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Rebuttal of Con

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After reading both opening pieces, I am struck more by the similarities in our attitudes toward increasing the utilization of EBM in clinical practice than our differences. We do differ in our opinions of the utility of clinical experience and common sense ("plausible theorizing"). There are innumerable examples of how dangerous this approach to medicine can be. One could, through common sense and pathophysiologic knowledge, conclude that chest pain that does not resolve with nitroglycerine but subsides with administration of Maalox cannot be cardiac, but is likely to have a gastrointestinal etiology.

Many of our differences can be explained by failing to acknowledge the complete definition of EBM. Recall the full definition: "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients."[1] This does not imply that every medical decision must be supported by a RCT or meta-analysis. Clearly, not all clinical issues are significant enough to warrant a RCT. Many decisions necessitate the use of "current best" available evidence. If a clinical scenario exists that occurs frequently, presents sufficient risk to patients, and has no clear best approach, perhaps a study should be conducted. All it takes is a clinician/researcher with the interest, time, training, and resources. Other clinical questions will never be examined by a RCT due to ethical concerns, consent issues, or rarity of the event/illness. Thus, many of our patients do receive care based upon "soft" evidence (the "best available" evidence). But do we truly know that "soft" evidence improves care of our patients, as my colleague states? The beauty of EBM is its dynamic nature and ability to evolve and incorporate new data as it becomes available. As we amass more information with time, we will have fewer clinical quandaries and less reliance upon "soft" evidence.

Every emergency physician understands the importance of throughput. However, this should not supercede providing appropriate care. EBM is rife with decision rules aimed at meeting both of these goals: the Ottawa foot, ankle, and knee rules, the Nexus and Canadian C-spine rules, Wells criteria for pre-test probability of deep venous thrombosis, and the Pneumonia Severity Index score to name a few. Correctly applying these rules may safely increase throughput by avoiding unnecessary tests and admissions.

My colleague unintentionally highlights another tremendously important component of EBM: one must know how to read, interpret, critique, and apply the literature. Is the study's data internally consistent? Were the groups truly randomized? Were the statistical tools correctly applied and performed? Are the conclusions appropriate? These questions evaluate a study's internal validity. The generalizability (or external validity) of a study must be assessed with

respect to one's own patients. My colleague identified a problem with external validity of the head CT rules with respect to his patients. His patient population is very different than those in the studies he mentions. Perhaps my colleague (or others) should study their population to formulate a more than "imperfect" approach to their care. We all know of patients like this who linger in a hallway awaiting "sobriety" only to find that they have a subdural hematoma. One must also be aware that data can be manipulated, resulting in misleading conclusions. The use of composite endpoints and survival to hospital admission (rather than hospital discharge) or other surrogate outcomes are cause for suspicion. Publication bias is yet another format for data manipulation (negative studies are far less likely to be published). This is one reason that meta-analyses are flawed.

Understanding how to safely and effectively utilize EBM in everyday clinical care does not come easy. EBM is a lifelong devotion. Clinical paralysis more likely results from a physician who is learning to integrate EBM into their practice. This seems to be more an issue of a clinician in training than a fault of EBM itself. "Good 'authority-based emergency medicine'" brings to mind all that is wrong with the old, paternalistic approach to medicine that undermines the EBM approach. The Clinicians for the Restoration of Autonomous Practice (CRAP) Writing Group sarcastically state that "proselytisation [of EBM] is now occurring on a global scale and threatens the very existence of for profit, doctor centered, authoritarian medicine as we know it."[2]

Experience alone is not the answer, as the Choudhry article I noted earlier concludes.[3] Recent data shows that we have a lot of room for improvement when it comes to providing EBM-supported care to our patients and that improvements are attainable when treatment guidelines based on EBM are mandated and scrutinized.[4, 5] It remains to be seen if adhering to these guidelines translates into reduced morbidity, mortality, and costs to the system. Despite our differences in approach to the topic, in the end, we both support the notion that EBM should be utilized more frequently in the clinical arena.

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