Radiologist Compliance With Institutional Guidelines for Use of Nonroutine Communication of Diagnostic Imaging Results

SA-CME

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Abstract

Purpose: The aim of this study was to evaluate radiologist compliance with institutional guidelines for nonroutine communication of diagnostic imaging results.

Methods: From July 2012 through September 2013, 7,401 completed advanced imaging cases were retrospectively reviewed by groups of 3 or more radiologists. The reviewing radiologists were asked to reach consensus on two questions related to nonroutine communication: (1) "Does the report describe a finding which requires nonroutine communication to the patient's physicians?" and if so, (2) "Were the department's guidelines for nonroutine communication followed?" Consensus judgments were aggregated and analyzed on the basis of subspecialty, level of acuity per the guidelines, and type of communication used.

Results: Of the 7,401 studies reviewed, 960 (13.0%) were deemed to require nonroutine results communication. The need for nonroutine communication was most frequent with CT (16.6%), followed by MRI (11.1%) and ultrasound (3.4%). For the divisions studied, nonroutine communication was most frequently needed in thoracic (37.9%), followed by neurologic (17.3%), emergency (15.8%), cardiac (13.7%), musculoskeletal (4.4%), and abdominal (0.7%) imaging. Of the cases requiring nonroutine communication, 39 (4%) yielded consensus that the guidelines were not appropriately followed: 21% (n = 8) involved level 1 findings (critical), 41% (n = 16) involved level 2 findings (acute), and 38% (n = 15) involved level 3 findings (nonacute). Failures of communication involving level 1 findings primarily involved neurologic imaging, including 4 cases of new cerebral infarct and 3 cases of new intracranial hemorrhage.

Conclusions: Established guidelines for nonroutine communication are appropriately applied and durable, underscoring the high yield of formalizing and implementing these guidelines across practice settings.

Key Words: Radiology, critical results, Joint Commission, nonroutine communication, quality and safety

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INTRODUCTION

Communicating the results of diagnostic imaging studies in a manner that is appropriate to their importance is an essential task of every radiologist. Certain emergent or nonroutine clinical situations require an interpreting radiologist to expedite the communication of diagnostic imaging results, while other, less time-sensitive results require only that they not be overlooked. Failures of communication in these instances can result in preventable patient morbidity and mortality and associated legal liability [1-7]. The Joint Commission, one of the largest accreditation bodies for hospitals and health facilities, found that among its accredited facilities, nearly 70% of sentinel events were caused by failures of communication [5]. Likewise, Roy et al [6] showed that when patients were discharged from hospitals with test results still pending, their primary physicians were unaware of actionable test results in up to 61% of cases, potentially resulting in adverse outcomes. This translates into the

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potential for substantial patient harm and associated liability risks. In fact, the Physician Insurers Association of America [7] listed "communications between providers" as the sixth most frequent reason for a claim against a radiologist and among the most likely to result in a paid claim.

The importance of communicating nonroutine results, particularly critical results, has been emphasized by The Joint Commission. In 2005, The Joint Commission added "reporting of critical results" to its National Patient Safety Goals. To promote safe and consistent patient care in these important clinical situations, The Joint Commission now requires accredited hospitals to have written policies regarding how critical results are to be handled [8]. The policy must define what qualifies as a critical result, stipulate who is responsible for reporting the result and to whom, and clarify how quickly the result must be reported [8]. In addition to having set policies and procedures, The Joint Commission also requires hospitals to evaluate the effectiveness of these procedures in ensuring the timely reporting of critical results [8]. The ACR has provided institutions with some guidance regarding nonroutine communication of results through its "Practice Guideline for Communication of Diagnostic Imaging Findings" [9]. However, the content of these guidelines continues to spark controversy and debate, garnering 4 to 5 times the number of comments typically received for an ACR guideline or standard [10].

In 2009, the radiology department at our tertiary referral academic medical center implemented a new set of institutional guidelines to direct radiologists in the nonroutine communication of diagnostic imaging results [11]. The policy not only addressed the communication of critical results but also provided guidance on the communication of acute, noncritical results (eg, diverticulitis, fracture) and new or unexpected findings that were not immediately life threatening but could result in significant morbidity if not appropriately treated (eg, indeterminate pulmonary or adrenal nodules). The policy also specified the manner in which such communication should be documented. A brief summary of the guidelines is included in Table 1.

The aim of this study is to evaluate radiologist compliance with the institutional guidelines for nonroutine communication of results through the use of a novel method of report auditing. We integrated the audit into the established process of radiologist peer review performed at our institution. A secondary aim of the study was to determine whether this strategy of combining critical results auditing with routine departmental peer review was an effective and sustainable solution for meeting the critical results self-evaluation requirement of The Joint Commission.

METHODS

Human Subjects Compliance

This retrospective, HIPAA-compliant study was approved by the institutional review board.

Assessment of Guideline Compliance

The 15-month study period was from July 2012 to September 2013 in the radiology department of a 907-bed tertiary care academic medical center. The department includes >100 staff radiologists; >500,000 outpatient and inpatient diagnostic imaging studies are performed and interpreted in the radiology department each year. The institutional guidelines for the use of nonroutine communication of diagnostic imaging results were in effect for approximately 3 years before the start of the study.

To assess radiologist compliance with the nonroutine communication guidelines, we leveraged our previously

Table 1. Summary of the nonroutine communication guidelines in effect at our institution

Category Description	Requirements for Communication*
Level 1 results are any new or unexpected findings on an imaging study that suggest conditions that are life threatening or would require an immediate change in patient management.	Live communication from the radiologist to either a responsible physician or another licensed caregiver within 60 minutes of the time the finding was noted
Level 2 results are any new or unexpected findings on an imaging study that suggest conditions that could result in mortality or significant morbidity if not appropriately treated urgently (within 2–3 days).	Live or alternative method of communication from the radiologist to either a responsible physician or another licensed caregiver within 6 hours of the time the finding was noted
Level 3 results are any new or unexpected findings on an imaging study that suggest conditions that could result in significant morbidity if not appropriately treated but are not immediately life threatening.	Live or alternative method of communication from the radiologist to either a responsible physician or another licensed caregiver within 6 days of the time the finding was noted

*All levels of communication require documentation within the report, to include (1) date and time of communication, (2) the name of the individual who communicated the results, and (3) the name of the individual who received the results.