Building a Nerve Center for Patient Flow: Outcomes from a Comprehensive Integration of Services at an Academic Medical Center

Paris B. Lovett, MD MBA, Brian E. Sweeney, RN, MBA, FACHE, Megan L. Johnston, , MHSA, Lewis J. DeEugenio Jr, MD, FACP, BSME, Holly Meisner, RN, BSN

Patient Flow Management Center. Thomas Jefferson University Hospitals. Philadelphia, PA

Background:
Improving patient flow metrics (inpatient length-of-stay (LOS), bed utilization, process cycle times and discharge efficiency) requires collaboration and coordination between multiple disciplines and departments within a hospital.

Objectives:
To report outcomes from a comprehensive geographic and organizational integration of disciplines and services with the goal of improving patient flow

Implementation Methods:

Setting: Large, urban, academic quaternary referral center

Design: In March, 2011 a multidisciplinary team built a Patient Flow Management Center (PFMC), bringing multiple services together in single geographic suite and operating under a unified organizational structure. Those services included the Transfer Center, Ambulance and Helicopter Service, Environmental Services, Patient Transport and Bed Management. Additionally, nursing, physicians, and case managers joined as core members of this team. The physical space was an open-plan floor with sight-lines between staff of all services, and state-of-the-art data and voice communications systems. Real-time data reporting and display was fully integrated, and all services met weekly to report on performance metrics and discuss action plans. The center coordinated with other departments on initiatives, working for instance with the ED on an intake program to reduce walkouts and ED length-of-stay.

Research Methods:

Observations: Patient flow metrics before and after creation of PFMC. PFMC was organizationally integrated over several months before completion and occupation of the physical space, so we report data from June 2010, to capture the full before-and-after trends.

Results:
See Table 1 and Figure 1. After deployment of PFMC, we saw major increases in growth metrics and compliance metrics. At the same time, there were dramatic reductions in turnaround times and process failure metrics.

Discussion:
Building a highly integrated physical space and organizational structure created an effective “nerve center” in which improvements in patient flow could be rapidly devised and implemented, with significant gains across all metrics. Turnaround times associated with traditional tasks such as assigning hospital beds, cleaning patient rooms, and transporting patients are prolonged when patient flow is not coordinated in a systematic way. Our experience demonstrates that it is possible to develop a PFMC and implement rapid operational changes in a complex academic medical center to achieve results within a twelve month time frame.