

Diagnostic Error (Part 3) – Preventing Diagnostic Error

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This is Part 3 of a series of 5 podcasts on diagnostic error. Part 3 focuses on ways for avoiding or preventing diagnostic error.

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About Dr Mark Graber

Dr Mark Graber is a Senior Fellow at RTI International and Professor Emeritus of Medicine at the State University of New York at Stony Brook. He has an extensive background in biomedical and health services research, with over 70 peer-reviewed publications. Mark is a national leader in the field of patient safety and originated Patient Safety Awareness Week in 2002, an event now recognised internationally. Mark has also been a pioneer in efforts to address [diagnostic errors in medicine](#), and his research in this area has been supported by the National Patient Safety Foundation and the Agency for Healthcare Research and Quality. In 2008, he convened and chaired the first Diagnostic Error in Medicine conference. In 2011, Mark founded the new Society to Improve Diagnosis in Medicine and serves as President of SIDM.

About Dr Owen Bradfield

Dr Owen Bradfield is a Senior Claims Manager, Medical Advisor and Medico-Legal Advisor at [Avant](#). Owen graduated with First Class Honours in 2003 from Monash University's unique combined Bachelor of Medicine/Bachelor of Surgery and Bachelor of Laws program. He was awarded the Ebsworth & Ebsworth Prize for Medical Law and the Victorian Institute of Forensic Medicine Prize. Owen is a qualified medical practitioner and lawyer. He completed his internship at The Alfred Hospital in Melbourne and later completed his articles of clerkship at Slater & Gordon Lawyers. He also has experience in health services management and completed an MBA at Monash University, where he was awarded the prize for the top graduating student. In addition to his work at Avant, Owen also works as a part-time [General Practitioner](#), is Deputy Chair of the Patient Review Panel and Chair of the Law Institute of Victoria's Health Law Committee.

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With Dr Mark Graber, leader in the field of patient safety, and Dr Owen Bradfield, lawyer, doctor, and Senior Claims Manager for Avant Mutual

Introduction

This is part 3 of a series of 5 podcasts on diagnostic error. Diagnosis is important to both patient and doctor. Diagnostic error can be defined as a failure to provide an explanation of the patient's health problem. Part 3 focuses on ways to prevent and avoid diagnostic error.

1. What are some strategies to prevent diagnostic error?

Physicians:

- Practice reflectively:
 - Always stop and think. Spend a few moments reflecting on how you came up with that diagnosis. Was there anything that biased that decision?
- Make the patient a partner in the diagnostic process:
 - Diagnosis is never a certainty, it's always just a probability
 - Doctors should approach discussion about diagnosis by telling patients "this is what I think you have", then let them know if their symptoms don't respond to treatment then they should follow up to re-evaluate the diagnosis
- Adequate follow up with patients as discussed in Overview of Diagnostic Error (Part 2)
- In Emergency Departments: Calling a patient a day or two later to see how they are going. This also allows us to catch diagnostic errors
- Get a second opinion: Fresh eyes on the case can help
- Make and document a differential diagnosis in every case: Consider web-tools which allow you to input symptoms and review those differential diagnoses to ensure nothing is missed or not considered
- Medico-legally, the majority of complaints about medical errors involve the patient and or the family stating the doctor wasn't listening to them. Hence it is important to listen to what both the patient and family are saying
- Avoid breakdowns in communication:
 - Clear effective communication with patients and their families will go a long way to helping you make a diagnosis. It will also go a long way to avoiding a malpractice suit
 - The doctor-patient relationship is very important and you want the patient to trust you and work with you

Patients:

- When you are sick you want to be taken care of – it is counter-intuitive to take control

- However, there is evidence that patients who are better engaged in their health care and diagnosis have better outcomes
- Follow up:
 - If things aren't going well then come back for re-evaluation.
 - Keep all your tests, as the doctor you follow up with may not have all your old records

Health care organisations:

- Take ownership of the problem: Take on the challenge to address diagnostic error
- Ensure the length of clinic appointments are sufficient, including time for the physician to look up a fact or think about differential diagnoses. Having that extra time available is crucial
- Facilitate communication: make it easier to get a consult or a second opinion
- Accessible and consistent electronic medical records
- Electronic products that can help a physician make a differential diagnosis list

2. What are some strategies to prevent diagnostic error from your experience with working for Avant?

- Follow up and communication
- A lot of the time Avant sees cases where the diagnosis was missed because of an inadequate history. Furthermore, it is difficult to tell if the history was even adequate since the documentation was not great
- Many times when a patient has left the clinic room you will have had some time to write up notes and think about the case. To avoid diagnostic error this may involve noting your uncertainty, and calling the patient back in for a further history or ensuring that your questions are asked at the next appointment if it is in the near future
- Documentation is very important. Yourself or a colleague taking over the patient's care will be looking at those records. Good documentation is essential

3. How do you go about ensuring good documentation and asking for a second opinion without biasing or influencing that second opinion?

- Do not ask for a second opinion by saying "I think the patient has 'X', don't you agree?" Instead a better way to consult a colleague for a second opinion is to say, "I'm sending over a sick patient and I would like you to think about it from scratch." This would remove a framing-bias which is very common
- Framing-bias can happen often, particularly when a patient is referred to Emergency from a clinic. That patient would already have had an initial work up with differential diagnoses suggested. The patient may also have their own ideas.
- Documentation:

- Ensure your clinical thinking is documented about the case - why you came up with that diagnosis and did you think about other possibilities
- This documentation will help you as a clinician the next time you follow up with the patient but will also help another medical provider reviewing the case in the future
- Ensure documentation of relevant negatives
- GP practice software may not allow that documentation of your clinical thinking process so that software may need to be re-considered in your practice
- The journal article *Diagnostic Error in Medicine: Analysis of 583 Physician-Reported Errors* showed that poor history and physical examination were important sources of diagnostic error. With breakdowns 10-20% of the time with those very simple first steps. Although more frequently diagnostic error came from the synthesis or failing to order the right tests, this still demonstrates that you need to pay attention to every step of the process. Always remember to perform a thorough physical examination, review past investigations and old notes.

4. What is the concept of occult infections or occult malignancy?

- The concept that a diagnosis might exist but inherent in that diagnosis is the assumption that it is not diagnosable at that point in time
- Very often seen with claims and complaints regarding diagnostic error:
 - Was there a very small malignancy there or not?
 - Was the physician in a position to make a diagnosis at that point in time? Much of the legal argument and medical evidence relies on that question.

5. What are some thoughts regarding the concept that a patient's illness isn't in fact diagnosable?

- It is the reality of practising medicine that almost every disease in the earliest stages is very hard to recognise because the symptoms are not specific enough. We all struggle with that.
- Many times you cannot be sure what is going on until you run some tests or there needs to be time for the disease to evolve so the symptoms and signs become characteristic of that problem. In many cases you still may never know and not doing autopsies contributes to that problem.
- Incidental findings:
 - For example, a patient has back pain and you get a spine film. Incidentally the patient has a lung nodule. It's important to make note of these things and have a process to make sure that these findings are followed up.

- Health systems need better ways to follow up on incidental findings. We need better ways to ensure laboratory tests get communicated effectively. These things are important so patients don't sustain harm from a diagnostic error.
- Send pathology and imaging results not only to the doctor but also to the patient.
 - There is now a law in the United States that mammogram results must be communicated to the patient. Previously there had been many incidences where an abnormality was found on imaging and then two years later a patient had end stage disease as they weren't followed up.
 - By communicating results to the patient, the patient becomes a safety net and can be proactive by contacting their health provider to see if anything needs to be done.

6. In healthcare we now typically work in teams. How can teams work together to prevent diagnostic error?

- The way we practice now by and large is that it is the doctor who makes the diagnosis to and for a patient. What the Institute of Medicine envisions is that first there should be a partnership between the physician and the patient. This is the new team concept.
- Nurses will also be involved in the process since they typically spend a lot of time with the patient and know them well. Nurses are in a good position to know if our communication with the patient was effective or not. Nurses are also in a good position to see whether what's playing out in front of them in terms of the way the patient behaves is concordant with our diagnosis. If nurses would be invited to be part of the team they in turn would interact with us more effectively.
- There was a tragic case in the United States where a patient had travelled to an Ebola endemic region in Africa, returning with fever, sinus pain and headache. Whilst the nurses knew about his travel, the physician didn't ask about his travel. The physician missed that key element of the history. He was discharged home and subsequently died 2 weeks later, exposing dozens to Ebola. This is an example of teamwork not existing. Would it have been different if the nurse had communicated with the physician by asking if he knew about the patient's recent travel history? Thus, the patient and the nurse needs to be part of the diagnostic team. Finally, radiologists and pathologists are so important at helping physicians make diagnoses. In the past we used to go down to the radiologist to talk with them and look at the films together. These days we don't have time to do that and the radiologist could even be in a different building. Instead all we see is a written report. This is not good!
- The radiologist knows twice as much about the patient and what is happening in that imaging than what they put into a report. If we could re-establish that direct communication, the radiologist then can tell physicians about those things. The radiologist would have the opportunity to ask us things and we could convey information that wasn't put into our request. This is a simple thing that can be done to improve diagnosis. Radiologists and pathologists need to be a part of this communicative diagnostic team.

Take home messages

- Stop and think. Practice reflectively
- Make the patient a member of the team
- Take advantage of second opinions
- Take advantage of decision support resources
- Follow up on your patients

Reference

- Schiff, G. D. et al. Diagnostic Error in Medicine: Analysis of 583 Physician-Reported Errors. *Arch Intern Med.* 2009;169(20):1881-1887. (Available at: <http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1108559>)

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Tags: #Avant,#clinical reasoning,#cognitive bias,#diagnosis,#diagnostic error,#medicolegal,#patient safety,#Physician-Reported Errors,#preventing diagnostic error

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