



# Position Statement

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## Crowding, Boarding, and Patient Throughput

### Description

Emergency department (ED) *crowding* occurs when the need for services exceeds the department's available resources for timely patient care (American College of Emergency Physicians [ACEP], 2018). ED crowding is a major problem not only in the United States (U.S.) but worldwide (Crane et al., 2014; Derose et al., 2014; Gaieski et al., 2017; Hong et al., 2013; McKenna et al., 2019; Morley et al., 2018; Moscop et al., 2019; Resnek et al., 2017; Wundavalli et al., 2019). Crowding is associated with deleterious patient outcomes including increased patient mortality and morbidity; medical errors; delayed or missed physician orders; prolonged time to surgery, analgesia, imaging, and antibiotics; poorer outcomes for cardiac, stroke, and sepsis patients; as well as decreased patient satisfaction and increased rates of patients leaving without being seen (Derose et al., 2014; Gaieski et al., 2017; Hong et al., 2013; McKenna et al., 2019; Moscop et al., 2018; Resnek et al., 2017). Crowding has also been implicated in increased nursing workload, burnout, and staff turnover (Crane et al., 2014; Moscop et al., 2019; Wundavalli et al., 2019). Additionally, the impact of ED crowding extends to the Emergency Medical Services (EMS) system, increasing ambulance diversion and patient offload delay, which is when EDs close to ambulance traffic or when EMS personnel wait for ED beds to open in order to hand off care (Geiderman et al., 2014).

Many attempts to quantify ED *patient boarding* have been made, yet discrepancies regarding its definition have resulted in the inconsistent tracking or understanding of this concept. In 2014 The Joint Commission's "Patient Flow Standard" suggested that patient boarding not exceed four hours from decision to admit (2013). Last updated in 2017, the Emergency Department Performance Measures and Benchmarking Alliance (EDBA) simply defined a boarding patient as "median time, in minutes, from admit decision time to time of departure from the ED" (2017, p. 11). The National Quality Forum (NQF) included in their definition the stipulation that the decision-to-admit must be initiated by a physician (2009). Although this standard was also supported by ACEP, various qualifiers of decision-to-admit have also resulted from further discussion and analysis (ACEP, 2018). For example, in a 64-year-old male patient experiencing chest pain with a history of myocardial infarction, decision-to-admit may differ across hospitals. It may be identified in triage, after obtaining a 12-lead electrocardiogram, upon collection and observance of labs, once a licensed independent practitioner (LIP) has assessed the patient, or when a LIP to LIP handoff has occurred (Resnek, 2017; ACEP, 2015). Because of these time variations, as well as various benchmarks regarding decision-to-admit, boarding has not been sufficiently or consistently identified or tracked.

The Emergency Medical Treatment and Active Labor Act (EMTALA) law provides a relevant starting place for clarity in decision-to-admit and the initiation of the patient boarding definition: ED's bear a responsibility to provide medical screening and to stabilize or transfer those patients with medical emergencies (EMTALA, 1986; ACEP, 2015). Hence, boarding cannot begin until an ED has completed this responsibility. The definition of decision-to-admit is then based on the point after a patient has received all of the following: (a) emergency stabilization, (b) completion and review of diagnostic studies, and (c) an LIP



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to LIP handoff has occurred or a transfer order has been placed (EDBA, 2017; NQF, 2009). Both LIP to LIP handoff and transfer order are within the definition to accommodate operations across various health systems. In following the rationale of the EDBA, NQF, and ACEP mentioned previously, transfer out of the ED requires time for preparing and readying the patient, nurse to nurse report, and physical departure from the department (ACEP, 2015; ACEP 2018; EMTALA, 1986). The Emergency Nurses Association (ENA) defines boarding as the process of holding an admitted patient in the ED while waiting for an inpatient bed, an interval measured as the time between the admit decision and departure time stamp (ACEP, 2015; ACEP 2018; EMTALA, 1986; ENA, 2017b).

Foundational research by Asplin et al. (2003) developed a conceptual model known as *patient throughput* to illustrate: (a) the arrival of patients at an ED for care – input, (b) the care patients receive within the ED – throughput, and (c) patients leaving the ED to home or other care environments – output. Since its inception, the patient throughput model continues to be found relevant in research today and is used to serve as both a description of sources of ED crowding as well as the course of treatment that patients take through the ED in receipt of their care (ENA, 2018; Harper & Mustafee, 2019; Khanna et al., 2017; Moretz & Chmielewski, 2019). This model make it possible to conceive how one source of ED crowding impacts another; how the consumption of ED personnel, geographic, and equipment resources are required to meet sources of crowding; and why resolutions for ED crowding require a hospital wide' systems approach (ENA, 2018; Harper & Mustafee, 2019; Khanna et al., 2017; Moretz & Chmielewski, 2019). EDs have little to do with their hospital inpatient units' capability to accept patients, yet EDs accrue a burden when these conditions exist (ENA, 2018; Harper & Mustafee, 2019; Khanna et al., 2017; Moretz & Chmielewski, 2019). Thus, it is important that patient boarding be addressed as a collaborative effort inclusive of multidisciplinary stakeholders from the ED and inpatient areas (Harper & Mustafee, 2019; Moretz & Chmielewski, 2019)

Administrators are challenged to address ED staffing to provide safe care with the added complexity of crowding, patient boarding, and or throughput delays. Furthermore, there has been little research on standardized methodologies that hospital leadership may use to account for these additional labor hours (ENA, 2018; Moretz & Chmielewski, 2019). This likely results in a staffing calculation shortfall as most EDs use worked hours per patient visit (wHPPV) to determine nurse staffing and labor needs, which does not account for extended care times when crowding, boarding, and/or throughput delay occurs. Nor does it account for the time of other support staff. The wHPPV is calculated as the total worked hours in the ED cost center divided by the total number of ED visits (ENA, 2018; Moretz & Chmielewski, 2019).

There is gap in research aimed at understanding labor productivity during ED crowding, boarding, and/or throughput delay. However, in 2019 the Berkeley Research Group examined methods to account for ED labor productivity when these conditions exist. They concluded that wHPPV with a *Buffer* was most appropriate for capturing actual labor productivity in EDs where crowding, boarding, and/or throughput delay occurs (Moretz & Chmielewski, 2019). When determining budgets, this calculation is then added to the ED wHPPV budgeted value to determine additional staffing needs. Conversely, when comparing actual performance to an established ED-only wHPPV budget for variance reporting, this calculation is subtracted from the combined actual wHPPV to determine the ED component of the wHPPV. Although



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this method may reflect that the ED is above its productivity goal, it provides a calculation to account for boarded patients, enables the anticipation of resources above its staffing plan, and gives credit based on actual boarding hours (Crane et al., 2014; ENA, 2018; Moretz & Chmielewski, 2019; Wundavalli et al., 2019). Additionally, when compared to other methods such as the use of virtual cost centers or calculated modified visits, wHPPV with a *Buffer* does not require the creation or monitoring of phantom cost centers or additional calculation tools (Moretz & Chmielewski, 2019). For further information regarding wHPPV with a *Buffer*, please refer to the Resources section of this document.

## ENA Position

It is the position of the Emergency Nurses Association (ENA) that:

1. Crowding, boarding, and or patient throughput delays are associated with deleterious patient outcomes, negative impacts on emergency staff, and disruption of communities' overall emergency services.
2. To reach the benchmark of decision-to-admit, it is essential that patients receive emergent stabilization, diagnostic studies are completed and reviewed, and an admission order is placed or a LIP to LIP handoff has occurred.
3. Boarding is defined as the process of holding an admitted patient in the ED while waiting for an inpatient bed, an interval measured as the time between the admit decision and departure time stamps.
4. Consistent data and measurement using rigorous metrics are key to both understanding and conveying the factors that cause ED crowding, boarding, and/or throughput delay and are used as the basis for evaluating quality care.
5. Hospitals use a wHPPV productivity calculation method that enables separation of caregiver hours from ED patients and boarded patients. Hospitals are encouraged to investigate the wHPPV calculation method that works best for their context.
6. Patient boarding be addressed as a collaborative effort inclusive of multidisciplinary stakeholders from the ED and inpatient areas.
7. Quality improvement teams be identified and implemented for process improvement approaches to further improve patient throughput and quality patient outcomes.
8. Further research is required to identify industry best practices for calculating labor productivity when crowding, boarding, and or throughput delay occurs.



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## Background

Crowding, boarding, and or patient throughput delays are daily problems in EDs worldwide and are especially problematic when facing increasing needs for behavioral health care and isolation holding in the ED (American Society for Quality [ASQ], n.d.; Centers for Disease Control and Prevention [CDC], 2018; Centers for Medicare & Medicaid Services [CMS], 2003, 2018; El Sayed et al., 2015; ENA, 2017a; Mustafa et al., 2016). For many reasons, EDs experience a large, sometimes overwhelming, demand for services. In the U.S., for example, nearly 140 million patients visit EDs each year, over 40 million visits are trauma related, and more than 14 million result in admission into the hospital setting (CDC, 2018). Considering these rates of ED use, it is imperative that EDs provide optimal care to all, improve efficiency, and support hospital-wide care guidelines to address the needs of patients as well as the staff providing their care.

Rigorous and consistent metrics are fundamental to identifying and addressing clinical process problems using the patient throughput model and to evaluate process improvements (ACEP, Emergency Practice Committee, 2016; Choudhury & Urena, 2020; El-Eid, et al., 2015; El Sayed et al., 2015; Sanders & Karr, 2015; Veterans Administration, Quality Enhancement Research Initiative, 2017). Some of the metrics that the Centers for Medicare & Medicaid Services require – named the “Timely and Effective Care” category of data – can be used for this purpose (CMS, 2003). When problem areas become identified, solutions can be implemented. It is important to note, however, that solutions for decreasing boarding nearly always require improving patient flow throughout the hospital, rather than within an isolated unit. Such solutions necessitate a systems-level understanding of variations of capacity, demand, and the specific consequences of misalignment of these variables (ENA, 2017b; Melton et al., 2016; Silver et al., 2017). Nurses can initiate and drive hospital-wide change to mitigate ED crowding and boarding but buy-in from hospital administrators who are committed to solving the problem is requisite (Silver et al., 2017).

Many hospitals and EDs have found process improvement teams that employ methods such as Lean and Six Sigma® to be extremely helpful in identifying problems and generating viable solutions (ASQ, n.d.; El-Eid, et al., 2015; El Sayed et al., 2015; ENA, 2017a). Those willing to invest some time to search databases such as PubMed or use other internet search engines with targeted keywords will be able to find research on approaches that best fit the particular problem they want to solve.

Every ED, hospital, county, and region presents a different set of variables that contribute to ED crowding and boarding. There is no one-size-fits-all solution, and all solutions must be data-driven, problem-oriented, and unique to each hospital and hospital system in order to be successful.

## Resources

American College of Emergency Physicians, Emergency Practice Committee. (2016). *Emergency department crowding: High impact solutions*. American College of Emergency Physicians.

<https://www.acep.org/legislation-and-advocacy/practice-management-issues/boarding/crowding/emergency-department-crowding---high-impact-solutions>



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Barata, I., Brown, K. M., Fitzmaurice, L., Griffin, E.S., Snow, S.K., American Academy of Pediatrics Committee on Pediatric Emergency Medicine, American College of Emergency Physicians Pediatric Emergency Medicine Committee, & Emergency Nurses Association Pediatric Committee. (2015). Best practices for improving flow and care of pediatric patients in the emergency department. *Pediatrics*, 135(1), e273–283. <https://doi.org/10.1542/peds.2014-3425>

Emergency Nurses Association. (2017a). *Emergency department throughput* [Topic brief]. <https://www.ena.org/docs/default-source/resource-library/practice-resources/topic-briefs/ed-throughput.pdf>

Emergency Nurses Association. (2017b). *System-wide strategies to reduce emergency department boarding* [Topic brief]. [https://www.ena.org/docs/default-source/resource-library/practice-resources/topic-briefs/system-wide-strategies-to-reduce-emergency-department-boarding.pdf?sfvrsn=1eb2b7c5\\_2](https://www.ena.org/docs/default-source/resource-library/practice-resources/topic-briefs/system-wide-strategies-to-reduce-emergency-department-boarding.pdf?sfvrsn=1eb2b7c5_2)

George Washington University School of Medicine and Health Sciences. (n.d.). *Urgent matters*. <https://smhs.gwu.edu/urgentmatters/>

Moretz, J., & Chmielewski, N. (2019, June). Emergency department boarding: Methods accounting for lost productivity. *BRG Review*. Berkeley Research Group. <https://www.thinkbrg.com/newsroom-publications-brgreview-ed-boarding.html>

Wiler, J. L., Welch, S., Pines, J., Schuur, J., Jouriles, N., & Stone-Griffith, S. (2015). Emergency department performance measures updates: Proceedings of the 2014 emergency department benchmarking alliance consensus summit. *Academic Emergency Medicine*, 22(5), 542–553. <https://doi.org/10.1111/acem.12654>

## References

American College of Emergency Physicians. (2018). *Definition of a boarded patient* [Policy statement]. <https://www.acep.org/patient-care/policy-statements/definition-of-boarded-145patient/#sm.00006mqo0s1ctsf8qtes3g1xi33z200006mqo0s1ctsf8qtes3g1xi33z2>

American College of Emergency Physicians, Emergency Practice Committee. (2016). *Emergency department crowding: High impact solutions*. American College of Emergency Physicians. Retrieved from <https://www.acep.org/legislation-and-advocacy/practice-management-issues/boarding/crowding/emergency-department-crowding---high-impact-solutions>

American College of Emergency Physicians. (2015). EMTALA fact sheet. <https://www.acep.org/life-as-a-physician/ethics--legal/emtala/emtala-fact-sheet/>

American Society for Quality. (n.d.). *Lean Six Sigma in healthcare*. <http://asq.org/healthcaresixsigma/lean-six-sigma.html>





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Asplin, B. R., Magid, D. J., Rhodes, K. V., Solberg, L. I., Lurie, N., & Camargo, C. A. (2003). A conceptual model of emergency department crowding. *Annals of Emergency Medicine*, 42(2), 173–180. <https://doi.org/10.1067/mem.2003.302>

Centers for Disease Control and Prevention. (2018). *Emergency department visits*. National center for health statistics. <https://www.cdc.gov/nchs/fastats/emergency-department.htm>

Centers for Medicare & Medicaid Services. (2017). *Hospital compare datasets*. <https://data.medicare.gov/data/hospital-compare>

Crane, P. W., Zhou, Y., Sun, Y., & Schneider, S. M. (2014). Entropy: A conceptual approach to measuring situation-level workload within emergency care and its relationship to emergency department crowding. *Journal of Emergency Medicine*, 46(4), 551–559. <https://doi.org/10.1016/j.jemermed.2013.08.113>

Derosé, S. F., Gabayan, G. Z., Chiu, V. Y., Yiu, S. C., & Sun, B. C. (2014). Emergency department crowding predicts admission length-of-stay but not mortality in a large health system. *Medical Care*, 52(7), 602–611. <https://doi.org/10.1097/mlr.0000000000000141>

Emergency Department Benchmarking Alliance. (2017). 2016 *cohort tables final*. <https://edba.memberclicks.net/assets/EDBA%20Final%20Report%2011.16.17.pdf>

Emergency Medical Treatment and Labor Act, 42 U.S. Code § 1395dd. (1986). [https://www.govinfo.gov/content/pkg/USCODE-1994-title42/html/USCODE-1994-title42-chap6-subchapXVIII\\_2-partC-sec1395dd.htm](https://www.govinfo.gov/content/pkg/USCODE-1994-title42/html/USCODE-1994-title42-chap6-subchapXVIII_2-partC-sec1395dd.htm)

Emergency Nurses Association. (2018). *Staffing and productivity in the emergency department* [Position statement]. [https://www.ena.org/docs/default-source/resource-library/practice-resources/position-statements/staffingandproductivityemergencydepartment.pdf?sfvrsn=c57dcf13\\_6](https://www.ena.org/docs/default-source/resource-library/practice-resources/position-statements/staffingandproductivityemergencydepartment.pdf?sfvrsn=c57dcf13_6)

Emergency Nurses Association. (2017a). *Emergency department throughput* [Topic brief]. <https://www.ena.org/docs/default-source/resource-library/practice-resources/topic-briefs/ed-throughput.pdf>

Emergency Nurses Association. (2017b). *System-Wide Strategies to Reduce Emergency Department Boarding* [Topic brief]. [https://www.ena.org/docs/default-source/resource-library/practice-resources/topic-briefs/system-wide-strategies-to-reduce-emergency-department-boarding.pdf?sfvrsn=1eb2b7c5\\_2](https://www.ena.org/docs/default-source/resource-library/practice-resources/topic-briefs/system-wide-strategies-to-reduce-emergency-department-boarding.pdf?sfvrsn=1eb2b7c5_2)

El Sayed, M. J., El-Eid, G. R., Saliba, M., Jabbour, R., & Hitti, E. A. (2015). Improving emergency department door to doctor time and process reliability: A successful implementation of Lean methodology. *Medicine*, 94(42), e1679. <https://doi.org/10.1097%2FMD.0000000000001679>

El-Eid, G. R., Kaddoum, R., Tamim, H., & Hitti, E. A. (2015). Improving hospital discharge time: A successful implementation of Six Sigma methodology. *Medicine*, 94(12), 1–8. <https://doi.org/10.1097%2FMD.0000000000000633>



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Gaieski, D. F., Agarwal, A. K., Mikkelsen, M. E., Drumheller, B., Cham Sante, S., Shofer, F. S., Goyal, M., Pines, J. M. (2017). The impact of emergency department crowding on early interventions and mortality in patients with severe sepsis. *American Journal of Emergency Medicine*, 35(7), 953–960. <https://doi.org/10.1016/j.ajem.2017.01.061>

Geiderman, J. M., Marco, C. A., Moskop, J. C., Adams, J., & Derse, A. R. (2014). Ethics of ambulance diversion. *American Journal of Emergency Medicine*, 33(6), 822–827. <https://doi.org/10.1016/j.ajem.2014.12.002>

Harper, A., & Mustafee, N. (2019). A hybrid modelling approach using forecasting and real-time simulation to prevent emergency department overcrowding. In *2019 Winter Simulation Conference (WSC)* (pp. 1208–1219). IEEE.

Hong, K. J., Shin, S. D., Song, K. J., Cha, W. C., & Cho, J. S. (2013). Association between ED crowding and delay in resuscitation effort. *American Journal of Emergency Medicine*, 31, 509–515. <https://doi.org/10.1016/j.ajem.2012.09.029>

The Joint Commission. (2013). The "Patient Flow Standard" and the 4-hour recommendation. *Joint Commission Perspectives*, 33(6). <https://www.jointcommission.org/assets/1/18/S1-JCP-06-16313.pdf>

Khanna, S., Boyle, J., Good, N., Bell, A., & Lind, J. (2017). Analysing the emergency department patient journey: Discovery of bottlenecks to emergency department patient flow. *Emergency Medicine Australasia*, 29(1), 18–23. <https://doi.org/10.1111/1742-6723.12693>

McKenna, P., Heslin, S. M., Viccellio, P., Mallon, W. K., Hernandez, C., & Morley, E. J. (2019). Emergency department and hospital crowding: causes, consequences, and cures. *Clinical and Experimental Emergency Medicine*, 6(3), 189–195. <https://doi.org/10.15441/2Fceem.18.022>

Melton, J. D., Blind, F., Hall, A. B., Leckie, M., & Novotny, A. (2016). Impact of a hospital-wide quality improvement initiative on emergency department throughput and crowding measures. *The Joint Commission Journal on Quality and Patient Safety*, 42(12), 533–542. [https://doi.org/10.1016/s1553-7250\(16\)30104-0](https://doi.org/10.1016/s1553-7250(16)30104-0)

Moretz, J., & Chmielewski, N. (2019). Emergency department boarding: Methods accounting for lost productivity. *BRG Review*. Berkeley Research Group. <https://www.thinkbrg.com/newsroom-publications-brgreview-ed-boarding.html>

Morley, C., Unwin, M., Peterson, G. M., Stankovich, J., & Kinsman, L. (2018). Emergency department crowding: A systemic review of causes, consequences and solutions." *PLoS ONE*, 13(8). <https://doi.org/10.1371/journal.pone.0203316>

Moskop, J. C., Geiderman, J. M., Marshall, K. D., McGreevy, J., Derse, A. R., Bookman, K., McGrath, N., & Iserson, K. V. (2019). Another look at the persistent moral problem of emergency department crowding. *Annals of Emergency Medicine*, 74(3), 357–364. <https://doi.org/10.1016/j.annemergmed.2018.11.029>

National Quality Forum. (2009). *National voluntary consensus standards for emergency care: A consensus report*. <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=22009>



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Mustafa, F., Gilligan, P., Obu, D., O'Kelly, P., O'Hea, E., Lloyd, C., Kelada, S., Heffernan, A., & Houlihan, P. (2016). 'Delayed discharges and boarders': a 2-year study of the relationship between patients experiencing delayed discharges from an acute hospital and boarding of admitted patients in a crowded ED. *Emergency Medicine Journal*, 33, 636–640. <https://doi.org/10.1136/emered-2015-205039>

Resnek, M. A., Murray, E., Youngren, M. N., Durham, N. T., & Michael, S. S. (2017). Door-to-imaging time for acute stroke patients is adversely affected by emergency department crowding. *Stroke*, 48(1), 49–54. <https://doi.org/10.1161/STROKEAHA.116.015131>

Sanders, J. H., & Karr, T. (2015). Improving ED specimen TAT using Lean Six Sigma. *International Journal of Health Care Quality Assurance*, 28(5), 428–440. <https://doi.org/10.1108/IJHCOA-10-2013-0117>

Silver, S. A., Harel, Z., McQuillan, R., Weizman, A. V., Thomas, A., Chertow, G. M., Nesrallah, G., Bell, C. M., & Chan, C. T. (2017). How to begin a quality improvement project. *Clinical Journal of the American Society of Nephrology*, 11(5), 893–900. <https://doi.org/10.2215/cjn.11491015>

U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services. (2003). 42 CFR Parts 413, 482, and 489: Medicare program; Clarifying policies related to the responsibilities of Medicare-participating hospitals in treating individuals with emergency medical conditions. *Federal Register*, 68(174). <https://www.gpo.gov/fdsys/pkg/FR-2003-09-09/pdf/03-22594.pdf>

Veterans Administration, Quality Enhancement Research Initiative. (2017). *QUERI implementation guide*. <https://www.queri.research.va.gov/implementation/default.cfm>

Wiler, J. L., Welch, S., Pines, J., Schuur, J., Jouriles, N., & Stone-Griffith, S. (2015). Emergency department performance measures updates: Proceedings of the 2014 emergency department benchmarking alliance consensus summit. *Academic Emergency Medicine*, 22(5), 542–553. <https://doi.org/10.1111/acem.12654>

Wundavalli, L., Kumar, P., & Dutta, S. (2019). Workload Indicators of Staffing Need as a tool to determine nurse staffing for a high volume academic emergency department: An observational study. *International Emergency Nursing*, 46, Article 100780. <https://doi.org/10.1016/j.ienj.2019.06.003>





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Developed: 2017

Approved by the ENA Board of Directors: December 2017.

Revised and Approved by the ENA Board of Directors: December 2020.

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