

Using Electronic Health Records To Measure and Improve Quality for Colonoscopy Procedures



The delivery of safe and successful colonoscopies—the most common means of screening for colorectal cancer—is important to patients and physicians. Providing accurate and timely feedback to gastroenterologists on the quality of colonoscopies they perform can help them provide better care to their patients. With the help of 400 participating gastroenterologists from 16 States, Judith Logan and her research team created and evaluated a quality measurement and feedback program for colonoscopies. This project was funded through the AHRQ initiative [Enabling Quality Measurement \(EQM\) Through Health IT](#). The researchers used a specialty-care electronic health record (EHR) for capturing structured data on colonoscopy procedures at the point of care. The project built on the work of several multispecialty task forces that provided recommendations for colonoscopy clinical quality measures in the areas of documentation, recommended processes, and safety and clinical outcomes. These measures covered areas such as—

- Quality of bowel preparation (Documentation quality measure).
- Documentation of recommended followup interval (Documentation quality measure).
- Examination of the entire colon (Process quality measure).
- Average withdrawal time of at least 6 minutes (Process quality measure).
- Polyp detection and retrieval (Process quality measure).
- Intra and postprocedural complication rate (Clinical outcome quality measures).

“Endoscopists liked the interactive web-based quality report card; For them, data entry time was worth it.”

Judith R. Logan, MD

Dr. Logan and her team conducted a qualitative evaluation of the measurement process and the feedback reports. They found that physicians were highly receptive to the goals of health IT-enabled quality measurement and feedback as a way of improving the effectiveness and safety of their procedures. They indicated that the additional time required for entering the measurement data was not overly burdensome because they were already using the EHR for documenting the procedure. The researchers learned that physicians often preferred to have the feedback information shared with the entire clinical team rather than with the physician alone, as many of the measures relate to team-based aspects of care. They also refined the process for delivering the feedback report so that it better fit into clinical workflows, moving from a system that either faxed the monthly report to the gastroenterology clinic or required login to the project Web site, to a system that updated the measures nightly and provided physicians feedback reports on five measures within the EHR.



Access a video of how the Excellence Reports for Colonoscopy were designed, tested, and used to provide feedback on the quality of colonoscopy: <http://healthit.ahrq.gov/EQMLoganVideo>

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Key Findings

The qualitative analysis of physician perceptions of the quality reports found the following results, organized around six themes:

1. Workflow

- Using the software: Even though the clinical roles and workflow varied across sites, there were enough similarities to make the use of the quality data collection software feasible.
- Accessing the reports: Initially, endoscopists tended not to look at the quality feedback reports and felt that monthly feedback was too frequent. The researchers adopted an alternative strategy of giving clinic managers access to the reports so that they can meet with physicians quarterly to discuss the feedback.

2. Organizational Structure and Accreditation

- Participants saw value in the quality reports since accreditation of colonoscopy centers requires regular measurement and reporting.

3. Measurement Burden

- Endoscopists were cognizant of the time needed for quality measurement and the need to gather the data efficiently.

4. Value of Measures and Reports

- Endoscopists are aware that patients and insurance companies increasingly expect quality indicators, and that these reports are an important step in that direction.

5. Need for High-Quality Data

- Accurate data are necessary for meaningful quality reports. Strategies such as having a quality assurance nurse who highlights missing data fields can help improve the accuracy of the data.

6. Integration Issues

- More complete quality measurement could be accomplished if it were easier to share clinical data between the quality measurement data collection systems standard EHRs and imaging and pathology systems.

A total of 22 measures were initially considered, but only 15 were implemented in the quality reports, as the others were either imprecisely defined or the EHR lacked the capacity to capture the necessary information. Examples of excluded measures were: use of

“This new quality report provides feedback to the individual provider on their colonoscopy performance and serves as a benchmark against other practice sites.”

David Lieberman, MD, Principal Investigator of the CORI Project

appropriate indications for colonoscopy, informed consent obtained including risks, and appropriate action with regard to prophylactic antibiotics. Analysis of the data in the quality reports found wide variation in the documentation of colonoscopy procedures. For example, anticoagulation plans were documented less than 8 percent of the time. In addition, pathology results were difficult to capture because they come back to the gastroenterologist after the procedure. This information would have had to be added to the quality measurement record after the fact; this was not commonly done, as it would be outside the usual clinical documentation workflow.

Sustainability and Future Directions

Endoscopists understand the importance of quality measurement programs, which they see as inevitable and even desirable. Most endoscopists felt they were performing within professional guidelines, but were open to feedback that might improve their performance. Many reported that they would be willing to share their quality reports with their patients and colleagues. The project took advantage of the specialty-care EHR developed by the Clinical Outcomes Research Initiative, a national research consortium focusing on improving health outcomes. Participating practices continue to receive the Excellence Reports for Colonoscopy, which have been refined further since the end of the AHRQ-funded study to take advantage of improvements in the software that allow feedback reports to be delivered in the EHR. The reports currently include the five most important and reliable measures from the study, plus two new measures for another endoscopic procedure (esophagogastroduodenoscopy).

