

Local pathogen knowledge key to preventing infection after surgery

February 16 2022



Credit: CC0 Public Domain

More than 250,000 people undergo a transurethral procedure each year in the U.S., and up to 10% of those people will experience a postoperative infection. Now, researchers from the University of

Missouri School of Medicine have discovered an indicator to potentially reduce infections.

A transurethral procedure is the most common type of prostate surgery. Surgeons access the prostate through the male patient's urethra. In an effort to avoid postoperative infection, patients are often prescribed a preventative antibiotic before surgery. However, infections after transurethral procedures are still common.

"Current first-line recommended antibiotics include first-generation cephalosporins and trimethoprim-sulfamethoxazole," said senior author Katie Murray, DO, assistant professor of surgery. "But we found different antibiotics may be more effective in certain parts of the country depending on that region's profile of [antimicrobial susceptibility](#)."

Murray's research team studied antimicrobial susceptibility profiles in 40 states. Twenty-two of those had statewide data, an additional 15 states provided public medical school data and the remaining three provided a combination of data from private institutions or counties.

"After reviewing the data from each state, we discovered current first-line recommendations for preventative antibiotic regimens provide relatively poor coverage overall," Murray said. "In most cases, we found aminoglycosides and third-generation cephalosporins to be more effective than current first-line antibiotics."

In some cases, Murray and her team found non-first-line [antibiotics](#) were 10-15% more effective than first-line treatment against the most frequently identified organisms after transurethral procedures.

"Among the antimicrobials we studied, not one is clearly superior in all settings," Murray said. "When possible, urologists should use up-to-date

knowledge of local patterns, and large organizations should consider changing recommendations to reflect the geographic variability of susceptibility patterns."

The study was recently published in the journal *Urology*.

More information: Geoffrey H. Rosen et al, Antimicrobial Selection for Transurethral Procedures Across the United States: A State-by-State Antibigram Evaluation, *Urology* (2021). [DOI: 10.1016/j.urology.2021.10.009](https://doi.org/10.1016/j.urology.2021.10.009)

Provided by University of Missouri

Citation: Local pathogen knowledge key to preventing infection after surgery (2022, February 16) retrieved 25 April 2024 from <https://medicalxpress.com/news/2022-02-local-pathogen-knowledge-key-infection.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.