HOW BOULDER COMMUNITY HOSPITAL REDUCED WAIT-TIMES BY 10 MINUTES

USING PATIENT SELF-SERVICE AS PART OF A LEAN SIX SIGMA INITIATIVE

BUSINESS DRIVERS

A Lean Initiative

Over a three-year planning period, Boulder Community Health (BCH) used Lean Six Sigma process improvement principles to optimize flow, eliminate waste, create standard workflows, and ultimately select a technology to appropriately triage the high volume of patients.

BCH consolidated its inpatient acute care operations into one location with a centralized registration area for all services. Given the anticipated increase in daily patient registrations, the hospital implemented a patient queuing system to streamline flow.

Prior to deployment, patients waited in lines in excess of 15-20 minutes. In addition, management had no visibility into registration wait times other than direct observation. The solution allows BCH to monitor and trend patients by type, task, and time.

To prepare for implementation, the team:

- Identified how many and what type of patients checked in daily
- Identified skills needed to serve them and how many registrars would be required.
- Evaluated the amount of time it would take to register, and
- Calculated patient wait time thresholds

Boulder Community Health

- Community owned-and-operated not-for-profit health system
- Early adopter of innovative technologies
- 540 physicians
- 54 medical specialties

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Wait times are less than five minutes and most patients are in and onto their service(s) inside of 10 minutes. These are industry-best standard performance goals. The workflow has also **dramatically helped reduce errors, save labor costs, and minimize waits."**

Jonathan Wiik
Chief Revenue Officer
Boulder Community Health

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Workflow Design

BCH designed 10 stations to register all patients for hospital services. Patients arrive at one lobby and are directed to check in at a kiosk, which prompts general questions about the reason for the visit. They then receive a ticket with a number that prioritizes that patient based on the type and time that the services are needed.

When the patient's number gets called, a 42" monitor in the lobby lists their number along with a corresponding station, and an automated auditory message announces the patient number. Registration staff can be flexed up or down depending on the varying volume.

The queue solution allows a patient to relax in the lobby, and enjoy the view, instead of standing and waiting in a line.

Accommodating Patients

BCH experienced an adjustment period of about 30 to 45 days. Patients can opt out anytime and ask for assistance from a registrar. Volunteers also routinely staff the area to help act as "ambassadors" to both the hospital and the process.

BUSINESS OUTCOMES

Improved Productivity and Metrics

After deployment of Vecna's Express Check-in solution, wait times fell to less than five minutes consistently. Registration times also improved as there were fewer distractions in queueing the patients, versus asking if they were next or where to go.
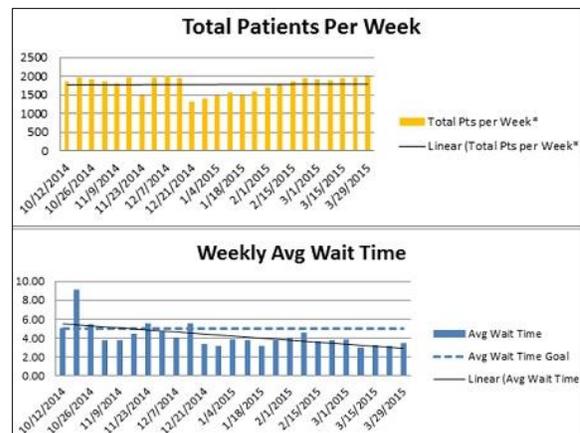
The workflow has also dramatically helped reduce errors, save labor costs, and minimize waits. It was a team effort and has achieved great outcomes.

Patients find the system efficient, simple, and comfortable. They have expressed confidence in knowing where they are and in what order. We receive many compliments on the flow and minimal wait times.

Expansion Plans

BCH looks to expand the system to ancillary sites. In addition, kiosks have the potential to interface with other platforms, such as scheduling, registration, payment, patient portals and biometric readers.

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Total Patients Per Week

Total Pts per Week*
Linear (Total Pts per Week*)

Weekly Avg Wait Time

Avg Wait Time
Avg Wait Time Goal
Linear (Avg Wait Time)

Tips and Tricks

- Volunteers are available to help patients and visitors in the lobby if they need assistance with the kiosk
- BCH performed focused interviews in the lobby after the solution was deployed. These interviews brought forth further enhancements surrounding signage, volunteer coverage, queuing options, and other changes to the implementation approach.

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