Clinical Safety & Effectiveness
Cohort # 23 / Team # 6

I-PASS: Improving Emergency Department Change-of-Shift Transitions of Care Using a Standardized Communication Tool

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Educating for Quality Improvement & Patient Safety

The Team

- Emergency Medicine
  - Bill Fernandez, CS&E Participant
  - Rose Ramos, Team Member
  - Christopher Gelabert, Team Member
  - Meera Gebrael, Team Member
  - Sherry Martin, Facilitator
- Department Sponsors
  - Bruce Adams, MD, Professor & Founding Chair
  - Andrew Muck, MD, Associate Professor & Interim Chair
    Department of Emergency Medicine

Background

- Emergency Department (ED) Care
  - 137 million visits annually in US
  - Time-pressure
  - Uncertainty
- ED Transfers of care (i.e., handoffs)
  - Uniquely susceptible to error
  - Lapses in Info
  - Disruptions
- May adversely affect patient care
  - Delays in Care
  - Patient harm

Overall Vision

- Standardize communications
- Confirm “key” info communicated
- Prevent harm

Aim Statement:
ED-based I-PASS Handoff Intervention

The specific aims of this project are to:

A) Improve **satisfaction** with resident physician sign-out in providing critical information necessary to safely execute patient care during handoffs in the ED by 50% among both residents and attending physicians - Oct 2018 to Jan 2019

B) Improve the **adherence** of I-PASS communication tool use by resident physicians during shift change (i.e., handoffs) in the emergency department (ED) from 0 to 80% - Oct 2018 to Jan 2019

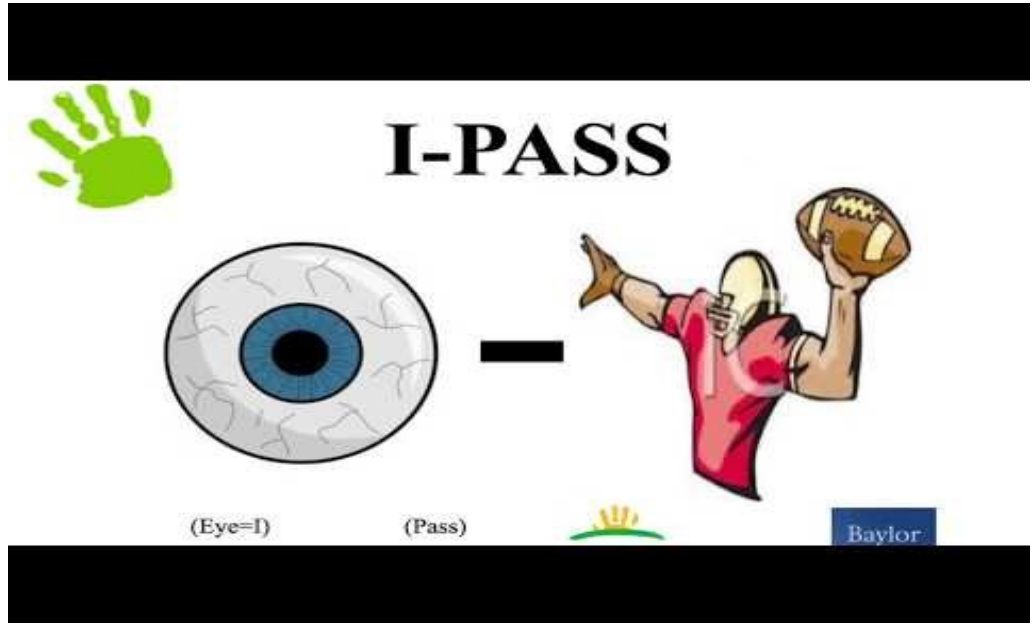
How Will We Know That a Change is an Improvement?

- **Outcome Measures**
  - Satisfaction with content of ED resident sign-outs by ED attendings
    - Use ongoing web-based survey tool (survey monkey) judged by ED attendings
    - Propose to increase satisfaction with content of information during sign-outs by 50%
  - Satisfaction (i.e. self-efficacy) of information transfer by ED residents
    - Use web-based pre-post intervention (survey monkey)
    - Propose to increase self-efficacy during handoffs by 50%
- **Process Measure**
  - Adherence of I-PASS tool use by ED residents
    - Use ongoing web-based survey tool (survey monkey) judged by ED attending
    - Propose to increase accuracy of I-PASS use from 0% to 80%

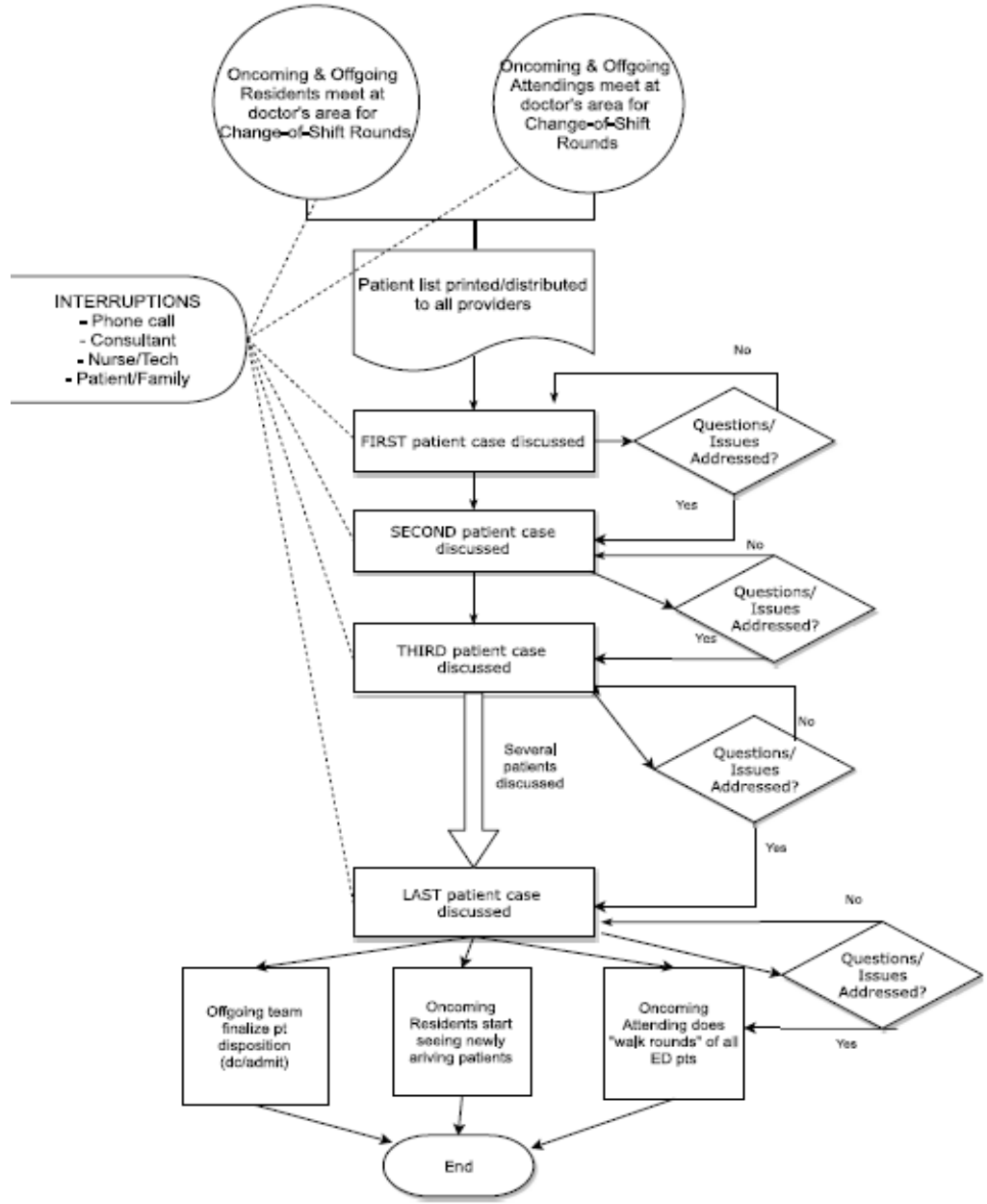
The I-PASS Intervention

I-PASS
BETTER HANDOFFS. SAFER CARE.

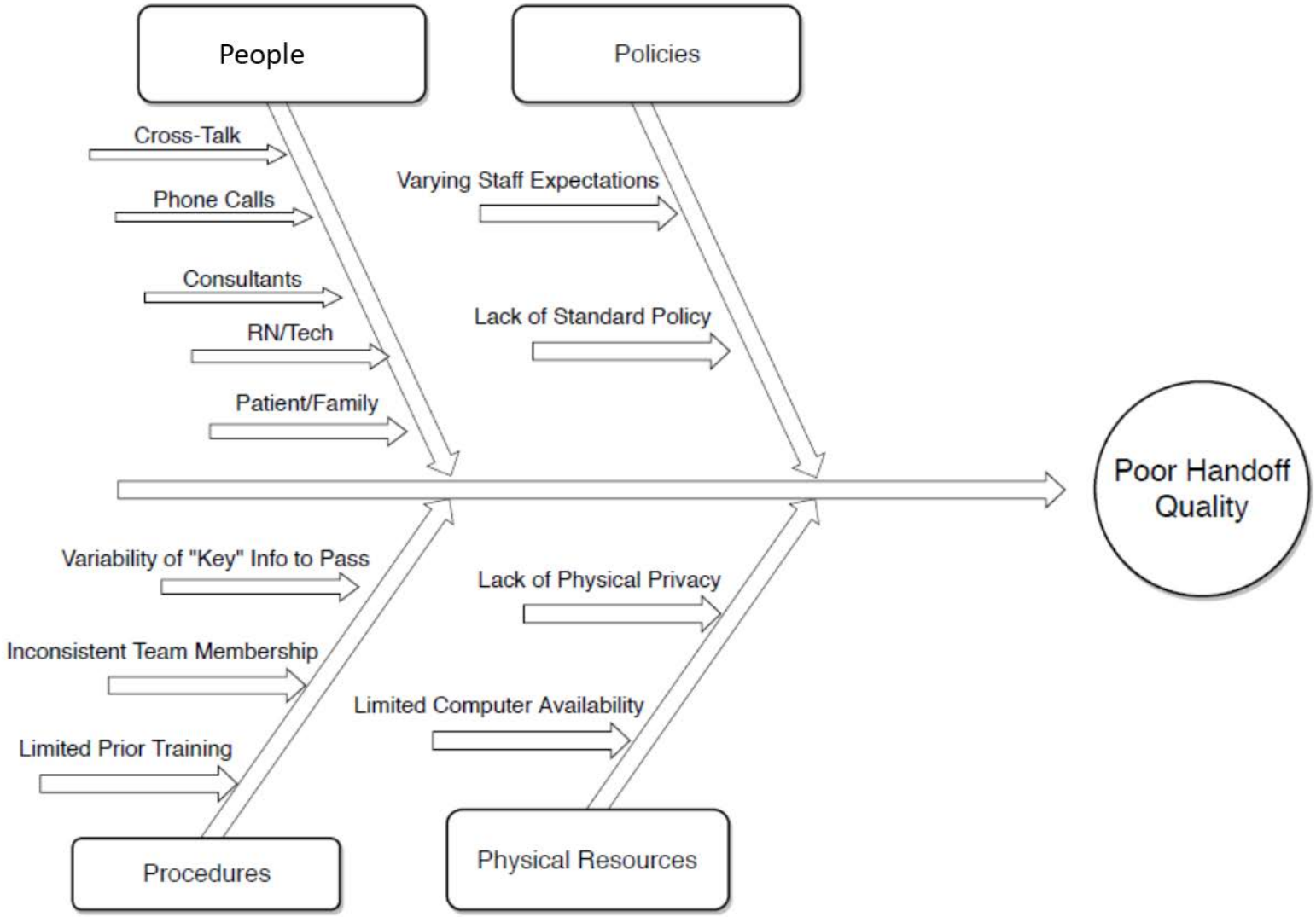
I	Illness Severity	• Stable, "watcher," unstable
P	Patient Summary	• Summary statement • Events leading up to admission • Hospital course • Ongoing assessment • Plan
A	Action List	• To do list • Time line and ownership
S	Situation Awareness and Contingency Planning	• Know what's going on • Plan for what might happen
S	Synthesis by Receiver	• Receiver summarizes what was heard • Asks questions • Restates key action/to do items



Flowchart: ED Handoffs



Obstacles to Effective Resident Handoffs in the Emergency Department



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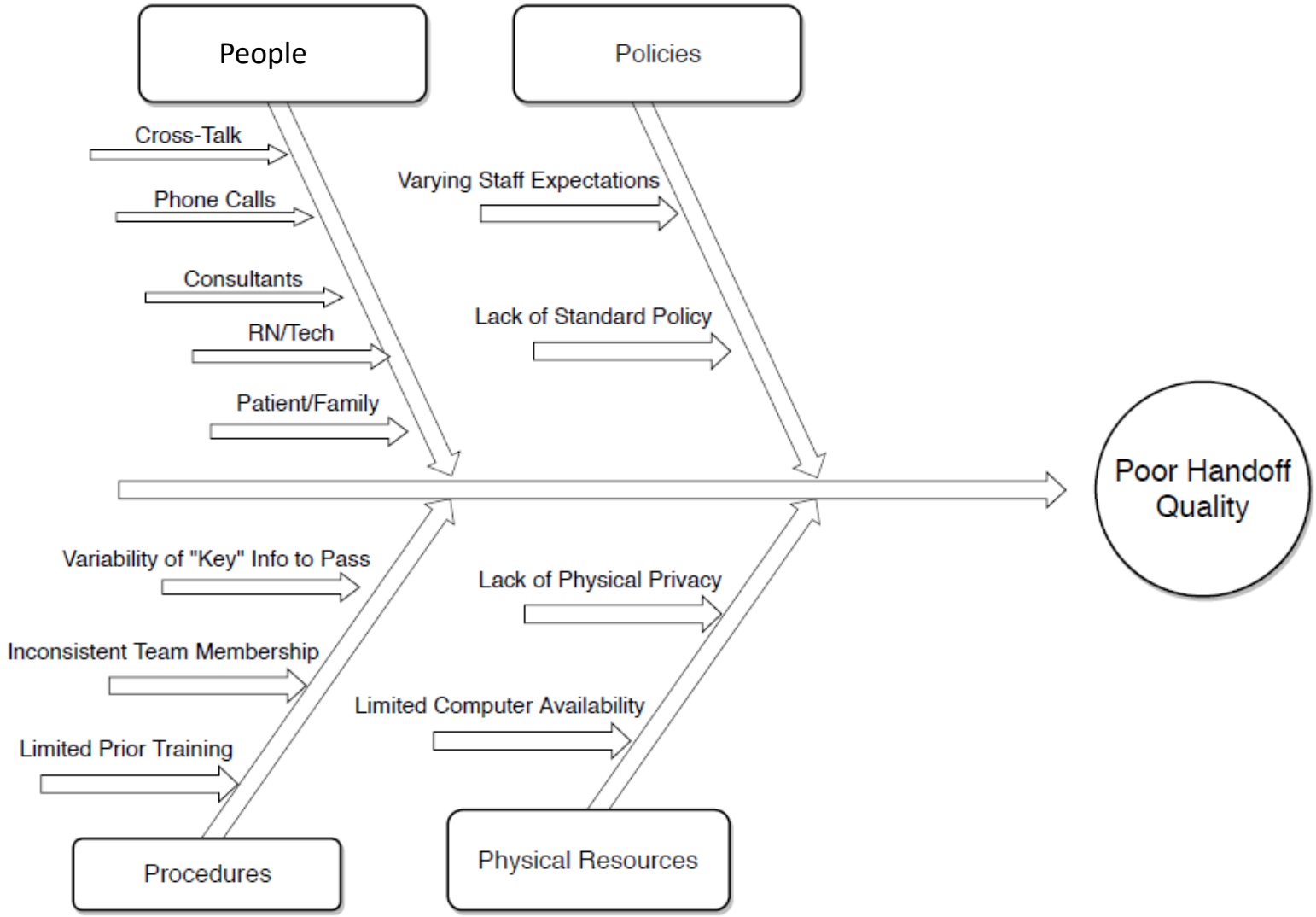
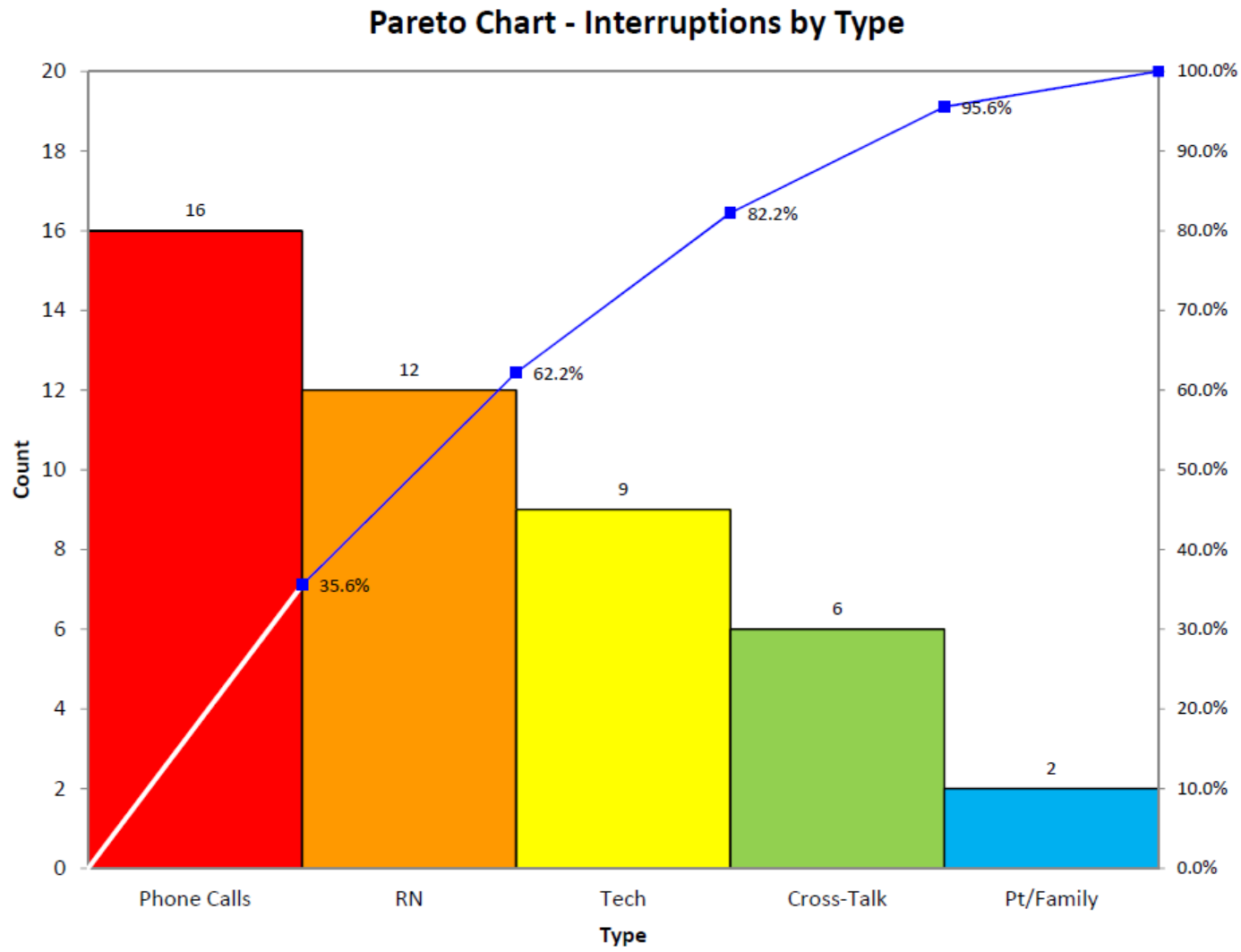



Pareto Chart - Interruptions by Type
Count
Type
Phone Calls
RN
Tech
Cross-Talk
Pt/Family
16
12
9
6
2
35.6%
62.2%
82.2%
95.6%
100.0%
0
2
4
6
8
10
12
14
16
18
20
0.0%
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%
70.0%
80.0%
90.0%

Drivers of Failure: Interventions

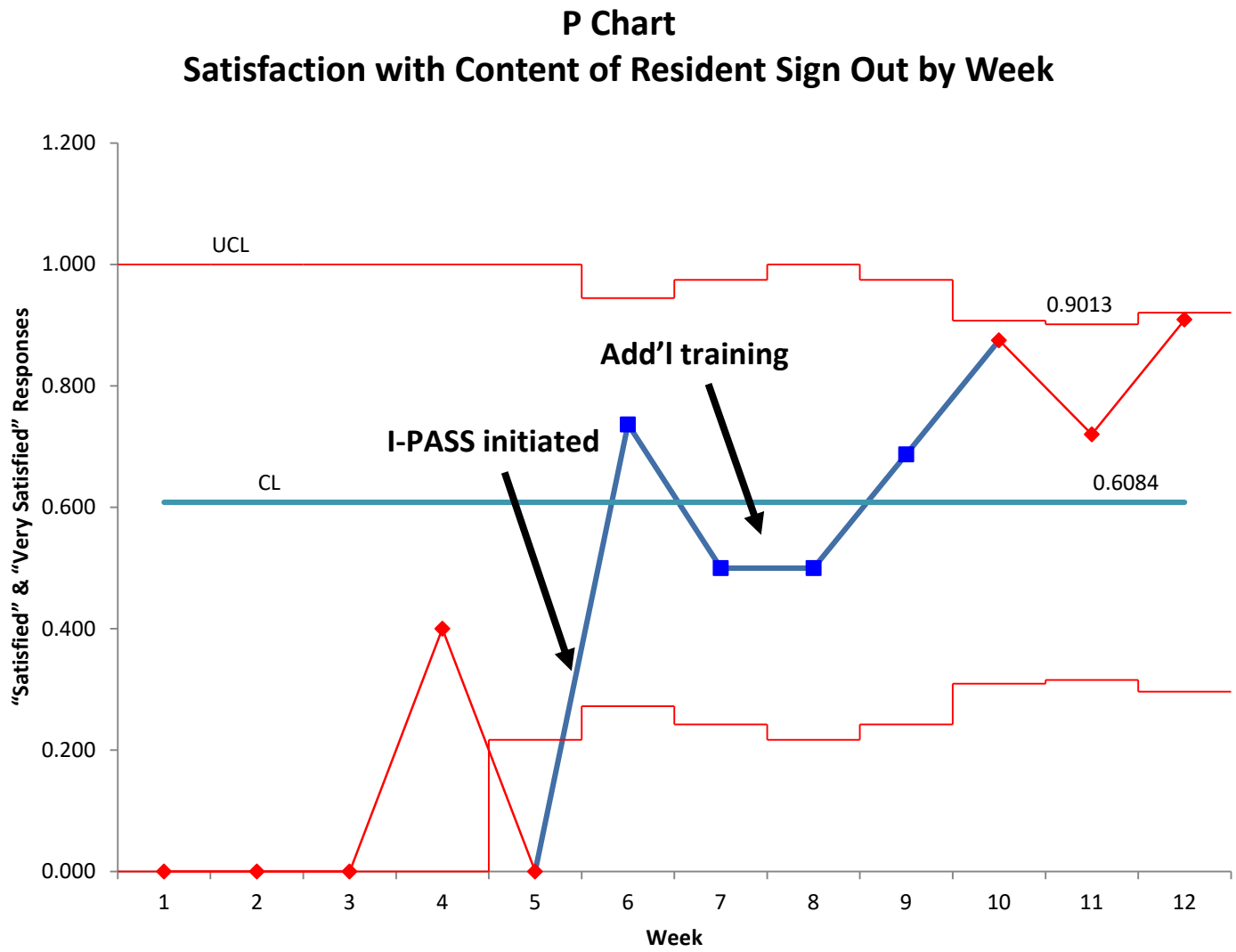
Goal	Primary Drivers Of Failure	Interventions
- Improve resident satisfaction in handoffs by 50%	Reduce Interruptions 	"Pre-rounding" to address nursing questions prior to handoff rounds
		Avoid paging consults < 15 min of shift change to limit calls during rounds
		Discharge Facilitator Coordinator (DFC) nurse attends rounds to help ensure interruptions are minimized
- Improve accuracy of I-PASS tool use from 20% to 80% - Improve attending satisfaction in handoffs by 50%	No standard method for handoff communication currently in use	I-PASS handoff tool implementation

Results: Satisfaction with Resident Sign Out

How satisfied are you that this resident has provided sufficient Information to safely manage care?

- ☐ Very Satisfied
- ☐ Satisfied
- ☐ Neutral
- ☐ Dissatisfied
- ☐ Very Dissatisfied

Results: Satisfaction with Resident Sign Out

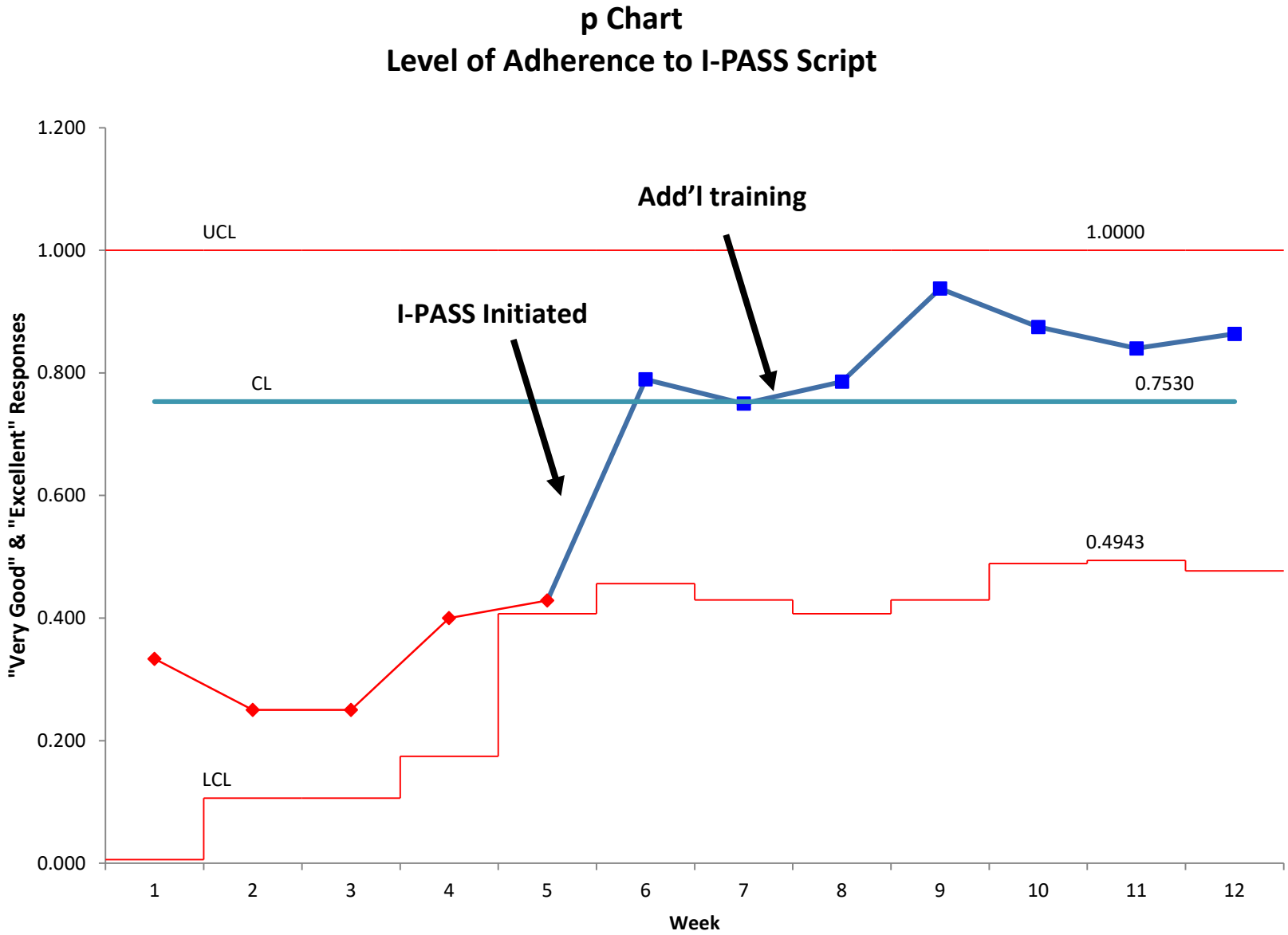


Results: Adherence to I-PASS

Overall, how well does this resident adhere to the I-PASS Script?

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Fair
- ☐ Poor

Results: Adherence to I-PASS

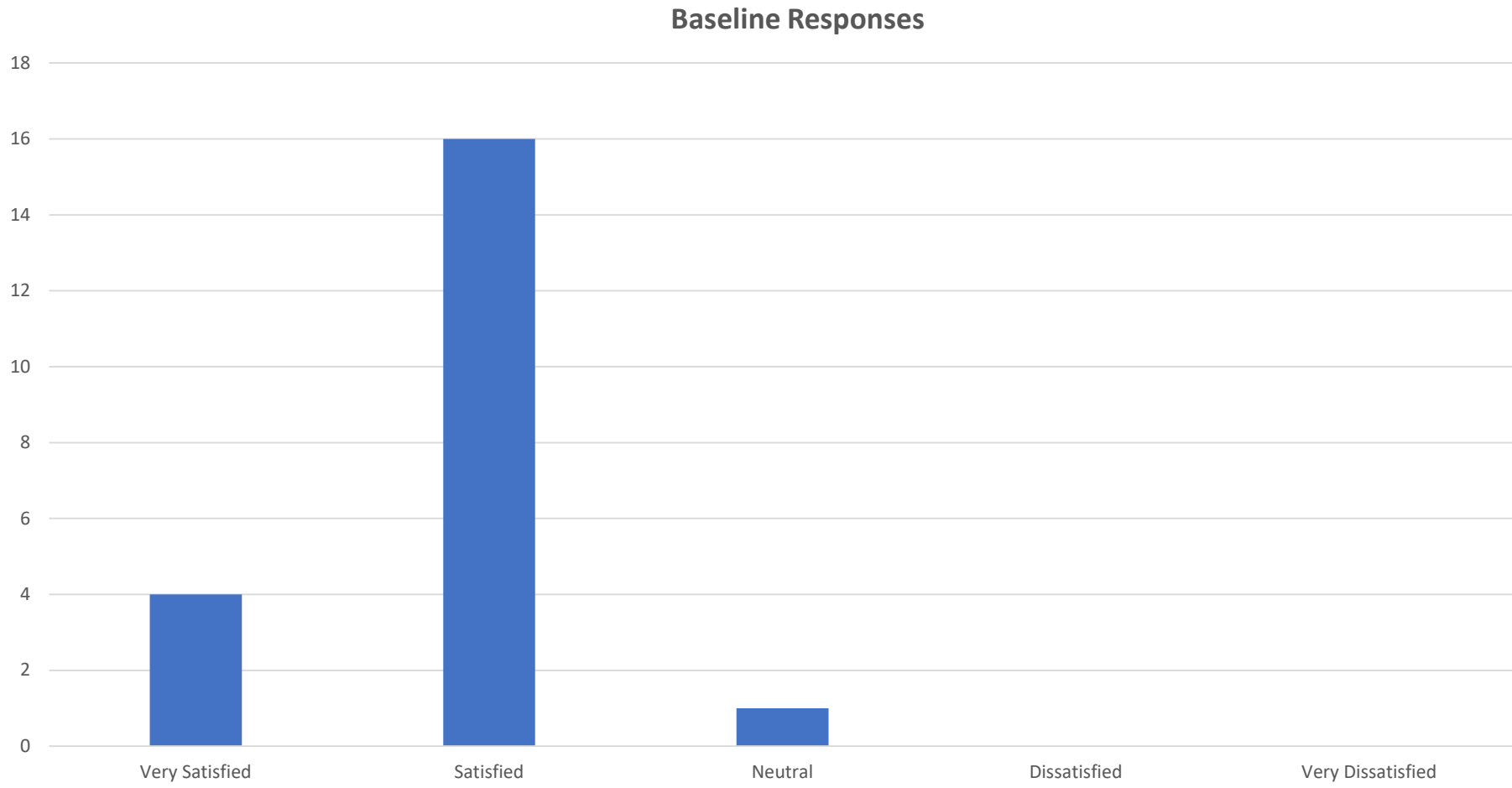


Results: Resident Self-Efficacy Giving Sign Out

How satisfied are you that the information you've GIVEN is sufficient to safely manage patient care?

- ☐ Very Satisfied
- ☐ Satisfied
- ☐ Neutral
- ☐ Dissatisfied
- ☐ Very Dissatisfied

Results: Resident Self-Efficacy Giving Sign Out



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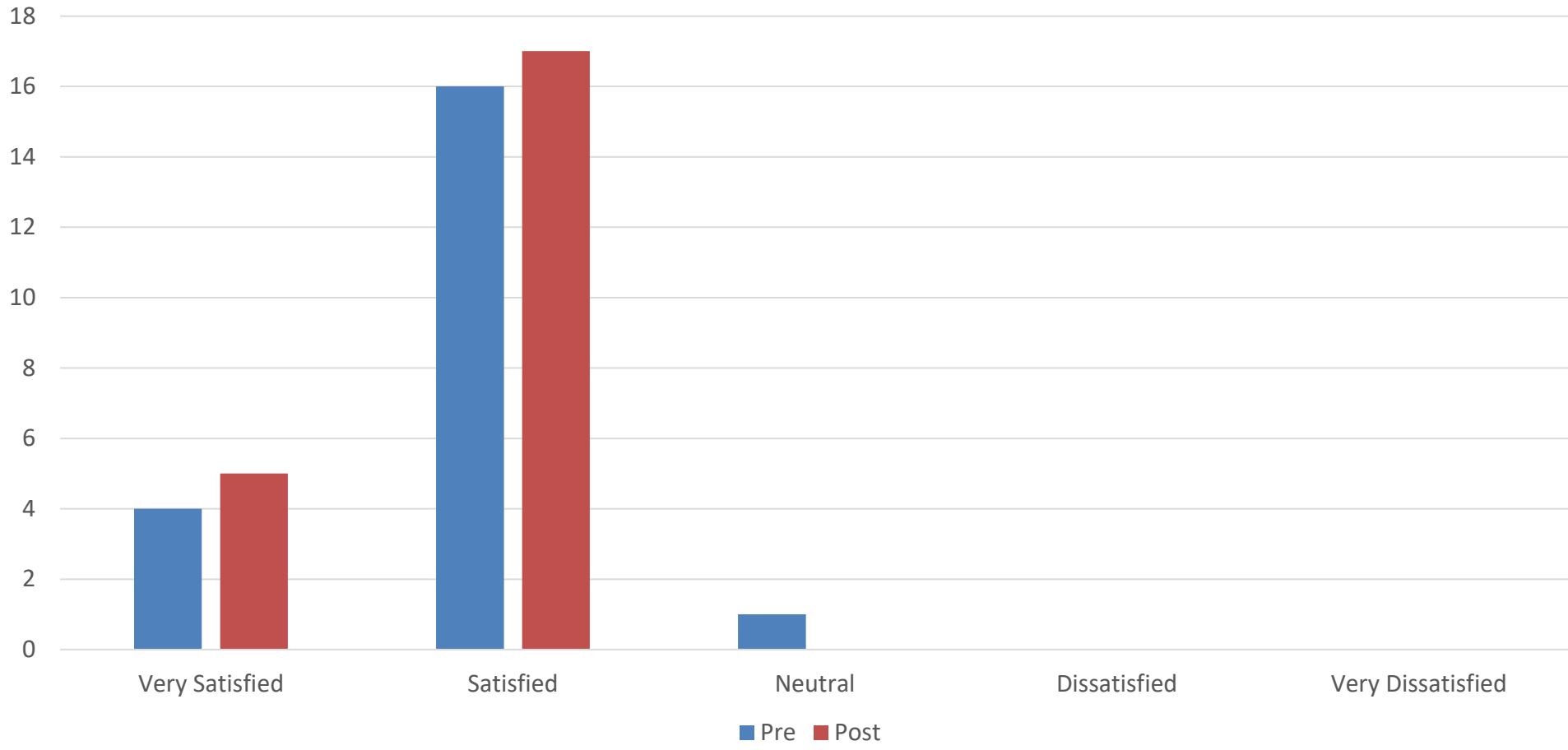
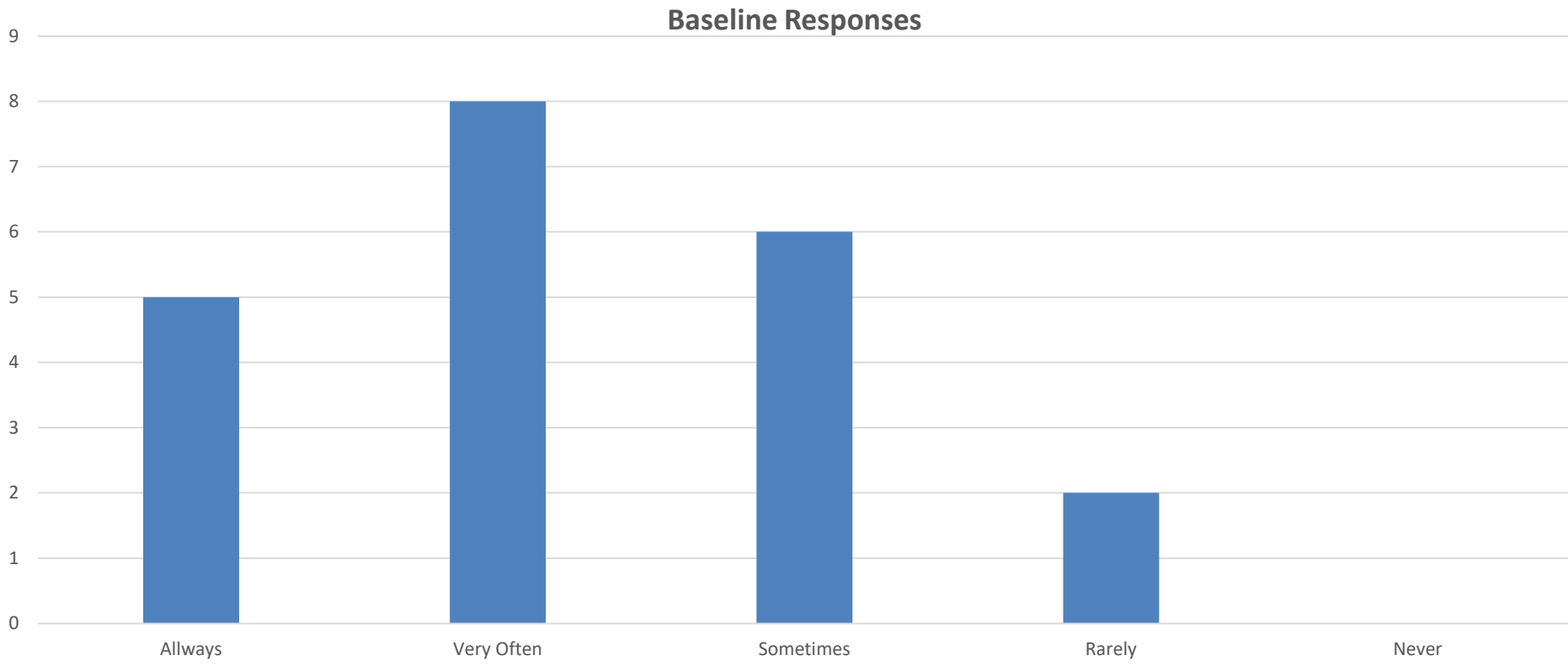


Results: Disruptions During Sign Out

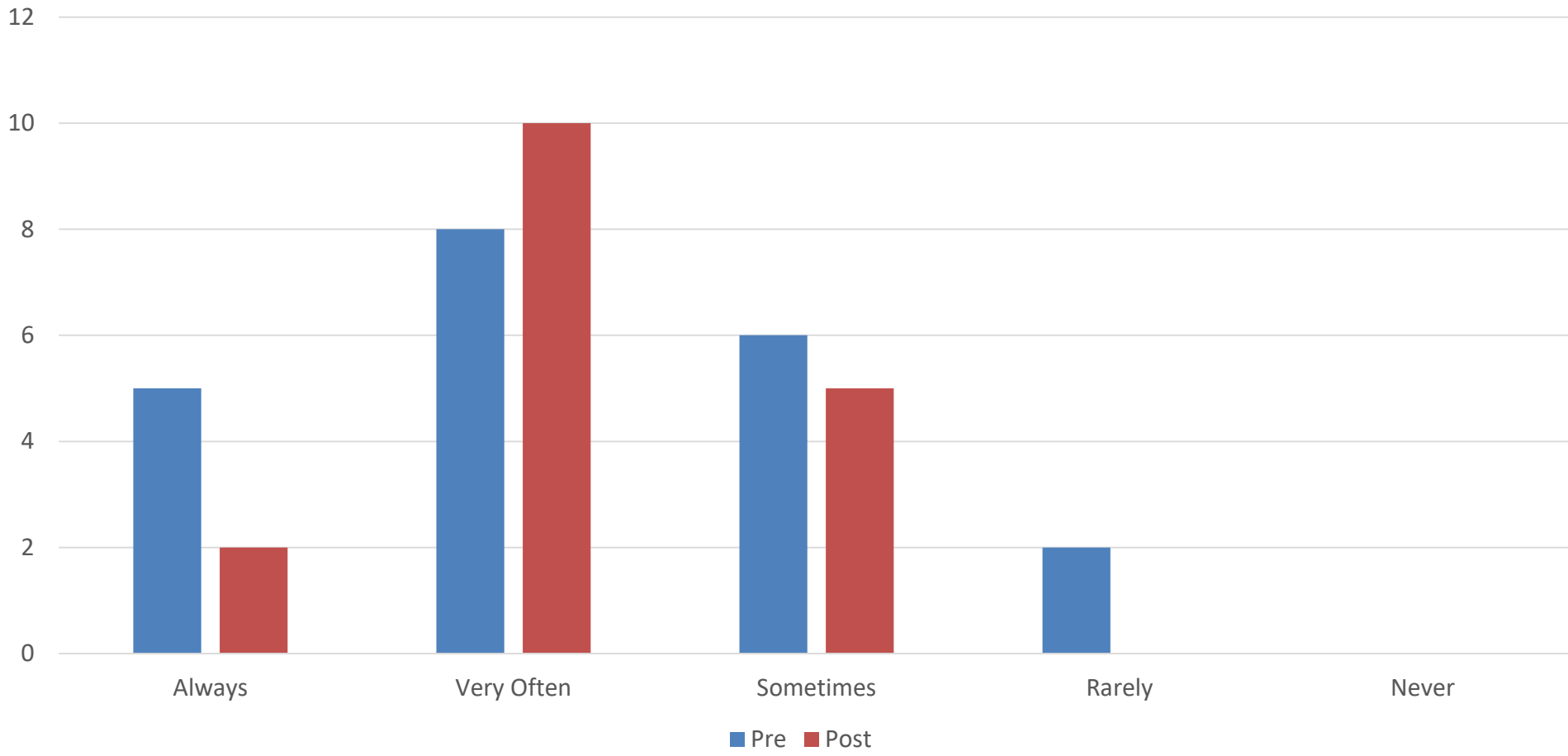
In the past 30 days….
How often have you experienced disruptions in the ED handoff process that could negatively affect patient care?

- ☐ Always
- ☐ Very Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

Results: Disruptions During Sign Out



Results: Disruptions During Sign Out



Return on Investment (ROI)

Annual Cost Savings Using I-PASS			
	Cost per Error		
Rate of Errors	$5,000/Error	$10,000/Error	$15,000/Error
2%	$720K	$1.44M	$2.16M
3%	$1.1M	$2.16M	$3.24M
4%	$1.62M	$3.24M	$4.86M

K = Thousands, $US
M= Millions, $US

Assumptions:
- 80,000 visits/year
- 30% errors due to poor communication
- 30% of adverse events prevented by I-PASS (Starmer et al, NEJM, Nov 2014)

Starmer AJ et al. N Engl J Med. 2015 Jan 29;372(5):490-1
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Heilman JA, et al. West J Emerg Med. 2016;17(6)756-61
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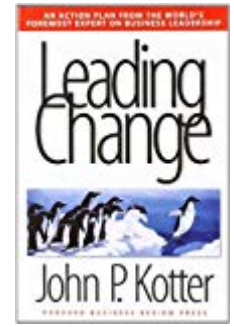
Ackroyd-Stolarz S, Qual Saf Health Care. 2010;19(6):e53
Magdelijns FJ, et al. Eur J Public Health. 2014;24(6):1028-33

Next Steps: Making Change Stick

1. Create a sense of urgency
2. Form a guiding coalition
3. Create a strategic vision
4. Communicate the vision
5. Remove barriers to success
6. Create short term wins
7. Sustain momentum
8. Institute lasting change

Kotter JP. Leading Change. Boston: Harvard Business School Press, 1996.



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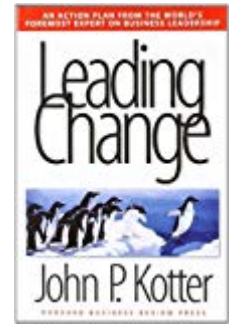

Conclusion

- **CS&E: Tremendous learning opportunity**
- **Look forward to continuing QI work**
- **One person CAN make a difference (best to ask for help!)**

Thank you!

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