

## Test Result Management: Toward a Systematic Reporting Process

The widespread adoption of the electronic health record (EHR) has revolutionized the process of managing diagnostic tests. Today's EHR systems can track pending test results, alert providers to significant findings, document receipt of results and follow-up actions taken, and notify providers and others of possible delivery problems.

However, it should be kept in mind that while electronic technology can help systematize test management and reporting, it does not eliminate risk. Potential errors include misidentification of patient or provider, delays in sending and reading results, data inaccuracies, failure to flag critical findings, lapses in follow-up and inadequate documentation. These reporting issues can lead to misdiagnoses, delayed diagnoses, gaps in continuity of care, and other occurrences with patient safety and/or liability implications.

To enhance quality and reduce liability exposure, organizations must implement an effective test result management program that addresses all four stages in the process:

1. Review of results by the clinician.
2. Communication of results to the patient.
3. Development of an appropriate treatment plan and/or referral to an outside provider.
4. Discussion with the patient of follow-up responsibilities.

Failure to complete and document any of these steps can lead to allegations of neglect or abandonment.

This edition of *AlertBulletin*® offers six essential strategies to help providers enhance the efficiency and timeliness of their laboratory test reporting and follow-up procedures, as well as a range of practical risk management tips.

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### 1. SELECT AN EHR TEST MANAGEMENT SYSTEM DESIGNED FOR RELIABLE, EFFICIENT AND USER-FRIENDLY OPERATION.

Many EHR-based test reporting systems are available. When determining which tool to adopt, consider its compatibility with existing systems, ease of use and error-prevention capabilities.

#### Risk management tips:

- Adopt an EHR system that enables clinicians to track and monitor the status of all orders and test-related procedures, e.g., specimen ordered and collected, test completed, results reported, provider receipt acknowledged.
- Ensure that the system permits sorting of results in the EHR inboxes of providers by clinically relevant criteria, such as severity, unread status, date and time.
- Require that test result notifications remain in the inboxes of providers until receipt is acknowledged, to ensure that important findings do not go unread.
- Determine whether test results and related information are easy to forward from one provider to another, and also between units and departments.

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## 2. DRAFT TEST REPORTING PROTOCOLS FOR LAB STAFF, AND REINFORCE THEM THROUGH ONGOING TRAINING.

Sound test management protocols – supported by thorough, ongoing training of all staff involved in the reporting process – are essential to achieving consistency. Policies should encompass such basic issues as reporting time frames, treatment of high-priority findings, documentation, and backup and escalation procedures. Training sessions should focus on conveying basic expectations, delineating individual roles and responsibilities, and familiarizing laboratory technicians and support staff with the test reporting system and the operational procedures that support it.

### Risk management tips:

- Design laboratory requisitions and test reports to clearly identify the name of the ordering physician, as well as any other clinicians responsible for follow-up.
- Draft protocols for reporting test results at shift handoffs, during staff absences and following the departure of providers from the organization, and reinforce these procedures during training sessions.
- Maintain an updated contact list of all practicing providers and their coverage schedules, and make this information available to laboratory and diagnostic services.
- Specifically address the issue of planned and unplanned provider absences and the potential effect of these absences on the reporting of test results.
- Devise an alternative method, such as urgent electronic alerts, for communicating significant test results if the primary recipient is unavailable or unresponsive.
- Create an escalation procedure for urgent or high-priority test results that are not acknowledged by ordering providers within the specified period, and communicate this procedure to laboratory personnel.
- Establish backup procedures in the event the EHR system malfunctions or for any reason cannot accept test result information, and train staff in these contingency plans.
- Explain test reporting procedures and duties during orientation, and “shadow” new employees after hiring to monitor their knowledge of and adherence to these protocols.

## 3. FORMALIZE THE COMMUNICATION RESPONSIBILITIES OF ORDERING PROVIDERS AND TREATING CLINICIANS.

Even the most sophisticated test management system is susceptible to communication breakdown at multiple points, such as between laboratory personnel and providers, physicians and staff, and clinicians and patients. Therefore, every provider and staff member must be made aware of the necessity of proactively following up if test results are not available when needed or include incomplete or questionable findings. This responsibility should be incorporated into the quality improvement process and emphasized in organizational policies, job descriptions and performance reviews.

### Risk management tips:

- Clarify the responsibilities of ordering and other treating providers, especially with respect to conveying and following up on time-critical results.
- Institute time frames for reviewing test results, and consider compliance with these protocols when evaluating physician performance.
- Establish consistent procedures for tracking ordered tests and reconciling them against results received.
- Require providers to confirm receipt of test results in the patient healthcare information record, noting the reason for ordering the test, key findings, differential diagnoses made and follow-up clinical actions taken.

### QUICK LINKS

- [“Ask ECRI: Patient Responsibility for Following Up on Test Results.”](#) ECRI Institute, December 6, 2017.
- Callen, J. et al. [“Failure to Follow-Up Test Results for Ambulatory Patients: A Systematic Review.”](#) *Journal of General Internal Medicine*, October 2012, volume 27:10, pages 1334-1348.
- [“Test Results Reporting and Follow-Up.”](#) A Safety Assurance Factors for EHR Resilience (SAFER) Self-Assessment Guide, from the office of the National Coordinator for Health Information Technology, November 2016.

#### 4. CLEARLY MARK HIGH-ALERT TEST RESULTS.

Critical, unexpected or clinically abnormal test results must be imparted to ordering providers in a forceful and unambiguous manner. By consistently using a standardized terminology – e.g., *normal, abnormal, urgent, critical* – laboratory personnel can reduce the risk of miscommunication and ensure that clinically significant findings receive due attention.

##### Risk management tips:

- **Utilize multiple visual indicators to flag clinically significant results.** Critical and abnormal values should be highlighted in conspicuously distinct ways, using boldface font, red type, asterisks or other eye-catching markers. (Note that color contrast should not be the only indicator, as it may not be visible in printouts.)
- **Sort test results in the EHR inboxes of providers by clinically relevant criteria,** such as severity, unread status, date or time.
- **Clearly flag results that have been amended,** notifying the appropriate provider(s) of the change and documenting both change and notification in the patient healthcare information record.
- **Verbally alert providers to life-threatening or critical test results,** such as positive cancer or HIV status findings. If the ordering provider does not respond within a specified period, contact an alternate provider in accordance with escalation protocols.
- **Exercise caution when employing a dual-alert notification system** in which two providers receive the same test result from the laboratory. Such a system can lead to confusion regarding responsibility for patient follow-up.

#### 5. INITIATE APPROPRIATE PATIENT FOLLOW-UP.

In addition to explaining to patients the clinical significance of laboratory test results, physicians must communicate treatment options and the importance of full compliance with therapeutic recommendations. In outpatient settings, providers also may offer to schedule necessary follow-up appointments and referrals.

Depending upon the nature of the findings, electronic patient portals may be a suitable means of conveying follow-up actions and mutual responsibilities. However, if values and findings are abnormal, providers must supplement online tools with face-to-face communication, in order to provide additional information, answer questions and offer personal support.

##### Risk management tips:

- **Draft a follow-up policy for outpatient settings,** encompassing such issues as appropriate means of communication, number of contact attempts and documentation procedures.
- **To protect patient confidentiality, communicate high-priority test results face-to-face whenever possible,** and make sensitive telephone calls from work areas offering a suitable degree of privacy.
- **Ask patients how they wish to receive notification of non-critical test results and respect their preferences,** within the limits of HIPAA privacy rules.
- **Post a link to laboratory test interpretations** that offer portal users more detailed information about their results.
- **Record all post-test patient education efforts** made in the clinical record.
- **Write up a current, accurate and complete summary of inpatient care at discharge time,** stressing any pending test results and necessary follow-up care.
- **Electronically relay this summary to the primary care provider of record** and document acknowledgment of receipt.

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## 6. TRACK REPORTING SYSTEM PERFORMANCE AND PROMPTLY ADDRESS DEFICIENCIES.

Inpatient test reporting and follow-up errors occur most frequently at transition points, including handoffs between clinicians (e.g., emergency department physicians to specialty providers, or hospitalists to attending physicians) and transfer between units or from inpatient to post-acute care settings. An ongoing tracking/auditing program should be implemented to detect test reporting deficiencies and inefficiencies, analyze causes and suggest effective remedial action.

### Risk management tips:

- **Adopt a set of pertinent test reporting quality measures for ongoing monitoring**, such as test results with the lowest follow-up rate, percentage of test results that go unreviewed by ordering providers within a specified time frame, and frequency of review delays of a week or longer.
- **Review test results sent to the wrong clinician**, as well as transmissions that fail due to a computer interface problem or patient/provider misidentification.
- **Monitor the electronic inboxes of providers for the number of unread test result notifications** and send deficiency notices when indicated.
- **Track electronic acknowledgment and acceptance of test results** when laboratory notifications are forwarded from the ordering provider to another clinician.
- **Maintain error logs to help detect failure patterns**, such as lab results not being delivered, reporting delays, or requisitions/reports failing to identify or misidentifying the ordering provider.

Timely, accurate reporting of diagnostic test results is critical to maximizing quality of care and minimizing risk. Computerizing the test reporting process can help reduce communication lapses. However, it does not reduce the need for an organization-wide commitment to ensuring that clinically significant findings receive an appropriate level of attention, and to taking swift and effective action whenever problems arise.



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