



# **A Discussion on Automating Patient Flow**

*Because improving patient flow means improving patient care...*

**University of Utah Hospitals and Clinics  
TeleTracking Technologies, Inc.**

11:00 a.m. Eastern / 8:00 a.m. Pacific  
March 11, 2009

# Housekeeping

## 1. Viewer Window

The screenshot shows a Citrix-hosted GoToWebinar Viewer window. The main content area displays a presentation slide with the following information:

- CB Presentations™**
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At the bottom of the slide, there is a profile picture of Corena Bahr, CEO and Founder of CB Presentations. The Citrix logo is visible in the bottom left corner of the viewer window. The desktop background shows icons for Network and Recycle Bin, and the Windows taskbar at the bottom displays the start button, taskbar icons, and system tray with the time 4:11 PM.

## 2. Control Panel

The screenshot shows the GoToWebinar Control Panel interface. The 'Audio' menu is open, showing options: Full Screen, Window, Auto-Hide the Control Panel, Hide Control Panel, Default Control Panel Layout, and Save this Startup Layout. The 'Questions' section is also visible, containing a 'Questions Log' with a welcome message and a text input field for questions. The 'Send' button is located below the input field. The GoToWebinar logo and Webinar ID (576-794-892) are displayed at the bottom of the control panel.

# The Participants



## University of Utah Hospital & Clinics

David Entwistle, CEO  
Quinn L. McKenna, COO



## TeleTracking Technologies, Inc.

Anthony Sanzo, President & CEO

Moderated by Fawn Lopez, Publisher, *Modern Healthcare*



# University Health Care

- About University of Utah Hospitals & Clinics (UUHC)
  - 560 beds
  - Academic medical center
    - 120+ specialties
  - Tertiary care referral center
    - Level 1 Trauma Center, Burn Unit, Ortho, Stroke, Ophthalmology, Cancer, NICU, Radiology, Organ Transplant
  - More than 26,000 admissions / 38,000 ED visits
  - Nearly 1.0 million outpatient visits
  - Consistently ranked among *U.S. News & World Reports* Best Hospitals



# Key Issues & Priorities

- UUHC was experiencing increasing period of critical census resulting in:
  - Long patient wait times prior to admission
  - Ambulance diversion in the emergency department
  - Patients being held in the ED or PACU for extended periods prior to admission.
  - Diverted admissions from hospitals and physicians.
- To be able to better compete for patient loyalty, UUHC recognized it needed to improve the overall patient experience.
  - Admit to discharge.
  - Right patient, right bed, first time.



# Key Issues & Priorities

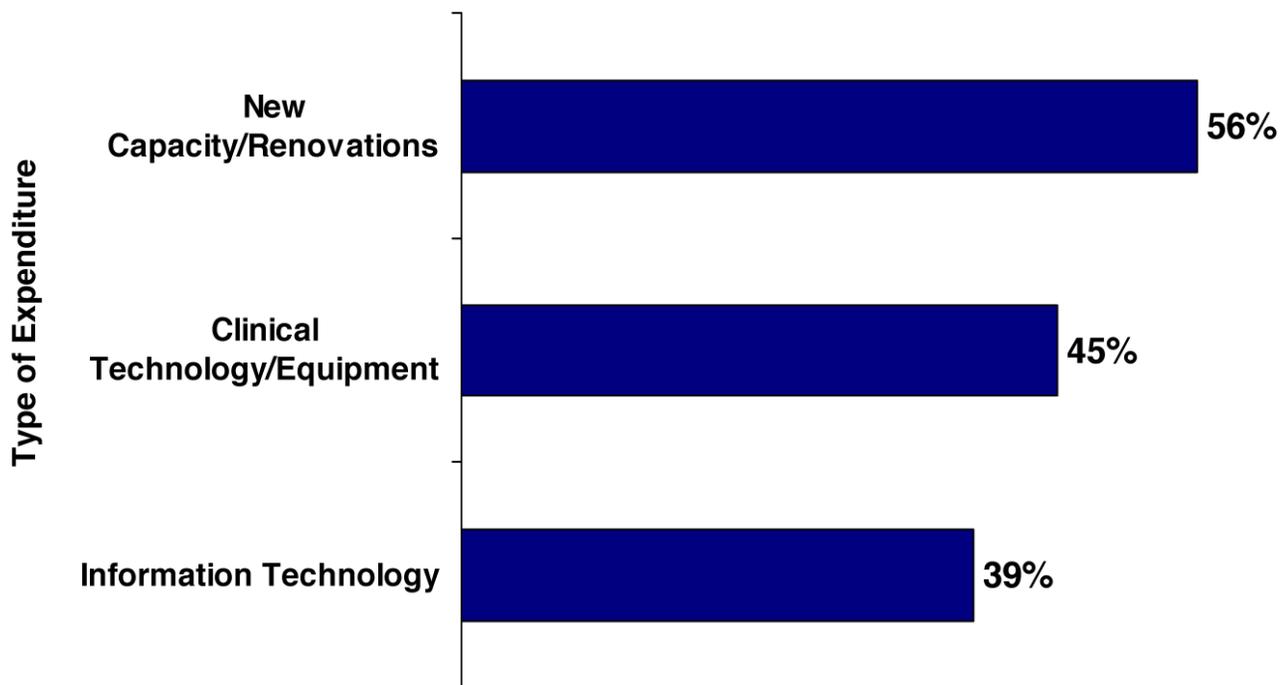
- We were concerned that our patient flow process was creating some of the critical census issues, as well as negatively impacting our patient experience.
  - Inefficient communication channels between constituents
  - Rumors of significant delays in bed turnaround times
- The desired outcomes and benefits for focusing on the patient flow included:
  - Improve Patient Throughput by Removing Inefficiencies
  - More patient volume / same bed capacity
  - Decreased Length of Stay
  - Improved patient loyalty.
  - Decreased times of critical census.
  - Better Manage Surge Capacity / Disaster Planning

# The State of Hospitals & Healthcare



As a result, more than half of hospitals are reconsidering or postponing investments in facilities and equipment.

Percent of Hospitals Reconsidering or Postponing Capital Expenditures, November 2008



Source: AHA. (November 2008). Rapid Response Survey, The Economic Crisis: Impact on Hospitals.

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# In today's economy, hospitals need to:

- Manage increasing patient demand without adding beds
  - Maximize existing bed capacity
- Improve a Fragmented Patient Flow Process
  - Automate communications across constituents
  - Provide transparency / visibility of patient flow information
- Encourage Accountability
  - Automate patient flow processes / understand workflow
  - Measure, set the bar, re-measure, re-set the bar
- Implement Cost-Effective Process and Technology
  - Refine process with understanding of technology benefits



# Steps to improve UUHC patient flow:

- Historically, UUHC was only using a manual bed board with inconsistent communication paths.
- Step 1 was to provide an automated bed board tool as the foundation of a revised patient flow system.
- Changes to operational processes were also required, including:
  - Streamlining the ED intake process.
  - Enhancing the IP discharge process.
  - Clarifying discharge transportation roles.
  - Adding a discharge lounge function.
- Providing education to nursing and support staff regarding the new tools and patient flow processes.
- Implementing dashboards to monitor key patient flow elements and provide feedback.



# Patient Flow Challenges

- The bed board process was manual.
- There was no patient flow dashboard with reliable metrics.
- Concerns regarding the patient flow were anecdotal and could rarely be substantiated.
- Beds were frequently “hidden” based upon individual preference.
- Patients were frustrated about how long it took to be placed in a bed either through transfer, the ED or from inpatient procedures.
- Times of critical census were increasing.

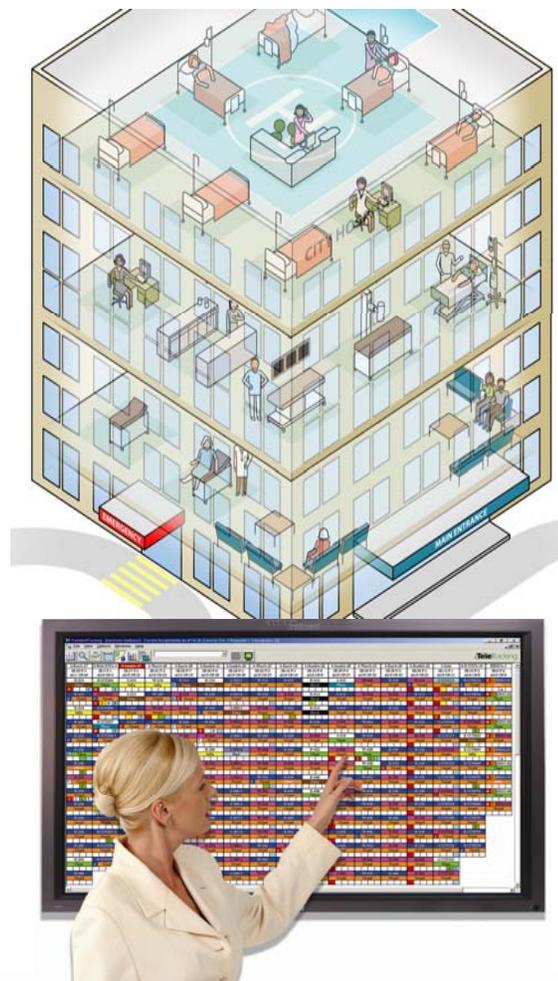


# Steps to improve UUHC patient flow:

- **Customer Satisfaction**
  - Patient Satisfaction with speed of discharge process has improved by 5% post implementation.
  - Overall patient satisfaction has steadily improved and is now approaching 70<sup>th</sup> percentile.
- **Employee Satisfaction**
  - UUHC employee satisfaction is consistently above the 90<sup>th</sup> percentile. Anecdotally, the staff are very pleased with the new tools and systems supporting their jobs.
- **Discharge Rate**
  - Approximately 10% improvement in discharge rate prior to 2:00 pm.
  - 55% of discharges are escorted through transporters saving 15 minutes in room turn time per discharge.
  - 53 minute average room turn time (reported to clean).
  - 3% growth in patient days with no added beds and a 2.4% increase in patient acuity.
- **ALOS**
  - 5% improvement in ALOS.
  - 3% increased occupancy rate.

# Key Patient Flow Results

- These systems will create transparency among areas, which is not always readily embraced
  - Bed Availability
    - Occupied, Clean, Dirty, In Progress
  - Pending Status
    - Discharges, Transfers, Assignments
  - Incoming patients
    - How many and from where (ED, PACU, etc.)
  - Projected Census





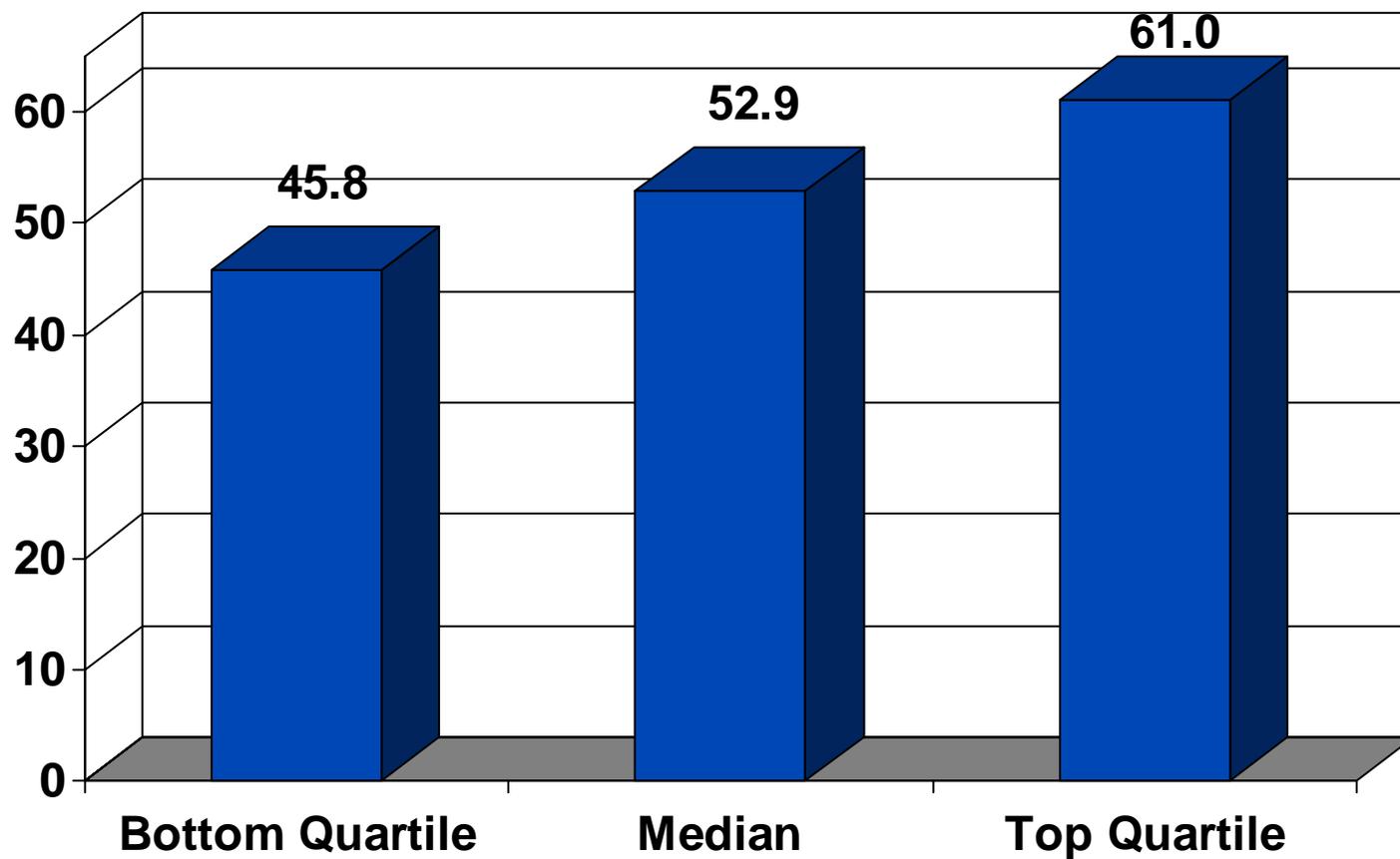
# Return on Investment

*University of Utah Hospitals & Clinics*

- Increased admissions through ALOS reduction and improved bed capacity has resulted in net CM of \$2.5 million.
- 14% reduction in diverted transfers.
  - Estimated contribution margin increase of \$275,000.

# Average Annual Bed Turns

(Admissions/Staffed Beds)



Source: Financial Compass, (Fourth Quarter, 2004); Health Data Insights; True North interviews and Analysis



# Return on Investment

OSF Saint Francis Medical Center, Peoria, IL

Reduction/ Elimination of Diversions		Revenue - Volume Increase	
Lack of available beds means the site is forced to divert; losing admissions			
	Number of Diversions		365
	% Reduction		50%
	Number of Diversions Avoided		183
	Contribution Margin/IP Admission		\$ 3,549
	Annual Additional Contribution Margin		\$ 645,918



# Return on Investment

*OSF Saint Francis Medical Center, Peoria, IL*

Improved ED throughput		Revenue - Volume Increase	
Moving patients out of ED and onto patient units frees up ED beds, allowing other patients to be seen faster and avoiding those who leave without being seen			
Annual Number of ED visits		60,278	
Annual Number LWBS		663	
% LWBS		1.10%	
% Reduction in LWBS		25%	
Reduction in # LWBS		166	
Margin/ED Patient		\$ 202.54	
Margin for recaptured patients		\$ 33,622	



# Tips for Patient Flow Solutions

- Don't look to implement technology with out defining what you are trying to accomplish.
- Establish your performance parameters for the system when you are selecting a vendor.
- Identify realistic timelines for implementation with clear accountabilities.
- Training is key to a successful implementation and should be planned as part of system costs.
- These systems will create transparency among areas, which is not always readily embraced



# A Discussion on Automating Patient Flow

*Because improving patient flow means improving patient care...*

## Q & A



# Thank You & Contact Information

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