

Use of Fecal Immunochemical Tests (FIT) Unlocks the Door to Efficient and Effective Investigation of Patients with New Bowel Symptoms



NHS Tayside 2020 UNIVANTS Recognition of Distinction

Colonoscopies are frequently ordered procedures for the diagnosis of colorectal cancers, and are commonly recommended for use in preventative screening. Though they may be common, they're also widely considered by patients and clinicians to be somewhat invasive, unpleasant, and in some cases, high risk, while costing significantly more than other diagnostic assessments.

In Scotland, clinicians observed that the volume of colonoscopy referrals had recently increased, with a notable 35 to 45 percent of referrals being marked as "urgent." Coupled with the rising awareness of bowel cancer, the burden on gastroenterology services was substantial. Additionally, less-invasive pathology tools were not being utilized at the same rate, suggesting an opportunity to change the clinical pathway.

"We realized there were a significant number of people getting a pretty invasive, unpleasant procedure that is not without risk," said Judith Strachan, a consultant clinical scientist at NHS Tayside, located in Dundee.

1/3 of patients avoided unnecessary referral for colonoscopy



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JUDITH STRACHAN

Symptoms of bowel cancer include rectal bleeding, palpable mass and iron deficiency anemia, but can also include non-specific symptoms. Strachan and her colleagues were concerned that referring patients for this significant procedure based mostly on broad symptoms—a poor predictor of pathology—has the potential to not only be ineffective but potentially harmful. The team performed a retrospective study of colonoscopy outcomes that supported this theory: only 2 percent of patients had colorectal cancer and only 5 percent had inflammatory bowel disease. Armed with this evidence, they were convinced there had to be a better way.

In collaboration with gastroenterologist colleagues, Strachan and her fellow clinicians sought to devise a strategic pathology-based pathway that was quicker, cost-effective and safer for promptly ruling out the need for colonoscopies in patients who are unlikely to be diagnosed with cancer. They decided to pilot the fecal immunochemical test (FIT) as an initial diagnostic tool for patients presenting with symptoms consistent with bowel cancer, to be ordered prior to referring them to a gastroenterologist or colonoscopy procedure. FIT analyzes stool for fecal hemoglobin (fHb) from the lower intestines.

Based on their pilot study, Strachan and her team determined that low fHb was a good indicator that a patient was unlikely to have significant bowel disease. The team developed a pathway that allows a general practitioner (GP) to rule out the need for colonoscopy in patients with low fHb, when coupled with a normal clinical assessment and normal complete blood count (CBC) test. This represents about one-third of patients who present to their GP and would previously have been referred for a colonoscopy. Doctors who rule out the need for a colonoscopy are offered other recommended options in the electronic health-record to further investigate and treat symptoms.

Following implementation of the pathway in Tayside, referrals for colonoscopy dropped 15 percent over 12 months, a sea change that allowed the NHS to free up procedure appointments and more promptly diagnose patients whose FIT results suggest a higher likelihood of colorectal cancer. Although Strachan did not cite cost as a major driver of this care innovation, the new pathway has significant cost efficiencies as well—FIT tests are very inexpensive, especially when compared to the cost of a colonoscopy.

Historically, GPs have referred patients to gastroenterologists for a final determination on whether a colonoscopy is necessary. Consequently, successful integration of FIT into routine assessment required widespread training of GPs on this new pathway to ensure appropriate and widespread adoption.

“We’ve had a lot of GPs who’ve said this test is very reassuring,” Strachan said. “If you have someone who you don’t want to send to colonoscopy because they’re frail or the procedure would be high risk, this test is a reassuring message.”



15% reduction in colonoscopy referrals over 12 months, freeing up appointments for urgent cases.

One concern cited by clinicians was that FIT tests could hold up colonoscopy referrals when cancer is suspected. To solve for this challenge, the team worked with colleagues to arrange for FIT samples to be transported to the lab via existing means of transporting blood samples and was coupled by daily analysis. This process improvement allowed FIT to be implemented in remote areas and ensured results were available for gastroenterologist review by the time the referral appointment occurred, allowing for timely diagnosis.

The substantial success of this care pathway has inspired others to do the same—consequently, it is now in widespread use across Scotland and gaining adoption in England as well. Strachan believes the success of her small, but tight-knit team lies in the ability of team members to communicate effectively within the lab while building effective relationships with clinicians and labs alike across the country. While it took time to gain buy-in for the pathway, longstanding trust and a culture of collaboration eased that process.

“We’re a small country, and we’re well-linked with all the labs in Scotland—I know most people, and the doctors know each other as well. Getting the message out there is quite easy in Scotland,” Strachan said.

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