The Impact of an Intake Model on Patient Care and Resident Education at an Urban Emergency Department

P Armenian, D Campagne, G Kallsen, B Snowden, L Weichenthal
UCSF Fresno, Department of Emergency Medicine, Fresno, CA

BACKGROUND
With Emergency Department (ED) overcrowding, many EDs have instituted measures to rapidly evaluate non-urgent patients. The impact of such measures has not been well studied in an academic setting.

OBJECTIVES
Evaluate an intake model in an academic ED in regards to time to provider (TTP), length of stay (LOS), left without being seen rates (LWBS), patient and staff satisfaction and perceived impact on resident education.

METHODS
Design: A prospective observational study
Setting: Community Regional Medical Center (CRMC), an urban level 1 trauma center with an emergency medicine residency program.
Participants: All ED patients, ED nursing staff; and emergency medicine residents and faculty. The study period was March 2008 through March 2010.
Interventions: In March 2009, an intake model was instituted at CRMC. Intake is an area where non-emergent patients receive an initial screening exam and are either treated and released or have initial orders started while they wait for an available bed in the ED.
Main outcome measure: TTP, LOS, LWBS; patient and staff satisfaction and perceived impact on resident education were evaluated by survey.
Statistics: Pre and post data, and averages were used and Student’s t-test and confidence intervals were calculated using Excel and GraphPad Software 2007.

RESULTS
Preliminary data was collected for three months prior to the institution of intake and three months after. LWBS rates increased in the time period (p=0.03) after the institution of intake as did TTP (p=0.09). LOS trended downward and patient satisfaction (p=0.06), staff and medical staff satisfaction trended upward. The system change was not viewed to significantly impact resident education. Of note, registered patients during the three months after implementation of intake increased by 18 percent while ED staffing did not change.

LIMITATIONS
- Observational Study
- Single Hospital Experience
- Preliminary Data Collection
- Significant Increase in Registered Patients in Post-Intake Period without increase in ED staffing

CONCLUSION
An intake model at an academic ED did not significantly impact LWBS, TTP or LOS. However, patient and staff satisfaction show trends toward improvement without negatively impacting resident education. This is a preliminary study and more data is being collected. Further studies are needed to determine if intake is effective in an academic setting.

Acknowledgements
Thanks to the academic research associate students and Jennifer Johnson for their data collection contributions to this study.