Invited Commentary

When the system comes together to solve emergency department flow

Shawn Mondoux, MD, MSc*

INTRODUCTION

Articles such as the one by Beckerleg and colleagues in this issue of *CJEM* should quell our anxiety as to the future of our healthcare system.[1] In this article, three internists from an academic centre conduct a systematic review on interventions to reduce emergency department (ED) consultation times. This seems to be the first step in the breaking down of the often referenced "silos" in healthcare and provides some evidence that we can look beyond interventions that provide benefit outside the group in which the intervention is deployed. If this paper were followed by any local interventions that are demonstrated to improve ED output (in keeping with Asplin's model[2]; Figure 1), its importance to patients in the healthcare system could not be overstated.

This systematic review is important because it provides guidance for clinical teams across the country. Authors reference that consultation times can make up approximately 26% to 67% of the total ED stay for patients. The literature, as well as the lived experience, inform us that this is a problem faced by many academic sites. This paper provides many ideas, some fitting a variety of workplace cultures, for the effective reduction of ED consultation times. Any improvement in ED output is likely to allow more patients to leave the ED, thus also increasing throughput. This should also lead to a reduction in patient mortality and morbidity at a system level.[3]

CONFOUNDING QUALITY IMPROVEMENT IN TRADITIONAL RESEARCH

Despite the importance of this article, there are a few cautions that must be exercised in the evaluation of its results. The methods followed for the identification of relevant articles were thorough, and the guidelines used were appropriate. Yet, the analysis of included articles demonstrates a misunderstanding of quality improvement (QI) and its methodology and studies. This is manifested by the use of the SQUIRE tool[4] as a bias and study quality assessment tool. SQUIRE is a reporting standard for QI studies, and its use in this way would be akin to evaluating bias with *preferred reporting items for systematic reviews and meta-analyses* (PRISMA).[5] Although studies that use SQUIRE in this manner are available, their primary intent was to evaluate the quality of QI studies rather than observational studies. SQUIRE does not provide a stratification for poor, fair, good, and so forth. It is unclear how these were established within this paper.

In addition, authors extracted post-hoc determinations of process and balancing measures for many of the studies included in the analysis. This language is not used within many of the studies nor were they primarily designed to include process or balancing measures. Lastly, the authors opine on the success of many of these interventions using criteria that are not determined a priori. Some interventions were judged as "fair" because the impact on education and the provider experience was not measured. These were not declared as explicit criteria of quality for the systematic review. Other studies were judged as "good," despite having not measured these. Still more were judged to have poor quality due to a lack of generalizability and a lack of balancing measure, despite that balancing measures are presented in Beckerleg's Table 1 and generalizability is only 1 of 40 elements presented in SQUIRE 2.0.[1]

From the *Division of Emergency Medicine, McMaster University, Hamilton, ON.

Correspondence to: Dr. Shawn Mondoux, 237 Barton St. E., McMaster Clinics, Room 250, Hamilton, ON L8L 2X2; Email: shawn.mondoux@medportal.ca

CJEM 2020;22(1):3–5 DOI 10.1017/cem.2019.468

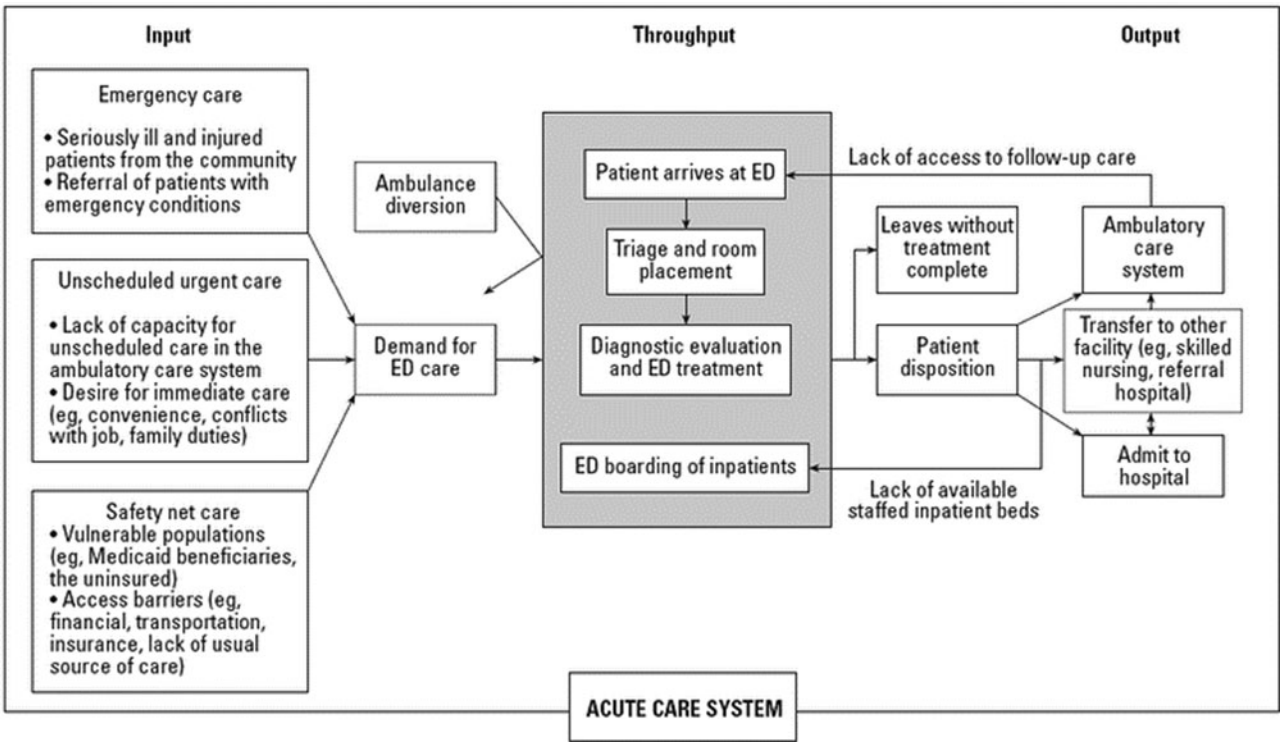

Figure 1. Asplin's model for ED crowding.

AN APPROACH FOR MOVING FORWARD AND REDUCING ED CONSULTATION TIMES

Because this systematic review speaks to a national problem, it is important to extract all that is possible from this paper. Multiple solutions are presented here, which may reduce consultation times and improve patient outcomes. The field of QI has provided a playbook for the best practice around implementing a solution, and it behooves us to move forward with a clear goal and intentions.

ED leaders must come together with their local consultant counterparts, likely one at a time, and develop a clear and well-articulated aim for consultation time reduction (by how much and by when). This change should include patient and learner stakeholder from the beginning. An assessment of those elements that are driving long ED consultation times must be done, and an earnest attempt to solve these issues must occur. Only at this stage can a solution be selected, whether among the list of those present in this paper or another that is derived internally – and, although the outcome measure for success will clearly be ED consultation times, process and balancing measures must be determined. Change will need to be communicated thoughtfully, and wide consultations should be held. As culture slowly changes, so too will the reality in the ED. A more in-depth explanation of methods can be found in the QI primer series previously featured in *CJEM*.[6–8] As these successes are achieved, their publication should be considered within *CJEM*.[9]

All of the easy work has been done. It is likely that those problems that are simple or complicated are largely solved – those that are complex and thorny remain.[10] For these problems, there exists no one person with a solution or easy fix. This will require the hard work of long-term cross-specialty engagement and a culture change. It will also require those engaging in practice change to understand that, although they may not be the direct benefactors of the process change, patients will receive better care because of it. This will have to be our strategy with diagnostic imaging as well. Though this may be difficult, it is ultimately a hopeful message – that coming together over our common issues may actually also be the best way forward.

Keywords: Quality improvement, emergency department flow, administration

https://doi.org/10.1017/cem.2019.468 Published online by Cambridge University Press

Competing interests: None declared.

REFERENCES

1 Beckerleg W, Wooler K., Hasimja D. Interventions to reduce emergency department consultation time: A systematic review of the literature. *CJEM* 2020;22(1):56–64.

2. Asplin BR, Magid DJ, Rhodes KV, et al. A conceptual model of emergency department crowding. *Ann Emerg Med* 2003;42 (2):173–80, doi:10.1067/mem.2003.302.

3. Guttmann A, Schull MJ, Vermeulen MJ, Stukel TA. Association between waiting times and short term mortality and hospital admission after departure from emergency department: population based cohort study from Ontario, Canada. *BMJ* 2011;342:d2983, doi:10.1136/bmj.d2983.

4. SQUIRE. Revised standard for quality improvement reporting excellence – SQUIRE 2.0; 2017. Available at: http://www.squire-statement.org/index.cfm?fuseaction=Page.ViewPage&PageID=471 (accessed October 18, 2019).

5. Moher D, Liberati A, Tetzlaff J, Altman DG, PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *BMJ* 2009;339 (12):b2535, doi:10.1136/bmj.b2535.

6. Chartier LB, Cheng AHY, Stang AS, Vaillancourt S. Quality improvement primer part 1: preparing for a quality improvement project in the emergency department. *CJEM* 2018;20 (1):104–11, doi:10.1017/cem.2017.361.

7. Chartier LB, Stang AS, Vaillancourt S, Cheng AHY. Quality improvement primer part 2: executing a quality improvement project in the emergency department. *CJEM* 2018;20 (4):532–8, doi:10.1017/cem.2017.393.

8. Chartier LB, Vaillancourt S, Cheng AHY, Stang AS. Quality improvement primer part 3: evaluating and sustaining a quality improvement project in the emergency department. *CJEM* 2019;21(2):261–8, doi:10.1017/cem.2018.380.

9. Mondoux S., Calder-Sprackman S, Thull-Freedman J, Chartier LB. *CJEM* to create a dedicated section for *Quality Improvement and Patient Safety publication*. *CJEM* 2020;22 (1):11–13.

10. Snowden DJ, Boone ME. A leader's framework for decision making. *Harv Bus Rev* 2007;85(11):68–76, doi:10.1109/MCDM.2007.369449.

https://doi.org/10.1017/cem.2019.468 Published online by Cambridge University Press