

Potential Impact of USPS Mail Delivery Delays on Colorectal Cancer Screening Programs

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Background: Colorectal cancer is the second-leading cause of cancer deaths in the United States. Fecal immunochemical tests (FITs) are a primary means of colorectal cancer screening at some health care institutions because of scheduling backlogs for screening, diagnostic, and surveillance endoscopies. However, delays in mail delivery can impact timely analysis of samples, possibly leading to false-negative results and the need for repeat tests. Some patients might be unwilling to submit another test when informed that an earlier sample cannot be reliably analyzed, resulting in a missed opportunity for screening.

Observations: The Jesse Brown Veterans Affairs Medical Center has experienced some success through contacting the local US Postal Service (USPS) to avoid these delays; however, the problem often unpredictably recurs with USPS staff turnover. Laboratories and health systems experiencing delays should

first ensure that prepaid envelopes have the correct postage and that their USPS accounts are properly funded, to confirm that insufficient funds are not contributing to the delayed deliveries. Adding additional language to the preprinted envelopes, such as “time-sensitive,” may also be helpful. Asking patients to drop off test kits at the laboratory or using private letter carriers is not feasible in some communities. Other strategies include establishing a drop-off box at clinic offices or considering other screening methods, such as colonoscopies or flexible sigmoidoscopies.

Conclusions: Clinicians who work in health care systems that use FIT kits need to be aware of the impact that local USPS delays can have on the reliability of FIT results. Health systems should be prepared to implement mitigation strategies if significant delays with mail delivery are encountered.

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Colorectal cancer (CRC) is the second leading cause of cancer deaths in the United States.¹ In 2022, there were an estimated 151,030 new CRC cases and 52,580 deaths.¹ Options for CRC screening of patients at average risk include stool tests (annual fecal immunochemical test [FIT], annual guaiac-based fecal occult blood test, or stool FIT-DNA test every 1 to 3 years), colonoscopies every 10 years, flexible sigmoidoscopies every 5 years (or every 10 years with annual FIT), and computed tomography (CT) colonography every 5 years.² Many health care systems use annual FIT for patients at average risk. Compared with guaiac-based fecal occult blood testing, FIT does not require dietary or medication modifications and yields greater sensitivity and patient participation.³

The COVID-19 pandemic and staffing issues have caused a scheduling backlog for screening, diagnostic, and surveillance endoscopies at some medical centers. As a result, FIT has become the primary means of CRC screening at these institutions. FIT kits for home use are typically distributed to eligible patients at an office visit or by mail, and patients are then instructed to mail the kits back to the laboratory. For the test to be as sensitive as possible, FIT kit manufacturers advise laboratory analysis within 14 to 15 days of collection, if stored at ambient temperature, and to reject the sample if it does not meet testing criteria for stability. Delayed FIT

sample analysis has been associated with higher false-negative rates because of hemoglobin degradation.⁴ FIT sample exposure to high ambient temperatures also has been linked to decreased sensitivity for detecting CRC.⁵

US Postal Service (USPS) mail delivery delays have plagued many areas of the country. A variety of factors, including the COVID-19 pandemic, understaffing, changes in USPS policies, closure of post offices, and changes in mail delivery standards, may also be contributory causes. According to the USPS website, delivery standard for first-class mail is 1 to 5 days, but this is not guaranteed.⁶

The Jesse Brown Veterans Affairs Medical Center (JBVAMC) laboratory in Chicago has reported receiving FIT kit envelopes in batches by the USPS, with some prepaid first-class business reply envelopes delivered up to 60 days after the time of sample collection. Polymedco, a company that assists US Department of Veterans Affairs (VA) medical centers with logistics of FIT programs for CRC screening, reports that USPS batching of FIT kits leading to delayed delivery has been a periodic problem for medical centers around the country. Polymedco staff remind USPS staff about 4 points when they encounter this issue: Mailers are first-class mail; mailers contain a human biologic specimen that has limited viability; the biological sample used for detecting cancer is time sensitive; and delays

in delivery by holding/batching kits could impact morbidity and mortality. Reviewing these key points with local USPS staff usually helps, however, batching and delayed delivery of the FIT kits can sometimes recur with USPS staffing turnover.

Tracking and identifying when a patient receives the FIT kit is difficult. Patients are instructed to write the date of collection on the kit, so the receiving laboratory knows whether the sample can be reliably analyzed. When patients are notified about delayed delivery of their sample, a staff member asks if they postponed dropping the kit in the mail. Most patients report mailing the sample within 1 to 2 days of collection. Tracking and dating each step of FIT kit events is not feasible with a mass mailing campaign. In our experience, most patients write the date of collection on the kit. If a collection date is not provided, the laboratory will call the patient to confirm a date. Cheng and colleagues reviewed the causes for FIT specimen rejection in a laboratory analyzing specimens for VA patients and found that 14% of submitted samples were rejected because the specimen was received > 14 days after collection, and 6% because the patient did not record the collection date. With a series of interventions aimed at reminding patients and improving laboratory procedures, rates of rejection for these 2 causes were reduced to < 4%.⁷ USPS delays were not identified as a factor or tracked in this study.

It is unclear why the USPS sometimes holds FIT kits at their facilities and then delivers large bins of them at the same time. Because FIT kits should be analyzed within 14 to 15 days of sample collection to assure reliable results, mail delivery delays can result in increased sample rejection. Based on the JBVAMC experience, up to 30% of submitted samples might need to be discarded when batched delivery takes place. In these cases, patients need to be contacted, informed of the problem, and asked to submit new kits. Understandably, patients are reluctant to repeat this type of testing, and we are concerned this could lead to reduced rates of CRC screening in affected communities.

As an alternative to discarding delayed samples, laboratories could report the results of delayed FIT kits with an added comment that “negative test results may be less reliable due to delayed processing,” but this approach would raise quality and medicolegal

concerns. Clinicians have reached out to local USPS supervisory personnel with mixed results. Sometimes batching and delayed deliveries stop for a few months, only to resume without warning. Dropping off the sample directly at the laboratory is not a realistic option for most patients. Some patients can be convinced to submit another sample, some elect to switch to other CRC screening strategies, while others, unfortunately, decline further screening efforts.

Laboratory staff can be overwhelmed with having to process hundreds of samples in a short time frame, especially because there is no way of knowing when USPS will make a batched delivery. Laboratory capacities can limit staff at some facilities to performing analysis of only 10 tests at a time. The FIT kits should be delivered on a rolling basis and without delay so that the samples can be reliably analyzed with a predictable workload for the laboratory personnel and without unexpected surges.

When health care facilities identify delayed mail delivery of FIT kits via USPS, laboratories should first ensure that the correct postage rates are used on the prepaid envelopes and that their USPS accounts are properly funded, so that insufficient funds are not contributing to delayed deliveries. Stakeholders should then reach out to local USPS supervisory staff and request that the practice of batching the delivery of FIT kits be stopped. Educating USPS supervisory staff about concerns related to decreased test reliability associated with delayed mail delivery can be a persuasive argument. Adding additional language to the preprinted envelopes, such as “time sensitive,” may also be helpful. Unfortunately, the JBVAMC experience has been that the problem initially gets better after contacting the USPS, only to unexpectedly resurface months later. This cycle has been repeated several times in the past 2 years at JBVAMC.

All clinicians involved in CRC screening and treatment at institutions that use FIT kits need to be aware of the impact that local USPS delays can have on the reliability of these results. Health care systems should be prepared to implement mitigation strategies if they encounter significant delays with mail delivery. If delays cannot be reliably resolved by working with the local USPS staff, consider involving national USPS oversight bodies. And if the problems persist despite an attempt to work with the

USPS, some institutions might find it feasible to offer drop boxes at their clinics and instruct patients to drop off FIT kits immediately following collection, in lieu of mailing them. Switching to private carriers is not a cost-effective alternative for most health care systems, and some may exclude rural areas. Depending on the local availability and capacity of endoscopists, some clinicians might prioritize referring patients for screening colonoscopies or screening flexible sigmoidoscopies, and might deemphasize FIT kits as a preferred option for CRC screening. CT colonography is an alternative screening method that is not as widely offered, nor as widely accepted at this time.

CONCLUSIONS

CRC screening is an essential part of preventive medicine, and the percentage of eligible patients screened is a well-established quality metric in primary care settings. Health care systems, clinicians, and laboratories must be vigilant to ensure that USPS delays in delivering FIT kits do not negatively impact their CRC screening programs. Facilities should actively monitor for delays in the return of FIT kits.

Despite the widespread use of mail-order pharmacies and the use of mail to communicate notifications about test results and follow-up appointments, unreliable or delayed mail delivery traditionally has not been considered a social determinant of health.⁸ This article highlights the impact delayed mail delivery can have on health outcomes. Disadvantaged communities in inner cities and rural areas have been disproportionately affected by the worsening performance of the USPS over the past few years.⁹ This represents an underappreciated public health concern in need of a sustainable solution.

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