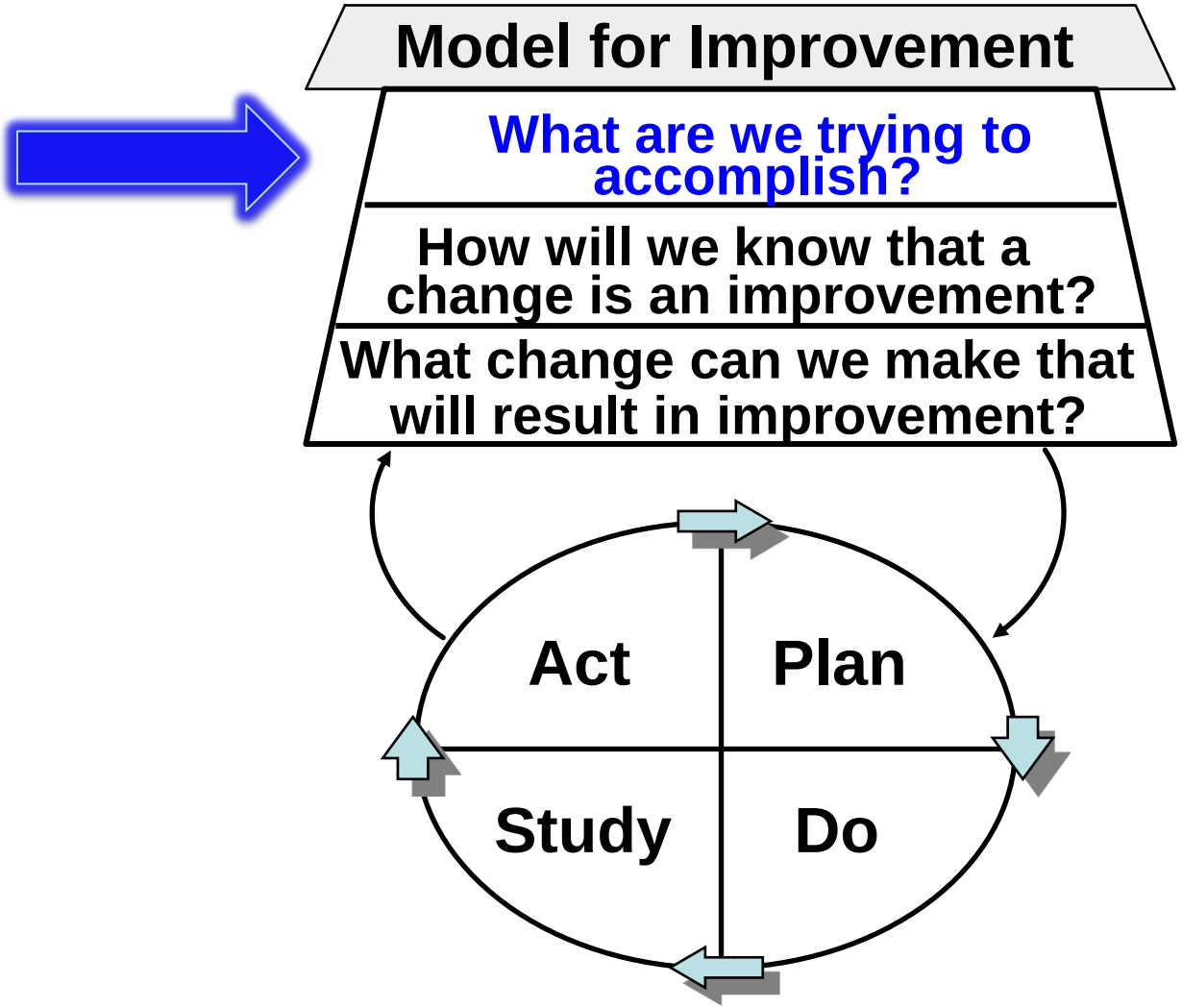
Heart to Home, Sooner, Safer, and Longer:

Nurse/Patient Collaboration to Reduce Readmissions for Heart Failure Patients

UT Southwestern Medical Center
Dallas, Texas
January 2011


Model for Improvement
What are we trying to accomplish?
How will we know that a change is an improvement?
What change can we make that will result in improvement?
Act
Plan
Study
Do

What are we trying to Accomplish?

By August 1, 2010

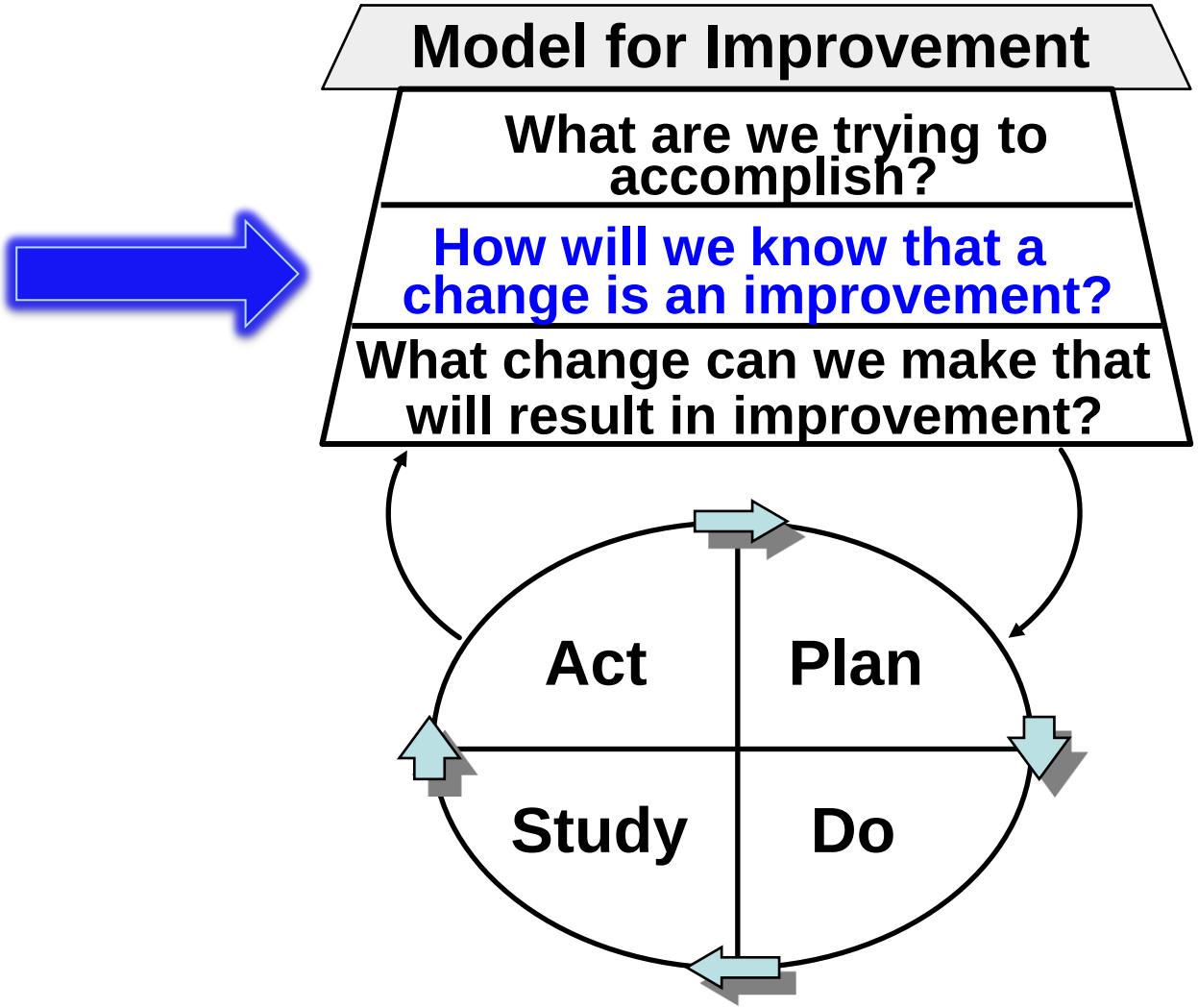
- Our aim is to reduce heart failure all-cause readmissions by 25%
- We will demonstrate that a highly engaged staff who provides patients with nurse-driven, reliable processes contributes to a reduction in readmissions and improved patient perceptions of hospitalization.

Strategy & Implementation

Strategy

Engage the Front line by using quality improvement tools

- Model for Improvement is the framework
- Use basic quality improvement tools
  - Make decisions
  - Identify barriers
  - Measure performance
  - Drill down on fall-outs
  - Embed reliability
- Provide frequent feedback to the team members using basic quality improvement tools
- Involve and engage patients as well as their care-givers/family members in the process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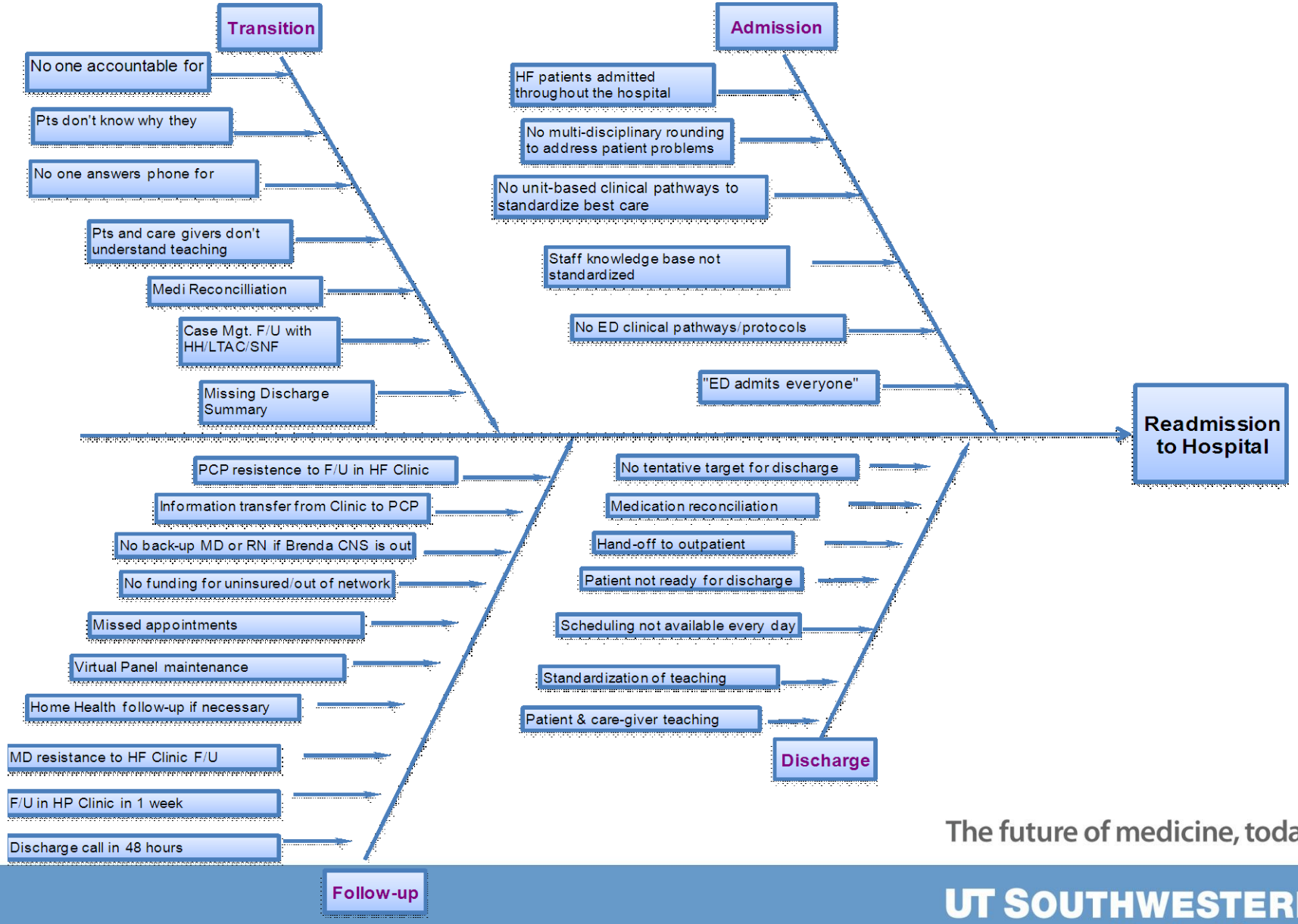
How will we know that a change is an improvement?

- The outcome evaluated is HF 30-day all-cause readmission, as measured from the date of discharge of the index HF admission.
- Our average 2009 Heart Failure all-cause readmission rate, based on our available data is 25%
- Our target rate for August 2010 will be 18.75%

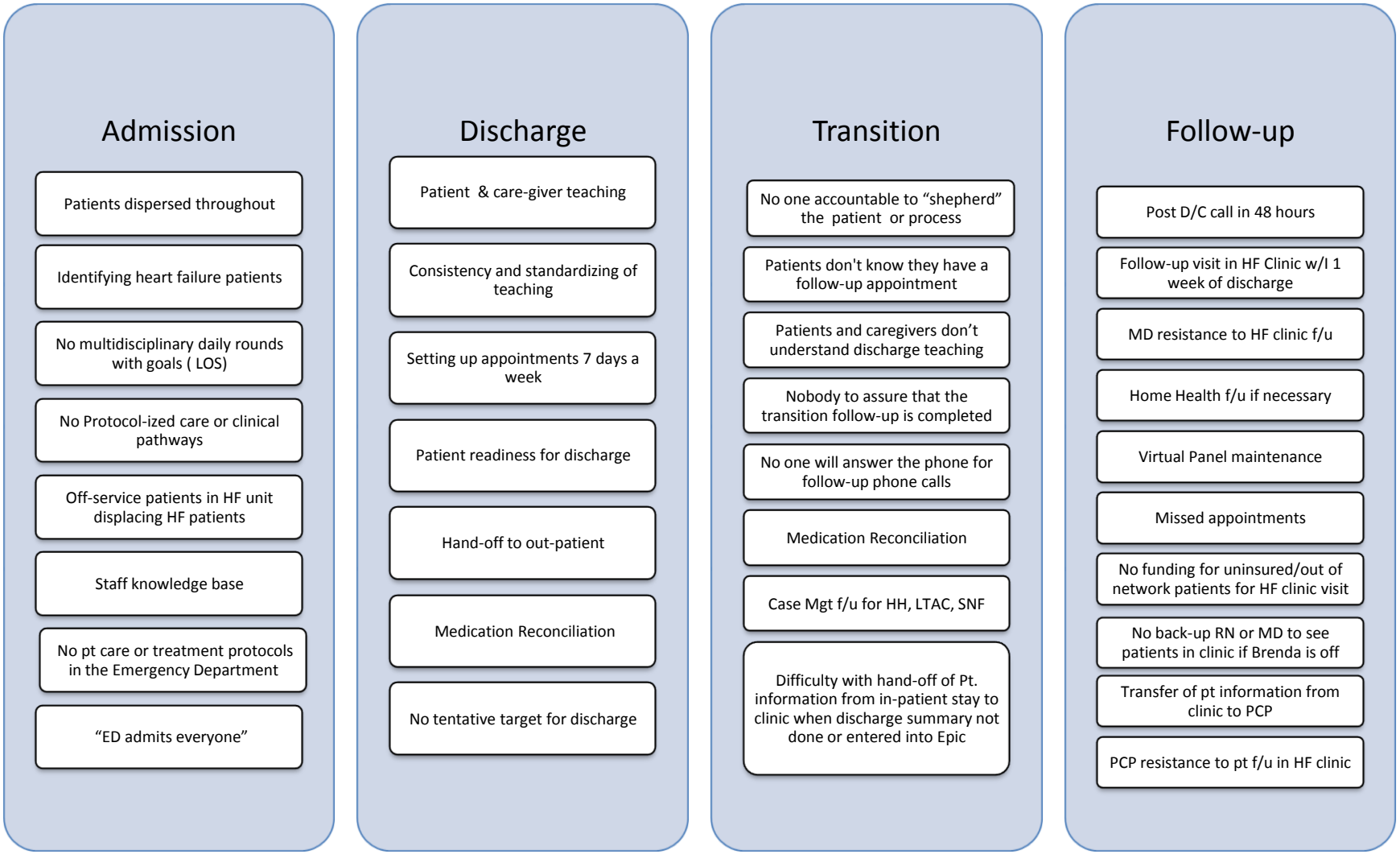
Selected Process Analysis Tools

- Brainstorming
  - In-patient and Out-patients teams worked together to think of any possible reasons that could cause a patient readmission within 30-days
- Flow-charting
  - Broke down the process flow from admission through discharge and mapped it
- Affinity and Fishbone diagrams
  - Sorted post-it notes from brain-storming sessions into framework that helped us understand factors and sequencing that contributed to the readmission of the patient

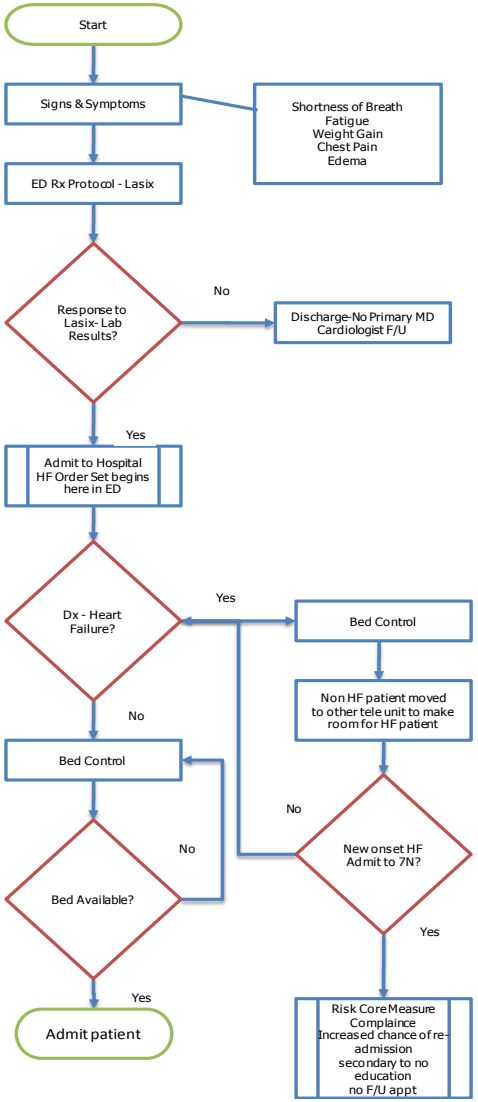
Process Analysis: System Causes for Heart Failure Readmission

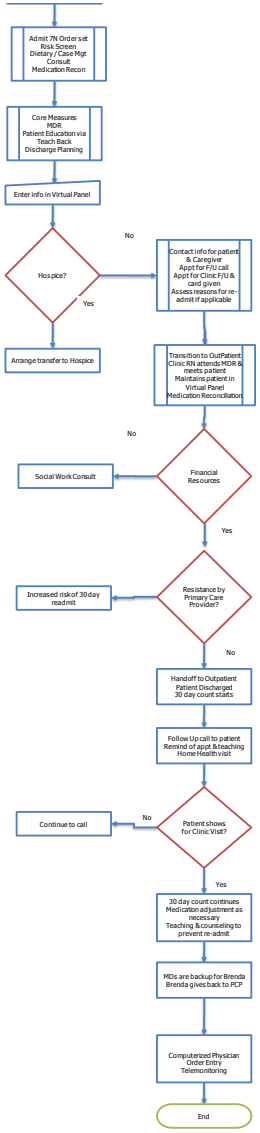


Process Analysis: Affinity Diagram



Process Analysis: Flow chart





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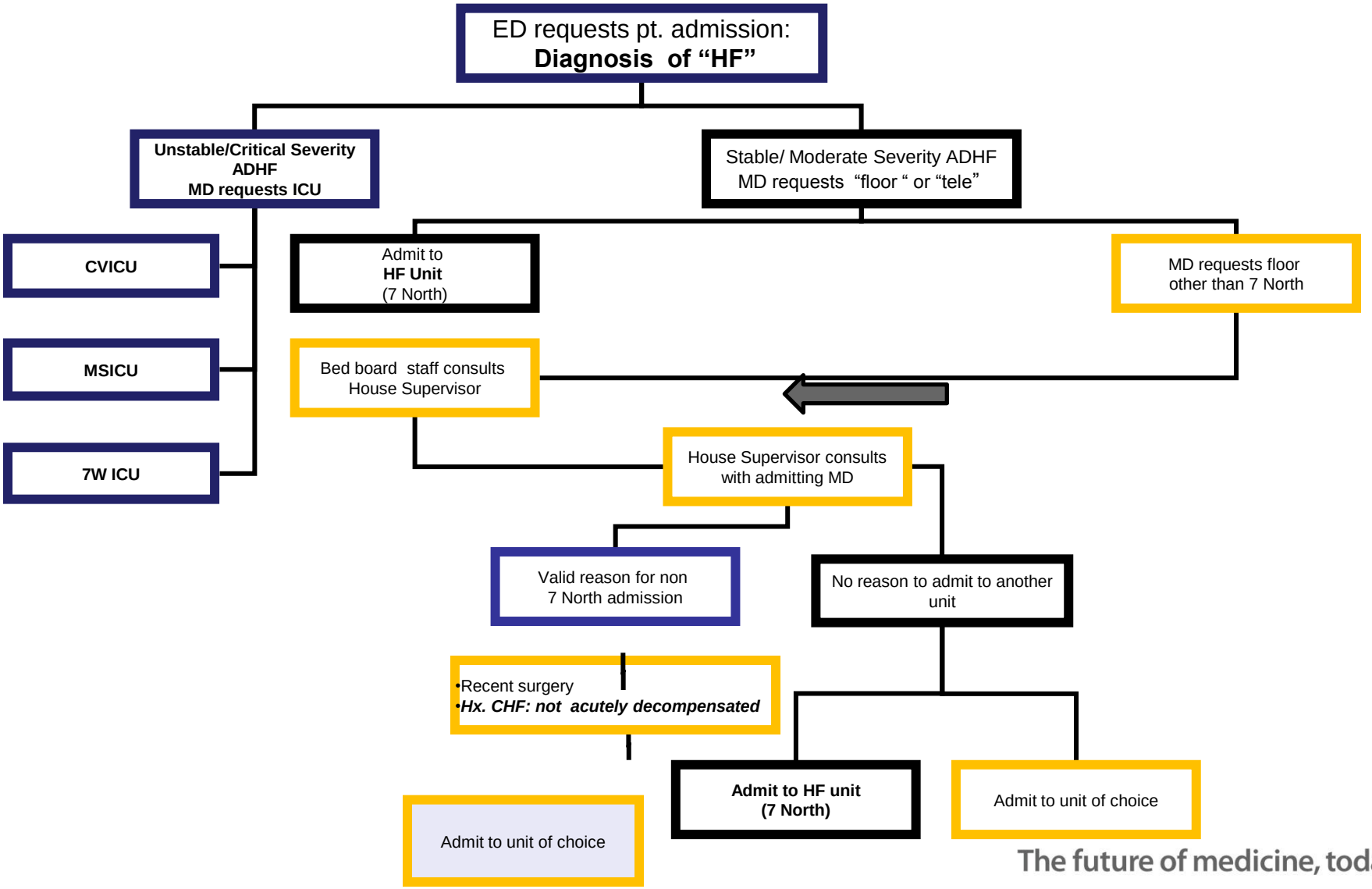
UT SOUTHWESTERN Medical Center

Decision Making Tools: Decision Tree



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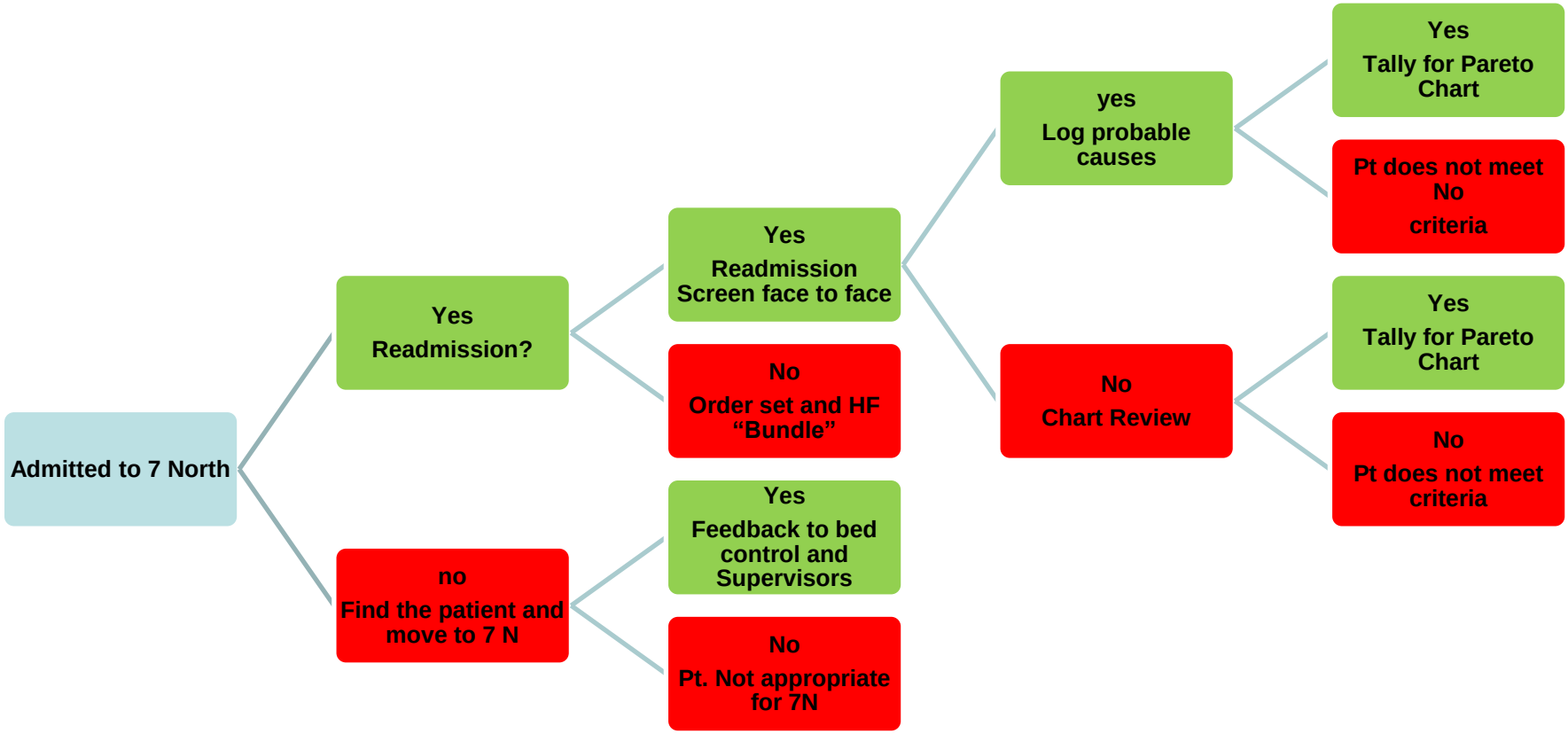
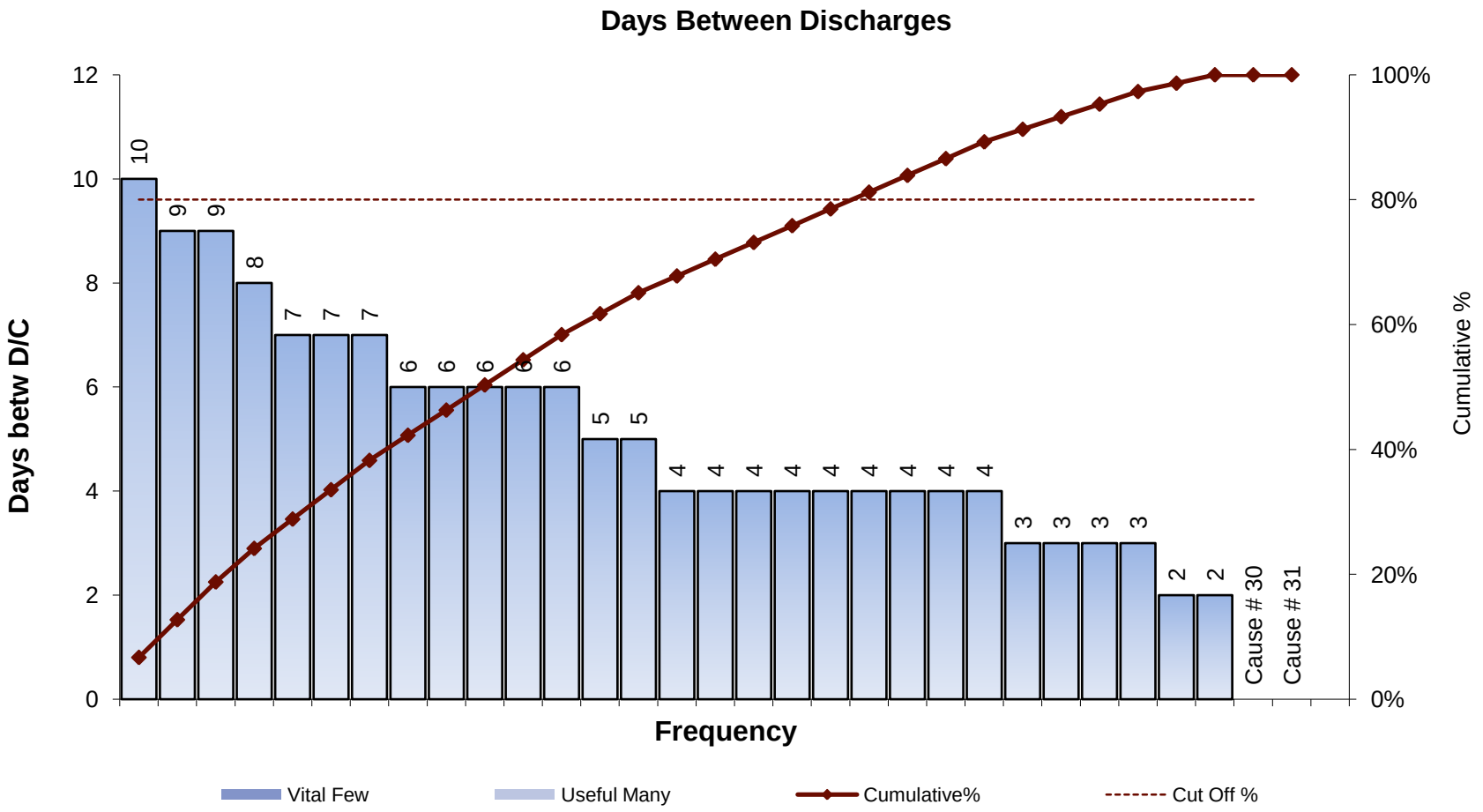
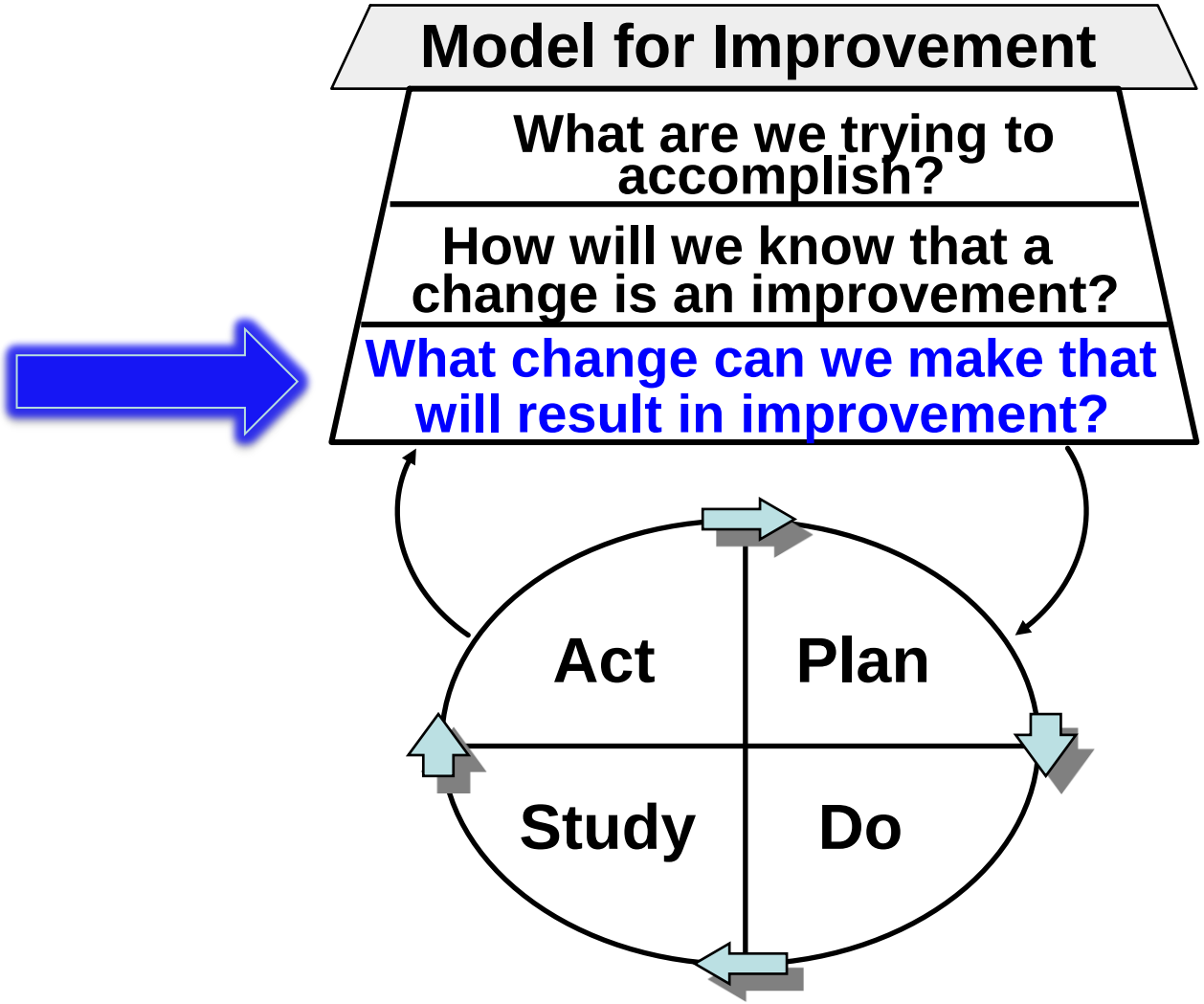
Decision Making Tools: Decision Tree



Decision Making Tools: Pareto Diagram

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Interventions

- Feb 09
  - Staff education
  - Rounding 5d/wk with feedback
- March: Centralized Dispersed Patients,
  - Tested Follow-up phone calls
  - Built on initial rounding: started Multidisciplinary rounds with daily goals
- April: Heart Failure Unit Kick-off
- May :Standardized teaching using “teach-back”

Interventions

- May :Standardized teaching using “teach-back” methodology
  - Engaged the patient
  - Provided feedback to the care-giver regarding the effectiveness of communication
  - Addressed patient literacy
  - Reviewed the patient plan for the day: both RN’s together with the patient

Interventions

- July:
  - Studied “transition” from in-pt to out-pt
- August:
  - Continued process of Clinical Coordinator making F/U clinic appointments prior to patient discharge
- September
  - HF Med reconciliation check-off using EPIC
- October:
  - Unit Secretary made HF appointments.
  - Pt. hand-off faxed to clinic,
  - MD’s started to attended Multidisciplinary Rounds (MDR’s)

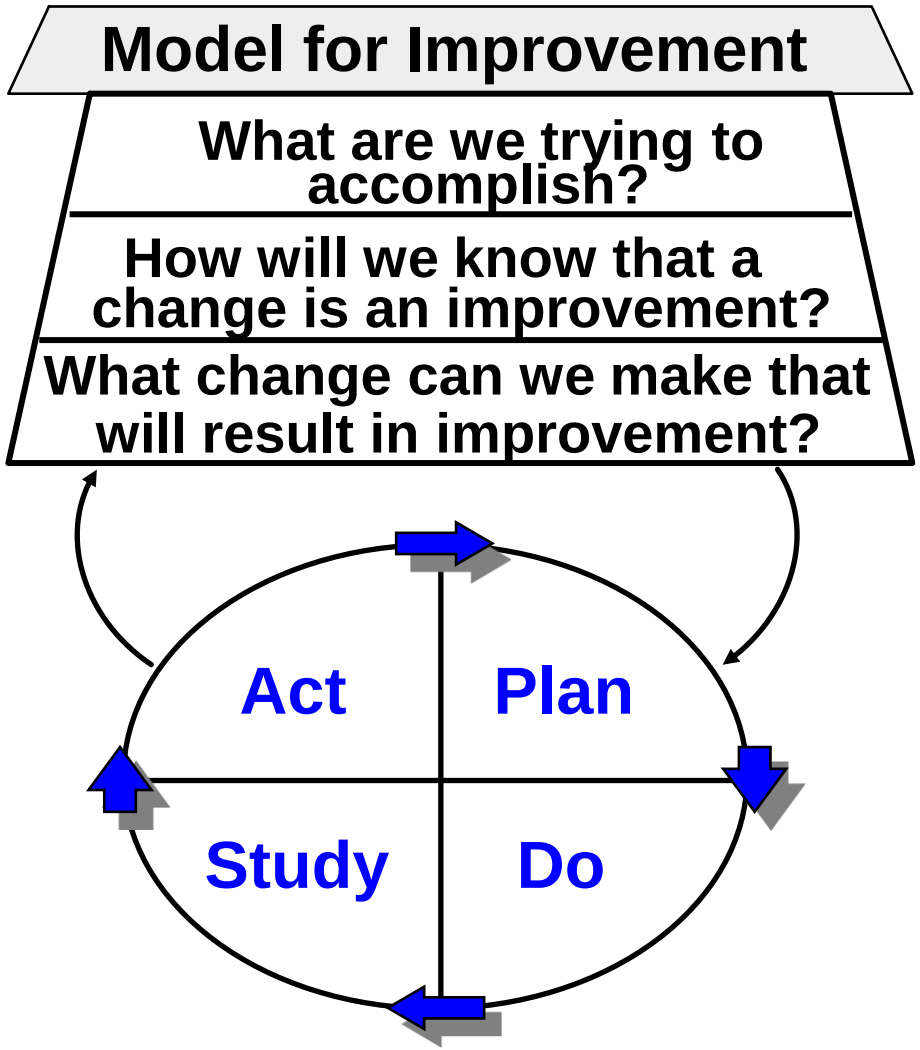
Interventions

- November
  - Tested “virtual patient”
  - Database-type document to share information between in-patient and out-patient encounters (very difficult to maintain)
  - F/U appointments now made by clinic prior to patient discharge
  - Out-pt RN served as the “Transition Nurse”
    - Visited the patient during hospital phase
    - attended MDR’s in the hospital
    - Transition Nurse made follow-up phone calls
- December
  - Transition RN (Out-pt RN) not able to continue with dual role

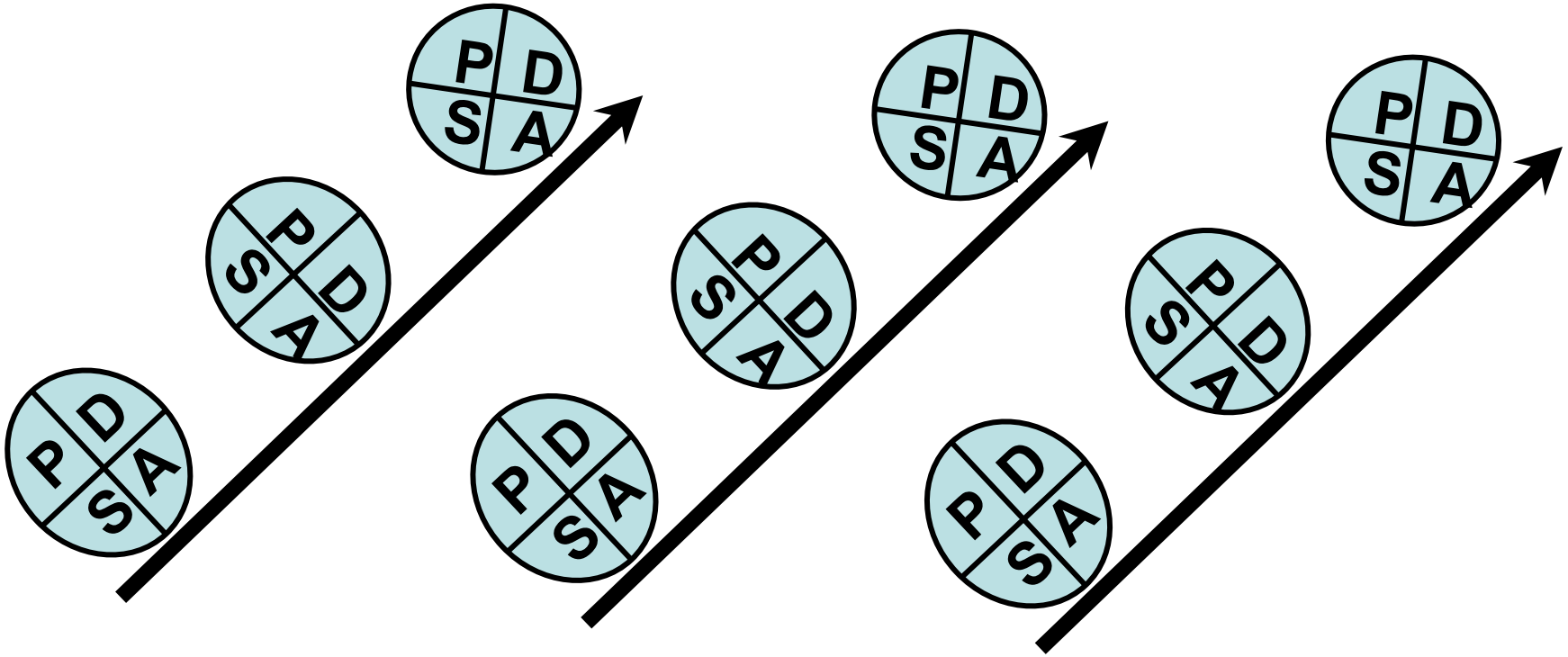
Interventions

- March 2010 Bedside Report commenced
  - Allowed the patient to engage directly and purposefully with the nursing staff
  - Daily goals discussed
  - Safety checks
  - Teach-back reinforced
  - Clinical Coordinator picked-up duties the Transition RN was not able to perform

Model for Improvement



Implementing the Change: Rapid cycle change



Change 1: Centralize dispersed patients

Change 2: Standardize Nursing competency

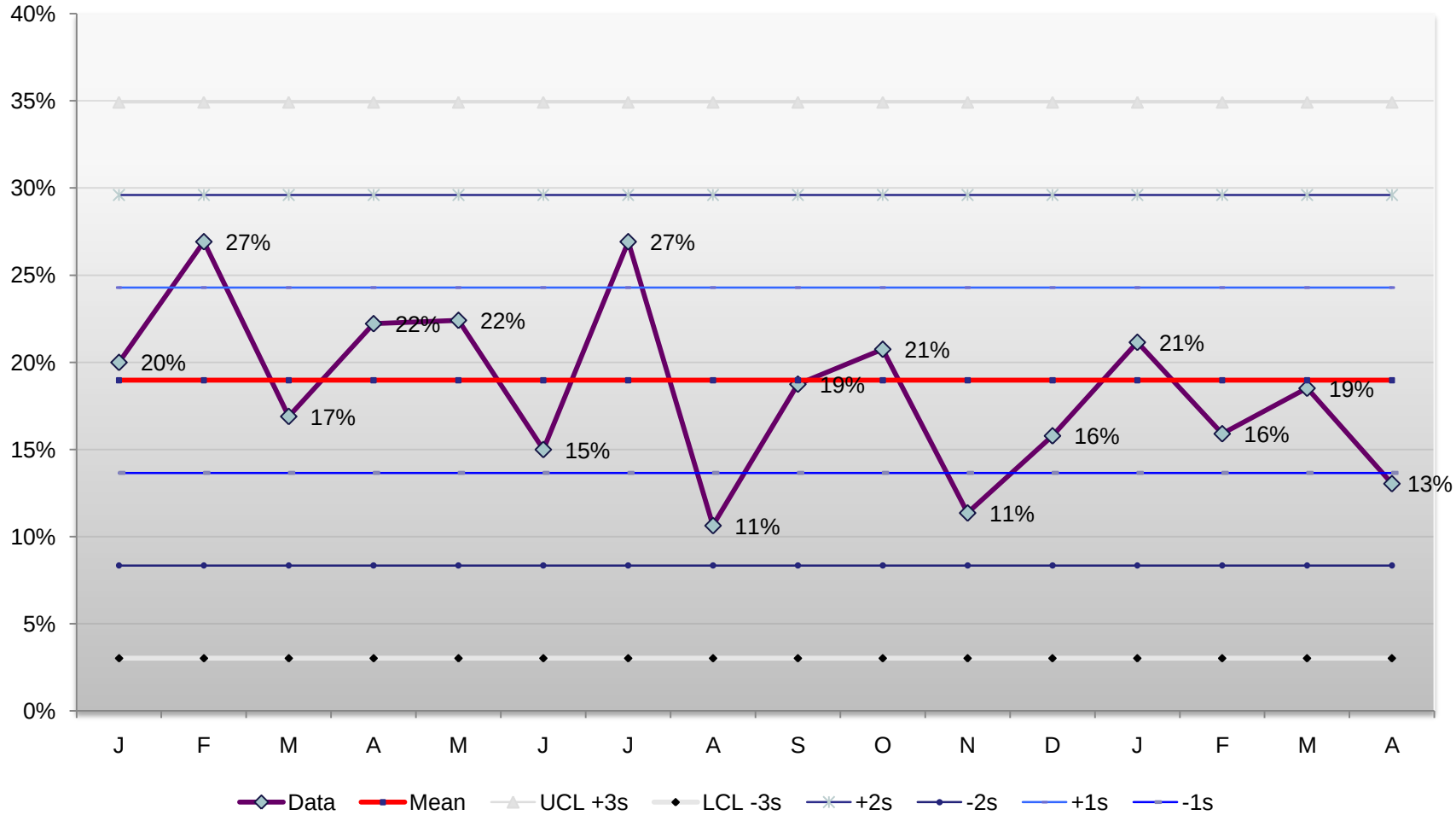
Change 3: Standardize patient teaching

Background Data: ICD-9 CM codes defining the patient cohort

- 402.01 Hypertensive heart disease, malignant, with heart failure
- 402.11Hypertensive heart disease, benign, with heart failure
- 402.91Hypertensive heart disease, unspecified, with heart failure
- 404.01Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
- 404.03Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease
- 404.11Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
- 404.13Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease
- 404.91Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
- 404.93Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease
- 428.xxHeart Failure (NOTE THAT 428 with any number afterwards is included

Preliminary Outcomes:

Heart Failure All Cause 30–day Readmissions by Month: Preliminary Data

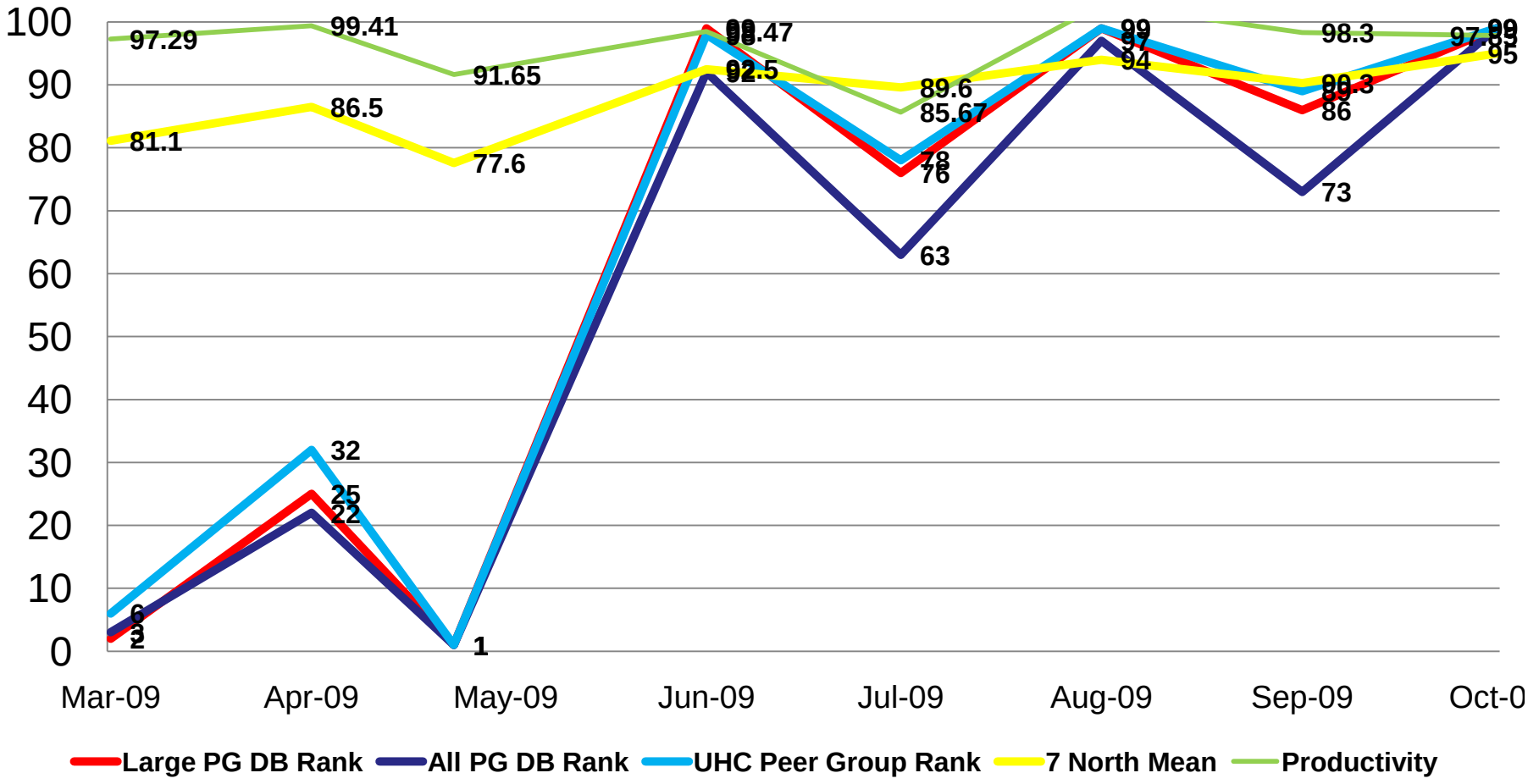


Outcomes:
Safer

- Core Measures:
  - 3% improvement
- Central Line Associated Blood Stream Infections:
  - 33% Improvement
- Patient Falls:
  - 48% Improvement

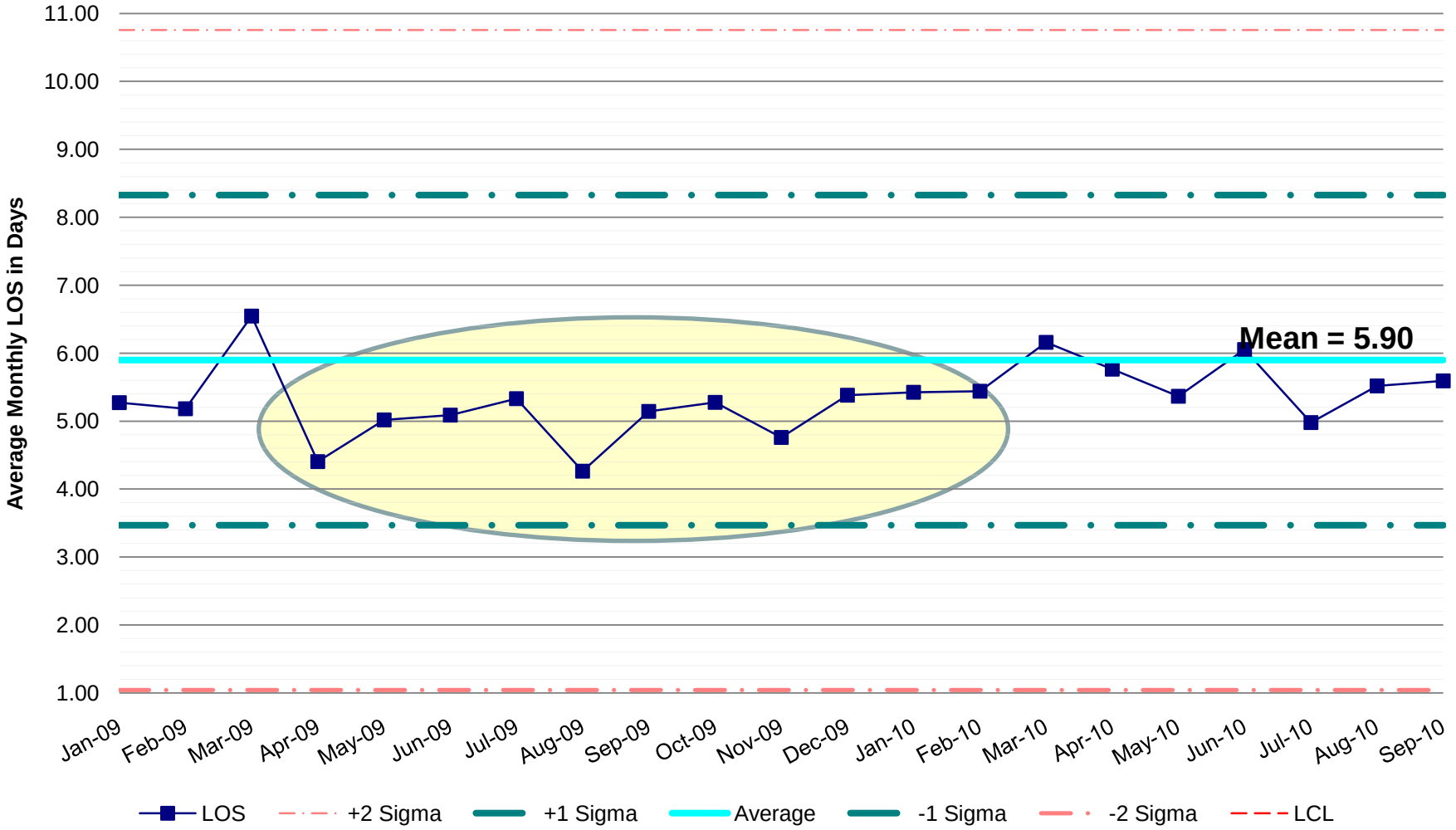
Outcomes:

7 North Press Ganey Mean, Peer Ranking ,and Productivity



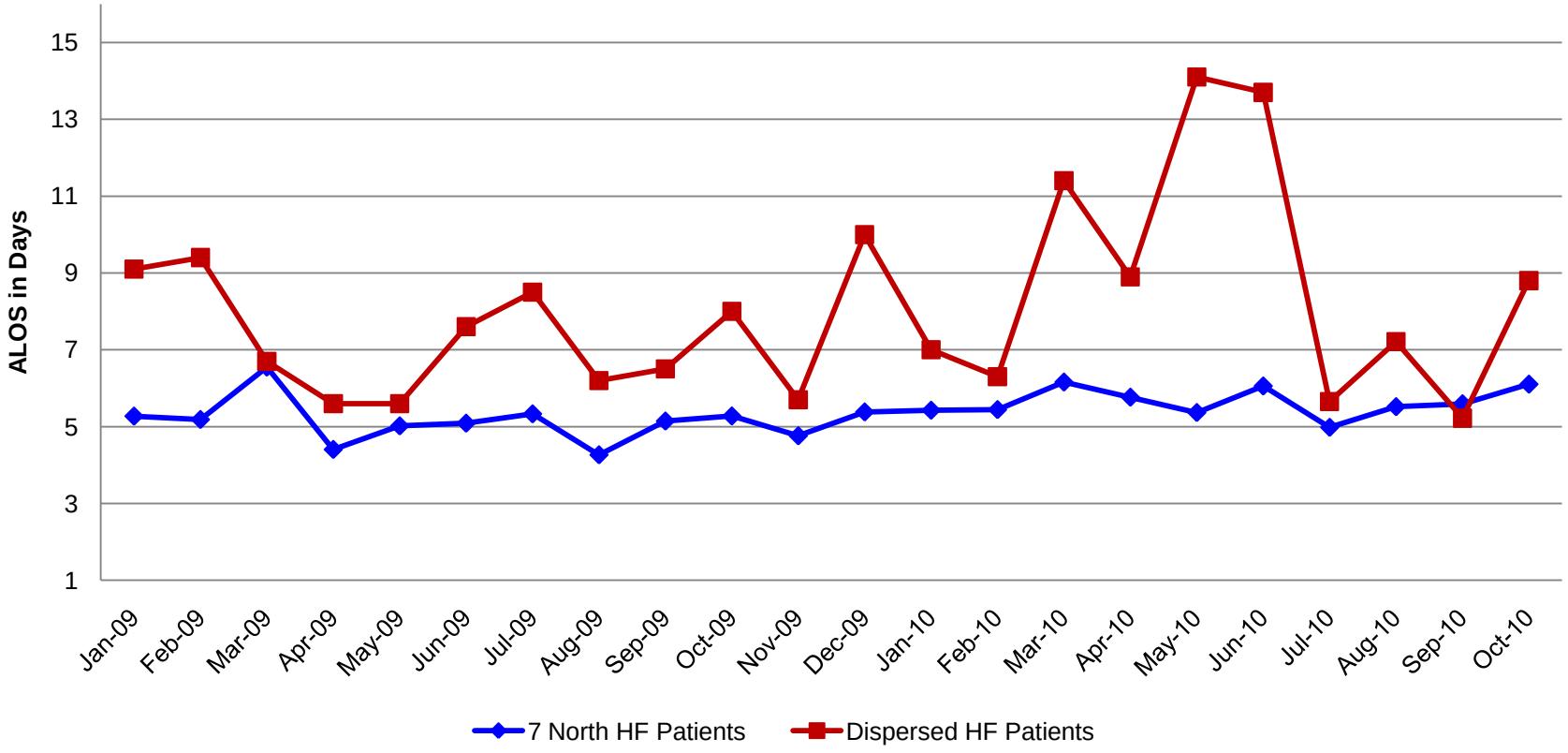
Outcomes:

7 North Average Length of Stay



Outcomes:

ALOS Dispersed and 7 North Heart Failure Patients



Outcomes:

Staff Experience

NDNQI®

NATIONAL DATABASE OF NURSING QUALITY INDICATORS

2010 RN Survey with Practice Environment Scale©

Outcomes:

Staff Experience

Unit Perceived Quality of Care

1. How would you describe the quality of nursing care for your unit on the last shift you worked? *Response options: excellent, good, fair, poor*

2. In general, how would you describe the quality of nursing care delivered to patients on your unit? R*esponse options: excellent, good, fair, poor*

3. 3. Overall, over the past year what has happened with the quality of patient care on your unit? *Response options: improved, remained the same, deteriorated*

Outcomes:

Staff Experience

Job Enjoyment Scale

Nurses with whom I work would say that they:

Response options: strongly agree, agree, tend to agree, tend to disagree, disagree, strongly disagree.

1. Are fairly well satisfied with their jobs.
2. Would not consider taking another job.
3. Have to force themselves to come to work much of the time.
4. Are enthusiastic about their work almost every day.
5. Like their jobs better than the average worker does.
6. Feel that each day on their job will never end.
7. Find real enjoyment in their work.

Outcomes:

Staff Experience

RN Work Context

Unit Perceived Quality of Care

1. How would you describe the quality of nursing care for your unit on the last shift you worked?

Response options: excellent, good, fair, poor

1. In general, how would you describe the quality of nursing care delivered to patients on your unit?

R*esponse options: excellent, good, fair, poor*

1. Overall, over the past year what has happened with the quality of patient care on your unit?

Response options: improved, remained the same, deteriorated

Outcomes:

Staff Experience

	Nursing Participation in Hospital Affairs	Nursing Foundations for Quality of Care	Nurse Manager Ability, Leadership, and Support of Nurses	Staffing and Resource Adequacy	Collegial Nurse-Physician Relations	Mean PES Score	Job enjoyment T-score: > 60 = High Satisfaction
7 North Cardiology - 856104	3.01	3.31	3	2.87	3.04	3.05	60.2
Hospital Adult Medical Median	3.01	3.27	3	2.59	3.04	3.01	57.77
Mean	2.77	3.04	2.94	2.49	2.90	2.83	50.6
S.D.	0.31	0.21	0.38	0.38	0.19	0.24	8.14
10th Percentile	2.20	2.68	2.22	1.80	2.59	2.36	39.8
25th Percentile	2.57	2.87	2.76	2.15	2.74	2.67	44.52
50th Percentile (median)	2.88	3.06	2.96	2.62	2.96	2.90	50.63
75th Percentile	3.01	3.24	3.16	2.72	3.04	3.01	57.24
90th Percentile	3.10	3.30	3.51	2.93	3.16	3.08	60.2

Next Steps

- Continue to learn and study small tests of change with multiple PDSA cycles in order to create systems and processes that “build in” reliability.
  - **Work with PI Analysts to finalize readmission data**
  - Refine and re-assess early processes
    - Evaluate performance measures and embed reliability
    - Provide feedback to first line staff
  - Continue with the “Transition RN” role as the position has been formally approved and staff hired
  - Study the out-patient phase of the process

Insights Gained

- Front-line staff participation and ownership is critical
- Become disciplined about uncovering the root causes of failures.
  - Focus on the vital few first
- Listen and respond to the insights of staff who actually do the work and participate in the processes
- Involve the patients, it allows them to be part of the team, participate in their care, and “connect” with the staff

Acknowledgement

Team Members

Gary Reed MD
Eleanor Phelps RN
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Mark Drazner MD
Tracy Ordrop RN Clinic Manger
Bobby Shrader RN
Pamela Dunham RN
Dera Devine RN
Brenda Thompson CNS, RN
Pamela Woltjen AA

7 North Heart Failure Team

day.