

## Using an Electronic Health Record System to Support Quality Improvement

Electronic health record (EHR) systems offer opportunities to collect and analyze data. These activities are at the core of delivering quality patient care, preventing errors, and minimizing risk. Yet, the challenge for healthcare practices is understanding how to aggregate and evaluate the data, analyze the results, and develop strategies and initiatives that will support quality improvement (QI).

QI relies heavily on auditing, a term that typically has been associated with the financial aspects of business. However, ongoing validation of clinical information through auditing also is important from both continuity of patient care and risk management perspectives.

The following checklist can help guide healthcare practices in using EHR systems to enhance auditing and QI activities. Making the best use of these systems may increase patient safety and satisfaction, reduce the likelihood of billing issues and/or fraud allegations, and support reimbursement.

	Yes	No
Electronic Health Record Systems		
Has your practice worked with its EHR vendor to determine how the EHR system can support quality monitoring and risk reduction?		
Are staff members aware of the QI and risk management objectives related to using the EHR system?		
Do staff members have working knowledge of the data elements and definitions associated with the EHR system?		
Auditing Processes		
Does your practice have an audit policy, and is it using auditing to identify areas for improvement and develop action plans?		

	Yes	No
Auditing Processes (continued)		
Does the entire team — including healthcare providers, clinical and administrative staff, and staff members responsible for EHR implementation and maintenance — participate in audits to ensure the best audit design and patient outcomes?		
Are quality measures clearly defined so that more than one person can produce the measure results without difficulty?		
Does each quality measure have an associated goal or objective to ensure the measure is relevant and useful? (For example, if the quality measure is to track the communication of test results, a goal might be to communicate all critical test results within an appropriate timeframe.)		
Has your practice establish targets (numerical values for quality metrics and goals) to determine the significance of the actual audit results?		
Are the following factors considered when establishing each target:		
Evidence-based literature related to the specific measure?		
Knowledge of "best practice" results in comparable settings?		
Historical data within your healthcare practice?		
<ul> <li>Knowledge of external requirements (e.g., pay-for-performance benchmarks)?</li> </ul>		
Does your practice have an audit document that includes the measure, the definition of the measure, the goal, and the target compliance number or percentage?		
Does your practice consider the method that it will use to obtain necessary data (e.g., running EHR system reports)?		
Does your practice determine how often to measure metrics and monitor results based on the type of metric and its impact on patient safety?		
Has your practice established a QI committee that meets routinely and reports back to staff members about activities and progress?		

	Yes	No
Quality Measures		
Has your practice selected quality measures based on high-risk aspects of patient care, such as:		
<ul> <li>Appointment processes, including time from request to appointment and canceled/missed appointments?</li> </ul>		
<ul> <li>Patient encounters, including chief complaints, problem lists, patient/family history, copied/pasted health information, creation of new patient records, and confirmation of patient identification?</li> </ul>		
<ul> <li>Patient communication, including patient reminders and patient education?</li> </ul>		
Test result management, including test result tracking and referral tracking?		
<ul> <li>Medication management, including medication reconciliation, drug interactions and allergy alerts, prescribing/e-prescribing, sample medication distribution, and state prescription drug monitoring program queries?</li> </ul>		
<ul> <li>Information management, including release of protected health information and identification of amended or incomplete health records?</li> </ul>		
Audit Reports		
Has your practice identified the range of reports that its EHR system can generate to help audit the effectiveness and efficiency of processes?		
Has your practice worked with its EHR vendor to automate as many reports as possible and ensure that quality measures are accurately calculated?		
If the EHR system cannot automatically calculate data and manual calculation or counting is required, has your practice specified appropriate sample sizes for various measures?		
Does everyone on the healthcare team understand that the practice's privacy and confidentiality policies apply to all auditing activities, including the generation of reports?		
Analysis, Communication, and Improvement		
Does your practice conduct ongoing analysis of both the audit framework and the audit results?		

	Yes	No
Analysis, Communication, and Improvement (continued)		
Has your practice determined key questions to consider when analyzing audit results, such as:		
Are we getting better or are we getting worse?		
Can we see the effect of our latest action step(s)?		
Where are we compared with our established target?		
Has your practice determined how best to display audit results for both analysis and subsequent communication?		
Does your practice have a positive and nonpunitive communication strategy for sharing aggregate and individual results from audits?		
Does your practice use the data collected during auditing to develop and implement corrective action plans (if targets are not met) and monitor the results of corrective actions?		

## Resources

For more detailed information and examples of audit measures, see MedPro's guideline *Using an EHR System for Quality Improvement: Advice for Healthcare Practices*. Other helpful resources include:

- Agency for Healthcare Research and Quality: Using Health Information Technology (IT) for Primary Care Quality Improvement (QI)
- Institute for Healthcare Improvement: The Electronic Health Record Can be the Hero, Not the Enemy
- Journal of the American Medical Informatics Association: Electronic Health Record Data
   Quality Assessment and Tools: A Systematic Review
- The Office of the National Coordinator for Health Information Technology: Capturing High Quality Electronic Health Records Data to Support Performance Improvement: A Learning Guide

- The Office of the National Coordinator for Health Information Technology: Health IT Playbook
- The Office of the National Coordinator for Health Information Technology: How Will Adopting Electronic Health Records Improve My Ability to Care for Patients?
- U.S. Department of Health and Human Services, Health Resources and Services
   Administration: Managing Data for Performance Improvement

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