The Diagnostic Process in Healthcare

From Improving Diagnosis in Healthcare

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(Annotated Comments by Dr. Childress)

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Diagnostic Error

"For decades, the delivery of health care has proceeded with a blind spot: Diagnostic errors—inaccurate or delayed diagnoses—persist throughout all care settings and harm an unacceptable number of patients. Getting the right diagnosis is a key aspect of health care, as it provides an explanation of a patient's health problem and informs subsequent health care decisions (Holmboe and Durning, 2014)." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: Diagnosis guides treatment. The treatment for cancer is different than the treatment for diabetes, and if we treat cancer with insulin the patient dies from the misdiagnosed and mistreated cancer. Misdiagnosis hurts people. The acceptable rate of misdiagnosis is zero.

"Diagnostic errors can lead to negative health outcomes, psychological distress, and financial costs. If a diagnostic error occurs, inappropriate or unnecessary treatment may be given to a patient, or appropriate—and potentially lifesaving—treatment may be withheld or delayed." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: The damage is not just from wrong treatment, it's also from absent effective treatment. In misdiagnosing and mistreating the pathology, the patient was also denied proper treatment that would have resolved the pathology, leading to a more destructive pathology than was necessary if proper treatment had been provided.

"However, efforts to identify and mitigate diagnostic errors have so far been quite limited. Absent a spotlight to illuminate this critical challenge, diagnostic errors have been largely unappreciated within the quality and patient safety movements. The result of this

inattention is significant: It is likely that most people will experience at least one diagnostic error in their lifetime, sometimes with devastating consequences." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: Diagnostic errors are common, and steps must be taken to reduce and mitigate the rate and impact of misdiagnosis, especially surrounding possible child abuse. When possible child abuse is a considered diagnosis, our diagnosis must be accurate 100% of the time. The consequences of misdiagnosing child abuse for the child are too severe and devastating.

Working Diagnosis

"The working diagnosis may be either a list of potential diagnoses (a differential diagnosis) or a single potential diagnosis. Typically, clinicians will consider more than one diagnostic hypothesis or possibility as an explanation of the patient's symptoms and will refine this list as further information is obtained in the diagnostic process." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: Standard of practice is to have a "working diagnosis" by the end of the first 90-minute intake session, with a confirmed diagnosis by 2-6 weeks. The initial diagnoses may contain qualifiers such as "Provisional" and "Rule-Out" (R/O), but all qualifiers should be cleared by six weeks.

"The working diagnosis should be shared with the patient, including an explanation of the degree of uncertainty associated with a working diagnosis. Each time there is a revision to the working diagnosis, this information should be communicated to the patient." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: This is part of our informed consent responsibility, the "informed" part. The importance of informed consent arose in prominence after World War II and the medical experiments in German concentration camps. The rights of informed consent to treatment are immensely serious in healthcare, patients need to be informed of their diagnosis and changes to their diagnosis.

"As the diagnostic process proceeds, a fairly broad list of potential diagnoses may be narrowed into fewer potential options, a process referred to as diagnostic modification and refinement (Kassirer et al., 2010). As the list becomes narrowed to one or two possibilities, diagnostic refinement of the working diagnosis becomes diagnostic verification, in which the lead diagnosis is checked for its adequacy in explaining the signs and symptoms, its coherency with the patient's context (physiology, risk factors), and whether a single diagnosis is appropriate." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress: The process of "differential diagnosis" begins with all the possibilities considered, then information is systematically collected to support some hypotheses and rule-out others, systematically eliminating competing possibilities with new information collected, the process of diagnostic modification and refinement. Clinical diagnostic interviews are not the random collection of

information, they are professional information gathering toward a decisional purpose, i.e., determining the diagnosis.

"When considering invasive or risky diagnostic testing or treatment options, the diagnostic verification step is particularly important so that a patient is not exposed to these risks without a reasonable chance that the testing or treatment options will be informative and will likely improve patient outcomes." (Improving Diagnosis in Healthcare, 2015)

Dr. Childress: In all risk situations, our diagnosis must be accurate 100% of the time. Sometimes there is uncertainty (see below), but our goal is always accuracy in our diagnosis when any risk factors are involved and we strive to obtain whatever information is needed to allow for the certainty of our diagnosis, including relevant and abundant professional-to-professional consultation to improve diagnostic accuracy (see below).

"Throughout the diagnostic process, there is an ongoing assessment of whether sufficient information has been collected. If the diagnostic team members are not satisfied that the necessary information has been collected to explain the patient's health problem or that the information available is not consistent with a diagnosis, then the process of information gathering, information integration and interpretation, and developing a working diagnosis continues." (Improving Diagnosis in Healthcare, 2015)

Dr. Childress Comment: Note the natural assumption that the diagnosis would be made by a team consultation. Diagnosis guides treatment. It is essential that our diagnosis be accurate or our treatment will be ineffective. Our diagnosis must explain all the symptoms – all of them. If the diagnosis does not explain all the symptoms, then something has been missed – i.e., there is a misdiagnosis of something. Find out what and put it on the treatment plan. Modify the larger diagnosis if necessary to account for all the information. In healthcare, it is not acceptable to simply ignore symptoms of a problem, we must identify (diagnose) what is causing the symptoms, otherwise we miss something in our diagnosis, i.e., a misdiagnosis.

"When the diagnostic team members judge that they have arrived at an accurate and timely explanation of the patient's health problem, they communicate that explanation to the patient as the diagnosis. It is important to note that clinicians do not need to obtain diagnostic certainty prior to initiating treatment; the goal of information gathering in the diagnostic process is to reduce diagnostic uncertainty enough to make optimal decisions for subsequent care (Kassirer, 1989; see section on diagnostic uncertainty)." (Improving Diagnosis in Healthcare, 2015)

Dr. Childress Comment: Notice again the natural assumption that the diagnosis would be made by a team consultation. Professional-to-professional consultation among doctors to reach an accurate diagnosis of patient symptoms is fully standard of professional practice throughout all of healthcare (see below). That is one of the ways we ensure we make an accurate diagnosis 100% of the time, through second-opinion consultation.

“In addition, the provision of treatment can also inform and refine a working diagnosis, which is indicated by the feedback loop from treatment into the information-gathering step of the diagnostic process. This also illustrates the need for clinicians to diagnose health problems that may arise during treatment." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: This can lead into a Response-to-Intervention (RTI) trial in which the response to treatment can be used confirm or dis-confirm diagnostic hypotheses.

Diagnostic Uncertainty

"One of the complexities in the diagnostic process is the inherent uncertainty in diagnosis. As noted in the committee’s conceptual model of the diagnostic process, an overarching question throughout the process is whether sufficient information has been collected to make a diagnosis.” (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: Diagnosis guides treatment, our diagnosis must be accurate 100% of the time. How do we handle diagnostic uncertainty?

“This does not mean that a diagnosis needs to be absolutely certain in order to initiate treatment. Kassirer concluded that:

> Absolute certainty in diagnosis is unattainable, no matter how much information we gather, how many observations we make, or how many tests we perform. A diagnosis is a hypothesis about the nature of a patient’s illness, one that is derived from observations by the use of inference.
>
> As the inferential process unfolds, our confidence as [clinicians] in a given diagnosis is enhanced by the gathering of data that either favor it or argue against competing hypotheses. Our task is not to attain certainty, but rather to reduce the level of diagnostic uncertainty enough to make optimal therapeutic decisions. (Kassirer, 1989, p. 1489)” (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: If our diagnosis is accurate then our treatment should be effective. We continually monitor treatment progress to ensure that the resolution of the problem is going as anticipated. If the treatment is not being successful, then the diagnosis is wrong. We continually collect information to verify that the diagnosis guiding the treatment is accurate.

“Thus, the probability of disease does not have to be equal to one (diagnostic certainty) in order for treatment to be justified (Pauker and Kassirer, 1980). The decision to begin treatment based on a working diagnosis is informed by: (1) the degree of certainty about the diagnosis; (2) the harms and benefits of treatment; and (3) the harms and benefits of further information gathering activities, including the impact of delaying treatment." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: Diagnostic and treatment decision-making is often a risk-benefit analysis in the absence of full certainty. Professional-to-professional second-

opinion consultation is a primary way of reducing diagnostic uncertainty into acceptable levels.

Referral and Consultation

"Clinicians may refer to or consult with other clinicians (formally or informally) to seek additional expertise about a patient's health problem. The consult may help to confirm or reject the working diagnosis or may provide information on potential treatment options." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: Professional-to-professional consultation is encouraged in healthcare because it improves decision-making and the quality of patient care. The legal system find the truth by argument, the healthcare system finds truth by collaboration on a team. The treatment team extend to whoever needs to be on the treatment team for treatment to be successful. Diagnostic accuracy is fundamental to treatment since the treatment will be selected based on the diagnosis. Note the earlier reference to "diagnostic team members." The appellate system in healthcare for a disputed diagnosis is second opinion, or even third.

"If a patient's health problem is outside a clinician's area of expertise, he or she can refer the patient to a clinician who holds more suitable expertise." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: In healthcare, we are prohibited from practicing beyond our boundaries of competence. If a podiatrist performs brain surgery, the patient will die. Ethical statutes requiring competence are in all professional ethical codes (APA: 2.01 Boundaries of Competence). We don't diagnose or treat patients from our ignorance, we refer to the professional knowledge needed to make an accurate diagnosis and receive effective treatment.

"Clinicians can also recommend that the patient seek a second opinion from another clinician to verify their impressions of an uncertain diagnosis or if they believe that this would be helpful to the patient." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: Because diagnoses in court-involved family conflict are anticipated to always be disputed, second-opinion confirmation of the diagnosis and consensus development of an appropriate treatment plan is always warranted and indicated for court-involved family conflict.

"Many groups raise awareness that patients can obtain a second opinion on their own (AMA, 1996; CMS, 2015c; PAF, 2012). Diagnostic consultations can also be arranged through the use of integrated practice units or diagnostic management teams (Govern, 2013; Porter, 2010; see Chapter 4)." (Improving Diagnosis in Healthcare, 2015)

> Dr. Childress Comment: Second opinion consultation is standard of professional practice and is encouraged by professional healthcare organizations.