

## **ANALYZING THE USE OF FECAL IMMUNOCHEMICAL TESTING (FIT) IN ACUTE PATIENT CARE IN HARRIS HEALTH HOSPITALS**

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**Category:** Health Outcomes / Services Research

### **Background**

Fecal immunochemical testing (FIT) has been validated as a screening test for colorectal cancer (CRC) in asymptomatic patients in the outpatient setting. However, FIT is used with relative frequency in emergency departments (ED) and inpatient wards across the country, where recent studies show the results rarely affect patient management and incur unnecessary costs.

### **Objectives**

Our objective was to characterize the prevalence of, indications for, and outcomes of FIT testing in the ED and inpatient setting in Harris Health Hospitals (HHS).

### **Methods**

We conducted a retrospective cohort study of 382 adult patients who received FIT testing in HHS between 8/2016 and 3/2017. Data collected included demographics, location of FIT ordering (ED vs. inpatient), FIT indication, FIT result, receipt and results of diagnostic follow-up. Descriptive statistics were used to compare outcomes for FIT positive and negative patients and log binomial regression was used to calculate risk ratios for obtaining a diagnostic exam.

### **Results**

Of the 382 patients, a majority had FIT ordered in the ED (79.1%). The primary indication for FIT was signs of overt GI bleed (GIB, 54.2%), followed by anemia (22%) and suspected GIB (12.3%). 0 FITs were ordered for the indication of CRC detection. 34.8% of the FITs performed were positive. While having a positive FIT was significantly associated with obtaining a diagnostic exam in multivariate analysis (RR: 1.56,  $p=0.002$ ), having signs of overt GIB was a stronger predictor of diagnostic follow-up (RR: 1.56 vs 2.07). Of patients who were FIT tested and received diagnostic follow-up ( $n=110$ ), 48.2% were FIT negative. Additionally, FIT negative patients who received diagnostic follow-up were just as likely to have an abnormal finding as FIT positive patients (90.6% vs 91.2%;  $p=1.0$ ). Finally, of the 382 patients in the study, 4 went on to have new CRC detected (1.0%). Of those 4 patients, 1 was FIT positive (sensitivity= 25%).

### **Discussion**

FIT testing is conducted frequently in the EDs and inpatient wards of HHS, but rarely if ever for its validated purpose of CRC detection. Even in patients with a positive FIT result, fewer than half received diagnostic follow-up. Moreover, a substantial portion (21.3%) of those with negative FIT received diagnostic follow-up given clinical suspicion. The sensitivity for detecting CRC in the acute setting was a mere 25%. These results suggest that there is no role for FIT testing in the acute setting, as it does not affect management and likely represents an unnecessary cost.