

# Delayed appendicitis diagnosis more common among non-Hispanic Black adults

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Non-Hispanic Black adults more frequently experience delays in receiving an appendicitis diagnosis in hospital emergency departments, putting them at a higher likelihood of perforated appendicitis and

subsequent post-surgical infections, reports a new Northwestern Medicine study.

However, the delay in [diagnosis](#) was less common for patients cared for in hospitals serving greater than 50% Black-Hispanic populations compared to hospitals serving less than 25% Black-Hispanic populations.

The study also found nearly half the cohort with delayed diagnosis was ultimately diagnosed and treated with surgery for their appendicitis at a different hospital from the first one that failed to diagnose the appendicitis.

This is the first study to show racial-ethnic disparities in the delay of diagnosis of appendicitis in adults. It also is the first to find that hospitals serving more minority patient populations are less likely to delay diagnosis of appendicitis than hospitals serving fewer minority patient populations.

The retrospective observational study was based on data from 80,312 patients, aged 18 to 64, who underwent appendectomy from 2016 to 2017 in Florida, Maryland, New York and Wisconsin.

Appendicitis is the most common surgical diagnosis, affecting more than 250,000 Americans annually. Delays in diagnosis are associated with increased rates of progression to perforated (or ruptured) appendicitis, which leads to more infections after surgery, increases time in the [hospital](#) and raises the likelihood someone will return to the [hospital](#) after surgery.

The study will be published Jan. 18 in *JAMA Surgery*.

Care for Black patients has historically been concentrated in a relatively small proportion of U.S. hospitals. There is prior evidence that minority

patients more frequently receive care at lower-quality hospitals.

"Yet, there is clearly a benefit to patients being treated in predominantly minority-serving hospitals when they are having symptoms of appendicitis," said senior author Dr. Anne Stey, assistant professor of surgery at Northwestern University Feinberg School of Medicine and a Northwestern Medicine surgeon.

Stey suggested a reason for that benefit.

"It may be hospitals that are more used to serving racial-ethnic minority patients are better at diagnosing them, because they're more culturally informed and have a better understanding of these patients," Stey said.

The structure of U.S. health care system financing provides lower reimbursements to hospitals serving a higher proportion of uninsured or publicly insured patients, who are frequently minorities, the study authors said.

"The lower reimbursements to hospitals serving Medicaid patients creates an unsustainable system," Stey said. "We have a two-tiered health system. By racially integrating hospitals, our health care system would be able to provide better [clinical care](#) to all [patients](#), but also create a more sustainable health care system."

In future research, the investigators plan to quantify the cost implications of delayed diagnosis of appendicitis.

Other Northwestern authors on the study are Joe Feinglass and former Northwestern post-doctoral research and clinical fellows Dr. Ana Reyes, Dr. Regina Royan and Arielle Thomas.

**More information:** Patient and Hospital Characteristics Associated

With Delayed Diagnosis of Appendicitis, *JAMA Surgery* (2023).

Provided by Northwestern University

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