CLINICAL SAFETY & EFFECTIVENESS COHORT # 8

IMPROVING RESIDENT HANDOFFS

CENTER FOR PATIENT SAFETY & HEALTH POLICY

UT HEALTH SCIENCE CENTER™

SAN ANTONIO

Educating for Quality Improvement & Patient Safety

THE UNIVERSITY OF TEXAS

MD ANDERSON CANCER CENTER

Making Cancer History

FINANCIAL DISCLOSURE

Stephanie Reeves, DO has no relevant financial relationships with commercial interests to disclose.

THE TEAM

- CS&E Participant
  - **Stephanie Reeves**, D.O. – Clinical Instructor , Department of Pediatrics, UTHSCSA
- Sponsors
  - **Shawn Ralston**, M.D. - Clinical Associate Professor and Division Chief, Inpatient Pediatrics, UTHSCSA
  - **Tom Mayes**, M.D.- Chairman, Department of Pediatrics, UTHSCSA

Facilitator

Amruta Parekh, MD,MPH

WHAT WE ARE TRYING TO ACCOMPLISH?

OUR AIM STATEMENT

INCREASE THE ANTICIPATORY GUIDANCE* PRESENT IN RESIDENT'S PATIENT HANDOFFS IN GENERAL INPATIENT PEDIATRICS BY 50% BY 9/1/11 AT CSRCH.

*Anticipatory Guidance includes providing specific instructions regarding how to follow up data and what to do for possible clinical scenarios that may occur. Most often found in an if/then format.

PROJECT MILESTONES

- Team Created — May 2011
- AIM statement created — May 2011
- Weekly Team Meetings — May – August 2011
- Background Data, Brainstorm Sessions, Workflow and Fishbone Analyses — May – June 2011
- Interventions Implemented — June – August 2011
- Data Analysis — Aug – September 2011
- CS&E Presentation — September 16, 2011

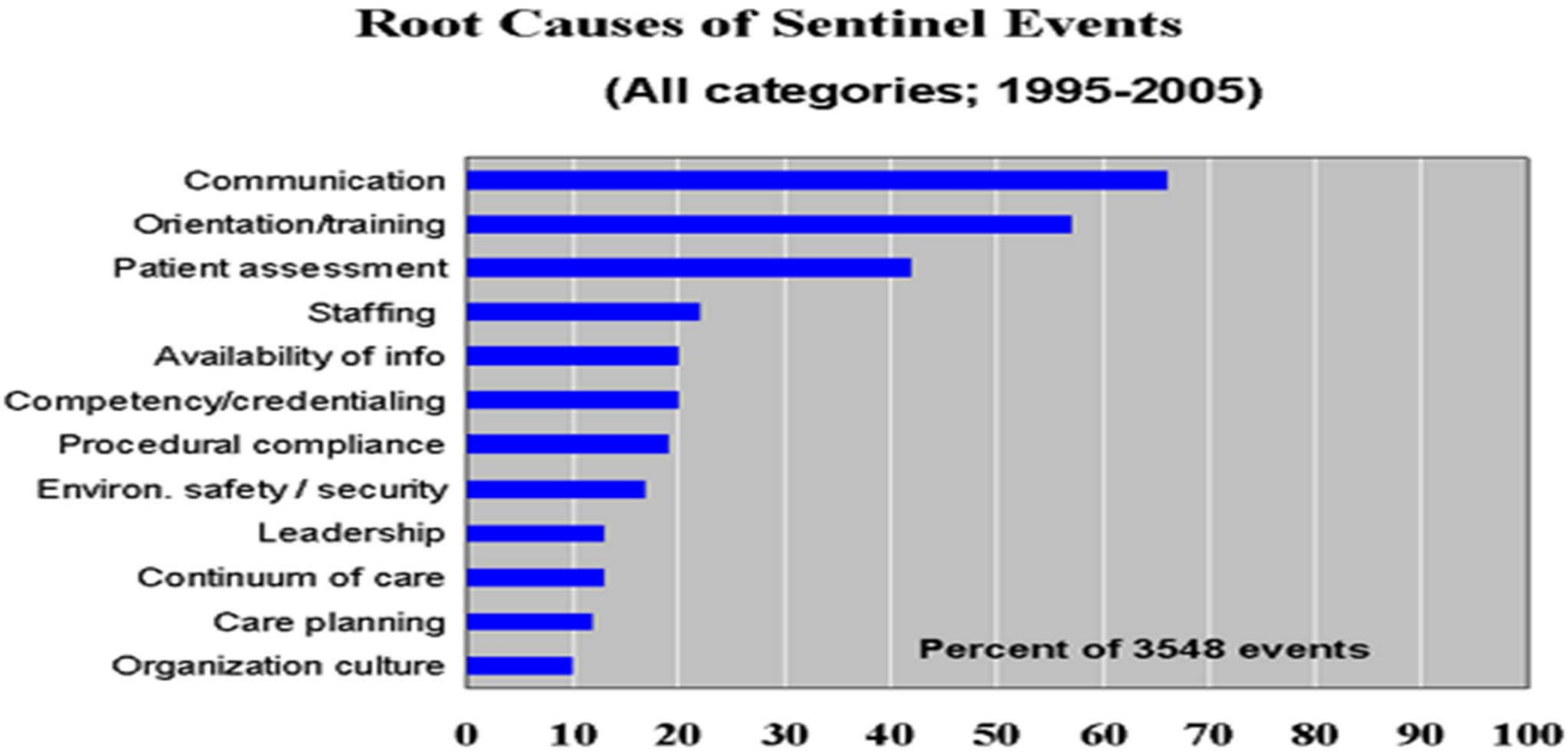
BACKGROUND – INSTITUTE OF MEDICINE REPORT

- Impact of Error:
  - 44,000–98,000 annual deaths occur as a result of errors
  - Medical errors lead followed by surgical mistakes and complications
  - More Americans die from medical errors than from breast cancer, AIDS, or car accidents
  - 7% of hospitalized patients experience a serious medication error

BACKGROUND – INSTITUTE OF MEDICINE REPORT

Cost associated with medical errors is $8-29 billion annually.

Communication Issues Leading Factor in Root Causes



COLLATION OF SENTINEL EVENT-RELATED DATA REPORTED TO THE JOINT COMMISSION (1995-2005). AVAILABLE HTTP://WWW.JOINTCOMMISSION.ORG/SENTINELEVENTS/STATISTICS/

ERRORS IN HANDOFFS

- Communication failure – most common root cause of sentinel events in US hospitals
- Poor sign out leads not “knowing” the patients and thus adverse events
- Variability in handoffs
- Shift work mentality
- Vulnerable gap in patient care activities

WHY NOW?

- ACGME Duty Hour limits
  - Increased handoffs by 15%(Vidyarthy, 2006)
  - Less continuity during hospital stay
- Joint Commission National Patient Safety Goal 2006
  - Implement a standardized approach to handoff communication and provide opportunity for staff to ask and respond to questions

CASE EXAMPLE

- 8 month old admitted to the PICU in January with bronchiolitis. Improved condition and ready for transfer to the floor.
- Signed out to resident on call on 1/15/11 but did not leave the PICU until 1/16/11 (different residents)
- Upon arrival to the floor, the patient had orders and was stable thus a physician was never notified of his transfer out of the PICU and to a different service
- 4 days later it was realized that he had not been seen by a physician since his transfer out of the PICU
- After this case, steps taken to change PICU transfer process including need for new orders from floor resident

SELECTED PROCESS ANALYSIS TOOLS

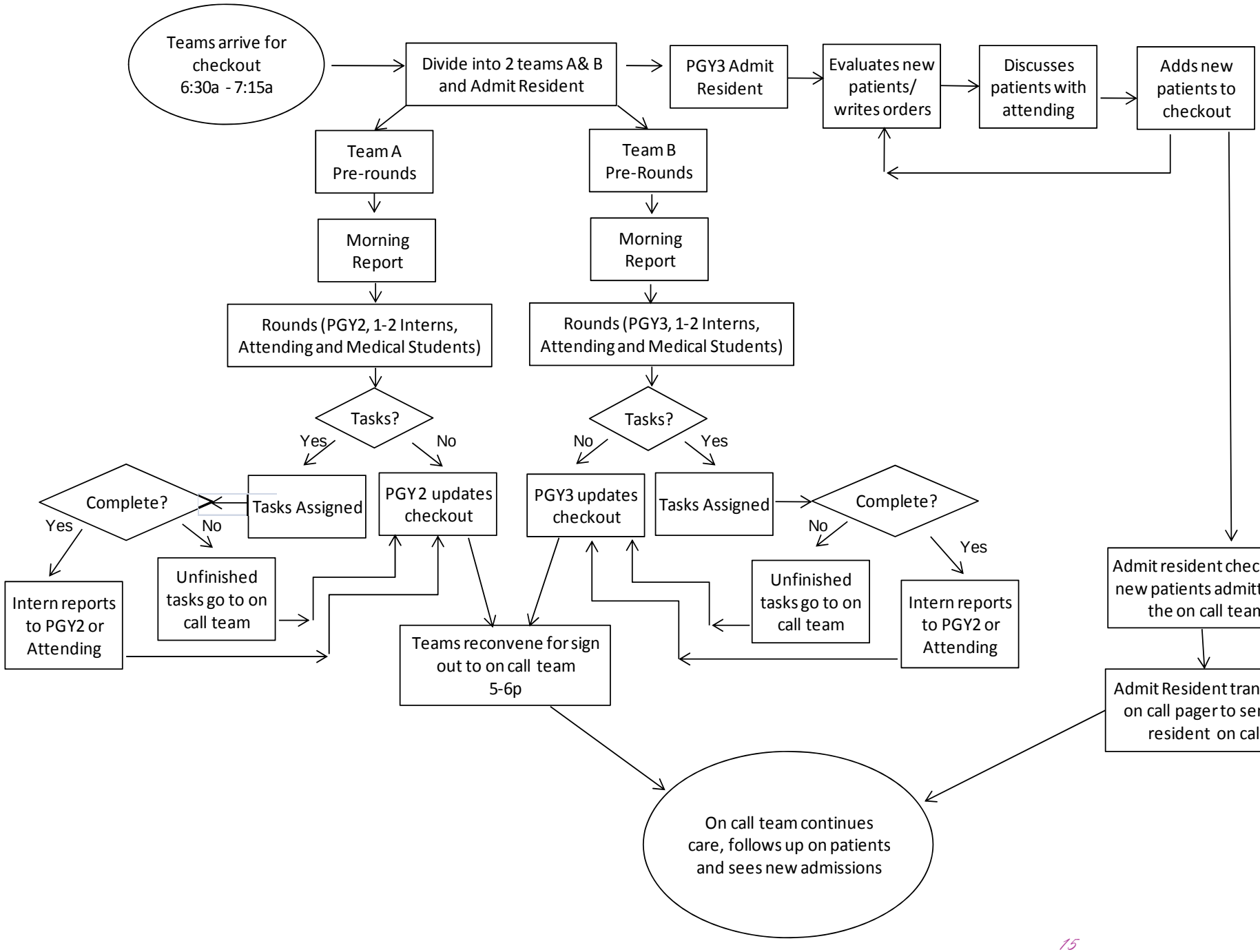
- Brainstorming
  - Email surveys to residents/faculty
  - Literature search on patient handoffs
- Process Map
- Fishbone

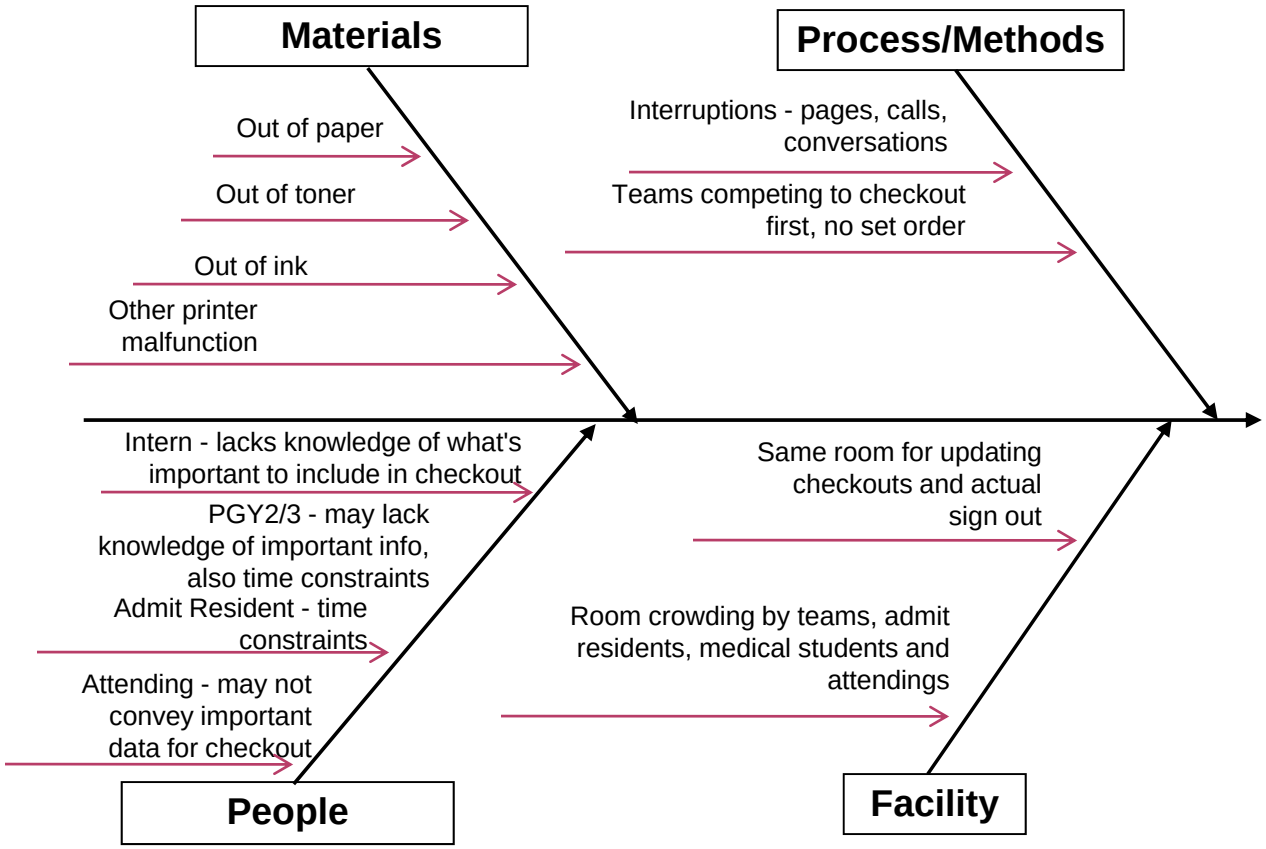
CSR RESIDENT PERSPECTIVE ON HANDOFFS

- “don’t know what information is important”
- “sometimes people handing off patients weren’t there during rounds”
- “lack of time”
- “takes too long”
- “medications on written sign out often wrong”
- “need EMR to auto-import data”

CSR PEDIATRIC FACULTY PERSPECTIVE ON HANDOFFS

- "residents don't know the patients"
- "they don't realize what information is important"
- "take too long handing off patients because of inclusion of irrelevant details"
- "shift work mentality"
- "not my patient, I was just cross-covering today"


Teams arrive for checkout 6:30a - 7:15a
Divide into 2 teams A& B and Admit Resident
PGY3 Admit Resident
Evaluates new patients/ writes orders
Discusses patients with attending
Adds new patients to checkout
Team A Pre-rounds
Team B Pre-Rounds
Morning Report
Morning Report
Rounds (PGY2, 1-2 Interns, Attending and Medical Students)
Rounds (PGY3, 1-2 Interns, Attending and Medical Students)
Tasks?
Tasks?
Yes
No
No
Yes
Complete?
Tasks Assigned
PGY2 updates checkout
PGY3 updates checkout
Tasks Assigned
Complete?
Yes
No
No
Yes
Intern reports to PGY2 or Attending
Unfinished tasks go to on call team
Unfinished tasks go to on call team
Intern reports to PGY2 or Attending
Admit resident checks out new patients admitted to the on call team
Teams reconvene for sign out to on call team 5-6p
Admit Resident transfers on call pager to senior resident on call
On call team continues care, follows up on patients and sees new admissions



Problem Statement

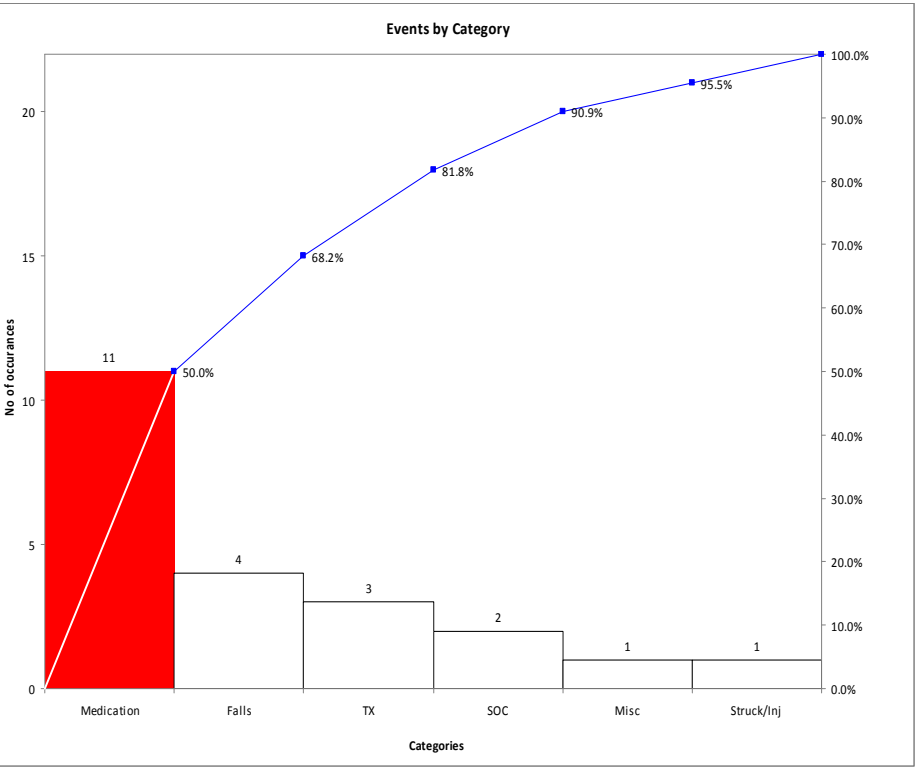
Lack of anticipatory guidance present in resident's patient handoffs given to overnight on-call team

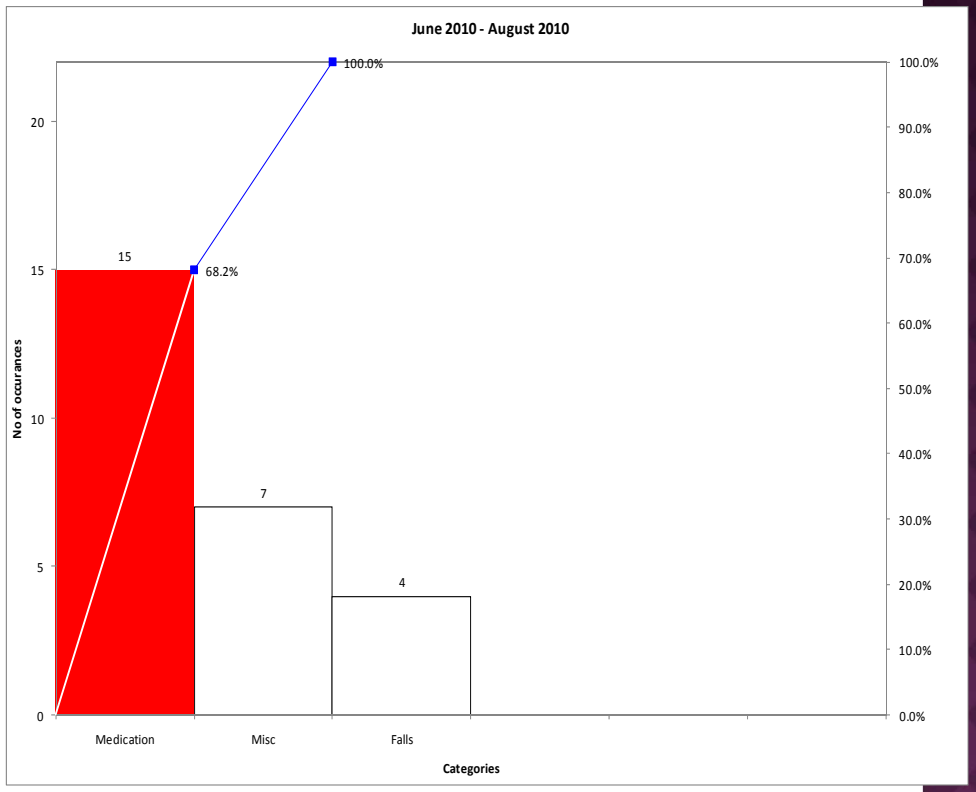
HOW WILL WE KNOW THAT A CHANGE IS AN IMPROVEMENT?

- Direct observation of resident handoffs – new ACGME requirement
- Monitor number of patients where specific anticipatory guidance is given
- Transitions in care are a prime target for improved patient safety efforts
- Sentinel event data creates an urgency for change

PREVIOUS PROJECT

INCREASING VARIANCE REPORTS ON 3RD AND 6TH FLOOR

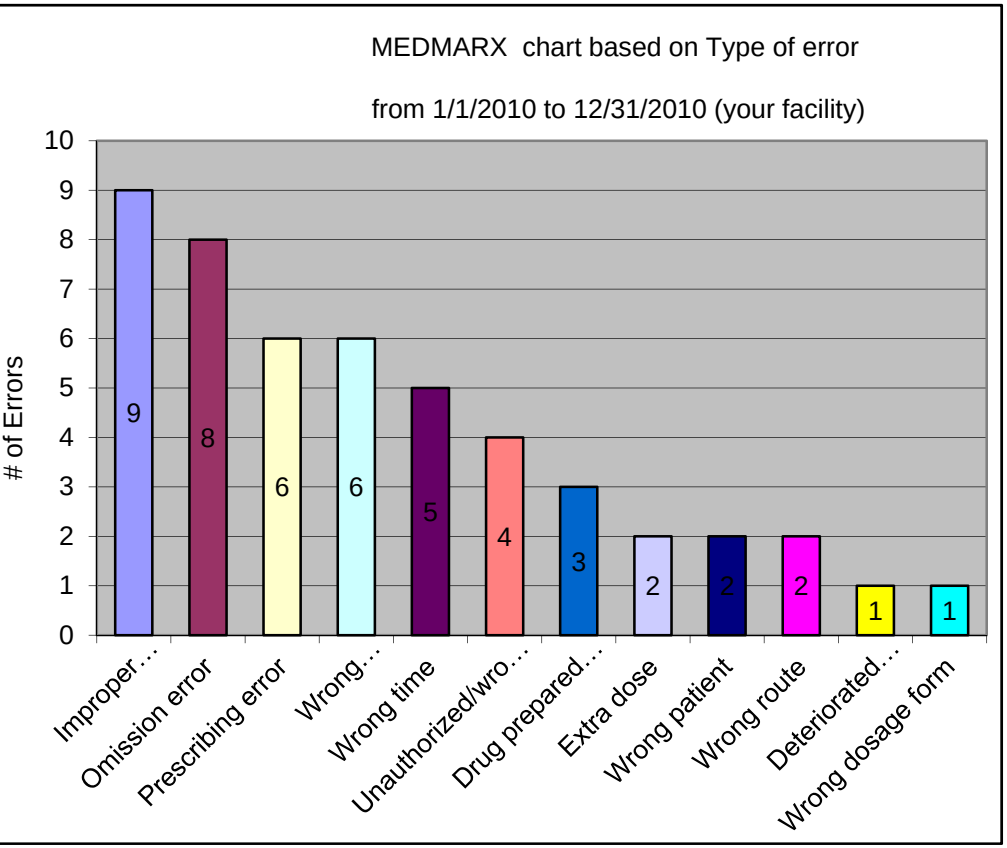


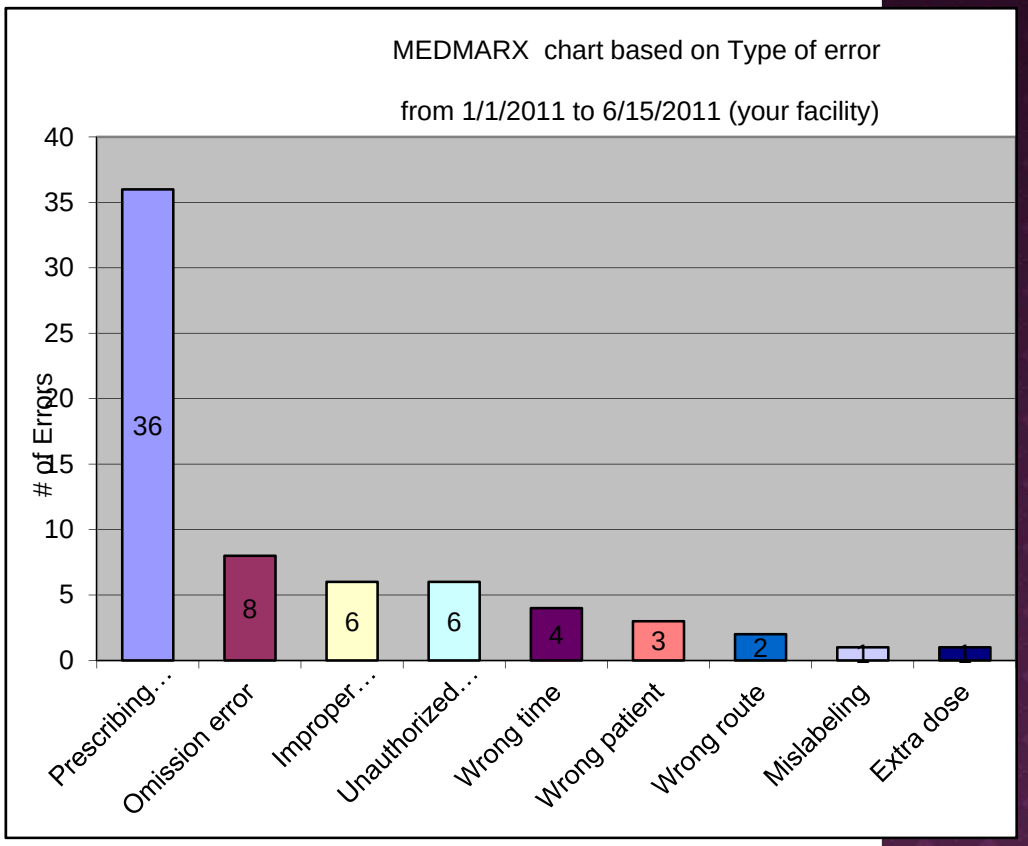


June -August 2009

June-August 2010

PREVIOUS PROJECT
DECREASING MEDICATION ERRORS





Jan – Dec 2010, 3rd and 9th floors

Jan – June 2011, 3rd and 9th floors

INTERVENTION - PLAN

- Increase training amongst residents and interns regarding importance of patient handoffs and how to do so properly
- Implementation of “If/Then” in written handoffs
- Implementation of “If/Then” discussions during family centered rounds

IMPLEMENTING THE CHANGE
DO

- June 2011 – Faculty began direct observation of resident handoffs as part of new ACGME requirements
- June 28, 2011 – Intern Bootcamp – Interns given a training session taking a written patient case and translating it into an effective written and verbal handoff
- June 30, 2011 – Email training reminders for 2nd/3rd year residents regarding importance of handoffs especially inclusion of "if/then" guidance for brand new interns taking call

IMPLEMENTING THE CHANGE (CONT.)
DO

- July 1, 2011 – Written handoff template changes made
- July 6, 2011 – Discussion with faculty regarding specific "if/then" guidance during family centered rounds

Room Name DOB Attending Weight kg DOA Allergies Intern
One line summary of clinical scenario PCP: Phone#:

Problem List:	Medications/Diet:	Results, Events:	If…Then:	To Do (with plan):
1. 2. 3.	1. 2. 3.		[ ]	[ ]

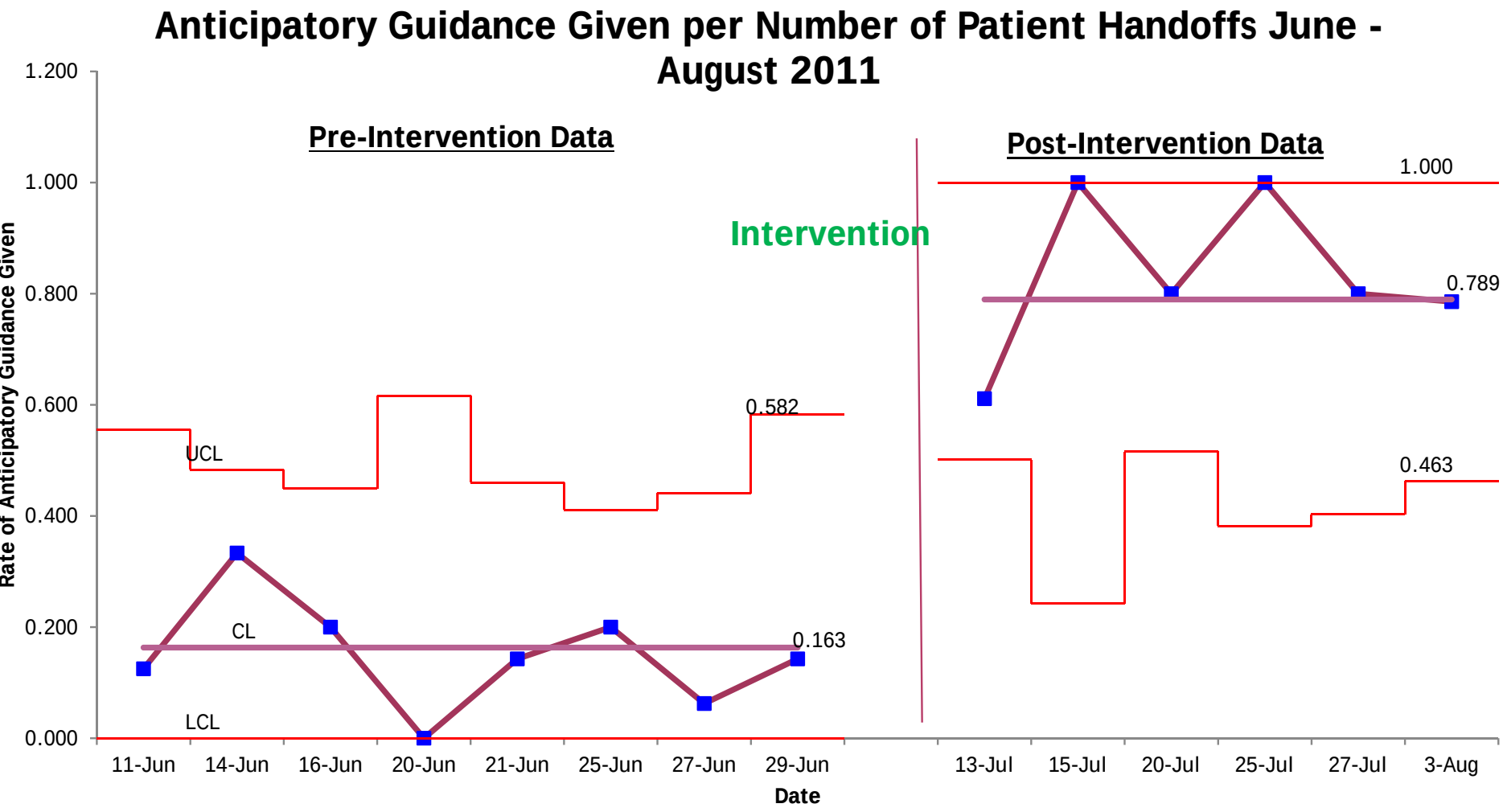
Pediatric Resident Sign-Out Checklist

- S - Sick/Not sick
- I - Identifying Data
  - Concise One-liner
  - Name
  - Room Number
  - Allergies
  - Weight
  - Primary Team
  - Admit Date
- G – General Hospital Course
  - Current Problems
  - Pertinent PMH
  - Medications
  - Special Diet
  - Oxygen/IVF
  - Social Concerns e.g., CPS involvement
- N – New Events of Day
  - Changes in Status
  - Medication Changes
- I – If/Then Statements
  - Issues to be expected with a plan to resolve
    - E.g., If HTN > 135/80, then give prn Nifedipine
- T – To Do List with Plan/Rationale
  - Labs/Imaging to check and what to do with results
  - Possible D/C if meets certain criteria
- ? – Any questions
  - Allow sign out recipients to ask questions
  - Provide satisfactory answers

RESULTS/IMPACT CHECK

- Ongoing review of handoff checklists completed by faculty supervising resident's patient handoffs
- August 4, 2011 and September 15, 2011 – Monthly inpatient school sessions with current interns/residents on the pediatric wards discussing patient handoffs and "if/then" guidance

RESULTS/IMPACT



EXPANSION OF IMPLEMENTATION ACT

- Continue to stress importance of “If/Then” guidance in handoffs
- Consider plans to modify written handoff templates on other services, ie. UH, GI, Heme-Onc

RETURN ON INVESTMENT (ROI)

- Unfortunately unable to obtain error reports from CSR for time period post intervention
- Reasonable to assume that better patient handoffs and greater guidance given to residents covering patients would lead to fewer medical errors which would result in savings
- More efficient resident handoffs leave residents with more time for direct patient care activities

CONCLUSIONS

- Pre-intervention – Residents only gave anticipatory guidance during patient handoff about 16% of the time (16 of 98 patients)
- Post-intervention – Residents gave anticipatory guidance during patient handoff about 78.9% of the time (60 or 78 patients)
- Verbal feedback from residents is positive with the majority stating that they feel more prepared for overnight call and issues encountered

CONCLUSIONS/WHAT'S NEXT

- Still an issue of patient handoff taking a very long time
  - Did not assess length of patient handoff during this project due to change in resident year. Would have been comparing finishing intern's handoffs with brand new intern's handoffs
- Plans to start timing resident handoff and brainstorming for ways to make it more efficient

REFERENCES

- http://www.iom.edu/Reports/1999/To-Err-is-Human-Building-A-Safer-Health-System.aspx (Institute of Medicine Report)
- Arora, V., Johnson, J. A Model for Building a Standardized Hand-off Protocol. J on Quality and Patient Safety. Nov 2006:V32No11;646-55
- Riesenberg, L et al. Residents' and Attending Physicians' Handoffs: A systematic Review of the Literature. Academic Medicine, Dec 2009 V84No12;1775-87
- Quality Improvement: Kelsey Sherburne MD and team: Increase the mean number of variance reports from the 3rd and 6th floor of the CHRISTUS Santa Rosa Children's Hospital by 50% by the end of August 2010.
- Quality Improvement: Mandie Svatek MD and team: Medication Errors and Safety, To decrease the number of medication errors for the Pediatric Medical Care Unit at CHRISTUS Santa Rosa Children's Hospital by 10% by June 2011

Thank you!

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