IMPROVE-IT!
Using Data to Drive Patient Safety Improvements

ALBUQUERQUE QUALITY NETWORK

NOVEMBER 15, 2018

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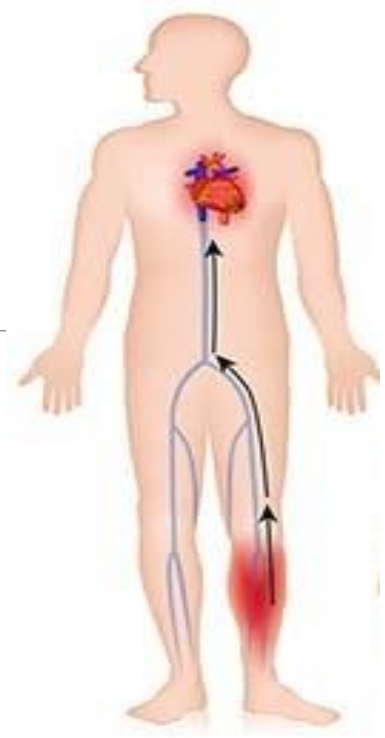
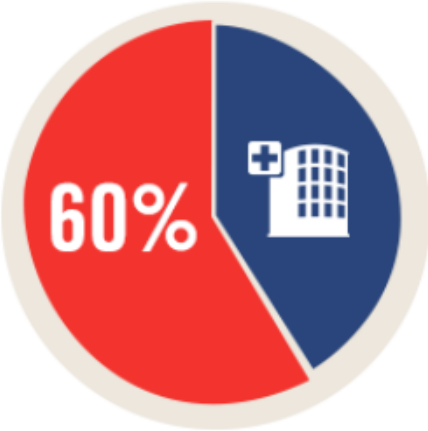
Learning Objectives

- Recognize fundamental quality principles in action, including but not limited to: visionary leadership, decision by fact, inclusion of all stakeholders and continuous improvement
- Recognize the importance of process mapping to aid in identification of system barriers and deficiencies that serve as targets for intervention
- Understand the intrinsic role data serves in decisions, resources, inspiration, interventions, achievements, recognition and cycles of improvement
- Explain the importance of multidisciplinary ownership, participation and collaboration in performance improvement initiatives
- Recognize that sustainable improvement often branches into a *tree*, much deeper and wider than the *seedling* first appeared to be

Venous Thromboembolism (VTE)



- Blood clots that form in the deep veins of the legs (deep vein thrombosis or DVT) and may break off and travel to the lung (pulmonary embolism or PE)
- 10 MILLION cases of VTE annually worldwide (10% die)
- Estimated cost of diagnosis and treatment at least $16 BILLION annually
- #1 cause of preventable death in hospitals
- Up to 60% of all VTEs occur during or within 90 days of hospitalization



http://www.worldthrombosisday.org/issue/vte/

Hospital-acquired VTE (HA-VTE)

- A DVT or PE that is diagnosed during a hospital admission that was not present on admission
- Preventable HA-VTE= patient did not receive appropriate prevention measures (pharmacologic or mechanical) during hospitalization, and thus the hospital is held accountable
- Assessed through national quality metrics set forth by CMS, JCO and AHRQ (PSI-12 and VTE-6)
- **Purpose:** evaluate a hospital population at risk for VTE to determine an individual hospital's performance in preventing VTE – Societal Responsibility and Community Health
- **Rationale:** If the hospital is applying appropriate VTE prevention strategies, the number of HA-VTE should be correspondingly low

Data drives it all!

Measurement, Analysis and Knowledge Management

Discussions

Learning

Solutions

Results

Documentation

Coding

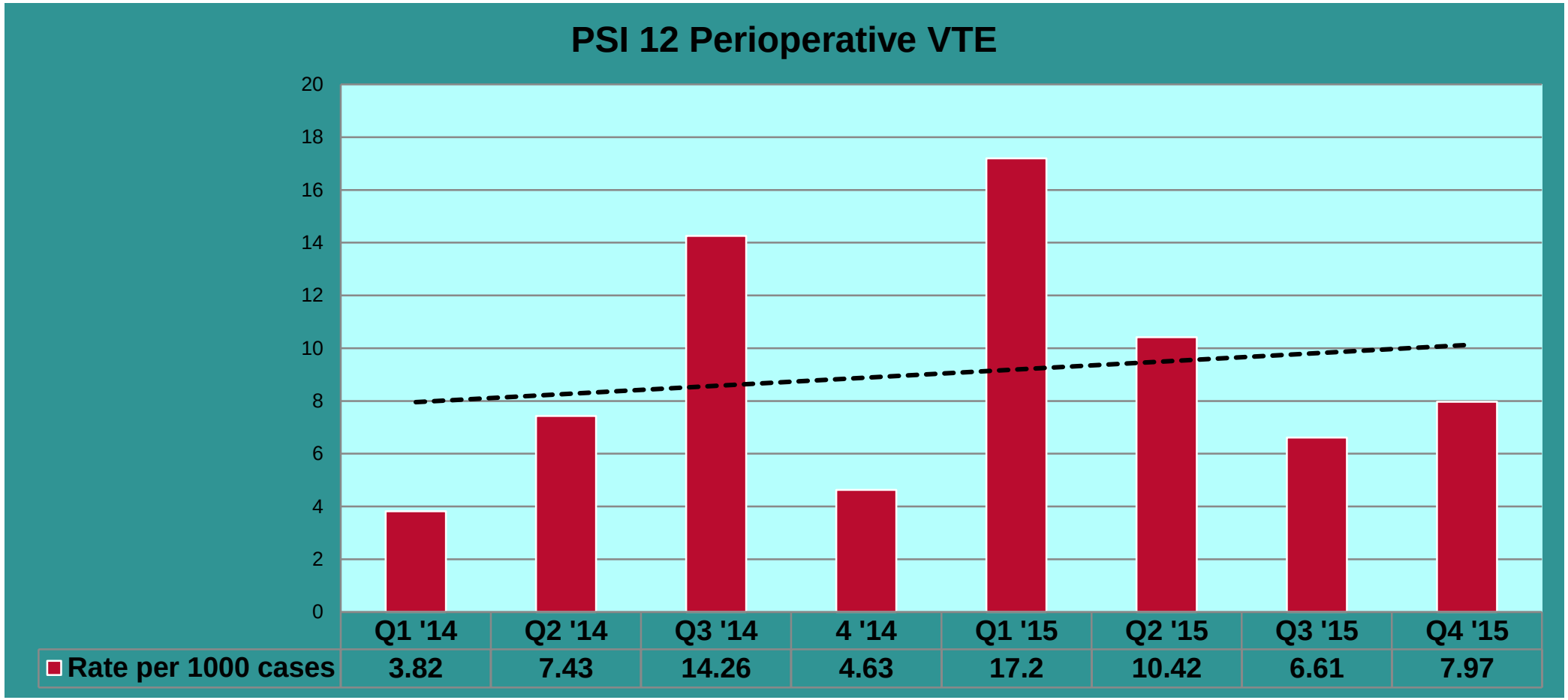
Billing

Reporting

Improvements

Income

HA-VTE at UNMH: Baseline Numbers



Implications of HA-VTE Data

Publicly reported 'pay-for-performance' measures

- Attempting to align the financial interests of hospitals with the quality of care they provide

Poorest-performing hospitals have Medicare/Medicaid payments reduced by up to 1%

- UNMH was losing ~ $750,000 annually for poor performance
- Each HA-VTE that we report "costs" ~ $25-30K

At UNMH, our rates of prevention were very high (>90%), but with a suboptimal measuring stick

- Suspicion that provision of prevention measures was suboptimal
- But also, inaccurate coding or poor provider documentation may have been contributing

Team /Project Development

Who needs to be at the table? Systems perspective

What will success look like? Visionary leadership

Common Vision- we cannot fail. Focus on success. Deliver value and results

How will we learn? Continuous Improvement cycles, Transparency

What experts are needed? Valuing people and their expertise

Who are the stakeholders? Patient-focused excellence

Data Integrity. Can we trust the data? Manage by fact

In the planning phase: Consider the challenges of long term, system-wide projects

Leadership: personnel changes, shifting support levels and priorities…

Turnover: coding personnel, nurse educators, physician champions, training, motivating, shifting knowledge base, loss of experts…

Funding: budgets and goals change over time…

Best practices: change over time, technology updates…

People: new staff, new champions, continual education, motivation…

Silos: breaking down silos and collaborating between departments and people…

Failures: accelerate learning, but can scare support away…

Scope: too big/ not big enough…

Level of Change Needed: Cultural, organizational, departmental, personal…

Simultaneous activities: Short and long term…

Approach: Inclusive, exclusive, proactive, strategic, remedial, disruptive, transformative…

Lack of time

Complacency

Lack of urgency

Lack of leadership

Lack / limited resources

Passive resistance

Hierarchy over teamwork

Lack of communication plan

Lack of infrastructure

Perceived or real roadblocks

Delays

Expertise not available

Multidisciplinary VTE Team/Process Development

Inception: Fall 2015

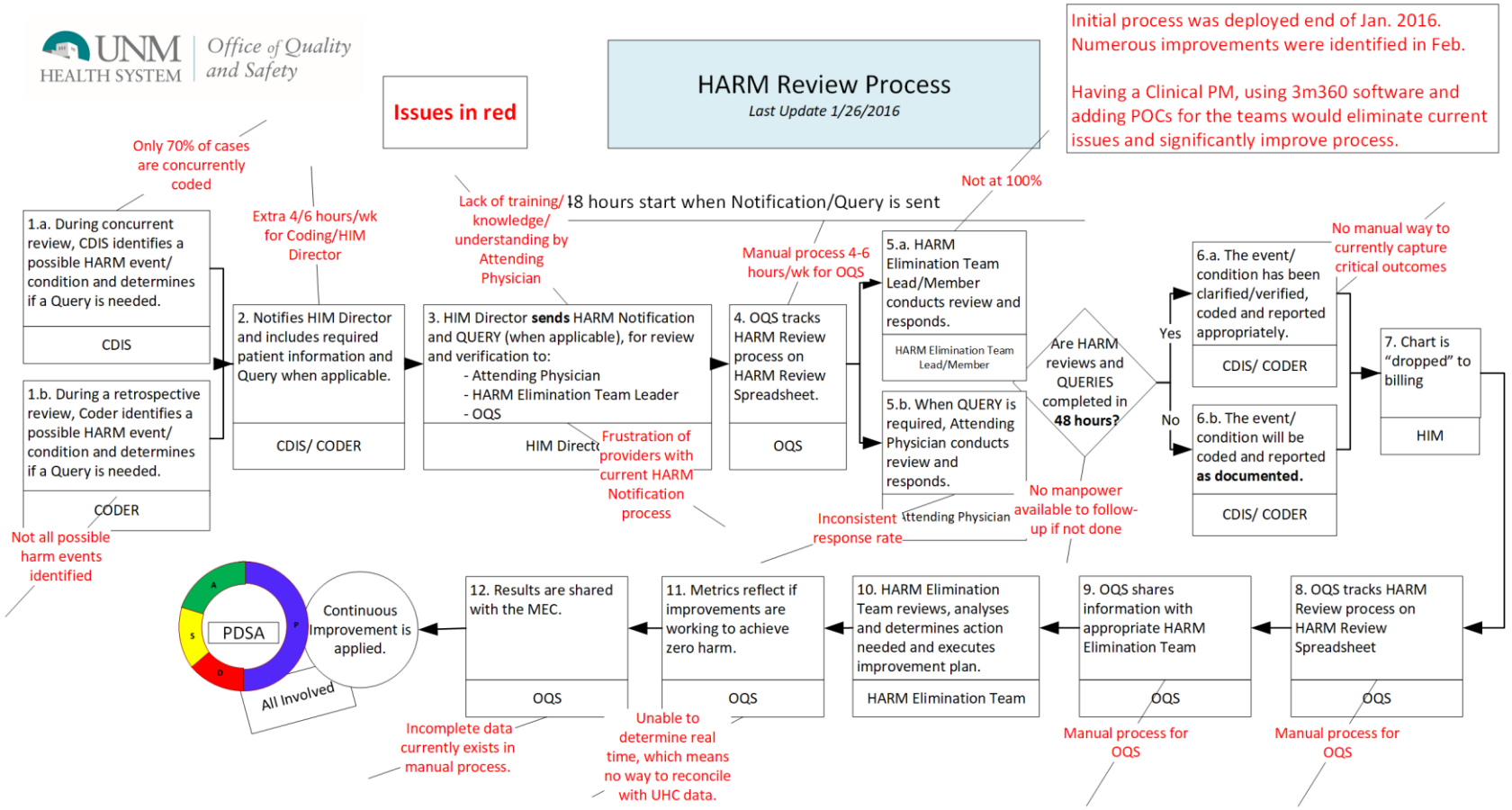
Purpose: Explore reasons for high rates of HA-VTE, including:

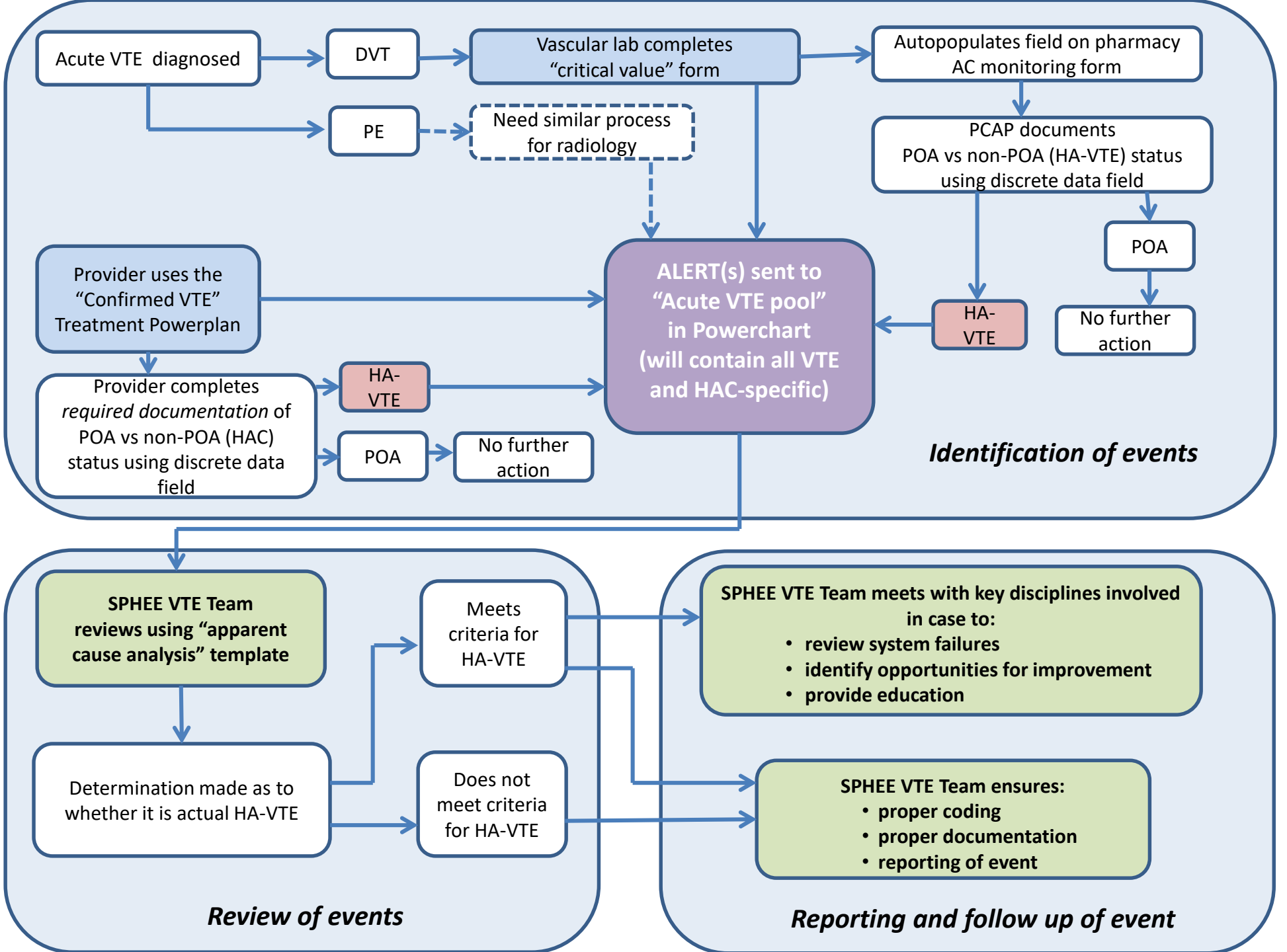
- Lack of appropriate prevention (VTE prophylaxis)
- Inaccurate coding of events
- Suboptimal provider documentation of events

Initial steps:

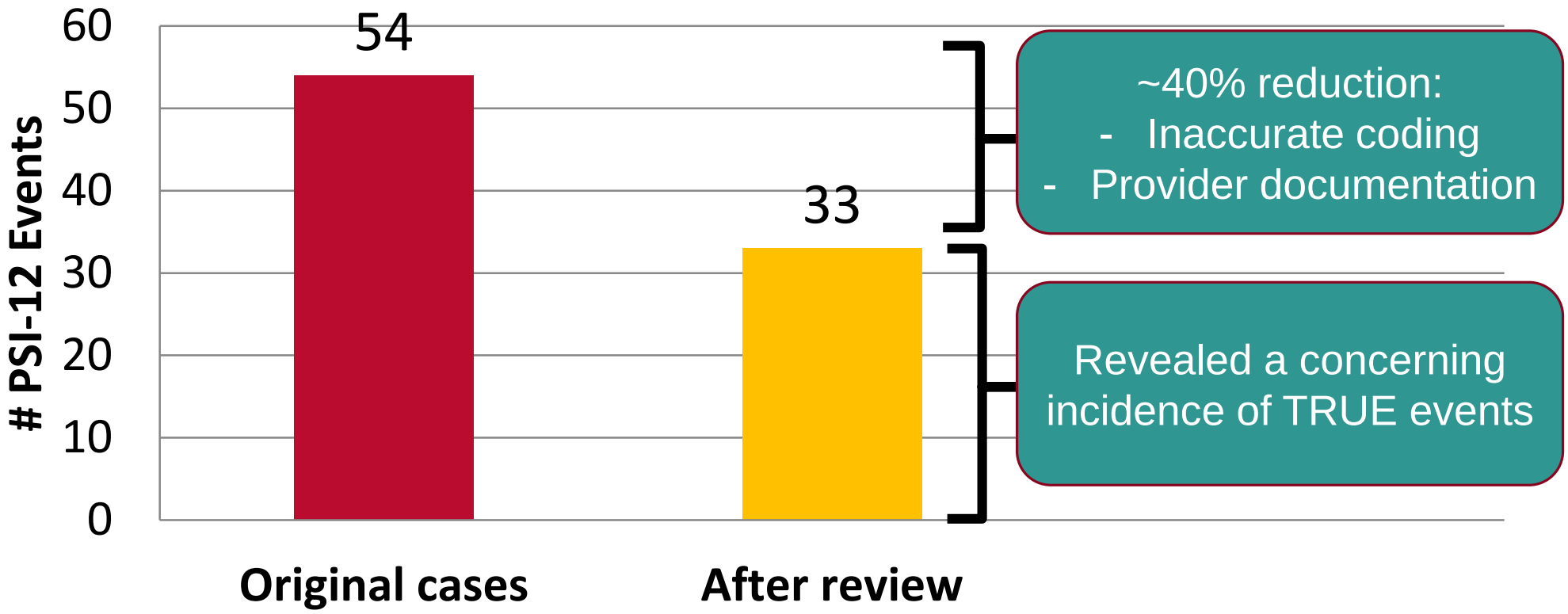
- Reviewed sample historical PSI 12 cases for practice in identifying issues and trends
- Developed VTE event review template with metric inclusion/exclusion criteria
- Began responding to notifications from health information management (HIM) to review possible PSI 12s identified via concurrent coding

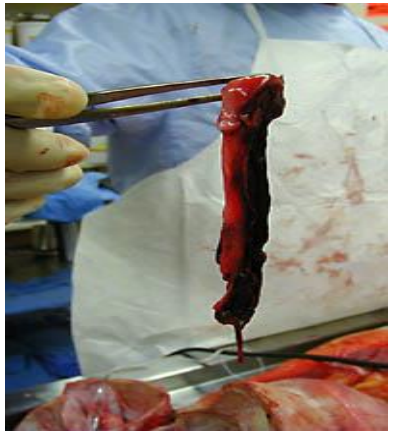
Continuous Process Improvement - CPI



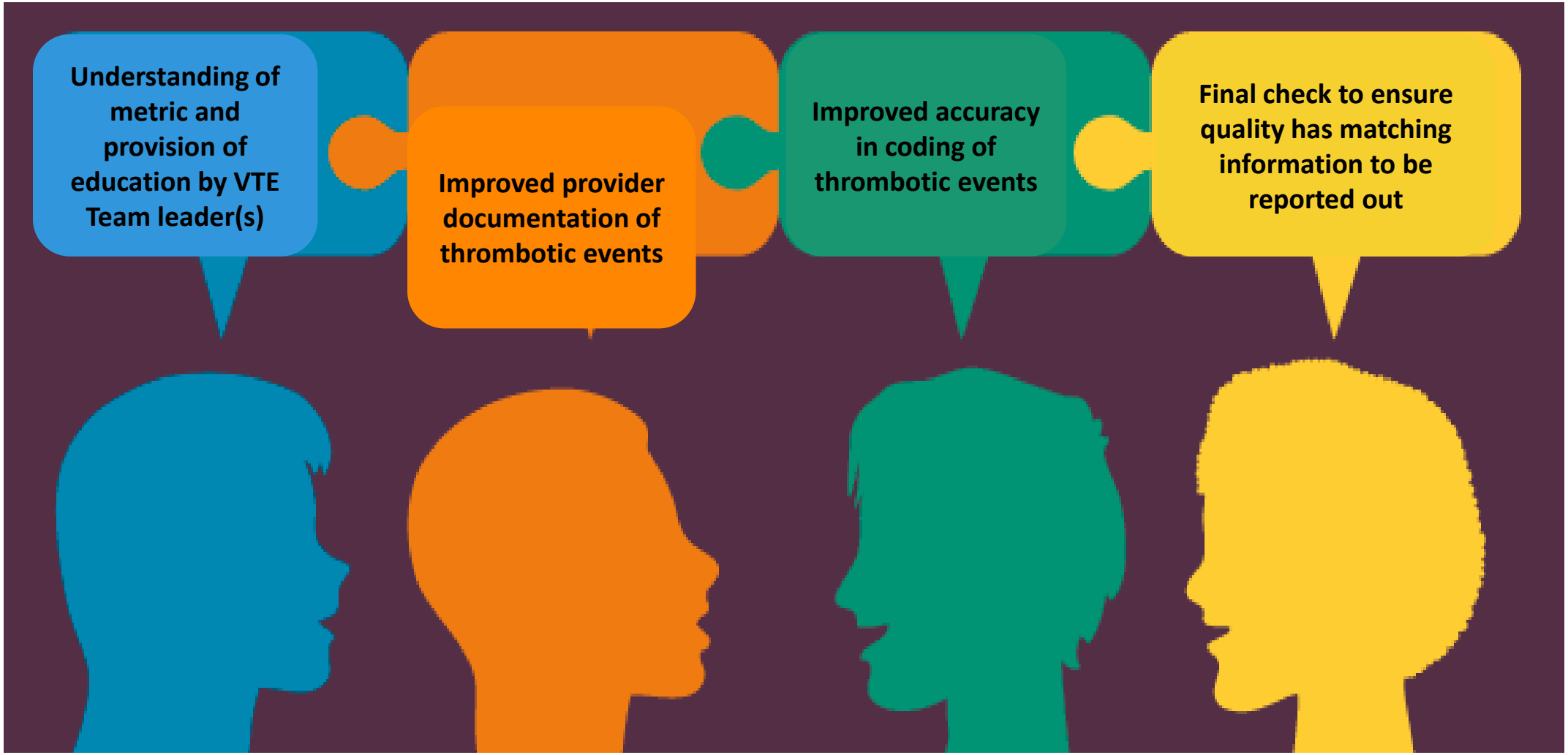

Acute VTE diagnosed
DVT
PE
Vascular lab completes "critical value" form
Need similar process for radiology
Autopopulates field on pharmacy AC monitoring form
PCAP documents POA vs non-POA (HA-VTE) status using discrete data field
POA
No further action
HA-VTE
Provider uses the "Confirmed VTE" Treatment Powerplan
ALERT(s) sent to "Acute VTE pool" in Powerchart (will contain all VTE and HAC-specific)
Provider completes required documentation of POA vs non-POA (HAC) status using discrete data field
HA-VTE
POA
No further action
Identification of events
SPHEE VTE Team reviews using "apparent cause analysis" template
Meets criteria for HA-VTE
Determination made as to whether it is actual HA-VTE
Does not meet criteria for HA-VTE
Review of events
SPHEE VTE Team meets with key disciplines involved in case to:
• review system failures
• identify opportunities for improvement
• provide education
SPHEE VTE Team ensures:
• proper coding
• proper documentation
• reporting of event
Reporting and follow up of event

Case Reviews produced important DATA!
SPHEE VTE Retrospective Reviews (Q3 '15- Q2' 16)





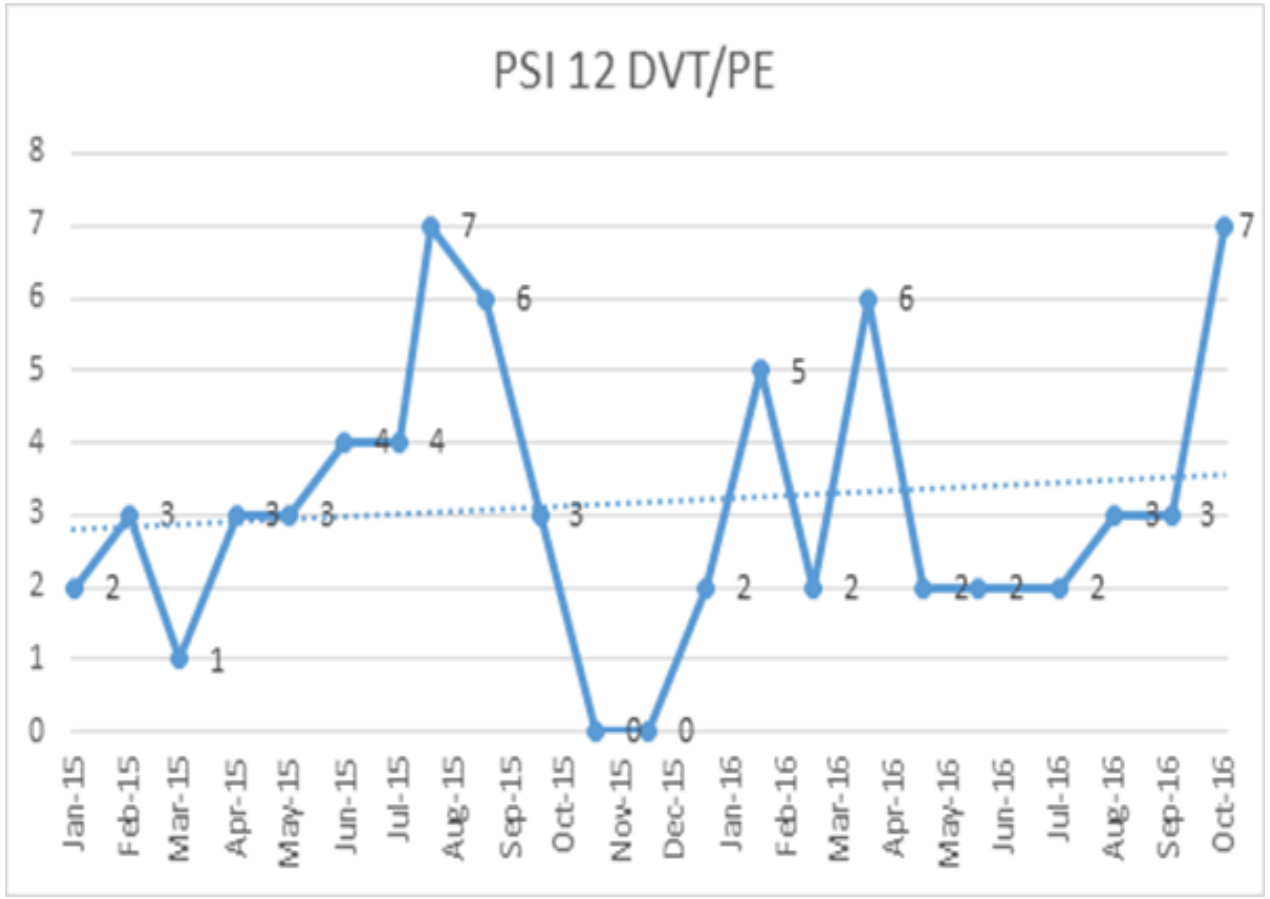
What have we learned? Quality's #1 question How Can ***WE*** Do Better?

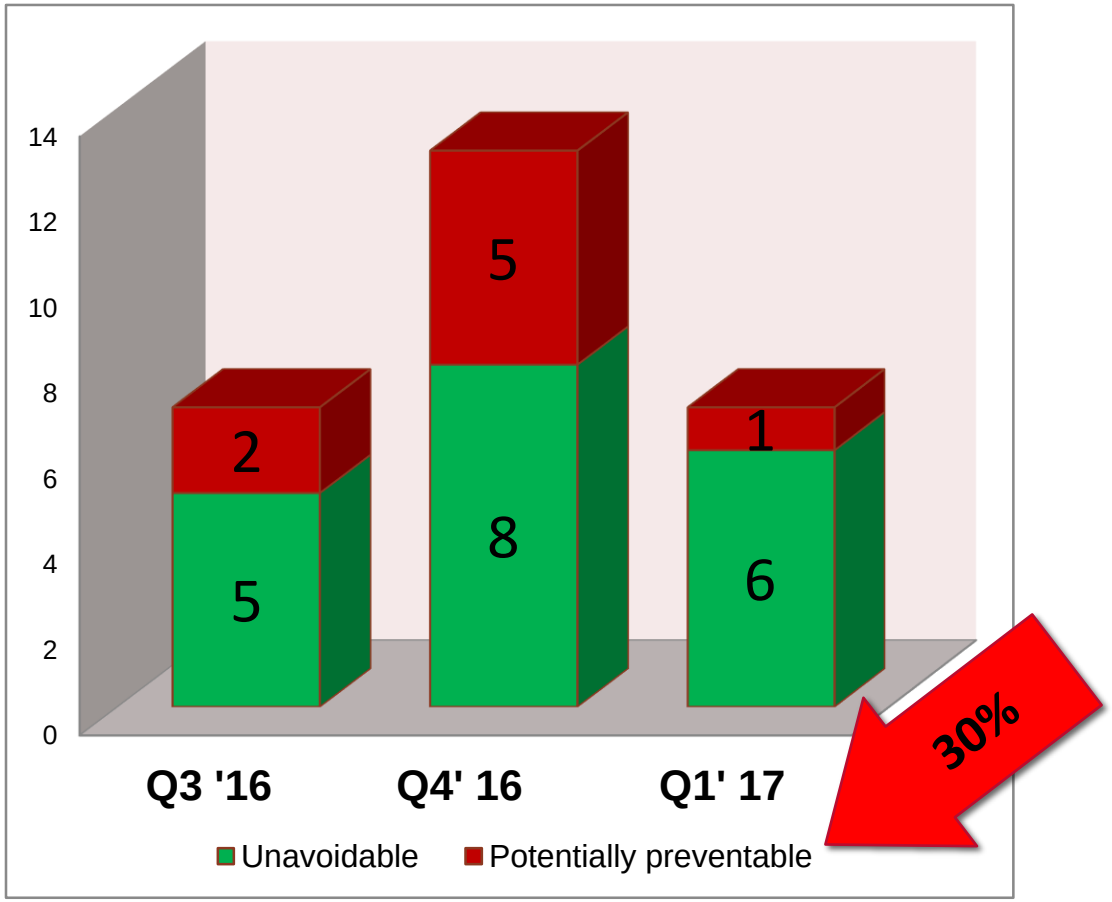


We learned…

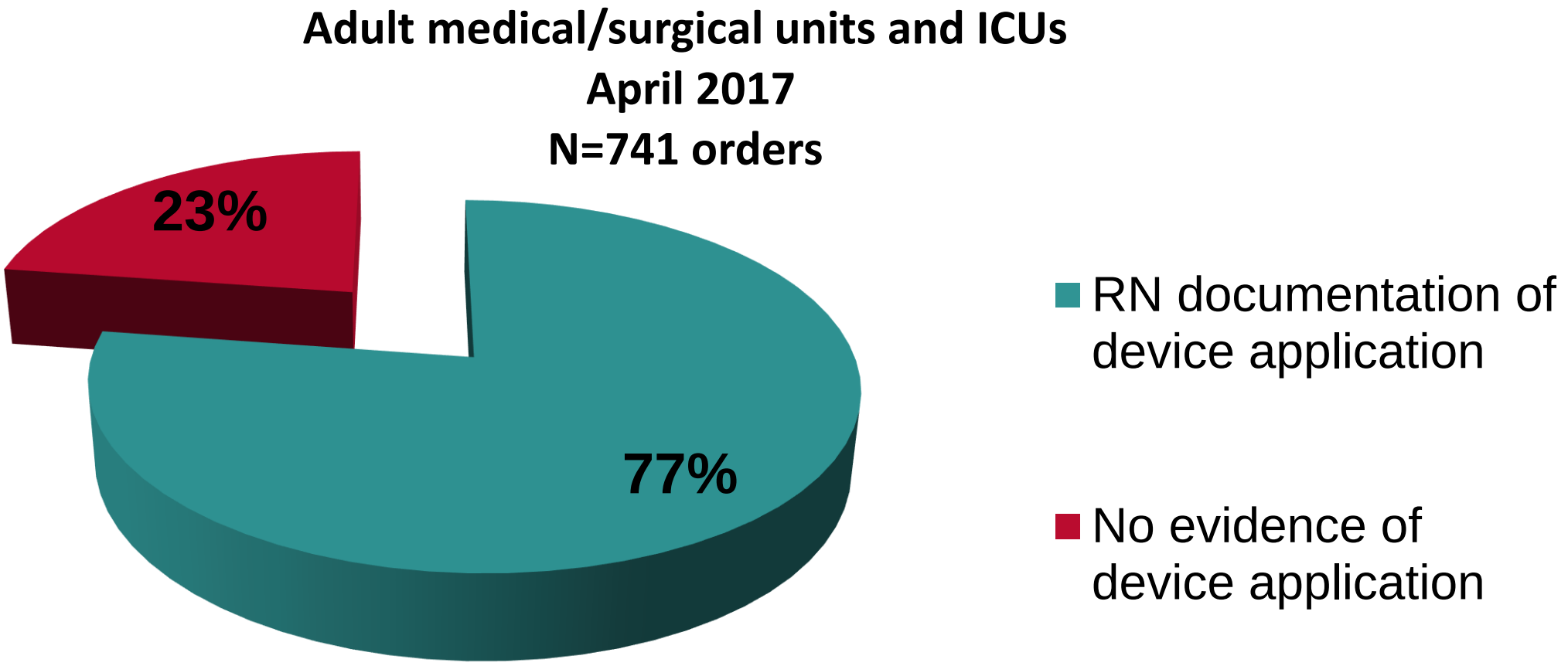
Issue
Coders unfamiliar with clinical terminology, vascular anatomy, PSI 12 exclusion criteria leading to inappropriate inclusion of events
Need to identify and review all VTE events in real-time
Lack of clarity on inclusion/exclusion criteria for the metric (e.g., upper extremity DVT)
Providers not familiar with documentation required to prevent events from being included in metric (“present on admission”)
Purchase of 3M 360 software package for concurrent coding

Addressing the Symptom vs. System…





Suboptimal Use of Mechanical Prophylaxis Devices



Critical input from the stakeholders regarding SCDs – Workforce Engagement

- One wasn’t in the room
- Couldn’t find one
- Didn’t have time to look for one
- It was broken
- Went downstairs- they didn’t have one either
- There was no order for one
- Patient wouldn’t wear it/ took it off/ didn’t understand the value/ too itchy /too hot -Voice of the Customer

Identified Causes of Suboptimal Pharmacologic VTE Prophylaxis from the data

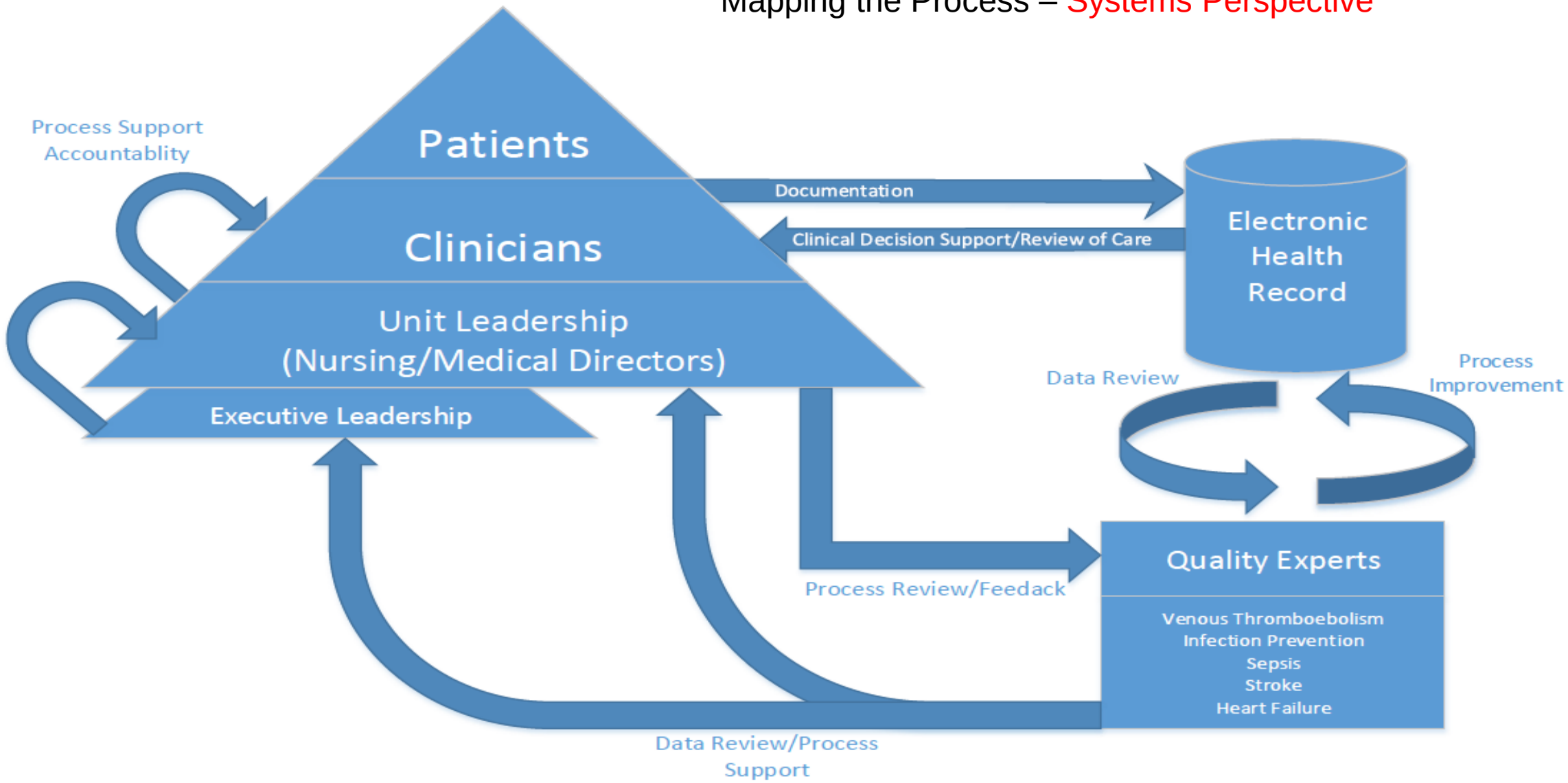
Patient	VTE ppx status	Reason	Comment
1	Delayed initiation (≥72 hrs)	Oversight	Acknowledged by neurosurgery
2	Delayed initiation (≥48 hrs)	No documented reason	SCDs documented
3	Held doses (≥72 hours)	Procedure delayed x 3d	SCDs documented
4	Held doses (≥72 hrs)	Procedure delayed x 3d	Transfer from SRMC SCDs documented
5	Held doses (≥24 hours)	Procedure delayed x 1d	Not on obesity dosing
6	Delayed resumption post-op (≥ 72 hrs)	Ortho spine	Initial ppx was asa. vs anticoagulation
7	Delayed resumption post-op (≥ 72 hrs)	Ortho spine	
8	Missed doses (≥ 24 hours)	Copy/paste	Prophylaxis suspended

How Can ***We*** Do Better?
Manage by Fact

Optimize adherence with mechanical prophylaxis modalities, such as sequential compression devices (SCDs)

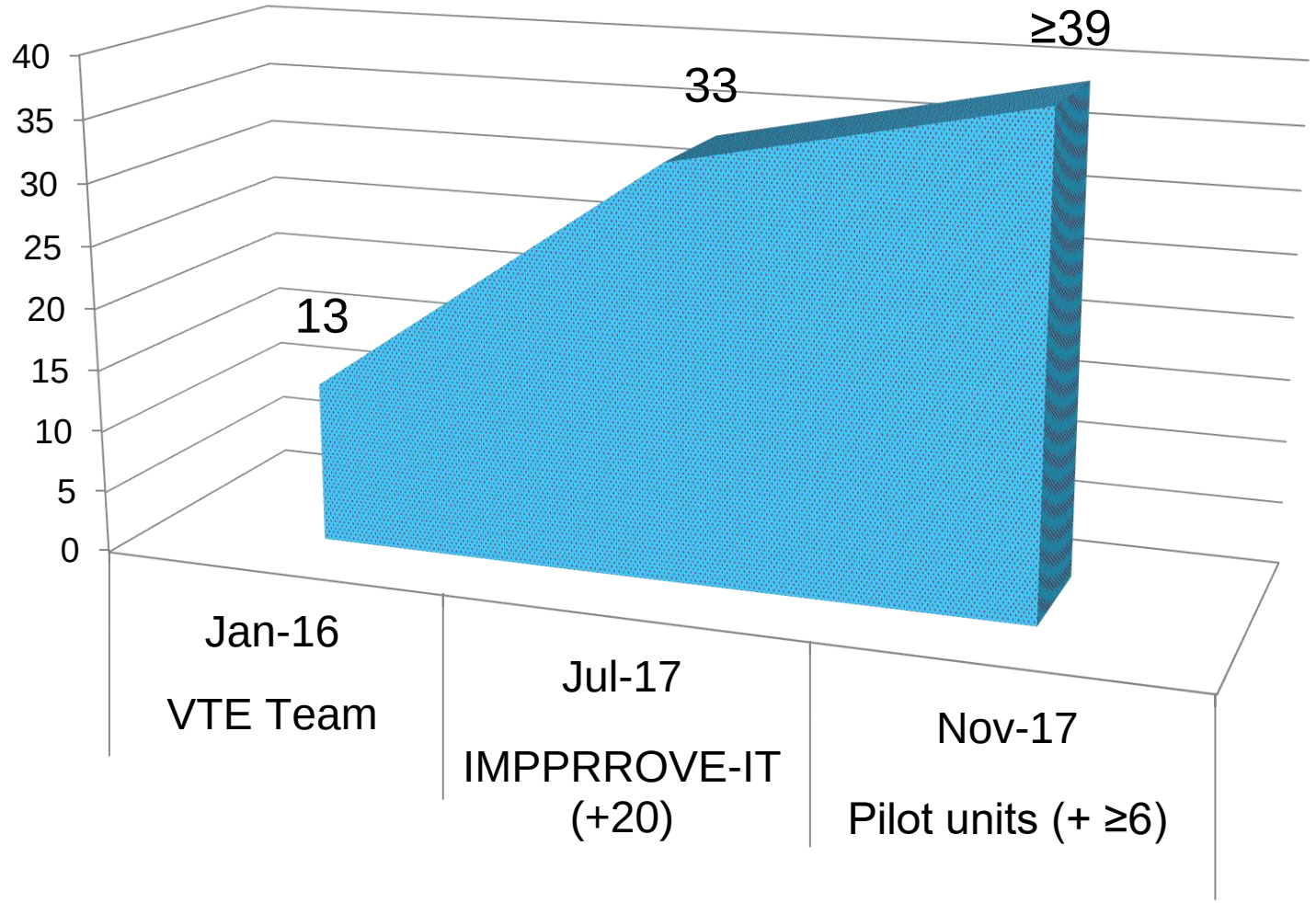
Minimizing the amount of time patients are off of VTE prophylaxis for any reason, particularly invasive procedures

Mapping the Process – Systems Perspective



Expanding Multidisciplinary VTE Efforts,

Adding Champions for Actions, Pilots and Education



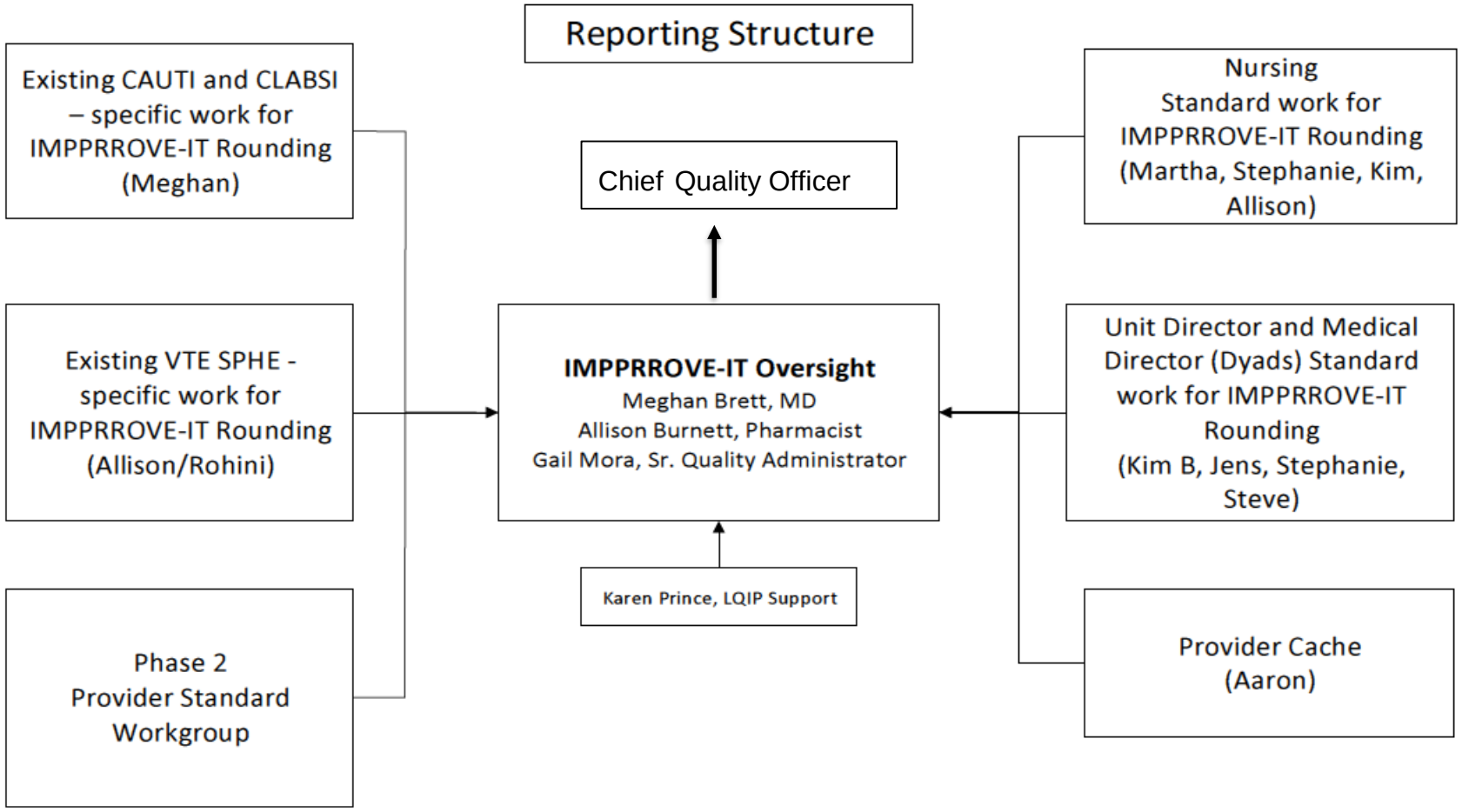
WORLD THROMBOSIS DAY
13 OCTOBER

KNOW THROMBOSIS

IMPROVE-IT

- ❑ Multidisciplinary group formed to develop and implement scalable patient safety and quality improvement pilot program. Identify Champions! Workforce Engagement
- ❑ Initially conducted on 2 units, then expanded to 6. Use of Pilot Program
- ❑ Process: solicited input from frontline healthcare professionals who interact with patients at the bedside to obtain their unique understanding of day-to-day processes and realistic approaches to improvement re: VTE prevention and hospital-acquired infections. Workforce Engagement and VOC
- ❑ Integrating unit leadership (unit directors, unit-based educators, RN supervisors, and medical directors) in the processes as well. Integration

IMPPRROVE-IT (7/21/17)



WORLD THROMBOSIS DAY
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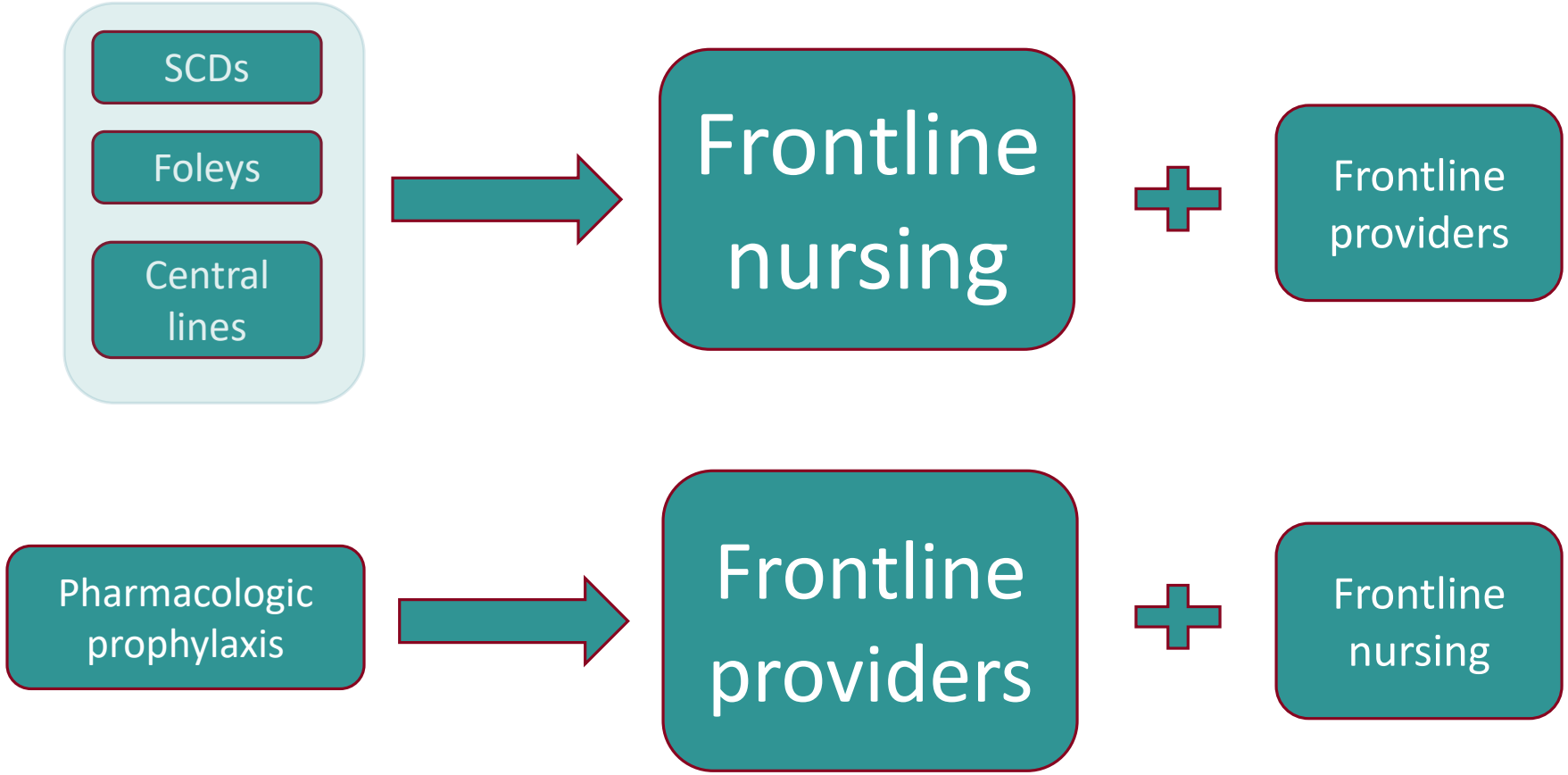
KNOW THROMBOSIS

Drivers/Primary Owners of Efforts-
Empower front line; those who do the work.



"The Why"-
Align to VMV!

- Giving bedside staff ownership
- Making them understand why its important
- Providing them standardized tools and processes

IMPPRROVE-IT Patient Safety Rounds at UNMH
***NURSES*, we need YOUR help!**

Who's involved?

- **Our patients**
- Bedside nursing staff
- Nursing leadership
- Providers
- Quality
- Information technology

What's the issue?

- Patients at UNMH are experiencing **harm** events, such as:
  - Central line infections
  - Foley catheter infections
  - Blood clots (DVTs, PEs, VTEs)

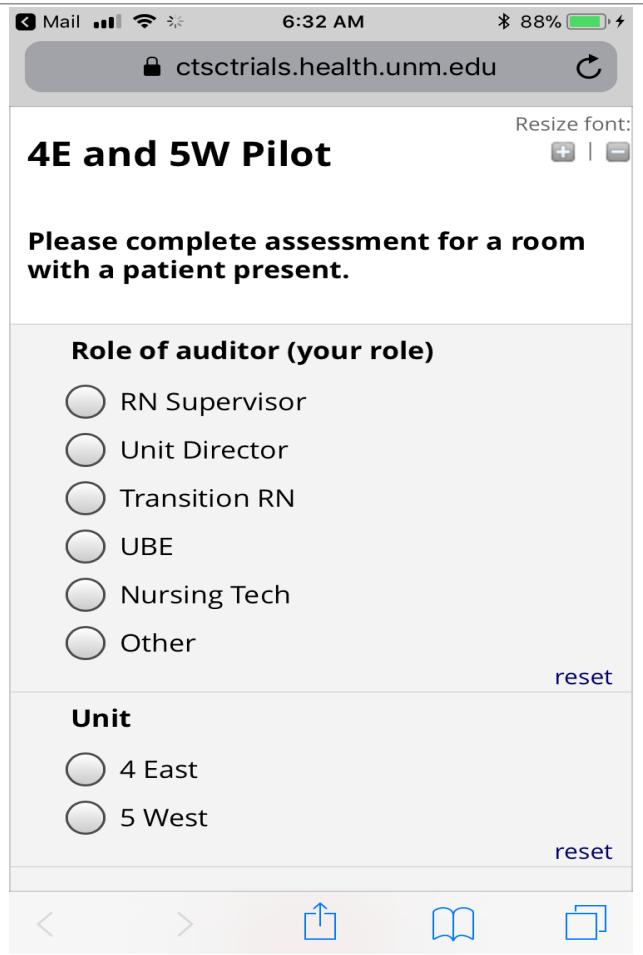
Why are these events happening?

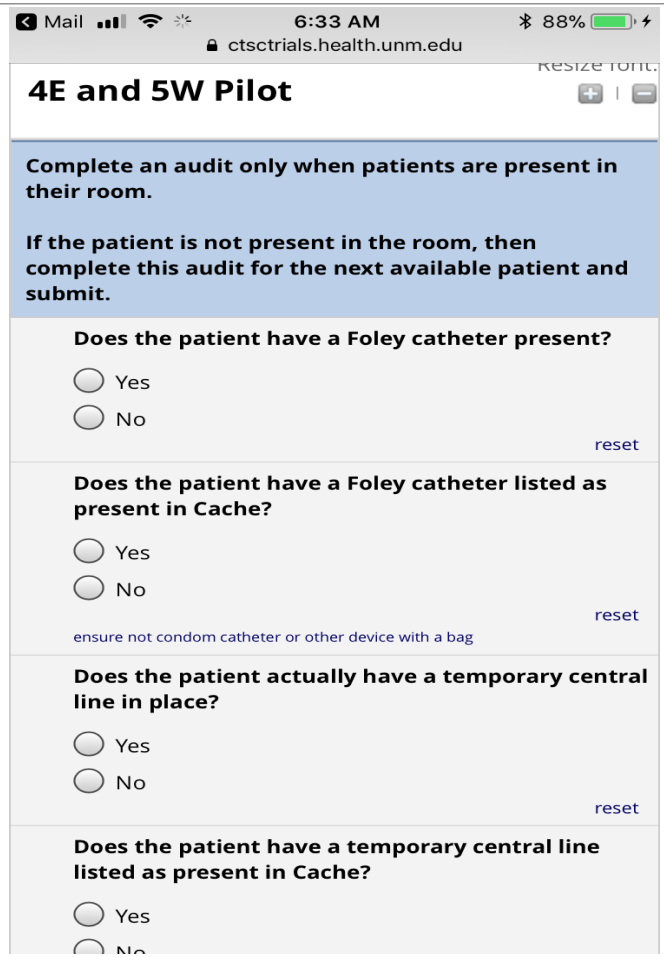
- Often, devices like central lines and foley catheters are left in when they are not needed, and this can lead to serious infection
- If VTE prevention strategies , such as SCDs are not consistently used when ordered, hospitalized patients can develop blood clots and even die

What can I do to keep my patients from experiencing harm while at UNMH?

- Make sure you are providing accurate, consistent documentation **EVERY SHIFT** for:
  - **Patients who have foley catheters (and the indication)**
    - Use the UNMH foley procedure (on the PP&G page) for guidance
    - If the patient has a foley present but no valid indication, nursing should be removing the foley (per Procedure)
  - **Patients who have temporary central lines (and the indication)**
    - Use the UNMH temporary central line procedure (on the PP&G page) for guidance
    - If the patient has a temporary central line present but no valid indication, nursing should advocate for removal via discussion with primary team

Leadership Engagement: RN Supervisor Rounding, Oversight Committee Rounding, Physician Rounding





Leveraging the EHR: Information Radiators

Transparency- Virtual Data available to all.

Patient Quality Dash Board

Testing: This information for non-clinical use only!!

Patient Lists | **Last update:**02/07/2018 07:53 am | **UH Medical Surgical Subacute Unit 4-E**: 20 patients displayed | **Next update:**02/07/2018 07:58 am | Refresh | Start Scroll

Unit	Room	Bed	IUC Days	Foley Indication	Central Lines	SCD Order	DVT Status
UH 4-E	0424	01				Yes	Ambulate, Below the Knee Intermittent Pneumatic Co
UH 4-E	0424	02	3	Urinary obstruction/retention, Immobilization d/t unstable spine		Yes	enoxaparin
UH 4-E	0424	03				No	enoxaparin
UH 4-E	0424	04	5	Do Not Remove order in place		No	enoxaparin
UH 4-E	0424	05				Yes	Ambulate, Below the Knee Intermittent Pneumatic Co
UH 4-E	0424	06				Yes	enoxaparin
UH 4-E	0424	07			**Title** PICC-2 Lumen Left Basilic vein **Indication** Medications **Days** 23 **POA** No	Yes	enoxaparin
UH 4-E	0424	08	Present on Admission	Urinary obstruction/retention	**Title** Central IV-3 Lumen Right Chest **Indication** Medications, Other: for home use. long term **Days** **POA** Yes	No	enoxaparin
UH 4-E	0424	09			**Title** PICC-2 Lumen Right Basilic vein **Indication** Frequent Lab Draws, Medications, Other: TPN **Days** 29 **POA** No	Yes	enoxaparin
UH 4-E	0424	10			**Title** PICC-3 Lumen Right Antecubital **Indication** **Days** 2 **POA** No	No	enoxaparin
UH 4-E	0424	11				No	rivaroxaban
UH 4-E	0424	12	1	Do Not Remove order in place		No	enoxaparin
UH 4-E	0424	13	5	Urinary obstruction/retention, Do Not Remove order in place		Yes	enoxaparin
UH 4-E	0424	14	1	Do Not Remove order in place		No	enoxaparin
UH 4-E	0424	15			**Title** PICC-2 Lumen Left Basilic vein **Indication** Difficult Access, Medications **Days** 22 **POA** No	Yes	enoxaparin
UH 4-E	0424	16				Yes	Below the Knee Intermittent Pneumatic Co
UH 4-E	0424	17	3	Assess UOP d/t hemodynamic instability		Yes	Below the Knee Intermittent Pneumatic Co
UH 4-E	0424	18				Yes	enoxaparin
UH 4-E	0424	19				Yes	enoxaparin
UH 4-E	0424	20				Yes	enoxaparin

Plan to have a monitor on each unit for staff and families to review

IMPPRROVE-IT: VTE

Process improvements and interventions	Development of hospital SCD procedure (rolled out Nov ‘17)
	Implementation of q4h reminder task for SCD documentation by nursing
	Optimization of functioning SCD availability
	Patient/family VTE prophylaxis education pamphlet in welcome packets
	Online nursing competency on VTE prophylaxis (rollout Jan ‘18)
	Ongoing development of similar competency for providers
	Ongoing development of quantitative VTE risk scoring tools and VTE prophylaxis ordersets within Powerchart (dovetails with Quality Alignment efforts)
	Development and implementation of IMPROVE-IT audit process on 6 pilot units with weekly feedback and monthly meetings

Continuous Cycles of Improvement

Multiple drafts of the SCD procedure

Multiple iterations of the Red Cap survey and audit reports

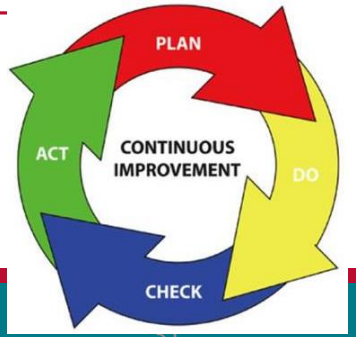
Multiple iterations of new Powerchart VTE risk assesment

Numerous drafts for online nursing educational competency

Improvement with each IMPPRROVE-IT pilot

Multiple iterations of educational material for patients

Etc, etc, etc….



Weekly Performance Feedback- Data!

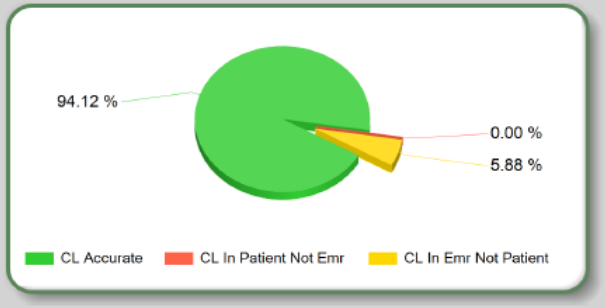
Manage by Fact

IMPROVE-IT 4 East

Accuracy of Central Line Documentation

Total Surveys this week: 96

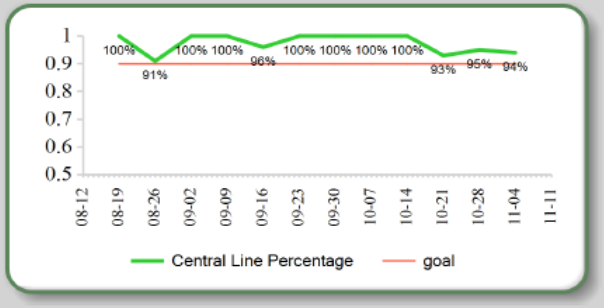
Week of: 10/28/2018 to 11/4/2018



Total Central Lines this week: 17

Total Surveys these 12 week: 1245

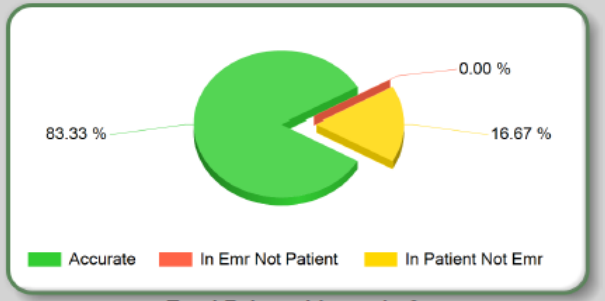
Trend For: 8/12/2018 to 11/4/2018



Total Central Lines these 12 weeks: 187

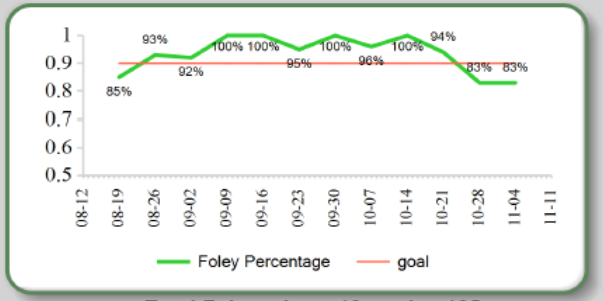
Accuracy of Foley Catheter Documentation

Week of: 10/28/2018 to 11/4/2018



Total Foleys this week: 6

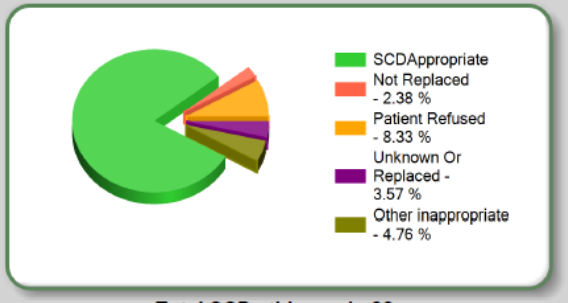
Trend For: 8/12/2018 to 11/4/2018



Total Foleys these 12 weeks: 185

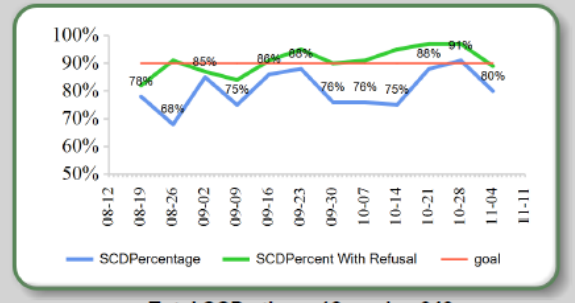
Accuracy of Sequential Compression Device Use

Week of: 10/28/2018 to 11/4/2018



Total SCDs this week: 82

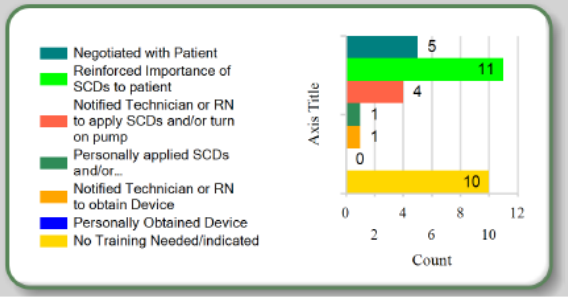
Trend For: 8/12/2018 to 11/4/2018



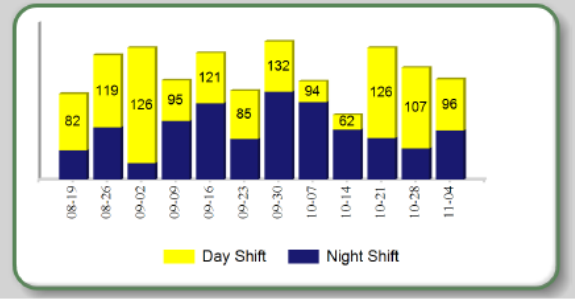
Total SCDs these 12 weeks: 949

Just In Time Training and Survey Count Trend

Week of: 10/28/2018 to 11/4/2018



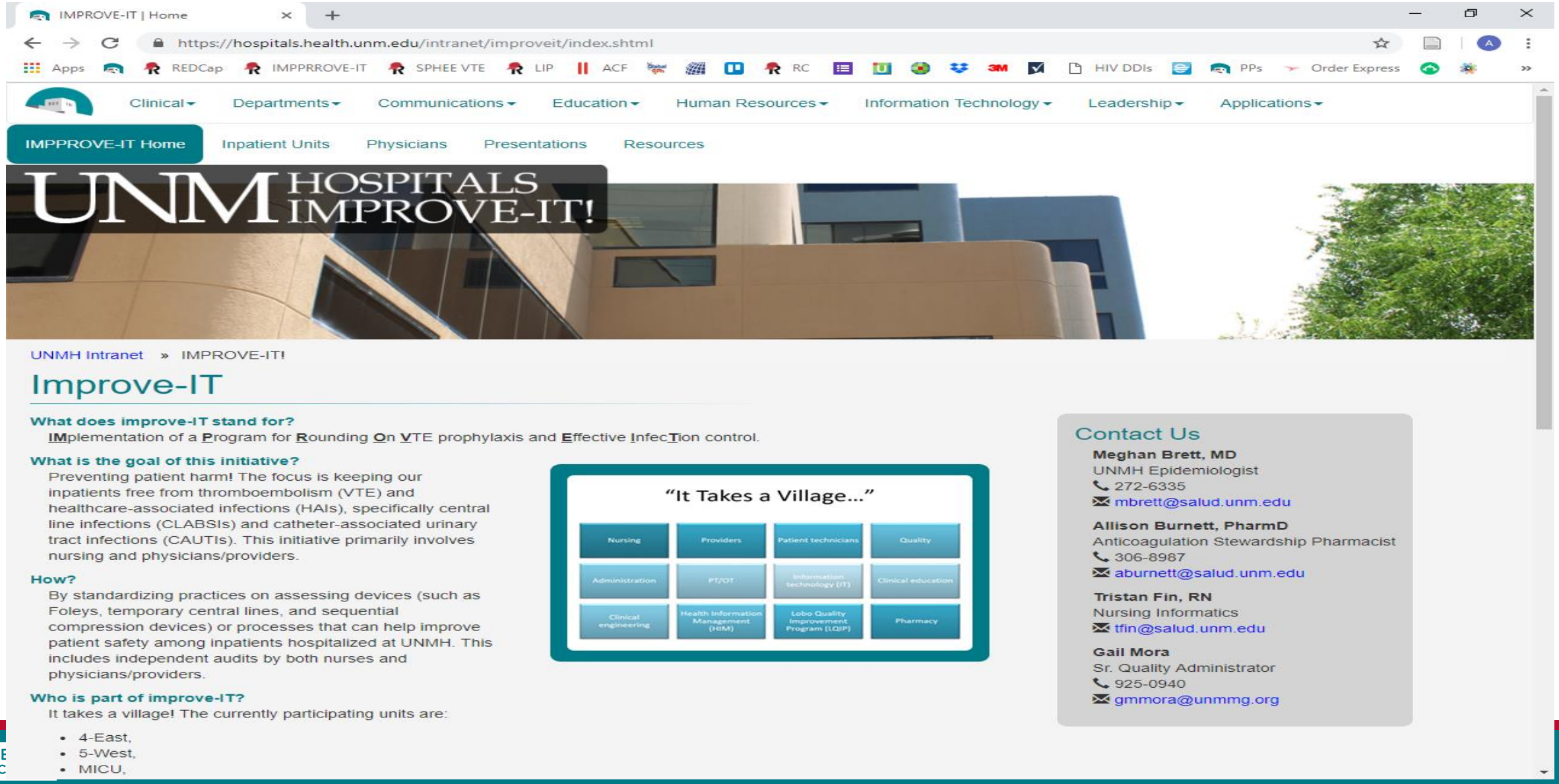
Number of Surveys Over the Last 12 Weeks



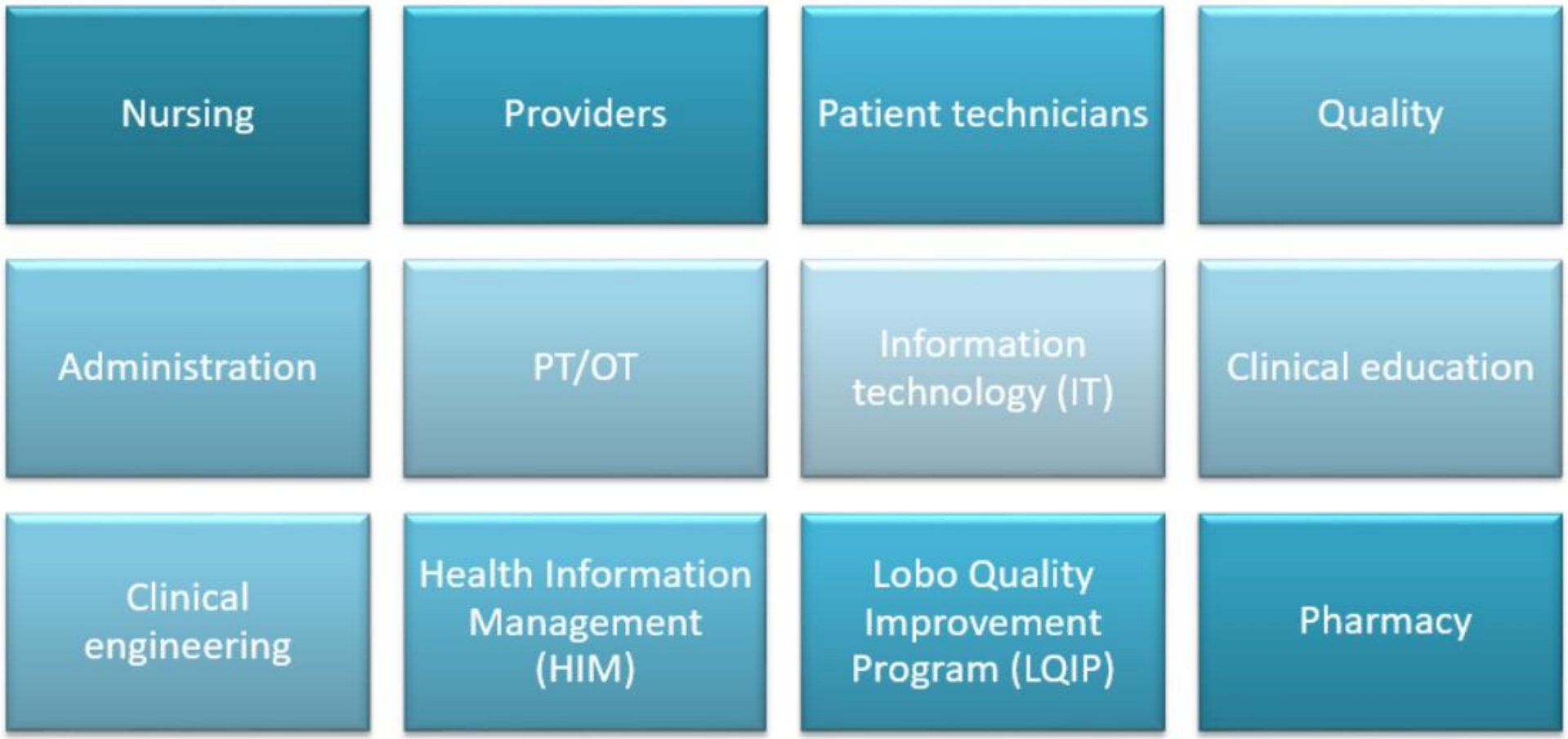
Questions or concerns? Contact Allison Burnett 505-306-8987 or Meghan Brett 505-264-6789

IMPROVE-IT Website

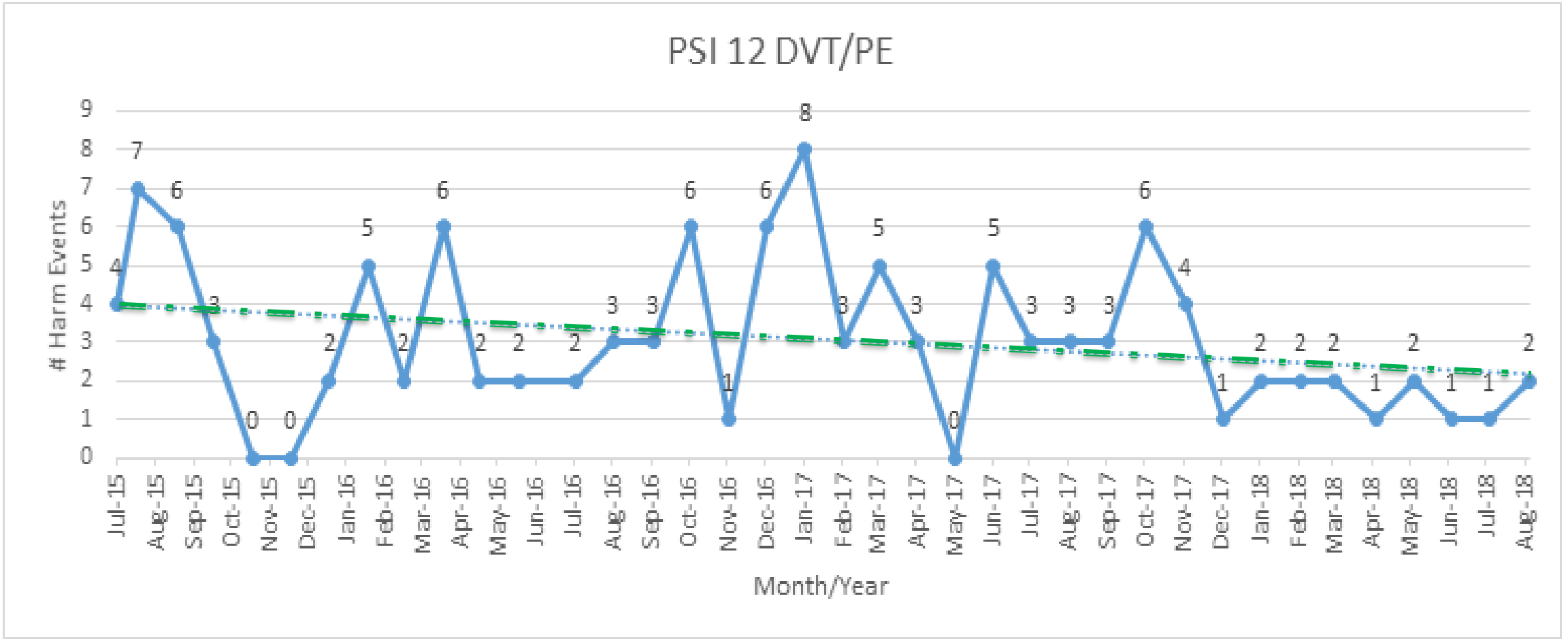
Assures transparency, communication, knowledge management



“It Takes a Village…”



We are IMPROVING IT! Share the story, focus on success.



But We Can't Let Up… Data helps us keep the focus

	Jul '17	Aug '17	Sept '17	Oct '17	Nov '17	Dec '17	Jan '18	Feb '18	Mar '18	Apr '18	May '18	Jun '18	2018 FYTD	Target for FY18	Target based on	FY '17	FY '16
P. Ulcer	0	0	1	0	1	1	0	2	1	2	0	1	9	6	Viz 50th	6	7
Iatro PTX	0	0	1	0	0	1	0	3	1	0	0	0	6	4	Viz 50th	4	6
Hemorr/H	0	1	1	1	0	1	1	1	0	0	1	0	7	10	Viz 50th	12	21
Resp Fail	1	1	0	0	1	0	1	0	0	0	2	1	7	6	Viz 40th	6	11
Sepsis	4	1	1	1	0	2	1	0	1	0	1	2	14	10	Viz 50th	17	22
Viz Total	5	3	4	2	2	5	3	6	3	2	4	4	43	36		45	67
DVT/PE	3	3	3	6	4	1	2	2	2	1	2	1	30	29	Viz 50th	43	39
UOP TOTAL	8	6	7	8	6	6	5	8	5	3	6	5	73	65		88	106
Dehisc	1	0	1	0	0	0	0	0	0	0	1	0	3	0	Viz 50th	0	6
Punc/Lac	0	0	1	0	0	0	0	0	0	0	0	0	1	0	Viz 50th	0	4

Italics = post-op metric * Reviews pending @ *Leading indicator; estimate # events*

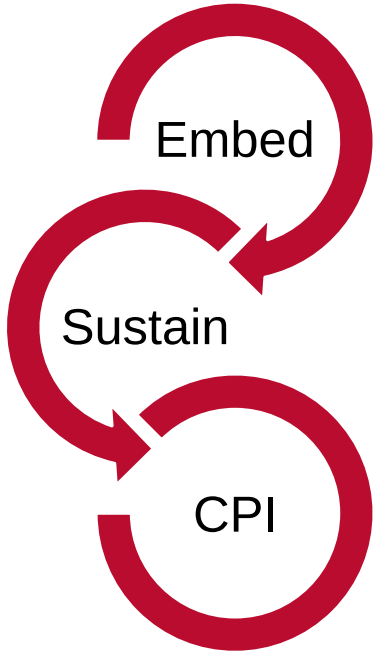
VTE Efforts: Next Steps

Formalization and standardization of VTE Team data collection, analysis, communication and documentation

Pursue additional resource(s) to aid in real-time VTE event review and data analysis

Expand IMPPRROVE-IT

To providers	Hospital-wide	To informatics (Quality monitors on units, electronic alerts in EHR)	To additional metrics once culture is changed re: initial metrics



Embed and sustain through Discipline

P.D.S ACT - Assure all accepted interventions are embedded in standard work

Auditing and audit results

Training and training results

Regular use of listening and feedback methods

Analysis of all results:

- Patient's health outcomes
- Process effectiveness results
- Staff satisfaction and engagement

Continual learning and improving and enhance your story

Team work: The success of the team impacts the success of the project

In God we trust, all others bring data.

–William E. Deming