HARD STOPS FOR GUIDELINE-NON-COMPLIANT *C. DIFFICILE* TESTING: PATIENT OUTCOMES & PROVIDER UPTAKE

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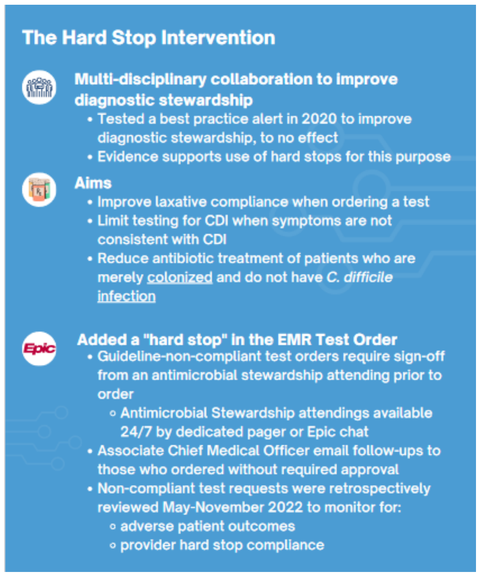
BACKGROUND

- *Clostridioides difficile* infection (CDI) is a serious healthcare-associated infection responsible for more than 12,000 U.S. deaths annually.
- Over-testing can lead to antibiotic overuse and potential patient harm when patients are colonized with *C. difficile*, but not infected, yet treated.
- The Infectious Diseases Society of America's 2021 guideline *CDI management in adults* recommends when testing is appropriate; occasionally, guideline-non-compliant testing may be warranted.

AIMS & METHODS

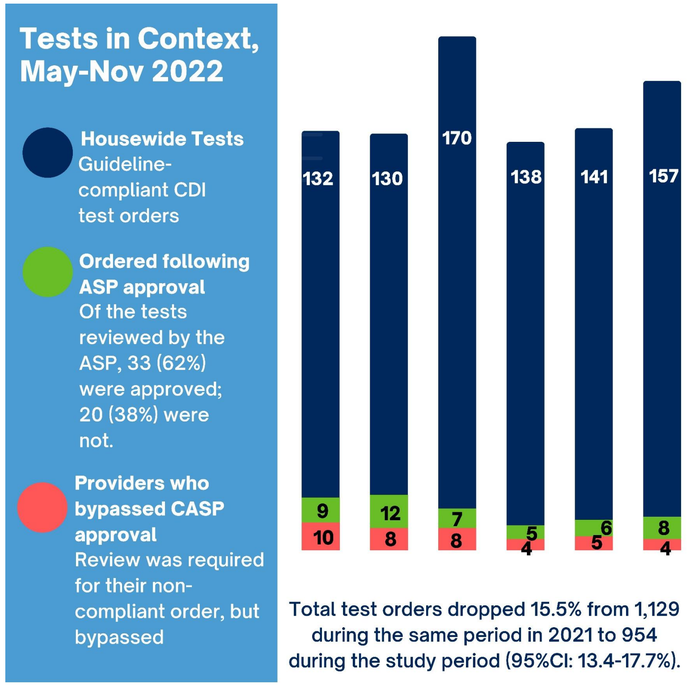


The team exported data from the electronic medical record (EMR), generated descriptive statistics in Microsoft Excel, and reviewed email feedback on reasons for bypassing the hard stop in the EMR.

RESULTS

Guideline-non-compliant test orders are a small proportion of all test orders. Green + Red below represent all guideline-non-compliant tests that required approval before ordering (86). Only the Green tests obtained review; Red tests bypassed stewardship approval.

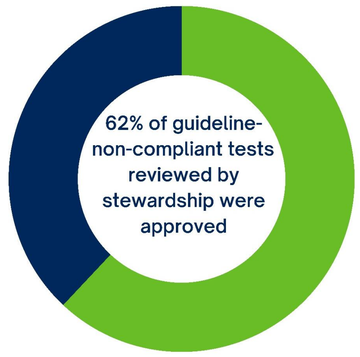
Fig. 1



Total test orders dropped 15.5% from 1,129 during the same period in 2021 to 954 during the study period (95%CI: 13.4-17.7%).

Fig. 2

Most guideline-non-compliant tests (62%) were reviewed by the Antimicrobial Stewardship Program (ASP), while 38% obtained non-ASP or no approval. Of the tests reviewed by the ASP, 33 (62%) were approved; 20 (38%) were not.

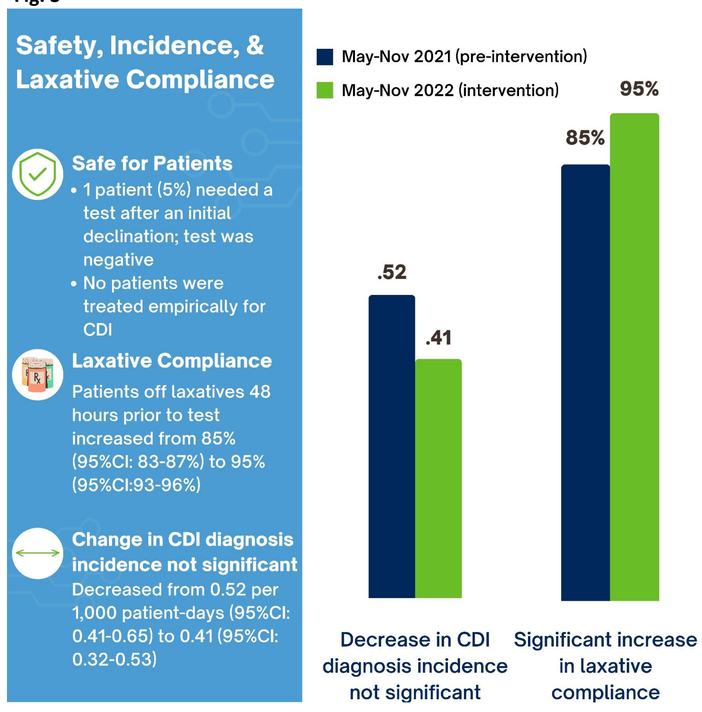


Of tests that bypassed ASP review, 18 (56%) of ordering providers received a follow-up email from an associate chief medical officer to remind them of the new process and to determine rationale for bypassing. Provider avoidance of the ASP approval mechanism decreased 38%, from 53% of non-compliant tests in month one to 33% in month six (see Fig. 1).

REASONS GIVEN FOR BYPASSING ORDER APPROVAL:

- Believed the requirement didn't apply because of holiday, weekend, or after-hours time of ordering
- Unaware of new approval requirement
- Believed that approval from Infectious Diseases, Gastroenterology, other non-ASP attending, or themselves met the requirement
- Patient had refused laxatives, but it was not charted (meeting the 48-hour off laxatives guideline and making the order guideline-compliant)
- Other patient-specific reasons

Fig. 3



CONCLUSIONS

- Over time and with feedback to providers circumventing the exception process, providers became aware of, accepted, and used the hard stop, improving diagnostic stewardship and avoiding unneeded treatment.
- Added scrutiny on the appropriateness of guideline-non-compliant testing had a significant effect on the overall volume of testing.

LIMITATIONS

- The analysis did not consider the effect of orders from a shifting provider mix due to the discontinuation of a standing order that permitted nurses to enter *C. diff* orders at the direction of a prescriber.
  - The team observed a decrease in nursing-placed test orders from 21% to 8% of all CDI test orders from baseline to the intervention period. Smaller shifts occurred among other groups.
- The intervention did not aim to improve loose stool documentation, which remained below 60% during both the implementation period and the period prior to implementation.