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New Ways to See:
Innovative Tools to Improve Patient Care

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6. Diagnosis Support

- Why do we need this tool?
 - According to a 2003 *JAMA* review of autopsy studies, misdiagnoses occur between 8% and 24% of the time
 - A 2005 AHRQ study found that diagnosis errors far outnumber medication errors as a cause of claims¹
 - Almost 75 percent of all mortality attributable to patient safety incidents was caused in part by failure to diagnose and treat in time²

¹ Schiff G, Kim S, Abrams R et al. "Diagnosing Diagnosis Errors: Lessons from a Multi-institutional Collaborative Project." *Advances in Patient Safety*. 2005; 2: 255-278.

² HealthGrades Quality Study. "Patient Safety in American Hospitals." 2004



Diagnosis Support

- Cognitive reasons for misdiagnoses
 - A 2006 study showed that failures in judgment (79%), vigilance or memory (59%), and knowledge (48%) were the leading factors contributing to misdiagnoses.¹
 - An NPSF-funded Veterans Administration study found that premature closure (the failure to consider reasonable alternatives to an initial diagnosis) was the single most common cognitive factor.

¹ Gandhi T, Kachalia A, Thomas E et al. "Missed and delayed diagnoses in the ambulatory setting: a study of closed malpractice claims." *Annals of Internal Medicine*. 2006; 145(7): 488-496



New Tools to “See” for Cognitive Errors

- Isabel (www.isabelhealthcare.com)
 - Developed in the UK by Jason Maude (in conjunction with physicians) after the near-fatal misdiagnosis of his three-year-old daughter Isabel
 - Symptoms are entered into a computer, and pattern recognition software queries current medical journals, textbooks, and databases such as the CDC’s. A list of differential diagnoses, bioterrorism diagnoses, and possible causative drugs is quickly produced to prompt the diagnostic process.
 - “Lessons Learned” section reviews pitfalls and errors associated with these diagnoses and symptoms.



New Tools to “See” for Cognitive Errors

- Problem Knowledge Couplers
(www.pkc.com)
 - Developed by Lawrence L. Weed, MD
 - Pulls relevant patient data through a series of carefully crafted questions written by full-time medical researchers, and “couples” the data with current medical research
 - Produces a patient-specific output, including potential causes, treatments and management strategies



Systems Reasons for Misdiagnoses

- Sheer volume of reports back to clinicians each week
- Random return of test results (ranging from minutes to weeks)
- Lack of reliable systems for processing and alerts
- Challenges in connecting with patients
- Most frequent barrier cited is communication problems and a lack of diagnostic plans between physicians, especially primary care and specialists



New Ways to “See” for System Problems

- Map out the diagnostic process, including people involved, departments, cycle times
- Create synchronized “huddles” to review input and collaborate on next steps, and to ensure that all test results are back and reviewed
- Teach staff and patients to ask, “You think it’s X. What else could it be?”



Diagnosis Support

- Diagnostic errors are significant and frequent. They will be a future area of focus for accreditation and payment.
- Causes include human factors and systems complexity, but leaders are demonstrating decreased errors, reduced malpractice payments, and safer care with new tools and processes.



References

- www.isabelhealthcare.com
- www.pkc.com
- Groopman J. *How Doctors Think*. Houghton Mifflin, 2007.
- Leaders in this area include:
 - Doug Bonacum, MBA, CSP, CPHQ, CPHRM
Vice President, Safety Management
Kaiser Permanente
 - Mark Graber, MD
Chief, Medical Service
VA Medical Center – Northport, NY



Thank You!

- And so, you have some new eyes, new ways to see and hear. Use them here; notice, ask, listen and share.

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