What's New in the Patient Safety World

August 2013

Clinical Intuition

Most of the literature on diagnostic error discusses two primary modes of decision making, "intuitive" vs "rational" (also known as "analytical"). In our November 29, 2011 Patient Safety Tip of the Week "More on Diagnostic Error" we noted that it's estimated we spend up to 95% of our time using the intuitive mode. In that intuitive mode we basically use a form of pattern recognition where we use our previous experiences to key concepts is that we often do most of this thinking at a subconscious level.

But there is another form of intuition that sometimes entered the diagnostic process. A recent study (Woolley 2013) concluded that, rather than admonishing clinicians not to trust their intuition, we need to better understand the nature of various "intuitive" processes. Those authors make a distinction between making diagnoses based upon "first impressions" vs. "intuition". They note that first impressions, while often using automatic, nonanalytical thinking, may still be relatively rational and justifiable. On the other hand, many clinicians consider their intuitions to be more like "gut feelings" where they do not understand the basis and often consider them irrational.

They recruited family physicians to conduct their study. Each was asked to identify 2 occasions where they felt they knew the diagnosis (or prognosis) but did not know why, one case for which they were correct and one in which they were incorrect. After conducting interviews and applying the Critical Decision Method to analyze the cases, three types of decision process emerged: gut feelings, recognitions, and insights.

"**Gut feelings**" were the most common. These were cases where, during initial data gathering, a feeling cast doubt over the initial interpretation. That feeling signaled alarm, often in response to a single cue that "did not seem right" or an unexpected pattern of cues. Sometimes they did not recognize what the nonfitting cues meant. At other times they were aware of some basis for their feeling but thought it was not evidence-based or supported by guidelines. They often believed their colleagues would have acted differently. An example included a 28 y.o. man with flu-like symptoms who the physician sent to the emergency room despite colleagues feeling he had nothing urgent. The patient turned out to have meningococcal septicemia.

"**Recognitions**" were instances where a diagnosis was formulated quickly with little information. These differ from first impressions in that the physicians may have been aware of conflicting information or absence of key symptoms and signs. An example

given was a physician suspected alcohol abuse in a patient who vehemently denied it. The physician could see no one feature that stamped the case as alcohol abuse but found multiple subtle cues that led to a diagnosis of alcohol abuse confirmed by a high blood alchohol level and subsequent patient admission of drinking.

"**Insights**" are cases in which initially there is no pattern of recognizable cues and no satisfactory explanation is found, though several diagnoses are considered. Subsequent information gathering suddenly results in a clear interpretation that integrates all the symptoms and signs. In these cases the physician was surprised and it was often a single piece of information that suddenly came into his/her awareness. The example given was a patient complaining of a severe headache in whom the physician, while examining her eyes, suddenly thought of glaucoma as a cause of headaches. That turned out to be the correct diagnosis.

They go on to describe the feelings these physicians had when relying on these collectively "intuitive" feelings. They often felt conflicted between their "intuition' and other interpretations they considered more rational. Some of the diagnoses suggested were considered highly unlikely, implausible, or rare. Some of the cues were considered out of the ordinary and not evidence-based. And often the pattern of cues was so complex that the physician could not verbalize them.

Note that on stratifying the family physicians by years in practice and by gender, they found that "gut feelings" were more frequently reported by experienced physicians and more often by female physicians.

Note that "gut feelings" are not unique to the medical field. It is not uncommon during root cause analyses of aviation accidents or near-misses to see that a pilot or other crew member had a "feeling of unease" or "gut feeling" that something was not quite right. These are often based on subtle cues or lack of expected cues.

It's pretty clear that various forms of intuition, particularly the "gut feeling", are often important in at least getting us to stop and think about the direction of our diagnostic thinking. Most experienced physicians can remember cases where that "gut feeling" surfaced and helped them avoid a potential disaster. In fact, when we train housestaff or nurses to challenge the medical hierarchy when they see something they don't think is right we often tell them to use the phrase "I just have this funny feeling". That often gets even the most recalcitrant physicians to pause and reexamine the situation.

Some of our prior Patient Safety Tips of the Week on diagnostic error:

- September 28, 2010 "Diagnostic Error"
- November 29, 2011 "More on Diagnostic Error"
- May 15, 2012 "Diagnostic Error Chapter 3"

- May 29, 2008 "If You Do RCA's or Design Healthcare Processes…Read Gary Klein's Work"
- August 12, 2008 "Jerome Groopman's "How Doctors Think""
- August 10, 2010 "It's Not Always About The Evidence"
- January 24, 2012 "Patient Safety in Ambulatory Care"
- October 9, 2012 "Call for Focus on Diagnostic Errors"
- March 2013 "Diagnostic Error in Primary Care"
- May 2013 "Scope and Consequences of Diagnostic Errors"
- And our review of Malcolm Gladwell's "Blink" in our Patient Safety Library

References:

Woolley A, Kostopoulou O. Clinical Intuition in Family Medicine: More Than First Impressions Ann Fam Med 2013; 11: 60-66; doi:10.1370/afm.1433
http://www.annfammed.org/content/11/1/60.full.pdf+html?sid=6ee8774a-b1c8-440b-ab69-1d232c8316f2

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