



# Predictive overbooking and active recruitment increases uptake of endoscopy appointments among African American patients CME

Folasade P. May, MD, PhD,<sup>1,3</sup> Mark W. Reid, PhD,<sup>1,2</sup> Samuel Cohen, MD,<sup>2</sup> Francis Dailey, MD,<sup>2</sup>  
Brennan M. R. Spiegel, MD, MSHS<sup>1,2,4</sup>

Los Angeles, California, USA

**Background and Aims:** Use of GI endoscopy is historically lower in nonwhite ethnic and racial groups compared with whites. These disparities are multifactorial but likely contribute to differences in GI clinical outcomes. We sought to improve endoscopy uptake overall and in minorities by predictive overbooking and active recruitment in a hospital-based GI clinic.

**Methods:** From January to October 2014, we alternated between traditional booking for Veterans Affairs Healthcare Network patients with a physician recommendation for endoscopy and active recruitment of patients to fill projected open endoscopy appointment slots. On intervention weeks, patients attending a GI clinic were given the opportunity to “fast track” to an endoscopy appointment on short notice. During control weeks, patients were not actively recruited. We compared uptake of endoscopy appointments in both groups and performed logistic regression to determine predictors of participation in fast-track active recruitment.

**Results:** During fast-track active recruitment for endoscopy, the clinic recruited an additional 111 patients for endoscopy over passive recruitment, including 46 African Americans (41.4%). In a logistic regression model controlling for demographic and clinical characteristics, African Americans were twice as likely (adjusted OR, 1.99; 95% CI, 1.26-3.17) than whites to participate in the fast-track option for recommended endoscopy.

**Conclusions:** Interventions to actively recruit patients for endoscopy increased the overall percentage of GI clinic patients undergoing endoscopy and disproportionately improved endoscopy appointment uptake in African Americans. (*Gastrointest Endosc* 2017;85:700-5.)

Endoscopy is an essential diagnostic tool for the detection and treatment of GI disease and an important screening tool for the prevention of GI malignancy.<sup>1-3</sup> Flexible sigmoidoscopy and colonoscopy are widely used for the diagnosis of colonic disease and are the only procedural modalities available to remove precancerous colon polyps.<sup>3,4</sup> EGD is a common diagnostic procedure performed by endoscopists worldwide and is the primary

*Abbreviations:* CI, confidence interval; OR, odds ratio; SES, socioeconomic status; VA, Veterans Affairs.

*DISCLOSURE:* The following authors received research support for this study from a VA Health Services Research and Development Merit Award (no. IIR 12-055): B. M. R. Spiegel; and from a National Institutes of Health Training grant (no. T32DK07180—40): F. P. May. All other authors disclosed no financial relationships relevant to this publication.

See CME section; p. 829.

Copyright © 2017 by the American Society for Gastrointestinal Endoscopy  
0016-5107/\$36.00

<http://dx.doi.org/10.1016/j.gie.2016.09.001>

Received June 14, 2016. Accepted September 1, 2016.

tool for screening of conditions like Barrett’s esophagus and esophageal varices.<sup>2</sup>

Despite various indications for use, rates of diagnostic endoscopy when endoscopy is indicated are historically lower in nonwhite ethnic and racial groups compared with non-Hispanic whites.<sup>3,5,6</sup> In a large cohort of African American patients in an inner city setting, completion rates were 17.5% and 22.8%, respectively, for

*Current affiliations:* Department of Gastroenterology, VA Greater Los Angeles Healthcare System, Los Angeles, California, USA (1), Cedars-Sinai Center for Outcomes Research and Education, Los Angeles, California, USA (2), Division of Digestive Diseases, David Geffen School of Medicine at University of California, Los Angeles, Los Angeles, California, USA (3), Department of Health Policy and Management, University of California, Los Angeles Fielding School of Public Health, Los Angeles, California, USA (4).

Reprint requests: Folasade P. May, MD, PhD, Assistant Professor of Medicine, UCLA Division of Digestive Diseases, Division of Gastroenterology, West Los Angeles VA Medical Center, 11301 Wilshire Blvd., Bldg. 115, Room 215, Los Angeles, CA 90073.

recommended outpatient EGD and colonoscopy.<sup>7</sup> African Americans are also less likely to comply with colonoscopy than whites when recommended for screening.<sup>8-10</sup> Our research group has demonstrated differences in the use of colonoscopy for colorectal cancer screening in a large and demographically diverse Veterans Affairs (VA) Healthcare Network where uptake of colonoscopic screening was significantly lower in eligible African American veterans than white veterans in a retrospective analysis of colorectal cancer screening use.<sup>11</sup> These inequities existed despite a known higher risk of colorectal cancer among African Americans and guidelines from the American College of Gastroenterology to preferentially screen for colorectal cancer with colonoscopy in African Americans.<sup>12</sup>

Disparities in uptake of diagnostic and screening endoscopy are likely multifactorial. Patient-level barriers, like fear of invasive procedures and perceived importance of indicated procedures, and provider- and system-level dynamics, like physician counseling practices and physical access to procedures, contribute to suboptimal use of endoscopy in minorities.<sup>13</sup> That patients are typically recruited passively for endoscopy—after receiving a physician recommendation, they must often call the clinic to schedule endoscopy—may impose additional barriers that disproportionately affect minorities. Even once an endoscopy appointment is made, African Americans are less likely than whites to present for the procedure. In a recent analysis of endoscopy attendance at 69 VA facilities, African American race was significantly and positively associated with missed endoscopy appointments.<sup>14</sup>

The present study is part of a large VA-funded effort to improve access to care and to help address concerns about procedure scheduling in the VA Healthcare System. Given recent national criticism of low procedure completion in the VA, our intervention aimed to improve EGD, flexible sigmoidoscopy, and colonoscopy uptake among all veteran patients recommended for endoscopy in the VA GI clinic by calling or speaking to patients directly about appointments and by making appointments available on short notice.<sup>15</sup> Given low GI procedure attendance among African Americans, we also sought to determine whether our intervention could improve disparities in procedure use in our facility.

## METHODS

### Overview and patients

The research was conducted as part of a larger study assessing the validity and efficacy of a predictive overbooking system tested in a GI outpatient clinic.<sup>16</sup> All patients were veterans of the U.S. military service who had been recommended for an outpatient EGD or colonoscopy by a physician in the VA Greater Los

Angeles Healthcare System, a demographically diverse network of 15 healthcare clinics in the Los Angeles area that serves more than 1.4 million veterans. Patients who chose to participate in the testing of our predictive overbooking system provided informed verbal consent to be scheduled for endoscopy on short notice. Study design and procedures were formally reviewed and approved by the VA Institutional Review Board (no. CC 2013-040489).

### Predictive overbooking

In previous research we used patient- and clinic-level data obtained retrospectively to develop a predictive model of patient absenteeism for GI endoscopy procedures. We selected possible predictors of absenteeism from a review of existing literature and an informal survey of VA care providers and tested these using logistic regression.<sup>17</sup> We tested our final multivariable model using bootstrapping to avoid estimation bias. Data for the prediction model were obtained through automated electronic health record review for each patient with an upcoming appointment scheduled. Predictors of not attending GI endoscopy appointments (ie, “no-show”) included previous no-shows or cancellations, global disease comorbidity, and current mood or substance use disorder diagnoses. Based on these results, we used a predictive overbooking model to calculate a no-show risk score for each patient. Those patients whose scores exceeded a critical cut-off value were predicted to no-show for their appointments.<sup>16</sup> We validated the predictive overbooking model using separate patient data over a 4-month period.<sup>17</sup>

### “Fast-track” active recruitment

To examine the degree to which this predictive overbooking system could improve performance in a working GI clinic, we prospectively collected sociodemographic and medical record data about patients recommended for endoscopy between March and November 2014. We used these data to calculate no-show risk scores for each patient, generated a 10-workday calendar of upcoming appointments, and flagged those appointments for patients predicted to no-show as available for other patients on short notice.

To actively recruit patients on short notice, we developed a process called “fast track” and tested this process during 17 randomly selected experimental weeks in the validation period. In fast track, patients who had recently been recommended for endoscopy by their primary care physician or a GI physician were offered the opportunity to complete their endoscopies on short notice (ie, within the next 2 weeks, the span of the prediction calendar). Patients were recruited in person at the weekly GI clinic or, if recommended for endoscopy at their primary care visit, were subsequently contacted by research staff by phone. In all cases, patients were told about the key benefit of

Download English Version:

<https://daneshyari.com/en/article/5659864>

Download Persian Version:

<https://daneshyari.com/article/5659864>

[Daneshyari.com](https://daneshyari.com)