



An excellent demonstration of how healthcare systems can redesign patient management strategies

Martin Than¹ · Abel Wakai^{2,3}

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In this edition of the Canadian Journal of Emergency Medicine, Moustapha and colleagues present a potentially inspiring report about their use of rapid-access clinics for chest pain to avoid hospital admission and observation of patients presenting to the ED with symptoms suggestive of an acute coronary syndrome (ACS) [1]. What is notable about their study, and why the authors should be particularly congratulated, is that they report the impact of an ED management strategy as implemented in real-life care. Additionally, their work generates a hypothesis for future prospective studies by providing baseline data that researchers can use to design further research.

This study is a retrospective observational study and might therefore be considered a lower level of evidence than, for example, a randomised controlled trial (RCT). The study is essentially a health services research (HSR) study. RCT methodology, first developed for drug trials, can be difficult to conduct for HSR. Consequently, an observational study describing what happened to approximately 2000 patients when a healthcare system implemented a strategy of rapid-access clinics is very useful. Moustapha and colleagues describe how to do this in practice and its impact outside a controlled research setting (in which most publications occur). Of note, at a recent meeting of the American Heart Association annual scientific sessions, it was noted by a session chairperson that less than 5% of the research presented

related to impact on practice; yet, improving patient care is our ultimate aim as clinicians.

The authors note that an intermediate heart score is often used as a trigger for inpatient admission and observation. They demonstrate how clinicians can use the HEART score to identify patients for rapid access to follow-up following attendance to busy emergency departments with a combined annual census of approximately 200,000 patients. Their results suggest that their proposed strategy is safe, with only nine patients having adverse events before clinic review and several returning to the emergency department (ED) because of symptoms. There were no deaths.

There is often an overlap of diagnostic strategies in this patient group; arguably, there are two investigative steps: the investigation for acute myocardial infarction (AMI) and the investigation for underlying coronary artery disease (CAD). Admitting the patient for observation—with or without investigations—merges the investigations for acute myocardial infarction and underlying coronary artery disease. A strength of the rapid-access clinic approach is that it separates these steps again, allowing follow-up investigations for coronary artery disease without using valuable inpatient resources and at the patient's convenience.

The authors rightly highlight that some definitions of MACE incorporate diagnostic angiography without intervention (and some do not); the authors have wisely done a sub-analysis which removes such patients. One could also debate whether the finding of coronary disease leading to semi-elective procedural intervention is truly an adverse event. Indeed the long-term outcomes benefit for such patients is less clear cut than for therapeutic interventions such as statins [2].

Specialists in emergency medicine are not a cheap resource [3], and many healthcare systems worldwide cannot afford the number of specialists in emergency medicine

✉ Martin Than
martin@thanstedman.onmicrosoft.com

¹ Emergency Department, Christchurch Hospital, Christchurch Central, New Zealand

² Department of Emergency Medicine, Beaumont Hospital, Dublin, Ireland

³ Emergency Care Research Unit (ECRU), Royal College of Surgeons in Ireland (RCSI), Dublin, Ireland

that they need [4]. The study findings must be interpreted with caution by healthcare systems where board-certified emergency physicians are not making the diagnostic and discharge decisions for follow-up in a rapid-access clinic. Many countries still do not have doctors who have received structured specialist training providing care in emergency departments 24/7, 365 days a year. The patient outcomes using the HEART score may be quite different in the hands of doctors providing care in emergency departments who are not board-certified or specialists in emergency medicine. Therefore, the external validity (generalisability) of the study's findings may be limited in emergency departments where specialists in emergency medicine are not the ones using the HEART score and referring patients to outpatient rapid-access clinics.

Concerning the research implications of their study's findings, Moustapha and colleagues appropriately state that prospective studies are needed to validate their findings. Prospective studies should rigorously investigate the interrater agreement of the HEART scores among study personnel to enhance the external validity of the results. Prospective studies should investigate the interrater agreement of the HEART score because Moustapha and colleagues report that the only substantial agreement was between ED physicians and reviewers. The agreement between ED physicians and cardiologists was fair. These discrepant measures of agreement raise questions about the precision of the study's findings, specifically concerning the computation of the HEART score between different groups of study personnel. These discrepant measures of the HEART score agreement also adversely impact the study's findings' external validity (generalisability). For example, if there was only modest interrater agreement between ED physicians and cardiologists, might this also be the case between emergency department doctors with differences in training or practice setting? Any prospective study on the topic should ensure that HEART scores are interpreted by study personnel in a manner reflective of routine clinical practice.

Perhaps it is worth reflecting that this study was conducted just before the COVID19 pandemic. The pandemic has been disruptive in both positive and negative ways, but one of the consequences has been the acceleration of

telehealthcare for conducting patient assessments and follow-ups [5]. Could the role of the rapid-access clinic be effectively (or at least partially) performed via telehealth? Could a synchronous audio-visual consultation be used to assess the need for and initiate planning for further investigations? Some centres have taken this a step further, with an offline review of the patient records and test results from the ED visit by a cardiology specialist without direct contact with the patient as a mode to plan further tests and management.

In summary, this is an excellent demonstration of how healthcare systems can redesign patient management strategies with a meaningful impact on patient care. There is tremendous potential for further work in this space, and Moustapha and colleagues provide an excellent description of an impactful implementation.

Declarations

Conflict of interest All authors declare that they have no conflicts of interest related to this publication.

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