Nebraska Medicine: A Davies Journey

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Nebraska Medicine

SERIOUS MEDICINE. EXTRAORDINARY CARE.®

What is Davies?

The HIMSS Nicholas E. Davies Award of Excellence is the pinnacle of the HIMSS Value Recognition Program . The Davies Award recognizes outstanding achievement of organizations who have utilized health information technology to substantially improve patient outcomes and value. The Davies Awards program promotes health information technology-enabled improvement in patient outcomes through sharing case studies and lessons learned on implementation strategies, workflow design, best practice adherence, and patient engagement.

Agenda

Topic
Introduction to Nebraska Medicine
The Davies Application and Preparation Process
Case Study Presentations: • Saving Lives from Sepsis • Preventing Catheter Associated Urinary Tract Infections • Improving Quality Outcomes in Ambulatory Clinics
Questions

Objectives

Objectives
Describe the process and resources needed for attainment of the HIMSS Nicholas E Davies award of excellence.
Develop a process to design clinical decision support tools based on multidisciplinary collaborative input and feedback.
Analyze clinical workflows and align with system tools to decrease variability in the care of patient with sepsis
Explain the importance of reflex ordering and nurse driven protocols in decreasing incidence of catheter associated urinary tract infections
Create standardized processes with supporting technology to ensure compliance with changing quality measures.

Introduction to Nebraska Medicine

Nebraska Medicine

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Nebraska Medicine

- $1.2 billion academic health system
- 8,000 employees
- More than 1,000 affiliated physicians
- Primary clinical partner of University of Nebraska Medical Center
- Two hospitals, anchored by tertiary/quaternary academic medical center, Nebraska Medical Center
- More than 40 specialty and primary care clinics, offering 50 specialties and subspecialties
- Partial ownership of two rural hospitals and one specialty hospital
- 809 licensed beds in Omaha and Bellevue
- 31,004 discharges
- 426,923 outpatient visits (primary and specialty)
- 91,800 ER visits

OUR MISSION

Our mission is to lead the world in transforming lives to create a healthy future for all individuals and communities through premier educational programs, innovative research and extraordinary patient care.

OUR VALUES

reflect **who we are** and **why we're here.**

ITEACH

Innovation

Search for a better way. Seek and implement ideas and approaches that can change the way the world discovers, teaches and heals. Drive transformational change.

Teamwork

Respect diversity and one another. Communicate effectively and listen well. Be approachable and courteous. There is no limit to what we can achieve when we work together.

Excellence

Strive for the highest standards of safety and quality in all that you do. Work to achieve exceptional results.

Accountability

Commit. Take ownership. Be resilient, transparent and honest. Always do the right thing and continuously learn.

Courage

Make the tough decisions. Have no fear of failure in the pursuit of excellence. Admit mistakes and learn from them.

Healing

Show the empathy you feel. Be selfless in caring for patients, one another and the community.

OUR DOMAINS

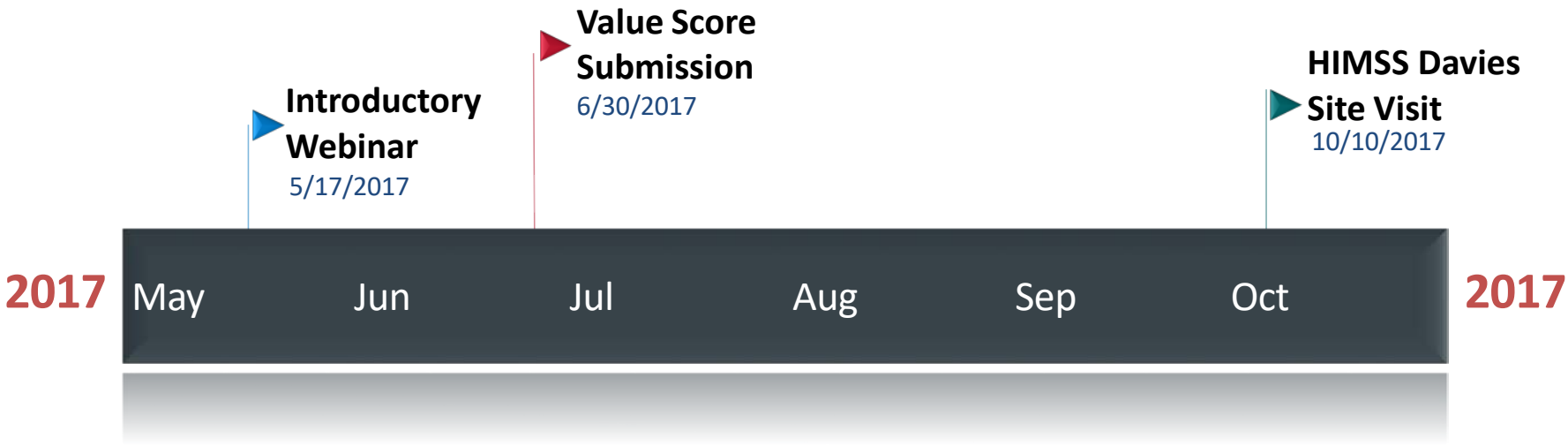
reflect our **priorities and areas of focus.**

Our Historical Contributions and Utilization of Health IT

1975	**PCIS** Installed to support enterprise billing, document retrieval & results reporting
1982	**COSTAR ambulatory EHR implemented**
1989	Lab automation grant resulting in Lab Interlink Automation System (deployed 1995)
1992	**OTTR transplant info system** developed by Byers Shaw, MD (deployed 1994)
1995	Implemented PHAMIS
1995	Implemented **first SNOMED coded problem list** *world-wide* (supported problem list terminology for PHAMIS consortium of users)
1999	IDXRad Installed
2001	Federal Funding for SAGE interoperable standards-based decision support
2009	**Nebraska Health Information Exchange established**
2010	Intuacare Documentation System developed and implemented in NICU
2011	Began use of Voalte for POC nursing communication and inpatient video monitoring
2012	**'Big Bang' Enterprise-wide Epic implementation**
2013	**NM Funded by PCORI as research center**
2015	**HIMSS Analytics, Stage 7 Hospital**
2016 & 2017	**Bernard A. Birnbaum, MD, Quality Leadership Award recipient**

Davies Timeline

- May 2017: Introductory Webinar from HIMSS
  Review of Requirements
- May – June 2017: HIMSS Value Score Submission Preparation
- July – Sept 2017: Site Visit Preparation
- October 2017: Site Visit with Case Study Presentations



Value Score Content

SECTION ONE: Focuses on known and expected outcomes in three general categories:

- **DATA CAPTURE and SHARING**
  - EMR Microsegmentation
  - 3 Day Documentation

- **ADVANCED PROCESSES**
  - Electronic Physician Documentation with Voice Recognition
  - Nursing Handoff Standardization
  - Rooming Improvements

- **IMPROVED OUTCOMES**
  - Sepsis
  - Improvements in Hemoglobin A1c Through Remote Monitoring
  - CAUTI

SECTION TWO: Health IT that had a positive *measurable* impact on your organization.

- Synoptic Encoding for Pathology
- Decision Support Use for EDU
- Geneva
- QMAs & Dashboards

Davies Timeline

2017 2017

Vizient Quality & Accountability Scorecard

What is Vizient?

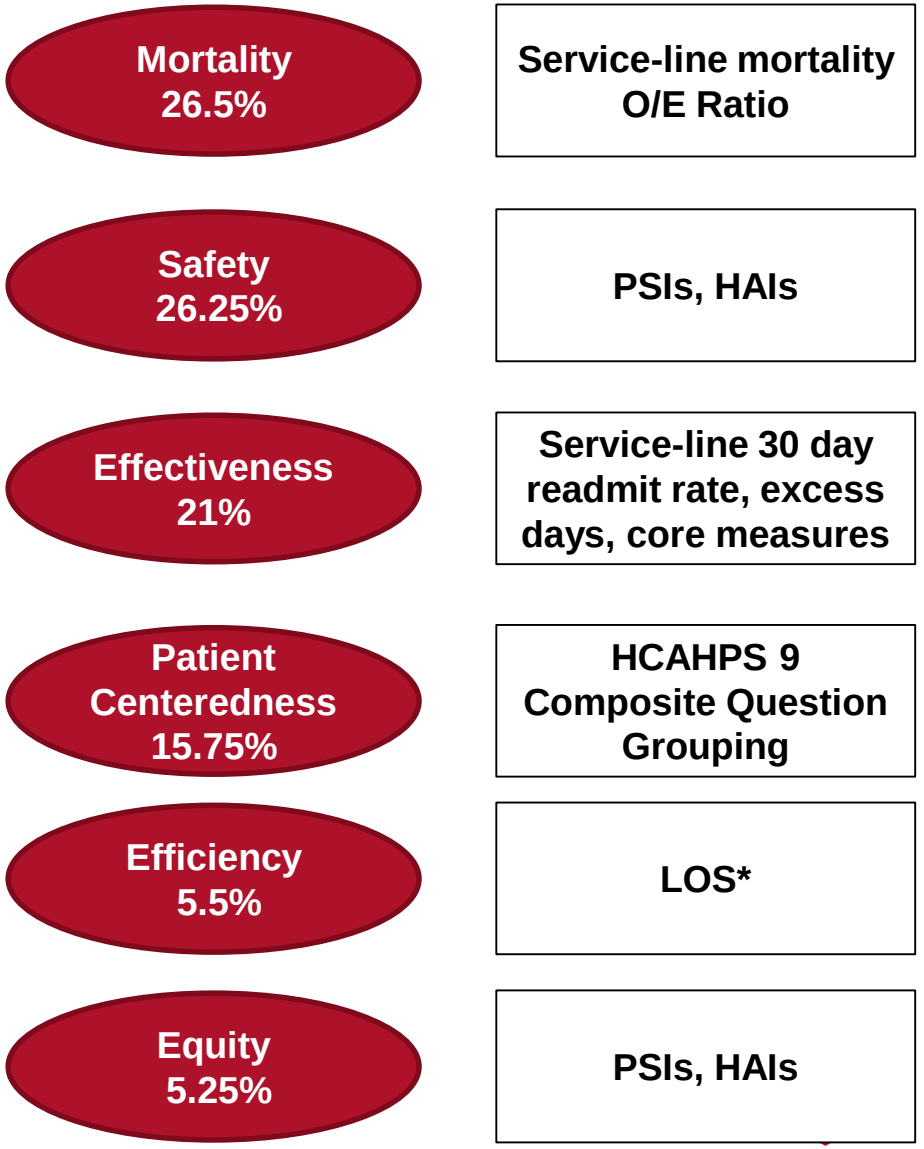
- Health care performance improvement company that assists in identifying opportunities for reducing variation and expediting data collection through a comprehensive analytics platform
- 95% of all major academic medical centers participate

What is the Q&A Scorecard?

- Scorecard evaluates organizations on their ability to demonstrate excellence in delivering high-quality care based on performance in key organizational metrics

Why do we participate?

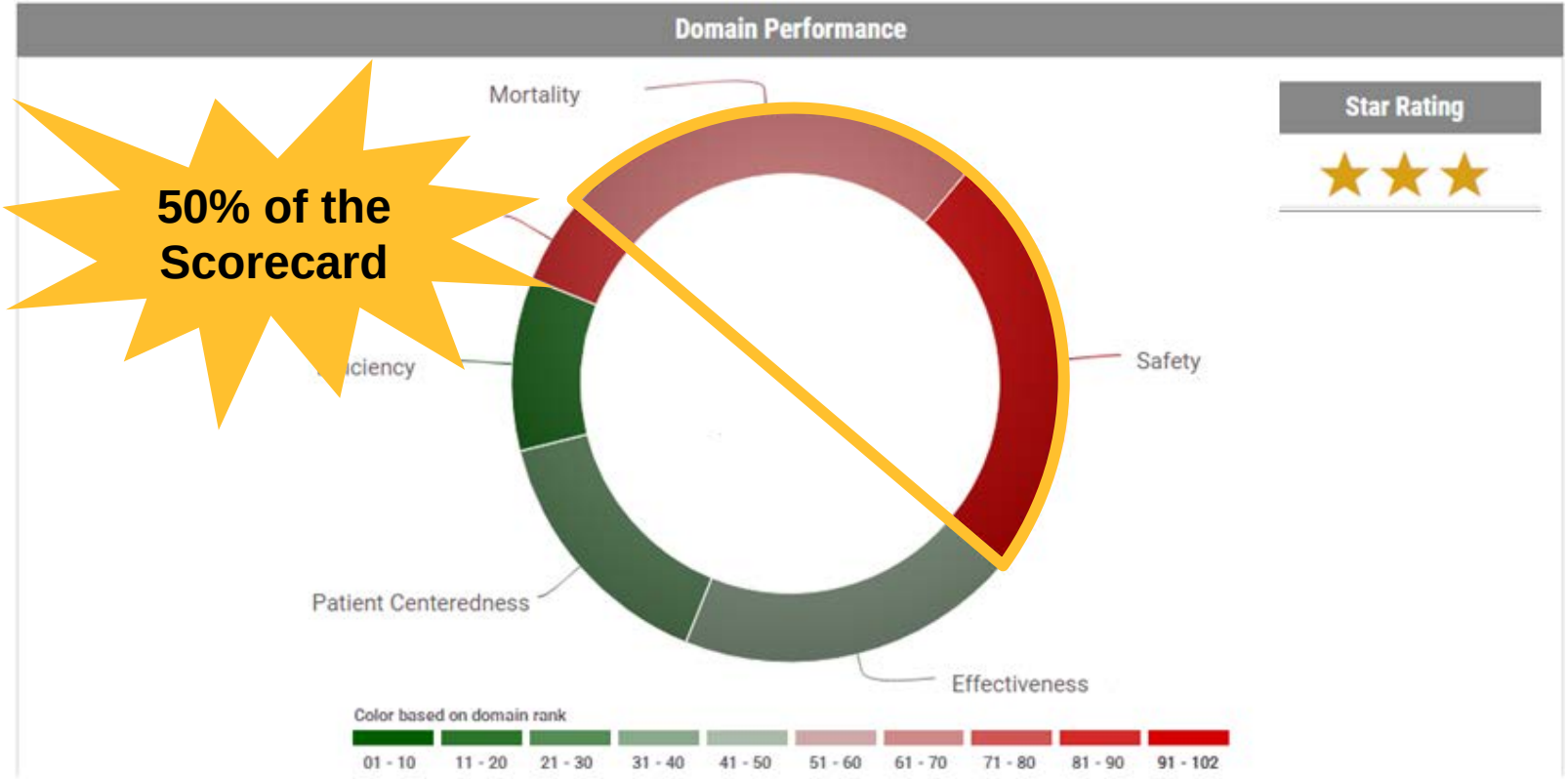
- Benchmark against peer groups
- Identify opportunities for improvement and accelerate changes
- Leverage performance in other reporting programs



*Efficiency Domain modified for 2017 only – Typically the domain evaluates Direct Cost per service line

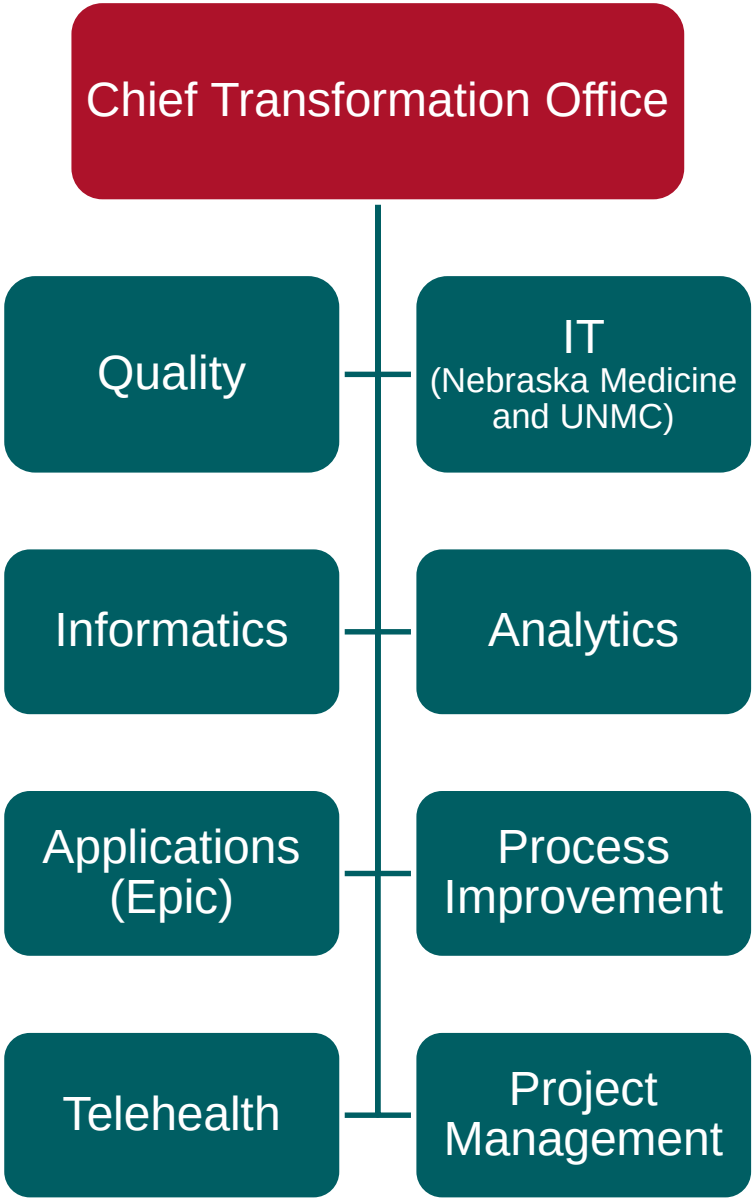
Nebraska Medicine Journey

October 2014



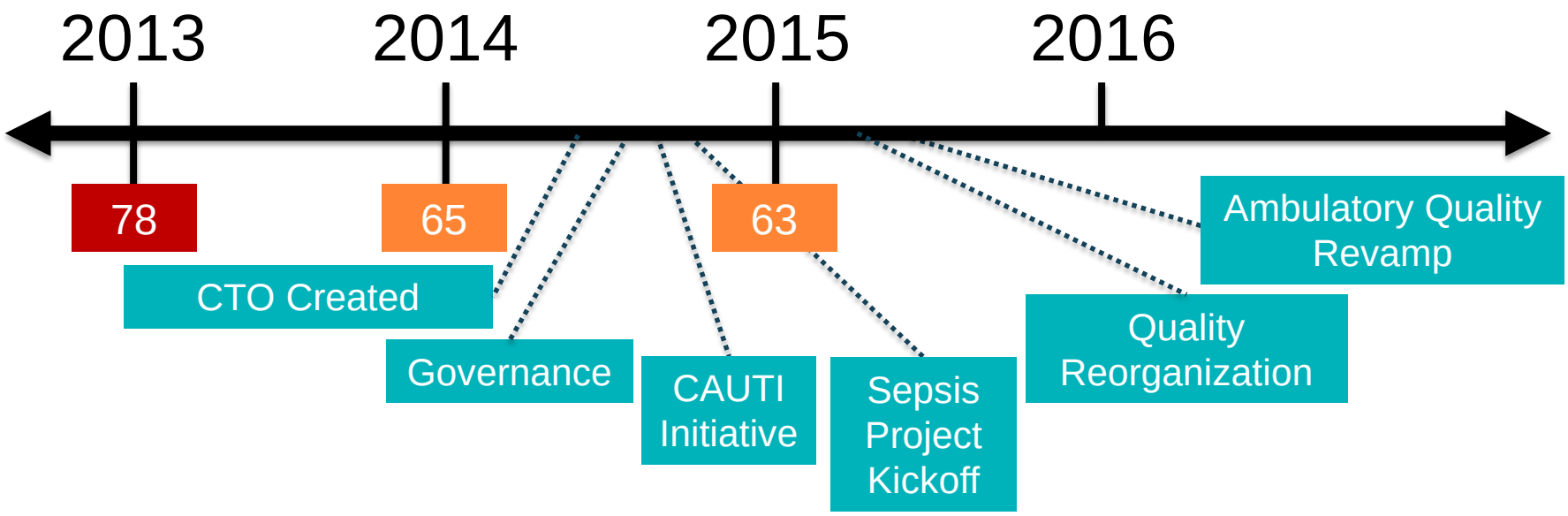
50% of the Scorecard

Organizational Chart



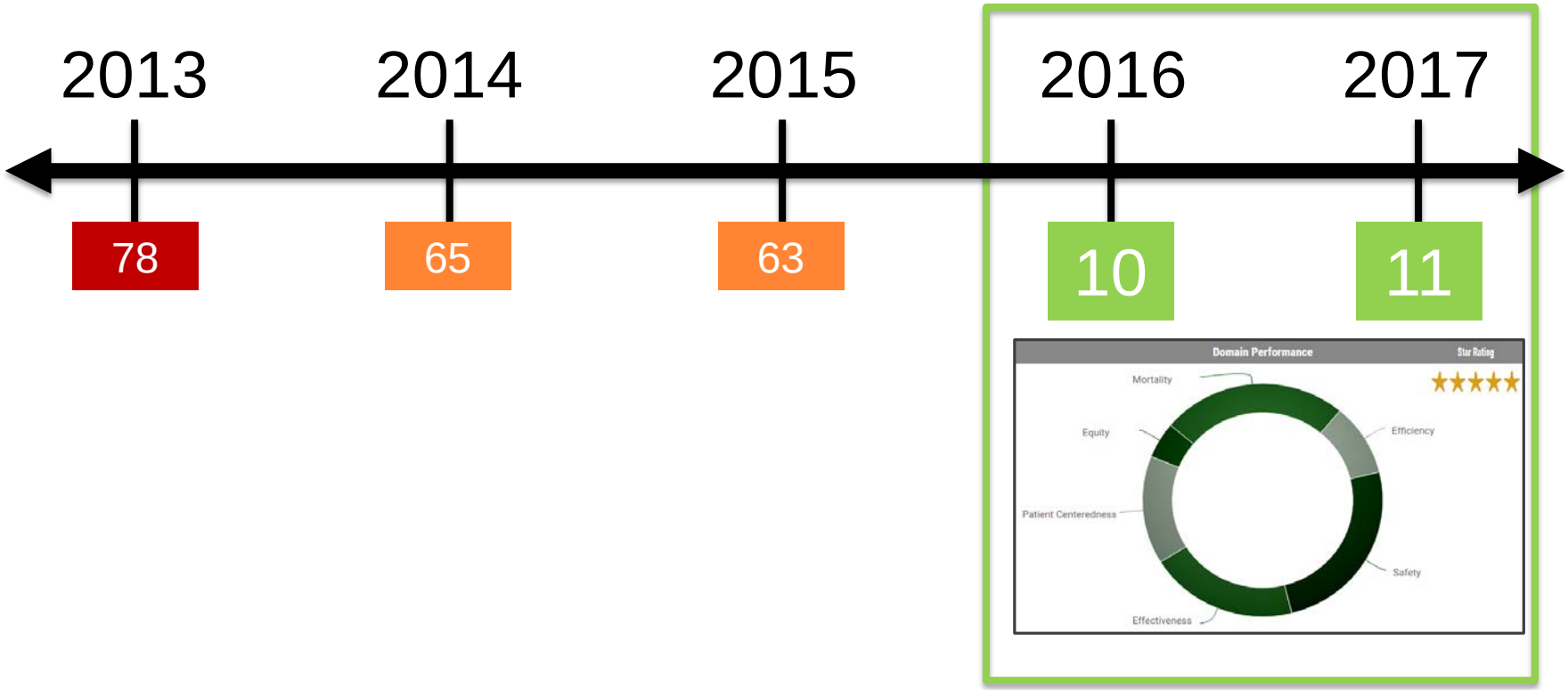
Nebraska Medicine Journey

The Transformation



Nebraska Medicine Journey

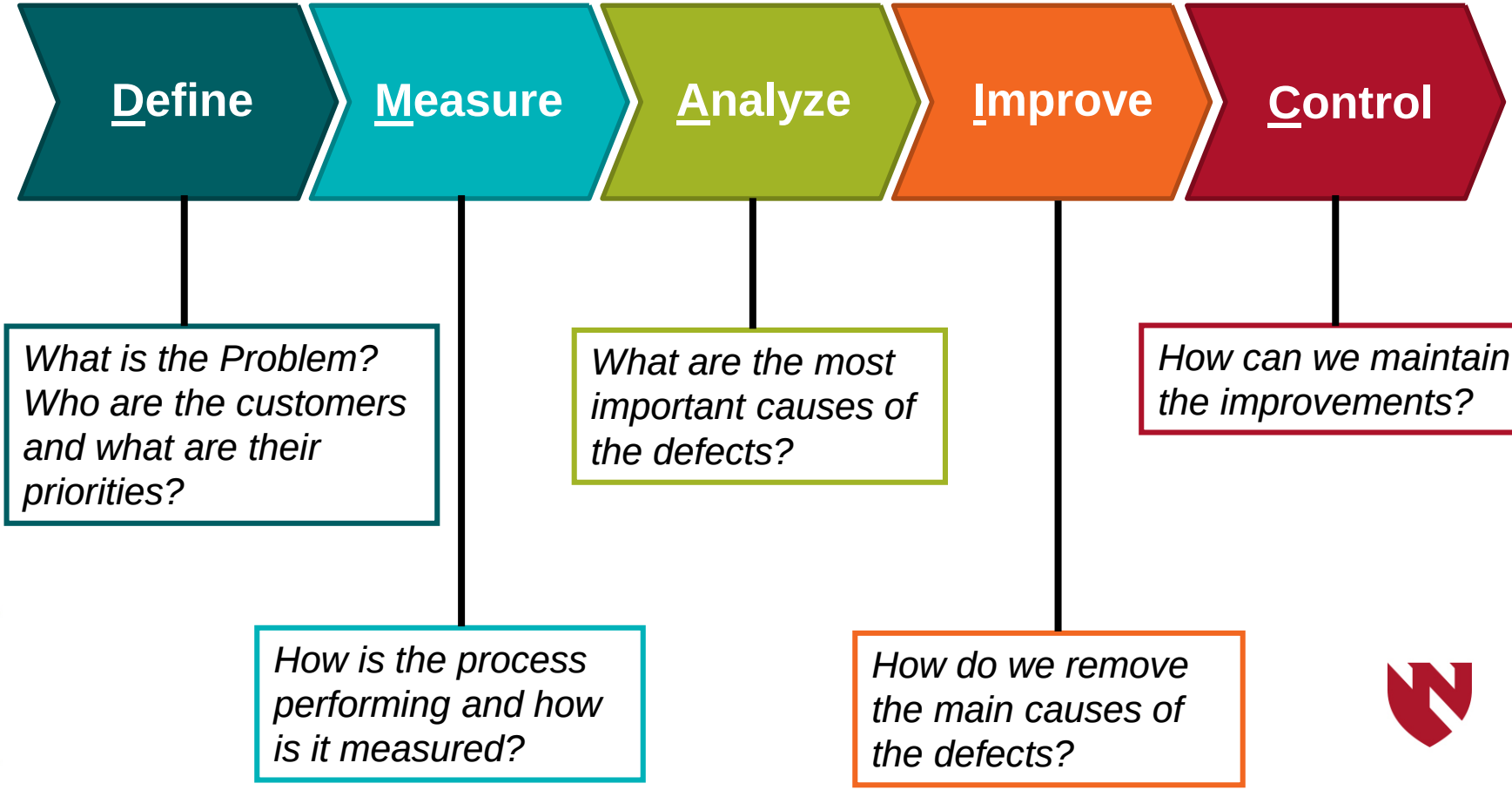
The Transformation



Approach to Change

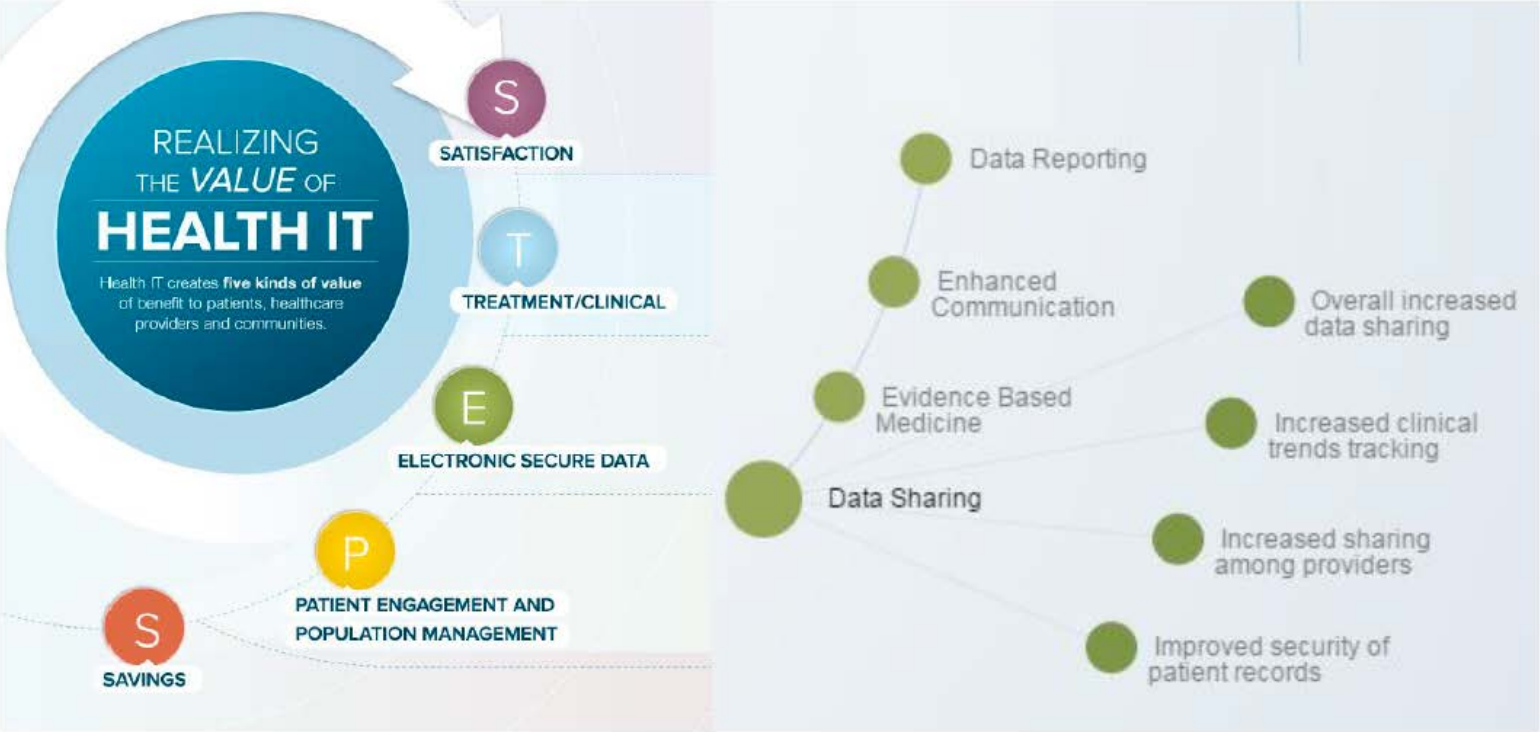
DMAIC THINKING

To improve any existing product or process…



How We Realize Value from Health IT

STEPS Framework

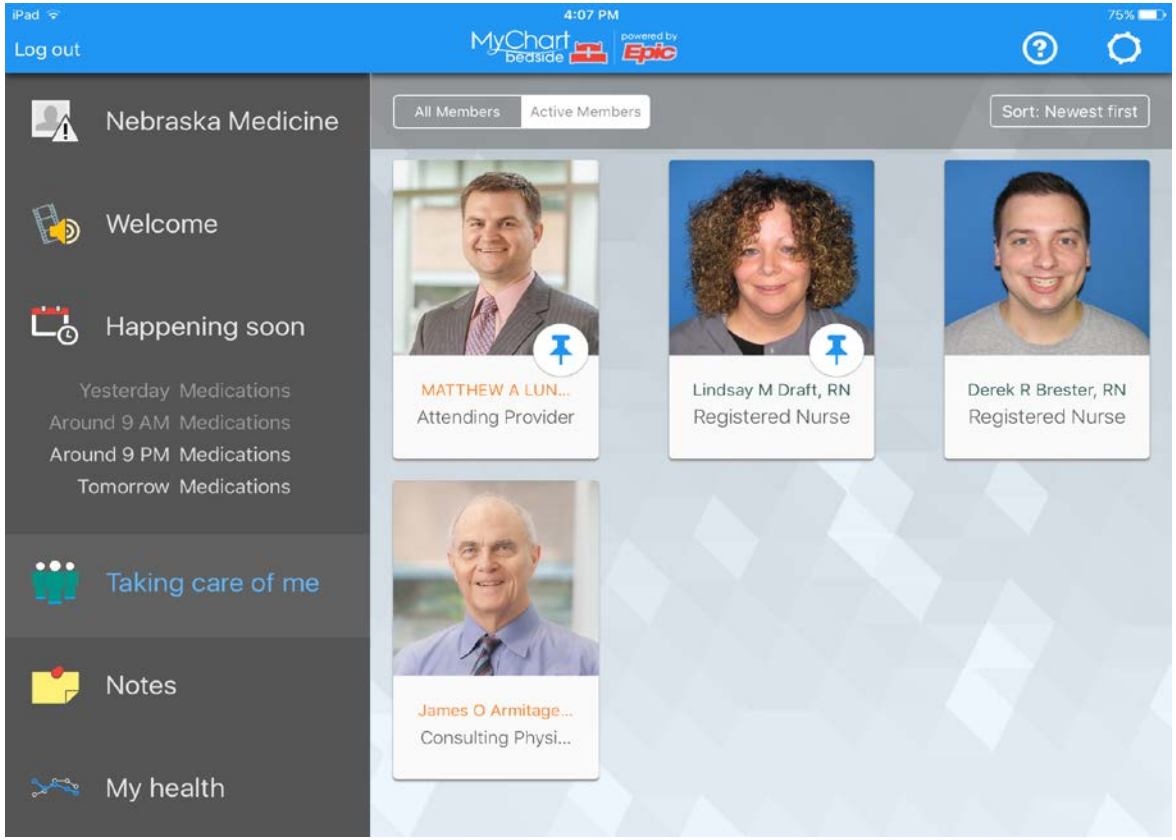


HIMSS
transforming healthcare through IT

How We Realize Value from Health IT

MyChart Bedside:
Improved patient satisfaction by **connecting the patient to his/her care team** and creating a platform for patients to actively engage in their care during hospitalization

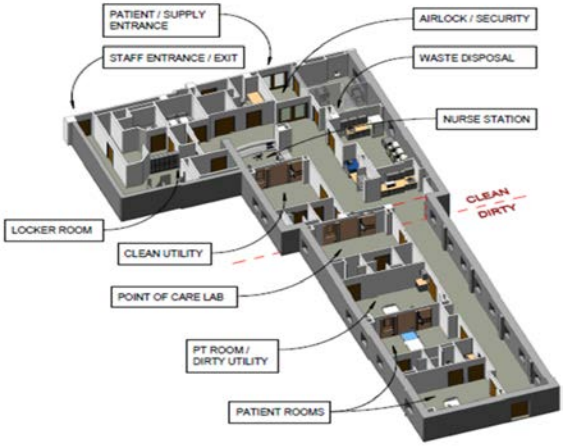
Improvement in HCAHPS Scores for Patients Utilizing Bedside

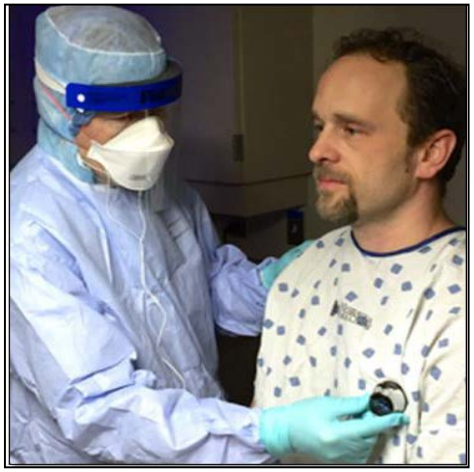


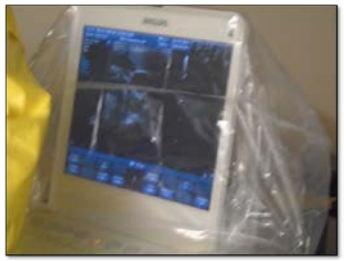
How We Realize Value from Health IT

Ebola:

Utilizing health IT to ensure the **same high-quality level of care** for patients with highly infectious diseases.

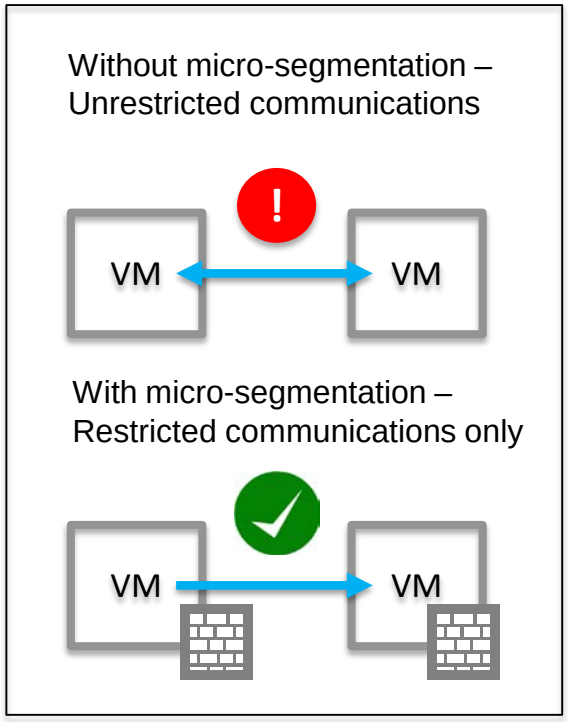






How We Realize Value from Health IT

Microsegmentation:
Micro-segmented Epic environment through a virtual network, resulting in a **reduction of open ports from 3,145,671 to 534**, thereby decreasing security vulnerabilities to cyberattacks



- Stateful firewall of every virtual machine
- Restricts to only necessary communications between virtual machines

- Windows Tier (34 VMs) -
  - 2,228,190 to 292 open ports

- Reporting Tier (8 VMs) –
  - 524,280 to 224 open ports

- Database Tier (6 VMs) –
  - 393,201 to 18 open ports

How We Realize Value from Health IT

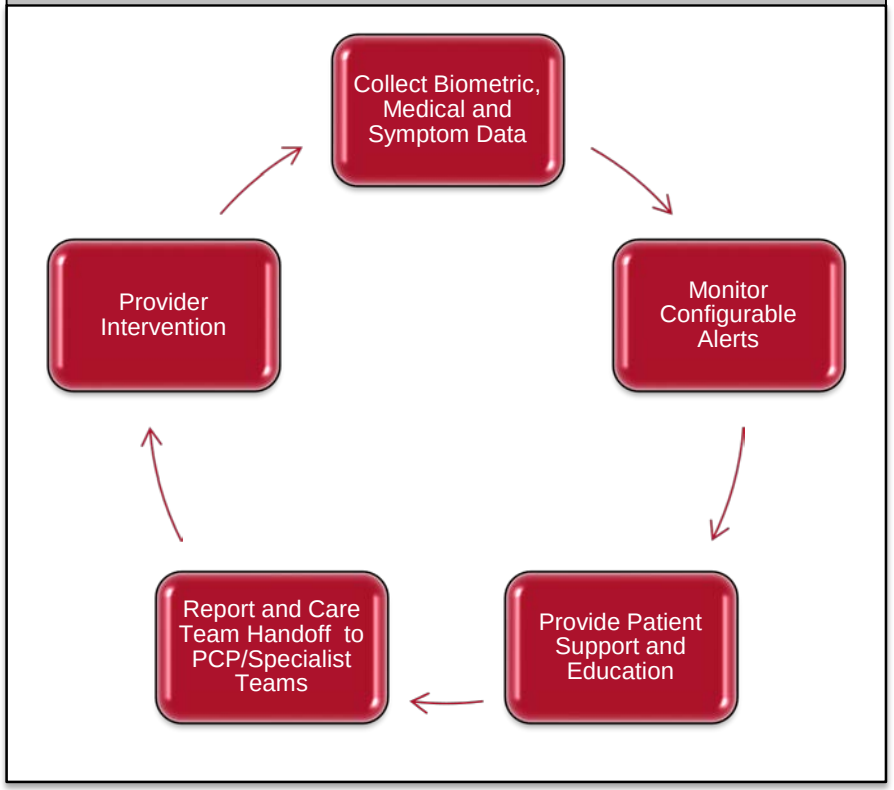
PATIENT ENGAGEMENT AND POPULATION MANAGEMENT

Type 2 Diabetes Management:
Utilized remote patient monitoring technology in patients' homes to **reduce re-hospitalizations and improve HgbA1c control**.

CARDIOCOM

- At Home Vital Sign Collection
- Blood pressure, blood glucose, weight, heart rate
- Home station uploads to cloud service via 3G network
- Patient data is auto downloaded into One Chart/MyChart

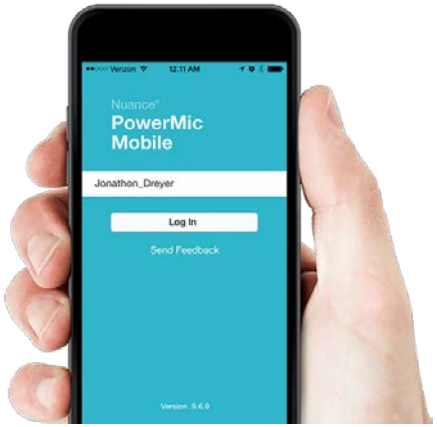
Remote Patient Monitoring Cycle

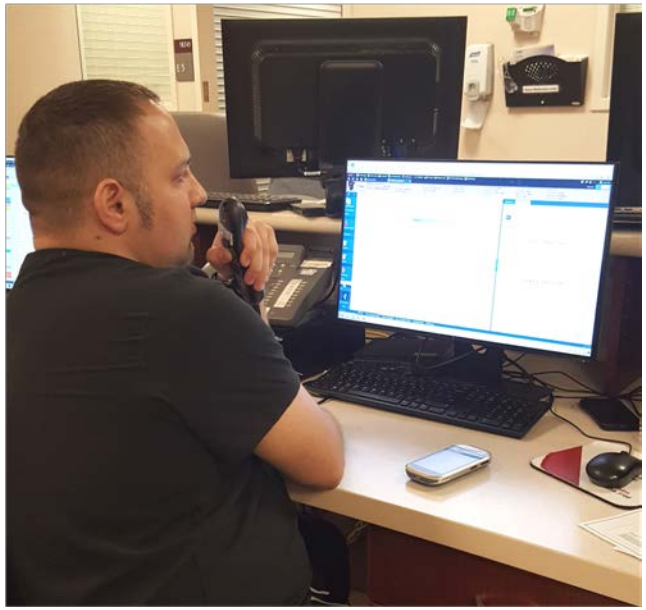


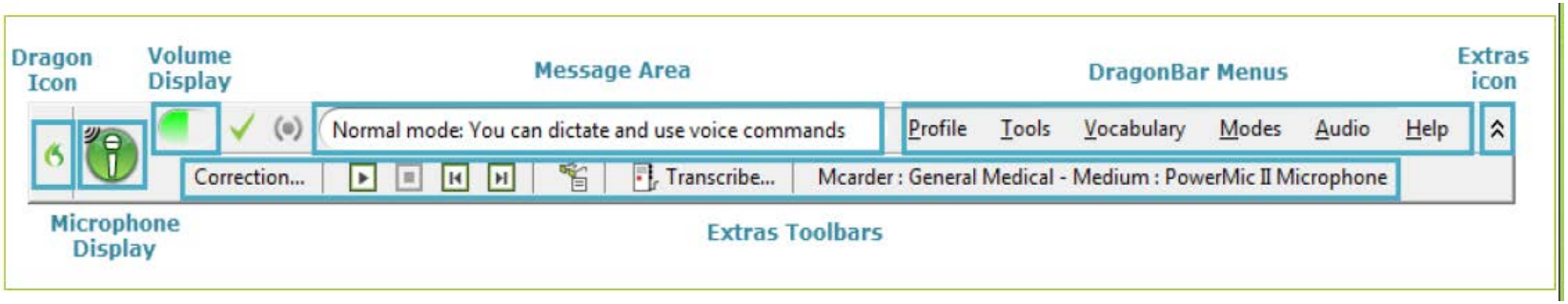
How We Realize Value from Health IT

Voice Recognition Software:

Physician documentation through Epic implementation and voice recognition decreased transcription costs from **$3.5 million to $300,000** per year



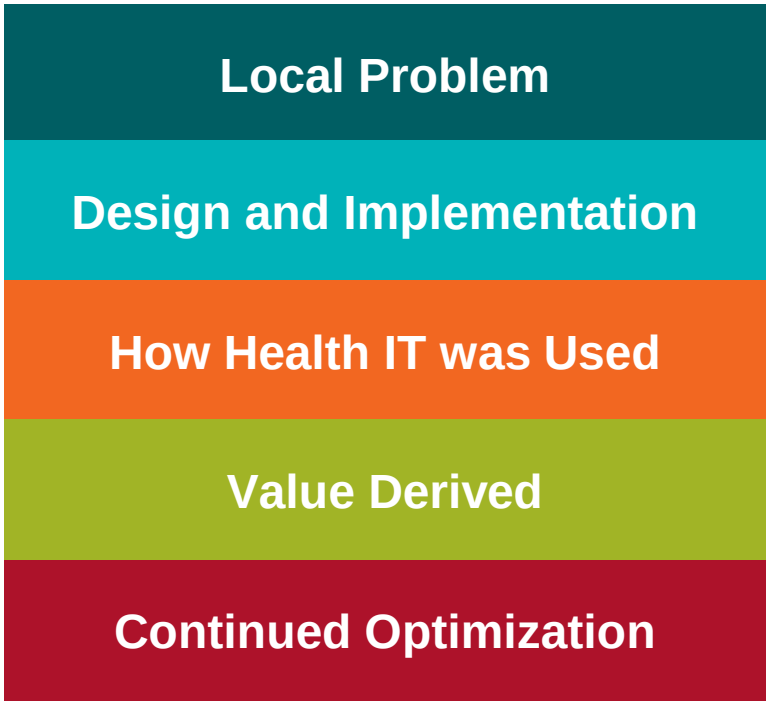




Menu Case Study Presentations

Topics & Design

- Saving Lives from Sepsis
- Preventing Catheter Associated Urinary Tract Infections
- Improving Quality Outcomes in Ambulatory Clinics



Saving Lives From Sepsis

Micah Beachy, DO, FACP
Medical Director, Clinical Effectiveness

Charlotte Brewer, BSN, RN
Program Coordinator, Clinical Effectiveness

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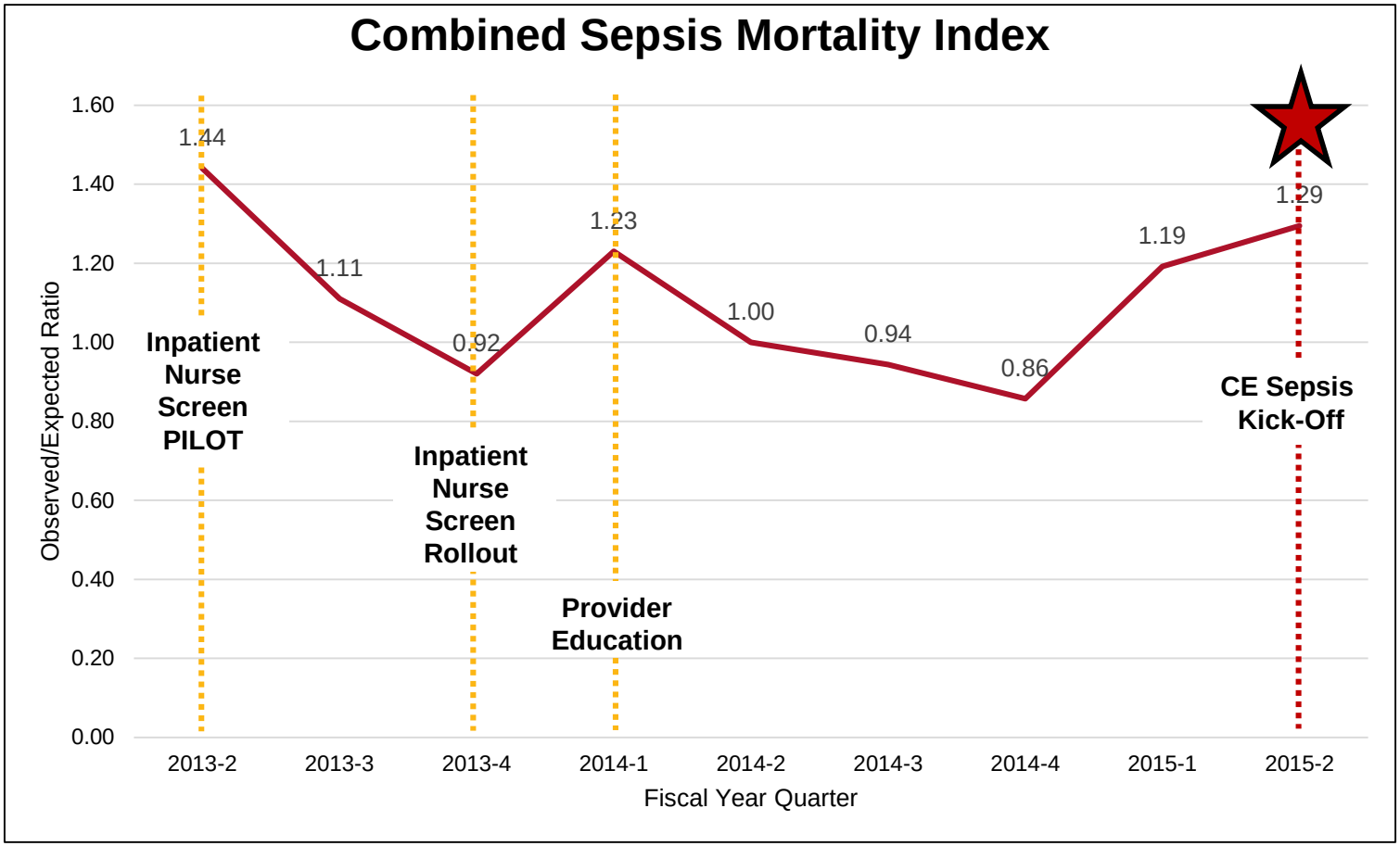
Background

- Sepsis is the #1 cause of mortality at Nebraska Medicine
- Sepsis mortality 2013:
  - All Sepsis DRGs: ~10% mortality rate
  - DRG 870: 29% mortality rate
  - Severe sepsis / septic shock development on the floor at Nebraska Medicine has mortality of ~ 50% mortality rate
- Multiple initiatives completed both before and after implementation of Epic
  - Most had temporary success in reducing sepsis mortality, but responses were unsustained
  - ICU leadership brought forward concern for increasing mortality in this population

DRG 870: Septicemia with mechanical ventilation greater than 96 hours
DRG 871: Septicemia without mechanical ventilation greater than 96 hours with a major complication or comorbidity (MCC)
DRG 872: Septicemia without mechanical ventilation greater than 96 hours without a major complication or comorbidity (MCC)

Background


Combined Sepsis Mortality Index
Observed/Expected Ratio
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
1.44
1.11
0.92
1.23
1.00
0.94
0.86
1.19
1.29
Inpatient Nurse Screen PILOT
Inpatient Nurse Screen Rollout
Provider Education
CE Sepsis Kick-Off
2013-2
2013-3
2013-4
2014-1
2014-2
2014-3
2014-4
2015-1
2015-2
Fiscal Year Quarter

Inpatient Clinical Process

- Patient has 2+ positive SIRS criteria
- Nurse completes sepsis screen and contacts provider if positive at any level of sepsis
- Provider evaluates patient for sepsis
- Provider orders additional screening tests as necessary
- Provider initiates 3 and 6 hour bundle treatment (and transfer to ICU for septic shock)

System Tools

Patient Has 2+ Positive SIRS Criteria

Care Guidance (1)

Sepsis Screen is required! Patient's Name meets SIRS Criteria and may be septic!
SIRS = Systemic Inflammatory Response Syndrome

- Click the link below to complete required sepsis screening.
- If the result of screen is "SEPSIS", "SEVERE SEPSIS" or "SEPTIC SHOCK"
  1. Immediately notify the provider if appropriate
  2. Document Sepsis Screen Actions or "Sepsis Screen" in Reason for Communication as necessary

Vitals:

	09/22/17 0700	09/22/17 1100	09/22/17 1300	09/22/17 1600
BP:	100/65	95/60	92/55	(!) 88/52
Pulse:	95	90	100	120
Resp:	20	20	20	26
Temp:	38.1 °C	38.6 °C	38.8 °C	39.2 °C

Pertinent Lab Results in the Last 24 Hours

Lab	Result	Ref Range
Lactate, Ven	6.5*	
WBC	15.5	X10E3/µL
Bands Relative	12*	0 - 6 %
Glucose, Blood	65	

Click here to complete Sepsis Screen

My Patients 5 Patients

Bed	Patient Location	# of SIRS Criteria Met	Sepsis Score	MRN	Code Status Text	Isolation	Expiri Order	Signed & Held Orders
5446-1	NMC 5USW	3	SEPSIS	00304811	Need Order			
6880-0	NMC 6CNE	4						
6886-0	NMC 6CNE	0						
7472-0	NMC 7UNW	0						
M324-0	BMC 3BE	0						

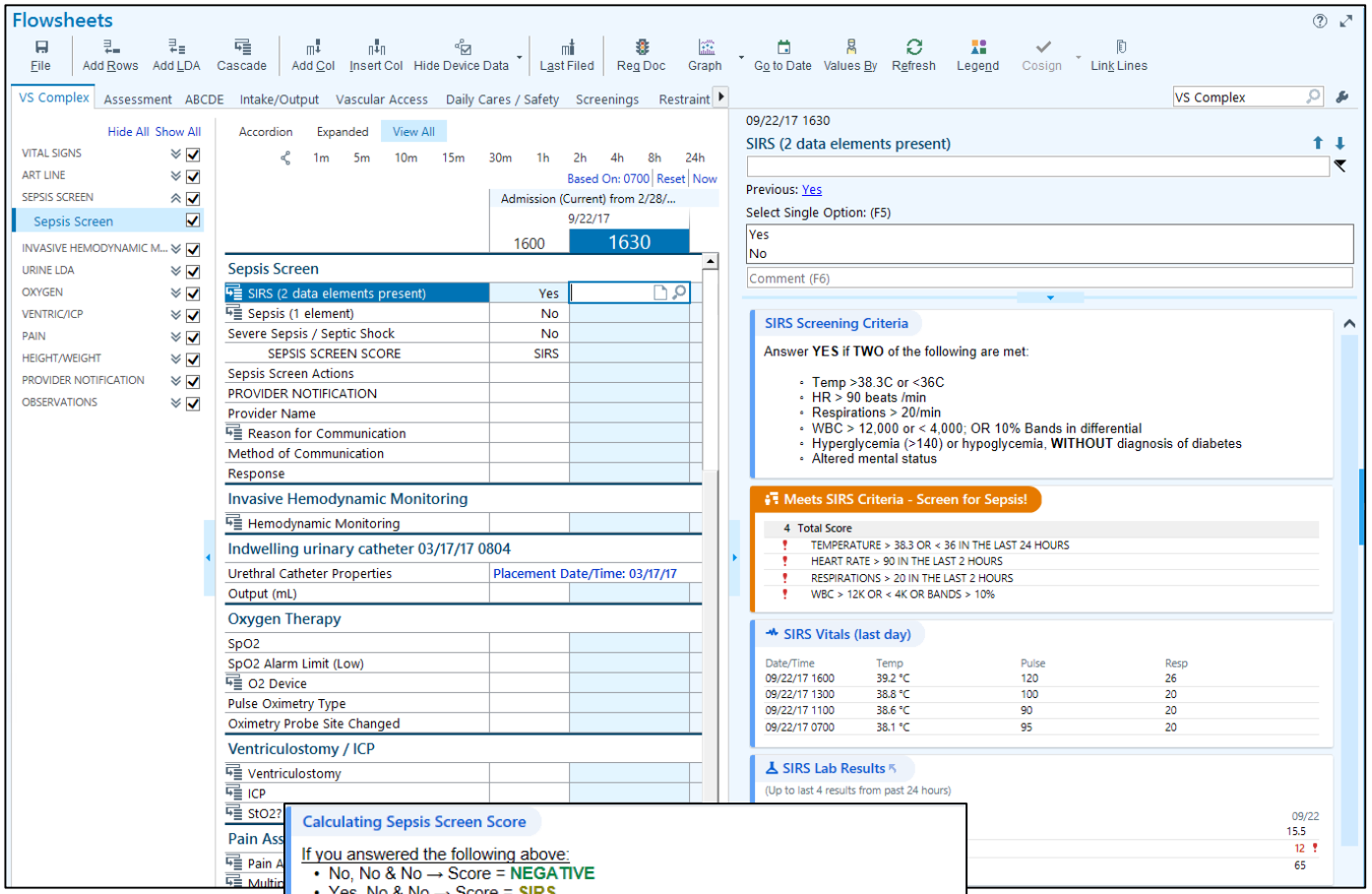
4 SIRS Score

1	TEMPERATURE > 38.3 OR < 36 IN THE LAST 24 HO...
1	HEART RATE > 90 IN THE LAST 2 HOURS
1	RESPIRATIONS > 20 IN THE LAST 2 HOURS
1	WBC > 12K OR < 4K OR BANDS > 10%
0	GLUCOSE < 70 OR > 140 IN THE LAST 24 HOURS W...
0	DOCUMENTED ALTERED MENTAL STATUS

System Tools

- BPA/System List Column
- Rule-based Print Groups
- Widgets, Sepsis Report, Predictive Model
- Sepsis Screening Order Panel
- Sepsis-specific Order Set

Nurse Sepsis Screen



Calculating Sepsis Screen Score

If you answered the following above:

- No, No & No → Score = **NEGATIVE**
- Yes, No & No → Score = **SIRS**
- Yes, Yes & No → Score = **SEPSIS**
- Yes, Yes & Yes → Score = **SEVERE SEPSIS** or **SEPTIC SHOCK** (if BP criteria met)

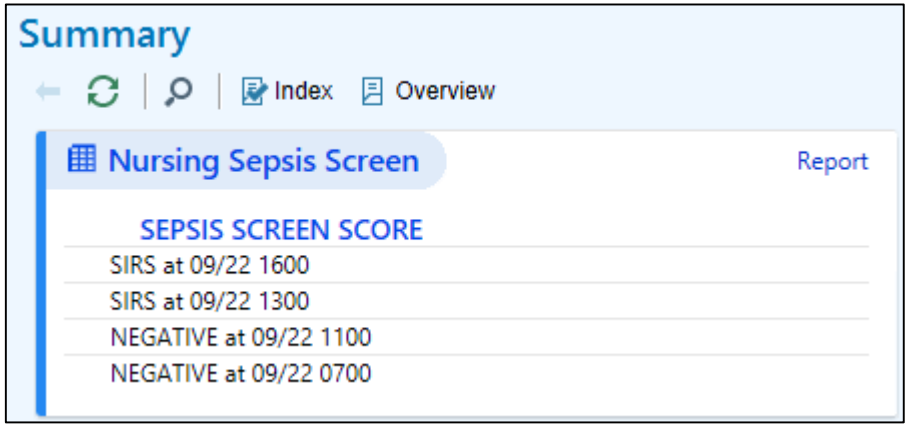
If Sepsis Screen Score =

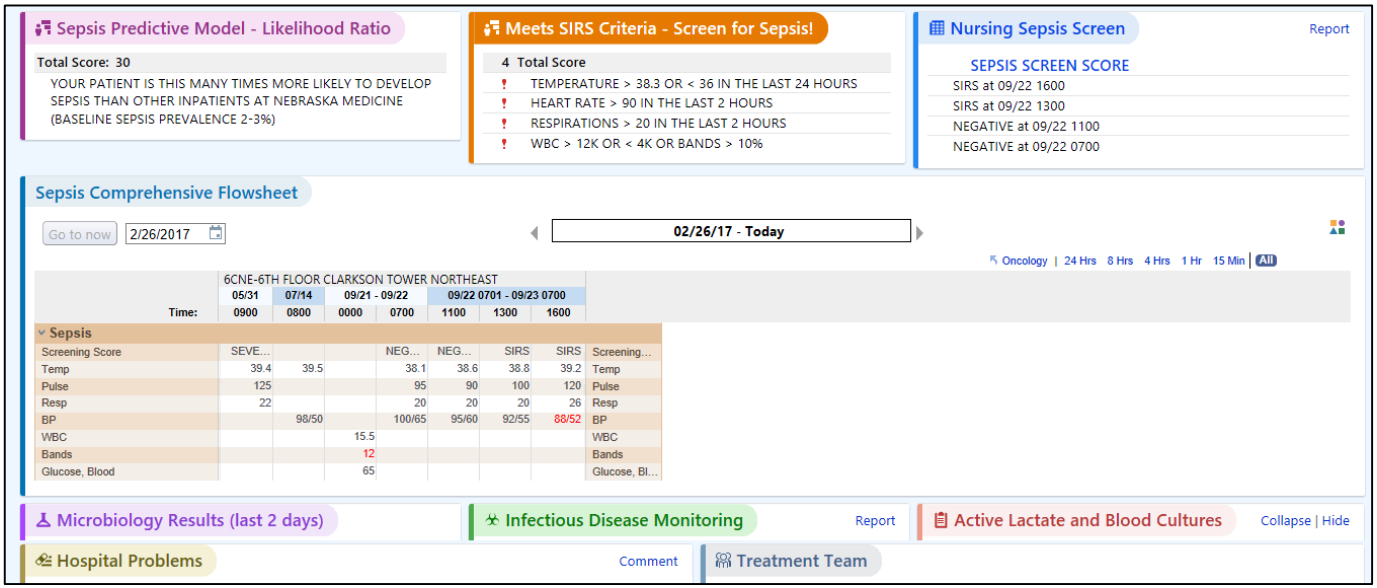
- **NEGATIVE** → screen patient as needed
- **SIRS** → continue to monitor for signs of progression
- **SEPSIS** →
  - **If finding is NEW**: notify provider to initiate Severe Sepsis Screening Panel
  - **If provider was previously notified**: notify provider only if necessary to initiate Severe Sepsis Screening Panel to evaluate for Severe Sepsis
- **SEVERE SEPSIS** → notify Provider to transfer patient to ICU for initiation of Sepsis Order Set
- **SEPTIC SHOCK** → notify Provider to transfer patient to ICU for initiation of Sepsis Order Set

System Tools

- BPA/System List Column
- Rule-based Print Groups
- Widgets, Sepsis Report, Predictive Model
- Sepsis Screening Order Panel
- Sepsis-specific Order Set

Provider Evaluates Patient for Sepsis





System Tools

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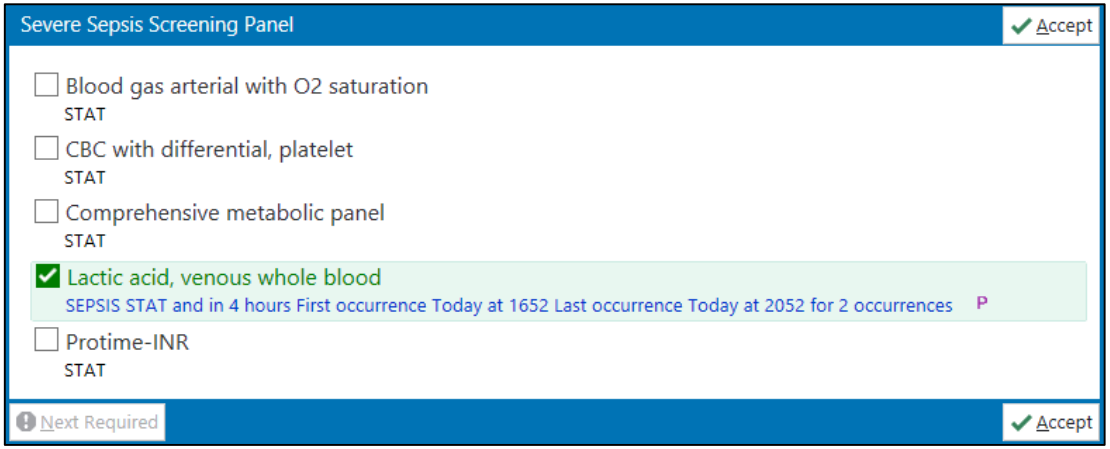
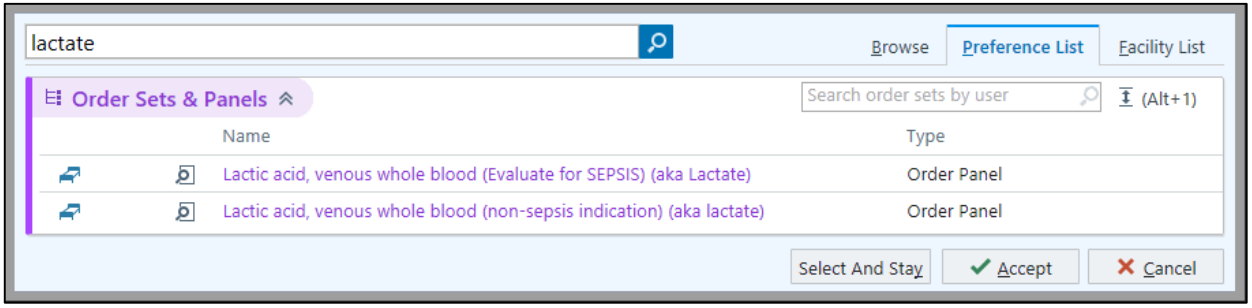
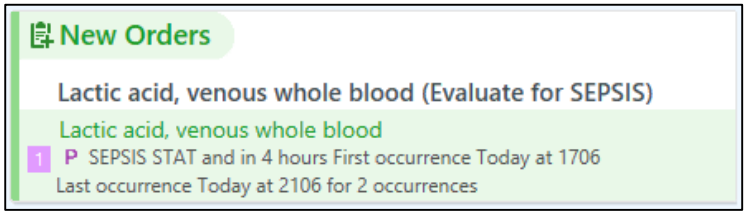
- Sepsis-specific Order Set

Provider Orders Screening







System Tools

- BPA/System List Column
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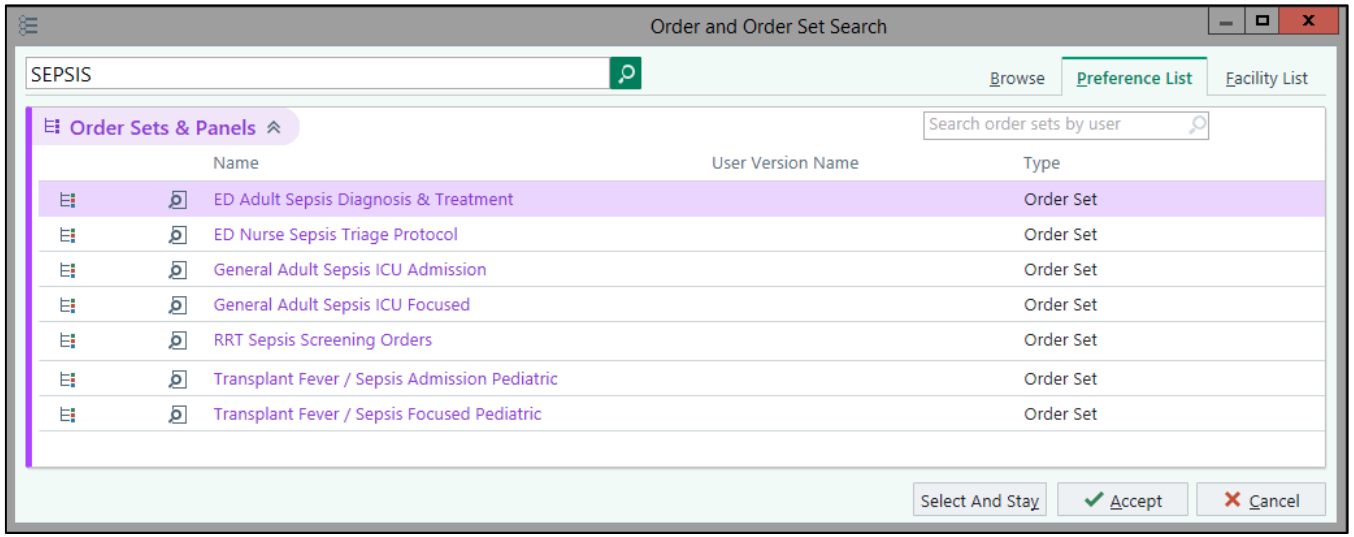
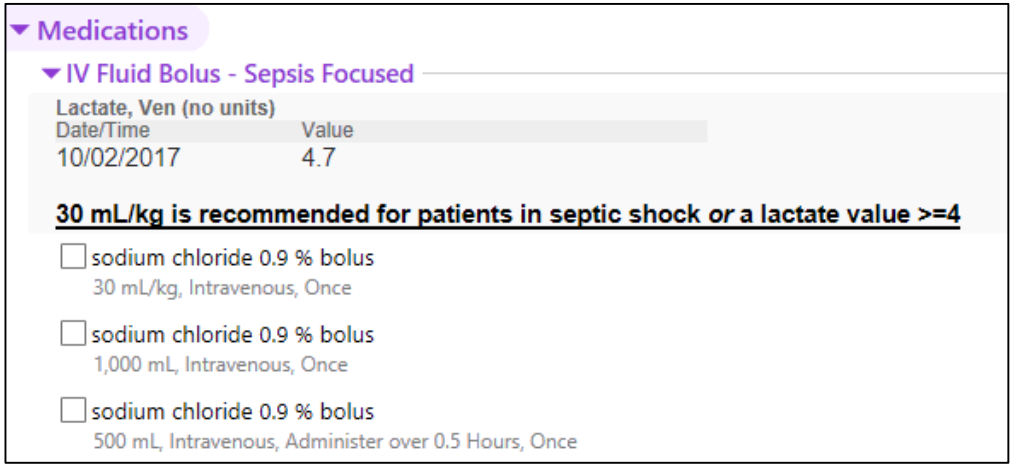
- Sepsis-specific Order Set

Provider Initiates 3 and 6 Hour Bundles





System Tools

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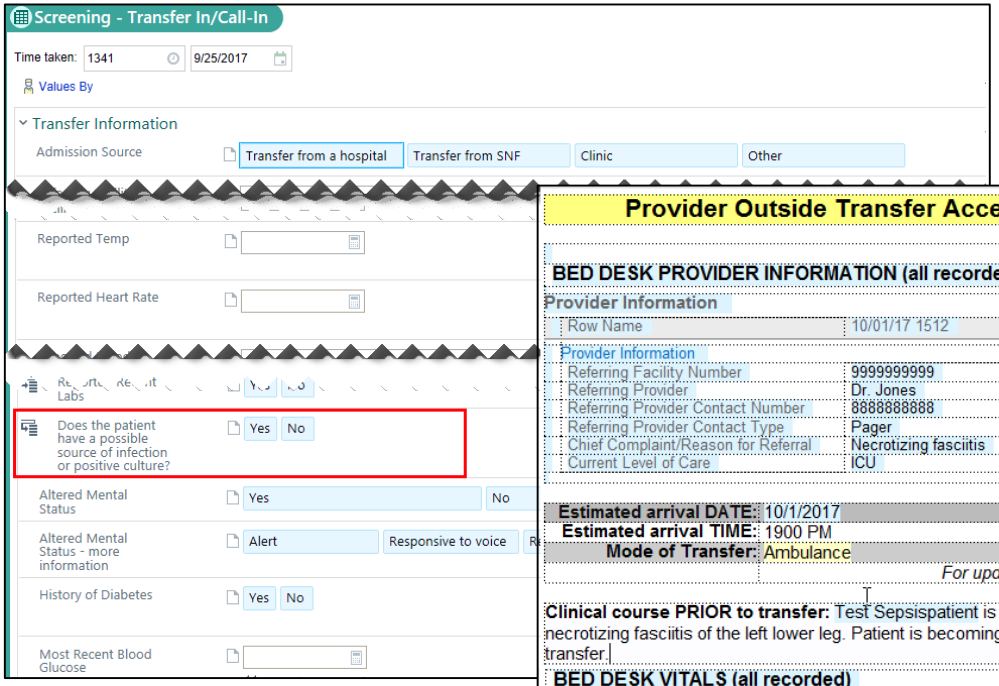
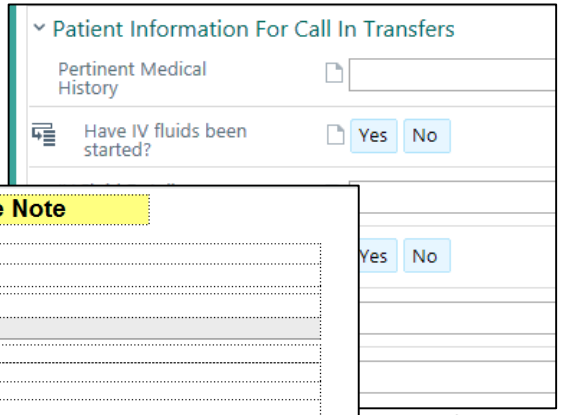
Outside Transfer Documentation





Provider Outside Transfer Acceptance Note

BED DESK PROVIDER INFORMATION (all recorded)

Provider Information

Row Name	10/01/17 1512
Provider Information	
Referring Facility Number	9999999999
Referring Provider	Dr. Jones
Referring Provider Contact Number	8888888888
Referring Provider Contact Type	Pager
Chief Complaint/Reason for Referral	Necrotizing fasciitis
Current Level of Care	ICU

Estimated arrival DATE: 10/1/2017
Estimated arrival TIME: 1900 PM
Mode of Transfer: Ambulance
For updates, call 559-2337 (9-BEDS)

Clinical course PRIOR to transfer: Test Sepsispatient is a(n) 64 y.o. male with necrotizing fasciitis of the left lower leg. Patient is becoming unstable and requires transfer.

BED DESK VITALS (all recorded)

Bed Desk Vitals

Row Name	10/01/17 1512	
Transfer Information		
Reported Temp	39.1	
Reported Heart Rate	120	
Reported Blood Pressure	92/60	
Reported Respirations	24	
Reported SpO2	90	

Provider sepsis screening:
Suspected source of infection: left lower leg infection and See clinical course (above)
1. Blood culture(s) obtained
2. Antibiotics given
3. Lactic acid > 4.0
4. Crystalloid fluid resuscitation 1L given, encouraged additional 2 L prior to/during transfer.
5. Vasopressors Unable to assess due to patient status

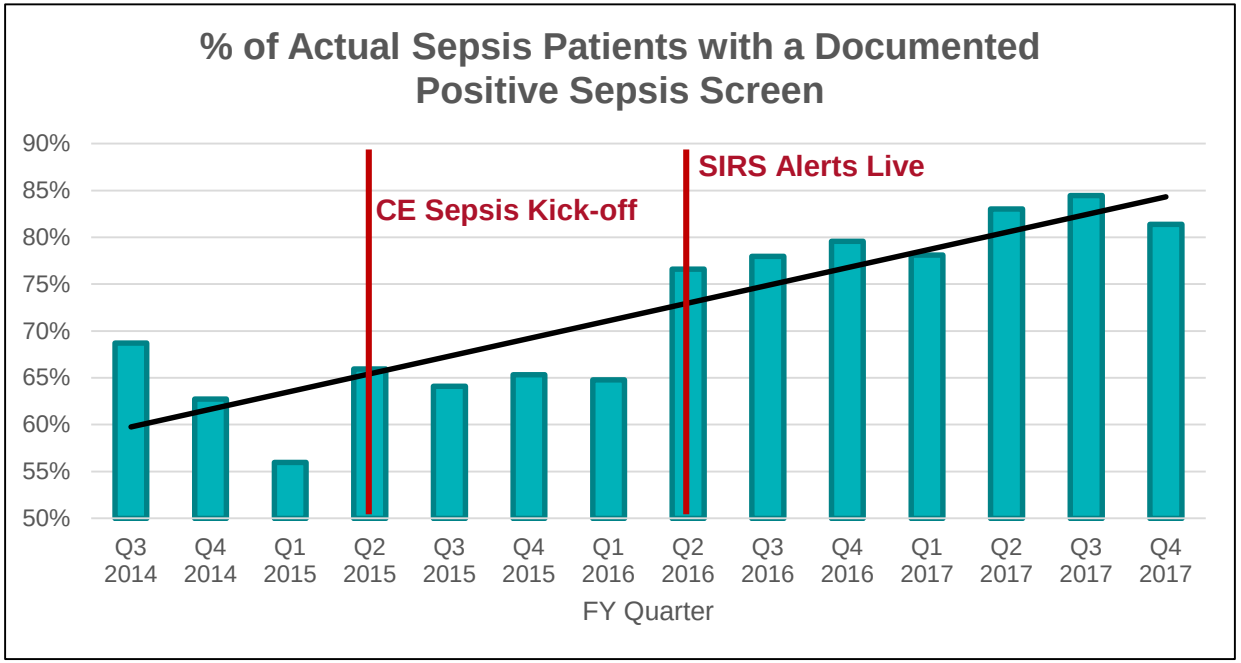
I discussed management of infection with the transferring facility.

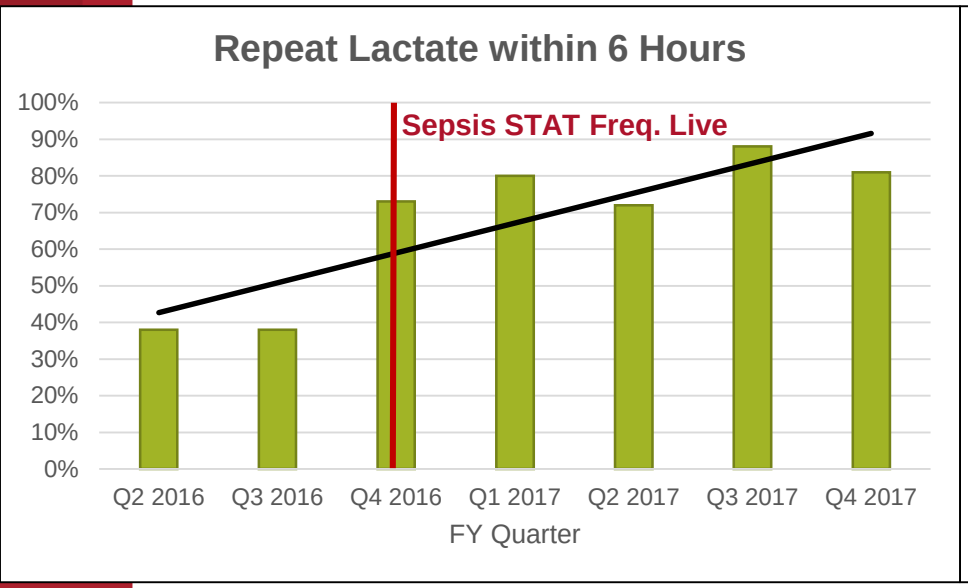
Unable to assess due to patient status
***
septic shock
severe sepsis
sepsis

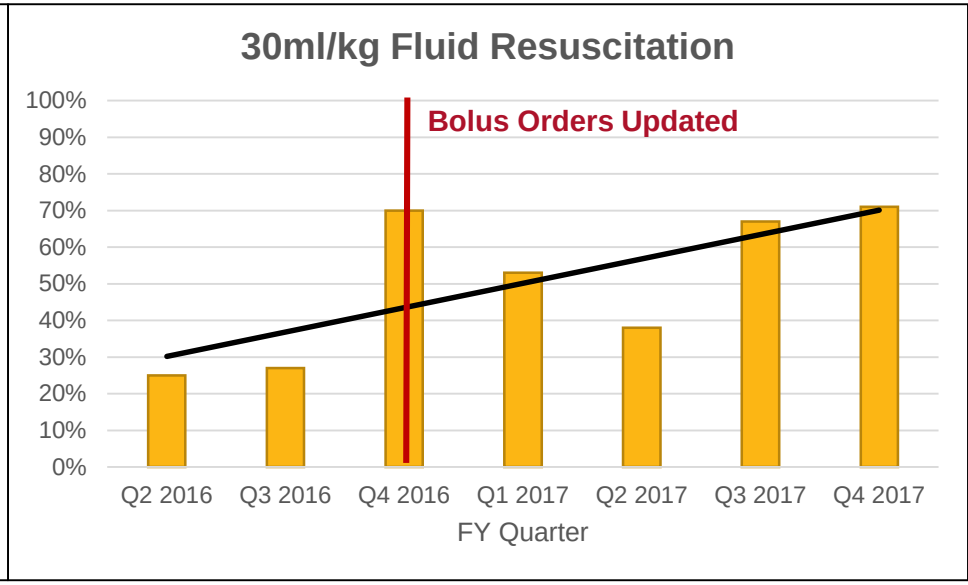
Based on the patient description and documented clinical course, I am conce
{sepsis spectrum disorder :19197::"septic shock" "severe sepsis" "sepsis"}

Value Derived

Process Metrics







Outcome Metric - Mortality

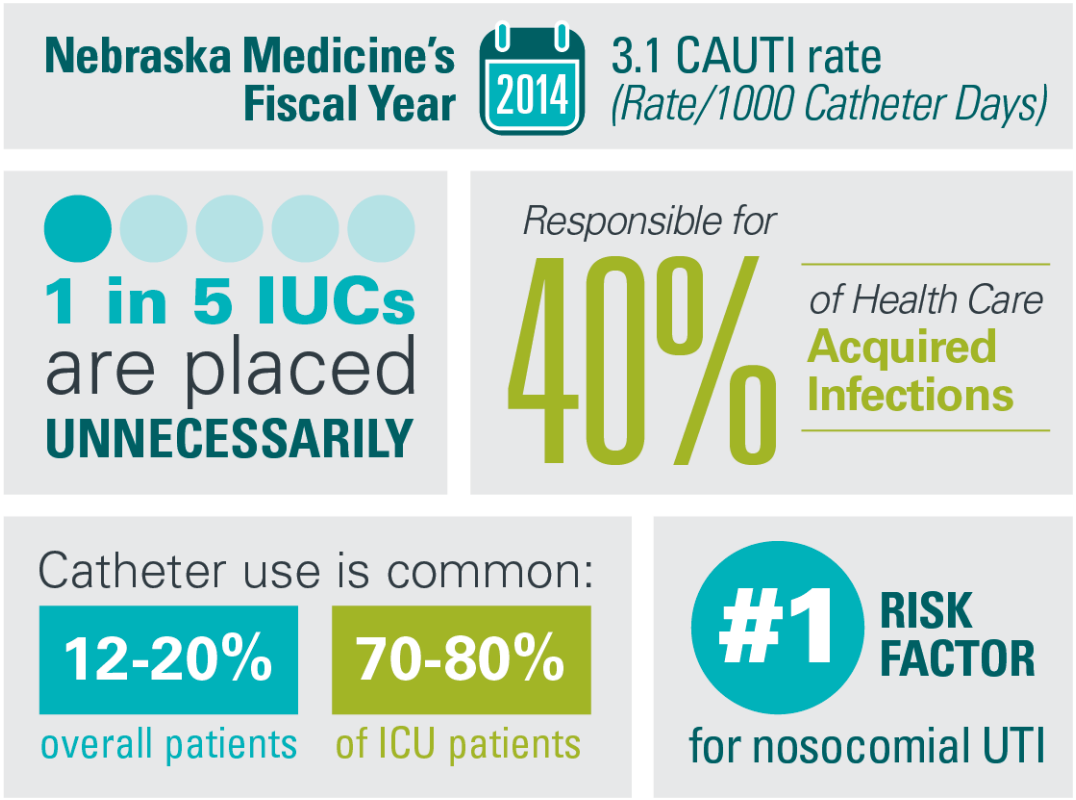
Striving Toward Zero Harm: Reducing Catheter-associated Urinary Tract Infections

Julie Fedderson, MD, MBA, FACP
Chief Patient Safety & Compliance Officer

Nicole Turille, BSN, RN
Director, Quality & Patient Safety

Nebraska Medicine
SERIOUS MEDICINE. EXTRAORDINARY CARE.®

Background



Further investigation revealed:

- Staff were not always aware of indication for catheter
- Catheters were not being removed in a timely manner
- Catheter cares were not being performed and documented consistently
- Urine culture and sensitivity studies were being ordered inappropriately

Solutions Implemented

- Indwelling Urinary Catheter (IUC) Protocol
- Infection Prevention and Department Manager Rounds
- Urine Culture Order Modifications
- Skills Validation – Nursing and Patient Care Technicians

Clinical Process

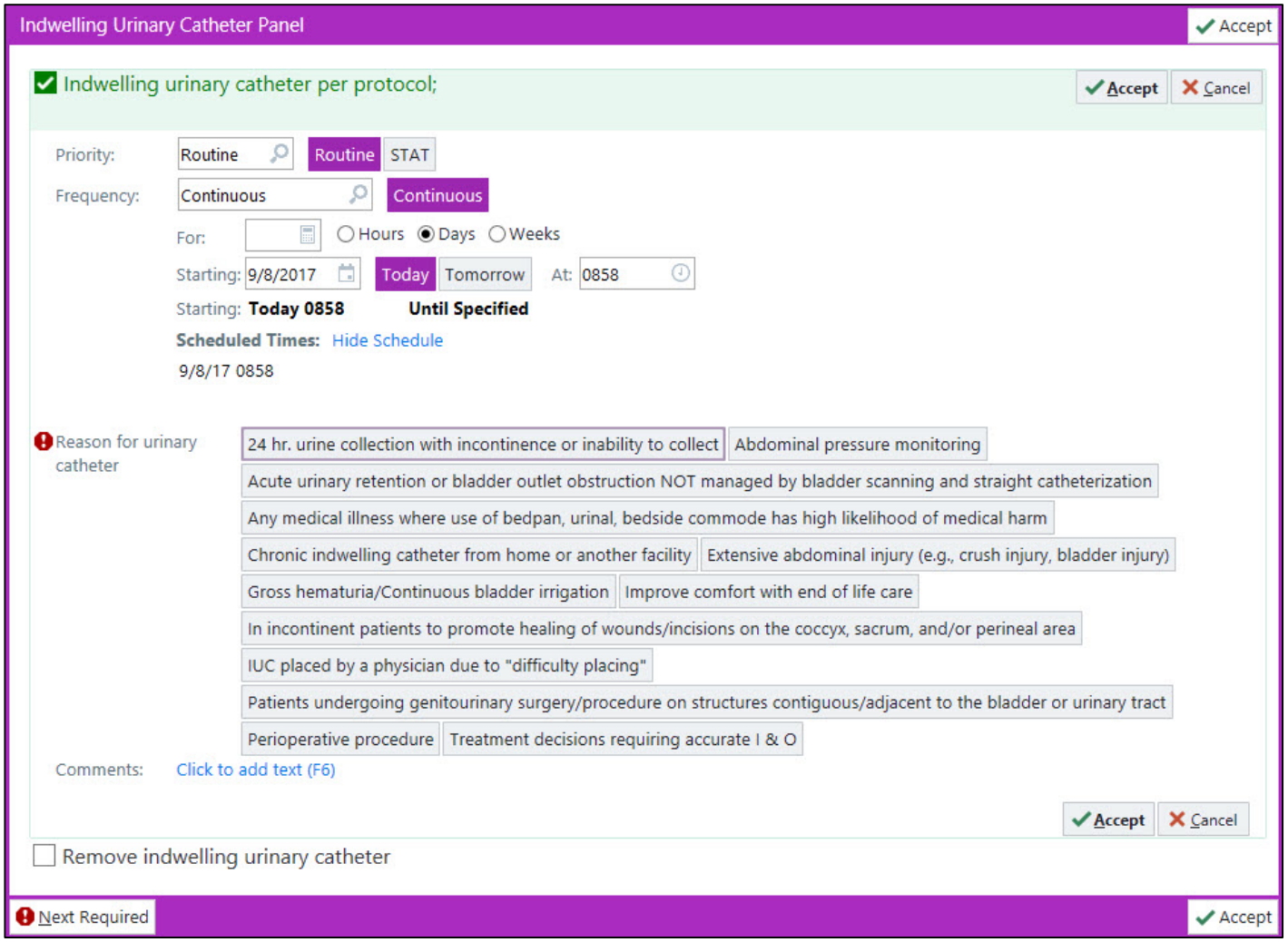
- Order is placed for IUC placement requiring selection of indication from a set of organizationally- approved indications
- Nurse documents IUC placement, status and catheter care completion
- Nurse monitors IUC dwell time and removes catheter or contacts MD for removal order dependent on indication
- Nurses and department leadership able to quickly evaluate patients with IUC, review catheter maintenance and length of dwell time
- Team leads and operational leadership able to view departmental opportunities
- Clinicians desiring urine cultures must utilize reflex ordering panel to ensure appropriate use.

System Tools

Process & Tools:

Reduce Catheter Days & Standardize Documentation

Indication is now a mandatory field and more visible



System Tools

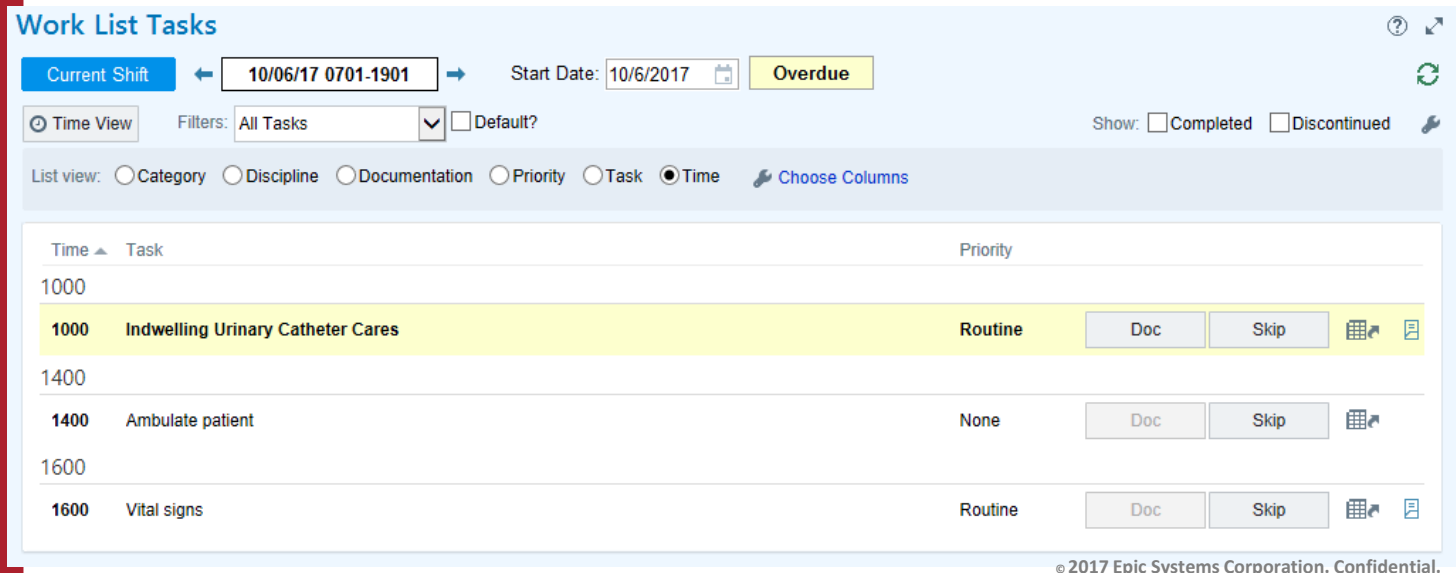
- Standardized Required Indications
- Task List Reminders
- Rule Based Decision Support
- Real-time Evaluation
- Nursing Dashboards
- Reflex Order Algorithm

Process & Tools:

Reduce Catheter Days & Standardize Documentation

How Health IT was Used

Decision support to aid in catheter care completion



System Tools

- Standardized Required Indications
- Task List Reminders
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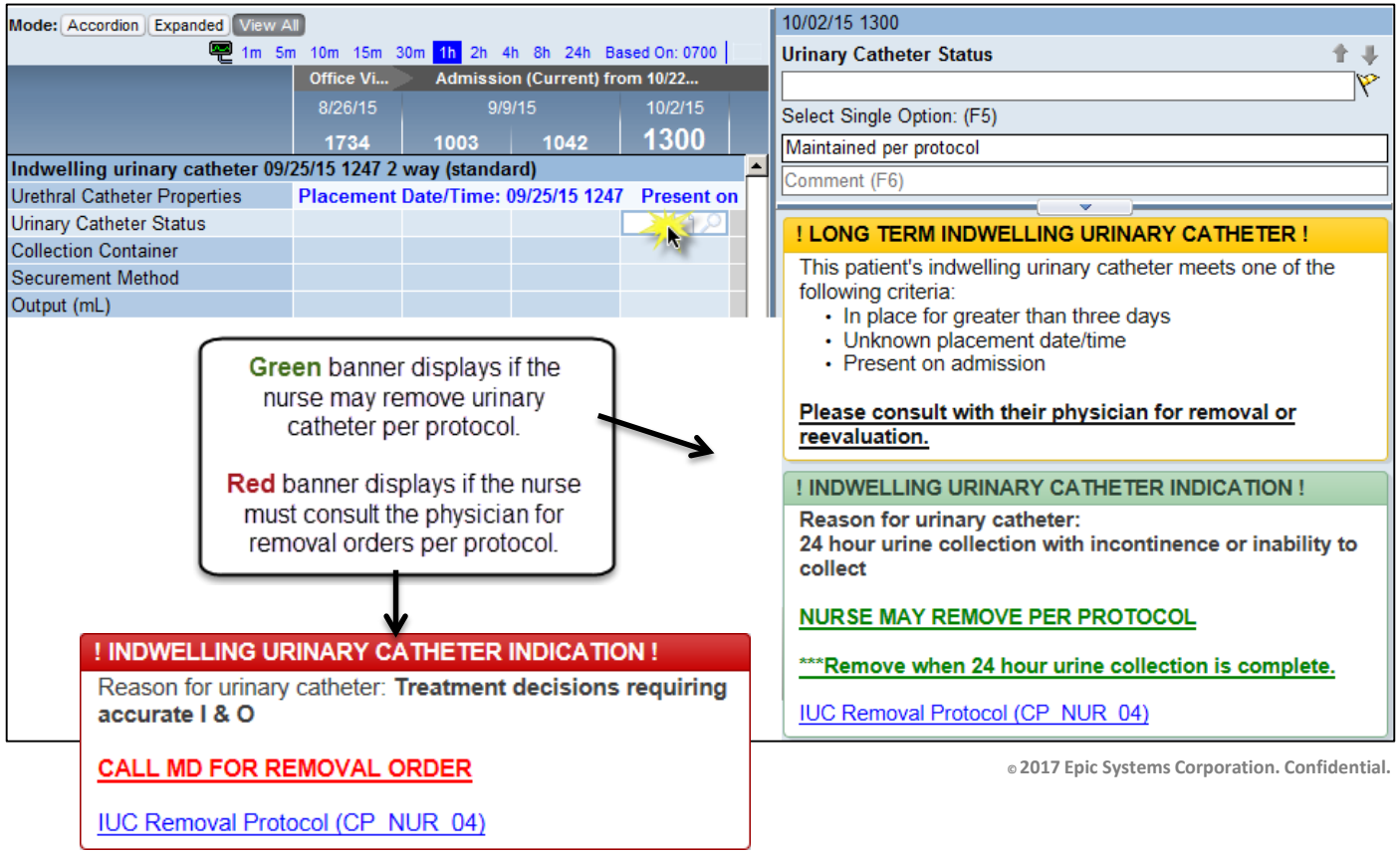
- Nursing Dashboards
- Reflex Order Algorithm

Process & Tools:

Reduce Catheter Days & Standardize Documentation

How Health IT was Used

Decision support to promote timely catheter removal



System Tools

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Process & Tools:

Reduce Catheter Days & Standardize Documentation

How Health IT was Used

System Tools

- Standardized Required Indications
- Task List Reminders
- Rule Based Decision Support
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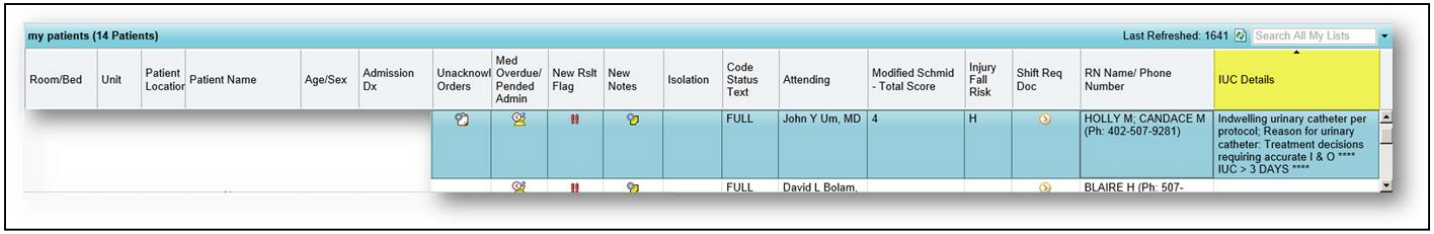
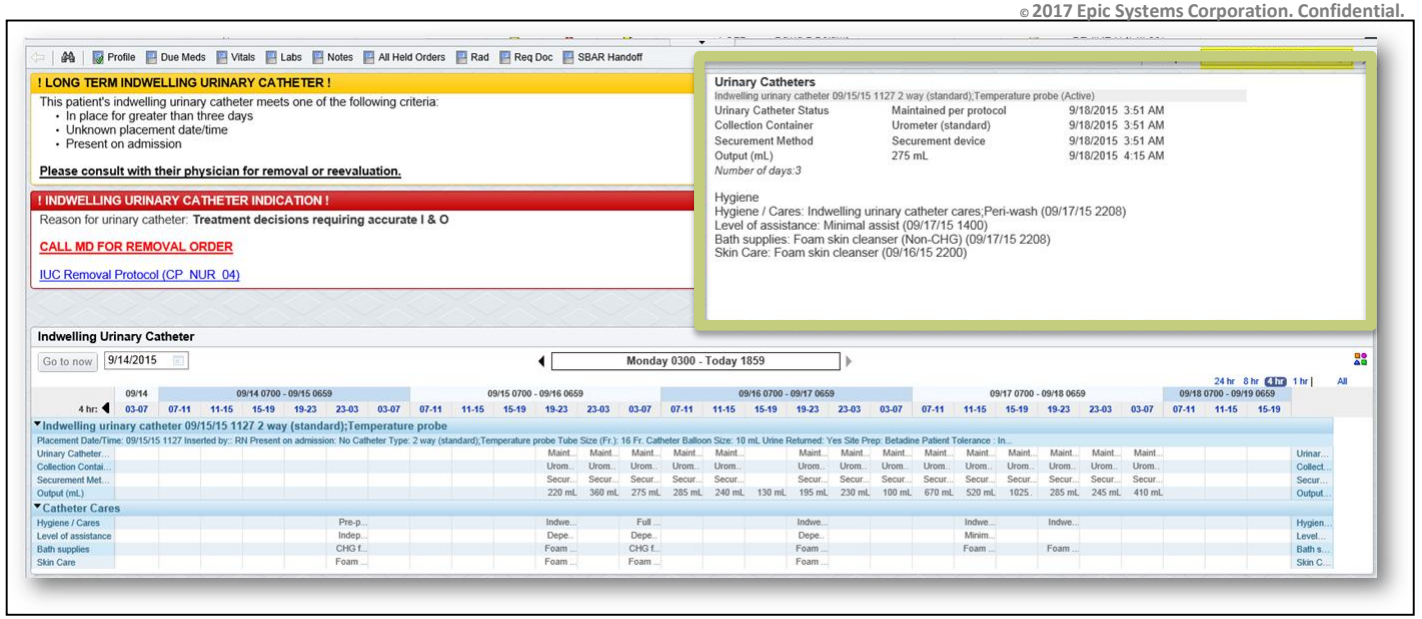




Process & Tools:

How Health IT was Used

Reduce Catheter Days & Standardize Documentation

Patients with Foley Catheters Just now

Report completed: Tue 10/3 02:32 PM

Department	Foley Catheter Duration (>3 Days)	Missing Foley Catheter Orders	Missing Catheter Cares Doc (>14 hrs)
BMC 1BNE	0 / 1	0 / 1	0 / 1
BMC 3BE	0 / 1	0 / 1	0 / 1
NM 4LEW	1 / 2	0 / 2	0 / 2
NM 6WNE	2 / 4	0 / 4	2 / 4
NM 6WW	0 / 1	0 / 1	0 / 1
NM 8WE	0 / 1	0 / 1	1 / 1
NMC 3CE	0 / 3	0 / 3	1 / 3
NMC 3CSE	0 / 1	0 / 1	1 / 1
NMC 3CSW	0 / 4	2 / 4	1 / 4
NMC 4CS	1 / 1	0 / 1	0 / 1
NMC 4UN	0 / 1	0 / 1	1 / 1
NMC 4UW	0 / 1	0 / 1	1 / 1
NMC 5CNE	0 / 2	0 / 2	0 / 2
NMC 5CSE	0 / 2	0 / 2	2 / 2
NMC 5CSW	1 / 1	0 / 1	0 / 1
NMC 5UN	0 / 4	0 / 4	1 / 4
NMC 5UNW	1 / 2	0 / 2	0 / 2
NMC 5USW	1 / 2	0 / 2	0 / 2
NMC 6CNW	1 / 1	0 / 1	0 / 1
NMC 6LEW	1 / 1	0 / 1	1 / 1
NMC 6UNW	0 / 1	0 / 1	1 / 1
NMC 7CSW	0 / 1	0 / 1	1 / 1
NMC 7LEW	1 / 1	0 / 1	0 / 1
NMC 8CNW	0 / 3	0 / 3	0 / 3
NMC 8CSW	2 / 6	0 / 6	1 / 6
NMC 9CSE	2 / 3	0 / 3	1 / 3
Total	14 / 51	2 / 51	16 / 51

System Tools

- Standardized Required Indications
- Task List Reminders
- Rule Based Decision Support
- Real-time Evaluation
- Nursing Dashboards
- Reflex Order Algorithm

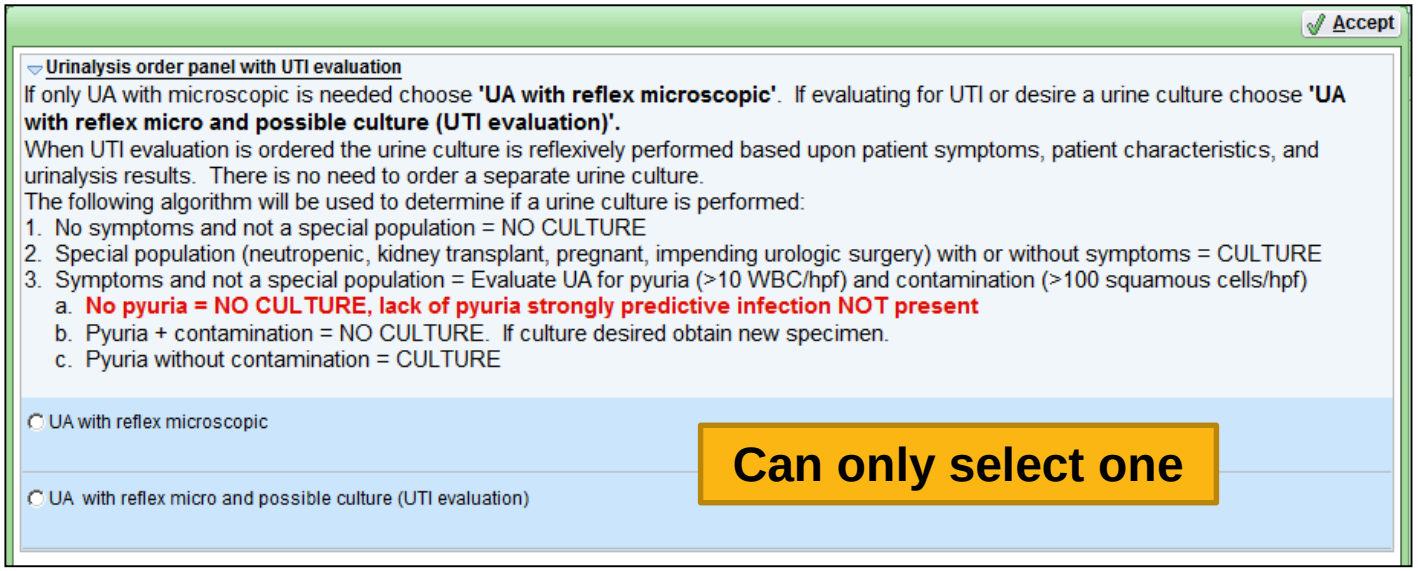
Process & Tools:

Decrease False Positive Culture Results

How Health IT was Used

System Tools

- Standardized Required Indications
- Task List Reminders
- Rule Based Decision Support
- Real-time Evaluation
- Nursing Dashboards
- Reflex Order Algorithm



- **Urine culture and sensitivity order no longer available for inpatients**
- **Urinalysis automatically reflexed for culture and sensitivity only if certain parameters are met in initial results**

Process & Tools:

Decrease False Positive Culture Results

How Health IT was Used

System Tools

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- Task List Reminders
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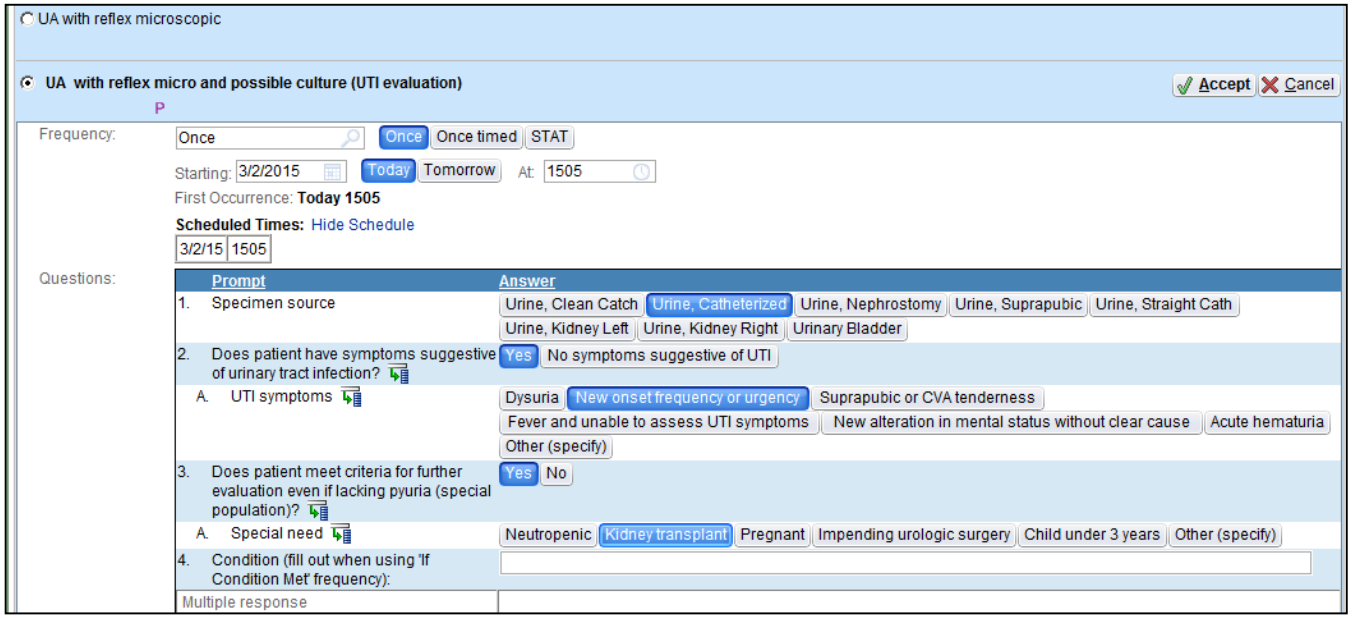
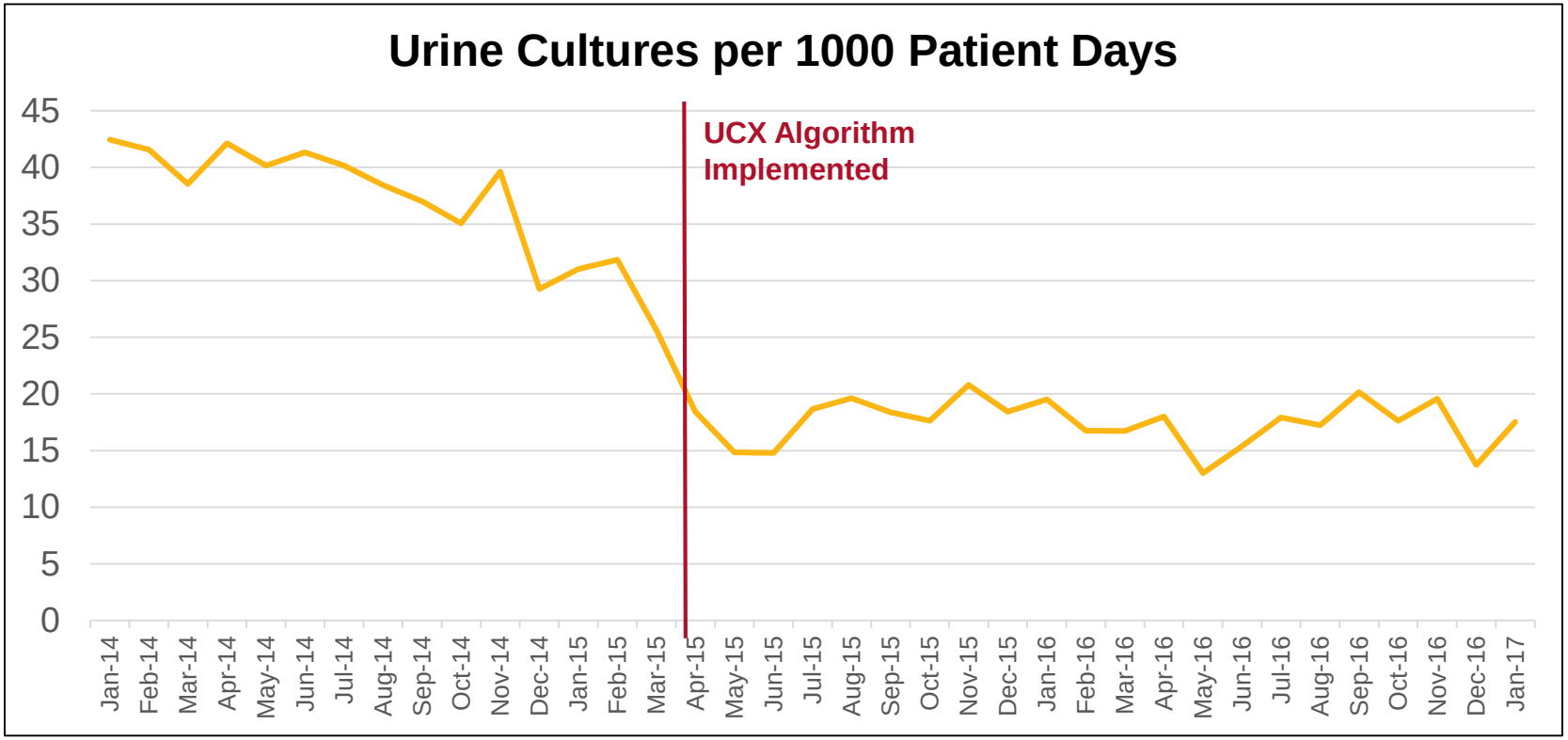


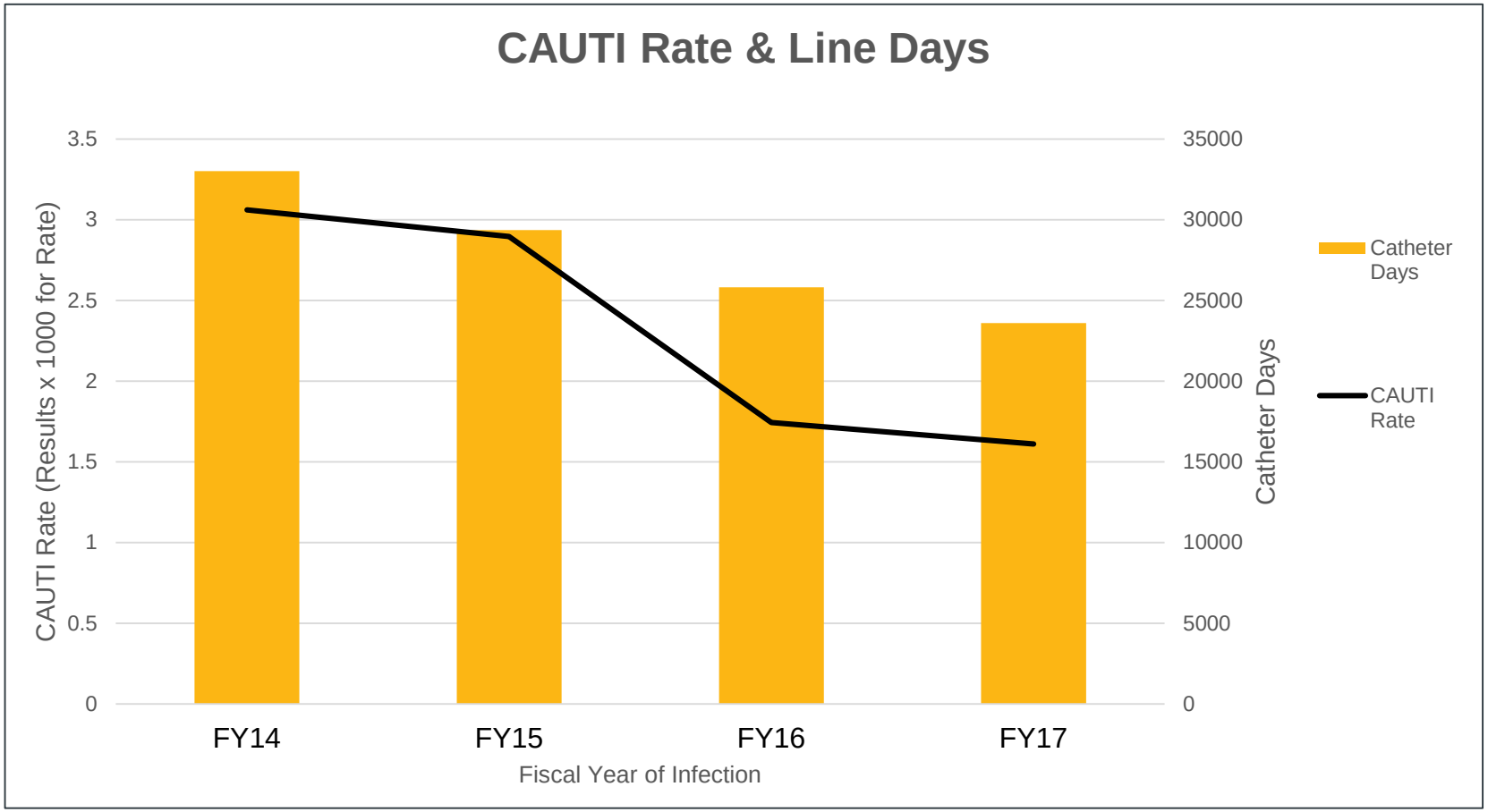
Value Derived

Markers of Success: Number of Urine Cultures



	Pre-Intervention	Post-Intervention	% Decline	*P*
UCX/1000 PD	36.9	18.4	50%	>.0001
Contaminated UCX/1000 PD	3.25	1.58	49%	<.0001

Value Derived: CAUTI Rate



Reduction in CAUTI rate: **47%**

Reduction in catheter days: **29%**

Moving the Mark on Ambulatory Clinical Quality Measures

David Cloyed, MS, RN-BC
Applications Manager

Tammy Winterboer, PharmD, BCPS
Director, Clinical Effectiveness and Informatics

Nebraska Medicine

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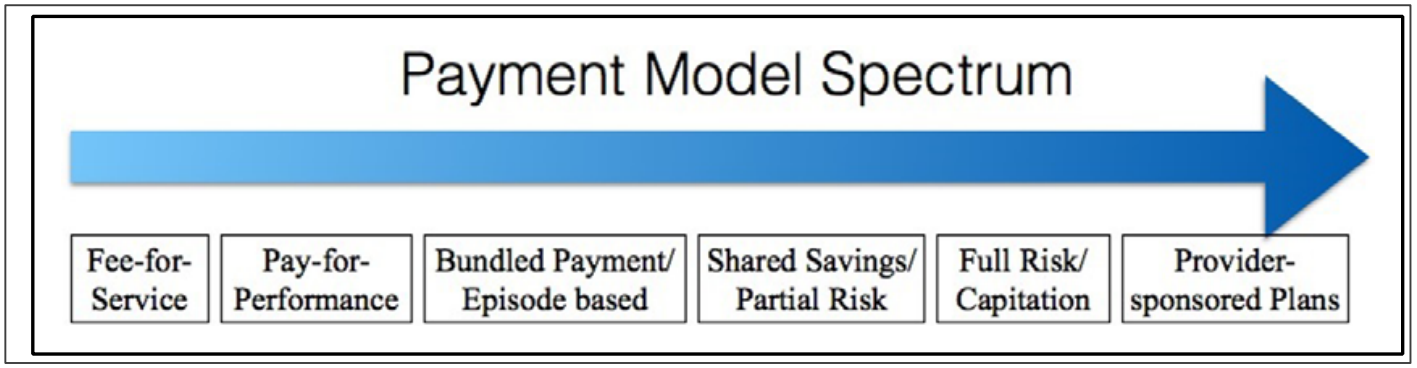
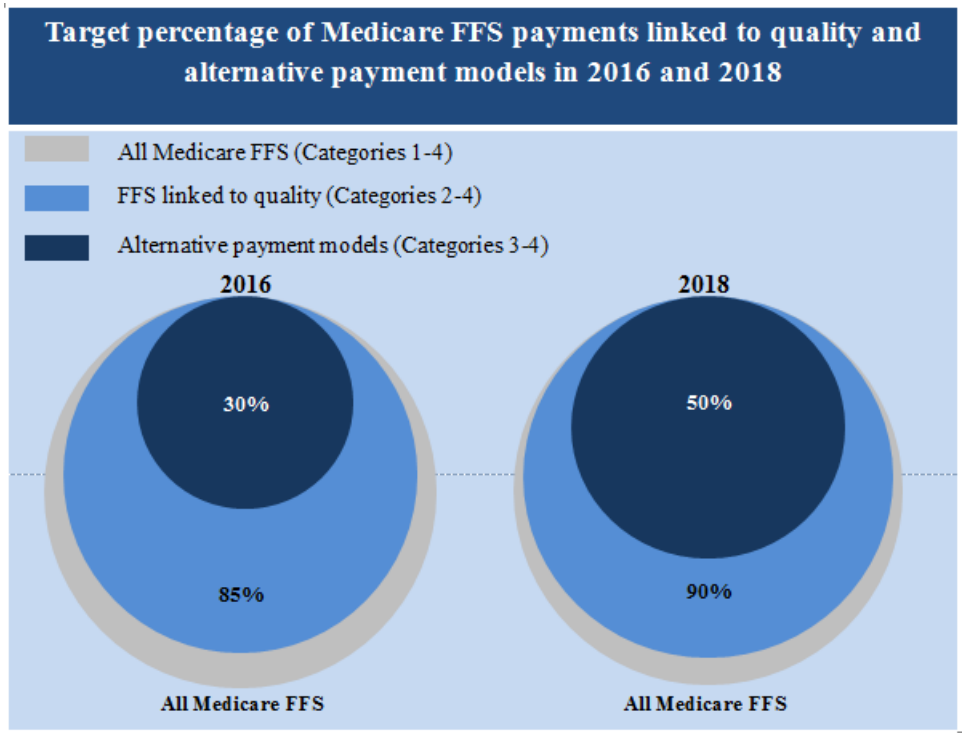
National Challenge: Quality and Payment





https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2015-Fact-sheets-items/2015-01-26-3.html

Significant Gap in Quality

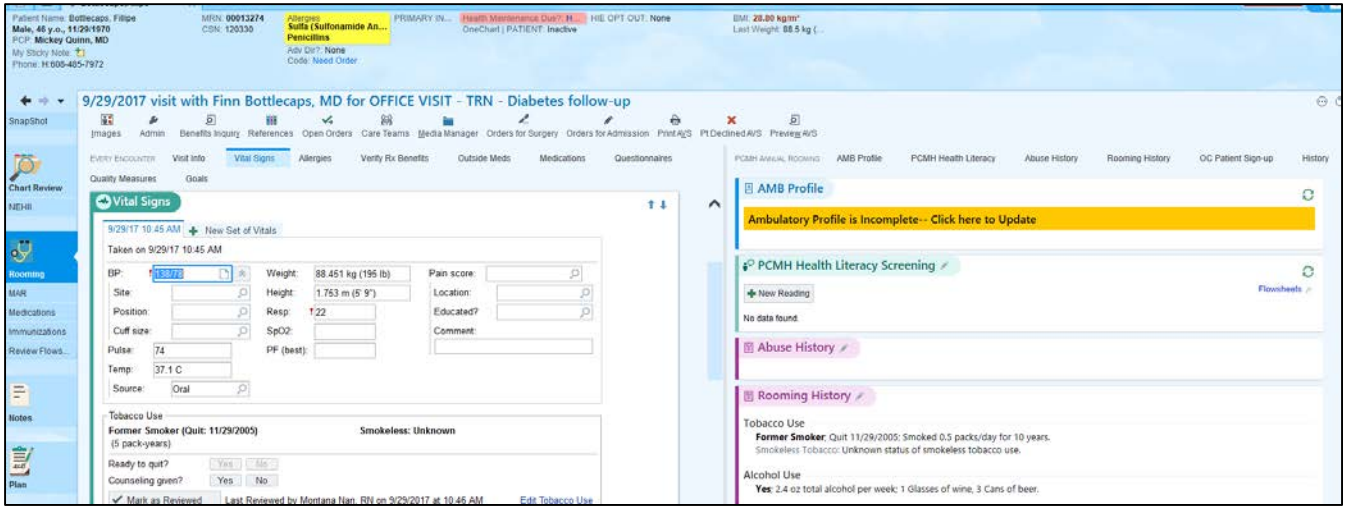
	CY 2015 (%)	CY 2016, Q1 (%)
Depression screen and follow-up	41	49
BMI counseling 18-65 yo	42	44
BMI counseling >65 yo	59	58
CRC screen	16	19
Pneumonia vaccination	35	40
Breast cancer screening	37	35
Falls screen	36	46
Uncontrolled HA1c	--	45
ASA in Vasc Dz	84	82
Tobacco use counseling	90	91
Med rec	89	91
BP control	60	57

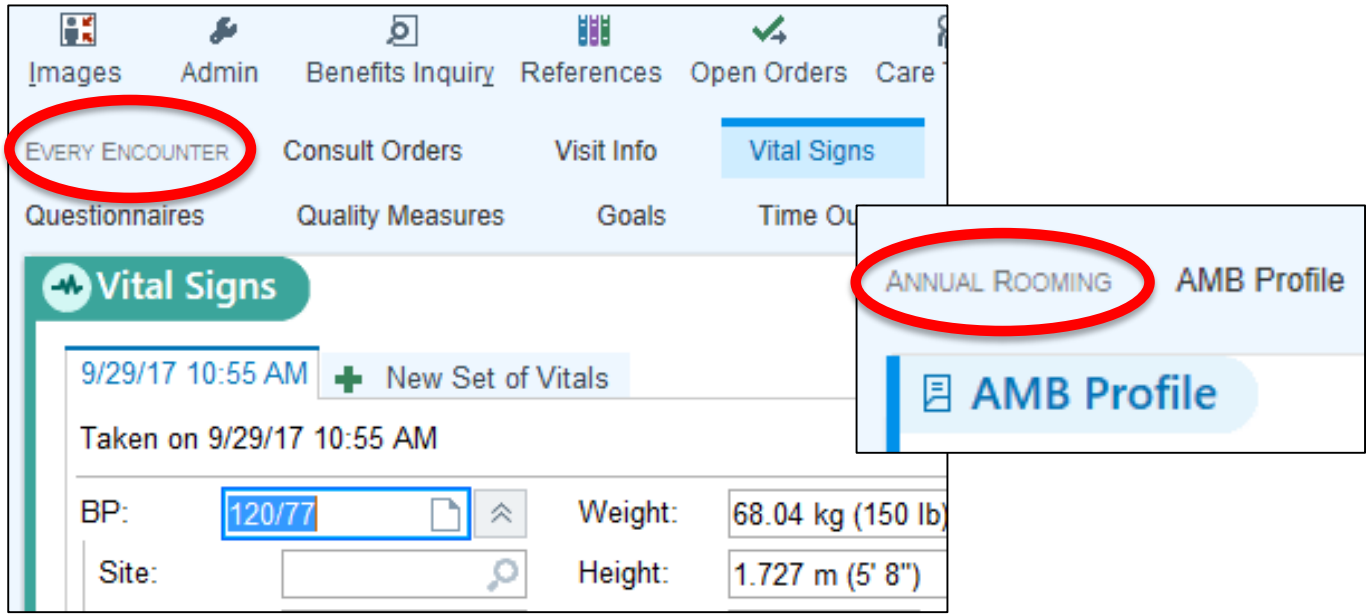
Clinical Process

- When patient arrives in clinic, rooming staff gather and document standard visit specific information
- If necessary, rooming staff gather pertinent information to be collected annually
- Rooming staff complete any unreconciled regulatory requirements within their scope
- Physicians evaluate patient, review visit specific and annual information and then complete required documentation
- Physicians review personal individual compliance metrics with quality requirements
- Department and service line leaders review metrics for their care areas

System Tools

Process and Tools





System Tools

- Visit Navigator Organization
- Rule-based Banners
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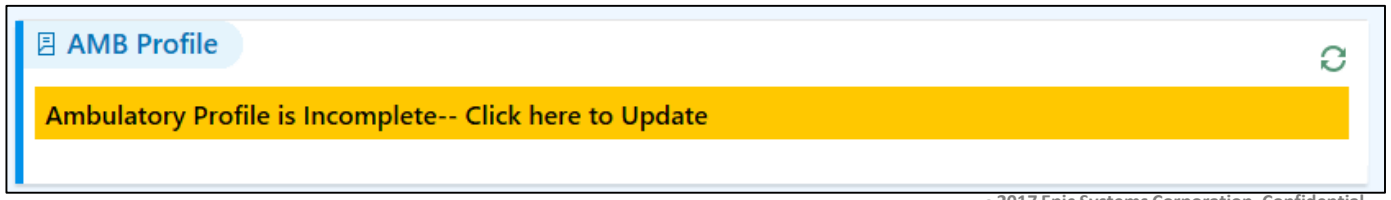
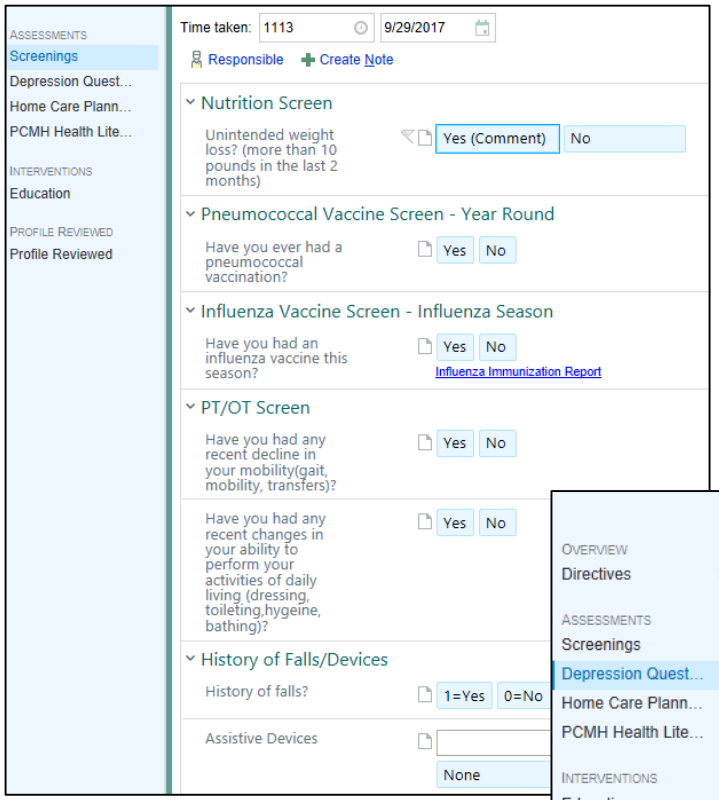
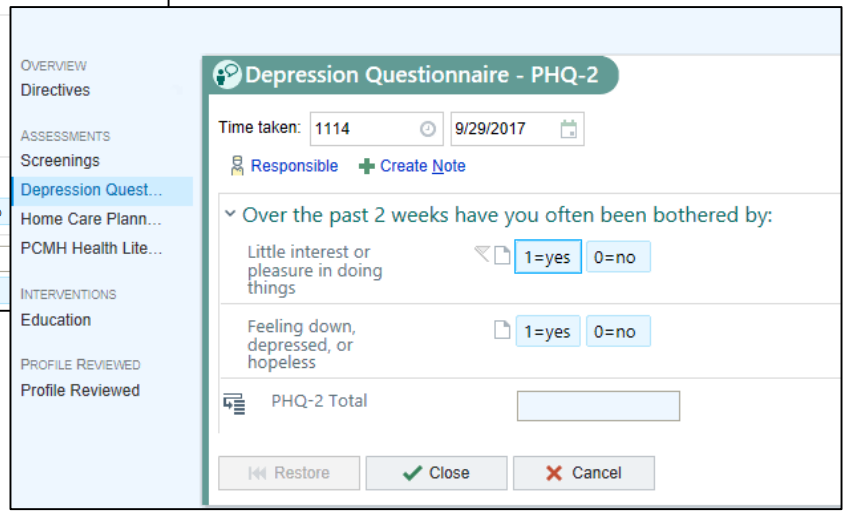
- Reminders for Providers
- Provider Dashboards
- Leader Roll-up Dashboards

Process and Tools







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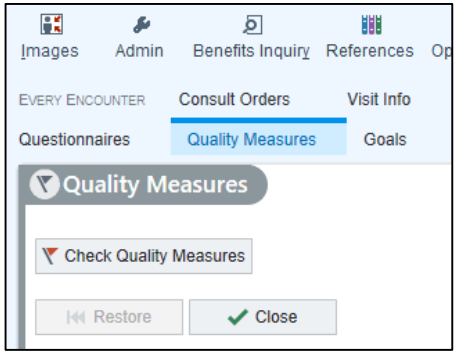
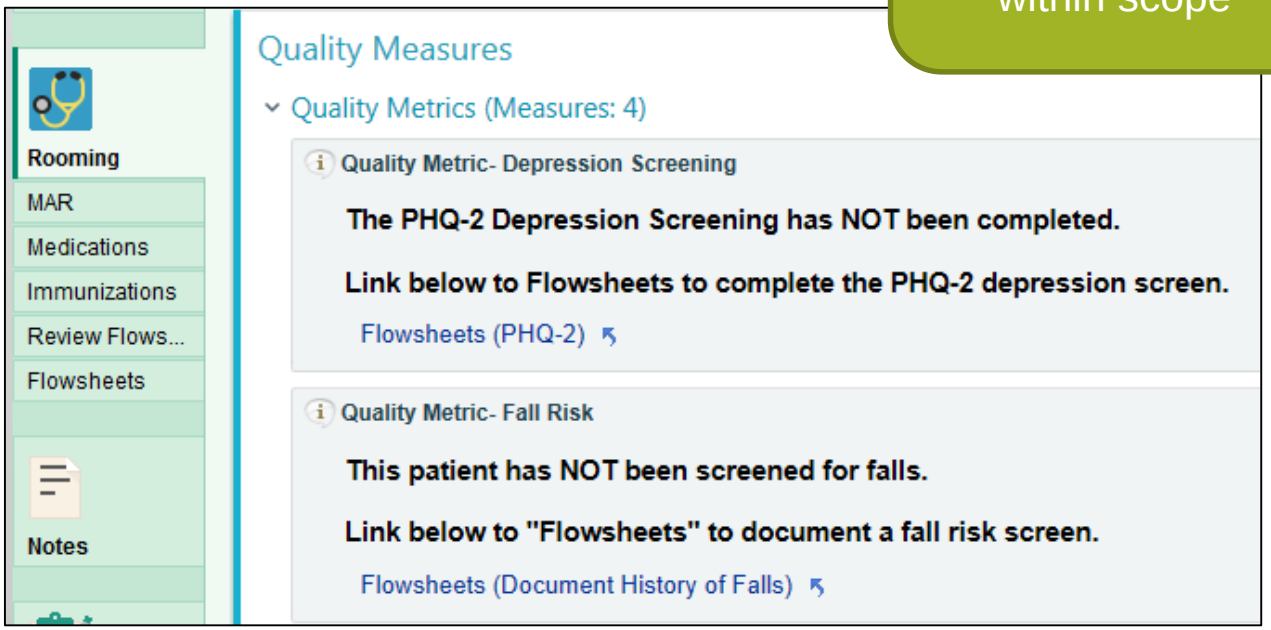


Designed to remind rooming staff of measures that are within scope



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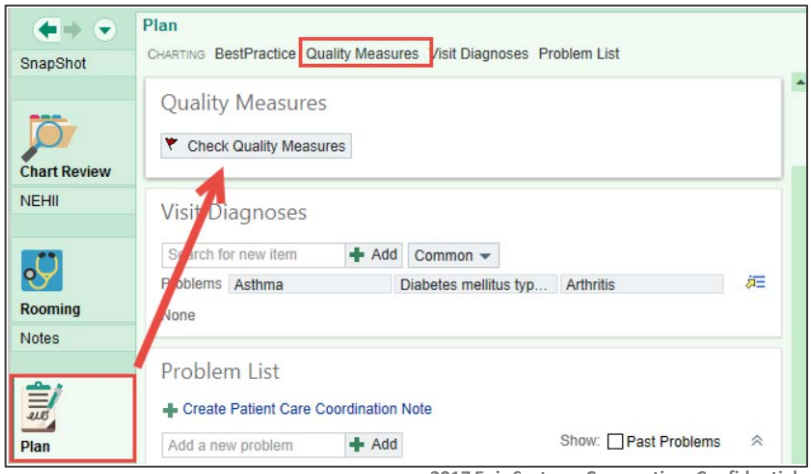

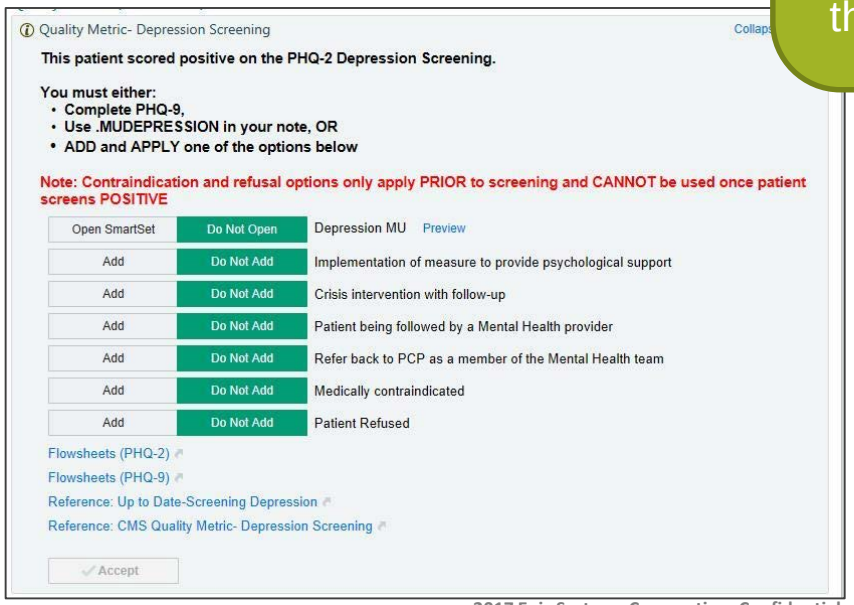

Automates chart checking and reduces clicks normally spent searching for information throughout the chart

System Tools

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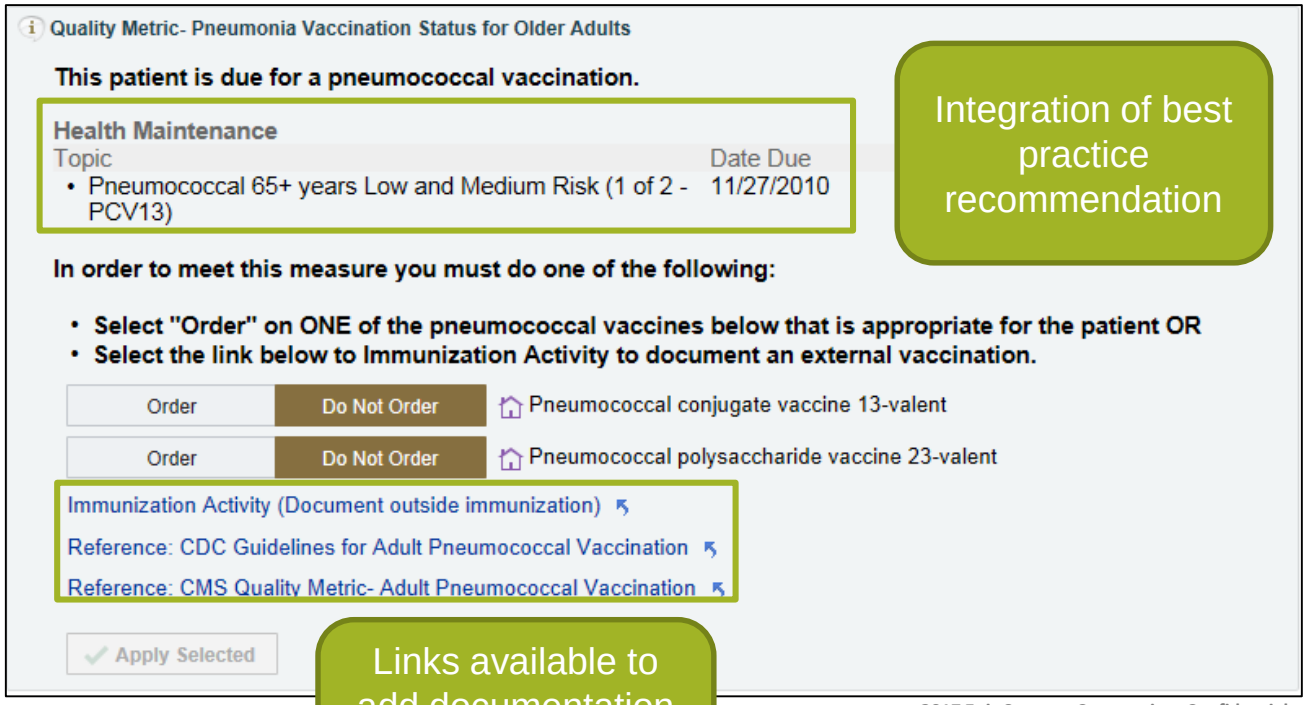
Process and Tools
Adding Clinical Value to QMAs



Integration of best practice recommendation

Links available to add documentation and reference material

System Tools

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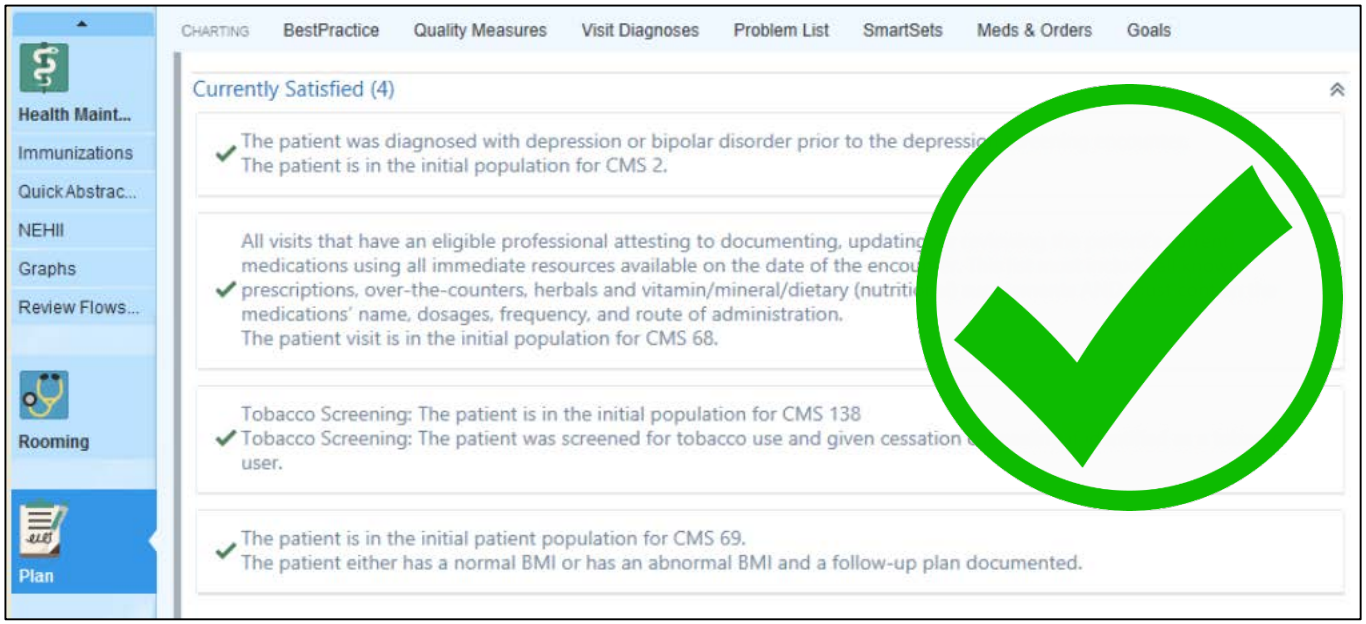
Process and Tools
Getting the Green Check Mark



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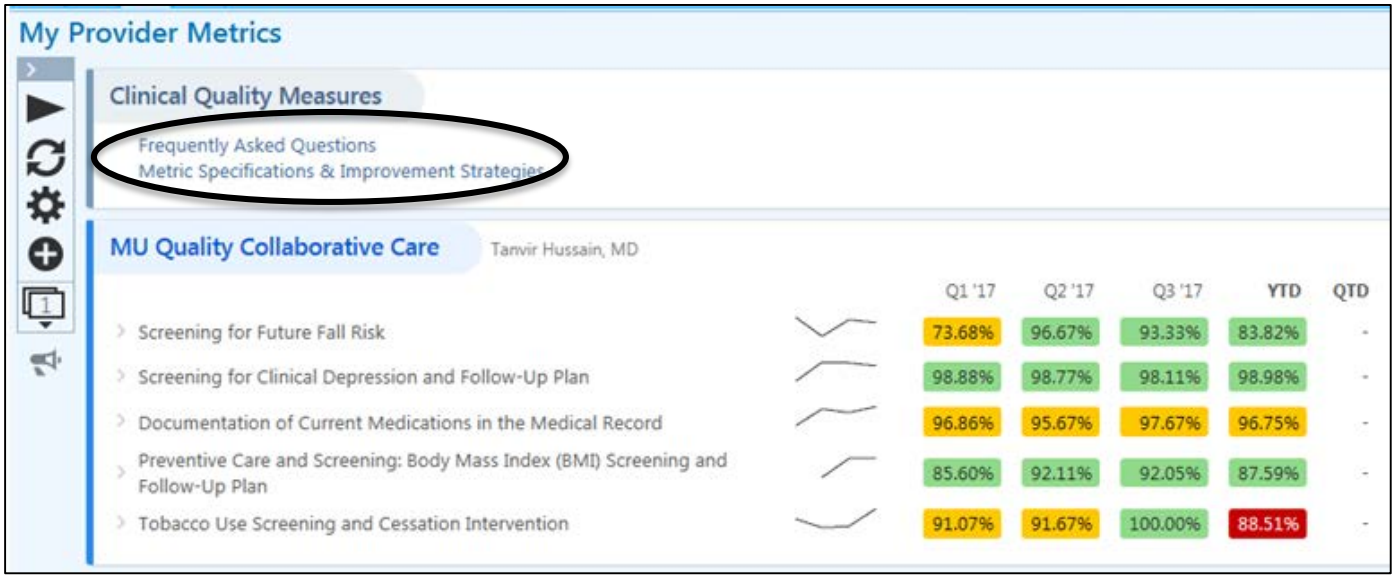

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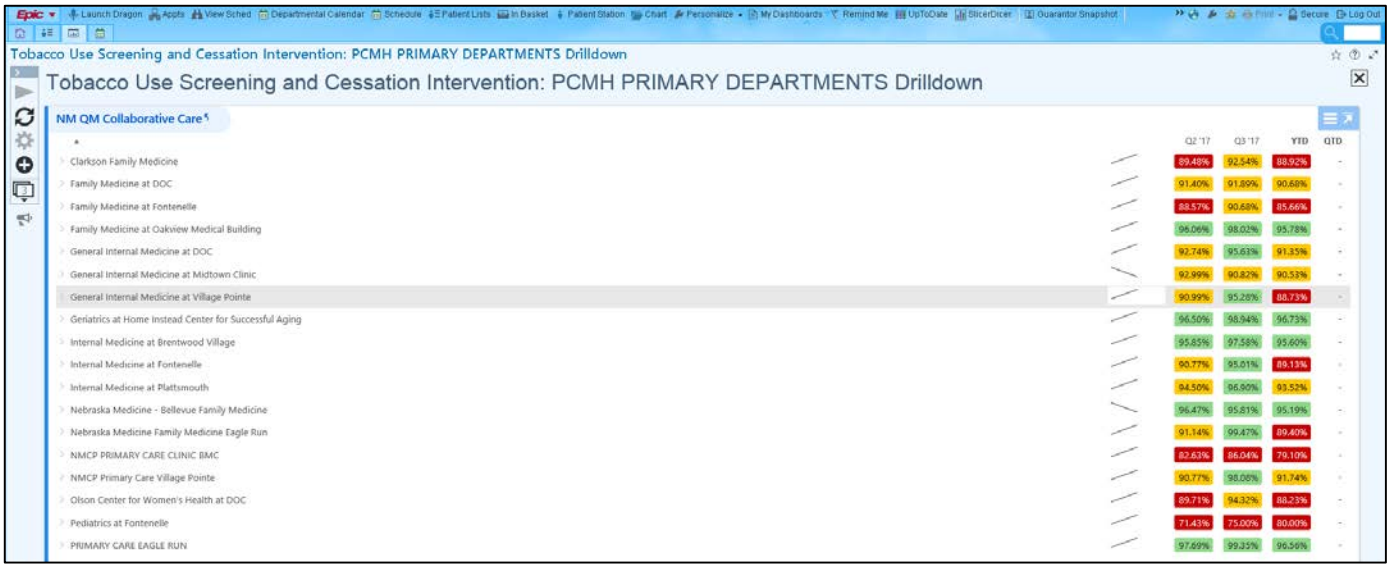

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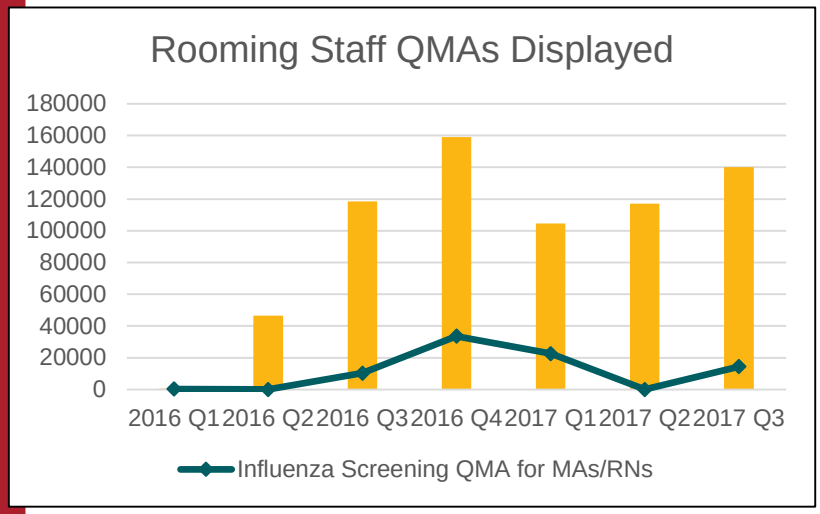
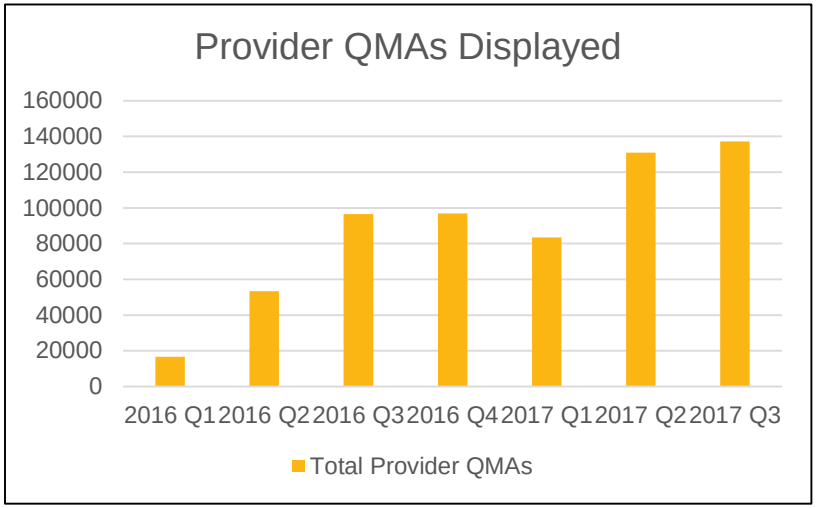
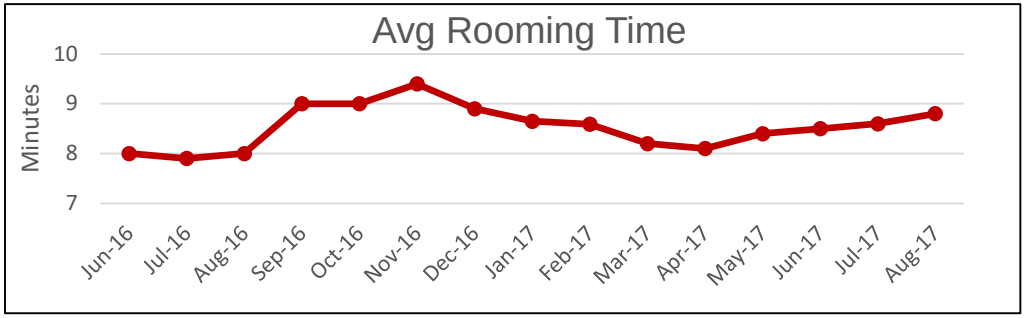
Value Derived: Rooming Process Metrics







Impact of Quality Workflow

	CY 2015 (%)	CY 2016, Q1 (%)	CY 2017, Q2 (%)	% Change
CRC Screen	16	19	45	137
Pneumonia Vaccination	35	40	59	48
Breast Cancer Screening	37	35	51	47
Depr Screen and F/U	41	49	70	43
Falls Screen	36	46	68	26
BP Control	60	57	63	11
BMI counseling 18-65 yo	42	44	49	11
BMI counseling >65 yo	59	58	61	5
Uncontrolled HA1c	--	45	42	7
ASA in Vasc Dz	84	82	85	4
Tobacco use counseling	90	91	94	3
Med rec	89	91	94	3

Impact of Quality Workflow

- 9000 additional mammograms
- 18 women saved from dying of breast cancer

- 11,400 additional pneumonia vaccinations
- 11 cases of pneumonia prevented
- 5 cases of invasive pneumococcal disease prevented

- 31,200 additional colon cancer screenings documented
- 39 lives at less risk from colon cancer deaths

Number needed to screen: development of a statistic for disease screening. BMJ. 1998 Aug 1;317(7154):307-12.
Vaccine against Pneumococcal Pneumonia in Adults. N Engl J Med 2015; 373:91-93.

Conclusions

Keys to Success
Create a multidisciplinary team
Clearly define and measure the problem
Leadership support is critical
Engage end-users and obtain their feedback
Analyze end-to-end workflows and hardwire processes
Always focus on the patient

Conclusions

Keys to Success

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