Communication from the ASGE Quality Assurance In Endoscopy Committee

WHITE PAPER

ASGE American Society for Gastrointestinal Endoscopy

Quality measures in the delivery of equitable endoscopic care to traditionally underserved patients in the United States

Prepared by: THE ASGE QUALITY ASSURANCE IN ENDOSCOPY COMMITTEE

Kathy N. Williams, MD, MS,[1] Folasade P. May, MD, PhD, MPhil,[2] Linda C. Cummings, MD, MS,[3] Neetika Srivastava, MD,[4] Neal Shahidi, MD,[5] Ali Kohansal, MD,[6] Kashyap Panganamamula, MD,[7] Rajat Garg, MD,[8] Amandeep Singh, MD,[8] Bryan Green, MD,[9] Jennie C. Nguyen, MSN,[10] Eden A. Essex, BA,[11] John M. Carethers, MD,[12] B. Joseph Elmunzer, MD[13]

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Inequities in the delivery of clinical care to traditionally underserved patients are substantial and pervasive, and addressing them represents a fundamental mandate. Such inequities are known to exist in endoscopic care and represent an important target for meaningful quality improvement.

Recognizing that quality of care is highly variable and influenced by myriad patient-related factors, including race, ethnicity, socioeconomic status, education, sexual orientation, gender identity, geography, and physical ability, among others, the American Society for Gastrointestinal Endoscopy (ASGE) has developed quality measures to guide endoscopists and units toward maximizing the equitable delivery of high-quality endoscopic care to all patients. These measures are not comprehensive or intended to reflect minimum performance standards but rather represent an initial framework for quality improvement efforts aiming to dismantle the most important disparities that some populations are likely to face when seeking and receiving endoscopic care.

This document pertains primarily to patients who are disadvantaged on the basis of race, ethnicity, education level, healthcare and insurance coverage, socioeconomic status, geographic location, sexual orientation, gender identity, and/or disability. Other groups, including women, face unique healthcare challenges that are not directly addressed by these measures. Further, with the exception of some matters that pertain to cancer screening, this document focuses on the delivery of endoscopic services rather than specific clinical considerations in minority populations. A dedicated ASGE guideline provides recommendations that pertain to differences in GI disease expression among varying racial and ethnic groups in the United States that might impact endoscopic practice in these patients.[1]

METHODS

A task force comprising members of the ASGE Quality Assurance in Endoscopy and Diversity and Inclusion Committees as well as recognized thought leaders in the field of gastroenterology inequities research was assembled to draft this document. Through a series of meetings and electronic communications, a list of proposed measures was developed by consensus of the task force members. As in the ASGE and American College of Gastroenterology procedural quality indicator documents, we aimed to develop trackable measures that have wide-ranging clinical and social implications, for which there appears to be disparities in performance and outcomes, and which are supported by research studies. Where necessary, for measures that were considered to be of great importance but with limited supporting evidence, expert opinion was used.

For each proposed measure, a literature review was conducted by the authors to identify relevant articles through a systematic search of PubMed (U.S. National Library of Medicine, National Institutes of Health) from inception through August of 2023. The search strategies for each indicator included a combination of subject headings (MeSH in PubMed) and pertinent key words. To identify additional articles, the authors reviewed PubMed's "similar articles" and manually searched reference lists of relevant studies. Because the measures in this document are not unique to endoscopy but have been understudied in the endoscopic context, the task force examined evidence from other areas of medicine and business to highlight the importance of each measure. Evidence from literature outside the field of medicine was primarily explored by querying salient topics in one of several widely available internet search engines. The final list of measures, informed to the greatest extent

possible by the literature search, was reviewed, amended, and finalized by group consensus. Although not considered mandatory for inclusion in this document, there was unanimous consensus regarding the included measures.

Ideally, measures would be feasible (ie, relatively easily implemented) and readily measurable. However, the task force elected to include several very important but not yet easy to implement measures, with the goal of promoting their eventual adoption. The measures in this document are largely either structural measures, such as those that pertain to characteristics of the care delivery environment, or process measures, defined as those that assess performance during the delivery of care. Although the ultimate goal is to improve outcomes of care (assessed by outcomes measures), existing evidence did not support the inclusion of such measures in this first version of the document. Adoption and tracking of the measures in this document will allow benchmarking and future assignment of performance targets. Research linking these measures to meaningful patient outcomes will result in the development of validated quality indicators.

It is important to clarify that these equity measures do not reflect the standard of care, credentialing requirements, or training standards, and it is a misappropriation to use any of the measures in this document as such. Rather, these are designed and intended to serve as a framework for quality improvement efforts. To guide continual improvement for endoscopists and units in varying phases of their quality journey, the task force recognized a subset of indicators as "priority measures" based on their importance and feasibility of measurement. We recommend that quality improvement efforts initially focus on these priority measures.

QUALITY MEASURES

The measures agreed on by the task force are presented in Table 1. These are divided into 3 categories: those that pertain to structural facilities, those that pertain to human capital within an endoscopy unit, and those that pertain more directly to the patient.

Facilities-related measures that might benefit traditionally underserved patients

1. *Endoscopy units use up-to-date and well-maintained endoscopic and medical equipment (priority measure).*
   Type of measure: structural

All endoscopy units should have the necessary endoscopes, devices, accessories, and other medical equipment to deliver optimal care; these should be maintained and replaced per manufacturer recommendations. The patient population served by an endoscopy facility should have no bearing on the availability and maintenance of up-to-date equipment.

Discussion. Endoscope manufacturers provide best practice recommendations for optimal endoscope management decisions (Olympus Corporate Intelligence, personal communication). These recommendations, which are based on numerous factors, including utilization rates, repair trends, and technology upgrades, should apply across all endoscopy units and should not vary according to facility characteristics (eg, private hospital, academic medical center, safety net hospital, or Veterans Affairs hospital). In brief, endoscope number requirements are typically 3.5 to 4.5 colonoscopes and 2.5 to 3.5 gastroscopes per procedure room when reprocessing turnaround time is 1 hour or less. Recommended replacement age for endoscopes is typically 5 years for all flexible endoscopes; however, this may need to be adjusted based on endoscope use and/or repair history (Olympus Corporate Intelligence, personal communication). Other endoscopy-related equipment, including endoscopy towers, processors, and monitors, must similarly be inspected and certified at regular intervals by the biomedical engineering department of the institution or the appropriate consultants for ambulatory surgical centers. Endoscopy units should have mechanisms in place to ensure the availability of appropriate devices and accessories for all procedures, to train staff in the proper use of the accessories, and for safe disposal after use. Additionally, units should use a standardized scope and device reprocessing protocol as recommended by several professional societies.[2] Gaps and variation in implementing infection prevention practices are common in endoscopy units across the United States, and compliance with reprocessing guidelines has been inconsistent.[3,4] Although there is no direct evidence that such variations have disproportionately affected units that care for underserved patients, a commitment to applying uniform standards across all centers minimizes this risk.

This measure is most easily audited and addressed in health systems with hospitals and ambulatory endoscopy centers in multiple locations that serve varying patient populations, including the underserved. Healthcare administrators of such systems should prioritize structural and equipment consistency across all units, regardless of population served.

2. *Endoscopy units undergo structural modification to ensure maximal patient comfort, privacy, and dignity before and after the procedure.*
   Type of measure: structural

The ASGE and World Endoscopy Organization have published guidelines on endoscopy unit design.[5,6] This or similar guidance should be applied to the design of any endoscopy unit regardless of location, care setting, or predominant patient population served. In an effort to maximize patient comfort, privacy, and dignity, all units should

TABLE 1. Quality measures in the delivery of equitable endoscopic care

Quality measures	Measure type
Facilities-related measures	
1. Endoscopy units use up-to-date and well-maintained endoscopic and medical equipment (priority measure).	Structural
2. Endoscopy units undergo structural modification to ensure maximal patient comfort, privacy, and dignity before and after the procedure.	Structural
Human capital–related measures	
3. Staffing standards for endoscopy practices do not vary according to patient population served (priority measure).	Structural
4. Endoscopy unit leaders are proactive and intentional about diverse and inclusive hiring and staffing practices.	Intermediate outcome
5. Endoscopy units provide employees with cultural competency, implicit bias, and sensitivity training (priority measure).	Process
Patient-directed measures	
6. Endoscopy units are committed to a culturally informed approach to patient education that is tailored toward the underserved patient populations for which they provide care.	Structural
7. Endoscopy units establish a reliable communication infrastructure that ensures appropriate pre- and postprocedural intrinsic language-specific communication with and scheduling of underserved patients (priority measure).	Structural
8. Endoscopy units account for and establish financial support mechanisms to cover patient-incurred costs related to the endoscopic procedure for patients who are financially disadvantaged.	Structural
9. Endoscopy units and practitioners participate in programs that provide pro bono (or cost-minimized) endoscopic care to low-income uninsured, underinsured, or otherwise marginalized patients.	Process

have gender-neutral restrooms for transgender and gender nonconforming patients, for those with disabilities (whose personal attendants might be of a different gender), and for patients and families who have to bring their children to the endoscopy unit on the day of the procedure. Additionally, units should have the necessary accommodations to care for patients with a very high body mass index and should satisfy all recommended regulations set forth by the Americans with Disabilities Act.[7]

Discussion. In brief, private intake rooms (or cubicles with curtains) are necessary for patients to provide their medical history, allow baseline evaluation, and enable confidential discussions with staff, including the informed consent process. In addition, preparation and recovery rooms or bays are required in which patients can undress in near-complete privacy. Patient preparation rooms should be adjacent to the main waiting area and, as above, have access to gender-neutral bathrooms. Ideally, these would be single-occupancy gender-neutral restrooms. If single-occupancy restrooms are not available, then in addition to multi-user gender-neutral restrooms, multi-user gender-specific restrooms should be available to maximize the comfort level of all patients.

The number of patient preparation rooms depends on the throughput of the endoscopy rooms, although this should not vary according to the patient population served. Generally, 1 patient preparation room for each endoscopy room is adequate, with an additional room containing a stretcher for nonambulatory patients. Postprocedure recovery areas should be spacious with adequate monitoring equipment and located in close proximity to the endoscopy rooms and nursing station. The recovery area should provide adequate privacy for patients to comfortably change into their regular clothing when they are able to do so after the procedure.

Human capital–related measures that might benefit traditionally underserved patients

3. *Staffing standards for endoscopy practices do not vary according to patient population served (priority measure).*
Type of measure: structural

Facilities that care for underserved patients should have identical physician and nonphysician staffing standards to highly resourced units. Because staffing affects the quality of care, compromised staffing standards represents suboptimal and inequitable care.

Discussion. Minimum nonphysician staffing requirements for the performance of endoscopic procedures have been previously detailed in an ASGE guideline.[8] This guideline provides specific minimum staffing recommendations depending on whether the procedure is a general or advanced endoscopic procedure. Additional staff may sometimes be required depending on the complexity of an interventional procedure. State and other regulations may also impact staffing requirements. These staffing requirements should apply consistently, regardless of practice setting.

One factor for which existing data are not as clear but that might disproportionately affect traditionally underserved patients is the degree of attending supervision provided to trainees during the conduct of endoscopic procedures. Given

resource limitations at some facilities that care for underserved patients, attending physicians may simultaneously supervise a larger than acceptable number of trainees.

Potential quality and safety concerns have been raised by the practice of concurrent procedures. For example, a recent analysis of >866,000 major inpatient noncardiac surgical procedures focusing on anesthesiologist supervision of certified registered nurse anesthetists found that increased overlapping coverage by anesthesiologists was associated with higher risk-adjusted morbidity and mortality.[9] In contrast, a recent analysis of the Veterans Affairs Surgical Quality Improvement Program database showed no impact of senior-level surgical resident autonomy (ie, attending surgeon not scrubbed) on postoperative adverse events and death after 5 common general operations.[10]

The practice of concurrent surgery has fallen under increasing scrutiny in recent years[11] and became the focus of a U.S. Senate Finance Committee Staff Report in 2016.[12] As a result, the American College of Surgeons issued a "Statements on Principles" document stating that involvement of a primary attending surgeon in concurrent surgeries was not appropriate. In the case of overlapping surgeries, the American College of Surgeons stated that the patient should be informed of the overlap and that this practice should not impede the flow of either surgical procedure.[13]

In 2021, training in endoscopy was described by expert endoscopist Jerome D. Waye and colleagues as a "1-to-1 apprentice type of education" with "[t]he teacher…in the same room as the student, watching each movement, each touch of the controls, every twist and torque, giving verbal suggestions and support during each procedure."[14(p439)] Indeed, Medicare billing rules dictate that the attending physician must be physically present for the duration of the procedure, from scope insertion to removal, becasue every phase of the procedure can be considered a "key or critical" portion.[15(p439)] Similarly, the Accreditation Council for Graduate Medical Education requires that "a supervising physician is physically present with the fellow during the key portions of the patient interaction." The 2019 Veterans Health Administration directive on supervision of physician trainees defines direct supervision as the physical presence of the supervising practitioner with the trainee and the patient. However, for endoscopic procedures (and other nonroutine, nonbedside procedures such as cardiac catheterization), the presence of the supervising physician is required in the procedural area but not necessarily in the procedure room.[16]

Thus, attending supervision requirements may differ to some extent between facilities based on several factors, and additional research may clarify the optimal degree of oversight necessary during endoscopy. However, because endoscopic procedures are shorter than most operations, and insertion, intervention, and withdrawal can be considered "key and critical," an attending supervision level that does not vary substantially from that required among Medicare beneficiaries may represent the best approach to performing supervised endoscopy for underserved patients. Advanced subspecialty (ie, endoscopy, liver transplant, inflammatory bowel disease) fellows—individuals who have already completed a gastroenterology fellowship—are often granted attending physician privileges in accordance with institutional policies. However, advanced trainees with attending privileges should not be preferentially assigned to oversee units that care for underserved patients. Instead, they should rotate evenly through such units along with established faculty members. Regardless of practice setting, *nonphysician* staffing requirements for endoscopy should not vary while caring for various populations.

4. *Endoscopy unit leaders are proactive and intentional about diverse and inclusive hiring and staffing practices.*
Type of measure: intermediate outcome

Staff and provider diversity in an endoscopy unit has myriad benefits to patients, employees, and organizations. Hiring and staffing practices and a unit culture that embraces diversity and inclusion are critically important to providing equitable care and improving clinical outcomes in traditionally underserved patients.

Discussion. The benefits of a diverse medical workforce are well described.[17,18] Concordance between provider and patient is associated with increased patient satisfaction, comprehension, and compliance with provider recommendations.[18-22] Moreover, workforce members identifying with an underrepresented group are more likely to work in underserved communities and provide mentorship to those of underrepresented backgrounds.[21,22] In addition, organizational diversity creates a sense of connectedness and belonging among employees that translates into greater workforce satisfaction, better performance, and less attrition.[23,24] Hence, proactive recruitment and training of a diverse workforce results in major benefits to patients, employees, and the organization.

Unfortunately, a lack of diversity remains readily apparent across many work sectors, disproportionately affecting historically under-represented groups.[25-27] These findings are mirrored in endoscopy, including in its workforce, leadership, and training programs.[19,25,28] This, in part, inspired the creation of the Intersociety Group on Diversity between the ASGE, the American Association for the Study of Liver Diseases, the American College of Gastroenterology, the American Gastroenterological Association, and the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition, with a goal of increasing diversity across their respective memberships. A proactive and intentional approach to increasing diversity and maximizing its value in the endoscopy unit addresses the following: unit structure and organization, hiring, and promotion and retention.[27]

Unit structure and organization. Diversity should be a unit priority as demonstrated by establishing diversity

benchmarks and tracking compliance. The goal should be that members of traditionally under-represented groups exist at all levels of the endoscopy unit leadership structure, including senior physician and nonphysician leadership. Achieving diversity milestones maximizes the opportunity for under-represented patients to receive care that aligns with their backgrounds and expectations.

Hiring. A diverse search committee should be formed, ideally including 1 or more members serving in the capacity of a diversity, equity, and inclusion champion. Selection criteria should be established in advance to ensure a consistent and equitable process that mitigates bias. Strategic advertising strategies should be used to elicit applicants from under-represented backgrounds, and the applicant pool as a whole should be assessed for adequate diversity.

Promotion and retention. Equal compensation, benefits, and opportunities for promotion for all staff should be the standard of practice in endoscopy units. Continual communication by endoscopy unit leaders to understand and support the professional development goals of all staff members is critical toward maintaining a satisfied and diverse workforce.

5. *Endoscopy units provide employees with cultural competency, implicit bias, and sensitivity training (priority measure).*
   Type of measure: process

A fundamental mandate of healthcare professionals is to provide care that is respectful, compassionate, and sensitive to the needs of all patients. Even when there is the best of intentions, however, traditionally underserved patients are often addressed and treated in ways that do not fully appreciate and respect their background, beliefs, customs, experiences, and sensibilities. Understanding how to interact with patients respectfully and in ways that engender mutual trust is central to the provision of high-quality health care and to leveraging the patient–provider relationship toward maximum good.[29,30] Training in cultural competency, implicit bias, and sensitivity can help achieve this ideal and have a profound impact on patient care. Such training not only enhances the skills of endoscopy unit personnel but also contributes to a more compassionate and equitable healthcare system.

Discussion. Cultural competency refers to being aware of your own cultural beliefs and values and how these may be different from others'. Cultural competency training equips healthcare professionals with the knowledge and skills to understand and appreciate the diverse cultural backgrounds of their patients, fostering an environment of trust. By gaining a deeper understanding of cultural norms, practices, and potential barriers to care, endoscopy unit staff can communicate more effectively with patients from various backgrounds, thereby improving compliance with clinical management, outcomes, and the patient experience. In 1 study, objective structured clinical examinations were used to assess deficiencies in culturally competent care among gastroenterology fellows. Only 18% of participants recognized that patients had below-basic health literacy and reading skills, which were not successfully evaluated by any of the participants in a culturally sensitive manner.[31] Thus, cultural competency training represents a high-priority target for quality improvement efforts aimed at delivering equitable care to traditionally underserved patients in the endoscopy unit.

Implicit bias refers to the unconscious attitudes and stereotypes that individuals may hold that can influence their decision-making and behavior, often unintentionally. This could relate to race and ethnicity, age, sex, sexual orientation and identity, ability, or other factors. In a systematic review of 42 studies of implicit bias outcomes in health care, authors reported a positive correlation between implicit bias and low quality of care.[32] By undergoing training that addresses these biases and encourages accountability, endoscopy unit personnel can become more aware of this potential limitation in delivering care and take proactive measures to mitigate its impact. This awareness promotes fair and unbiased treatment, ensuring that patients receive care based on their medical needs rather than any preconceived notions or stereotypes.[33]

Sensitivity training emphasizes the importance of empathy and compassion when dealing with patients and their families, particularly those who may be vulnerable or facing challenging circumstances. In an endoscopy unit, patients might feel anxious or uncomfortable because of the invasive nature of the procedures and the potential consequences of what they might learn. Sensitivity training focuses on making employees and employers aware of their own attitudes and behaviors as well as their impact on themselves and others. Such training equips staff with strategies to provide emotional support and create a welcoming environment, making the experience less distressing for patients.[34] Furthermore, training on pronouns and titles is a crucial aspect of fostering an inclusive and affirming environment for all patients, including those who identify as LGBTQ+. One study reported favorable experiences by both students and faculty after incorporating lesbian, gay, bisexual, and transgender-specific content into a nurse practitioner program.[35] Having knowledge about correct pronoun usage and respectful titles, endoscopy unit staff can show their respect for patients' gender identities and reduce the risk of inadvertently causing distress or discomfort during interactions.

We recommend that units designate an employee champion to help curate a practical and effective curriculum for all staff and have periodic refreshment of training, perhaps on an every 2- or 3-year basis. Resources for cultural competency, implicit bias, sensitivity, and LGBTQ+ inclusivity

training with proven efficacy are widely available.[36] Some resources and organizations that can provide training and materials include the following:

- Institute for Diversity and Health Equity (American Hospital Association)
  - Website: https://www.diversityconnection.org/
  - Provides resources, webinars, and toolkits to promote diversity, equity, and inclusion in health care.
- National Center for Cultural Competence
  - Website: https://nccc.georgetown.edu/
  - Provides a wealth of resources and training materials on cultural competency in health care.
- The Joint Commission
  - Website: https://www.jointcommission.org/
  - Provides guidelines and resources on cultural competency and patient-centered care.
- Local universities and medical schools
  - Contact local academic institutions to inquire about training programs or workshops related to cultural competency and diversity in health care.
- National LGBTQ+ Health Education Center (Fenway Institute)
  - Website: https://www.lgbtqiahealtheducation.org/
  - Offers a wide range of training resources and courses on LGBTQ+ health issues, including cultural competency and sensitivity training.
- Implicit Association Test, Harvard University
  - Website: https://implicit.harvard.edu/implicit/takeatest.html
  - Offers online tests to help individuals recognize their implicit biases.

Patient-directed measures that might benefit traditionally underserved patients

6. *Endoscopy units are committed to a culturally informed approach to patient education that is tailored toward the underserved patient populations for which they provide care.*
   Type of measure: structural

Communication and education are 2 major barriers to equitable care in underserved patients. Earnest efforts on behalf of the endoscopy community to help traditionally disadvantaged patients better understand their endoscopic care will increase trust and compliance and favorably impact clinical outcomes. An investment in culturally informed patient educational material and a commitment to furthering patient education through community outreach will narrow healthcare disparities among the underserved.

Discussion. One of the greatest accomplishments in the field of gastroenterology over the past decade has been the increase in colorectal cancer screening uptake, which has resulted in reduced incidence and mortality of this common malignancy.[37] Despite this success, underserved patients continue to be disproportionately affected by colorectal cancer and other GI malignancies.[38-40] Studies have shown that the leading factors contributing to this disparity are language barriers, fear of screening and results, embarrassment, and lack of knowledge regarding the need for and how to successfully complete screening tests.[41-44] Additionally, low literacy has been shown to be an important barrier to colorectal cancer screening, knowledge, beliefs, and experiences in federally qualified health centers.[45] To address these factors and to promote more equitable care to all patients, endoscopy units should be committed to tailoring their communication and education approach according to patients' needs.

Language and understanding barriers may be dismantled by the availability of educational and instructional material translated into the patient's primary language and by the use of language-concordant patient navigators.[46,47] Ideally, the translation of these documents would be overseen by a member of the target community(ies) to ensure that the language is culturally sensitive and compassionate. Along these lines, materials should be tailored to the education level of the patient population in question. For example, a study conducted in a safety net hospital showed that simplified colonoscopy instructions written at a sixth-grade reading level improved bowel preparation scores and reduced cancellation rates compared with standard instructions written at a ninth-grade level.[48] The health literacy of a practice's target population can be determined using simplified assessment tools.[49] Depending on need, simpler sentences with a noun-then-verb structure can achieve an appropriate reading level. Integration of graphics that complement text in a simplified manner has been shown to increase patient compliance.[50] Word processing tools are available to simplify language and instructions. Evidence also suggests that encouraging patients toward healthier behaviors using low-literacy education materials requires attention to factors beyond reading level. Clear labels and graphics should be used where necessary to communicate important concepts and reduce the need for extensive text.[51]

Endoscopy unit leaders should also be mindful of the long-standing history of mistrust that many underserved populations harbor toward the medical community and should implement communication and education strategies to help rebuild and maintain trust. Perhaps the most effective such strategy is the use of community outreach programs. One approach is to identify prominent role models in the community who are willing to share their experience with endoscopy.[52] Other effective strategies include training community members to be patient navigators, hosting educational seminars in patients' native languages, and posting culturally concordant educational material in high traffic areas such as churches and grocery stores.[52,53] In a study, rural women overdue for colorectal cancer screening were more receptive to screening after undergoing a structured

interview highlighting fecal occult blood testing using a literacy, sex, and culturally appropriate approach.[54] Endoscopy units should be motivated and prepared to use such interventions, not only for screening colonoscopy but also for other common endoscopic procedures in their practice.

7. *Endoscopy units establish a reliable communication infrastructure that ensures appropriate pre- and postprocedural intrinsic language-specific communication with and scheduling of underserved patients (priority measure).*
Type of measure: structural

Insufficient communication infrastructure can negatively impact endoscopic outcomes through many mechanisms. This is of particular importance in underserved patient populations who are usually in the minority and thus inherently disadvantaged in their communication needs. An effective communication infrastructure is accountable, versatile, accessible, and language and culturally appropriate.

Discussion. *Accountability.* Typically, the burden of responsibility for ensuring healthcare compliance is placed on the patient. Although patient agency has been shown to improve clinical outcomes, underserved patients tend to suffer disproportionately as a result of this burden because of various factors, such as lower educational levels and mistrust. Endoscopy unit leaders should be accountable for sharing this burden of responsibility to maximize the likelihood that communication will achieve its desired effect in all patients. The philosophy of blaming patients for their lack of compliance to recommendations should be eliminated and replaced with a collaborative approach that involves contacting the patient to discuss the upcoming procedure and to review instructions to confirm they understand the bowel preparation and dietary and medication modifications and to answer all questions with patience and compassion.

Versatility. Multiple communication strategies beyond a standard "one size fits all" method may be required for patients of underserved communities. Several studies have demonstrated improved compliance with recommendations, including colorectal cancer screening in rural and urban populations, when a more personalized communication strategy is used instead of a standard informational pamphlet.[55] Additionally, all patients, and especially the underserved, are more likely to accept salutary interventions when they have agency in their healthcare decisions.[56,57] Endoscopy units should embrace these principles in the design of their patient communication infrastructure by developing multiple options that are anchored in tailored communication and shared decision-making.

Accessibility. Communications and scheduling mechanisms that leverage widely available technologies such as text messaging (for those with smart devices) may improve patient understanding and participation in endoscopic care. For example, communications based on the Cognitive Social Information Processing model were shown to improve follow-up attendance after an abnormal pap smear test in black and Hispanic/Latinx women.[58] Similarly, monthly text message reminders greatly improved patient compliance with timely pancreaticobiliary stent exchange or removal.[59]

Language appropriateness. Patients who do not speak English as their first language are 3 times more likely to miss follow-up endoscopy appointments.[60] As above, an effective communication infrastructure recognizes the higher possibility of miscommunication in patients whose first language is not English and will make intentional efforts to ensure that patients have the right information in the right language and at the right educational level.

Cultural appropriateness. Based on commonality, most existing communication constructs in medicine and beyond are primarily designed for a white Anglo-Saxon population. Such constructs fail traditionally underserved patients but represent an important target for quality improvement. For example, an Australian study of women with breast cancer reported increased feelings of anxiety and exclusion from the decision-making process among Chinese Australian women as a result of communication deficiencies.[61] However, it has been shown among Medicare beneficiaries that identifying cultural and language needs at admission significantly reduces hospital length of stay.[62] It is important that endoscopy units take the time to consider their patients' race and ethnicity, language, and cultural background when booking and communicating endoscopy appointment instructions.

8. *Endoscopy units account for and establish financial support mechanisms to cover patient-incurred costs related to the endoscopic procedure for patients who are financially disadvantaged.*
Type of measure: structural

Structural barriers to care among the underserved are well known to affect health outcomes related to endoscopy, especially colonoscopy.[63-65] One such barrier that disproportionately affects those of low socioeconomic status is out-of-pocket costs incurred by patients, such as lost wages, cost of transportation, child care, and insurance copay.[66]

Discussion. It is challenging or impossible for patients of limited financial means to make the monetary sacrifices required to receive endoscopic care. This hurdle is often exaggerated by the mistrust some underserved patients have in the healthcare system. For a patient of limited means who mistrusts the system to make a major financial sacrifice for a potential problem that does not yet exist (eg, colonoscopy for colorectal cancer screening) is simply not tenable. Often, the financial implications extend to family and caregivers, a scenario even more unattractive to the patient. Mitigating these financial barriers improves compliance with endoscopic services and represents a valuable quality improvement activity.

Several potential interventions for helping the financially disadvantaged exist. For example, Cottonelle (Kimberly-Clark Corporation, Neenah, Wis, USA) and BLKHLTH (Atlanta, Ga, USA) have collaborated with the Colorectal Cancer Alliance to provide financial assistance to black individuals who are in need of additional monetary support to undergo screening colonoscopy.[67] However, the results of studies evaluating the impact of financial incentives, in and of themselves, on colorectal cancer screening uptake are conflicting,[68,69] and other approaches that address specific obstacles may be more effective. For example, hospital or unit-financed transportation to and from the endoscopy suite or health escorts who are able to accompany patients home after receiving anesthesia can potentially alleviate some of the financial burden and emotional stress that dissuades patients from undergoing an endoscopic procedure. Recently, the feasibility of a ridesharing program to provide nonemergency medical transportation for colorectal cancer screening at a safety net healthcare system was demonstrated.[70]

Some facets of this measure, such as underwriting lost wages, remain aspirational in the current healthcare climate, but endoscopy organizations are encouraged to continually innovate around assistance models that mitigate the financial challenges that underserved patients face. Outside-the-box approaches to this problem, including familiar and unconventional partnerships, will be necessary to achieve the ideal of providing high-quality equitable care to all our patients.

9. *Endoscopy units and practitioners participate in programs that provide pro bono (or cost-minimized) endoscopic care to low-income uninsured, underinsured, or otherwise marginalized patients.*
   Type of measure: process

Despite major efforts in the last decade to boost the delivery of colorectal cancer screening and other endoscopic services to traditionally underserved groups, access to care remains suboptimal, especially among those without healthcare or insurance coverage. One potential solution to address this inequity is the altruism and goodwill of endoscopy providers and staff. Endoscopists witness daily the burden of late-stage colorectal cancer, and most possess an innate human desire to help. Indeed, there is a long precedent among GI endoscopists in United States of participation in programs that aim to increase colorectal cancer screening and other endoscopic care among the underserved.[65] A loose framework of programs for this purpose exists throughout the United States but has been underused. A more systematic commitment and approach by relevant stakeholders to support and leverage such programs could, in aggregate, make a meaningful impact on the care of certain traditionally underserved groups.

Discussion. Various models that allow endoscopists and units to give back to their communities through the philanthropic provision of endoscopic care exist. In particular, many practices periodically open their units on Saturday mornings throughout the year to provide free screening colonoscopies, especially in March during Colorectal Cancer Awareness Month. A small study with the aim of improving access to colorectal screening by leveraging medical philanthropy demonstrated the feasibility of a flexible sigmoidoscopy health fair for uninsured patients at a cost of $126 per patient screened.[71] Fifty-two patients without access to any form of colorectal cancer screening were recruited through local free clinics and health fairs, and procedures were safely performed in a medical clinic that was transformed into a fully functional endoscopy unit. Similarly, mobile endoscopy units have been successfully deployed in South Africa and India and are a promising concept that could be offered in certain parts of the United States.[72,73] However, there is a broad range of existing models, from such ad hoc initiatives to statewide networks with publicly supported navigation programs.[74] Endoscopy practices are encouraged to explore these models and participate to the greatest extent possible.

One challenge that well-intended endoscopy practices face is the identification of unscreened eligible patients. Most communities in the United States have a federally qualified health center, indigent patient clinic, or public (safety-net) hospital system that will have access to the records of uninsured patients who have not yet been screened for colorectal cancer. Proactively partnering with such organizations is a reliable mechanism of identifying patients in need and of implementing the necessary pre- and postprocedure care to serve these patients.

Although endoscopists, endoscopy nurses, and endoscopy staff are almost always willing to volunteer their time and expertise for this purpose, another challenge has been securing buy-in from other needed stakeholders. However, as the leaders in colorectal cancer prevention, endoscopists should not hesitate to leverage their relationships with anesthesia providers, pathologists, and hospitals to inspire these entities toward philanthropy. All these partners derive profit from endoscopists' delivery of services to insured patients

and should be willing to contribute to all that endoscopy can offer our communities.

Because nonprofit hospital organizations are required to use the Schedule H (Form 990) to provide information on the activities, policies, and community benefit provided during the tax year, administrators should be reminded that endoscopists volunteering their time and skills would satisfy these requirements and, importantly, further reduce overall cost to the health system for late-stage cancer diagnosed in the uninsured through such benevolent activities. The National Colorectal Cancer Roundtable has produced a colonoscopy needs calculator that provides an estimation of the costs of providing colonoscopy services relative to those of treating cancer.[75]

The entrance of private equity into gastroenterology practice and hospital acquisition of endoscopic practices may pose new challenges to these philanthropic efforts. However, some groups have leveraged such partnerships by guaranteeing adequate support to continue providing pro bono colonoscopy services as part of their sale agreements.

DISCUSSION

In this document, we propose 9 measures that aim to enhance the equitable delivery of high-quality endoscopic care to traditionally underserved patients. We hope these measures can serve as a framework for quality improvement initiatives to address existing disparities in the delivery of endoscopic services. Given the inherent importance and myriad benefits of justice, diversity, equity, and inclusion in the practice of medicine, we envision a time in which these "equity" measures become standard quality measures for endoscopists and units, akin to obtaining informed consent, performing endoscopy for an appropriate indication, and administering antibiotics in the proper context. This document represents an important early step in that pathway.

We recognize that implementing some of these proposed measures will be challenging and costly, especially given the current healthcare landscape and particularly for smaller and/or under-resourced practices. Thus, one of the goals of this document is to galvanize endoscopists and endoscopy unit leaders toward innovation around identifying and leveraging the resources needed to realize the benefits envisioned in this document. This will likely require partnership with professional societies, hospital systems, local government, philanthropic organizations, industry, and payers, among others. Stakeholders are encouraged to share their experiences with the ASGE so that a more formal strategic framework for successful implementation of each measure can be developed and disseminated.

To counterbalance these perceived challenges, it is important to consider that not only are these measures inherently important, but their potential concrete and intangible benefits are substantial. For example, revamping a unit's approach to hiring and staffing, albeit not the path of least resistance, will result in a workforce and environment that is more insulated from staff turnover, a major problem in the postpandemic era. Similarly, participation in community outreach, financial assistance programs for patients, and philanthropic efforts to provide free endoscopy can provide marketing and publicity content that will benefit the practice financially and in reputation.

Some measures proposed in this document apply primarily to endoscopy units that occasionally care for underserved patients but should nevertheless be prepared to deliver high-quality care, in all its facets, to such patients. Other measures are primarily directed at units in disadvantaged and resource-limited areas that exclusively care for underserved patients. The conventional philosophy on such institutions and the patients they serve has been that some level of care, even if suboptimal, is better than no care at all. However, an objective of this document is to cement the concept that equal and equitable care must occur in all practice settings. Equity in this context, as expressed in several of the measures, involves establishing additional supports for underserved patients to achieve optimal outcomes in all patients. We believe it is the mandate of all stakeholders, including physicians, healthcare administrators and leaders, professional societies, and government agencies, to ensure that care for the underserved is not only uncompromised but results in equivalent outcomes to the general population.

Quality improvement aiming to produce equitable care involves the development of measures that capture aspirational clinical care delivery (as we have tried to achieve in the document), the measurement of performance relative to these metrics, the establishment of performance targets (known as benchmarks) that reflect high-quality and equitable practice, and the implementation of interventions to improve performance compared with the benchmarks. This document represents an important first step in this process, but reliable measurement is the critical next step in validating the measures and establishing benchmarks. To this end, the task force developed these metrics with measurability in mind. As such, most measures, regardless of implementation challenges, can be tracked more easily than the adenoma detection rate. We are hopeful that practices will begin to develop and share standard operating procedures related to measurement and also begin sharing their compliance with the measures. This collective knowledge will inform future, more impactful versions of this document.

In parallel, research initiatives to better understand the effect of the proposed measures on health outcomes and patient satisfaction are critical and may result in modifications that maximize impact in both areas. The salient research themes, at this important juncture, mirror the measures

themselves. In particular, a better understanding of the optimal approach to and magnitude of the effect of patient-directed measures should be considered a research priority toward the goal of emphasizing interventions that most directly impact patients and their caregivers. Research in this area represents a great opportunity for collaborative efforts among endoscopy practices and the myriad stakeholders invested in ensuring equity in endoscopic care.

In conclusion, this document provides an initial framework for quality improvement efforts focused on the delivery equitable endoscopic care to traditionally underserved patients. A commitment to some or all of the measures proposed in this document, starting with the priority measures, represents an important step toward the ideal of taking excellent care of all our patients.

DISCLOSURE

All authors disclosed no financial relationships.

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Current affiliations: Division of Gastroenterology, Cooper University Hospital, Camden, New Jersey, USA (1), Vatche and Tamar Manoukian Division of Digestive Diseases, University of California Los Angeles, Los Angeles, California, USA (2), Division of Gastroenterology and Liver Disease, University Hospitals Cleveland, Cleveland, Ohio, USA (3), Division of Gastroenterology and Hepatology, Harbor-UCLA Medical Center, Los Angeles, California, USA (4), Division of Gastroenterology, University of British Columbia, Vancouver, British Columbia, Canada (5), Division of Digestive Care and Endoscopy, Dalhousie University, Halifax, Nova Scotia, Canada (6), Division of Gastroenterology and Hepatology, Penn Medicine, Philadelphia, Pennsylvania, USA (7), Department of Gastroenterology, The Cleveland Clinic Foundation, Cleveland, Ohio, USA (8), Digestive Disease Group, PA, Greenville, South Carolina, USA (9), Digestive Diseases Center, MUSC Health, Charleston, South Carolina, USA (10), American Society for Gastrointestinal Endoscopy, Downers Grove, Illinois, USA (11), Division of Gastroenterology and Hepatology, Moores Cancer Center, and Wetheim School of Public Health, University of California San Diego, San Diego, California, USA (12), Division of Gastroenterology and Hepatology, Medical University of South Carolina, Charleston, South Carolina, USA (13).

Reprint requests: B. Joseph Elmunzer, MD, MSc, Division of Gastroenterology & Hepatology, Medical University of South Carolina, MSC 702, 114 Doughty St, Ste 249, Charleston, SC 29425.