BEST PRACTICES

MORNING REPORT: A DIAGNOSTIC TRAIL

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The Diagnostic Trail

The Freedom Trail in Boston, Massachusetts, serves as an epitaph to the birth of America. Walking from one site to the next, tourists are guided through a story that evolves, revealing a series of decisive events that led to a final conclusion—revolution. The Morning Report functions in much the same way. An expert guide solicits information and ushers the learner through a clinical presentation, navigating bifurcations in the decision tree, leading to a final conclusion—diagnosis.

Familiar readers of SGIM *Forum* will recognize that the Morning Report column has been a long-standing feature of the monthly publication. With a growing excitement for clinical reasoning as well as the book review for *Frameworks for Internal Medicine* published in this issue of Forum,[1] we felt it was high time to revisit *why* we solicit and publish such case-based writing.

The "Morning Report" Column

Harken back to the origin of the name—the classic resident *morning report* or other case-based conference, a fond generative memory from clerkship and residency training for many internists. Ideally, this was a discussion-based, participatory conference where information was presented in a linear fashion, as cases progress in the real world. This intentionally promoted exploration of a differential diagnosis rather than revelation of a "surprise" diagnosis at the end.

Contrast in-person learning discussions to formal case report publications, where rare or unusual entities are detailed—although useful in identifying novel disease, these are often not applicable and can lead one to searching for zebras. A happy medium exists in the form of clinical reasoning publications, which are "constructed in a manner that emphasizes thought process and reasoning as the case unfolds" and "allows the authors to explore a clinical dilemma in greater detail and present the broader set of teaching points".[2] Much like the Freedom Trail, it is the "journey to the final diagnosis—not the diagnosis itself—that makes for an educational discussion". The Morning Report column is the perfect forum to showcase the Internists' forte—clinical reasoning.

Educational Value

The term *clinical reasoning* describes the process of gathering information as well as generating and testing hypotheses to develop a diagnosis and treatment plan. Physicians often do this subconsciously, but self-improvement and education benefit from a more deliberate and transparent process.[3]

The "Morning Report" column supports a back-and-forth of presentation and discussion aliquots, analyzing information as it is presented. Such a writing style brings us back to Socratic methods. As heralded in the foreword to *Frameworks,* not only does "the art of Socratic teaching…reveal what is known but, even more clearly, it reveals what is not known. Everybody learns. Students, teachers, and nurses learn…patients learn" [p. vi]).[4] This form of active learning encourages readers to learn not just from the ultimate diagnosis but from the journey of the discovery process itself.

Cases evolve over time, feeding into Bayesian statistics. During his interview on Dr. Vinay Prasad's "Plenary Session" podcast,[3] *Frameworks'* author Dr. André Mansoor talks about the longitudinal nature of diagnostic reasoning and the importance of going back to the patient with new and additional questions rather than relying on the single admission interview as the diagnostic process is not a static process: "heart failure is on the differential, I didn't ask about orthopnea or weight gain…I didn't specifically listen for an S3…it's always going back and forth from your differential back to the patient and extracting more information".[1] This emphasis on self-regulation is vital to the process of lifelong learning.

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Everyone Else Is Doing It

We are excited to see multiple other venues highlighting clinical reasoning as a core internist skill. *Frameworks* highlights that rather than waiting for someone to "get" the correct diagnosis, it is important to have frameworks and schemas for tackling difficult cases and building broad differential diagnoses. The objective is then to narrow the differential based on available data that influences pre-test probability. Many internal medicine podcasts or virtual platforms are producing episodes illustrating dynamic clinical reasoning exercises, including, "The Curbsiders," "Core IM," "The Clinical Problem Solvers," and the Human Diagnosis Project's "Global Morning Report." Beyond providing forums for case discussions, these venues also analyze clinical reasoning theories themselves—talking explicitly about the role of illness scripts, problem representations, diagnostic schema, hypothesis driven reasoning versus data driven reasoning, and Dual Process Theory—and even providing the cognitive autopsy on the back end.

Ready, Set, Go

Channel the motivation behind the "Core IM" Hoofbeats segments, which sought the challenge "to solve diagnostically difficult real world cases".[5] Pulling from the classic medicine adage about looking for zebras versus horses, their title came from "hoping to avoid a trophy hunt for zebras, even though the cases might well be complex and unusual. Instead, what we're hoping for here is bits of wisdom, be it clinical pearls, reasoning techniques, rules of thumb, diagnostic schema—the cognitive tools that might be helpful for our next patient. We'd like to get ourselves thinking about how we think, keep visible what is so often invisible".[5] We want to see "how slight refinements of a problem representation can change one's differential".[3] Send us your organized, deliberate process, highlighting the nuances of the challenge of clinical reasoning—from the array of inpatient and outpatient cases you encounter. Just as the Freedom Trail helps us understand our history so we can better create our future, it is the duty of the physician to examine our own diagnostic trails, our pitfalls and our learnings so we can better serve our learners, our patients and each other. It doesn't have to be a zebra diagnosis.

We want to share with the *Forum* audience how you groom your horses and the journey you take with them.

- Choose a case that will engage the audience (because it is common, scary, or interesting).
- Consider 2-3 learning objectives you hope to impart on the reader from this case, then build the story around that.
- Use poetic license in recreating the case to make the details of the case more or less cumbersome for your audience. Consider emphasizing a particular part of the patient encounter—either the history-taking, physical exam, work-up, or treatment.
- Early on, have the discussant create a prioritized differential. After all possibilities are on the board, discuss what the most likely and the cannot-miss diagnoses.
- Provide a brief didactic which focuses on a pivotal aspect of the case (can be the presenting signs/symptoms, physical exam, differential, work-up, or treatment).
- End with Summary with 2-3 teaching points.
- We use a presenter and discussant format with discussant typically in italic.
- We aim for up 1000-1250 words with less than 6 references.

References

1. Mansoor AM. *Frameworks for Internal Medicine*. Philadelphia: Wolters Kluwer, 2019.
2. Packer C, Berger G, Mookherjee, S. *Writing Case Reports: A Practical Guide from Conception through Publication*. New York: Springer, 2017.
3. Steinhilber S, Estrada CA. Exercises in clinical reasoning: A retrospective. *J Gen Intern Med*. 32(1):1-2.
4. Prasad, Vinay, host. 1.29 RCT of Parachutes and frameworks for internal medicine with Dr. Andre Mansoor. https://soundcloud.com/plenarysession/129-rct-of-parachutes-and-frameworks-for-internal-medicine-with-dr-andre-mansoor. Plenary session conducted December 17, 2018.
5. Hwang J, Fang C, Sathe N, et al. Core IM Hoofbeats: A 36F with Weakness. https://www.clinicalcorrelations.org/2018/05/02/core-im-hoofbeats-a-36f-with-weakness/. Core IM Podcast broadcast May 2, 2018.

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