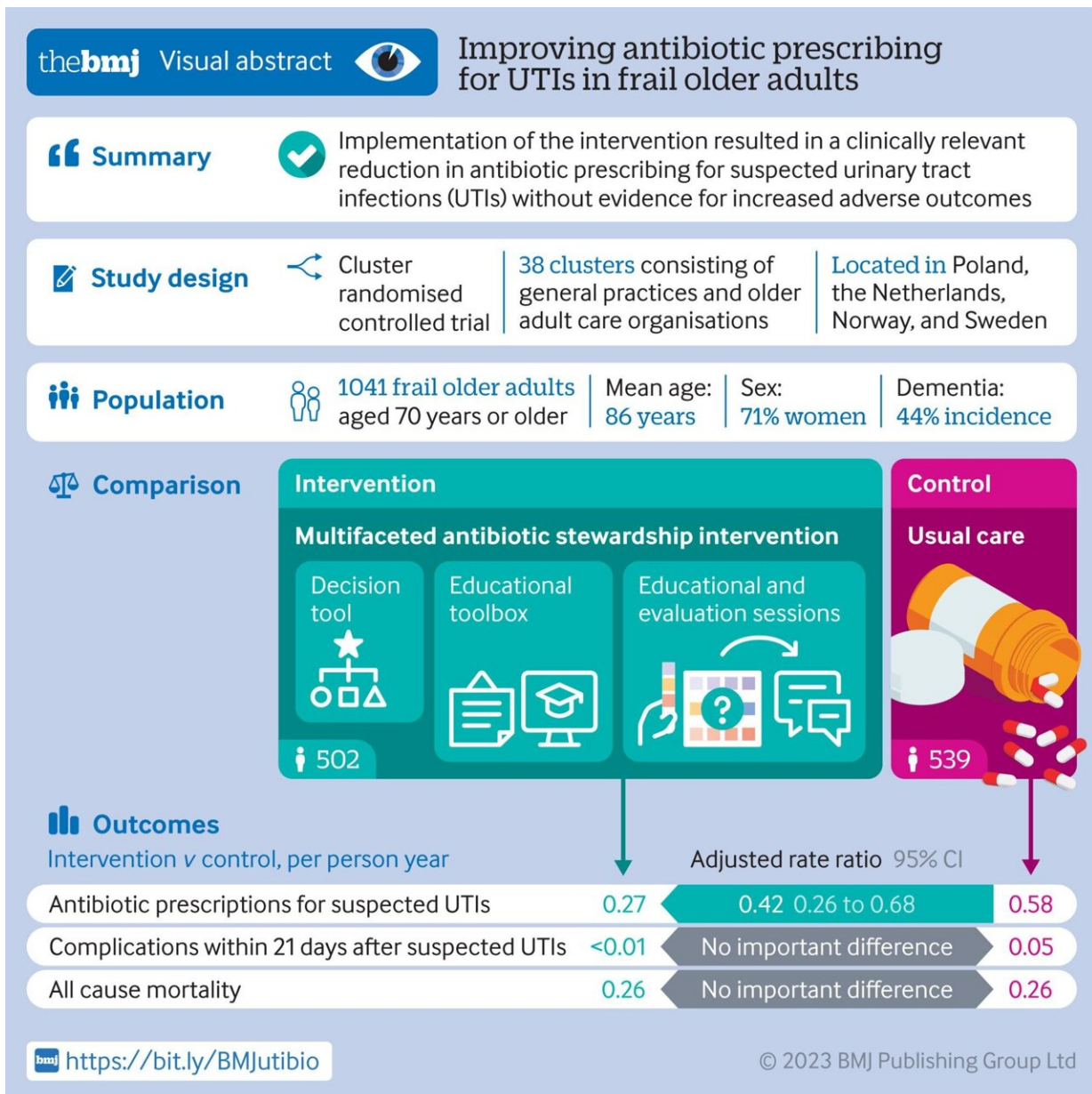


# Decision tool helps halve seniors' use of urinary-tract infection antibiotics

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Credit: *BMJ* (2023). DOI: 10.1136/bmj-2022-072319

As an international study involving University of Gothenburg researchers has shown, a decision tool for health professionals has proved capable of halving the use of antibiotics against urinary tract infections while maintaining patient safety.

The study, now published in *The BMJ*, comprises a total of 1,041 frail [older people](#) at 38 senior care homes in the Netherlands, Norway, Poland, and Sweden. A group of researchers at the University of Gothenburg and Region Västra Götaland has been running the Swedish part of the study, with 207 participants.

The background to the study is the overprescription of antibiotics for older people when urinary tract infections (UTIs) are suspected. Within the framework of the international collaboration, the researchers have therefore designed a multifactorial training program (a "multifaceted antibiotic stewardship intervention") intended to reduce the unnecessary prescriptions.

## **Education and action plan**

The interactive training program consisted of theory instruction followed by discussion in [small groups](#) about optimal care for seniors with suspected UTIs. A [decision tool](#) with associated educational and information material was used. Doctors, nurses, and nurse assistants taking part devised action plans adapted for their own respective workplaces, and these were followed up.

The results show that the intervention was indeed effective: The outcome was a halving of the number of UTI antibiotic courses of

treatment compared with the control group. The reduced number of prescriptions was 0.27 per person-year, against 0.58 for the [control group](#)—a difference that is both clinically relevant and statistically significant.

The study also shows that patient safety was unaffected. There were no intergroup differences in terms of complications, hospitalizations, or deaths ensuing from UTIs. The research was conducted in the period from September 2019 to June 2021.

## Vital to avoid unnecessary antibiotics

Pär-Daniel Sundvall, an associate professor and specialist physician in [general practice](#), is jointly responsible for the Swedish part of the study with Professor Ronny Gunnarsson, doctoral student Egill Snaebjörnsson Arnljots and research nurse Sofia Sundvall.

"Since [antibiotic-resistant bacteria](#) are a growing problem, it's essential to avoid unnecessary antibiotic treatments. Older people are also more sensitive to side effects of antibiotics. So it's fantastic that the training program halved seniors' use of UTI antibiotics while safety remained unchanged," Sundvall says.

**More information:** Esther A R Hartman et al, Effect of a multifaceted antibiotic stewardship intervention to improve antibiotic prescribing for suspected urinary tract infections in frail older adults (ImpresU): pragmatic cluster randomised controlled trial in four European countries, *BMJ* (2023). [DOI: 10.1136/bmj-2022-072319](https://doi.org/10.1136/bmj-2022-072319)

Provided by University of Gothenburg

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