



KEY POINT SUMMARY

OBJECTIVES

To study the effects of a hospital's overall design and the presence of an interventional platform (IP) on patient care, with particular attention on door-to-balloon (DTB) time.

Impact of a novel interventional platform and hospital design on the door-to-balloon time in patients presenting with ST-segment elevation myocardial infarction.

Poulin, M.-F., Appis, A., Purim-Shem-Tov, Y., Schaer, G. L., Snell, J., 2015 | *Critical Pathways In Cardiology*. Volume 14, Issue 1, Pages 39-43

Key Concepts/Context

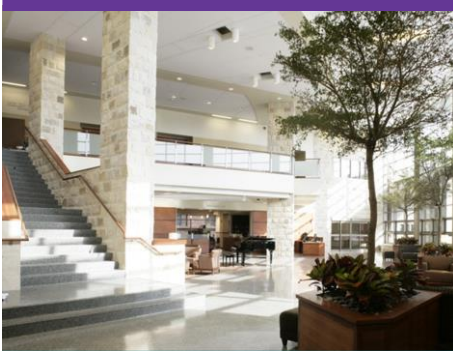
A "heart attack" is usually identified among cardiologists as an "ST-segment elevation myocardial infarction". Fast and effective care is a necessity when treating patients suffering from heart attacks, and the unit of measurement used by hospital administrators and cardiologists to gauge how long a patient has been inside the hospital before receiving heart attack treatment with a catheter guidewire or "balloon" is called "door-to-balloon" or DTB time. Many procedural delays can contribute to elongated DTB times, which can result in increased rates of morbidity and mortality. This paper presents the study of an interventional platform (IP), which is a strategically designed unit with links to other sections of the hospital that can help optimize DTB time.

Methods

A total of 52 patients who required treatment for heart attacks between 2010 and 2014 were observed in this study. 21 patients were treated prior to the installation of the IP, and 21 were treated after installation. The IP described in this study was connected to the hospital's emergency department (ED) in order to provide faster access to heart attack treatment for admitted patients. The researchers retrospectively gathered data on DTB times in both groups of patients in order to determine whether or not the IP decreased DTB time.

Findings

The introduction of the IP resulted in a decreased mean DTB time from 71.6 to 59.9 minutes. The authors note that this significant improvement was also likely



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influenced by the ED's new design, which featured more strategically placed triage rooms. The new equipment featured in the IP, which included larger monitors and room features, did not significantly impact the duration of treatment processes.

Limitations

This study focused on a single healthcare facility that underwent a large-scale redesign. The authors note that several aspects of this redesign, which were not studied here, may have significantly influenced the observed decrease in DTB time. The authors also note that a small sample size of patients was used, and that the results cannot be used to project long-term outcomes for DTB time.

Design Implications

The “interventional platform” or IP described in this study is a design feature that strategically allocates the space, equipment, and personnel required to effectively initiate the complex treatment procedures underlying fast and safe care for patients experiencing a heart attack. By connecting IPs to emergency department spaces while still keeping the IP shielded from noise, foot traffic, contact with other patients, and other hazards, heart attack treatment can be administered more quickly without contributing to additional health concerns.

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