

Operations Management Committee

Flow Improvement Strategies: Provider-In-Triage (PIT)

Gerry Maloney, DO FAAEM



Do you have problems with patient flow? Does your waiting room fill and your department vapor-lock by mid-afternoon every day? Do you have to deal with long waits and patient complaints?

If you don't have these issues, consider yourself in the minority nationwide. Most of us are running into flow problems during our peak volume hours, and the higher your volume and acuity, the worse the

issues become. In general, they result from issues both intrinsic to the emergency department (triage, rooming and discharge processes, bed capacity, efficiencies in seeing patient, and ordering tests) and extrinsic (difficulty in obtaining inpatient beds, radiology and laboratory results). While the primary issues may differ by site, it is likely that everyone experiences at least some of these issues to some degree.

The concept of ED flow has been the subject of a growing body of scientific research. The earliest research dates back to the 1980's, when overcrowding in the ED (defined as patients in hallway beds) was identified with delays in care, longer time spent in the waiting room, and higher left without being seen (LWBS) rates. Their early papers identified a lack of inpatient beds as a driving factor behind these flow issues. Throughout the 1990's and into the 2000's, studies continued to identify increasing problems with crowding, ED length of stay (EDLOS), and boarding of admitted patients. As ED volumes have continued to trend up nationally, the population has aged and become more medically complex. Concurrently, inpatient bed capacity has decreased both due to hospital closures and staffing issues. For these reasons, flow problems have become a daily reality in ED's across the country, whether community, academic, or government hospitals.

There has been an equally robust growth in research looking at ways to improve flow and optimize ED operations to compensate as much as possible in ways that can be controlled by the ED. The evolution of fast tracks for lower acuity patients, split flow triage to room the sickest patients and move the lower acuity patients through an area where they can be seen quickly, use of order sets to have labs and certain imaging studies ordered at triage to speed the diagnostic process, and use of holding areas to move patients awaiting results to free up bed space are all examples of flow improvement schemes that have been successful. Another major flow improvement strategy that will be discussed now is the use of a provider (generally a physician) in triage to help speed the disposition of patients.

The physician in triage (PIT) process has been studied in multiple configurations, with the published research largely in academic centers, though in practice most of the PIT programs happen in community ED's. The basic premise is similar-use of a provider seeing the patient during or very shortly after triage with a goal of determining disposition (immediate discharge, immediate rooming in back, or movement to a holding area for reassessment). Ordering of diagnostic testing and initiation of

treatment commonly begins much earlier than in a traditional queuing process, and as the patients are seen in triage or some other specially designated area the door-to-provider times are lowered. Successful PIT programs have seen lower door-to-provider, door-to-disposition, and EDLOS times. The team configura-

tion differs somewhat among models, generally including a medic, registration person, or nurse with the provider. The majority of research has focused on using a physician instead of an APP in triage as this allows for independent evaluation of the highest acuity patients waiting to be seen without needing to involve another provider. The timing of provider assessment differs as well; recent research has looked at "team triage" where the assessment of the patient by provider and triage nurse happens simultaneously. The extent to which the PIT program is implemented differs as well, with reported times ranging from as low as 4 hours during peak volumes up to 12 hours of PIT coverage. While this heterogeneity makes determining the ideal format for use of a PIT program difficult to precisely nail down, what has been consistent across the literature is that implementation of successful PIT program based on the characteristics of the institution has resulted in flow improvement.

PIT does not work in isolation; places that have utilized PIT have paired it with other flow initiatives, and the better the metrics initially (i.e., the shorter your wait times and crowding issues), the less additional impact of adding more flow initiatives. That said, the literature has reported varying degrees of flow improvement, based on where the department started and what other process improvements they have put in place. As flow issues are multifactorial, flow solutions are also best approached in a multifactorial fashion.

So, should you be in the unlucky majority with crowding and flow issues in your department, and are looking at flow improvement initiatives, consider creating a PIT program as an additional step.

Dr. Maloney is a member of the Operations Management Committee and associate chief of the emergency department at the Cleveland VA Medical Center. ●

Bibliography

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