Patient Safety and Clinical Quality Update

- Clinical Emergencies
- High Risk/Low Volume Procedures
- Culture of Patient Safety Survey Results

Laura Lee, MS, RN
Director, Office of Patient Safety and Clinical Quality

Clinical Emergencies

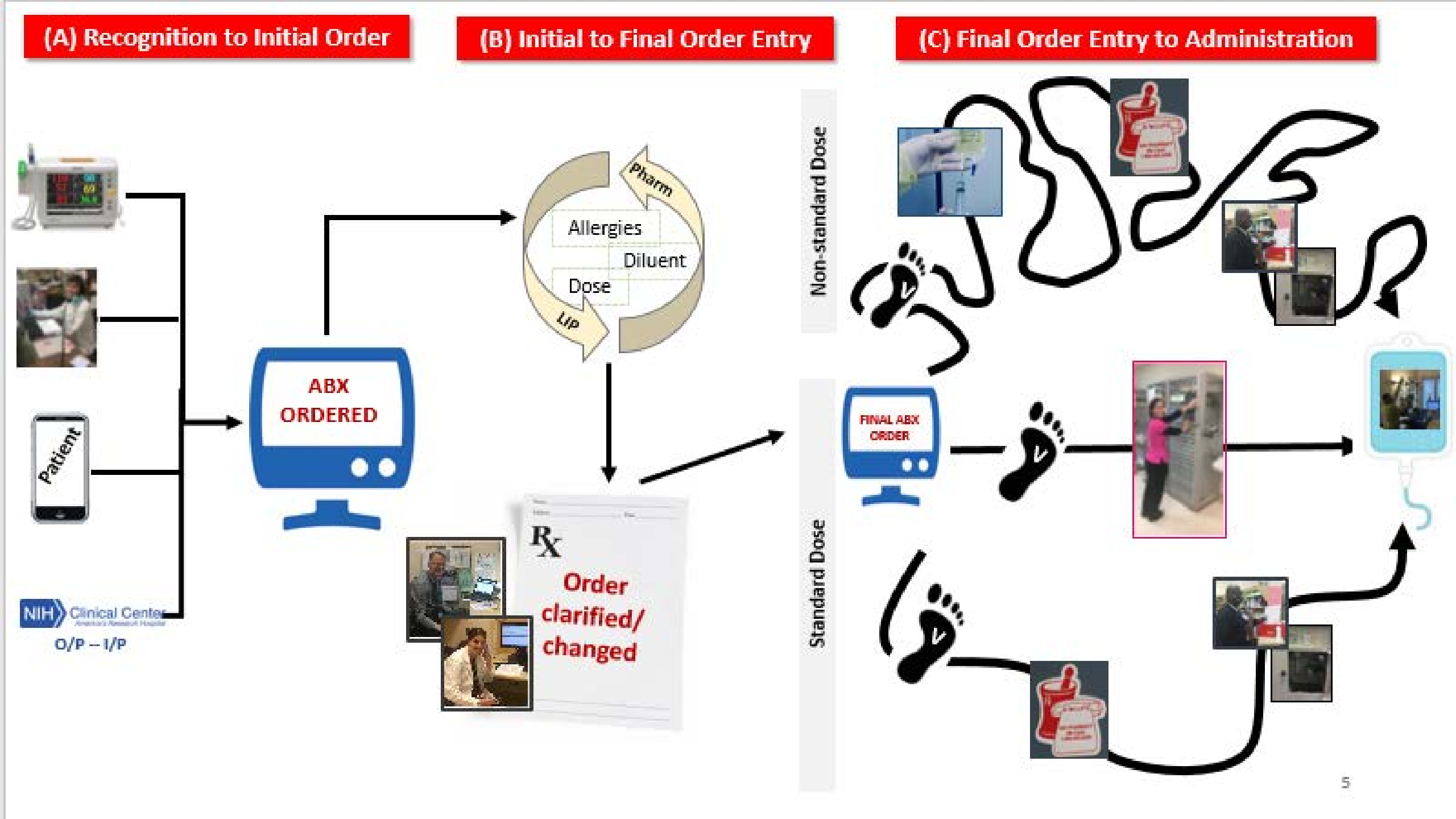
- Febrile neutropenia/Sepsis
- Peri-op hemorrhage (intra and post-op)
- Post-op neck surgery
- In-hospital suicide attempt
- Emergent cardiac events
- Neurologic Code (stroke, spinal cord)
- Urgent unplanned admissions
- Difficult airway
- Electrolyte abnormalities

Febrile Neutropenia/Sepsis

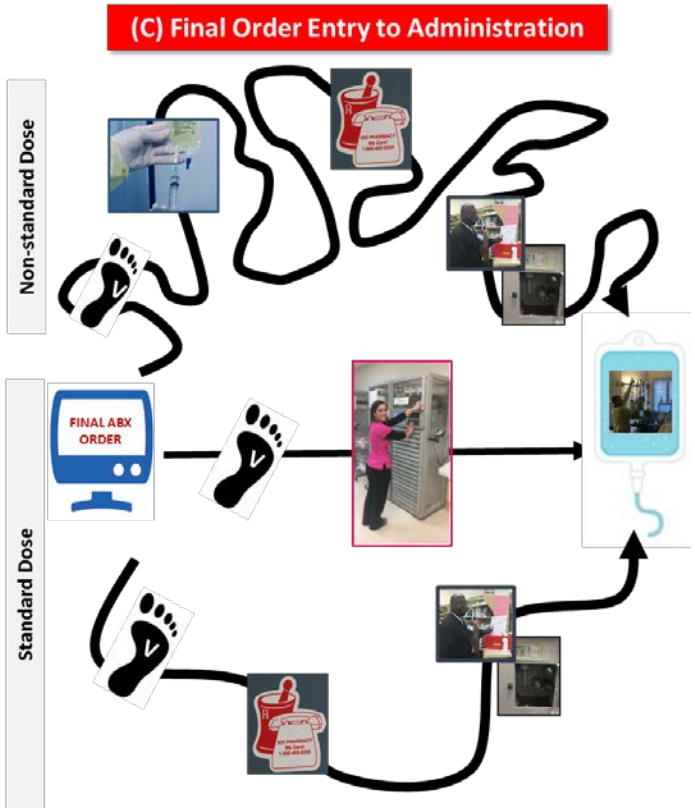
Trigger Events

- Neutropenic pediatric patient
- STARS reports of delayed antibiotic administrations

Deep Dive


(A) Recognition to Initial Order
(B) Initial to Final Order Entry
(C) Final Order Entry to Administration
Patient
ABX ORDERED
Pharm
Allergies
Diluent
Dose
LIP
Rx
Order clarified/ changed
Non-standard Dose
Standard Dose
FINAL ABX ORDER
NIH Clinical Center
O/P – I/P
5

Primary Outcome:
STAT Order to Infusion of Drug

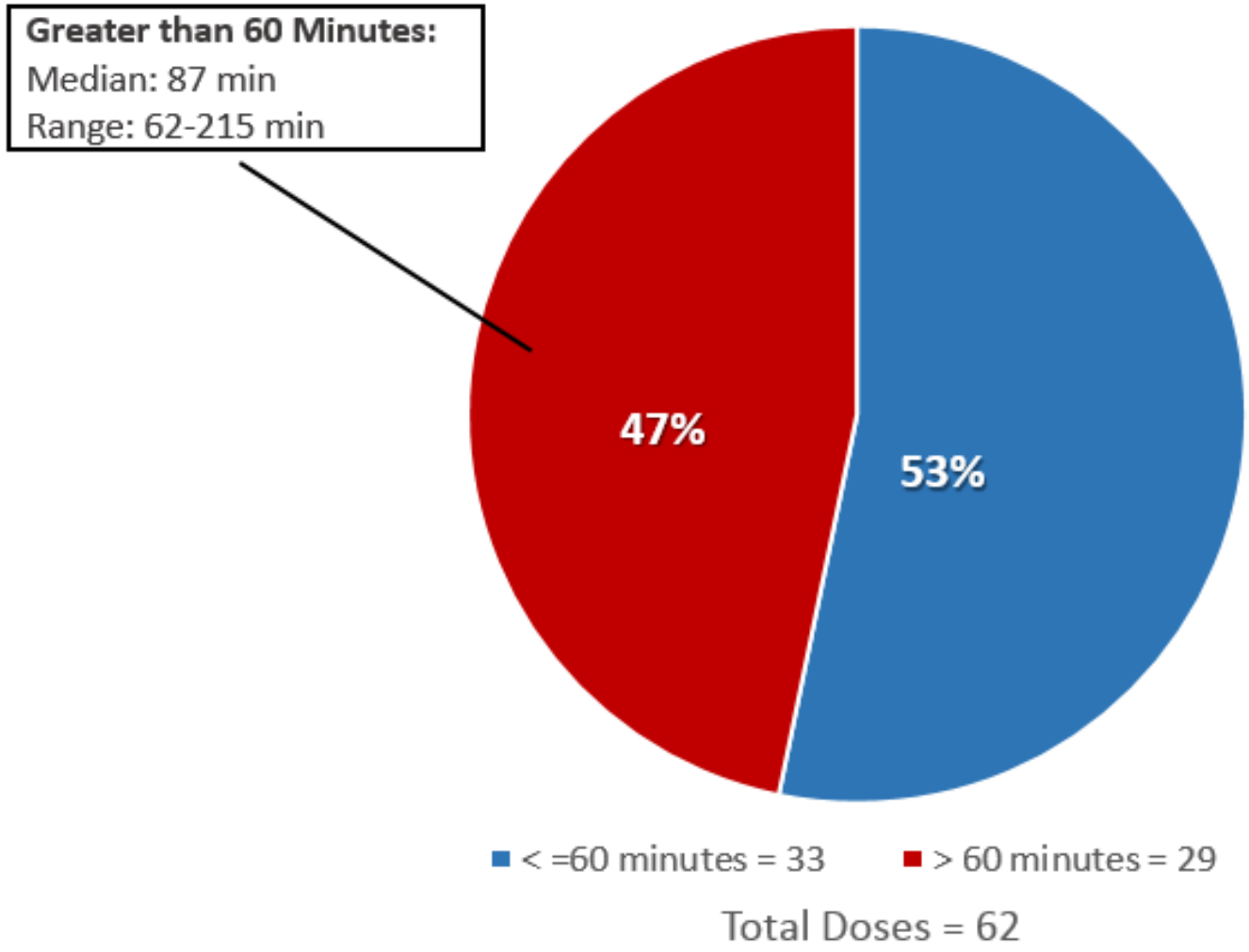


Institutional Goal

≤ 60 minutes

STAT Order Entry to Infusion of Antibiotic

August/September 2017

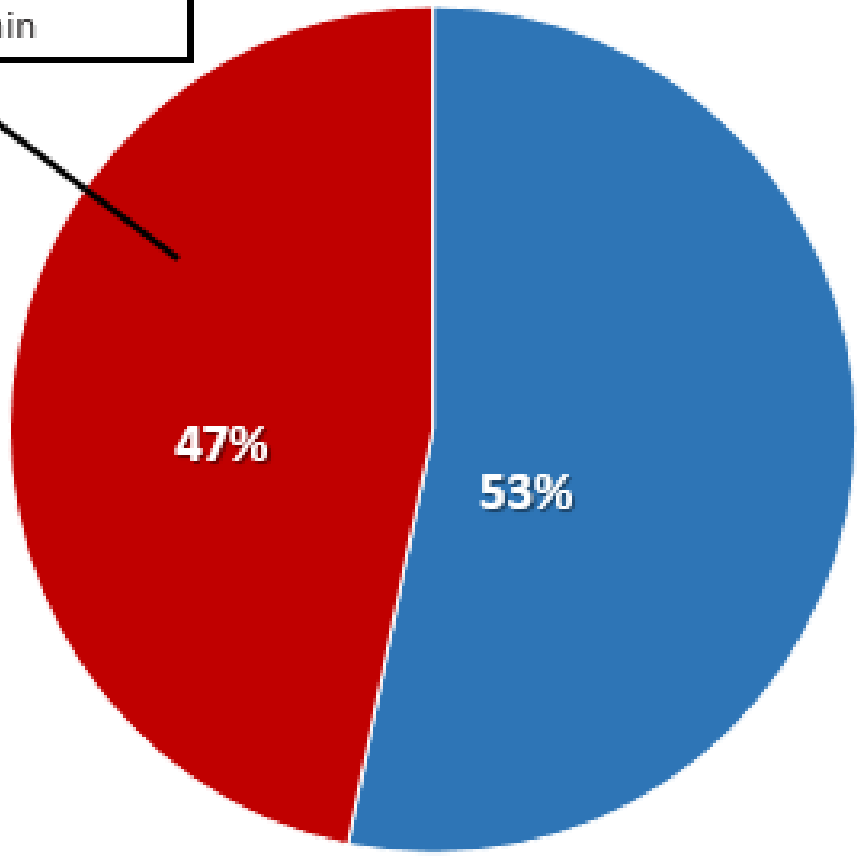


Interventions

- Immediate Actions
  - “Deep Dive” conducted to evaluate timeliness of all STAT antibiotics
  - Communication pathways improved – clarified processes for escalation of issues; internal pharmacy information exchange
  - Practice change re: “overuse” of STAT orders
  - First line antibiotics made available on patient care units
- “Post Hurricane IV fluid shortage” Actions
  - Additional antibiotics placed on patient care units
  - Nurses approved to administer broader range of antibiotic doses via IV push

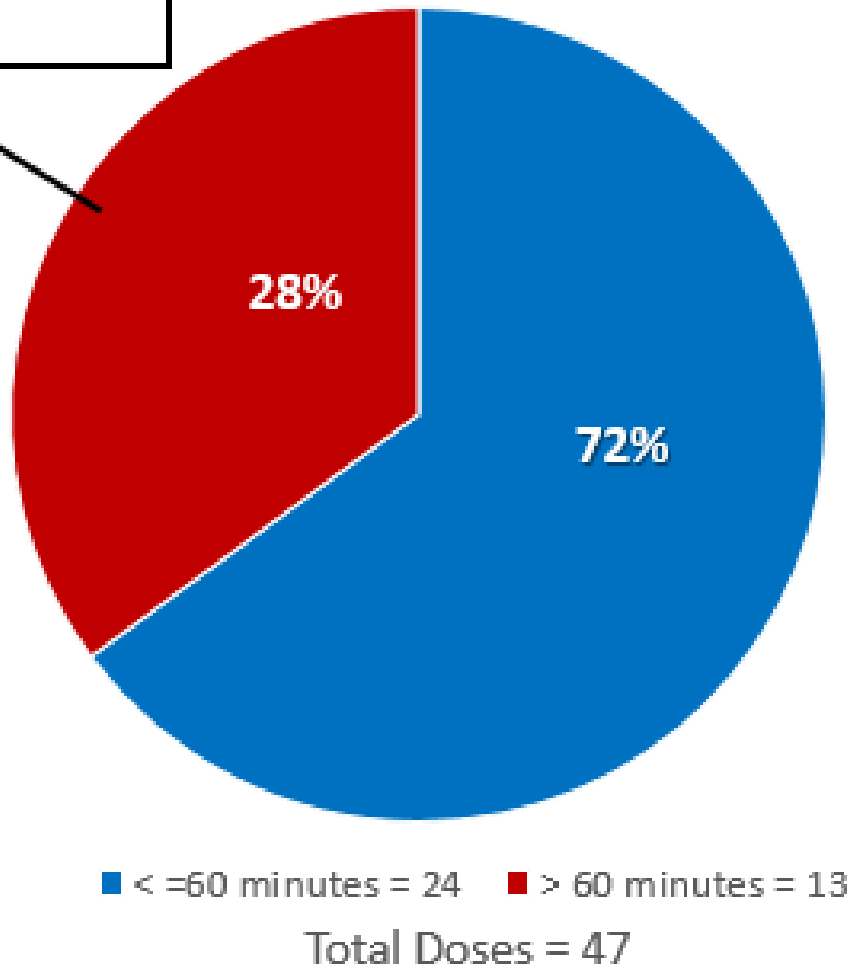
August/September 2017

Greater than 60 Minutes:
Median: 87 min
Range: 62-215 min



November/December 2017

Greater than 60 Minutes:
Median: 107 min
Range: 62-325 min



Peri-operative Hemorrhage

Managing Massive Blood Loss/Transfusions

Evidence of Harm related to Massive Blood Loss/Transfusions

- Historically not tracked
- Several instances of massive blood loss with associated harm reviewed in the ICU Trigger Tool program
- Findings from Surgical M&M

"Etiology"

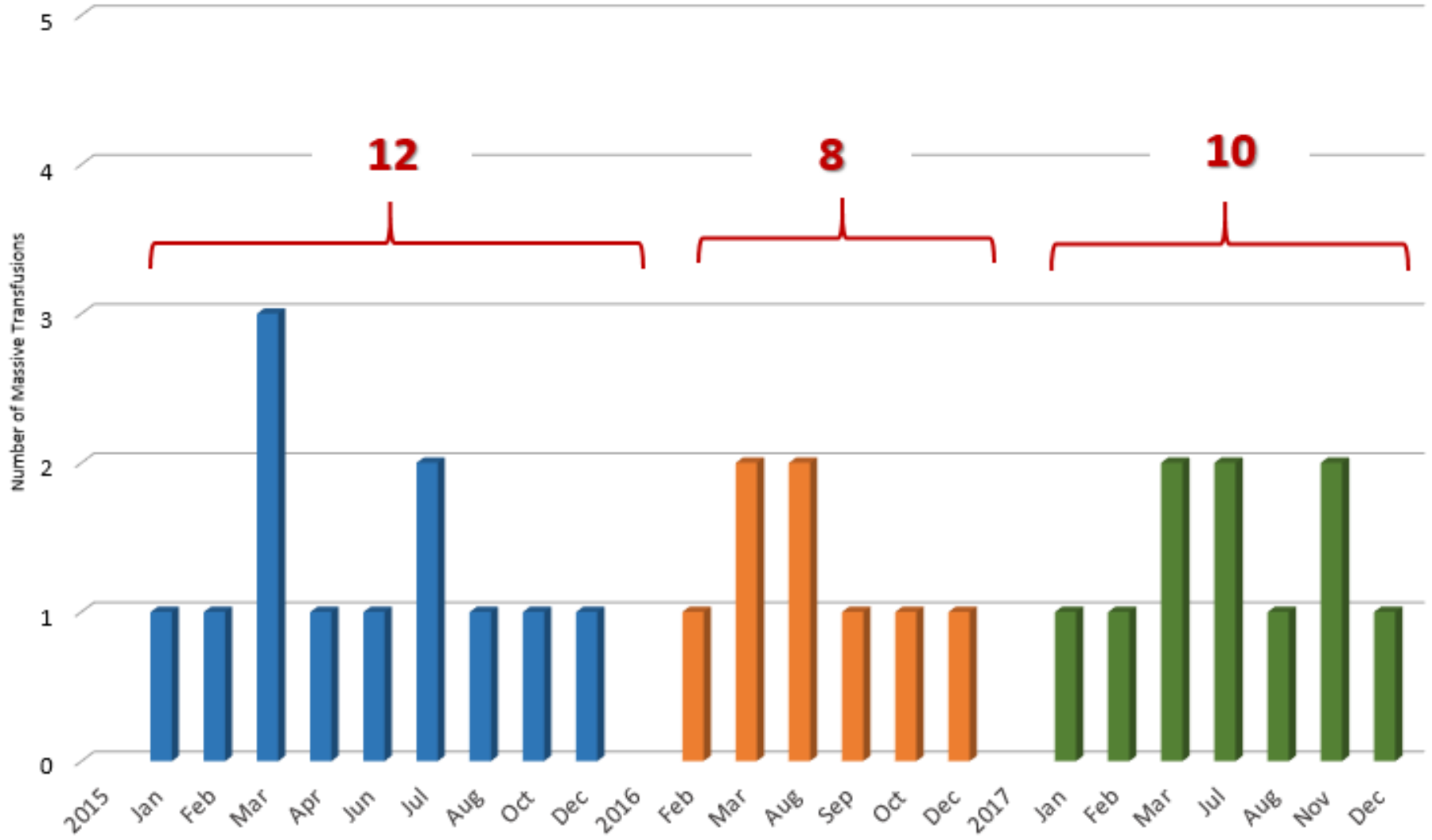
- "Kidney-Sparing" Surgeries
- Post-procedural bleeding complications

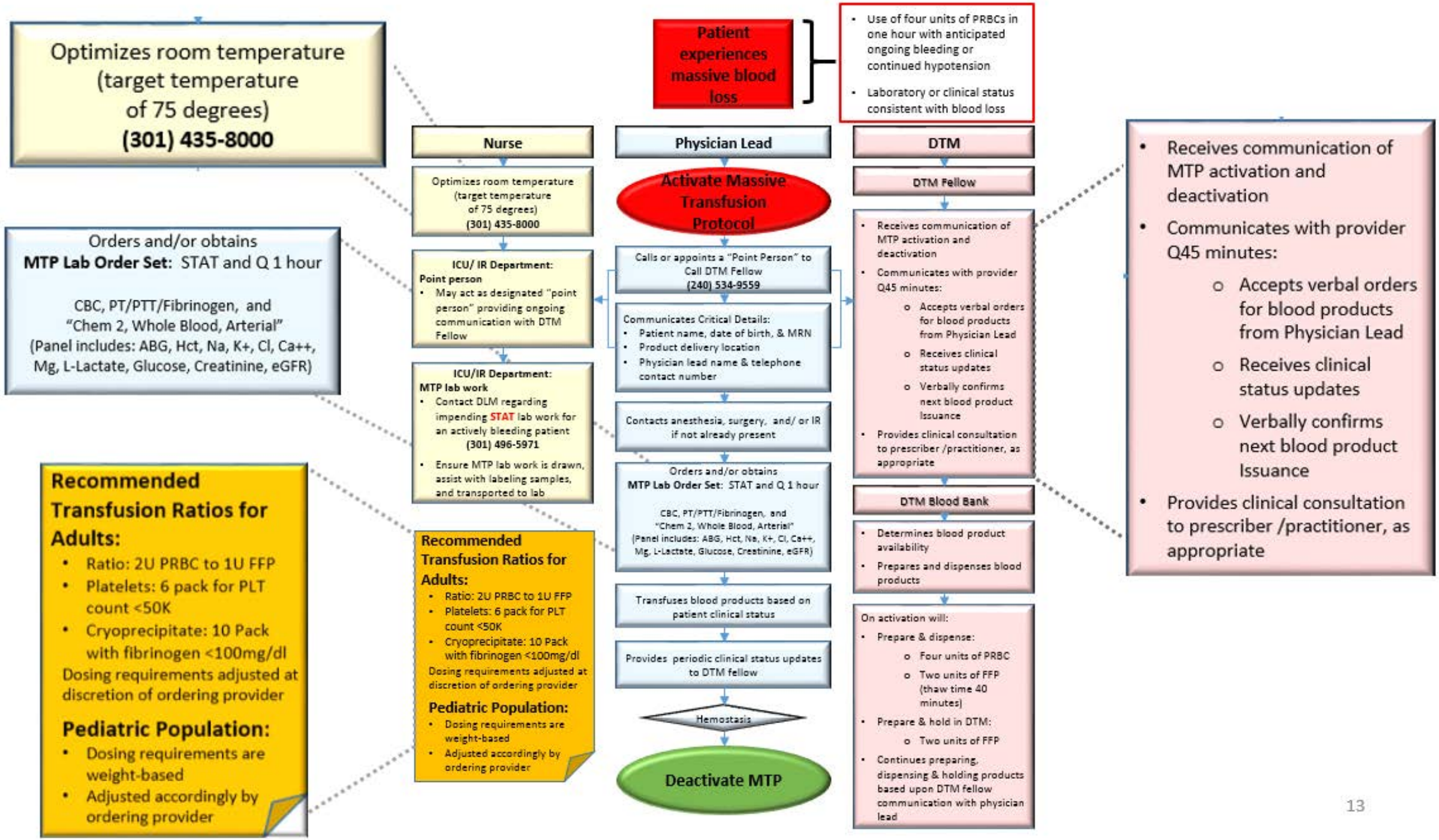
Definition/Trigger for Invoking New Massive Transfusion Protocol

- Use of four units of PRBCs in one hour with anticipated ongoing bleeding or continued hypotension
- Laboratory or clinical status consistent with blood loss

Frequency of Massive Transfusions

(Data represent cases with >10 units of RBCs in 24h hour period)




Optimizes room temperature (target temperature of 75 degrees) (301) 435-8000
Orders and/or obtains MTP Lab Order Set: STAT and Q 1 hour
CBC, PT/PTT/Fibrinogen, and "Chem 2, Whole Blood, Arterial" (Panel includes: ABG, Hct, Na, K+, Cl, Ca++, Mg, L-Lactate, Glucose, Creatinine, eGFR)
Recommended Transfusion Ratios for Adults:
Ratio: 2U PRBC to 1U FFP
Platelets: 6 pack for PLT count <50K
Cryoprecipitate: 10 Pack with fibrinogen <100mg/dl
Dosing requirements adjusted at discretion of ordering provider
Pediatric Population:
Dosing requirements are weight-based
Adjusted accordingly by ordering provider
Patient experiences massive blood loss
Use of four units of PRBCs in one hour with anticipated ongoing bleeding or continued hypotension
Laboratory or clinical status consistent with blood loss
Nurse
Physician Lead
DTM
Optimizes room temperature (target temperature of 75 degrees) (301) 435-8000
Activate Massive Transfusion Protocol
DTM Fellow
ICU/ IR Department: Point person
May act as designated "point person" providing ongoing communication with DTM Fellow
Calls or appoints a "Point Person" to Call DTM Fellow (240) 534-9559
Receives communication of MTP activation and deactivation
Communicates with provider Q45 minutes:
Accepts verbal orders for blood products from Physician Lead
Receives clinical status updates
Verbally confirms next blood product Issuance
Provides clinical consultation to prescriber /practitioner, as appropriate
ICU/IR Department: MTP lab work
Contact DLM regarding impending STAT lab work for an actively bleeding patient (301) 496-5971
Ensure MTP lab work is drawn, assist with labeling samples, and transported to lab
Communicates Critical Details:
Patient name, date of birth, & MRN
Product delivery location
Physician lead name & telephone contact number
Contacts anesthesia, surgery, and/ or IR if not already present
Orders and/or obtains MTP Lab Order Set: STAT and Q 1 hour
CBC, PT/PTT/Fibrinogen, and "Chem 2, Whole Blood, Arterial" (Panel includes: ABG, Hct, Na, K+, Cl, Ca++, Mg, L-Lactate, Glucose, Creatinine, eGFR)
Transfuses blood products based on patient clinical status
Provides periodic clinical status updates to DTM fellow
Hemostasis
Deactivate MTP
DTM Blood Bank
Determines blood product availability
Prepares and dispenses blood products
On activation will:
Prepare & dispense:
Four units of PRBC
Two units of FFP (thaw time 40 minutes)
Prepare & hold in DTM:
Two units of FFP
Continues preparing, dispensing & holding products based upon DTM fellow communication with physician lead
Receives communication of MTP activation and deactivation
Communicates with provider Q45 minutes:
Accepts verbal orders for blood products from Physician Lead
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Provides clinical consultation to prescriber /practitioner, as appropriate
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Dosing requirements adjusted at discretion of ordering provider
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Adjusted accordingly by ordering provider

Process Measures

Lab order set	Orders and/or obtains **MTP Lab Order Set:** STAT and Q 1 hour CBC, PT/PTT/Fibrinogen, and "Chem 2, Whole Blood, Arterial" (Panel includes: ABG, Hct, Na, K+, Cl, Ca++, Mg, L-Lactate, Glucose, Creatinine, eGFR)
DTM Fellow engagement	• Receives communication of MTP activation and deactivation • Communicates with provider Q85 minutes: ○ Accepts verbal orders for blood products from Physician Lead ○ Receives clinical status updates ○ Verbally confirms next blood product issuance • Provides clinical consultation to prescriber /practitioner, as appropriate
Patient temperature	Optimizes room temperature (target temperature of 75 degrees) **(301) 435-8000**

Outcome Measures

RBC/FFP/CRYO/PLT Ratio
Post-procedure hemostasis

Managing Risk:
High Risk/Low Volume Activities

High Risk/Low Volume Clinical Activities

Long time conundrum and noted in the Simonson Report

Focus of the PSCPQ Committee

Subcommittee charged

- Expand scope to include surgery/invasive procedures as well as new research procedures/therapies
- Determine volume/characteristics of these types of activities
  - Survey of practitioners (types of procedures, perception of risk, competence)
  - CRIS review of procedures

High Risk/Low Volume Clinical Activities

Mitigate the risks of “low volume” through systems approach

- Military medicine’s playbook
- Key Strategies
  - Effective communication processes and team approach
  - Active and early engagement of attending/senior staff
  - Reliance on outside expertise
  - Standardization of care processes
  - Rigorous outcomes review

Culture of Patient Safety Survey

Preliminary Findings

Culture of Patient Safety Survey

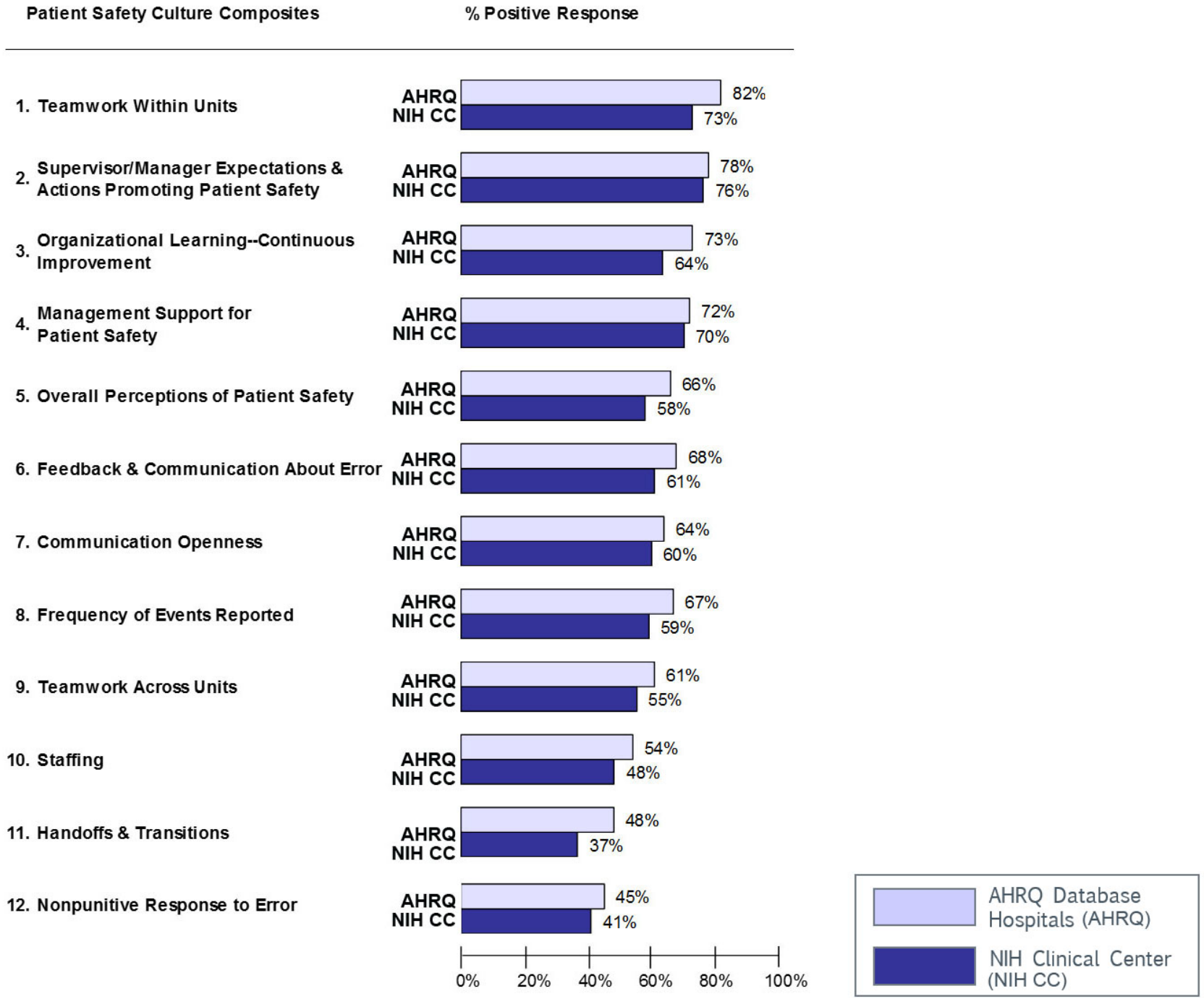
Designed by AHRQ to evaluate domains of safety culture

- Communication/Hand-offs
- Teamwork
- Non-punitive response to errors
- Reporting
- Organizational learning
- Leadership support

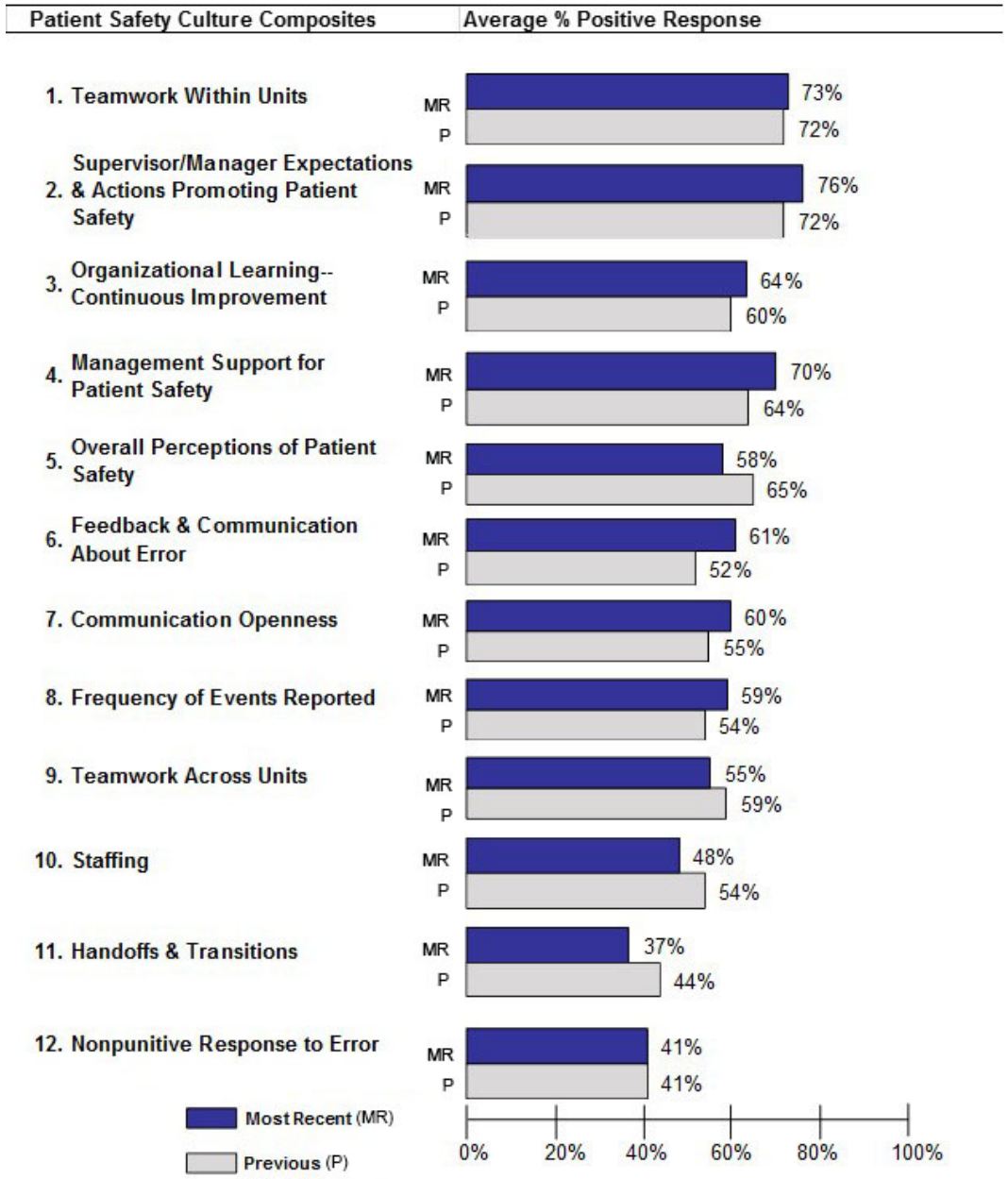
Survey last fielded in 2012

Clinical Center 2017 survey results

- 1,171 total participants; 800-900 “active” participants
- 73% have direct patient contact
- Response rate: approx. 30-35%


Patient Safety Culture Composites
% Positive Response
1. Teamwork Within Units
AHRQ 82%
NIH CC 73%
2. Supervisor/Manager Expectations & Actions Promoting Patient Safety
AHRQ 78%
NIH CC 76%
3. Organizational Learning--Continuous Improvement
AHRQ 73%
NIH CC 64%
4. Management Support for Patient Safety
AHRQ 72%
NIH CC 70%
5. Overall Perceptions of Patient Safety
AHRQ 66%
NIH CC 58%
6. Feedback & Communication About Error
AHRQ 68%
NIH CC 61%
7. Communication Openness
AHRQ 64%
NIH CC 60%
8. Frequency of Events Reported
AHRQ 67%
NIH CC 59%
9. Teamwork Across Units
AHRQ 61%
NIH CC 55%
10. Staffing
AHRQ 54%
NIH CC 48%
11. Handoffs & Transitions
AHRQ 48%
NIH CC 37%
12. Nonpunitive Response to Error
AHRQ 45%
NIH CC 41%
0%
20%
40%
60%
80%
100%
AHRQ Database Hospitals (AHRQ)
NIH Clinical Center (NIH CC)

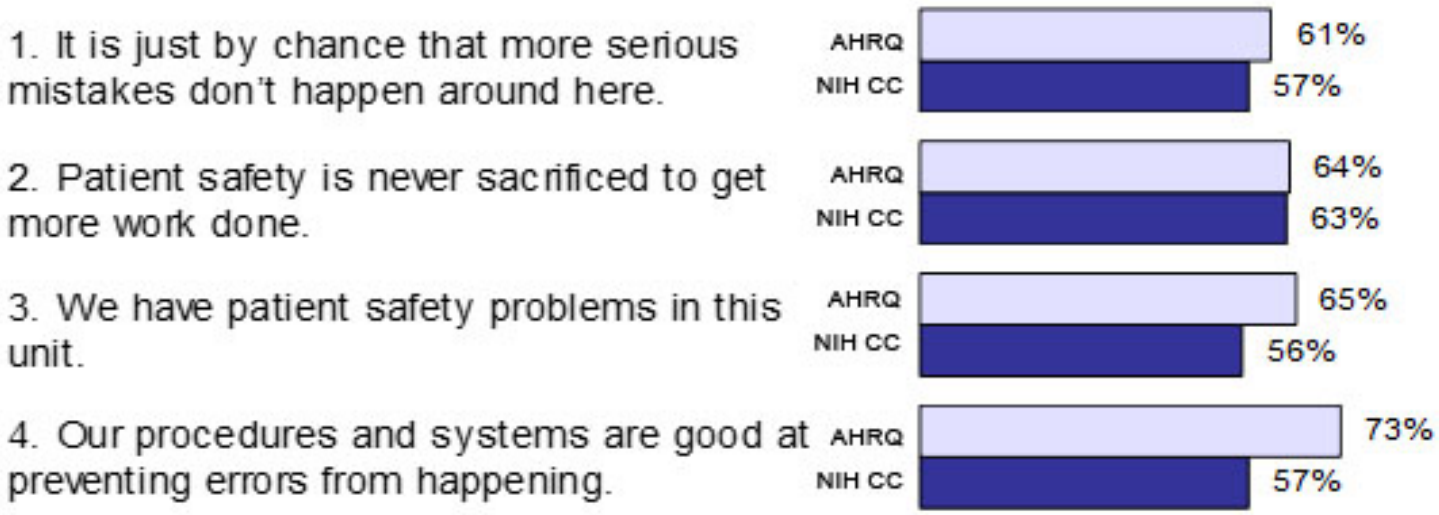
Composite-Level Trending Results for NIH Clinical Center

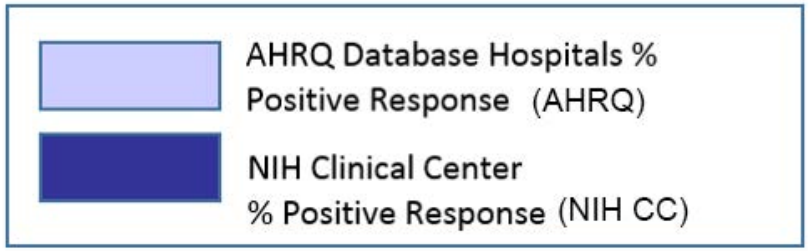


Composite Level Trending Results

	Patient Safety Culture Composite	Your Hospital's % Positive		Difference	Change
		Recent	Previous		
1	Teamwork Within Units	73%	72%	1	↑
2	Supervisor/Manager Expectations & Actions Promoting Patient Safety	76%	72%	4	↑
3	Organizational Learning— Continuous Improvement	64%	60%	4	↑
4	Management Support for Patient Safety	70%	64%	6	↑
5	Overall Perceptions of Patient Safety	58%	65%	-7	↓
6	Feedback & Communication About Error	61%	52%	9	↑
7	Communication Openness	60%	55%	5	↑
8	Frequency of Events Reported	59%	54%	5	↑
9	Teamwork Across Units	55%	59%	-4	↓
10	Staffing	48%	54%	-6	↓
11	Handoffs & Transitions	37%	44%	-7	↓
12	Nonpunitive Response to Error	41%	41%	0	

5. Overall Perceptions of Patient Safety





NOTE: For negatively worded questions, "% positive response" represents "Strongly Disagree" and "Disagree" responses

11. Handoffs & Transitions