Clinical Safety & Effectiveness
Cohort # 13

Transition of Patient Care

CENTER FOR PATIENT SAFETY & HEALTH POLICY
UT HEALTH SCIENCE CENTER™
SAN ANTONIO

Educating for Quality Improvement & Patient Safety

Background

- Context – Duty hour regulations have increased number of transitions of care among residents. The sign-out of a laboring OB patient is unique because of the rapidly changing status of the patients. A lack of a standardized method was limiting effectiveness of the sign-out.
- Rationale – We sought to identify the obstacles to effective sign-out of OB patients. Using this information, we intend to create a sustainable structure for sign-out that would improve communication between teams.

The Team

- Division
- Luke Newton, MD, OB-GYN, Assistant Program Director & Team Leader
  - Elly Xenakis, MD, OB-GYN, Program Director
  - Jennifer Peel, PhD, Assistant Dean, GME
  - Lisa Hutcherson, Program Manager, GME
  - Jenna Banner MD, OB-GYN PGY -2
  - Nancy Ray, CNO-UHS
  - Facilitator: Edna Cruz MSc, RN, CPHQ

- Sponsor Department
  - Robert Schenken, M.D. – Chair

What Are We Trying to Accomplish?

OUR AIM STATEMENT

To improve the quantitative sign-out score by 25% during sign out (transition of care) of OB patients between resident shifts by December 1, 2013.

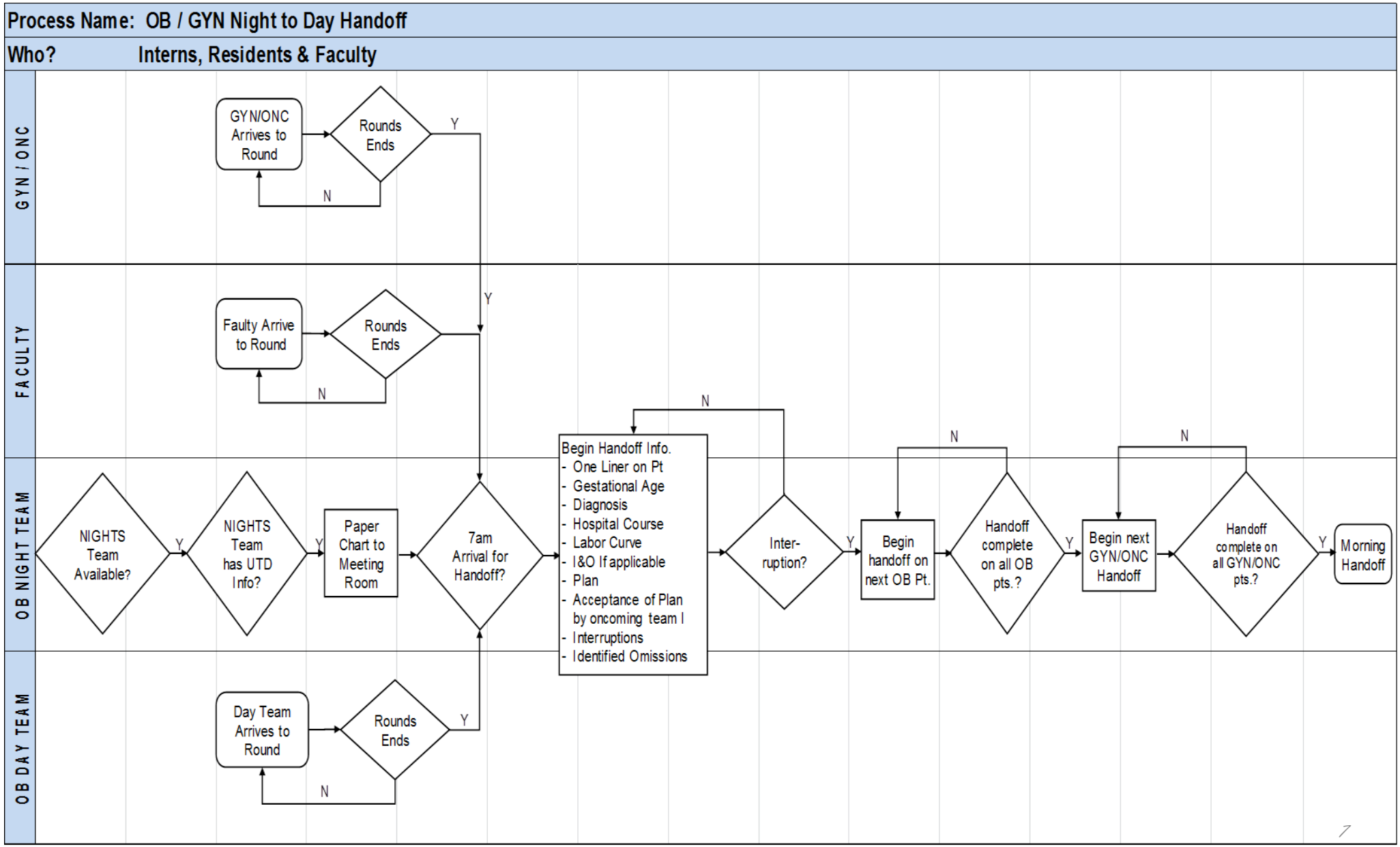
Project Milestones

- Team Created 8/2013
- AIM statement created 8/2013
- Weekly Team Meetings 9/2013 – 1/2014
- Background Data, Brainstorm Sessions, Workflow and Fishbone Analyses 9/2013
- Interventions Implemented 11/27/2013
- Data Analysis 11/2013-1/2014
- CS&E Presentation 1/17/2013

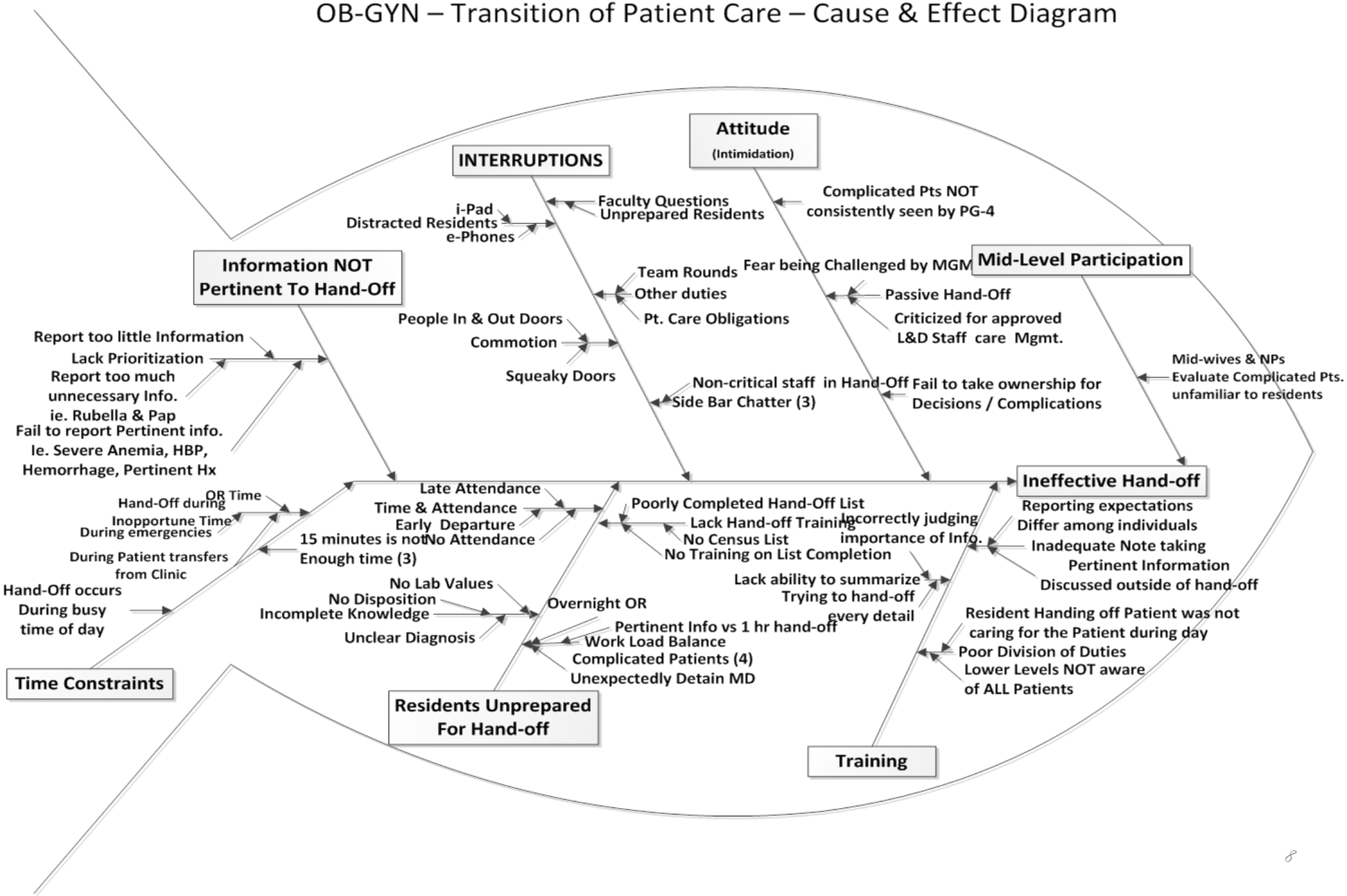
How Will We Know That a Change is an Improvement?

- Types of measures – The team selected a **qualitative measure in the form of a survey** and a **quantitative scoring system to measure the quality of the sign out**. The design for both measures will be a pre and post timed series comparison.
- How you will measure – The survey was administered electronically via survey monkey and the sign out via direct observation and measurement.
- Specific targets for change - To improve the quantitative sign-out score by 25% during sign out (transition of care) of OB patients between resident shifts by December 1, 2013.

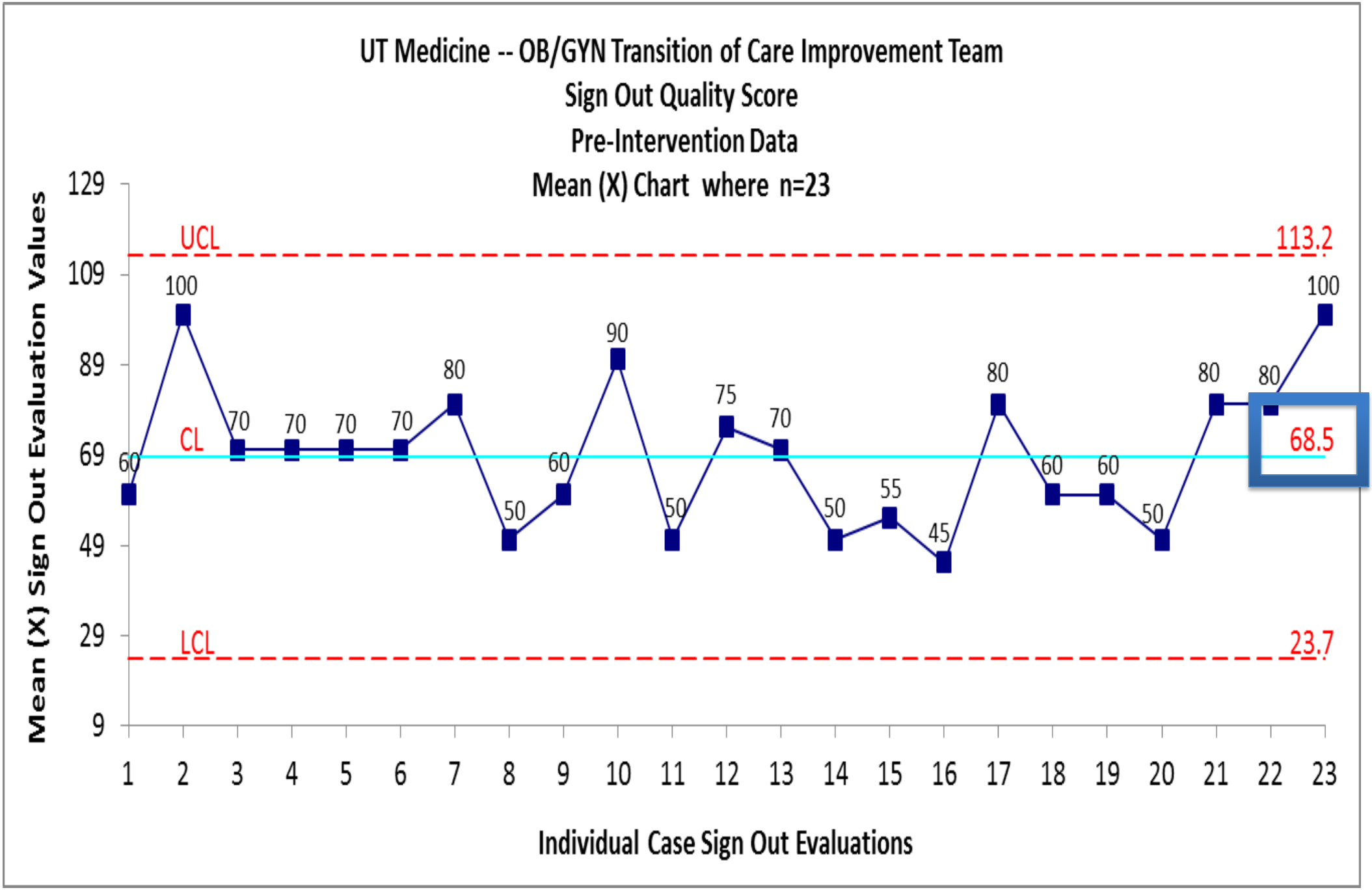
Swim Lanes


Process Name: OB / GYN Night to Day Handoff
Who? Interns, Residents & Faculty
GYN / ONC
FACULTY
OB NIGHT TEAM
OB DAY TEAM
GYN/ONC Arrives to Round
Rounds Ends
Y
N
Faulty Arrive to Round
Rounds Ends
Y
N
NIGHTS Team Available?
Y
NIGHTS Team has UTD Info?
Y
Paper Chart to Meeting Room
7am Arrival for Handoff?
Day Team Arrives to Round
Rounds Ends
Y
N
Begin Handoff Info.
- One Liner on Pt
- Gestational Age
- Diagnosis
- Hospital Course
- Labor Curve
- I&O If applicable
- Plan
- Acceptance of Plan by oncoming team I
- Interruptions
- Identified Omissions
N
Inter-ruption?
Y
N
Begin handoff on next OB Pt.
Handoff complete on all OB pts.?
Y
N
Begin next GYN/ONC Handoff
Handoff complete on all GYN/ONC pts.?
Y
N
Morning Handoff

OB-GYN – Transition of Patient Care – Cause & Effect Diagram



Pre & Post Intervention Measurement by Line Item		
Measure	**Pre-Intervention**	**Post-Intervention**
One liner on patient	23/23 or 100%	
Gestational age	21/21 or 100%	
Diagnosis	23/23 or 100%	
Hospital course	19/21 or 90%	
Labor curve	6/9 or 67%	
I&O if applicable	7/11 or 64%	
Plan	11/23 or 48%	
Acceptance of plan by on-coming team	2/23 or 9%	
Interruptions	5/23 or 22%	
Identified omissions	4/23 or 17%	


UT Medicine -- OB/GYN Transition of Care Improvement Team
Sign Out Quality Score
Pre-Intervention Data
Mean (X) Chart where n=23
Mean (X) Sign Out Evaluation Values
Individual Case Sign Out Evaluations
UCL
113.2
CL
68.5
LCL
23.7
129
109
89
69
49
29
9
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
60 100 70 70 70 70 80 50 60 90 50 75 70 50 55 45 80 60 60 50 80 80 100

Survey results : pre-intervention

To what extent do each of the following inhibit meaningful communication in the current signout process?		
	Pre-Intervention	Post-Intervention
Being called away for clinical duty	15.15%	
Being Interupped while presenting	40.63%	
Participants show up late	12.12%	
Presentation of information that is not pertinent to signout	21.21%	
Omission of pertinent information	18.18%	
Lack of faculty attendance	3.03%	
Lack of faculty participation	0.00%	
Lack of resident attendance	0.00%	
Lack of resident participation	0.00%	
Lack of resident preparedness to present	9.09%	
Intimidation by faculty	12.12%	
Side discussions not pertinent to case	18.18%	

Survey results – pre-intervention

In the Last 2 weeks, can you recall an OB patient who was omitted from signout (not presented at all)?		
	Pre-Intervention	Post-Intervention
YES	24.24%	

In the last two weeks, can you recall an OB patient who was presented at signout but critical information was later discovered to have been omitted?		
	Pre-Intervention	Post-Intervention
YES	45.45%	

What Changes Can We Make That Will Result in an Improvement?

1. An hour training on the new sign out structure (to include overall census, and new order for reporting 1st OB, 2nd Triage, 3rd GYN etc.) = *Simplification & Standardization of new process*

2. "Game Rules" for the sign out = *Standardizes behavior and cultural cha*nge

3. Putting the resident on the improvement team for continued data collection and to improve communication – *Sustainability*

4. Poster in conference room showing the structure, new order and game rules for all to see, review and as a reminder during the sign out. = *Checklist and cognitive aids improve performance*

Implementing the Change

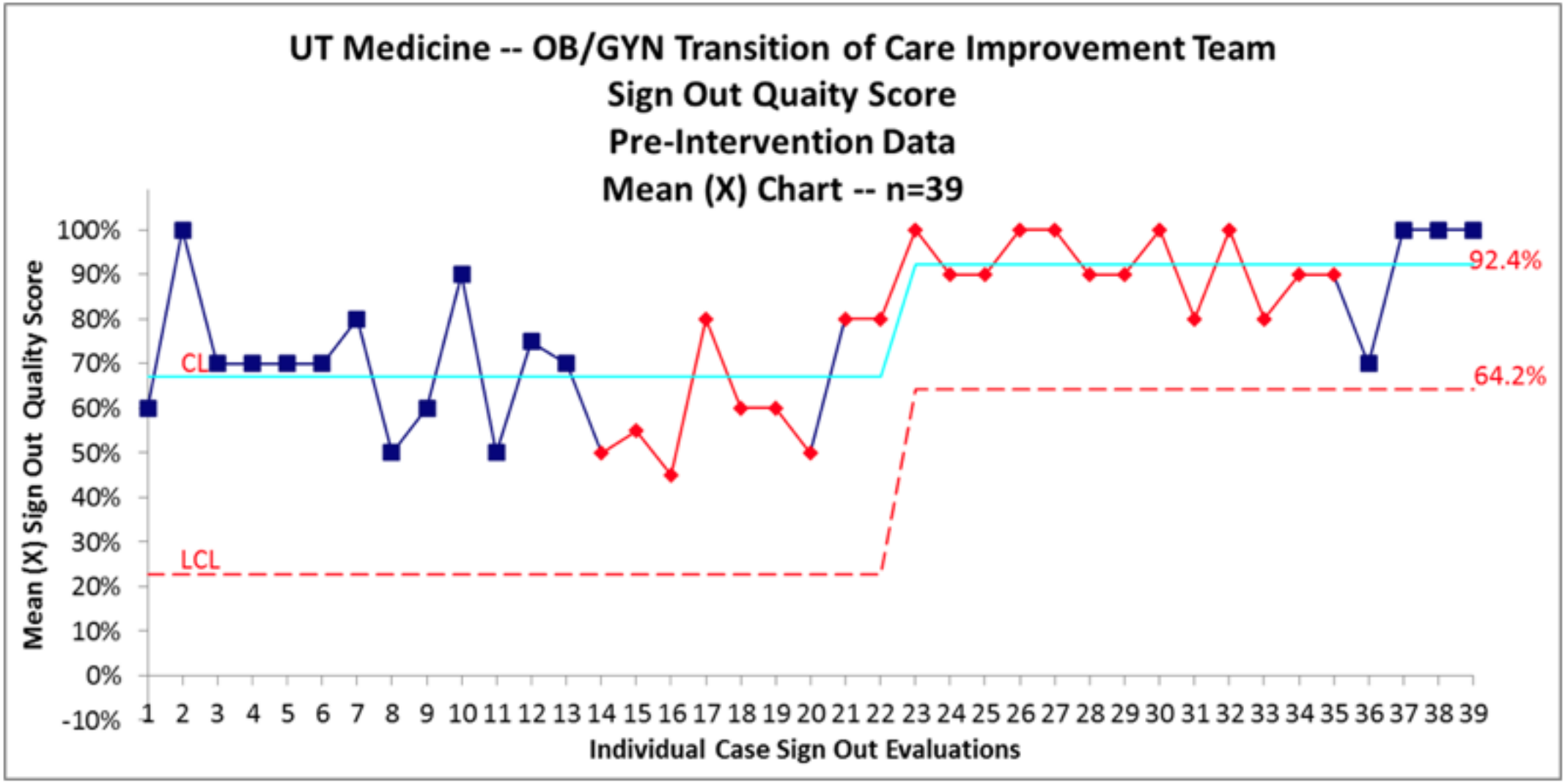
- Hour long training on the new sign-out structure
  - Implementation – We evaluated multiple standardized sign-out tools and modified them to best fit laboring patients to create our expected template.
- "Game Rules" for the sign out
  - As part of the training, we involved the residents and faculty in the making of the rules.
  - Clearly stated expectations for attendance, preparation and delivery will allow for more engaged teams and civil transfer environment.


Order of presentation
1 One liner with age, parity and diagnosis gestational age
2 Diagnosis/presenting complaint
3 Pertinent PMH, pregnancy complications and prenatal labs
(GBS and EFW on all patients)
4 Hospital course/labor curve/admit labs
5 I&O on all preeclampsia and PPH patients
6 Clearly stated plan
7 Opportunity to ask questions/clarify
8 Oncoming team restatement of the plan
Rules of sign-out
1 Starts promptly at 7 am
2 All OB charts must be present and updated
3 Every patent must have a STATED PLAN
4 Every plan must be verbally summarized by the oncoming team.
5 Clarifications and questions should occur at the completion of each patient's presentation.
6 No side conversations
7 Rubella status is rarely important for sign-out

Implementing the Change

- Resident participation in QI team (Dr. Banner)
  - Participation allows more broad ideas and realistic solution.
  - All residents participated in the “making of the rules” which allowed more broad based support.
- Sustainability with permanent guides and training
  - A poster in conference room serves as constant template.
  - All faculty participated in training.
  - Incoming residents will receive similar training.
  - The scoring system created for the QI project can be used to grade resident’s presentations at sign-out (New ACGME requirement).

Post-intervention data



Pre & Post Intervention Measurement by Line Item		
Measure	**Pre-Intervention**	**Post-Intervention**
One liner on patient	23/23 or 100%	100%
Gestational age	21/21 or 100%	100%
Diagnosis	23/23 or 100%	100%
Hospital course	19/21 or 90%	14/15 or 93%
Labor curve	6/9 or 67%	100%
I&O if applicable	7/11 or 64%	3/3 or 100%
Plan	11/23 or 48%	15/16 or 93%
Acceptance of plan by on-coming team	2/23 or 9%	8/16 or 50%
No Interruptions	18/23 or 78%	16/16 or 100%
No Omissions	19/23 or 83%	16/16 or 100%
Pertinent PMH/Preg Hx/Labs (10)		14/16 or 88%

Post survey results

To what extent do each of the following inhibit meaningful communication in the current signout process?		
	Pre-Intervention	Post-Intervention
Being called away for clinical duty	15.15%	12.05%
Being Interupped while presenting	40.63%	15.63%
Participants show up late	12.12%	3.13%
Presentation of information that is not pertinent to signout	21.21%	6.45%
Omission of pertinent information	18.18%	3.13%
Lack of faculty attendance	3.03%	3.13%
Lack of faculty participation	0.00%	3.13%
Lack of resident attendance	0.00%	0.00%
Lack of resident participation	0.00%	0.00%
Lack of resident preparedness to present	9.09%	0.00%
Intimidation by faculty	12.12%	3.13%
Side discussions not pertinent to case	18.18%	3.23%

Post survey results

In the Last 2 weeks, can you recall an OB patient who was omitted from signout (not presented at all)?		
	Pre-Intervention	Post-Intervention
YES	24.24%	6.25%

In the last two weeks, can you recall an OB patient who was presented at signout but critical information was later discovered to have been omitted?		
	Pre-Intervention	Post-Intervention
YES	45.45%	15.63%

Return on Investment

Original Investigation

Rates of Medical Errors and Preventable Adverse Events Among Hospitalized Children Following Implementation of a Resident Handoff Bundle

Amy J. Starmer, MD, MPH; Theodore C. Sectish, MD; Dennis W. Simon, MD; Carol Keohane, RN; Maireade E. McSweeney, MD, MPH; Erica Y. Chung, MD; Catherine S. Yoon, MS; Stuart R. Lipsitz, PhD; Ari J. Wassner, MD; Marvin B. Harper, MD; Christopher P. Landrigan, MD, MPH

- JAMA December 4, 2013 Volume 310, Number 21

Return on investment

- Object of the study: To determine whether introduction of a multifaceted hand off program was associated with reduced rates of medical errors and preventable adverse events
- Results:
  - medical errors decreased from 33.8 per 100 admissions to 18.3 per 100 admissions
  - preventable adverse events decreased from 3.3 per 100 admissions to 1.5 per 100 admissions

NOT measured in the project:

- Decreased medical errors
- Decreased adverse outcomes
- Increased patient satisfaction
- Improved staff morale
- Improved sign-out efficiency (sign-out length remained the same)

Thank you!

CENTER FOR PATIENT SAFETY & HEALTH POLICY
UT HEALTH SCIENCE CENTER™
WE MAKE LIVES BETTER

Educating for Quality Improvement & Patient Safety