

Patient Safety Tip of the Week

April 13, 2021

Incidental Findings – What’s Your Strategy?

We’ve done many columns on “closing the loop” and communicating significant results to ensure patients do not “fall through the cracks”. One particular area that merits better communication relates to **incidental findings**.

Incidental findings can occur on several different types of diagnostic tests, but are most prevalent on imaging studies. The most appropriate followup actions depend on the specific nature of the incidental finding. There are numerous guidelines regarding what to do for specific incidental findings. But there are 2 key issues:

- ensuring that the presence of the incidental finding gets communicated to the clinician who “needs to know” (and usually to the patient as well)
- having a system in place to find out that appropriate follow up, indeed, occurred

Who is responsible for such communication and followup? We’ve stressed that multiple individuals or entities share such responsibility:

- the radiologist or pathologist reporting the finding
- the radiology practice or lab reporting the finding
- the clinician who ordered the test or study
- the clinician who is primarily responsible for care of the patient (note that this may differ from the clinician who ordered the study)
- the practice to which that clinician belongs
- the patient him/herself

A recent review ([Cralle 2021](#)) looked at management strategies used to promote guideline-concordant follow-up for incidentalomas identified in diagnostic imaging studies. In all, 15 studies met inclusion criteria. Four types of interventions designed to promote guideline-concordant follow-up care for incidentalomas were identified:

1. physical or verbal guideline reminders
2. electronic guideline references
3. enhanced radiology templates
4. restructured clinical and communication pathways

Crable et al. note that the ideal completed pathway would have the following steps or “phases”:

1. Index imaging study occurs (eg. CT, MRI, Ultrasound, etc.)
2. Radiologist interprets image, records findings, recommendations for follow-up care
3. Ordering clinician receives image study report, follow-up care recommendations
4. Patient’s primary care physician or other responsible clinician is informed of findings, recommendations
5. Follow-up care is delivered
6. Incidentaloma is resolved (i.e. confirmed diagnosis, and/or treatment or surveillance)

Of the strategies identified by Crable et al., **enhanced radiology templates** were used to prompt actions in phase 2. These would include standardized follow-up recommendations from various sources.

Several of the reviewed studies utilized **electronic guideline references** embedded within electronic radiology reporting and communication systems. These provided radiologists easy access to guidelines and follow-up recommendations as they were doing their reports (phase 2). Electronic guideline references were also made available to clinicians when reading radiologists’ reports (phase 3) in some studies.

Physical or verbal guideline reminders and electronic guideline references were used to alter clinical processes in both phases 2 and 3. Examples included incorporating guideline-recommended care for pancreatic or ovarian incidentalomas. Those recommendations might be posted in hard copies at every radiology workstation or provided as verbal reminders at monthly case conferences.

Restructured clinical and communication pathways impacted clinician tasks in phases 2 through 6. **Task shifting** was an important strategy. For example, a staff person (such as a nurse coordinator or nurse specialist) could be assigned to help manage the process. In one system ([Holden 2004](#)), an electronic messaging system notified pulmonary nurse specialists when incidental findings were identified. That nurse specialist collected information about patients’ health and past imaging studies. Then, a pulmonary service consultation team comprised of physicians and a thoracic radiologist reviewed each incidental finding with relevant patient history and created a management plan that was shared with PCP’s and stored in the EHR. A member of the pulmonary service consultation team monitored the EHR until the incidental finding was resolved.

We think having a **field in your EHR** that can be **flagged** for “unresolved incidental finding” is a good idea.

Crable et al. provide a long list of various **metrics** that can be applied to evaluate the management of incidental findings. Of interest is that some monitored not only rates of **undermanagement**, but also **overmanagement** (eg. ordering follow-up imaging studies that were not recommended in guidelines).

Crable et al., however, point out the paucity of metrics of incidental finding diagnostic outcomes. And they note that few studies address barriers to improving incidentaloma follow-up from interpretation to patient education of findings and care delivery.

One scenario is worth emphasizing – the incidental finding on an imaging study at the time of hospital discharge. You know the picture: you and your team review the imaging study in the morning and it allows you to discharge the patient. But the official report of that study has not yet been dictated. When the radiologist interprets the study, he/she notes an incidental finding. That report is often not seen by someone in the position to follow up. The report may go to a resident or hospitalist who has moved on to another rotation or other clinician who will not see the patient after discharge. A copy of the report may not go to the patient's PCP (or other clinician who will be primarily responsible for the patient after discharge). But, we've often lamented the unfortunate reality that hospital IT systems often fail to accurately identify the patient's PCP. So this is your classic "falling through the cracks" scenario. We discussed this in detail in our September 8, 2020 "[Follow Up on Tests Pending at Discharge](#)". That column also highlights similar problems that arise on studies done on patients discharged from the emergency department. The ED physician who ordered the study is no longer at the hospital (and, in some cases, may not return to that hospital). The radiologist may, therefore, have difficulty identifying a clinician who needs to be informed of that incidental finding.

Knowing the guidelines or recommendations regarding specific incidental findings is critical to avoid the "diagnostic cascade" where one study leads to another study or intervention, often resulting in unnecessary interventions or even patient harm. Many specialty societies have issued such guidelines for common incidental findings. It would be very difficult for a primary care physician to be knowledgeable about all these guidelines. Therefore, we really like the idea of the radiology report linking to the guideline specific to that incidental finding. Of course, that puts the onus on the radiology department or practice to keep up to date on those guidelines and links.

Then, there is the problem of consistency and quality of guidelines. A recent study on radiologist awareness of guidelines for pulmonary nodules is illustrative ([Gould 2021](#)). Gould et al. state that approximately 1.6 million patients annually are found to have incidental pulmonary nodules on chest CT scans. They state that most have benign etiologies but about 5% are malignant. They go on to state that, because of the low likelihood of malignancy and the risks associated with biopsy, the preferred method for the evaluation of most small nodules is longitudinal surveillance with serial CT scans. There are existing guidelines from the Fleischner Society and the American College of Radiology with recommended intervals for CT surveillance. But these are based largely on indirect evidence and expert opinion, because direct evidence from randomized trials of pulmonary nodule evaluation strategies has not been available. They surveyed radiologists participating in the ongoing Watch the Spot Trial, which is designed to provide higher quality evidence on approach to small pulmonary nodules. They found that radiologists reported high levels of familiarity and agreement with and adherence to

guidelines for pulmonary nodule evaluation, but many overestimated the quality of evidence in support of the recommendations.

And, it is not just “incidental” findings that need a system to ensure followup. A recent article showed delays in followup of positive at-home tests for colon cancer screening ([Jaklevic 2021](#)). Jaklevic et al. noted that, particularly since the COVID-19 pandemic began, more people are getting their colon cancer screening as fecal immunochemical testing (FIT). The article notes that, depending on population characteristics such as age and sex, 5% to 9% of patients have an abnormal result, and about 1 in 3 of those have a large polyp or cancer.

A study of veterans age 50 to 75 years with an abnormal fecal occult blood test (FOBT) or fecal immunochemical test (FIT) between 1999 and 2010 showed increased time to colonoscopy is associated with higher risk of CRC incidence, death, and late-stage CRC after abnormal FIT/FOBT ([Miguel 2021](#)). The authors recommend interventions to improve CRC outcomes should emphasize diagnostic follow-up within 1 year of an abnormal FIT/FOBT result.

So, just as we recommend having a **field in your EHR** that can be **flagged** for “unresolved incidental finding” it’s a good idea to have a field that can be flagged for **“follow-up action needed”** for any significant finding.

There are many reasons, both system- and patient-related, for failure of adequate follow up of incidental findings. And even though many or even the majority of such findings have benign etiologies, we’ve all seen cases where such failures have led to patients developing untreatable cancers. Do you have any idea how often your patients do not get appropriate follow up of such incidental findings? What is your system to ensure adequate follow up?

See also our other columns on communicating significant results:

- May 1, 2007 [“The Missed Cancer”](#)
- February 12, 2008 [“More on Tracking Test Results”](#)
- October 13, 2009 [“Slipping Through the Cracks”](#)
- July 2009 [“Failure to Inform Patients of Clinically Significant Outpatient Test Results”](#)
- March 9, 2010 [“Communication of Urgent or Unexpected Radiology Findings”](#)
- March 1, 2011 [“Tests Pending at Discharge”](#)
- August 21, 2012 [“More on Missed Followup of Tests in Hospital”](#)
- October 2, 2012 [“Test Results: Everyone’s Worst Nightmare”](#)
- March 12, 2013 [“More on Communicating Test Results”](#)
- October 2013 [“New AHRQ Toolkit: Improving Your Office Testing Process”](#)
- January 2014 [“Email Alerts for Pending Test Results”](#)
- July 2015 [“Technology to Avoid Delays in Follow-up of Significant Results”](#)
- November 17, 2015 [“Patient Perspectives on Communication of Test Results”](#)
- December 20, 2016 [“End-of-Rotation Transitions and Mortality”](#)

- September 2018 “[ECRI Institute Partnership: Closing the Loop](#)”
- September 24, 2019 “[EHR-related Malpractice Claims](#)”
- November 26, 2019 “[Pennsylvania Law on Notifying Patients of Test Results](#)”
- January 2020 “[The Joint Commission on Closing the Loop](#)”
- September 8, 2020 “[Follow Up on Tests Pending at Discharge](#)”

References:

Crabbe EI, Feeney T, Harvey J, et al. Management Strategies to Promote Follow-Up Care for Incidental Findings: A Scoping Review. J Amer Coll Radiol 2021; 18(4): 566-579
[https://www.jacr.org/article/S1546-1440\(20\)31225-4/fulltext](https://www.jacr.org/article/S1546-1440(20)31225-4/fulltext)

Holden WE, Lewinsohn DM, Osborne ML, et al. Use of a clinical pathway to manage unsuspected radiographic findings. Chest 2004; 125: 1753-1760
<https://www.sciencedirect.com/science/article/abs/pii/S0012369215321723>

Gould MK, Altman DE, Creekmur B, et al. Guidelines for the Evaluation of Pulmonary Nodules Detected Incidentally or by Screening: A Survey of Radiologist Awareness, Agreement, and Adherence From the Watch the Spot Trial. J Amer Coll Radiol 2021; 18(4): 545-533
[https://www.jacr.org/article/S1546-1440\(20\)31119-4/fulltext](https://www.jacr.org/article/S1546-1440(20)31119-4/fulltext)

Jaklevic MC. The Push for Timely Follow-up After Abnormal At-home Colon Cancer Screening Results. JAMA 2021; Published online March 31, 2021
<https://jamanetwork.com/journals/jama/fullarticle/2778236>

Miguel YS, Demb J, Martinez ME, et al. Time to Colonoscopy After Abnormal Stool-Based Screening and Risk for Colorectal Cancer Incidence and Mortality. Gastroenterology 2021; Published online February 2, 2021
[https://www.gastrojournal.org/article/S0016-5085\(21\)00325-5/fulltext](https://www.gastrojournal.org/article/S0016-5085(21)00325-5/fulltext)



<http://www.patientsafetysolutions.com/>

[Home](#)

[Tip of the Week Archive](#)

[What's New in the Patient Safety World Archive](#)