THE UNIVERSITY OF TENNESSEE MEDICAL CENTER

Wisdom for Your Life.

A Tale of Two Projects

Change Management Lessons
Not All Change is Created Equal

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MAGNET RECOGNIZED AMERICAN NURSES CREDENTIALING CENTER

Tennessee Center for Performance Excellence 2016 EXCELLENCE AWARD

Who We Are

- Academic Medical Center
- Level 1 Trauma Center
- Regional Perinatal Center
- Level III Neonatal Intensive Care Unit
- Regional Hemophilia Program
- Regional Kidney Transplant Center
- The Pat Summitt Clinic
- Comprehensive Stroke Center
- 669 licensed beds, 630 staffed beds
- Two Regional Health Centers
- Clinically Integrated Network
- Colleges:
  - Graduate School of Medicine
  - Pharmacy

EMR – Cerner Powerchart

The University of Tennessee Medical Center

Medical Staff:

University Physicians' Association

- 610 Physicians
- 146 Primary Care
- 464 Specialists
- 416 Physician Extenders

Locations:

- 400 Physicians on UTMC Campus
- 132 Primary Care Physicians in 13 counties in East Tennessee

Process Improvement Model

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Fundamentals of Change Management - Kotter

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- Create a sense of urgency
- Create a guiding coalition
- Create a vision for change and strategy
- Communicate the change vision
- Empower the entire base
- Short term wins
- Consolidating gains and producing more change
- Anchoring new approaches with culture

WILL NOT GO THROUGH "ONE BY ONE" BUT WILL REFERENCE THESE CONCEPTS THROUGHOUT OUR TALK

https://en.wikipedia.org/wiki/John_Kotter

Two Projects

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- **Sepsis** – 2015
  - Desire to improve sepsis outcomes
  - Knowledge that sepsis core measure was being introduced in October 2015
    - Ultimately to be tied to pay-for-performance
    - Most complex CMS Core Measure ever introduced
  - **Will serve as our "base case" for comparison**
- **Anticipated Date of Discharge Clinical Throughput Project** – 2017
  - Long bed holds in ED and PACU
  - ED Left-Without-Being-Seen higher than desired
  - Data suggested too many discharges clustered late in the afternoon
  - **Will serve as our "case-study" to compare/contrast to sepsis and identify the lessons learned**

Sustainable Strategy for Surviving Sepsis – 2015

Base Case

Create a Sense of Urgency – Core Measure

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≥ 18 y.o., Dx: Severe Sepsis or Septic Shock

Severe Sepsis

3 hours

- Lactate *
- Blood cultures
- BS Antibiotics

- *Must repeat lactate within 6 hours if first lactate elevated

Septic Shock

3 hours

IVF @ 30 mL/kg

+

- Lactate *
- Blood cultures
- BS Antibiotics

6 hours

* Hypotension persists*

- Vasopressors
- Reassess volume status and tissue perfusion

53 different components of this core-measure.

If successfully complete 52 and miss 1, we FAIL!

Guiding Coalition

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- Chief of Staff (me)
- Co-Leader - Julia van Zyl MD – Pathways Medical Director
- Medical Director and Clinical Specialist of ED
- Medical Directors and Nurse Managers of all ICUs
- Medical Director and Lead Nurse Practitioner of Hospitalist Service
- Pharmacy
- Lab
- Nursing Leadership

GROUP MET ON TUESDAY AFTERNOONS WEEKLY, ATTENDANCE DEPENDED ON TOPIC

Year-Long Approach

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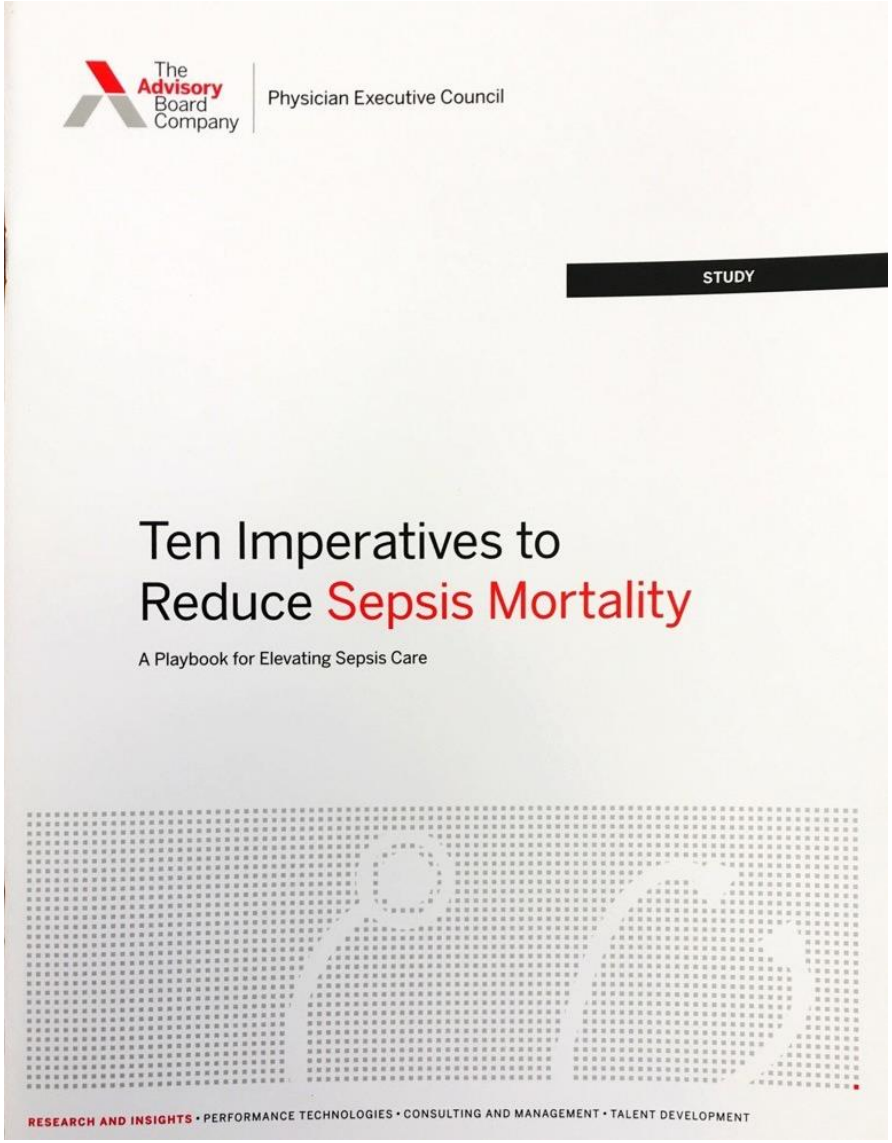
- Year-long Schedule (Tuesday afternoon meetings)
  - Assemble team – December 2014 (nearly 100 members)
  - Define current state – January – February
  - Sepsis World Tour – Part 1 – January – April
  - Develop Sepsis Bundle – March
  - Develop Screen and Alert Process – April – May
    - Included pilot on two nursing units
  - Redesign Sepsis Pathway Architecture - June
  - Incorporate CMS Sepsis Core Measures into Process – July
  - Create Infection Site Specific Pathways – August – November
  - Education and Awareness Strategy – August – now
  - Data Acquisition and Monitoring – August – now
  - Sepsis World Tour Part Two – October – December
  - Formal Education – January 2016
  - Go Live – January 26, 2016

Vision and Strategy



Communicate the Change Vision - Movie Poster

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Movie Trailer

Show Movie Trailer to be Brought on Memory Stick

Empower the Entire Base - Early Warning Score Card for Acute Care

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SEPSIS Early Warning Score Criteria

Screen Every Patient

Review Sepsis Tracking Trend
Any 1 of the following?

- Δ VS Trend
- Δ Lab Trend
- Δ Mental Status
- ↑ or new O2 requirements

→ Turn card over.

Review early warning alerts flowsheet.

Discuss patient and checklist with team lead.

Is there concern for patient decline?

UT MEDICAL CENTER

SEPSIS Early Warning Score Criteria

Call provider using script checklist below

Are you familiar with this patient?
This is a [47 y.o. WF] admitted with [abdominal pain].
I am calling due to [change in VS trend].

Report on each below:

- Current VS & trend
- ↑or new O2 requirements
- Last WBC, lactate, lab trend
- Mental status
- Immunocompromised: (HIV, CA/Chemo, steroids, transplant, HD)
- Infection risk (lines, tubes, drains, post-op)
- Is this patient pregnant?
- Pain (expected level / site?)
- Antibiotics / pain / sedating meds
- Family/staff concerned

ALL CLINICAL STAFF SHARE THE RESPONSIBILITY FOR SEPSIS

Refined Electronic Alert

- Electronic ALERT still exists
- SNOOZE parameters have been introduced, imbedded in pathways
- Encourages use of pathways and also lessens the “cry-wolf” effect

24 Hour Snooze

- TAVR - post - op

48 Hour Snooze

- Trauma General
- ICH
- SAH
- UBA
- TBI
- Infection Specific Phase of Sepsis Pathways
- STEMI

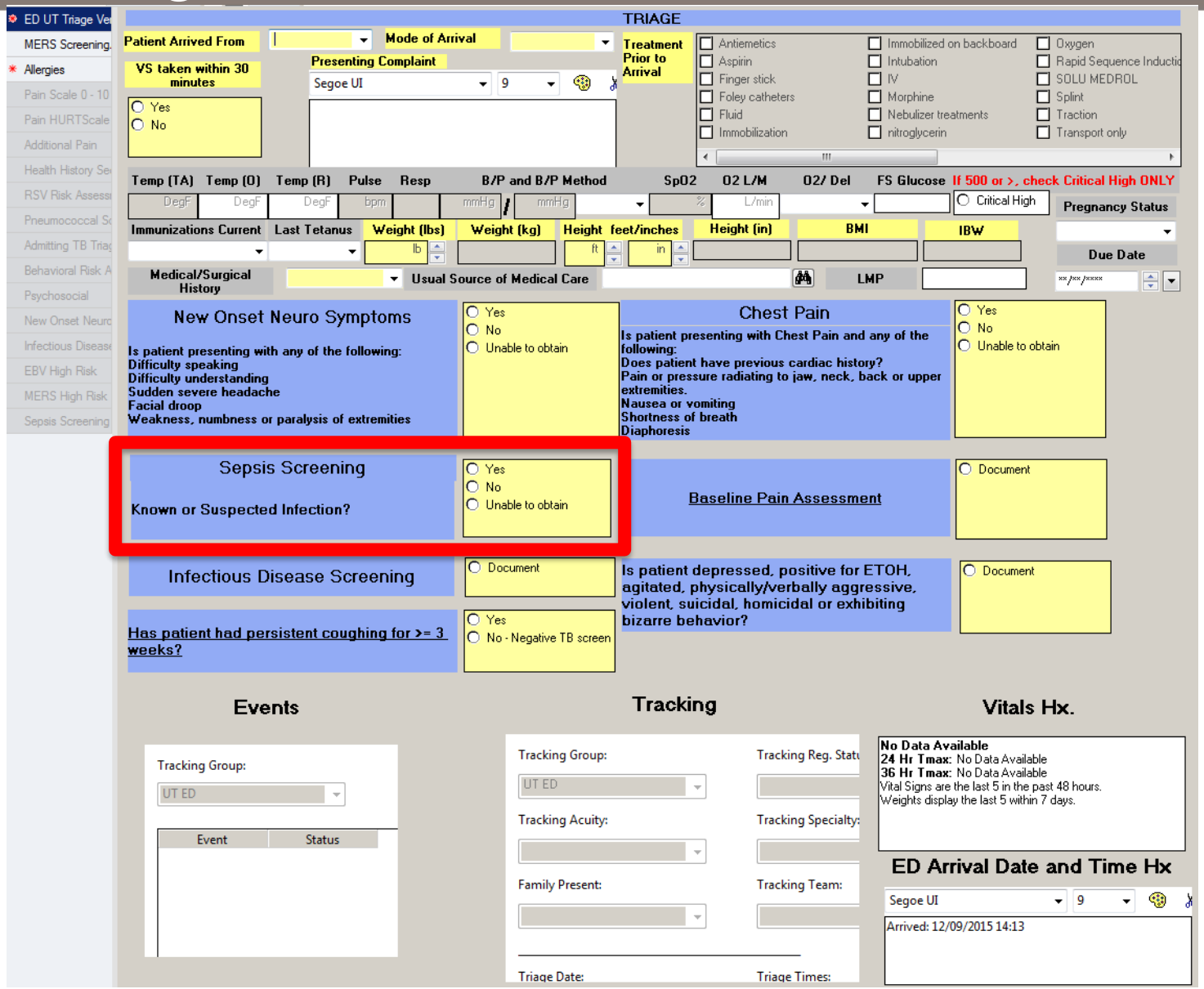
72 Hour Snooze

- Open Heart

96 Hour Snooze

- Septic Shock Phase

Short Term Win - New ED Screening Process



The New Sepsis Bundle

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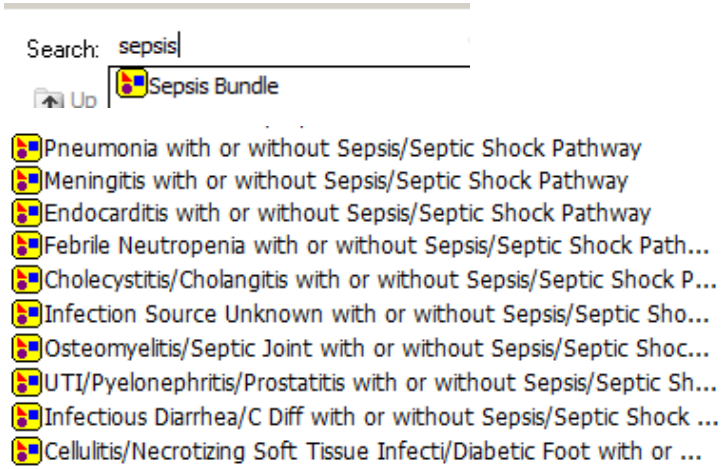
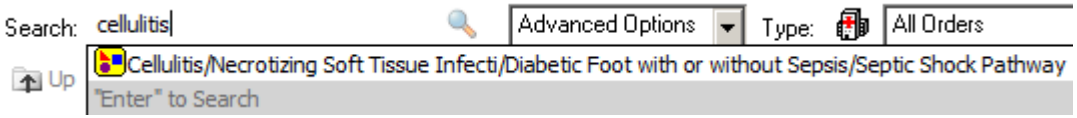
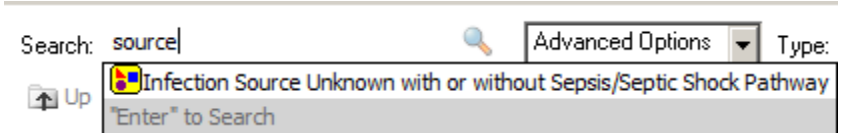
Sepsis Bundle (Initiated Pending)			
⊿ Condition/Code Status			
Provider QM Documentation Note			
		*** Document reasons for antibiotic choices below:	
☑		QDN: Patient has additional source of infection	T;N, Sepsis/Septic shock: possible blood, urine, lung infection.
⊿ Nursing Orders			
Communication Orders			
☑		Communication to HUC (Communication to HUC - One Time Task)	T;N, Sepsis Bundle has been ordered on your patient. Please notify the nurse and text page your area's phar...
☑		Communication to Nurse (Communication to Nurse - One Time Task)	T;N, The Sepsis Bundle has been ordered on your patient
☑		Communication to Nurse (Communication to Nurse - One Time Task)	T;N, Sepsis Bundle Blood Cultures. PLEASE READ ORDE... Sepsis Bundle Blood Cultures. Both sets of blood cultu...
⊿ IV Solutions			
IV Fluid Bolus			
☑		Sodium Chloride 0.9% (NS Bolus)	1,000 mL, IV Piggyback, 1TIME, STAT, Dose Form: INJ Sepsis Bundle. Give 1000 mL over 60 minutes.
⊿ Medications			
		Choose ONLY ONE antibiotic subphase below based on infection risks	
		REMEMBER! The antibiotics included in these subphases are for first dose only!	
☐		Cefepime Only Broad Spectrum Antibiotics	
☐		Cefepime Plus Vancomycin: Broad Spectrum Plus MR...	
☐		Aztreonam/Vancomycin: Penicillin Allergy	
☐		Cefepime/Linezolid: Broad Spectrum/MRSA for Vanco...	
☐		Aztreonam/Linezolid: Broad Spectrum/MRSA for Peni...	
		IF CAP an option, add azithromycin OR levofloxacin to above	
		IF C. difficile an option, add metronidazole OR oral vancomycin to above	
Pharmacy Communications			
☑		Pharmacy Communication	Sepsis Bundle, Start: T;N, STAT, Duration: 24 hr The Sepsis Bundle has been ordered on your patient

ENSURES PROMPT ANTIBIOTICS AND BLOOD CULTURES

10 New Infection Based Pathways







Consolidating Gains - Sepsis Coordinator

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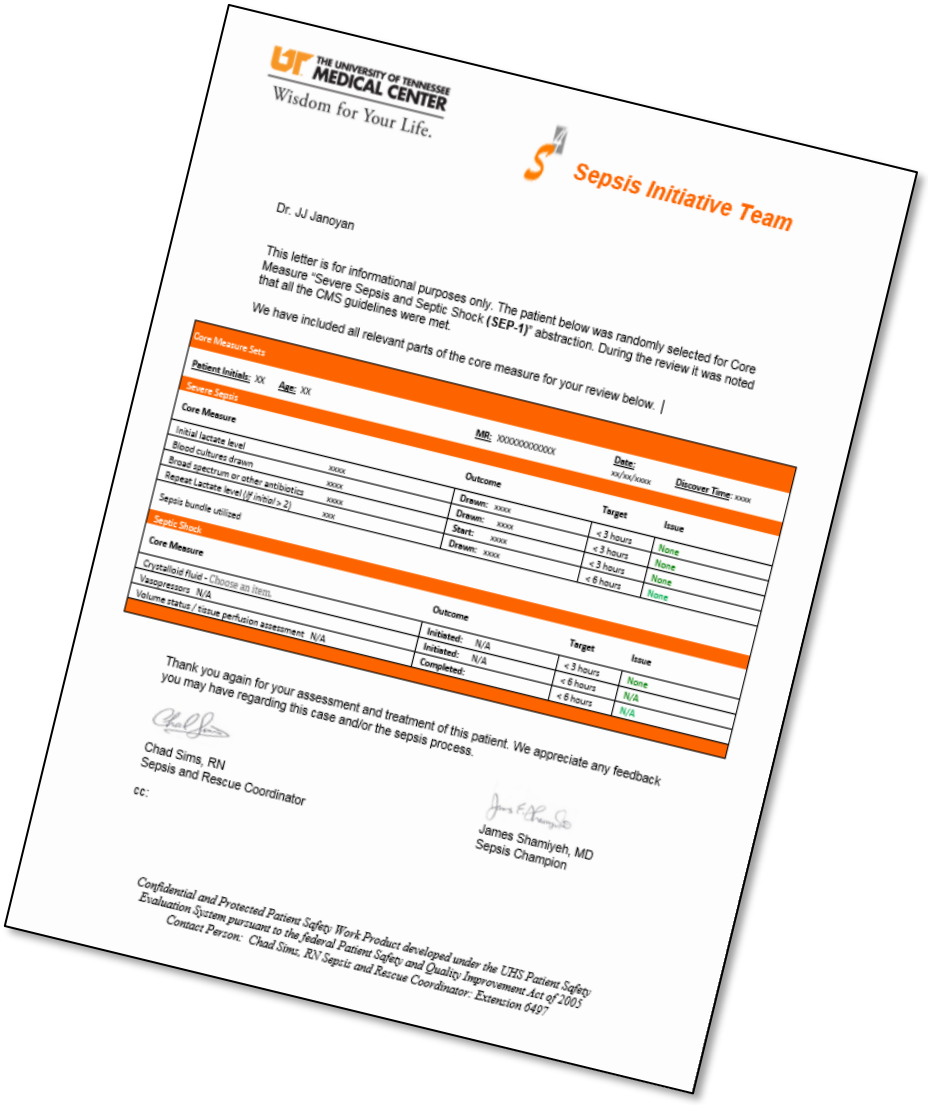
January 2016

- Initial primary focus concentrated on in-process measures
- Progressed to monitoring outcomes measures and relationship with the in-process measures
- Staff education
    - General orientation: 40 minute introduction to sepsis program
    - ED / ICU: additional 1.5 hours (tailored to clinical area)
    - Acute care: additional 30 minute presentation and 1 hour simulation lab training
    - PRN unit-specific “town hall” meetings/training
    - New intern orientation

- ED rounds (twice/daily)
- Provider follow-up
- Staff feedback
- State level representation

Sepsis Feedback Letter

- Every core measure case
- “Good and bad”
- Sent electronically
- Contains:
  - CMS SEP-1 core measure criteria
  - Actual performance
  - Bundle/pathway utilization



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Wisdom for Your Life.

Sepsis Initiative Team

Dr. JJ Janoyan

This letter is for informational purposes only. The patient below was randomly selected for Core Measure “Severe Sepsis and Septic Shock **(SEP-1)**” abstraction. During the review it was noted that all the CMS guidelines were met.

We have included all relevant parts of the core measure for your review below.

Core Measure Sets

Patient Initials: XX **Age:** XX **MR:** XXXXXXXXXXX **Date:** xx/xx/xxxx **Discover Time:** xxxx

Severe Sepsis

Core Measure	Outcome	Target	Issue
Initial lactate level	Drawn: xxxx	< 3 hours	None
Blood cultures drawn xxxx	Drawn: xxxx	< 3 hours	None
Broad spectrum or other antibiotics xxxx	Start: xxxx	< 3 hours	None
Repeat Lactate level (if initial > 2) xxxx	Drawn: xxxx	< 6 hours	None
Sepsis bundle utilized xxxx			

Septic Shock

Core Measure	Outcome	Target	Issue
Crystalloid Fluid - Choose an item.	Initiated: N/A	< 3 hours	None
Vasopressors N/A	Initiated: N/A	< 6 hours	N/A
Volume status / tissue perfusion assessment N/A	Completed:	< 6 hours	N/A

Thank you again for your assessment and treatment of this patient. We appreciate any feedback you may have regarding this case and/or the sepsis process.

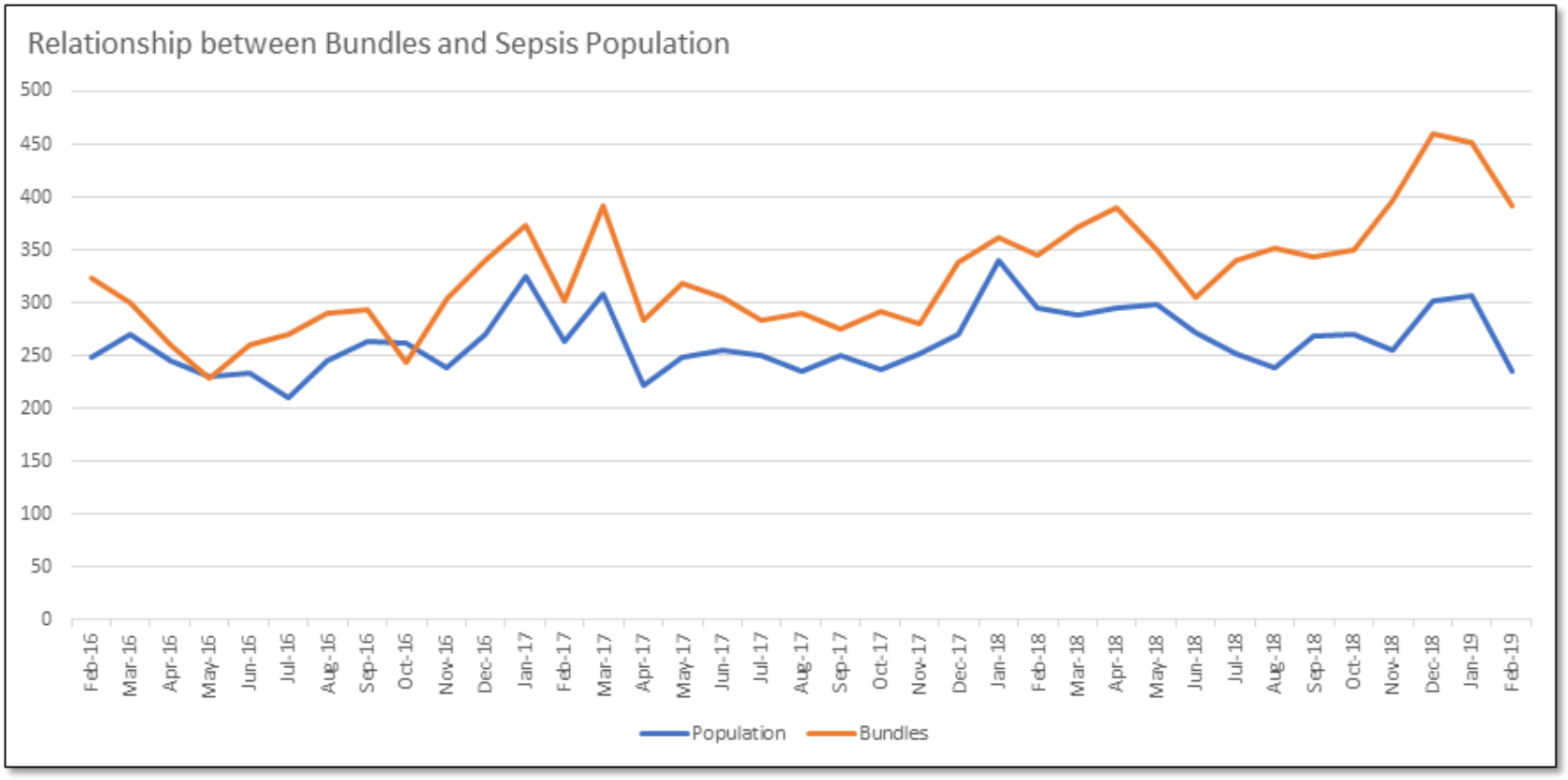
Chad Sims, RN
Sepsis and Rescue Coordinator

cc:

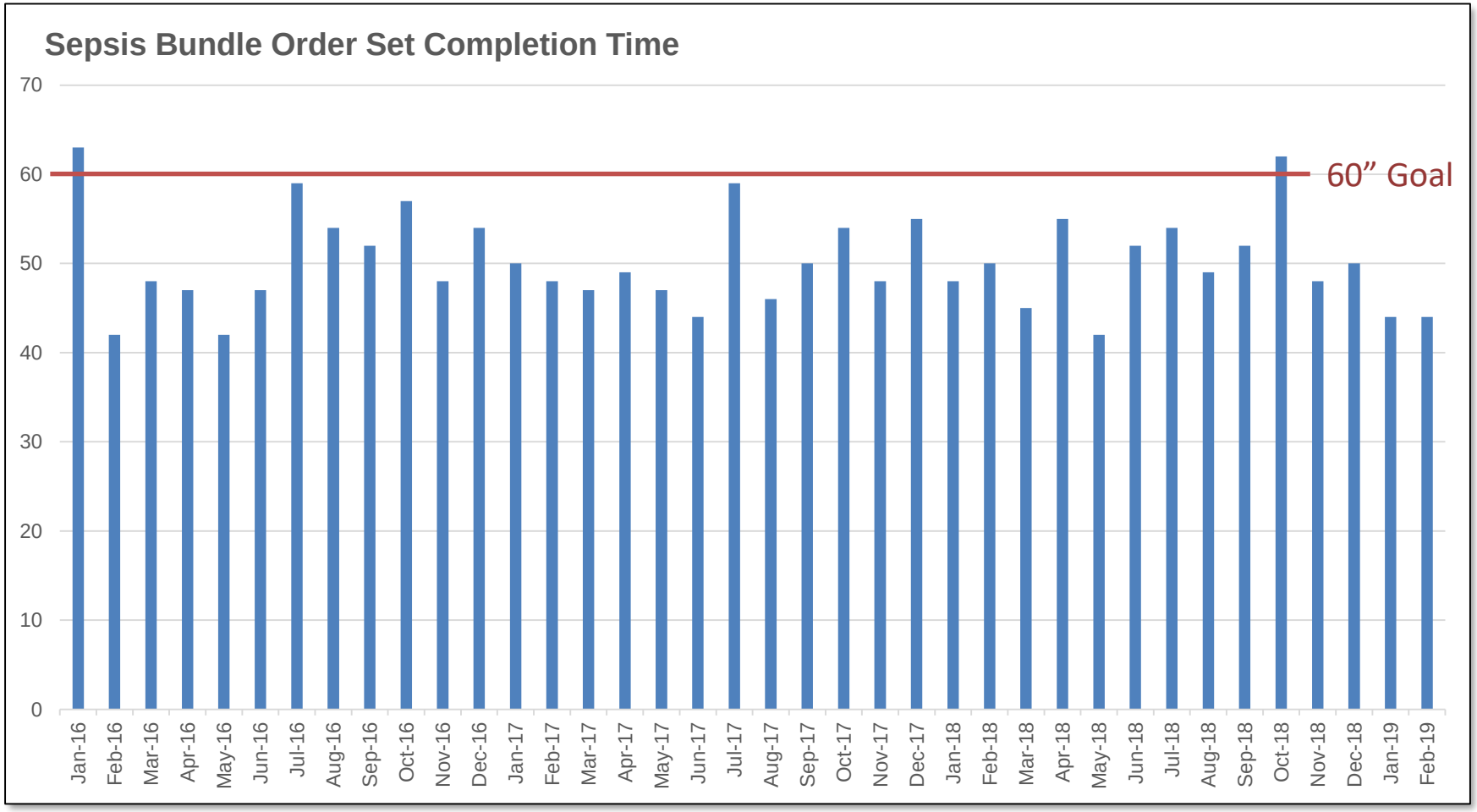
James Shamiyeh, MD
Sepsis Champion

Confidential and Protected Patient Safety Work Product developed under the UHS Patient Safety Evaluation System pursuant to the federal Patient Safety and Quality Improvement Act of 2005
Contact Person: Chad Sims, RN Septic and Rescue Coordinator: Extension 6497

Anchor with Culture

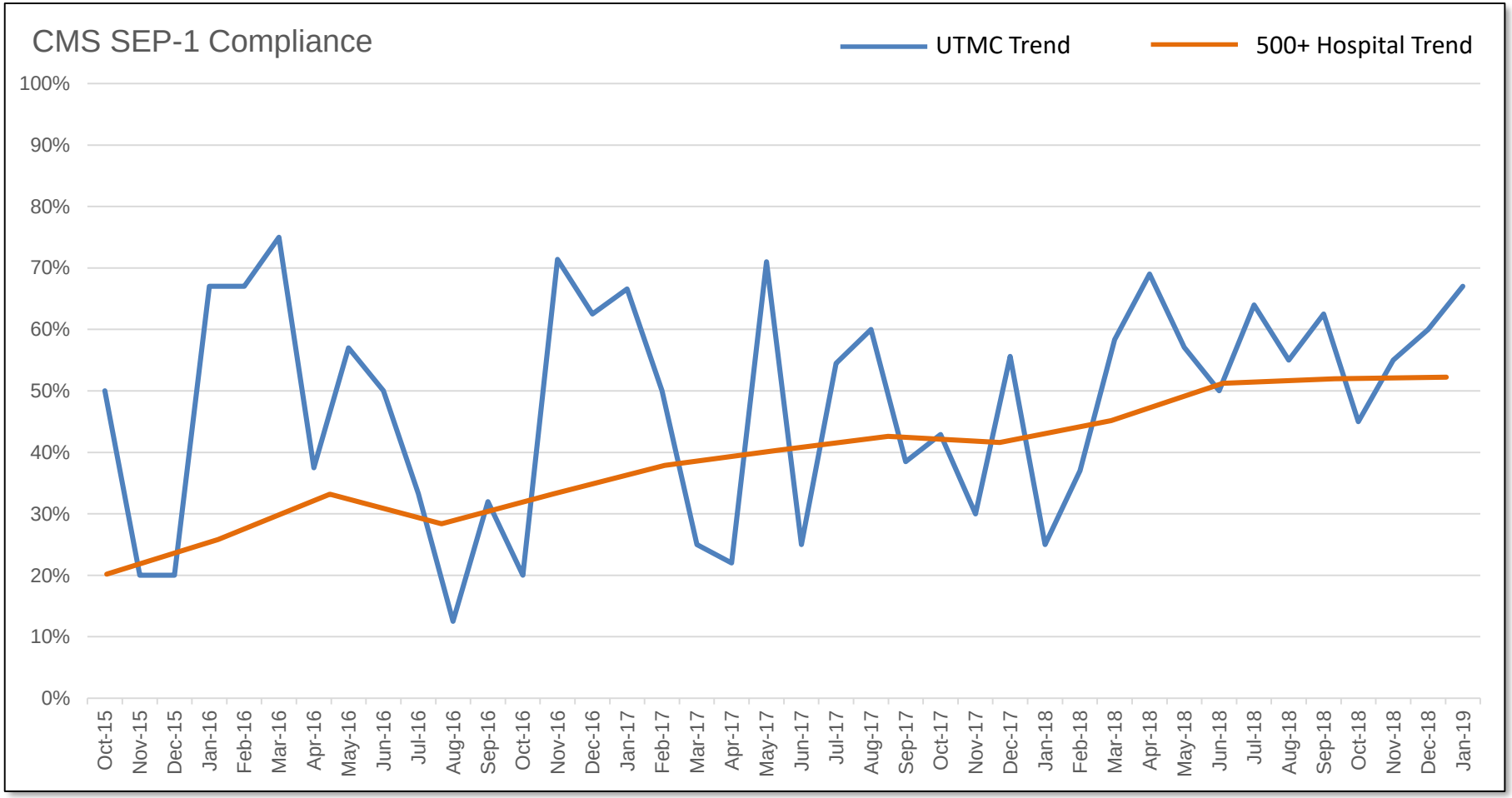


Bundle Completion Time Bar Graph



Time in minutes

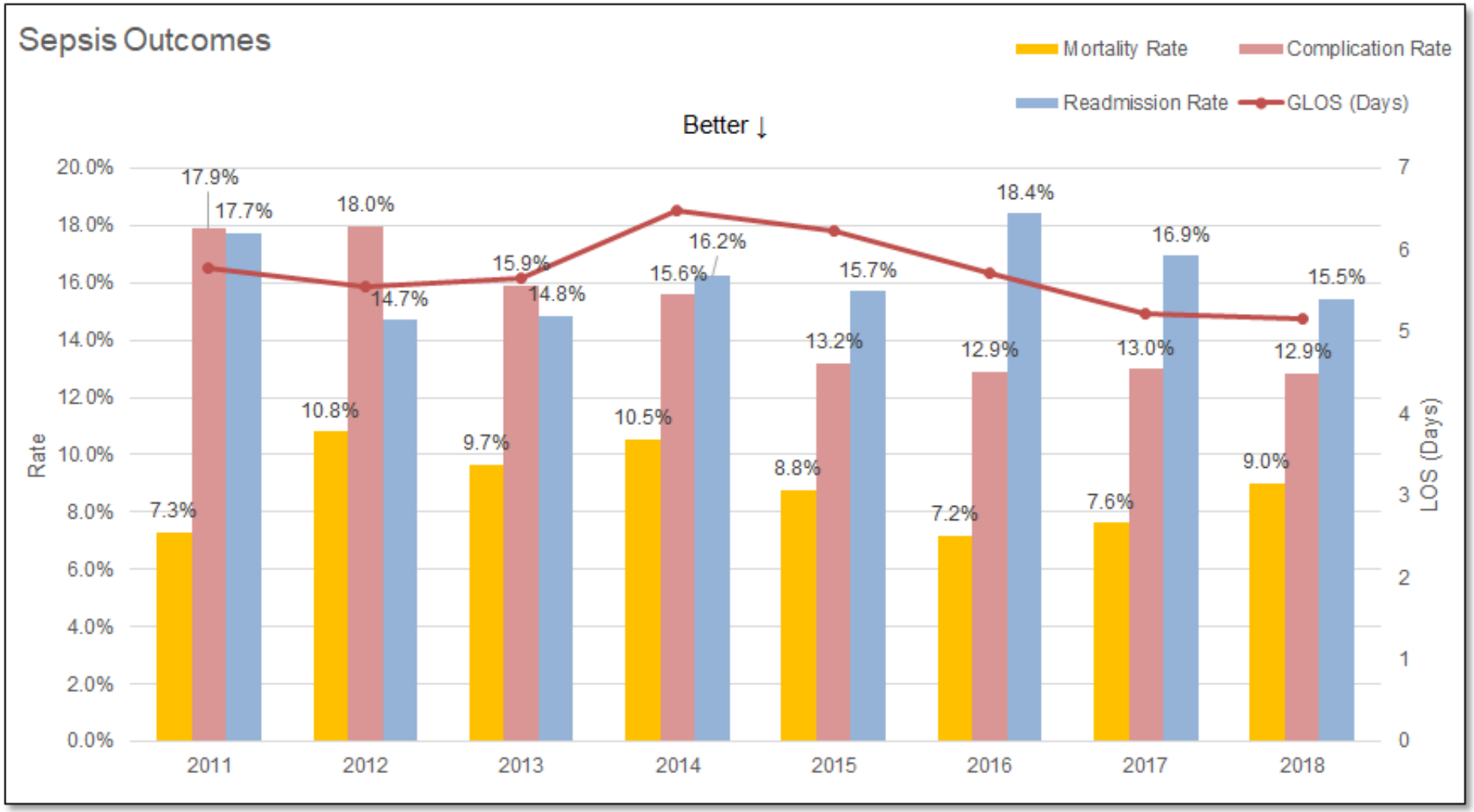
CMS SEP-1 Core Measure



UTMC Compliance: **47%**

Peer Compliance: **43%**

The Big Four Improvement



Anticipated Date of Discharge - 2017

Case Study

Create a sense of urgency:

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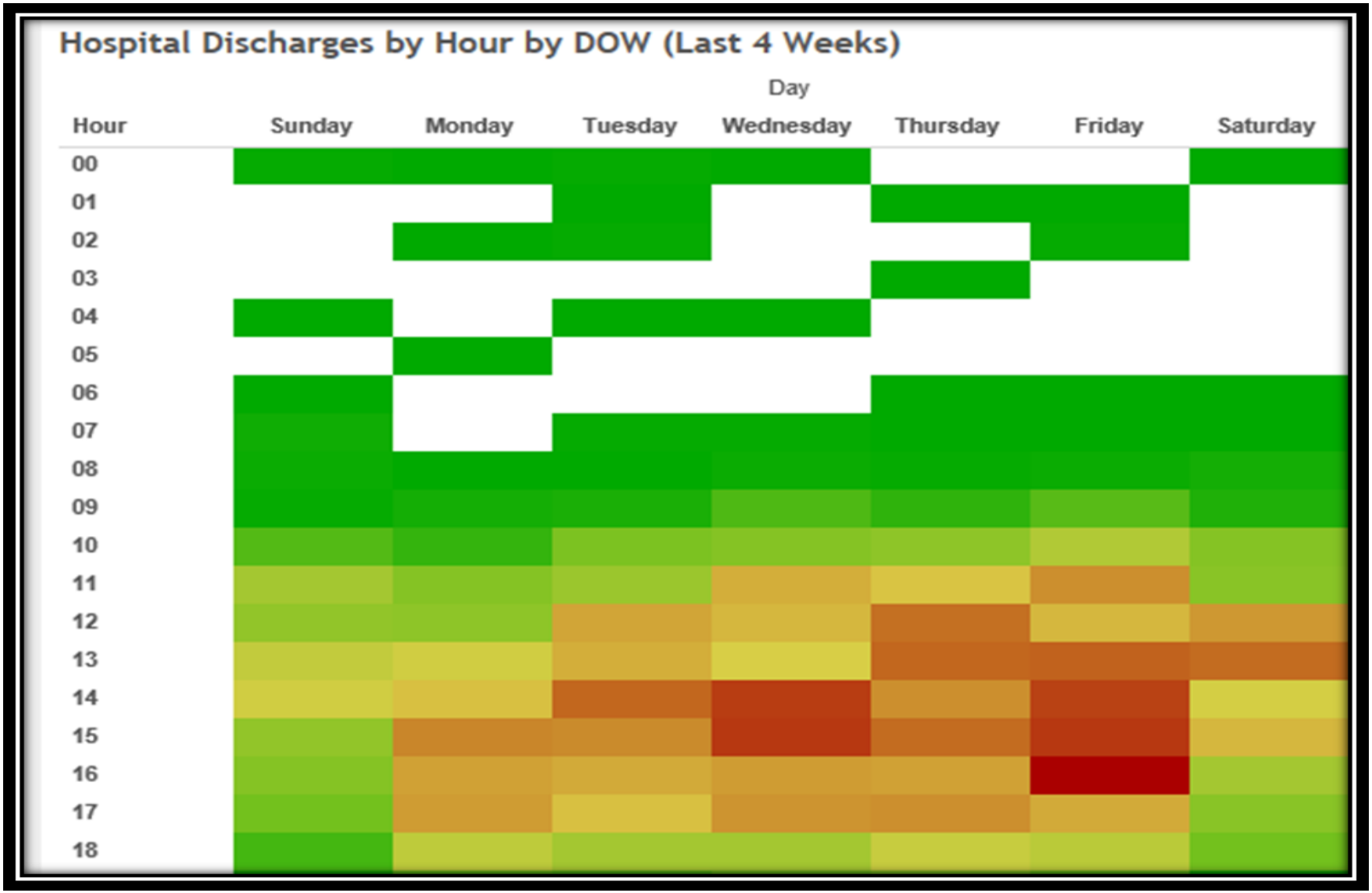
- ED Left without being seen:
  - 2016 Performance = 5%
  - Goal: <1%

- Outside referrals not accepted
  - 2016 Performance >100 per month
  - Goal : 0

Facility	LOS Days Opportunity	Current ALOS	Target ALOS	Variance	Discharge Opportunity
UTMC	7,945	5.19	4.91	.28 Days	1,531 – 1,618

Understand the Problem



Understand the Problem

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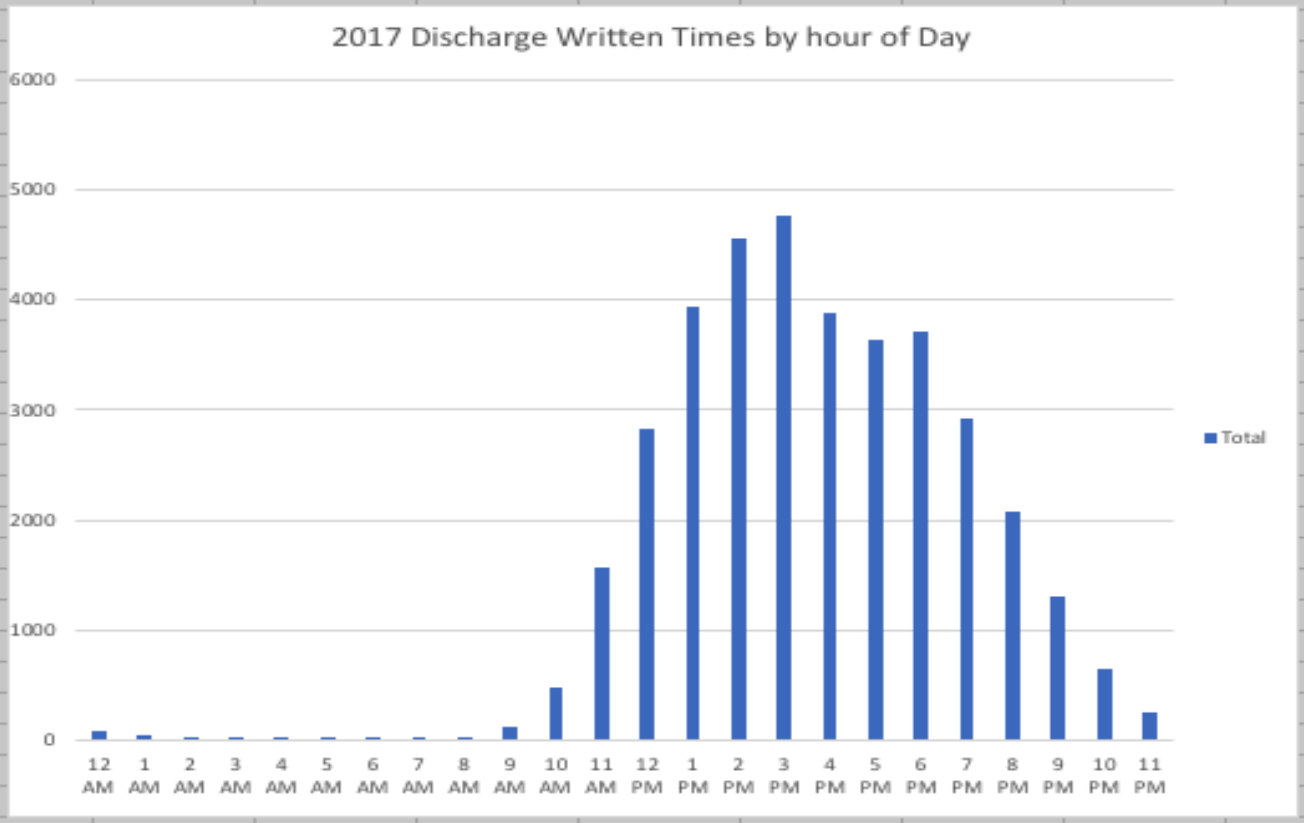
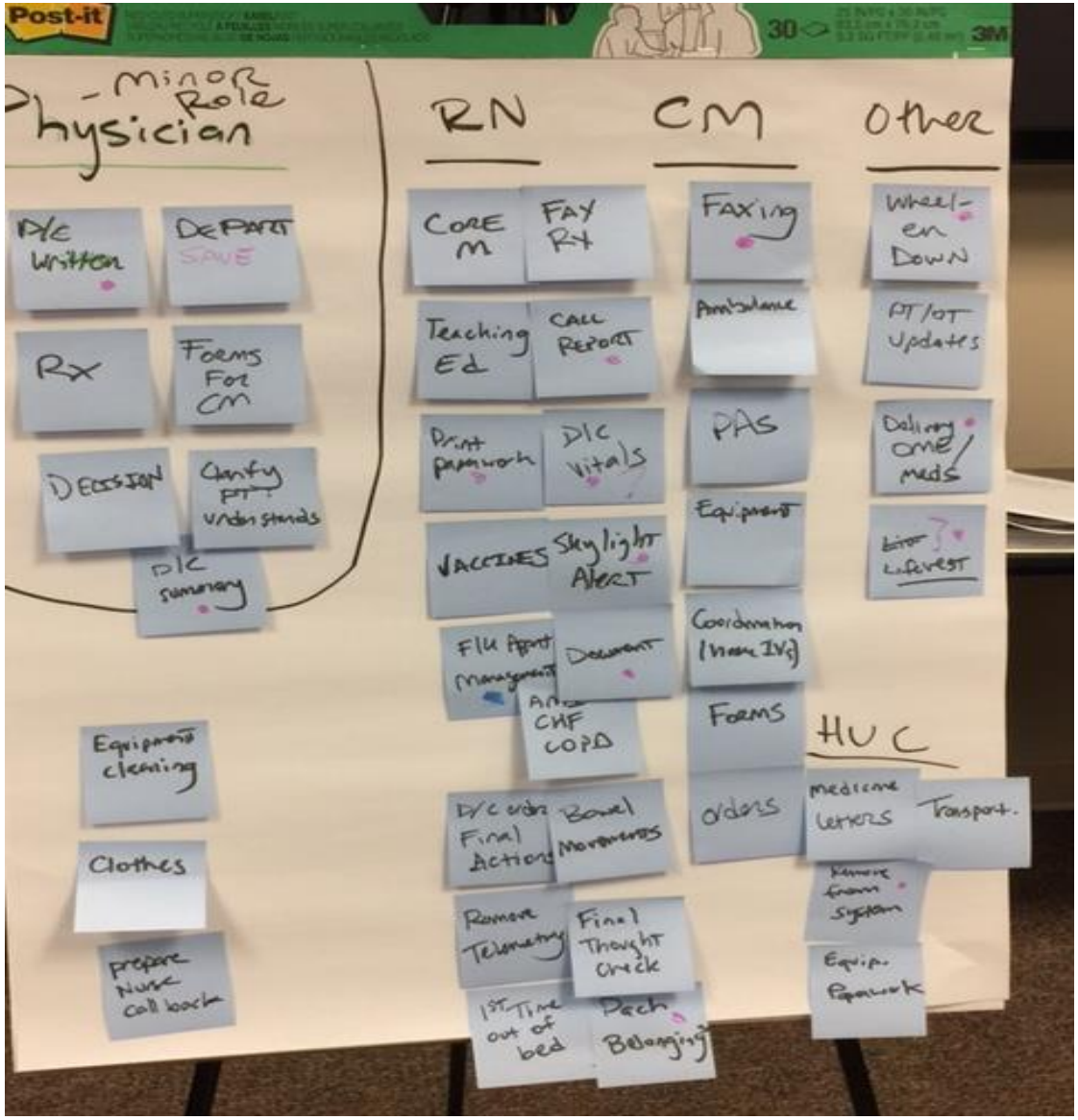
One MR = 0	0
Row Labels	Count of FIN
12 AM	79
1 AM	49
2 AM	32
3 AM	19
4 AM	16
5 AM	16
6 AM	9
7 AM	10
8 AM	17
9 AM	115
10 AM	486
11 AM	1561
12 PM	2836
1 PM	3938
2 PM	4560
3 PM	4762
4 PM	3879
5 PM	3633
6 PM	3705
7 PM	2931
8 PM	2070
9 PM	1302
10 PM	648
11 PM	252
Grand Total	36925



Understand the Problem



Current state:

- Discharge order itself only trigger to prepare for patient for discharge
- Most tasks done after this order placed

Guiding Coalition

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- Executive Sponsors- COO, CNO
- Physician champions
- Director of case management
- Nurse managers of multiple nursing units
- Bed side nursing representatives
- Hospitalists
- Unit Secretaries

GROUP MET WEEKLY FOR 4 MONTHS

Creating a Shared Vision: WIIFM (What's in it for me?)

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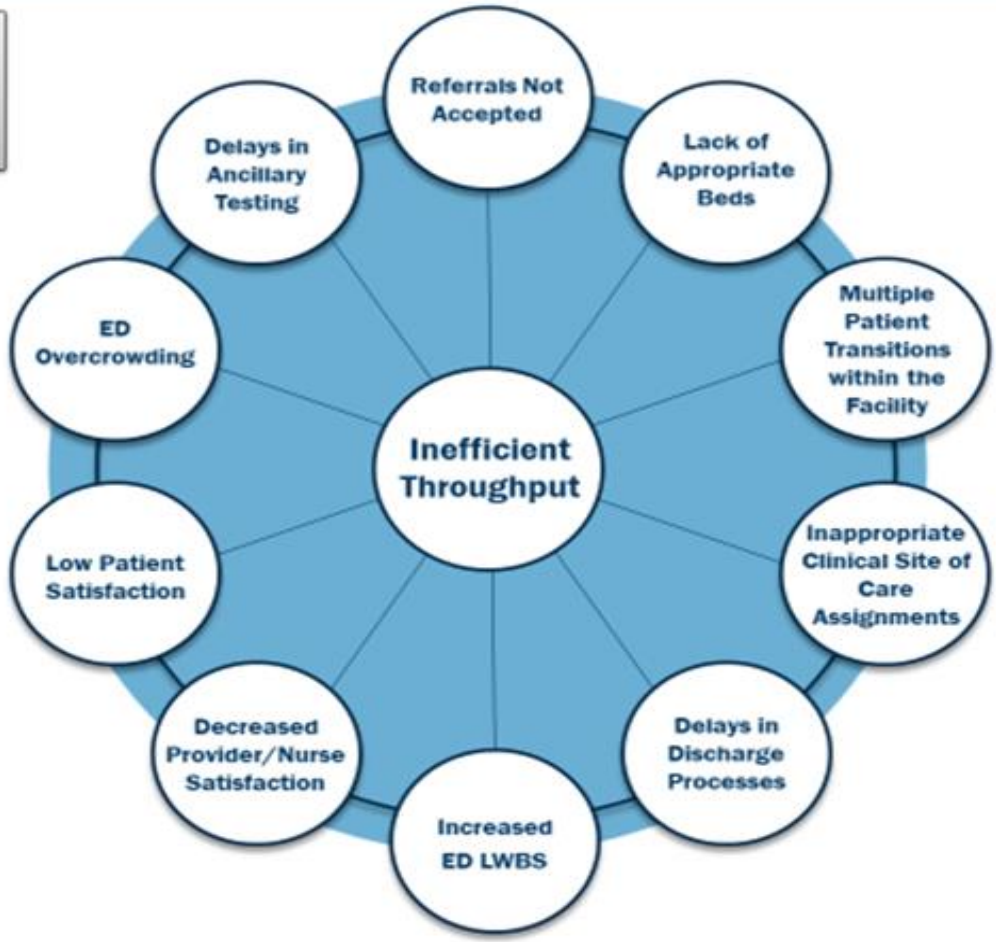
Throughput Process

Impact of Inefficient Throughput

Inefficient throughput processes lead to a range of downstream consequences.



Objectives:

- Reduce length of stay (LOS)
  - Creating a process for assigning an Anticipated Date of Discharge (ADOD)

- Identify and coordinate discharge related tasks
  - Move to earlier in hospitalization where possible

- Develop and deploy a multidisciplinary rounding (MDR) process that is tasked with enhancing discharge readiness and identifying barriers to discharge. (COPIS design process)

"I Wish We Knew Now What We Didn't Know Then"

or

Lessons Learned from a Change Management Perspective

Without a Pilot the Plane May Crash

- Piloting Helps:
- Uncover unforeseen issues
  - EMR
  - Workflow
  - Standard work
- Team building
- Understanding barriers to success

“I Promise you Cerner will Do That. I Know a Guy.”

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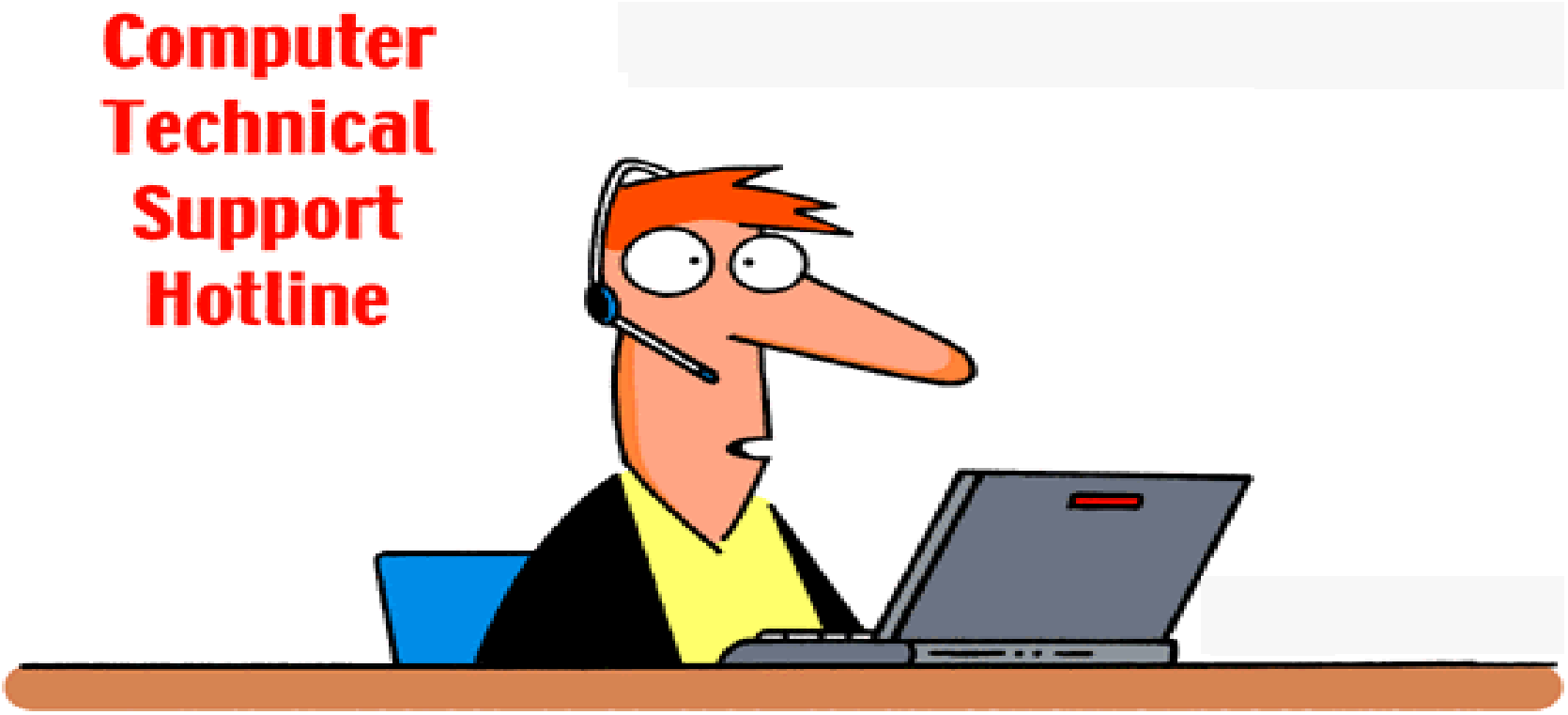
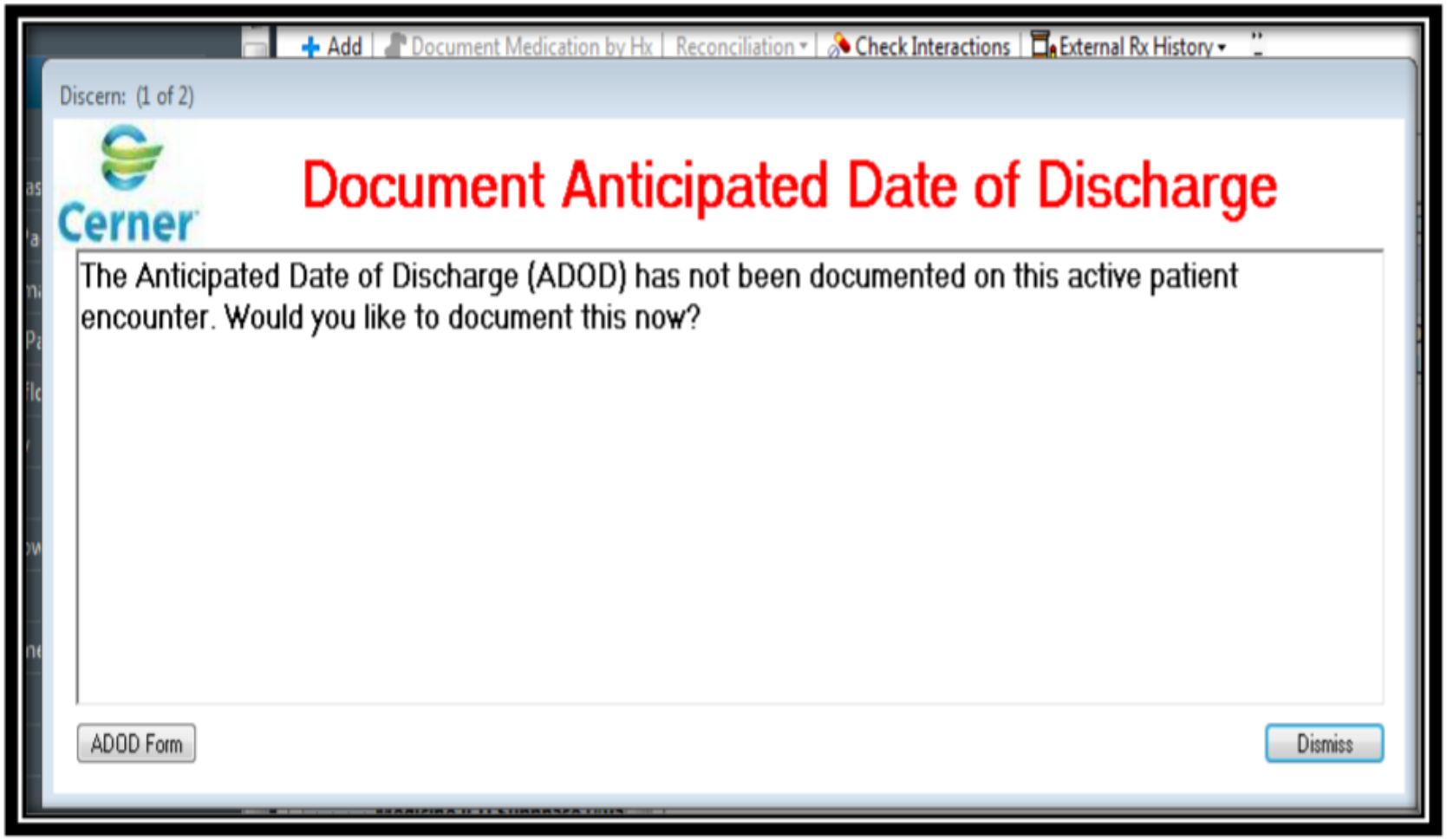


5000 EMR Alerts in Two Weeks Does not "Empower The Base"



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IT has a “Roadmap” and We Were not on It

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Workflow beats Vision Every Time

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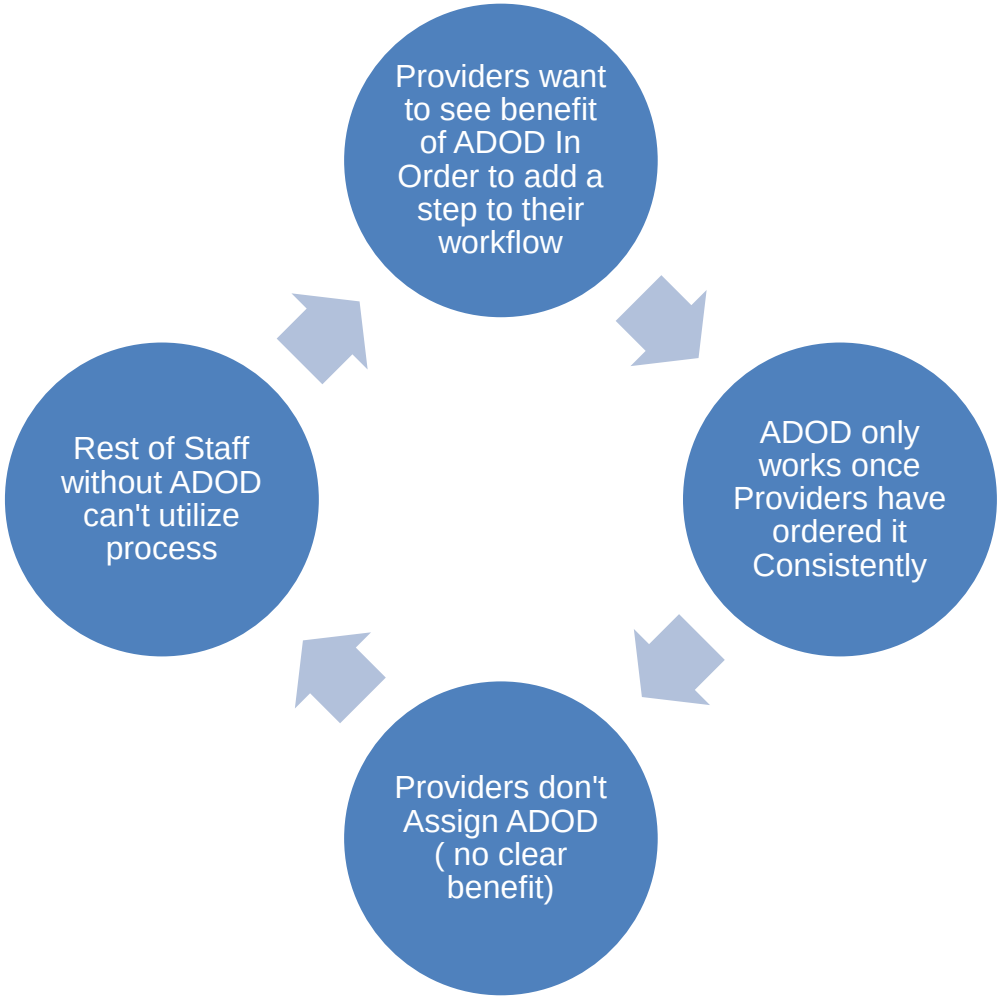
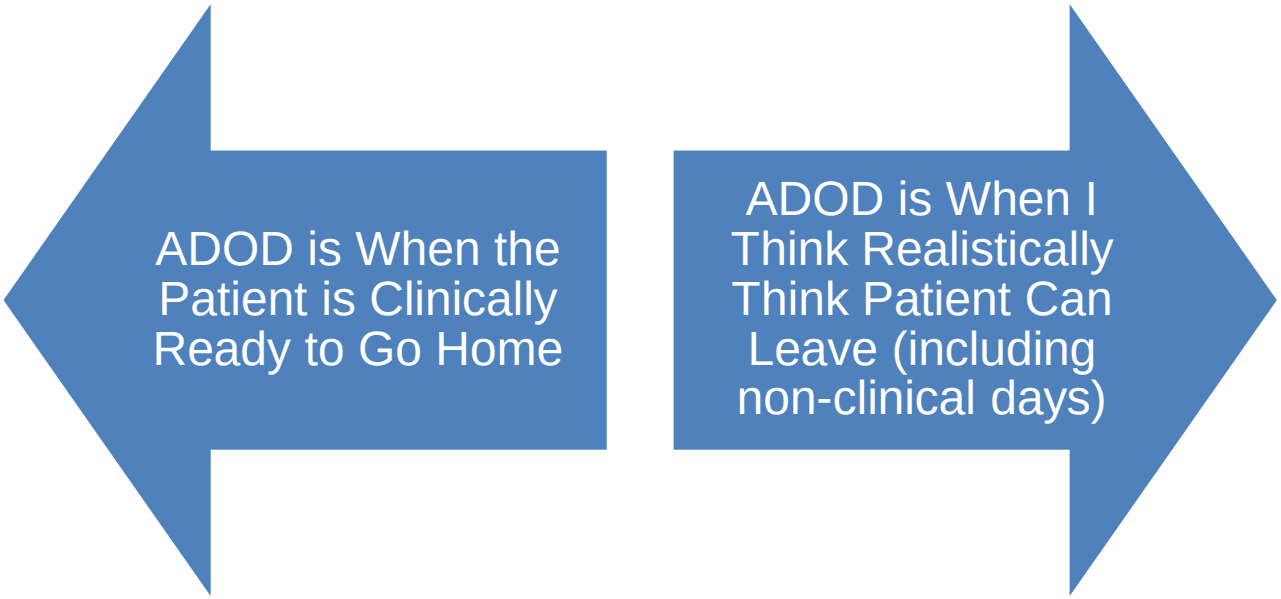
- Lots of finger pointing
- “Not my problem”
- “I can’t do anything about it”
- “It’s definitely a nursing problem”
- “I don’t see how this helps”

An Infinite Loop of No Quick Wins



I Can't Define ADOD But I Know It When I See It



If Sepsis was a Movie, ADOD was an After School Special

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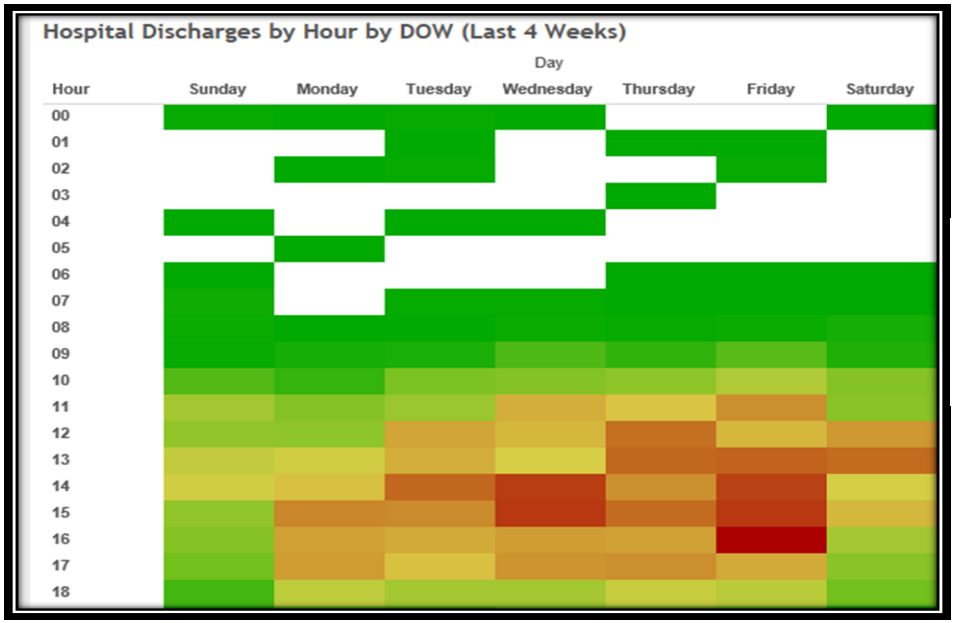

≠

We Need a "Catch Phrase"

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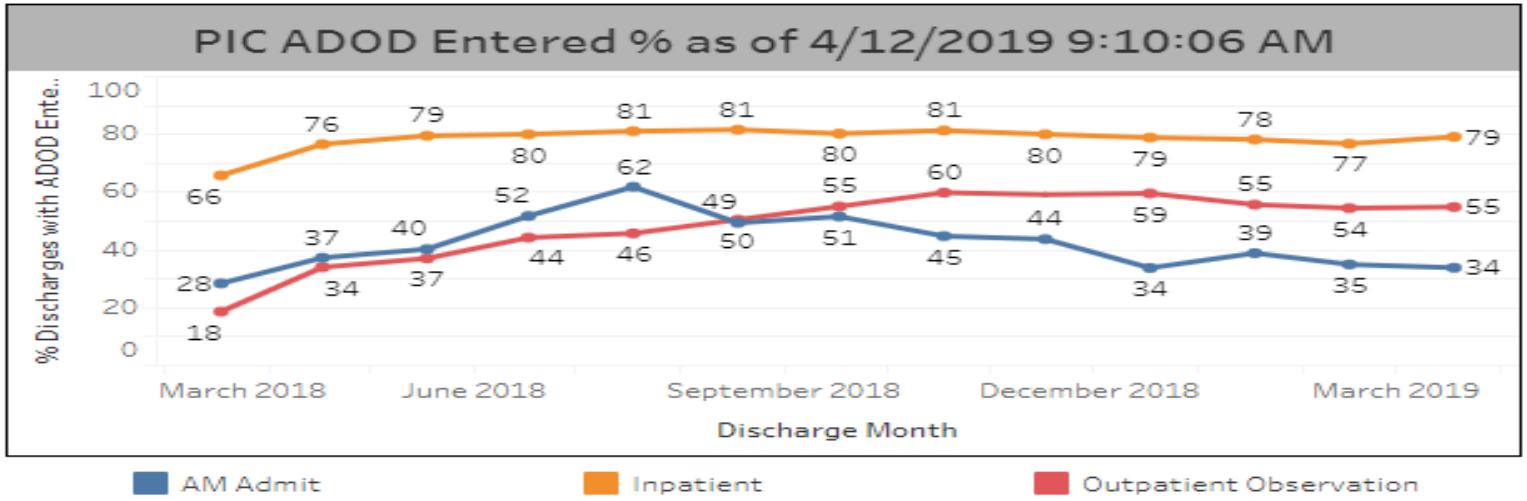
- Needed a way to both advertise as well as set discrete goals.
- Initial messaging – "We need to discharge patients earlier in the day" – very hard to measure or motivate
- Subsequent messaging

Two by 10, then 12, then 2

- Every nursing unit targeted discharging at least two patients by 10, then 12, and then 2pm.
  - Tried to identify patients day before so ride was in place
- If every nursing unit had 6 patients out before 2pm, throughput issues would be largely solved
- ADOD boards installed on units
- Our problems were solved ….. Not exactly.

Empower the Base – A Few Months Late

- Small fraction of patients were getting ADOD assigned by the provider after alert frequency decreased
- Hospitalists “incentivized” to assign ADOD until it became “culture.”
- Hospital Performance Improvement Committee started tracking compliance with assigning dates
  - Committee members included people with ability to influence behavior of multiple service lines



Single Unit Results:

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4 West Results

Length of Stay Results – Before and After Launch – 4 West

Length of Stay Before	Length of Stay After	Improvement (Days)
5.07	4.57	0.50

Time out the Door – Weighted Average Analysis. (Using 8am as "Time Zero") – 4 West

Weighted Average Time Out Before	Weighted Average Time Out After	Improvement (Hours)
7.67	7.25	0.43

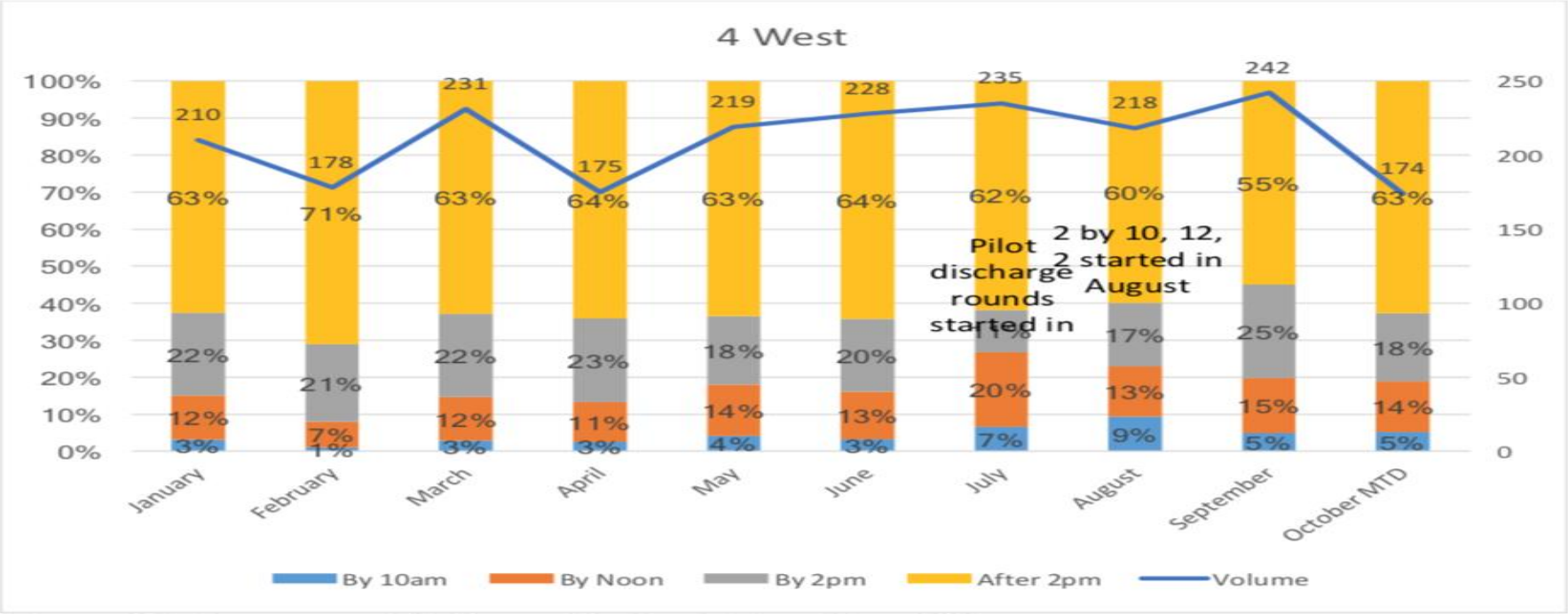

Figure 26: Percentage Discharged in Each Time Slot, 4 West

What “Iteration #1” Did Accomplish

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- Thinking about the importance of patient throughput became culture
- “Anticipated Date of Discharge” became part of the vocabulary
- Length of stay DROPPED!
  - Related to ADOD?
  - Hawthorne effect?
- Entire project served as essentially a “pilot” for “Iteration 2”

Next Steps: Focus on last 24 hours:

- In-process measures versus outcome
  - Know your stakeholders
- Adding tasks to the order was important
  - RN's were flagged but not "tasked" to do anything
- Add process owner for overall longevity
- Involve the patient

Questions?

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