Evaluation of a Centralized Electronic Bed Placement System for Patient Care Capacity Management

Introduction

Emergency Department
- Overcrowding
- Treatment delays
- Increased length of stay

Affecting
- Patient safety
- Quality of care
- Patient satisfaction

Issues
- Rising bed demands
- Limited bed and treatment capacity
- Managing cost
- Improving customer service and patient satisfaction

Electronic Bed Placement System
- An automated workflow system that can provide real-time information on patients, staff, and operations.

The Evidence
- Improved capacity management creates better quality, service, and financial indicators (Baim, 2012; Broyles et al., Crews et al., 1986; Kobis, 2006; Proudlove et al., 2007).
- Minimal literature on investigating the effects of a patient care capacity management system on throughput and clinical practice.
- Gap in literature on nurses’ views and the effects of an electronic patient care capacity management system.

Purpose

To evaluate the effects of the implementation of an automated patient care capacity management system.

Research Questions

1. What is the effect of a centralized electronic bed placement system on throughput in patients admitted from the Emergency Department?
2. What is the effect of transitioning from an entity bed placement model to a centralized bed coordination model?
3. What is the effect of a centralized electronic bed placement system on nurses and nurses’ work?
4. What are the charge nurses’ perceptions on the use and satisfaction between the entity bed placement and the centralized off-site bed coordination model?
5. Is there a difference in patient satisfaction with the implementation of a centralized electronic bed placement system?

Methods

Mixed method

Comparative quantitative Pre & post implementation
Descriptive quantitative Post implementation
Patient satisfaction survey Before implementation and 3 months post implementation
Time recordings 1 month prior and 1 month after implementation
Nurses’ interviews 3 months and 6 months after implementation

Results

Time from Order for Admission to Bed Assignment

Patient Satisfaction: Speed of Hospital Admission

Effect on Nurses and Nurses’ Work

3 Months Post Go-Live
- Communication
- Process Control
- Trust
- Usability

6 Months Post Go-Live
- Technology
- Communication
- User Operation
- Trust

References