

More patients can avoid hospital admissions after emergency room visits for diverticulitis

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About 150,000 people are admitted to hospitals each year for diverticulitis,¹ an inflammation of an outgrowth or pouching in the colon that can cause severe abdominal pain. Furthermore, emergency room (ER) visits for diverticulitis have increased 21 percent in recent years.² However, these ER visits don't have to land patients in the hospital as frequently as they do, according to new findings published as an "article in press" on the *Journal of the American College of Surgeons* website in advance of print publication. A study of patients with diverticulitis who went to emergency rooms in a Minnesota health system found that about half of those admitted could have been sent home at significant savings to not only the health care system, but to the individual patients as well.

Researchers at the University of Minnesota, Minneapolis, reported that most patients with uncomplicated [diverticulitis](#) could safely go home with a prescription for [oral antibiotics](#) after their ER visits with a very low risk of returning to the [hospital](#). "While that finding may not seem surprising to most surgeons, it is a poorly studied topic in the United States, and gathering some data on this occurrence is important to clarify in terms of whether there are even more people seen in the [emergency](#) room who could be safely managed at home," said lead study author Mary Kwaan, MD, MPH, FACS, assistant professor of surgery, division of colon and rectal surgery, department of surgery, University of Minnesota. National statistics have shown that only 15 percent of patients with diverticulitis who go to the emergency room need an operation right away.¹

Complicated diverticulitis involves a small perforation of the pouching or outgrowth of the colon that is visible on a computerized tomography (CT) scan, whereas uncomplicated diverticulitis is defined as no identifiable perforation on a CT scan. Extreme cases involve a large perforation of the colon with peritonitis, which is inflammation of the abdomen. The goal of treatment is to relieve symptoms, typically of [abdominal pain](#) and inflammation, and to restore normal bowel function. Severe cases often require surgery. CT scanning is essential in the diagnosis of diverticulitis. "The CT scan provides us with a surrogate for determining the severity of perforation one has suffered," Dr. Kwaan said.

The researchers evaluated 240 patients treated in five [hospital emergency rooms](#) in the Fairview Health System, which includes University of Minnesota Health, from September 2010 through January 2012; 144 (60 percent) were admitted to the hospital and 96 (40 percent) were discharged to their homes on oral antibiotics.

Admitted patients were more likely to be age 65 years or older, have other health problems, take steroids to treat inflammation or agents that suppressed their immune system, have excess air in the digestive system, or have an abscess or perforation in the diverticular area as seen on a CT scan. Among those patients discharged from the emergency room, 12.5 percent returned to the ER or were admitted to the hospital within 30 days, and only one patient required emergency surgery, but not until 20 months later. "That [finding] didn't seem to be a high rate," Dr. Kwaan said. For the patients who were admitted from their emergency room visit, the hospital readmission rate was slightly higher, at 15 percent.

Dr. Kwaan and coauthors found that 53 percent of the admitted patients in their study could be safely discharged home. They used a standard that Margaret Greenwood-Ericksen, MD,² and colleagues at Brigham and Women's Hospital, Boston, had developed for determining low-risk

diverticulitis.

Two key factors the researchers found that determined the severity of diverticulitis were high fever and high white blood cell counts. In low-risk patients, "we found that few patients had high fevers and most patients had normal or mildly elevated white blood cell counts," Dr. Kwaan said.

While the study is relatively small, Dr. Kwaan noted it is significant because it involved several emergency rooms across one health system. It also confirms findings of an earlier randomized clinical trial in Spain that concluded outpatient treatment is safe in selected cases of uncomplicated diverticulitis.³

Dr. Kwaan said physicians and hospitals could use the Minnesota study findings to develop protocols for emergency room doctors to better treat diverticulitis. "As a result of this study, a checklist approach to patient and CT characteristics can prompt a protocol that allows an [emergency room](#) doctor to quickly sort out whether or not the patient needs a surgical consult or whether they need to be admitted to the hospital, and then whether they can be safely discharged home," she said. She and her colleagues are collaborating with ER physicians to develop such protocols in their health system. The next step would be to create a feedback loop to monitor the effectiveness of the protocol.

Avoiding unnecessary hospitalizations is important for reducing health care costs and applying hospital resources more effectively.

"Diverticulitis is quite a common disease, and there is a general movement among hospitals toward being more strategic with their resources," Dr. Kwaan said. "Unnecessary hospital admissions cost the system and potentially expose [patients](#) to hospital-acquired infections."

More information: Diverticulitis diagnosed in the emergency room: is

it safe to discharge home? *Journal of the American College of Surgeons*.
DOI: [dx.doi.org/10.1016/j.jamcollsurg.2017.02.016](https://doi.org/10.1016/j.jamcollsurg.2017.02.016)

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