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Defining Measurable Performance Standards in Radiology

In the era of accountable care, radiologists must be judged on the value of the services they provide to the patient, and they must be vested in their hospital’s strategy for reimbursement. These standards should include report turnaround time, interpretive accuracy, critical results reporting, and utilization. In addition, evaluation of areas such as leadership and committee participation adds valuable insight and helps complete the picture of group performance.

The task of developing metrics for each element of performance can be simplified through direct collaboration with the radiology group. The process should include review of published standards and research from credible industry sources like the Radiology Business Management Association (RBMA) and the American College of Radiology (ACR), as well as guidance from other sources such as hospital associations, and quality improvement and consulting organizations. While industry information is extremely helpful in the goal-setting process, it only provides the framework for establishing expectations, which must be further refined through direct discussion about the group’s resources, capabilities, and current level of performance. For example, expected report turnaround times will be influenced by whether the radiology group utilizes voice recognition technology.
technology (best practice) or whether reports are still dictated and typed by the hospital’s transcription service. To achieve excellence on a standard such as report turnaround time, the hospital and radiology group must not only understand the realistic limits of current performance given the existing technology and workflow, but they must also agree on what is needed to achieve the optimal level of future performance in terms of investments or realignment of responsibility.

When working with a radiology group that has a high level of insight into their own performance, and that possesses both good reporting capabilities and a commitment to transparency, the process of defining performance standards will be less difficult for the hospital. In circumstances where the hospital’s radiology service is less evolved, a more directive approach will be needed. When setting priorities for what to measure, necessary items include those elements of performance that address immediate regulatory and accreditation requirements. Examples include:

- Interpretation time for brain imaging on stroke patients presenting to the ED.
- Interpreters accuracy evaluated through peer review and medical outcomes auditing.
- Compliance with CT radiation dose reporting.
- Reporting time and communication tracking for critical results.

Measurement of these performance elements should be the minimum requirement, and if a radiology group fails to perform as needed on such basic metrics then it will be difficult for the hospital to represent to the Joint Commission that it is effectively managing the contracted service.

**Pushing Radiology Performance to the Next Level**

Beyond addressing the “must-have” performance metrics, hospitals that devote the resources to measure and manage against additional standards in radiology are more competitive and better positioned to succeed under any reimbursement scenario. For example, higher levels of specialization in the radiology service usually equate to greater confidence by the medical staff. This limits leakage of highly profitable outpatient imaging procedures to competitors and prevents unnecessary and wasteful follow-up testing due to interpretations rendered by less experienced general radiologists who fail to answer
the clinical question. Hospital leaders (or ideally their radiology groups) can measure the percentage of time each week that radiologists with subspecialty training are available to interpret cases, or simply measure the total percentage of cases interpreted by subspecialists.

Hospitals can greatly benefit from proactive analysis and management of utilization, which radiologists can influence indirectly through their level of engagement with the medical staff and directly through recommendations for follow-up imaging in their own interpretations. When imaging utilization is optimized, the cost of care is appropriate and the diagnostic process is efficient. A high-performing radiology group addresses the problem of inappropriate utilization by actively educating referring physicians about which imaging examinations will deliver the best results in specific scenarios, based on evidence. This type of approach both ensures the safety of the patient by reducing unnecessary exposure to ionizing radiation and improves the hospital’s bottom line by curtailing inappropriate testing on inpatients. Measuring the percentage of radiologist interpretations recommending follow-up will help meet regulatory requirements in some instances, such as calculating screening mammography recall rates to comply with MQSA, and more generally assists the hospital in determining if the radiology group is driving inappropriate utilization.

Medical Malpractice Risk
When it comes to medical malpractice risk, in-depth focus on critical results communication may yield substantial benefits for both the radiology group and the hospital. Hospitals can satisfy Joint Commission requirements in this area by simply identifying a short list of diagnoses that warrant urgent follow-up and then documenting the results for that list. This minimal threshold of performance doesn’t adequately address all of the important issues, however, and the ideal approach to communication of critical radiology results would encompass considerations beyond simple definitions of what should be reported. To achieve performance excellence, it is of equal importance to focus on the mechanism used to deliver the results in the most timely but least disruptive manner. This approach places appropriate focus not just on the individual but also on the system within which all providers must operate.

Up to 80% of closed malpractice claims in radiology involve failure to communicate as a causal factor in the case, including both reliability and timeliness of the communication. The average indemnity payment for primary errors in communication by radiologists is between $228,000 and $236,000, which is twice as high as the payment when appropriate communication occurred (Brenner & Bartholomew, 2005). Given these statistics one could argue that when it comes to critical findings, more communication is better. Collaboration to identify a manageable but comprehensive list of reportable critical findings is the first step, followed by intelligent system design. After that, analysis of compliance by individual providers should be used to pinpoint and mitigate failures in the communication process.

Radiologists Must Lead the Effort to Improve Performance
The introduction of standards-based performance assessment to all areas of radiology practice is inevitable. Radiologists must define their role in this evolution, either as protectionists that resist the change, cooperators that go with the flow, or preferably as leaders that light the way. Although hospital executives have both a responsibility and a clear vested interest in ensuring the quality of radiology services, this task is difficult without the full cooperation of the contracted radiology group. As the subject matter experts, radiologists can monitor their own performance with greater effectiveness and fewer resources than are required when the hospital must shoulder the burden alone. They should do so and be fully transparent with the hospital about the results.

Steady declines in imaging utilization growth, coupled with the increased efficiency gained from digital image interpretation, has softened the job market considerably for radiologists at a time when the emergence of national radiology groups is offering hospitals more choices than ever before (Lee & Levy, 2012). To remain competitive in this environment, radiology groups must be progressive in their performance assessment efforts, using a standards-based approach and working as active partners with the hospital, to ensure the care they deliver is cost-effective, accurate and safe.

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