Institute *for* Healthcare Improvement

Informational Call

September 19, 2018

IHI's Hospital Flow Professional Development Program

Lloyd Provost and Pat Rutherford

November 5-9, 2018
Boston, MA

So-Called "Flow Failures" are Disrespectful to Patients

“The number one reason to improve the movement of patients through health care settings is because “bad flow” is disrespectful to patients and families.

Our inability to more effectively design and manage processes also wears on clinicians and staff — decreasing their efficiency and productivity, undermining joy in work, contributing to burnout, and decreasing job satisfaction. But our patients and families bear most of the burden.

We make patients wait in the wrong places. We make them seek care in the wrong units. If you were to walk through most hospitals today, you will probably find multiple problems with patient flow.”

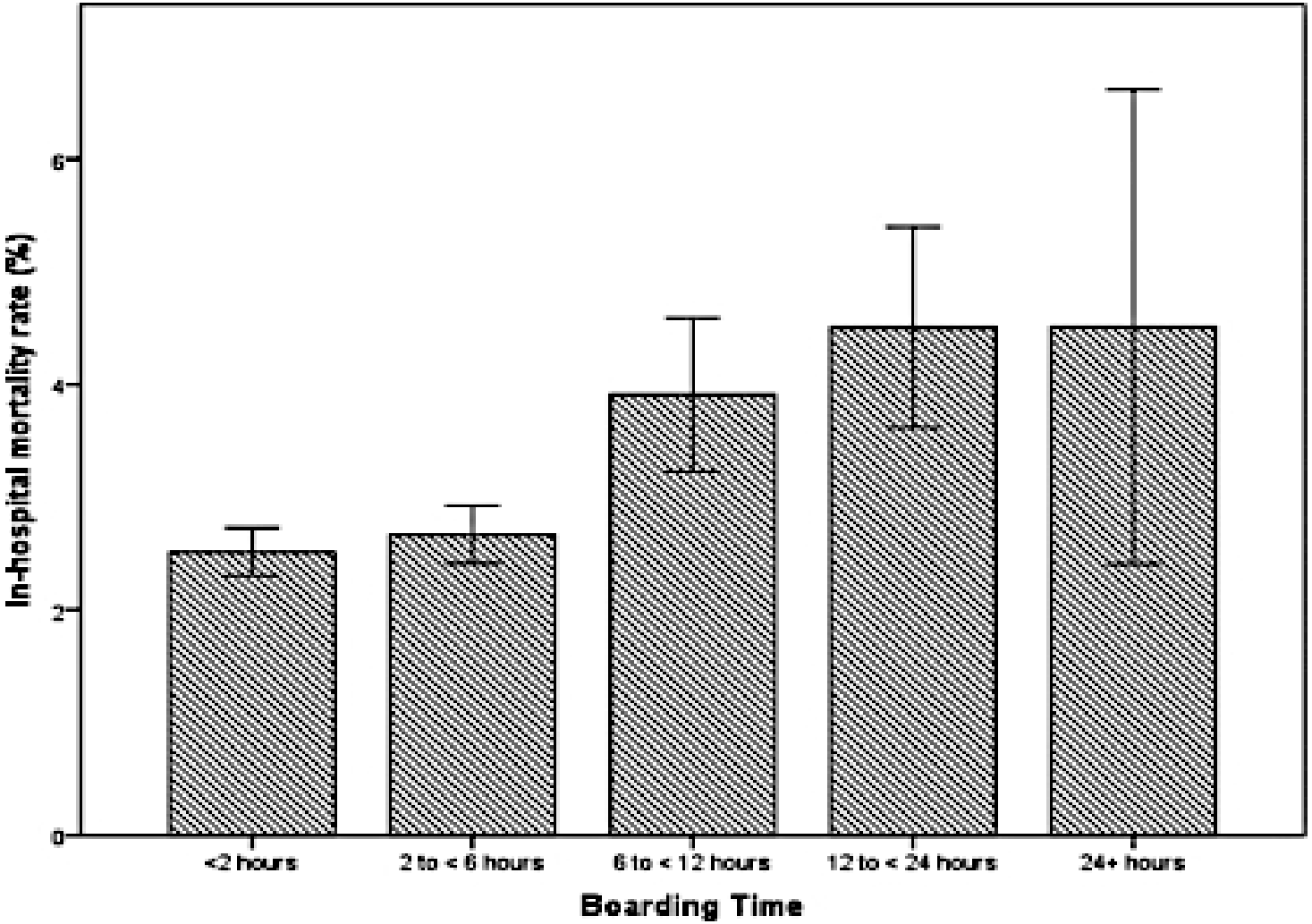
Jess Jacobs

http://jessjacobs.me/on-wasting-my-time-the-numbers/

Why Hospital Flow Is Key to Patient Safety

http://www.ihi.org/communities/blogs/why-hospital-flow-is-key-to-patient-safety

ED Boarding and Mortality



Singer, A. J., Thode Jr, H. C., Viccellio, P. and Pines, J. M. (2011), The Association Between Length of Emergency Department Boarding and Mortality. Academic Emergency Medicine, 18: 1324–1329.

ICU Transfer Delay and Hospital Mortality

- Observational cohort study on medical-surgical wards at 5 hospitals to investigate the impact of delayed ICU transfer.
- A total of 3789 patients met the critical eCART threshold before ICU transfer, and the median time to ICU transfer was 5.4 hours.
  - Delayed transfer (>6 hours) occurred in 46% of patients (n = 1734) and was associated with increased mortality compared to patients transferred early (33.2% vs 24.5%, $P < 0.001$).
  - In patients who survived to discharge, delayed transfer was associated with longer hospital length of stay (median 13 vs 11 days, $P < 0.001$)
- Delayed ICU transfer is associated with increased hospital length of stay and mortality. Use of an evidence-based early warning score, such as eCART, could lead to timely ICU transfer and reduced preventable death.

Churpek MM, Wendlandt B, Zadravecz FJ, Adhikari R, Winslow C, Edelson DP. Association between intensive care unit transfer delay and hospital mortality: A multicenter investigation. J Hosp Med. 2016 Nov;11(11):757-762.

The Problem and the Opportunity

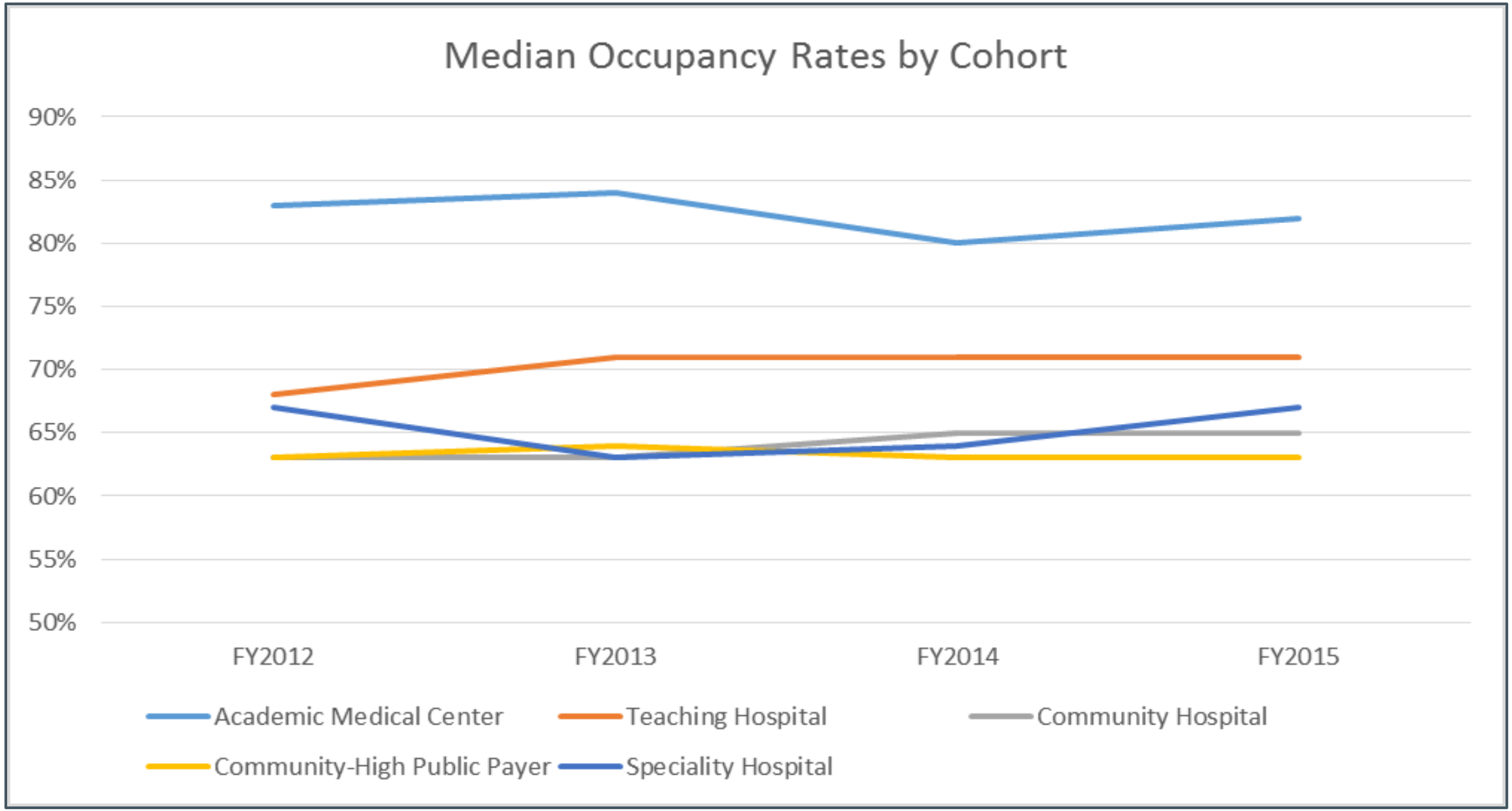
Addressing vexing issues of patient flow in hospitals is essential to ensure safe, high quality, patient-centered care. Failure to provide the “right care, in the right place, at the right time” puts patients at risk for sub-optimal care.

Poorly managed hospital flow also adds to the already taxing burden on clinicians and staff and diverts their attention from clinical care. Improving hospital flow is critical lever for increasing value -- for patients, clinicians and health care systems.

What would success in achieving hospital-wide flow look like at your hospital or health system?

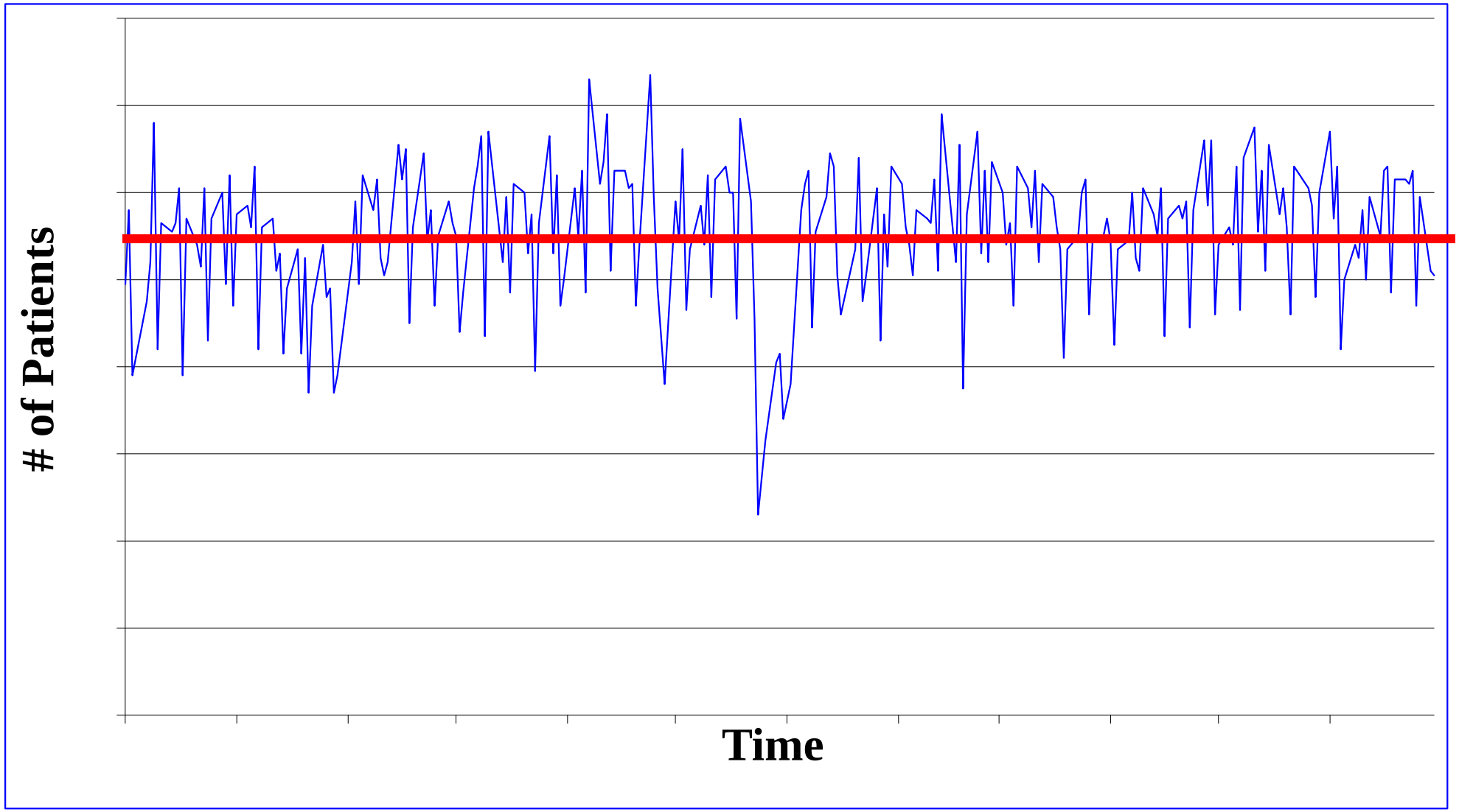
Recommended Outcomes

- **Decrease overutilization of hospital services**
  - Relocate care to more appropriate care settings outside the hospital
  - Decrease complications and harm resulting from errors and hospital-acquired conditions
  - Manage LOS “outliers” and unnecessary bed days
- **Optimize patient placement to insure the right care, in the right place, at the right time**
  - Reducing delays in treatment, surgery, transfers, discharge, etc.
  - Decrease external and internal diversions (boarders and “off-service” patients)
  - Ensure capacity for anticipated patient demand
- **Increase clinician and staff satisfaction with hospital operations**
- **Demonstrate a ROI for the hospital or the health system**
  - What is your primary payment model(s)? Focus on revenue or margin targets? Balancing capital and operating expenditures?



Source: Massachusetts Hospital Profiles, Data Through Fiscal Years 2012-2015, Center for Health Information and Analysis

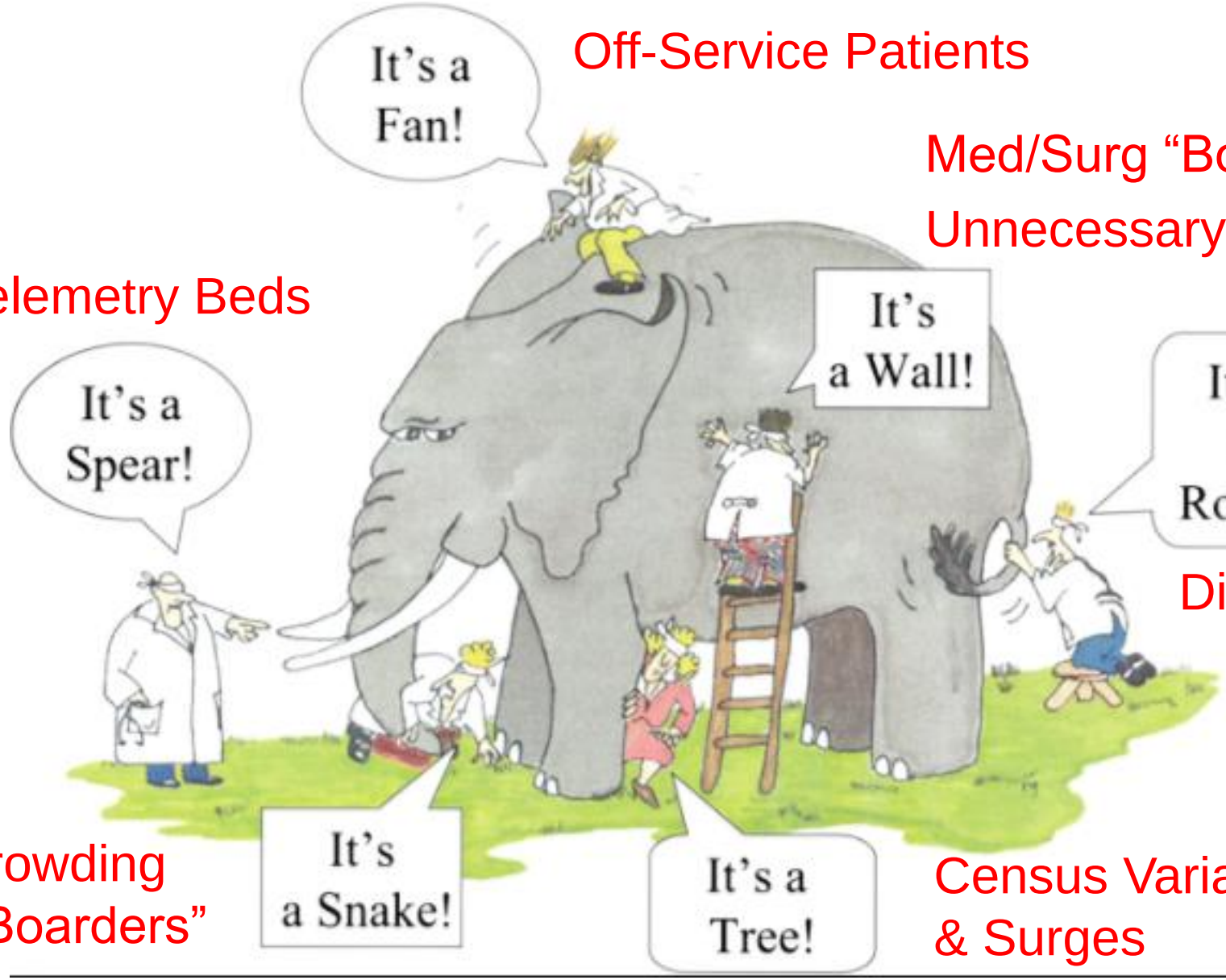
Average Occupancy Rates (at hospital or unit level) and the Day-to-Day Realities of Managing Patient Flow



“If I had to reduce my message for management to just a few words, I’d say it all had to do with reducing variation.”

W. Edwards Deming

System-wide View of Patient Flow of Helps to Avoid Isolated Perspectives and Flow Projects



Off-Service Patients

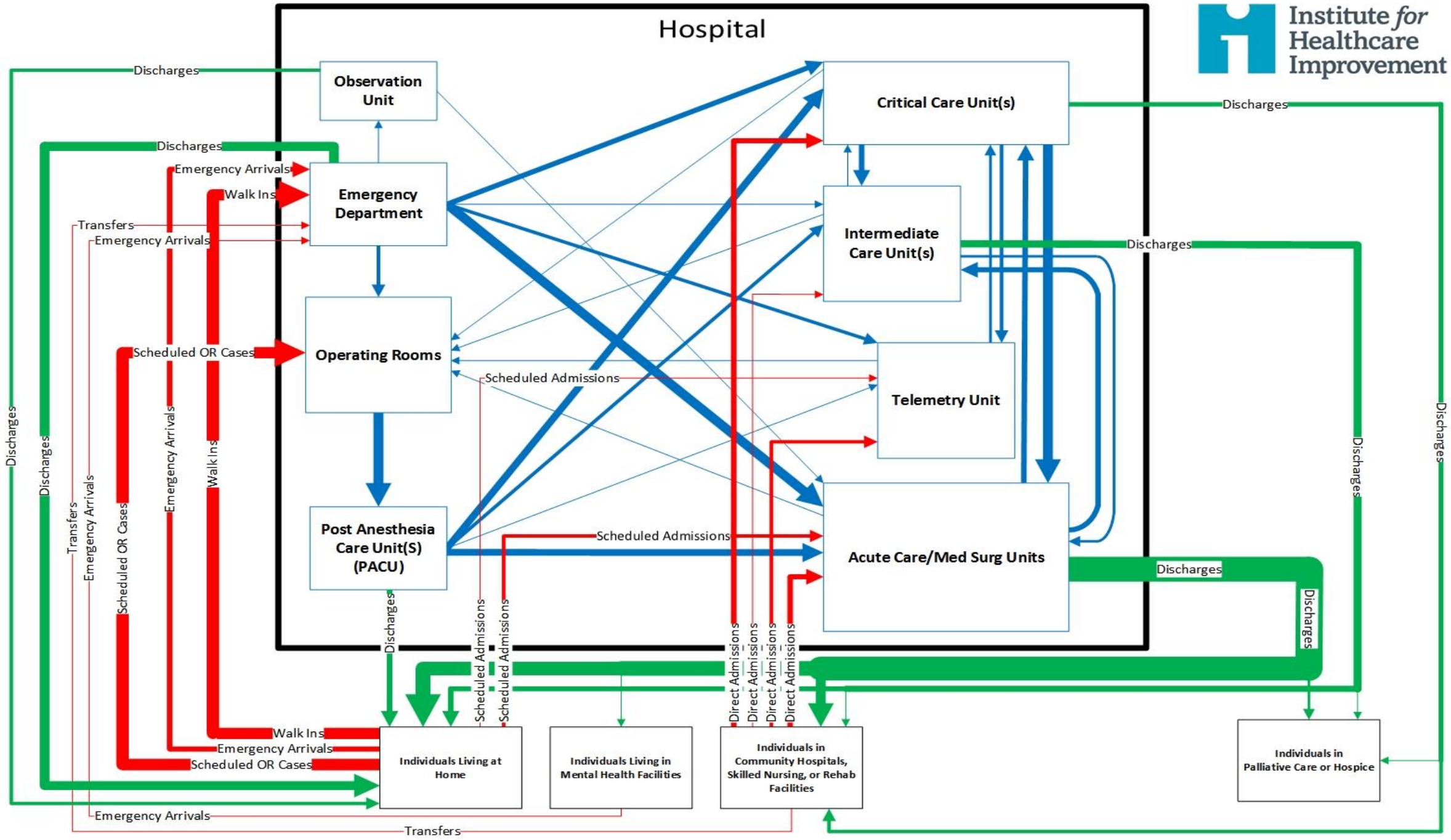
Med/Surg "Boarders" / Unnecessary Bed Days

No Telemetry Beds

Discharge Delays

ED Crowding and "Boarders"

Census Variability & Surges


Hospital
Institute for Healthcare Improvement
Observation Unit
Emergency Department
Operating Rooms
Post Anesthesia Care Unit(S) (PACU)
Critical Care Unit(s)
Intermediate Care Unit(s)
Telemetry Unit
Acute Care/Med Surg Units
Individuals Living at Home
Individuals Living in Mental Health Facilities
Individuals in Community Hospitals, Skilled Nursing, or Rehab Facilities
Individuals in Palliative Care or Hospice
Discharges
Emergency Arrivals
Walk Ins
Transfers
Scheduled OR Cases
Scheduled Admissions
Direct Admissions

Six Ways Not to Improve Patient Flow: A Qualitative Study

- Narrowly focused initiatives reflected a decentralized system and the lack of a coherent system-level strategy for patient flow
- Well-established principles exist for improving timeliness and efficiency -- assess capacity and demand, ascertain and address the causes of variation and streamline care processes.
- Improving efficiencies in isolated areas will not lead to improved hospital-wide patient flow (need to focus on the greatest system constraint and scrutinize how different sub-systems throughout the hospital impact each other)
- Move beyond a proliferation of piecemeal initiatives to a coherent strategy of identifying the greatest constraints, and after the greatest constraint has been addressed move to the next constraint in the system.
- Without a system perspective to inform improvement efforts, the most promising initiatives may become just another dismal entry in 'The How-Not-To Guide' to patient flow

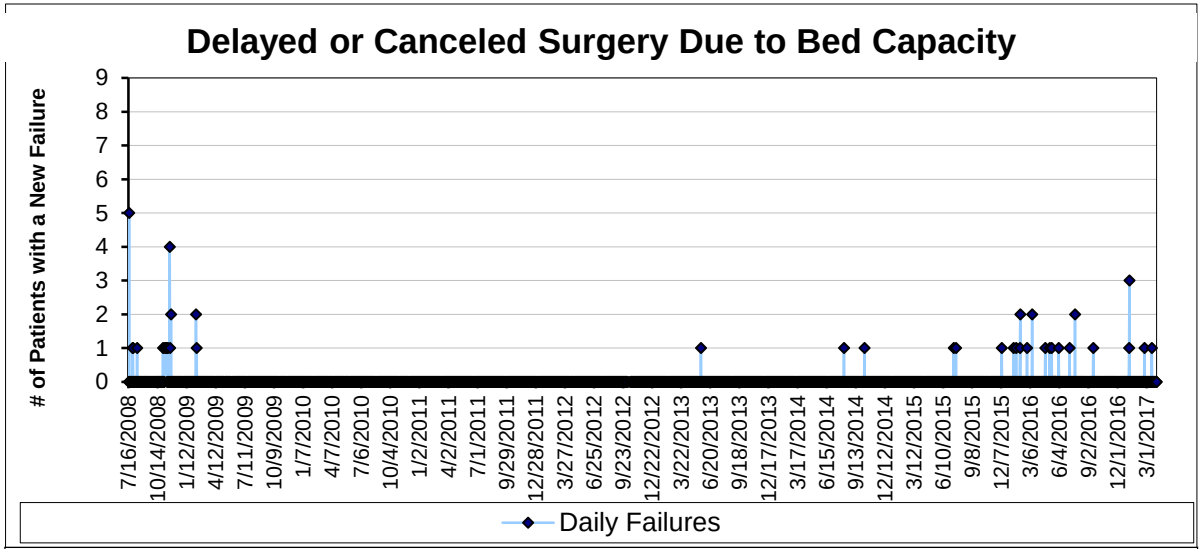
Kreindler SA Six ways not to improve patient flow: a qualitative study
BMJ Qual Saf 2017;26:388-394.

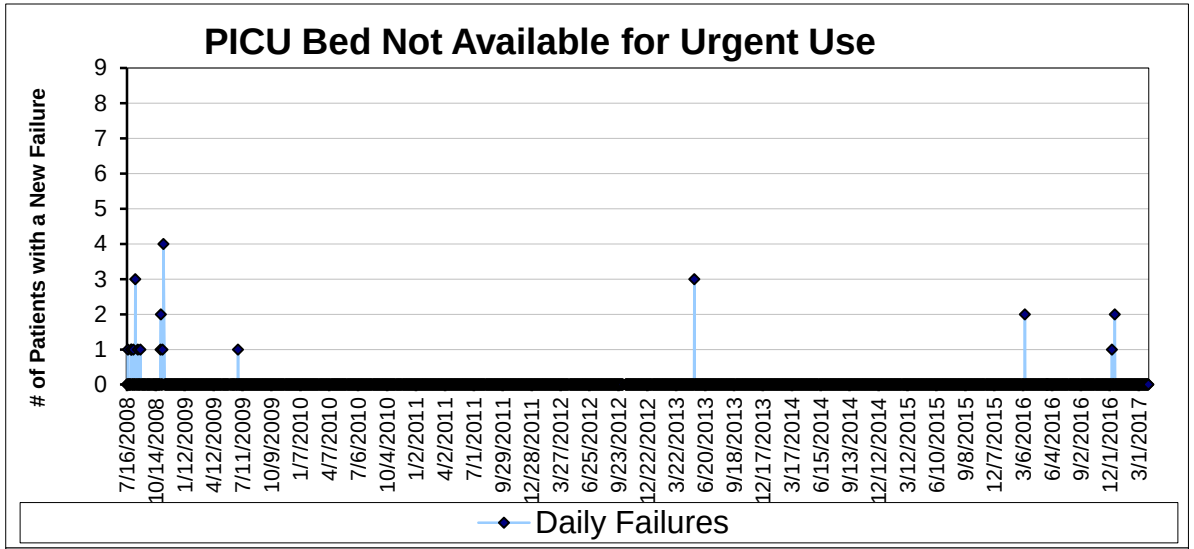
Success is Possible!

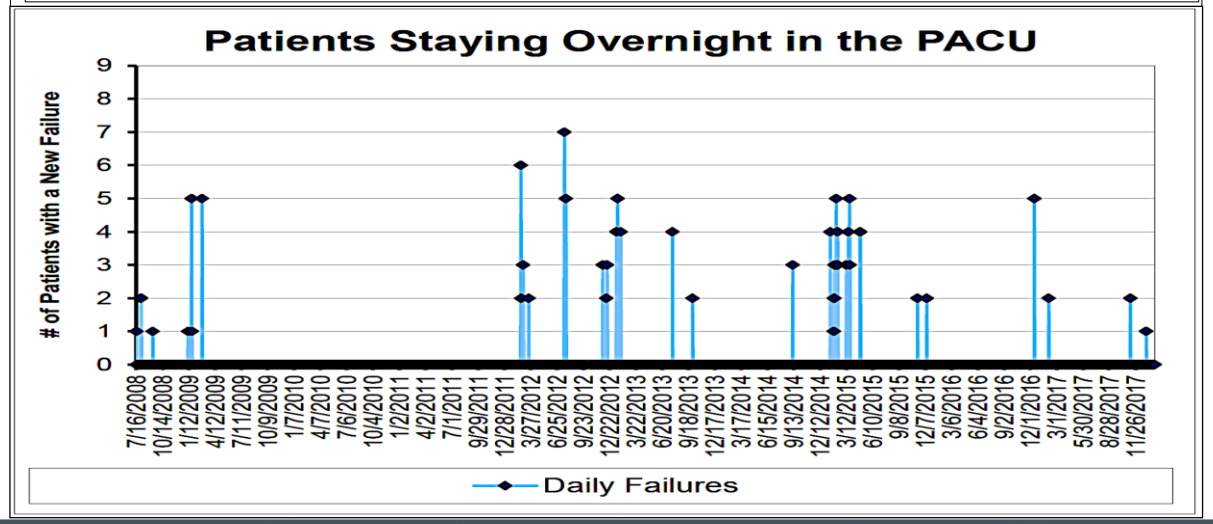
- Based on AHA data, overall nationwide hospital inpatient occupancy was 67.8% (AHA 1991–2011); range was from 33.6% to 74%)
- Once managed efficiently, US hospitals, on average, could achieve an 80–90 percent bed occupancy rate—without adding beds at capital costs of approximately $1 million per bed.
- As a result of "smoothing" the scheduling of elective surgeries, improving discharge efficiencies, use of advanced data analytics and other interventions to improve flow at CCHMC, the hospital's quality of care improved even as the occupancy rate grew from 76 percent to 91 percent. Hospital officials also report improved overall safety for patients and reduction in stress on the doctors and nurses who treat them.

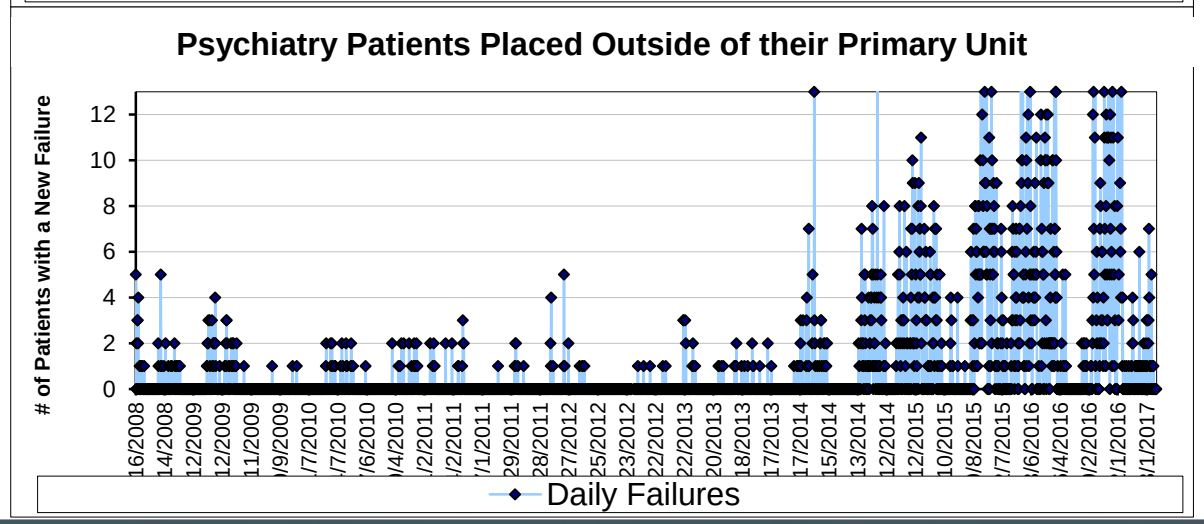
Litvak E., Bisognano M. More Patients, Less Payment: Increasing Hospital Efficiency In The Aftermath Of Health Reform . *Health Affairs*, 2011, vol. 30, No. 1, pp. 76-80

Critical Flow Failures

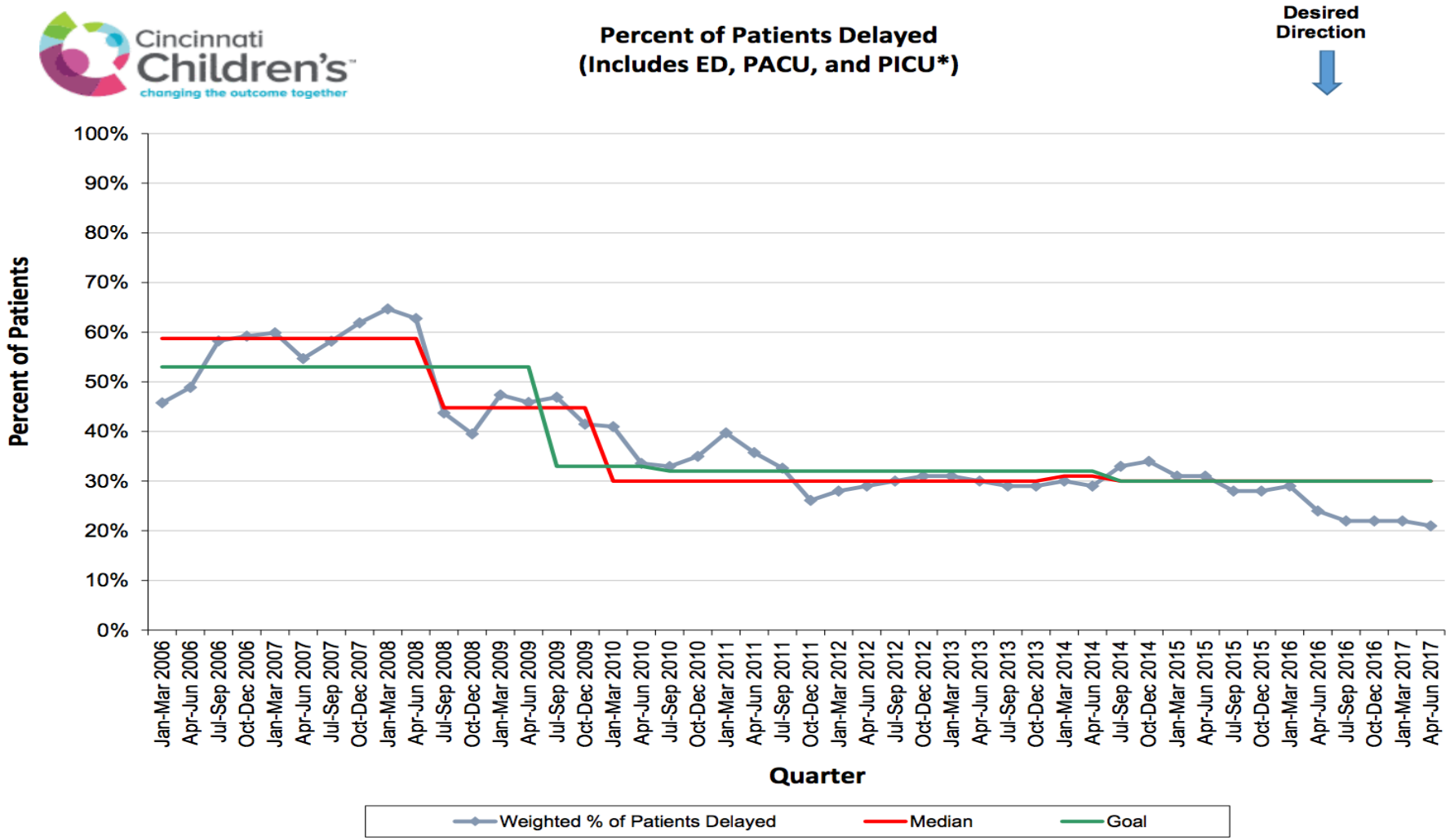








System Wide Patient Flow Delay Measure



Composite Measure Delay Definition

PACU > 20 Min
ICU to floor > 2 Hour
ER to Admit > 1 Hour

Guiding the Flock:
Simple Rules to Improve Hospital-wide Patient Flow

Guiding the Flock: Three Simple Rules to Improve Hospital-wide Patient Flow. Lloyd Provost and Pat Rutherford, IHI blog post Aug. 7, 2018

Simple Rules to Improve Hospital-wide Patient Flow

We propose the adoption of these three simple rules for governing complex systems for achieving hospital-wide patient flow.

Right Care, Right Place: Patients are placed on the appropriate clinical unit alongside the clinical team with disease- or condition-specific expertise.

Right Time: There should be no delay greater than two hours in patient progression from one hospital unit or clinical area to another, based on clinical readiness criteria. For example, patients should be transferred within two hours from the ED to an inpatient unit, within one hour from a PACU to a surgical unit, and discharge to home or community care within two hours.

Operational Capacity: Teams should ensure each unit or clinical area has operational capacity at the beginning of each day. For example, a unit should have one or two beds available and staffed at 7:00 AM based on patient demand patterns.

The challenge of complexity in health care, British Medical Journal, September 2001
Guiding the Flock: Three Simple Rules to Improve Hospital-wide Patient Flow. Lloyd Provost and Pat Rutherford, IHI blog post Aug. 7, 2018

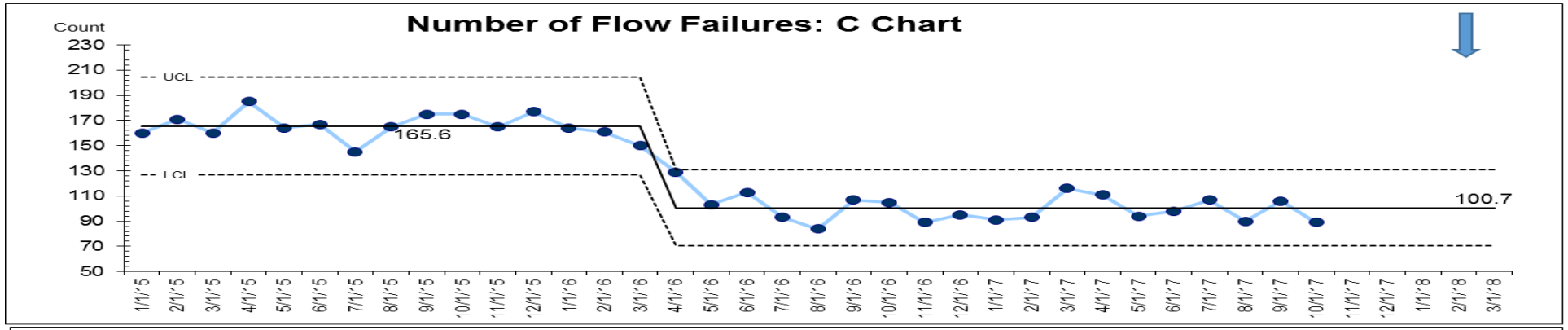
Simple Rules to Improve Hospital-wide Patient Flow

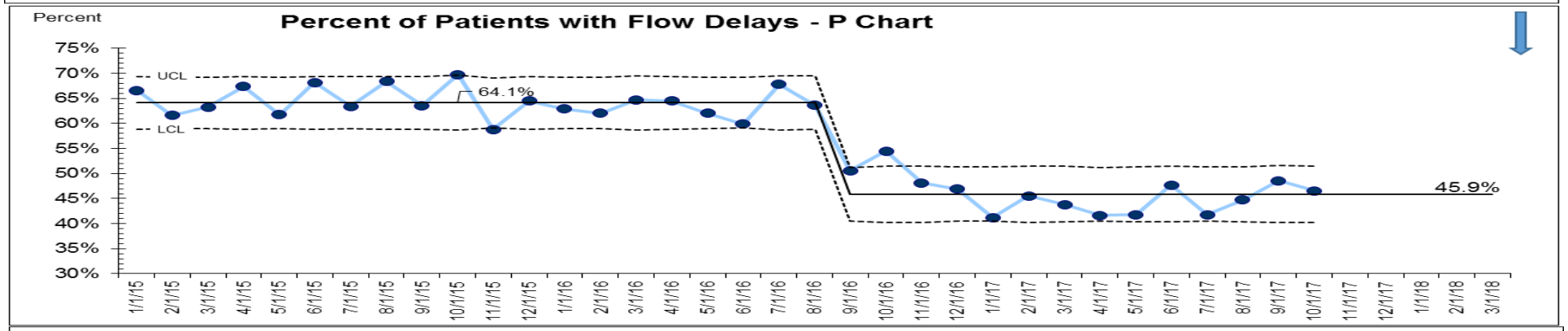
These simple rules are not intended for judgement or accountability. Rather, they can **form the basis for a hospital-wide flow philosophy that unites all staff and departments to a common purpose**. They can provide the basis for daily flow huddles to manage safe and timely patient progression throughout the hospital.

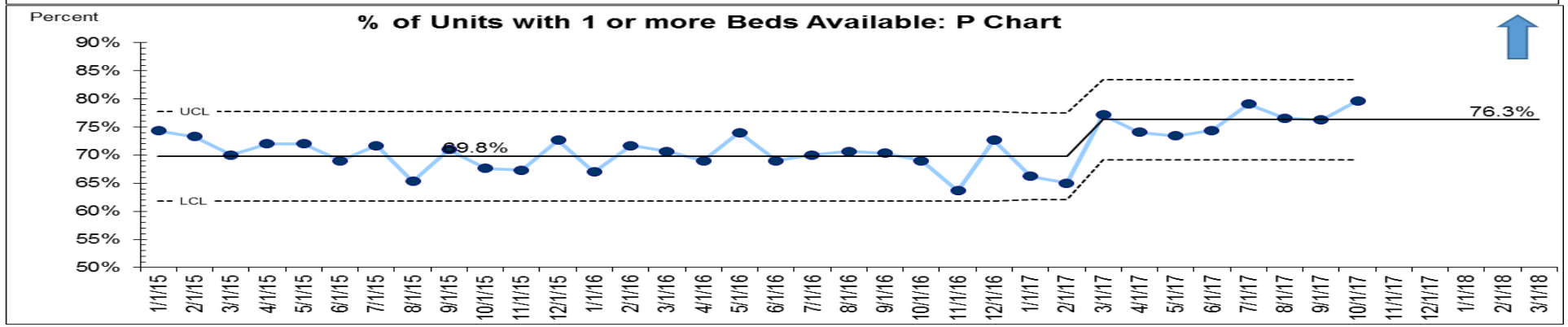
The hospital flow oversight team should create a **hospital-wide learning system to understand failure** to achieve these simple rules and develop approaches to **mitigate flow failures and flow delays.**

The challenge of complexity in health care, British Medical Journal, September 2001
Guiding the Flock: Three Simple Rules to Improve Hospital-wide Patient Flow. Lloyd Provost and Pat Rutherford, IHI blog post Aug. 6, 2018

Simple Rules to Improve Hospital-wide Patient Flow







IHI's Framework and Strategies for Achieving Hospital-wide Patient Flow

Institute *for* Healthcare Improvement

WHITE PAPER

Achieving Hospital-wide Patient Flow

The Right Care, in the Right Place, at the Right Time

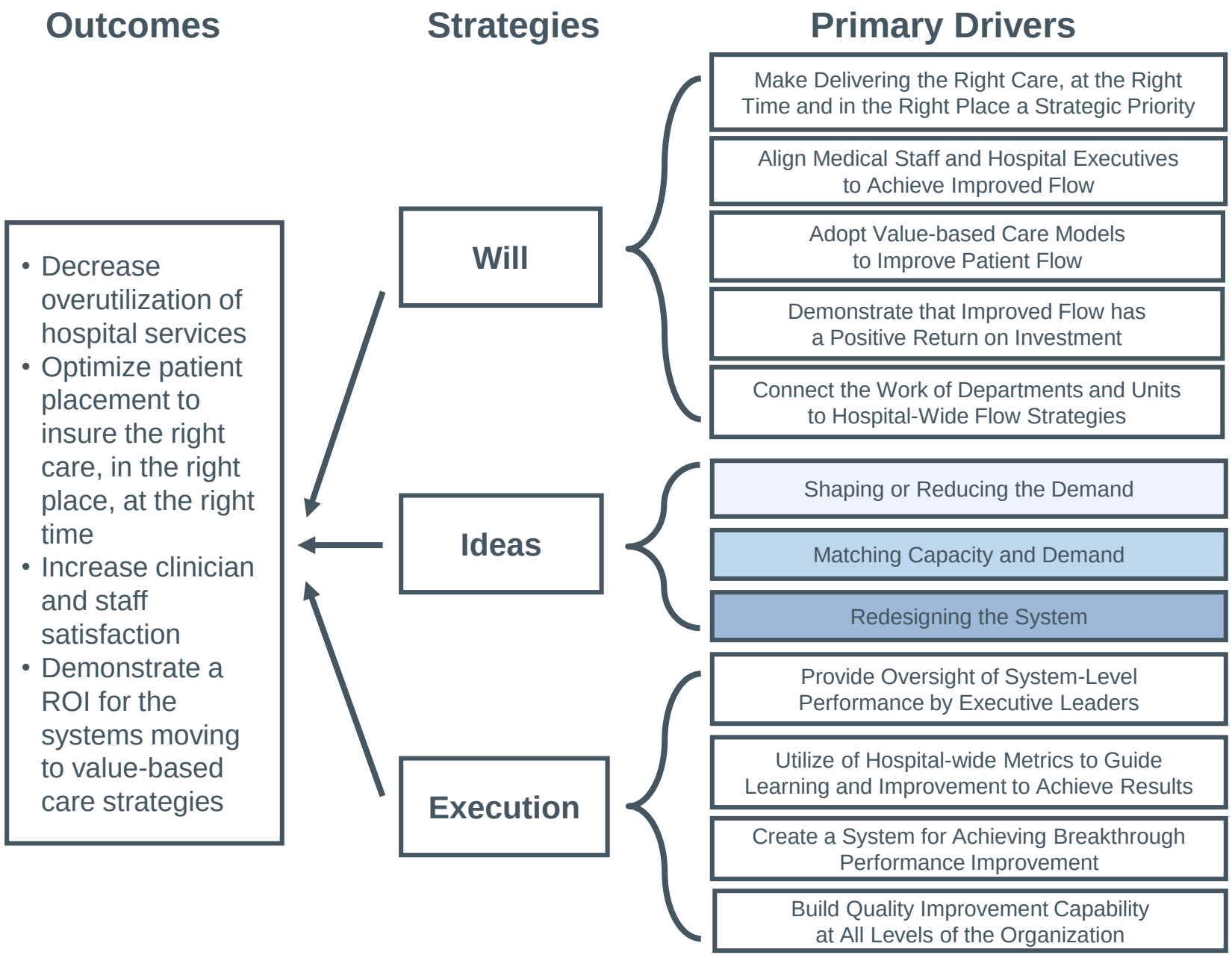
AN IHI RESOURCE

20 University Road, Cambridge, MA 02138 • ihi.org

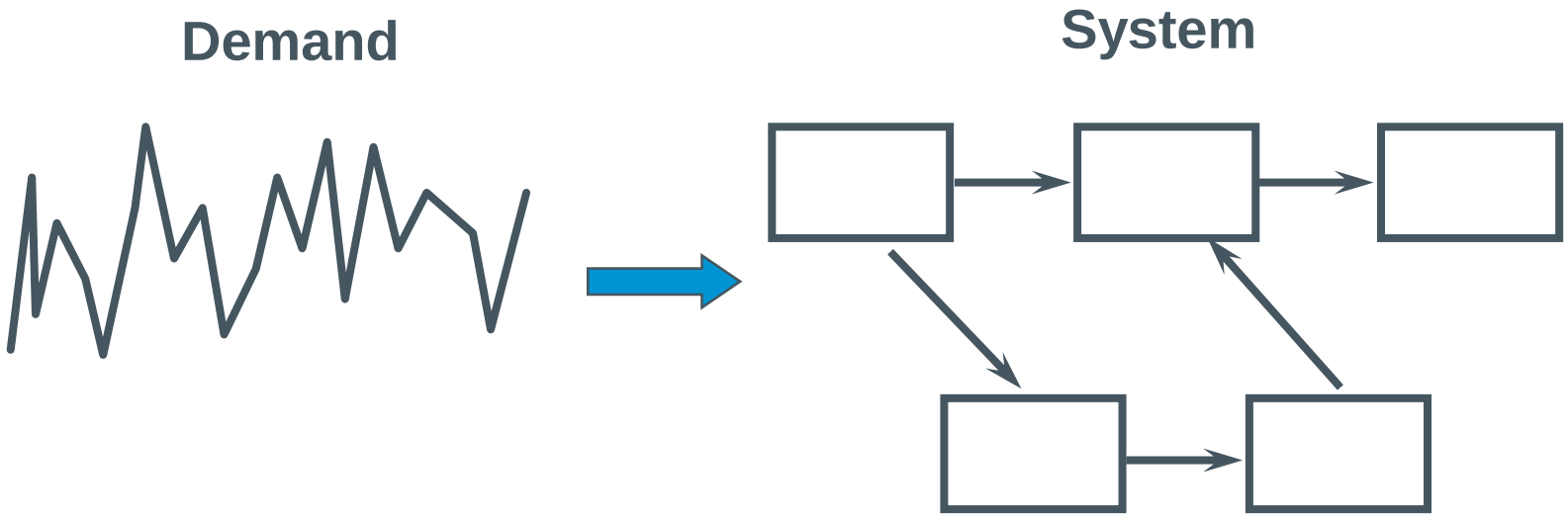
How to Cite This Paper: Rutherford PA, Provost LP, Kotagal UR, Luther K, Anderson A. *Achieving Hospital-wide Patient Flow*. IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2017. (Available at www.ihi.org)

http://www.ihi.org/resources/Pages/IHIWhitePapers/Achieving-Hospital-wide-Patient-Flow.aspx?utm_source=ihi&utm_campaign=Flow-WP&utm_medium=rotating-feature-2

Strategies to Achieve System-Wide Hospital Flow



Hospital Flow: 3 Key Strategies for System Optimization

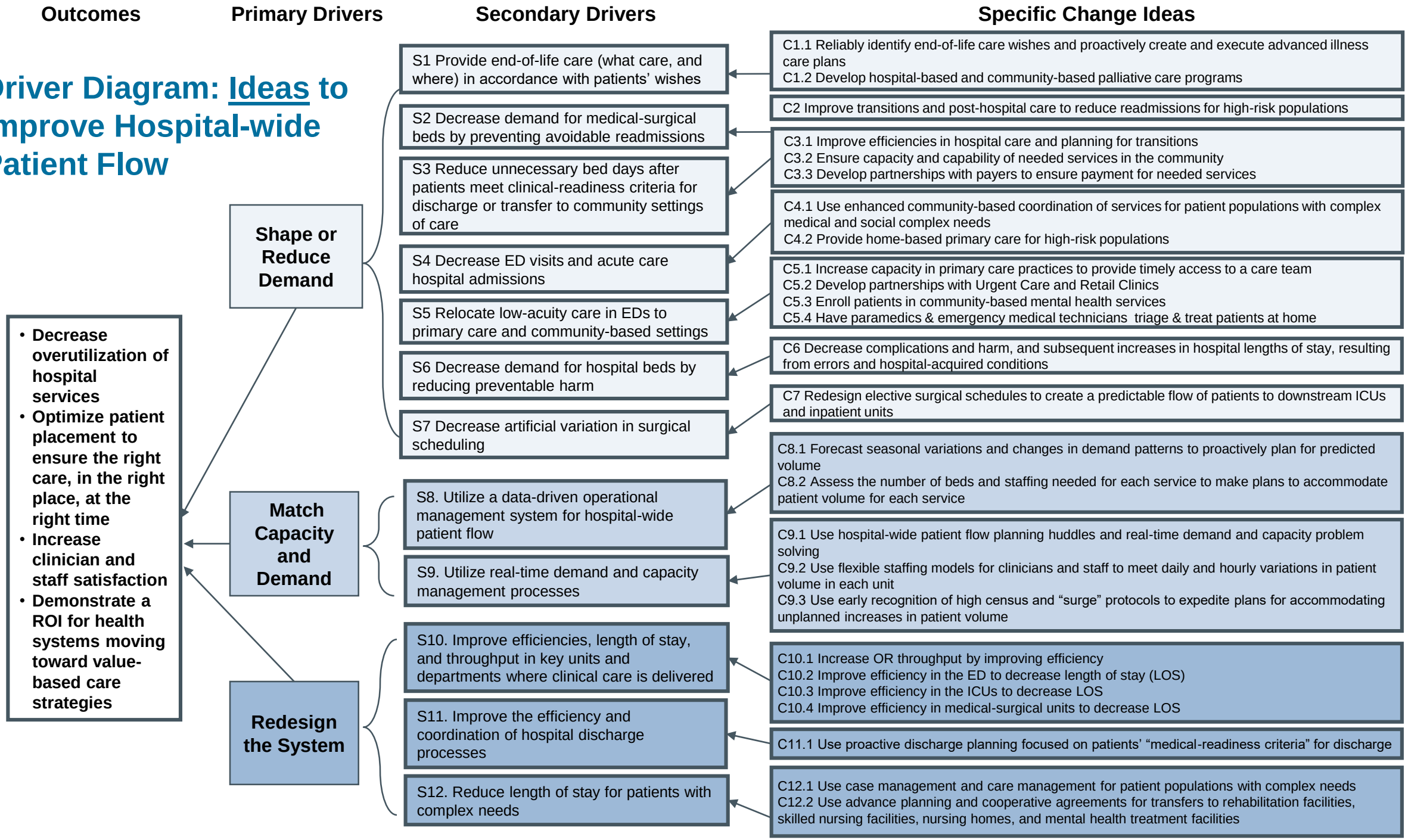


1. **Shape or Reduce the Demand** (reduce bed days; reduce ED visits and admissions; smooth elective surgeries and downstream bed utilization)

2. **Match Capacity to Demand** (reduce delays in moving patients to appropriate units throughout hospital; ensure patients are admitted to the appropriate unit)

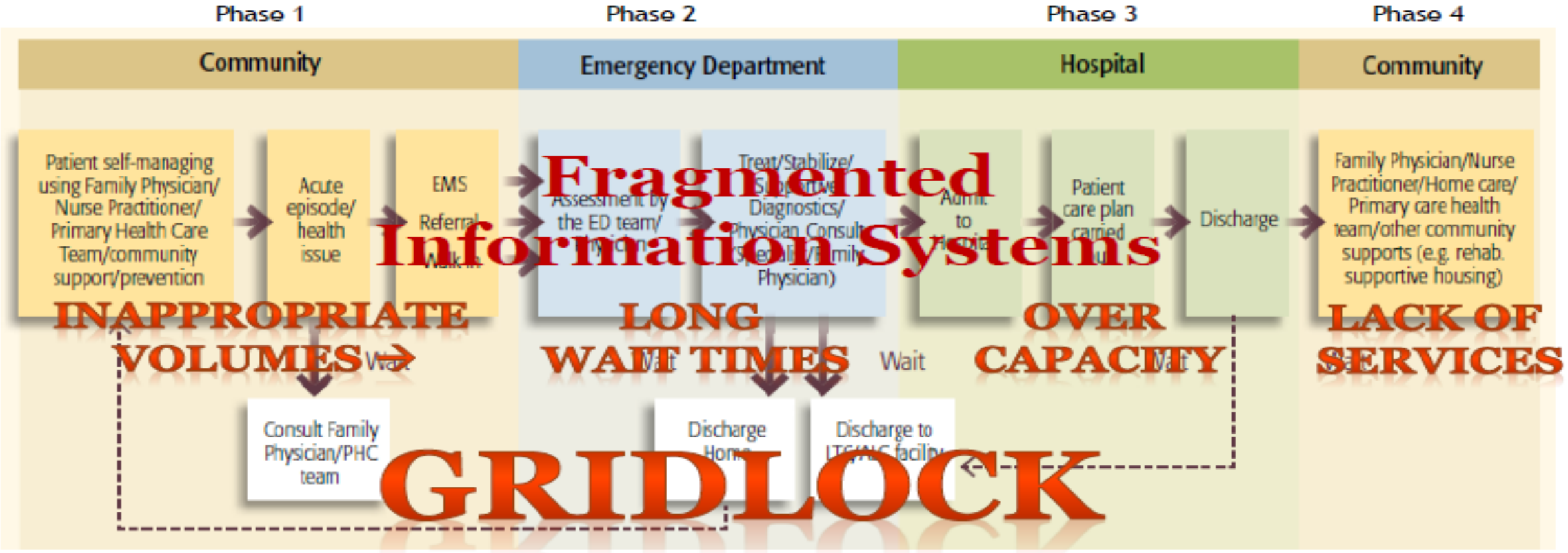
3. **Redesign the System** (increase throughput; reduce bed days, manage LOS outliers, and reduce delays and waiting times)

Driver Diagram: Ideas to Improve Hospital-wide Patient Flow



Shape or Reduce Demand

Wait Times in the Emergency Department - It's a System Problem



SASKATCHEWAN HEALTH QUALITY COUNCIL

SOONER SAFER SMARTER

Emergency Department Waits and Patient Flow Initiative
putting the Patient First

Changing the Cultural Norm

the conversation project

A national campaign encouraging everyone to have a conversation about their wishes for end-of-life care

conversation ready

Collaboration to ensure health care systems are ready to receive and honor wishes for end of life care

Harvard Business Review

The New York Times

abc WORLD NEWS WITH DIANE SAWYER

O THE OPRAH MAGAZINE

Advanced Illness Planning : Respecting Choices

Gundersen Lutheran HEALTH SYSTEM

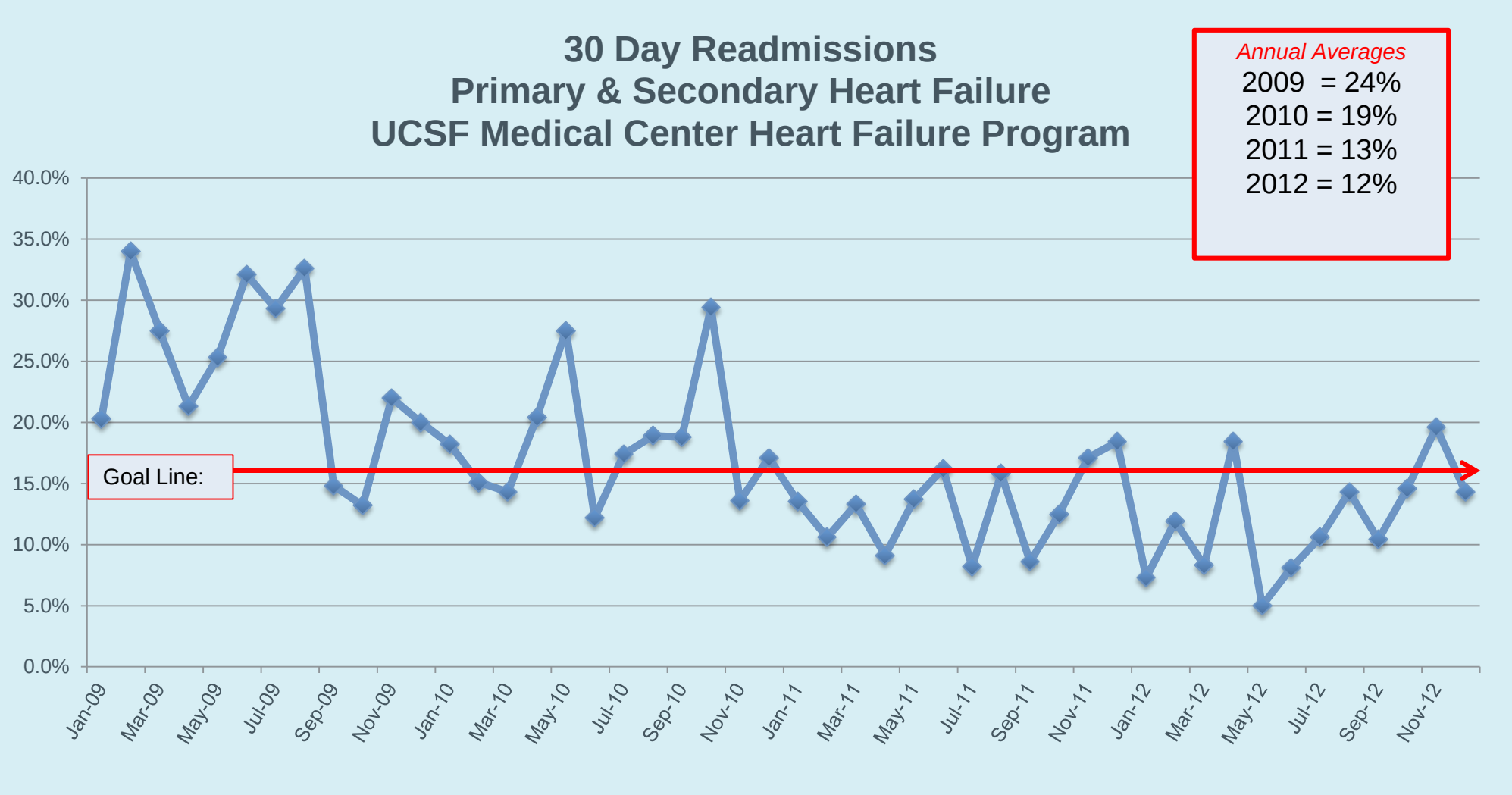
Respecting Choices controls the per capita cost of care

	Per capita cost of care		
	La Crosse Wisconsin	Statewide Wisconsin	National Average
Reduces unwanted hospitalizations—percent hospitalized at least once during last six months of life[29]	59.5% (below 10th percentile)	67.5%	71.5%
Reduces costs of care in last two years of life due to elimination of unwanted treatment[29]	$48,771	$67,443	$79,337
Decreases hospital care intensity in last two years of life[29]	0.49 (half the national average)	0.72	1.00
Reduces inpatient days in last two years of life[29]	10.0 days (below 10th percentile)	13.2 days	16.7 days
Reduces hospital deaths[29]	20.4%	20.9%	25.0%
Reduces percent of decedents seeing 10 or more different physicians during last six months of life[29]	22.7% (well below 10th percentile)	31.0%	42.0%
Reduces percent of decedents spending seven or more days in ICU/CCU during last six months of life[29]	3.8% (well below 10th percentile)	6.8%	15.2%
Reduces percent of decedents admitted to ICU/CCU in which death occurred[29]	9.5% (well below 10th percentile)	13.1%	18.5%

Reduces healthcare costs: for each dollar spent on ACP the cost of healthcare is reduced by $2. The ROI is $1 for every dollar spent.[12,30]

http://www.gundersenhealth.org/upload/docs/respecting-choices/Respecting-Choices-return-on-investment.pdf

30 Day Readmissions: Primary & Secondary Heart Failure 65+



Reasons for Unnecessary Bed Days

- HOSPITAL CARE: Delays in hospital care and transitions out of the hospital
  - Consults, results of tests, imaging and procedures
  - Comprehensive assessments for post-acute care needs, interdisciplinary and patient/family planning, decision-making and/or transitions out of hospital to community-based care

- COMMUNITY-BASED CARE AND SERVICES: Lack of availability for needed services (lack of capacity or capability in the community settings of care)
  - Palliative Care and Hospice (hospital, community or home)
  - Community Hospital, LTACs, Skilled Nursing Facilities, Rehabilitation Facilities and Long-Term Care
  - Psychiatric and Mental Health services and/or facilities
  - Home Health Care services
  - Community services (housing, meals, transportation, etc.)

- POLICY AND PAYMENT: Lack of eligibility and/or payment for needed services

Atrius Health ACO: Reducing ED Visits & Admissions

Utilization of emergency rooms, hospitals and drugs tends to be lower than average:

- With Medicaid, demonstrated 39% fewer admits/1000 on hospital (medical) admissions and 37% fewer Emergency Room visits/1000 as compared with the health plan's network.
- With Medicare Advantage, demonstrated 12% fewer Emergency Room visits/1000 and 5% fewer SNF admits/1000 as compared with the plan's network.
- For a commercial PPO product, 30-day readmission rate that is half of the plan's network rate, and 25% fewer Emergency Room visits/1000.
- For a commercial HMO, demonstrated 8% fewer inpatient admits/1000 and 9.5% less Rx scripts/1000.

Reducing Non-Urgent Emergency ED Services

- Extend hours in Primary Care
- Independence at Home (home-based primary care)
- Use of Telemedicine in Emergency Departments
- Urgent Care Centers (many now part of health care systems)
- Retails Clinics
- Paramedics and Emergency Medical Services managing non-emergency calls*
- Community Health Workers connecting frequent ED users with community-based services*
- Coordinated, Intensive Medical, Social, and Behavioral Health Services*

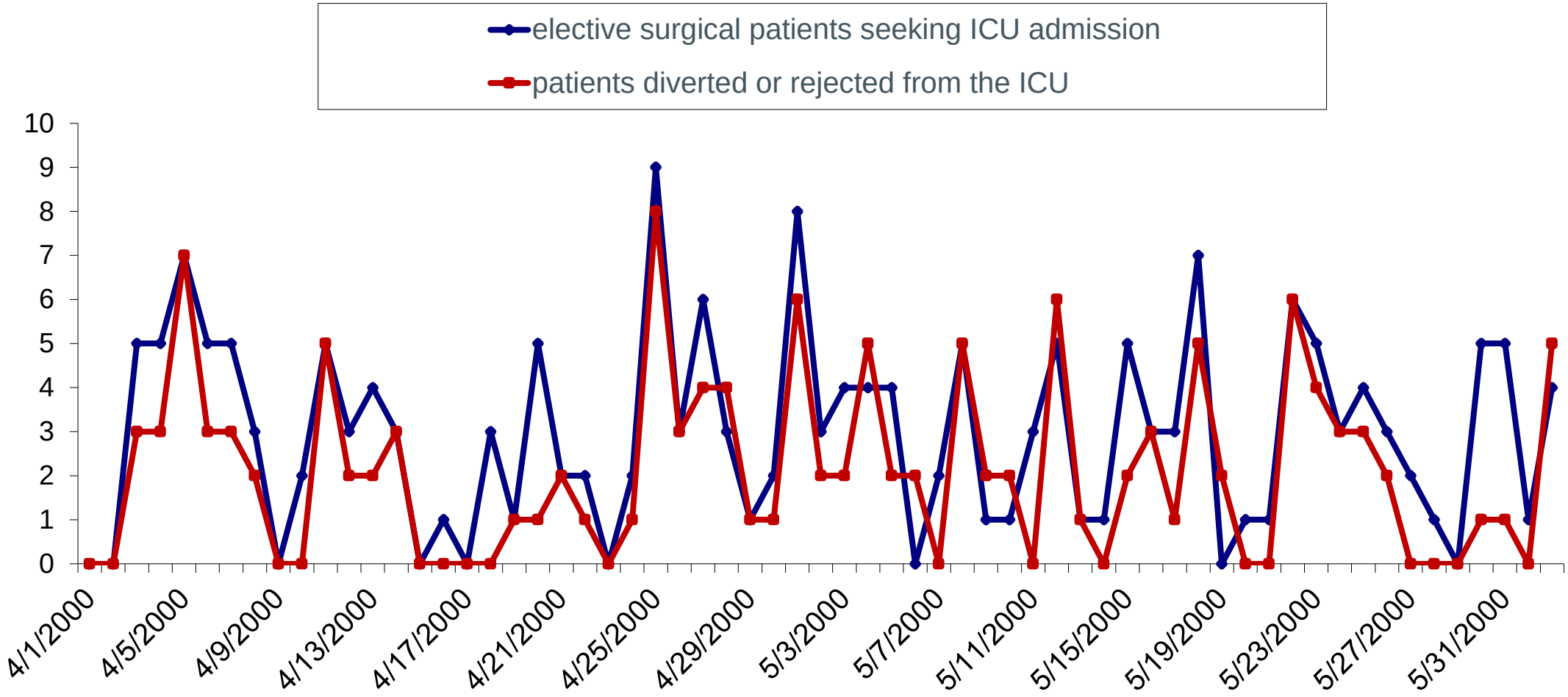
https://innovations.ahrq.gov/scale-up-and-spread/reports/reducing-non-urgent-emergency-services-learning-community-september-2015

Clostridium difficile Infection Rates in Hospitals

Many hospitals acknowledge that *C. diff* infections are a widespread problem, especially as the CDC estimates that 94 percent of cases occur in hospitals. *C. diff* infections increase patient length of stay by more than 55 percent and may increase the cost of their care by 40 percent or more. More worrying, 500,000 patients are infected annually and 29,000 patients die each year from the drug-resistant superbug, so researchers are focused on finding potential treatments.

Two solutions for hospitals to cut down on the infection risk: make sure staff follow hand-hygiene protocols and establish antibiotic stewardship programs.

Elective ICU Admissions vs. Diversion / Rejection



Michael L. McManus, M.D., M.P.H.; Michael C. Long, M.D.; Abbot Cooper; James Mandell, M.D.; Donald M. Berwick, MD; Marcello Pagano, Ph.D.; Eugene Litvak, Ph.D. Impact of Variability in Surgical Caseload on Access to Intensive Care Services, *Anesthesiology* 2003; 98: 1491-1496.

“Level-loading” Electively-Scheduled Surgical Cases

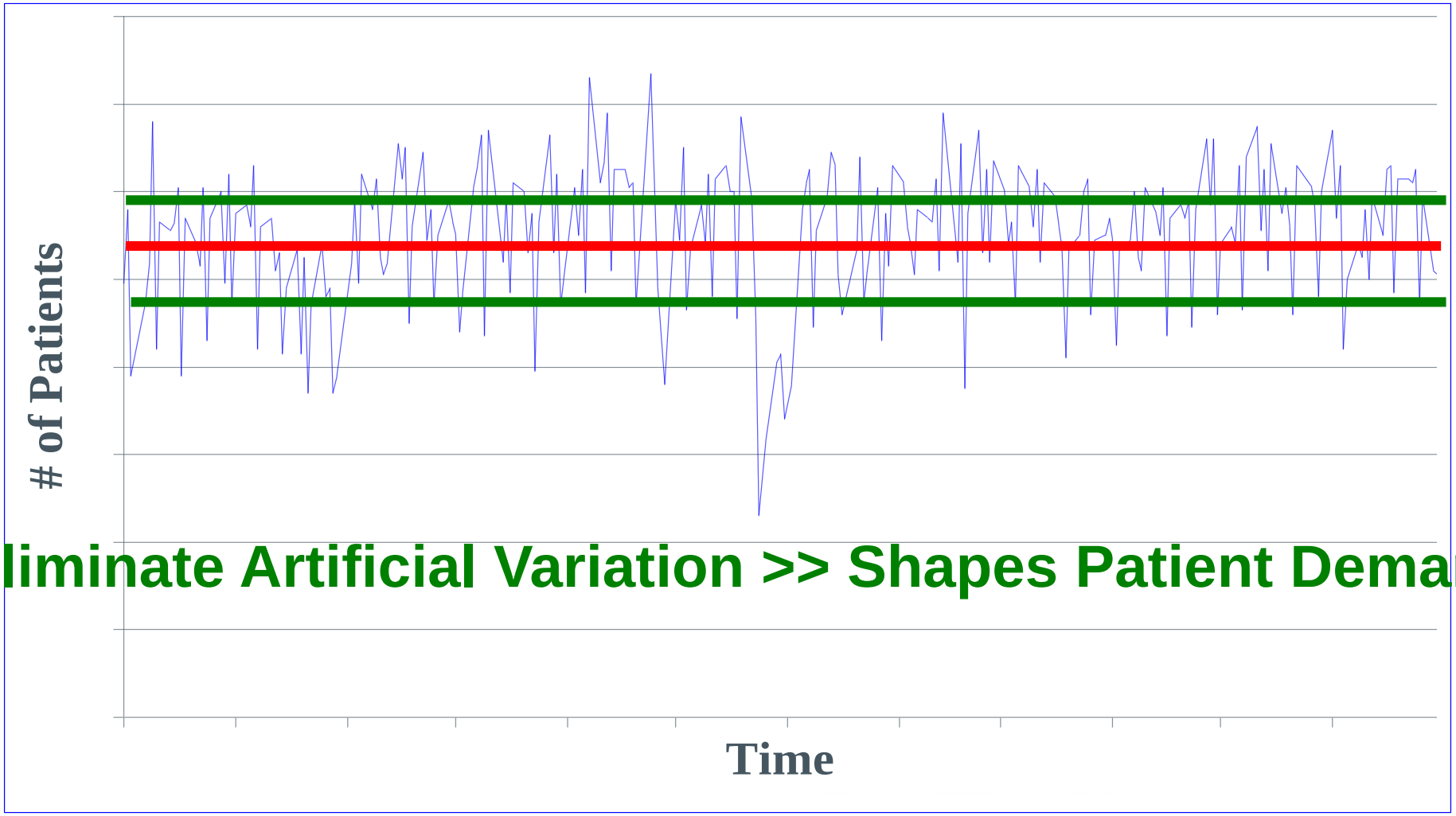
- By smoothing the inherent peaks-and valleys of patient flow, and eliminating the artificial variability, that unnecessarily impair patient flow, hospitals can improve patient safety and quality while simultaneously reducing hospital waste and cost.

- CCHMC: scheduling of “itineraries” for patients having surgical procedures
  - Redesign elective surgical schedules to create a predictable flow of patients to downstream ICUs and inpatient units.
  - Simultaneously schedule OR suite rooms and ICU beds (based on predicted length of stay).

http://www.ihoptimize.org/what-we-do-methodology-flow-variability-management.htm

Litvak E., Bisognano M. More Patients, Less Payment: Increasing Hospital Efficiency In The Aftermath Of Health Reform . *Health Affairs*, 2011, vol. 30, No. 1, pp. 76-80

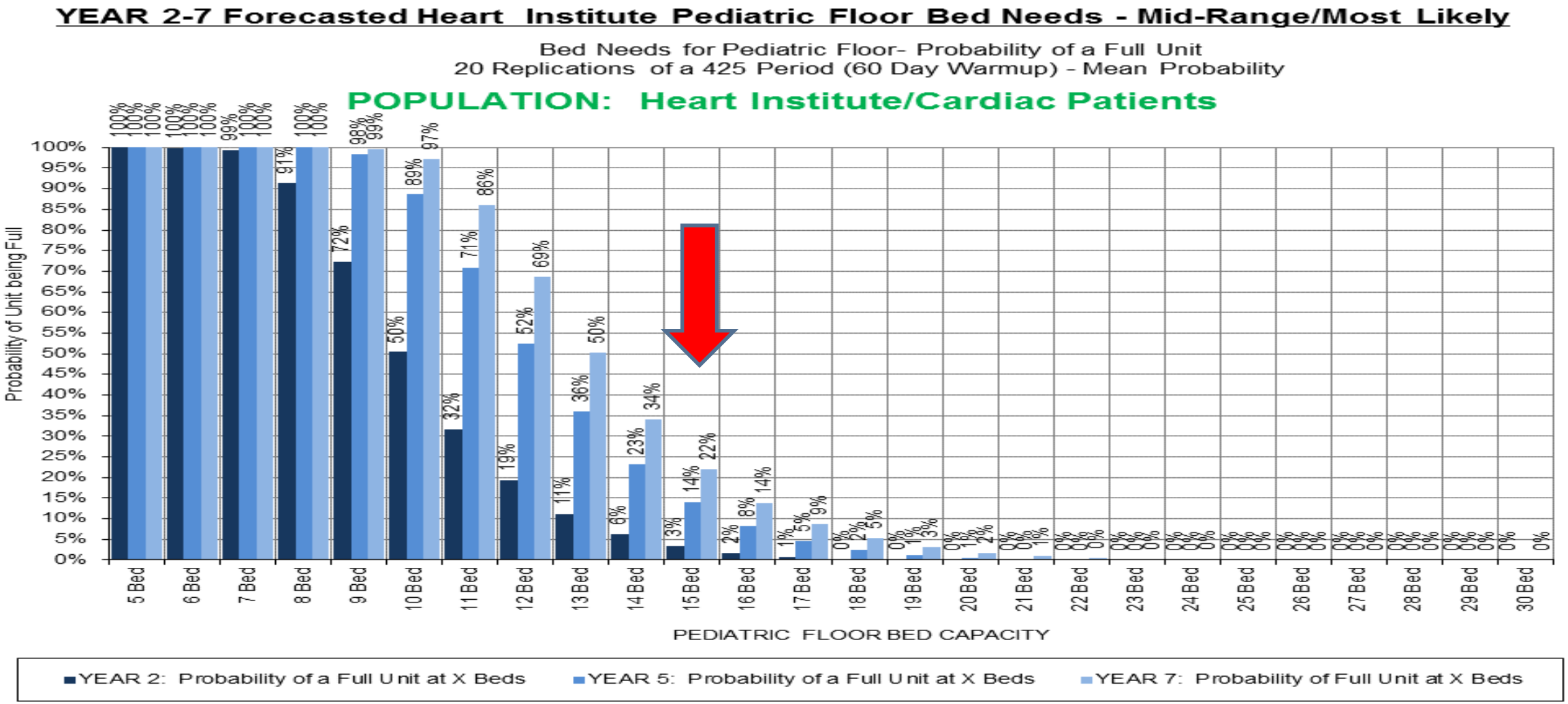
Average Occupancy Rates (at hospital or unit levels) and the Day-to-Day Realities of Managing Patient Flow



Eliminate Artificial Variation >> Shapes Patient Demand

Match Capacity and Demand

Analytics for Prediction of Present Bed Needs



Cincinnati Children's
changing the outcome together

Scenario Planning

BASELINE SCENARIO

Question: What will our capacity look like at the end of FY2016?

Answer:

- Budgeted growth of **883 additional discharges** at **BIDMC** in FY16
- Expect **370 incremental discharges** (in first year of **MetroWest Medical Center** deal)
  - **6.4 day average LOS** expected
- **Closing 14 Obs beds** at **BIDMC**
- Opening **43 new Med/Surg beds at BIDMC** by June 2016 (net addition of 29 beds)

USING THE SCENARIO PLANNING TOOL

WHAT DOES THE FUTURE BED CAPACITY LOOK LIKE BY CLINICAL AREA?

WHAT ARE THE IMPLICATIONS IN TERMS OF CAPACITY PLANNING?

1 Observe Current State

	Beds	Usable Beds	Average Occupancy Rate	% of Time in Red Zone
Critical Care	77	77	82.1%	65.3%
Med/Surg	441	417	92.9%	96.5%
Observation	32	32	39.1%	0.0%
Med/Surg & Obs	473	449	89.0%	82.3%

2 Describe a Future Scenario

Additional expected discharges per year	370
Avg LOS (days) of additional discharges [current = 4.1]	6.4
Critical Care beds added (+) or removed (-)	0
Med/Surg beds added (+) or removed (-)	43
Observation beds added (+) or removed (-)	-14
Budgeted increase (+) or decrease (-) in discharges	626
Organic % growth (+) or decline (-) in discharges	0.4%

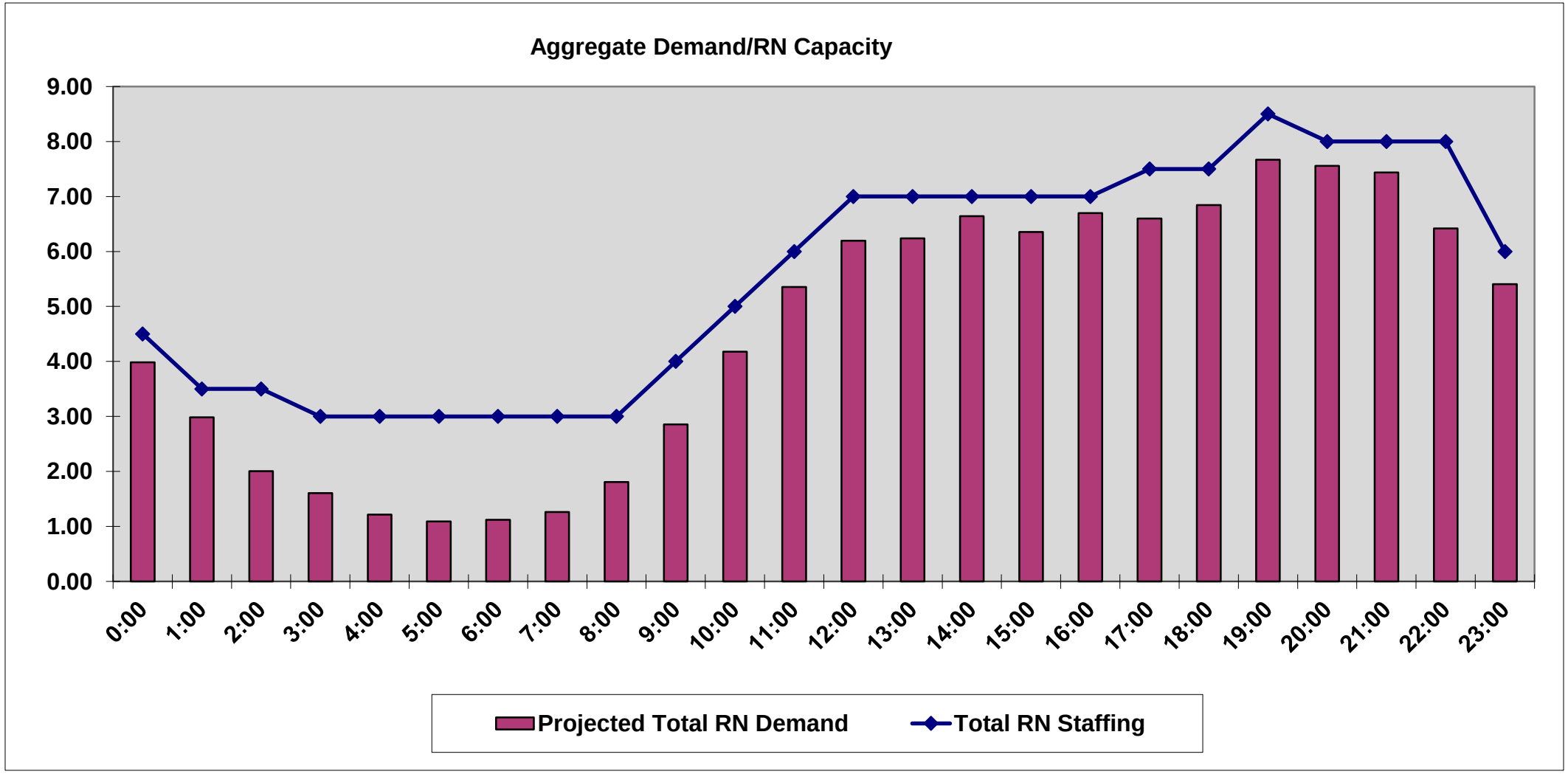
3 Understand Future State

	Beds	Usable Beds	Average Occupancy Rate	% of Time in Red Zone
Critical Care	77	77	84.8%	81.2%
Med/Surg	484	457	87.4%	71.0%
Observation	18	18	71.7%	12.2%
Med/Surg & Obs	502	475	86.8%	66.2%

Beth Israel Deaconess Medical Center

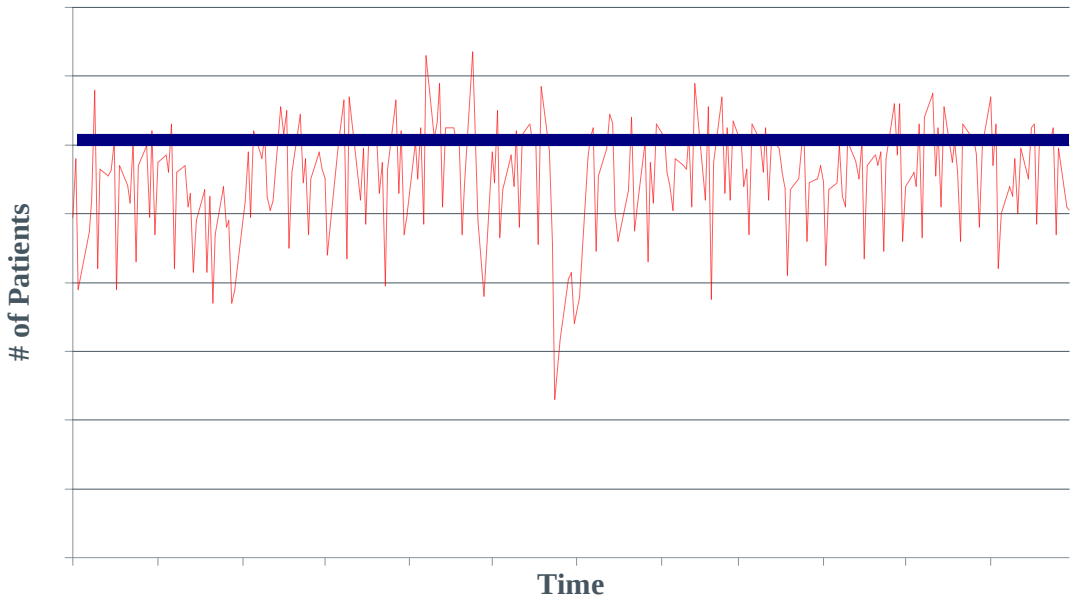
HARVARD MEDICAL SCHOOL TEACHING HOSPITAL

RN Capacity for Predicted ED Demand

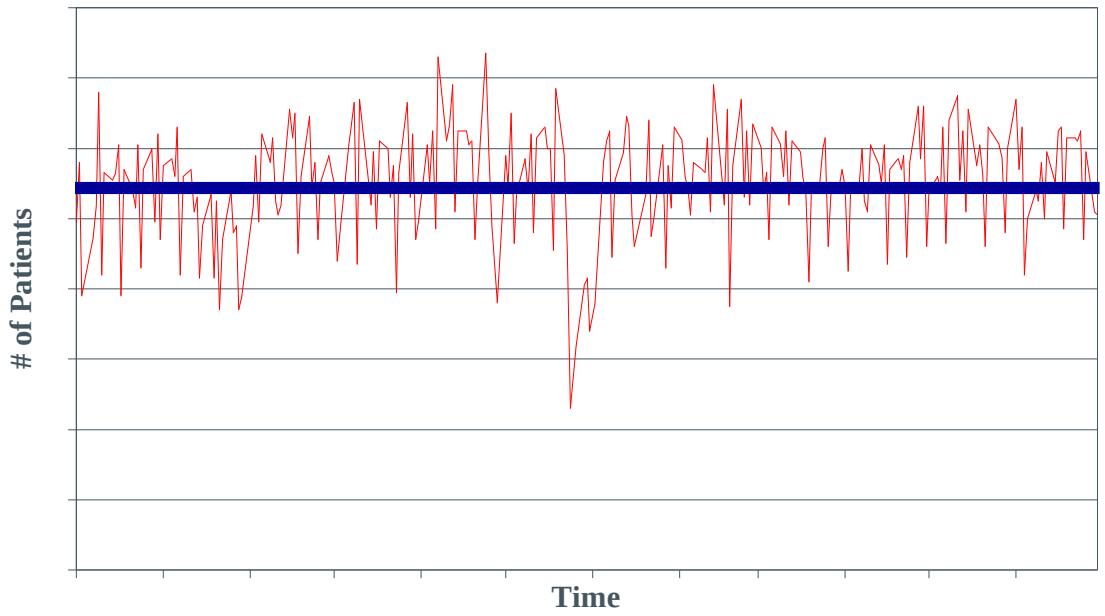


Demand/Capacity Management

What nurse staffing is needed to consistently provide safe and quality care?



Staffing for >95% census/occupancy



Staffing for > average census/occupancy

Assuring Adequate Nurse Staffing while Maintaining Operational Efficiencies

- Research by Aiken, Needleman, etc. clearly build the case that adequate nurse staffing is essential for safe and effective care in acute care hospitals
- Thus, mandating nurse/patient ratio is a logical conclusion by many, but studies of mandated ratios in California have not resulted in anticipated improvements in nursing-sensitive patient outcomes (and, there are many downsides to mandating ratios)

Balancing Adequate Nurse Staffing and Operational Efficiencies

- Reduce artificial variability in elective surgical scheduling
- Increase nurses' time in direct care
- Be "creative" by introducing dynamic nurse/patient ratios that will fluctuate with patient volume and acuity and nurses' competencies and experience levels
  - Use predictive analytics to match staffing capacity and demand (long-term, short-term and real-time each day)

Litvak E, Laskowski-Jones,L; Nurse staffing, hospital operations, care quality, and common sense; *Nursing*, August 2011

Mandated Nurse Staffing Ratios in California: A Comparison of Staffing and Nursing-Sensitive Outcomes Pre- and Postregulation. Linda Burnes Bolton, et.al. *Policy, Politics, & Nursing Practice*. Vol 8, Issue 4, pp. 238 – 250, November 1, 2007

Real-Time Demand and Capacity (RTDC) Management Processes

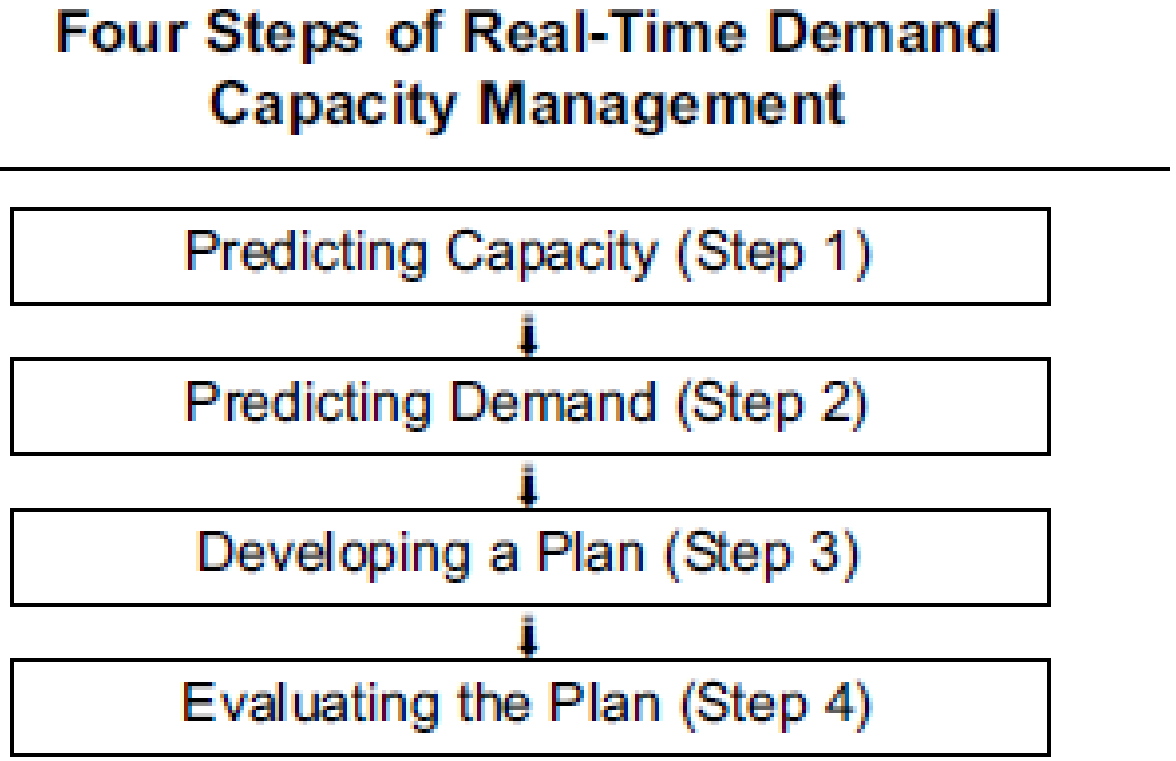
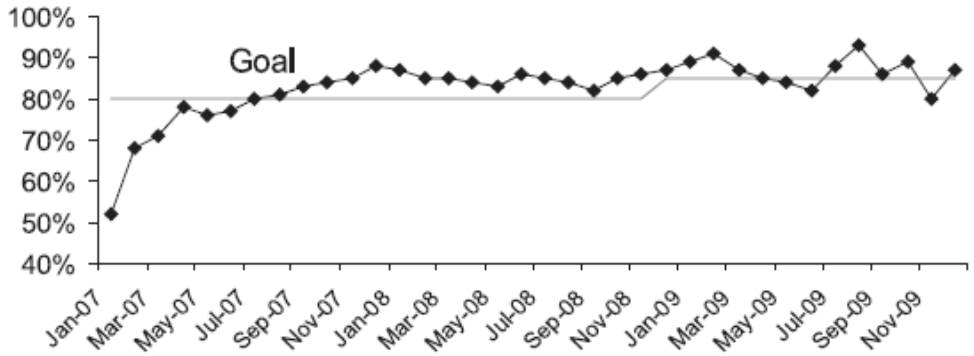


Figure 1. *The four steps of real-time demand capacity management are depicted.*

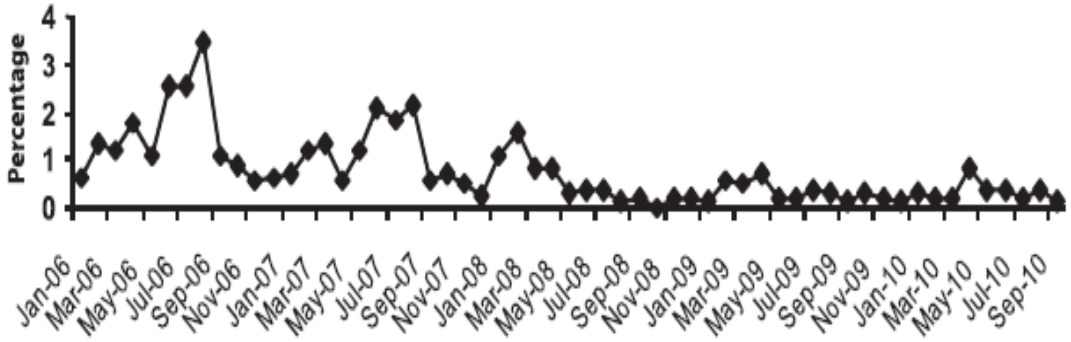
Using Real-Time Demand Capacity Management to Improve Hospitalwide Patient Flow; Resar, R; Nolan, K; Kaczynski, M, Jenson, K; The Joint Commission Journal on Quality and Patient Safety; May 2010, Vol 37, No 5

Results at UPMC

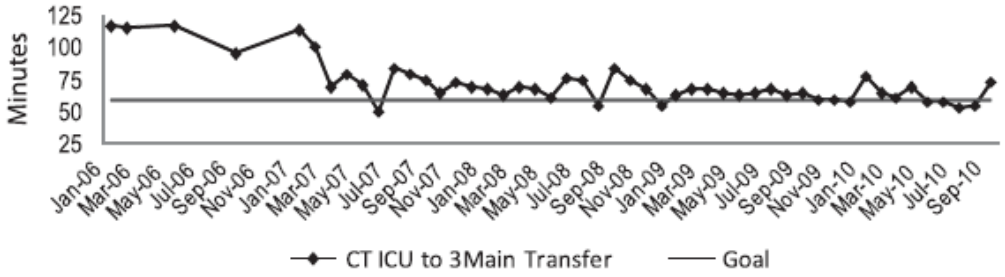
Monthly Accuracy of Discharge Predictions, January 2007–November 2009



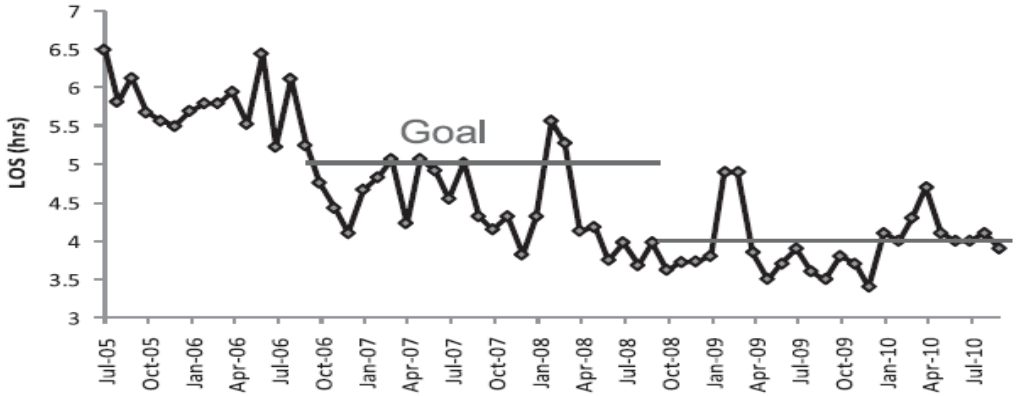
Percentage of Patients Who Left Without Being Seen (LWBS), January 2006–September 2010



Cardiothoracic (CT) ICU to 3 Main Transfer Time, January 2006–September 2010



Emergency Department (ED) Median Length of Stay (LOS) for Admitted Patients, July 2005–July 2010



Resar, , *Roger Resar, M.D.; Kevin Nolan, M.A.; Deborah Kaczynski, M.S.; Kirk Jensen, M.D., M.B.A., F.A.C.E.P.* , Management to Improve Hospital wide Patient Flow, Joint Commission Journal on Quality and Safety, May 2011 Volume 37 Number 5, pp 218-227

Staffing Prediction – Proactive Planning

Cincinnati Children's

Weekly Census Prediction Report

Last Exec: 11/20/2017 4:53:40 AM

Monday		PICU	HI		NICU	Cmplx Airway	TCC	CBDI		Medical					Surgical			Liberty	Psychiatry						OVF
11/20/2017		B5CC	B6HI	A6C	B4	B5CA	A3S	BMT	HemOn	A4C1	A6NS	A7C1	A7C2	A7NS	A3N	A4N	A4S	Liberty	LCOH	A4C2	Adol	LTNCY	Child	Neuro	OVF
Total Capacity (# of Beds on Unit)		35	25	17	65	11	24	36	32	12	48	11	11	41	22	24	24	42	16	12	38	18	9	9	
	Actual Midnight Cens	25	19	17	57	6	24	21	23	9	33	10	7	32	16	20	21	26	16	10	42	19	10	9	9
Scheduled Admits	OR electives	4	1	2	0	1	0	1	0	0	0	0	0	1	13	4	2	1	0	0	0	0	0	0	0
	Sleep Study	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	7	0	0	0	0	0	0	0
	EEG	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0
	Infusions	0	0	0	0	0	0	0	0	0	0	0	1	3	0	1	0	4	0	0	0	0	0	0	0
Predicted Admits	OR electives	3	1	0	0	2	0	0	0	0	0	0	0	1	10	4	1	1	0	0	0	0	0	0	0
	OR add on	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ED	3	0	2	0	0	1	0	1	1	12	0	1	5	3	3	1	6	3	0	1	1	0	2	0
	Sleep Study	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	6	0	0	0	0	0	0	0
	Direct Admits	0	1	2	1	0	1	0	0	1	3	1	0	2	0	3	2	1	2	0	2	0	1	1	1
	EEG	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
	Other	2	0	2	0	0	1	1	3	0	5	1	1	2	0	1	0	2	0	0	0	1	0	0	1
	Infusions	0	0	0	0	0	0	0	0	0	0	0	1	3	0	1	0	3	0	0	0	0	0	0	0
Predicted Discharges		3	0	3	0	2	0	2	1	1	8	1	4	16	3	4	2	16	3	5	6	5	0	1	0
Predicted Demand		30	21	20	58	6	27	20	26	10	45	11	9	34	26	28	23	29	18	5	39	16	11	11	11
Predicted Overflow		3 (A3S)	3 (A6C)			4 (A3N)					3 (A4N)						1 (A4N)				2 (Lindner) 1 (Neuro)	1 (Child)			
Predicted Unit		33	24	17	58	10	24	20	26	10	48	11	9	34	22	24	24	29	16	5	38	17	9	9	11

Surge Planning

Green — Reflects an optimally functioning system, a state of equilibrium, homeostasis. Staff describe it as, a good day.

Yellow — Reflects the state of early triggers which identifies and allows the system to initiate early interventions.

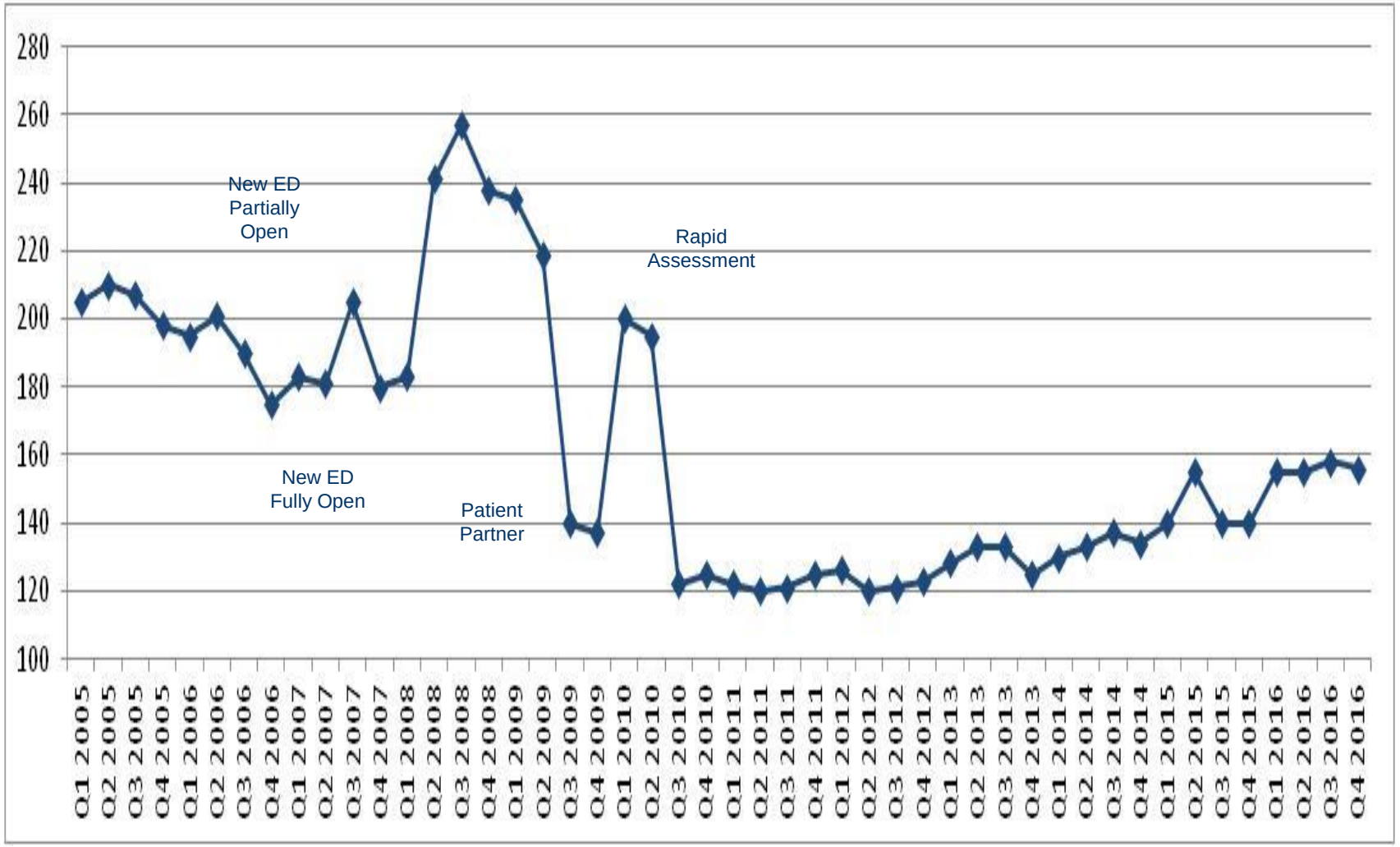
Orange — Reflects escalating demand without readily available capacity. In this state aggressive action required to avoid system overload and ultimate gridlock.

Red — Reflects a state of gridlock as a result of system overload. The system should respond by using its organizational Disaster Plan.

	Green	Yellow	Orange	Red
Census				
Acuity				
Other				
Staff				

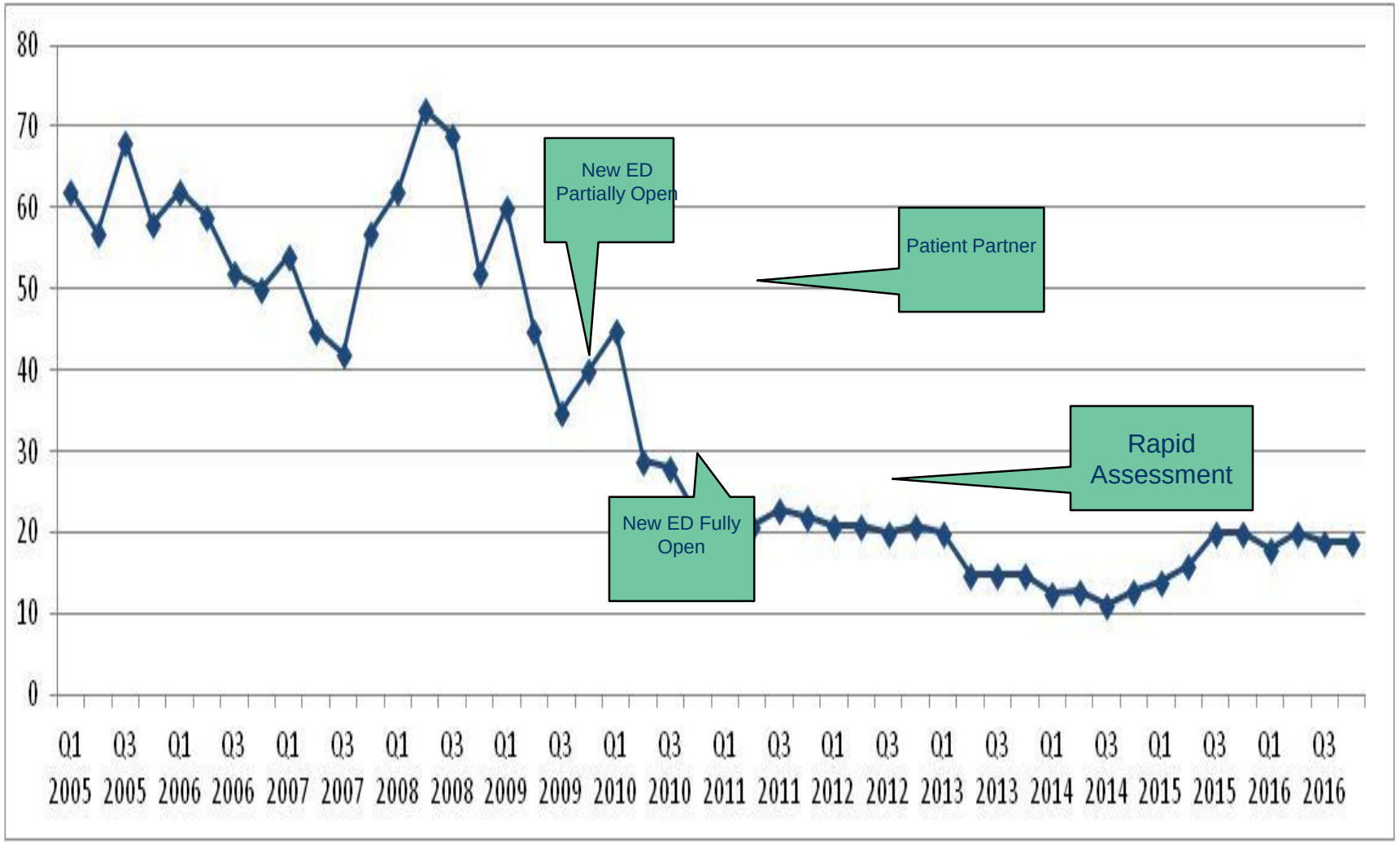
Redesign the System

ED Median Total Length of Stay (min)



Cambridge Health Alliance

ED Median Door to Provider Time (min)



Cambridge Health Alliance

Separate Flows for Elective and Non-Elective Surgical Cases

Mayo Clinic Florida

- Surgical volume and surgical minutes increased by 4% and 5%, respectively;
- Prime time use increased by 5%;
- Overtime staffing decreased by 27%;
- Day-to-day variability decreased by 20%;
- The number of elective schedule same day changes decreased by 70%;
- Staff turnover rate decreased by 41%. Net operating income and margin improved by 38% and 28%, respectively

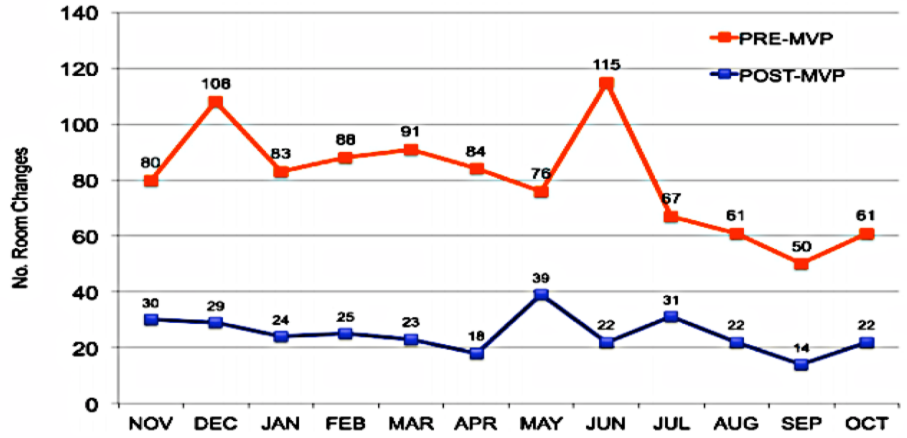


Figure 4. Number of changes to elective surgical schedule on the day of surgery before and after implementation of operating room redesign. MVP, managing variability program.

C. Daniel Smith, et al. *Re-Engineering the Operating Room Using Variability Management to Improve Healthcare Value*. Journal of the American College of Surgeons, Volume 216, Issue 4 , Pages 559-568, April 2013

Foundational Elements for ICU Efficiencies and Patient Flow

Stabilization	Weaning	Mobility	Prevent Complications	End of Life
• Sepsis protocol • Fluid stability • Ventilator management	• Decrease Vent hours • Sedation protocol/ w holiday • Weaning criteria – “no MD” • 24-hour weaning, extubating	• Protocol online • Standard workflow • Delirium assessment (CAM-ICU) • Metrics	• VAP, CLABSI protocol • FMEA –low volume • Renal injury • DV ??	• Secure and respect wishes • Family meeting in 24 hours • Clear follow-up plan

MEMORIAL HERMANN

Standardizing Multidisciplinary Rounds

Old Model

Resident or other provider presented case and any updates; other input contributed ad hoc:

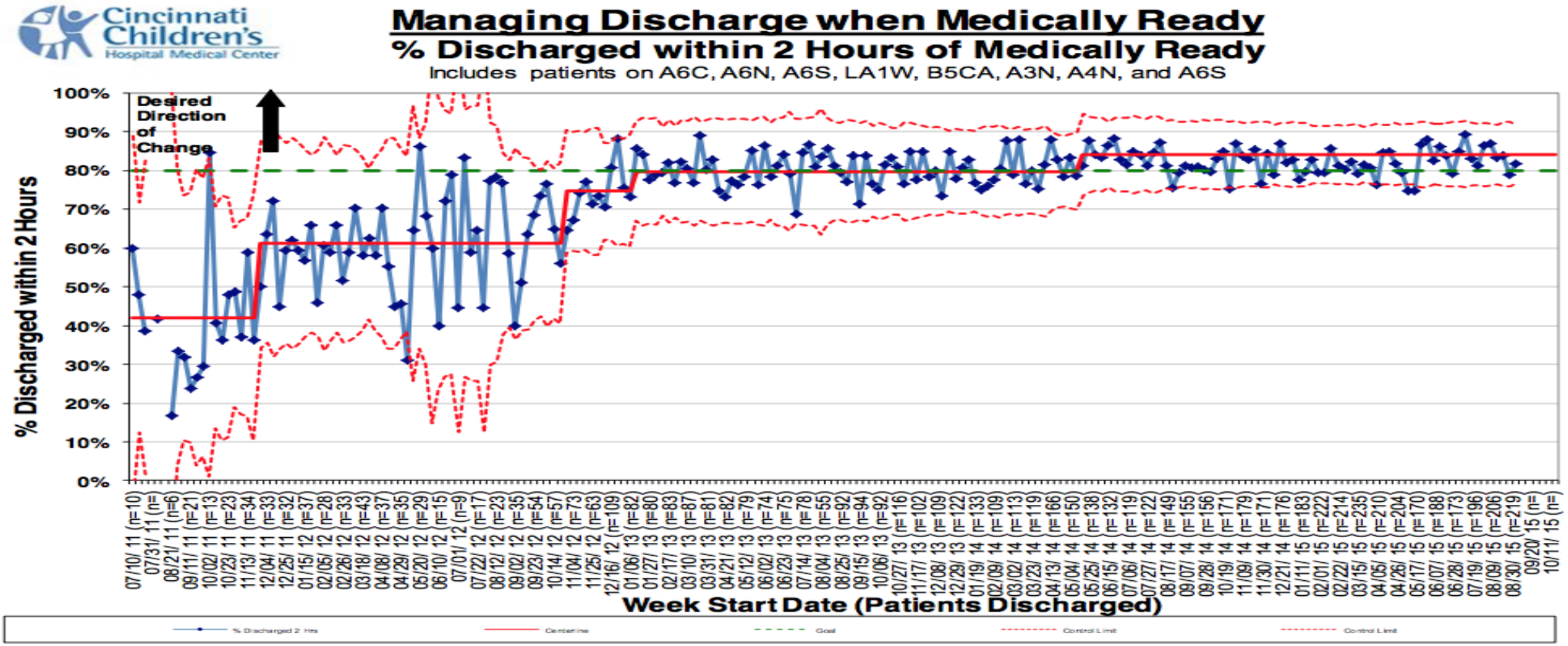
- *Less experienced nurses often felt uncomfortable jumping in unless resident remembered to ask*
- *Residents unclear on contribution*

Patient Progression Model

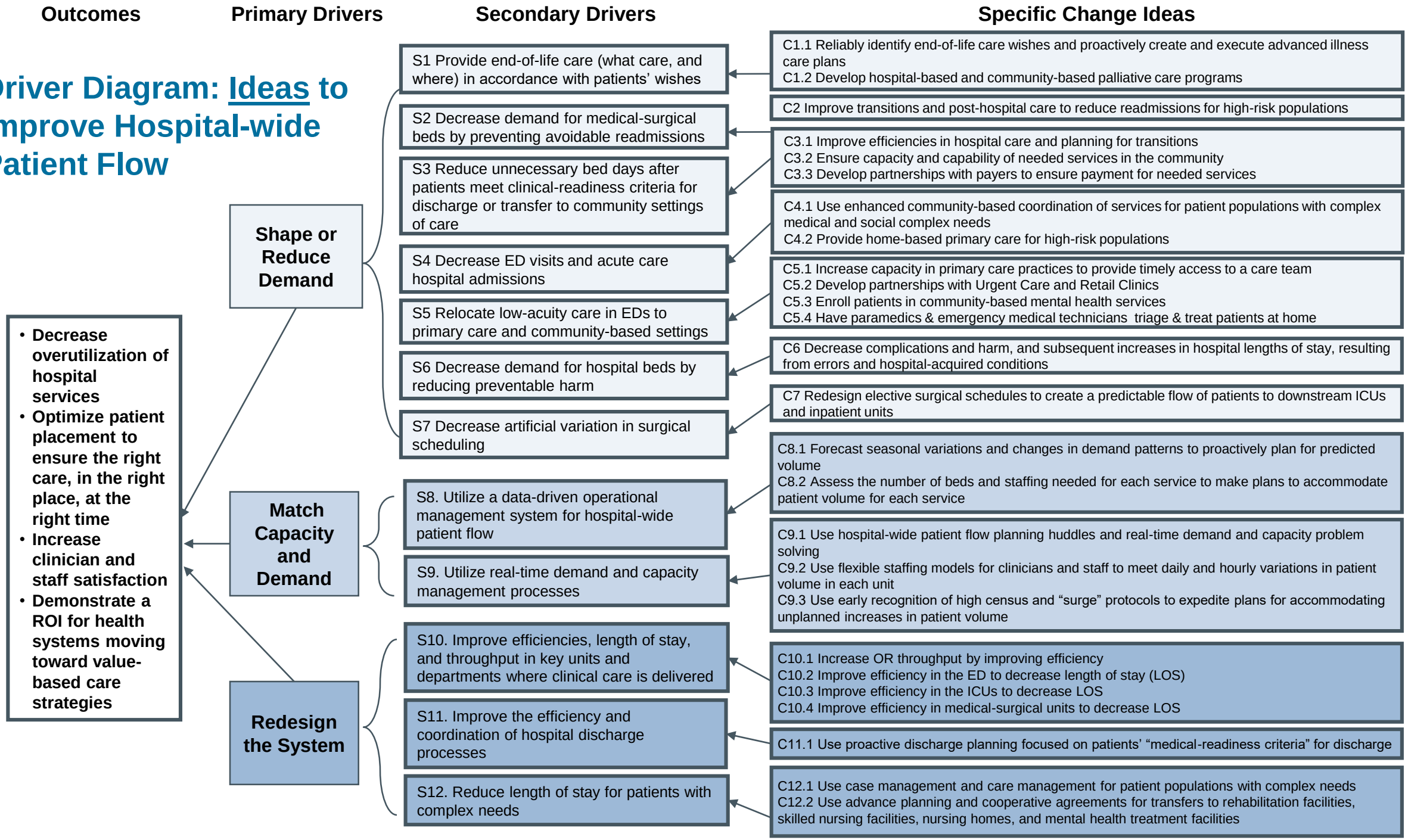
Case Manager facilitates discussion prompting each discipline for input on standard, defined elements

- *Created clear expectations for participation and care is planned more collaboratively*

Discharging Patients when Medically-ready



Driver Diagram: Ideas to Improve Hospital-wide Patient Flow



Hospital Flow Professional Development Program

Delivering the right care, in the right setting, at the right time

IHI's Hospital Flow Professional Development Program is designed for a team or individuals who are tasked with hospital operations, throughput, and ensuring optimal patient flow in the acute care hospital.

- 5-day intensive shared learning and capability building
- 20 leading health care expert faculty presenters
- Leverage opportunities to collaborate with expert faculty and successful hospital leaders to develop or refine a detailed, customized action plan

Hospital Flow Professional Development Program

More information at ihi.org/hospital-flow

Achieving Hospital-wide Flow: the right care, in the right setting, at the right time

November 5-9, 2018 | Boston, MA
ihi.org/hospital-flow

Participants will learn from:

- Expert faculty
- Case study presenters
- Other program participants

Participants will have opportunities to engage in:

- Pre-work and data collection
- Working sessions with team members
- Exchange of ideas with other program participants & faculty
- Ad hoc faculty coaching sessions

Hospital Flow Professional Development Program

Who should attend?

This program is designed for teams who are responsible for implementing and maintaining operational efficiencies, throughput, and optimizing patient flow in acute care hospitals.

While individual participants will gain value from this professional development program, IHI strongly recommends that hospitals and health care systems consider sending teams of 4 or 5 individuals (those who have accountability for outcomes related to delivering the right care, in the right place, at the right time) to this program

Recommended Team Members:
CEOs, COOs, Chief Nurse Executives, Surgeons and Medical Directors, Nursing Directors, Service Line Leaders, Financial Analysts, Quality Improvement Leaders

More information at ihi.org/hospital-flow

Hospital Flow Professional Development Program

What you will learn

Designed for a team or individuals who are tasked with hospital operations, throughput, and ensuring optimal patient flow in the acute care hospital, this intensive IHI program helps participants:

- Make sense of the variety of approaches needed to achieve timely, efficient person-centered care
- Gain actionable strategies, skills, and tools that help ensure that demand for hospital service matches capacity — daily, weekly, and seasonally
- Prevent diversions and overcrowding in EDs
- Eliminate waits and delays for surgical procedures, treatments, and admissions to inpatient beds
- Increase the number of patients admitted to the appropriate inpatient unit (based on the patient's clinical condition)
- Identify opportunities to collaborate with expert faculty and successful hospital leaders to develop or refine a detailed, customized plan of action
- Explore ways to calculate the return on investment

More information at ihi.org/hospital-flow