Kentucky SEPSIS Consortium

Virtual Meeting

April 24, 2025

Kentucky Hospital Association

The Kentucky Hospital Association Sepsis Consortium is working with hospitals statewide to reduce the morbidity and mortality caused by sepsis.

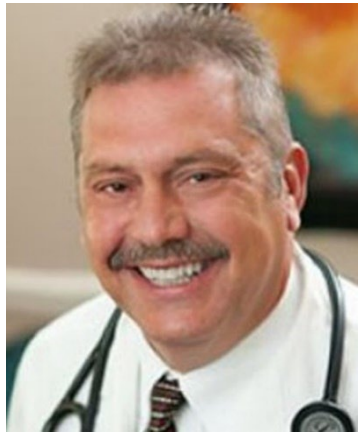
Consortium Steering Committee Regional – Bluegrass District

Amanda Miller, BSN, RN, CPHQ
Program Manager, Quality and Patient Safety
St. Joseph London
CHI St Joseph Health System

Tracy Louis MSN, RN-TN, CIC, CPPS
AVP Infection Prevention
Lifepoint Health

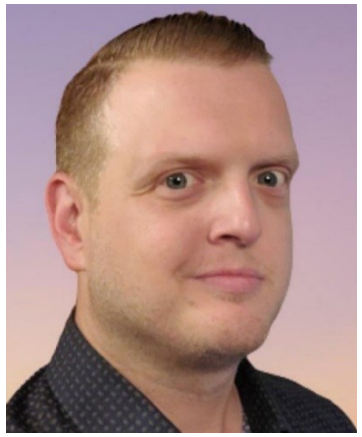
Louis Claybon, MD
Physician Advisor
St. Elizabeth Healthcare

Consortium Steering Committee Regional – Cumberland District



Anthony Stumbo, MD
Appalachian Regional Health

Christina Witt, RN
Sepsis Nurse Navigator
Ephraim McDowell Health

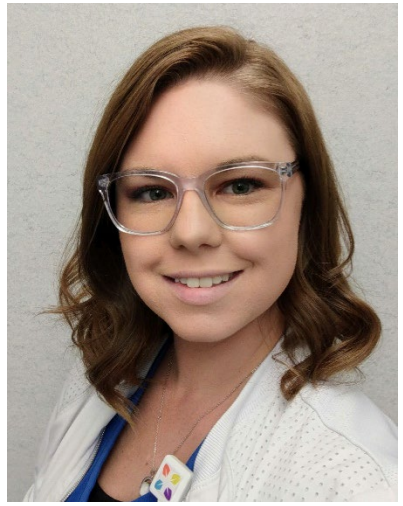


James J. Hensley
System Director
Infection Prevention
Appalachian Regional Healthcare

Kim Elliott, RN
Director of Quality/
Sepsis Coordinator
Paintsville ARH Hospital

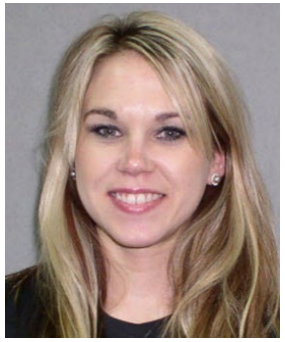
Consortium Steering Committee
Regional – Ohio Valley District

Karan Shah, MD
MMHC, FACEP
Managing Partner, Physician
Care Coordination
Consultants (PC3)



Stacey Monarch
Sepsis Coordinator
Baptist Health Louisville

Consortium Steering Committee
Regional – Twin Lakes District



JoAshley Ross
Sepsis Coordinator
Baptist Health
Paducah

Allison Rains, MD
Emergency Department
Baptist Health
Paducah

Skyler Hughes, BSN, RN
Sepsis Clinical Program
Specialist
Owensboro Health

Laura E White, BA, MHA
Performance Improvement
Engineer
Med Center Health
Bowling Green

LTAC/Post Acute/Rehab Facilities

Nicki Shorr-Maxson, RN, BSN, CIC, CPHQ
Manager of Quality and Safety
Continuing Care Hospital
CHI St Joseph Health

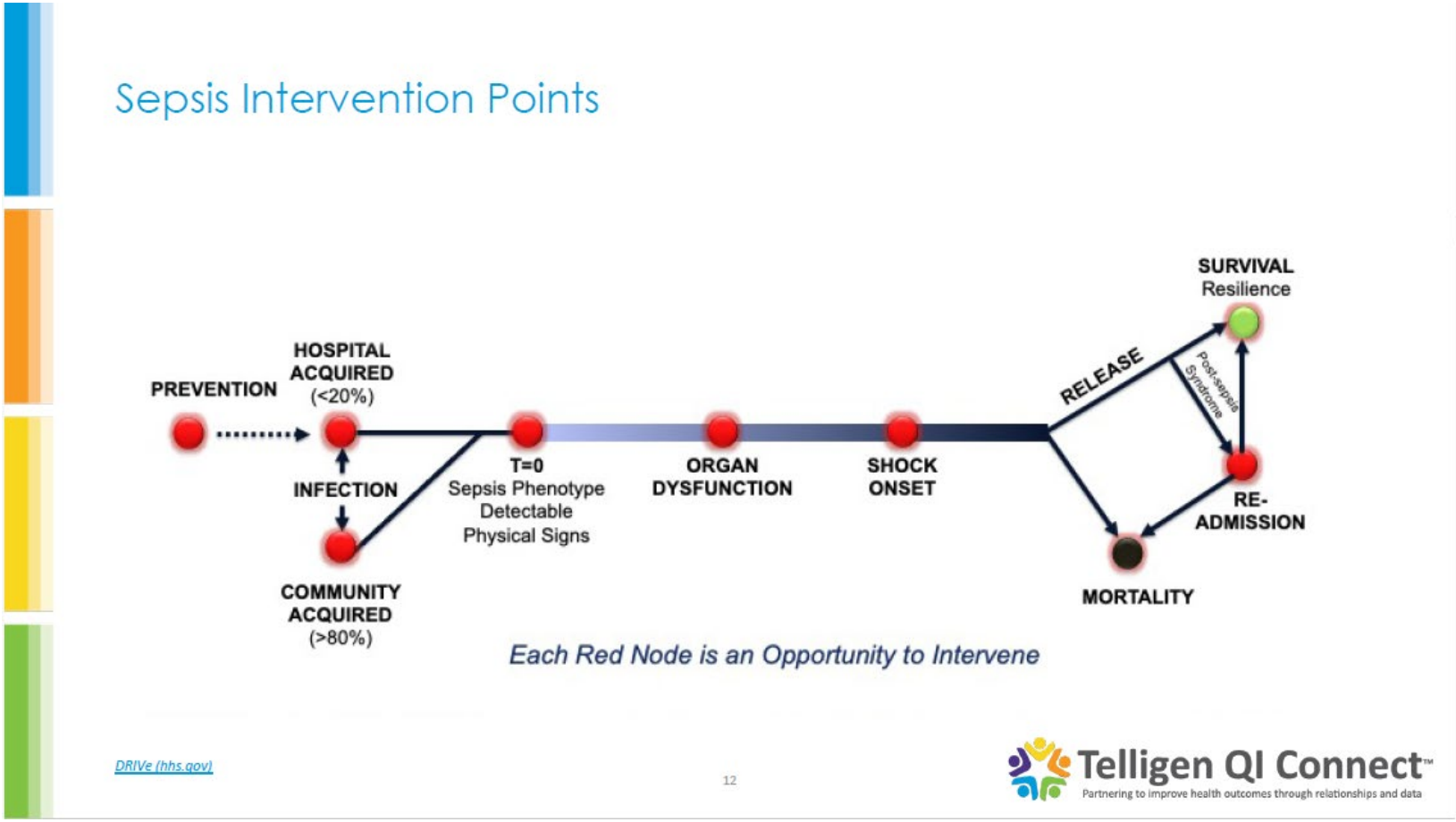
Consortium Steering Committee
Patient/Family Advocate

Darrell Raikes

Pediatric Sepsis Week
April 20-26

- Remembering to be just as alert to signs/symptoms in children.
- Easy to assume benign viral illness in previously healthy children.
  - We see so many with fevers, even high fevers
- Frequent failures in children who have underlying health issues.
  - The Spirit Catches You and You Fall Down, by Anne Fadiman
    - Cultures around illness and treatment collide
    - Epilepsy frequent ED visits

Reminder of Opportunity Points

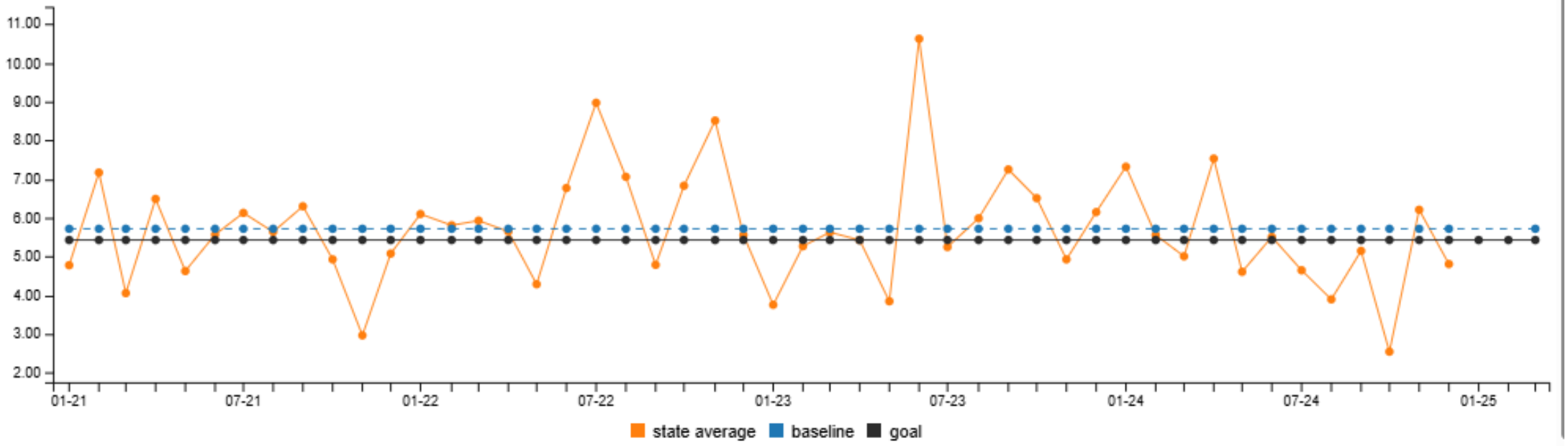


Sepsis-1a Postoperative Sepsis (AHRQ-PSI 13)

Kentucky Sepsis Consortium

SEPSIS-1a Postoperative Sepsis (AHRQ - PSI 13)

Goal Type: Decrease

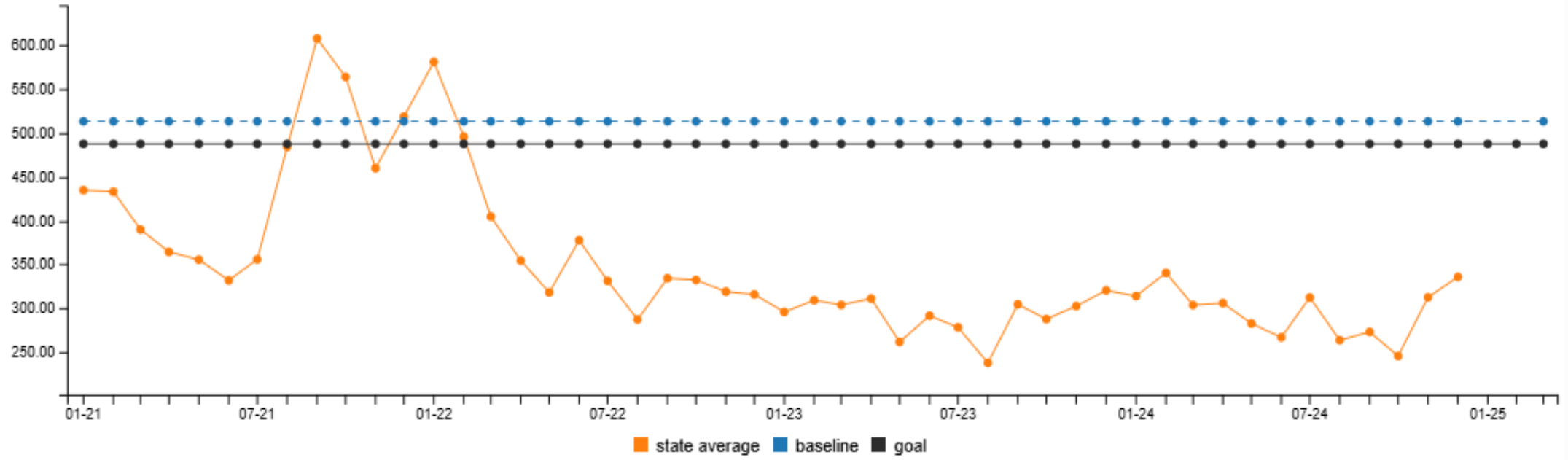


Sepsis-1c Hospital-Onset Sepsis Mortality Rate

Kentucky Sepsis Consortium

SEPSIS-1c Hospital-Onset Sepsis Mortality Rate

Goal Type: Decrease

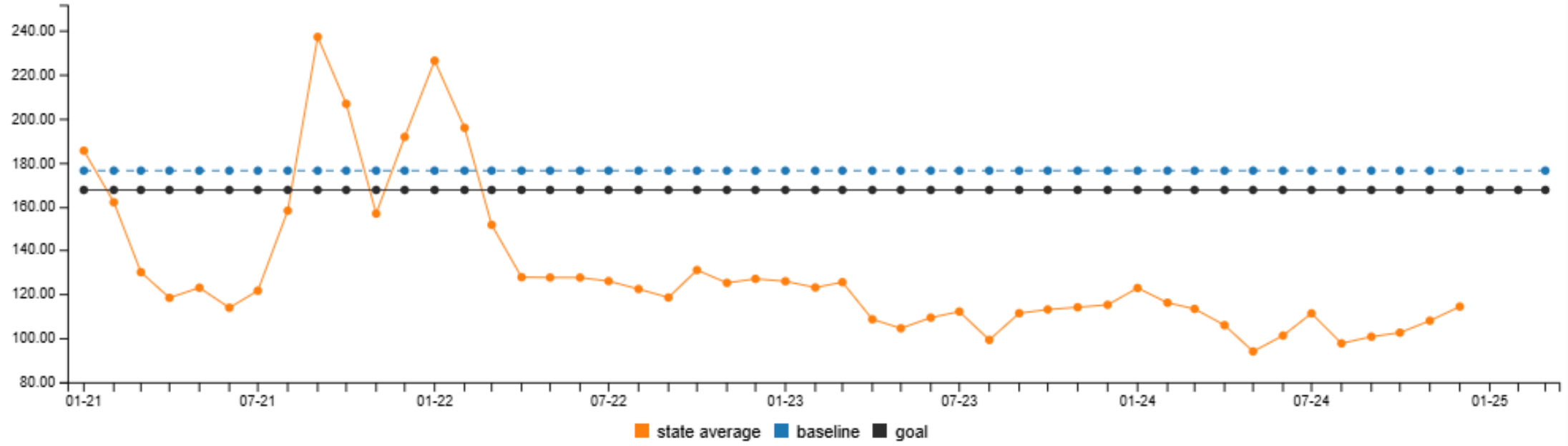


Sepsis-1d Overall Sepsis Mortality Rate

Kentucky Sepsis Consortium

SEPSIS-1d Overall Sepsis Mortality Rate

Goal Type: Decrease

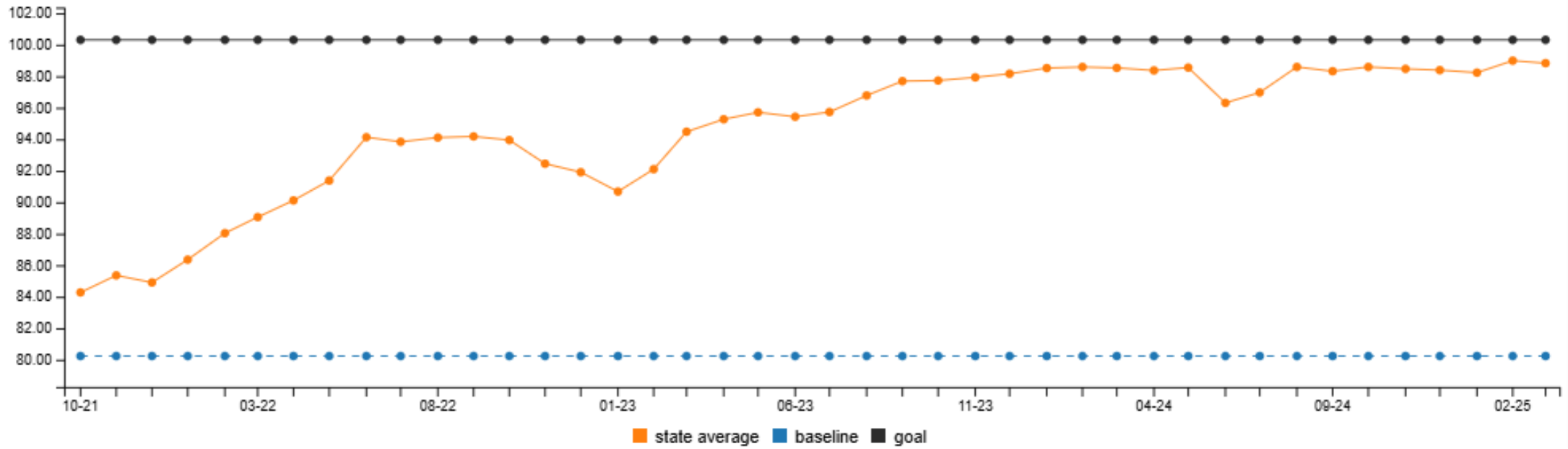


SEPSIS-2c SEPSIS Screening Performed at Triage

Kentucky Sepsis Consortium

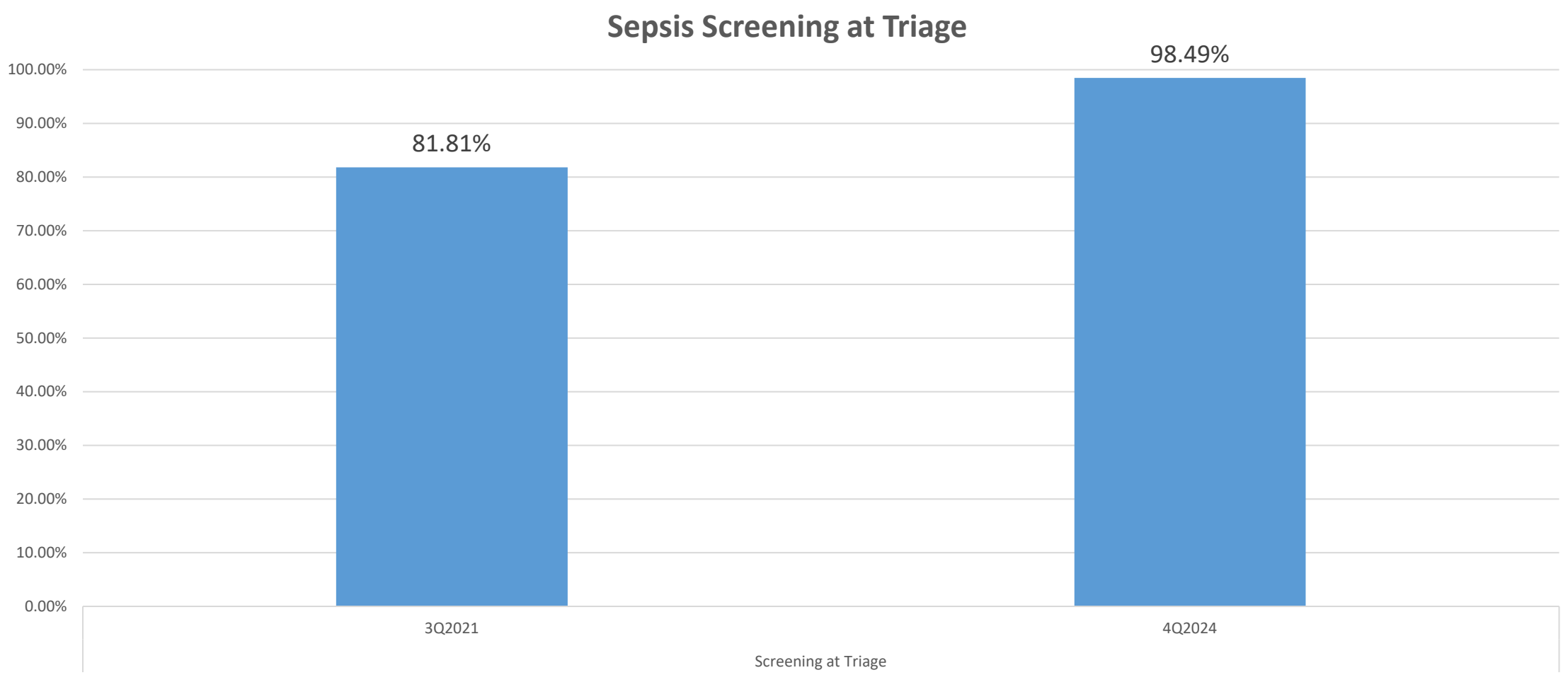
SEPSIS-2c SEPSIS Screening Performed at Triage

Goal Type: Increase



*Data is in review

KQC Pull from 04/17/2025

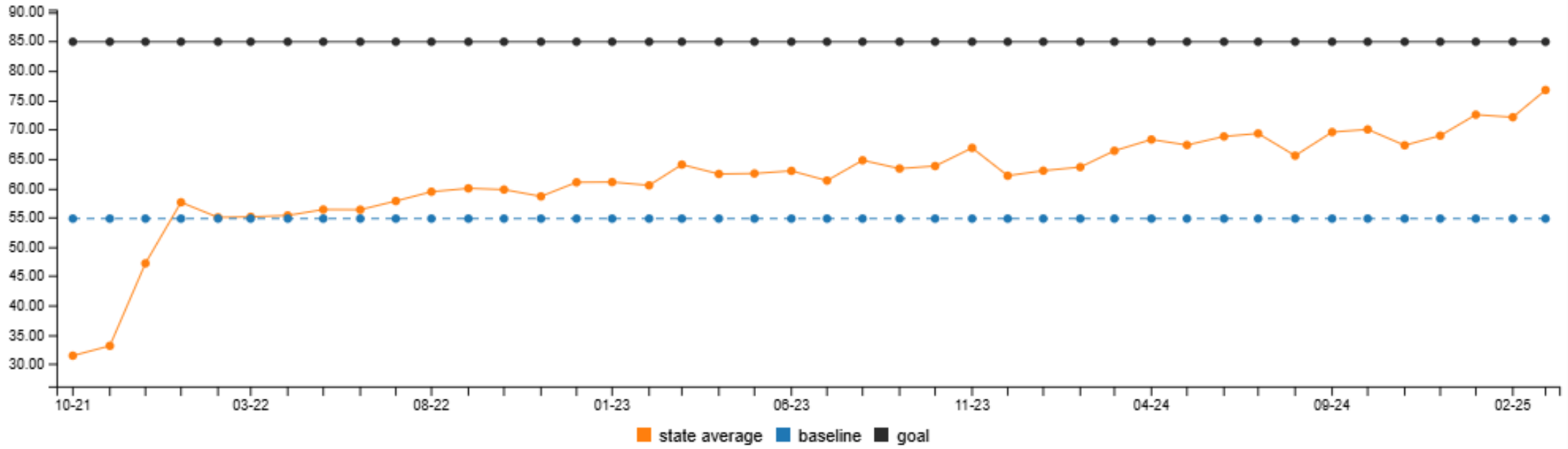

Sepsis Screening at Triage
100.00%
90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
81.81%
98.49%
3Q2021
4Q2024
Screening at Triage

SEPSIS-2d 3 & 6 Hour Sepsis Bundle Compliance

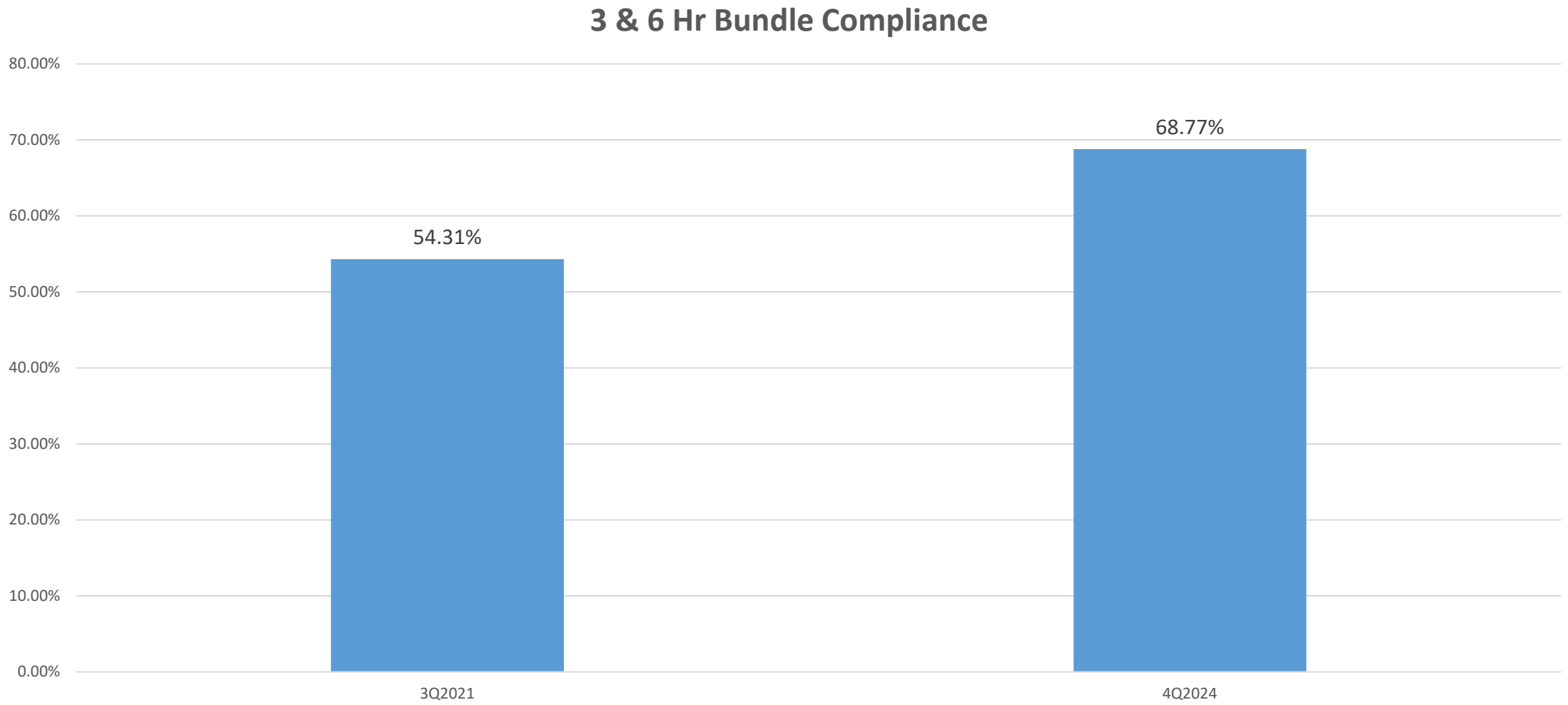
Kentucky Sepsis Consortium

SEPSIS-2d 3 and 6-Hour Sepsis Bundle Compliance

Goal Type: Increase



*Data in review

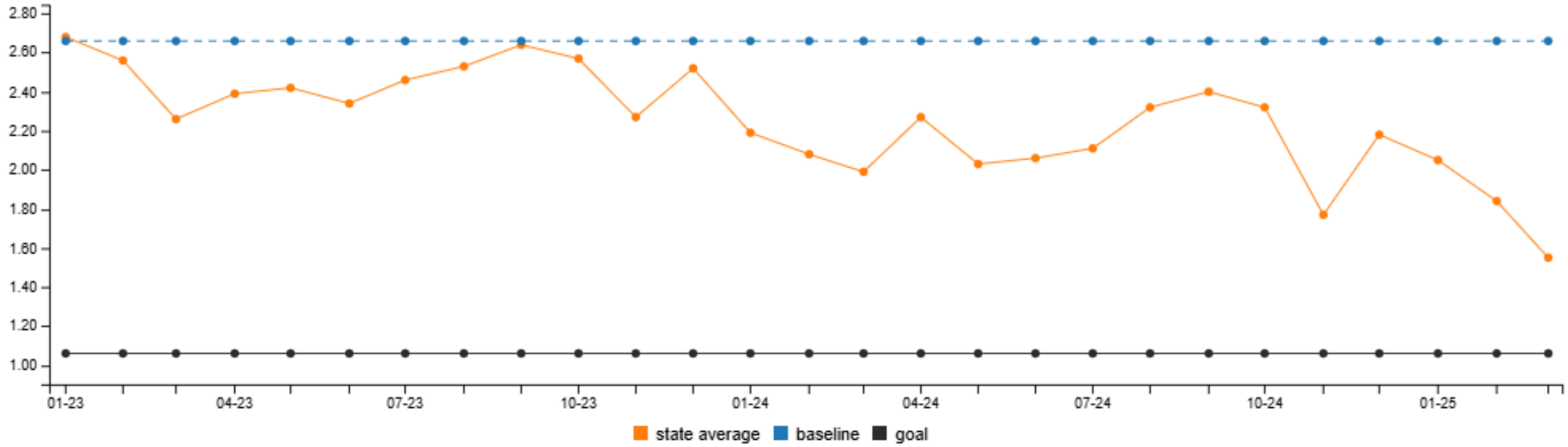

3 & 6 Hr Bundle Compliance
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
54.31%
68.77%
3Q2021
4Q2024

SEPSIS-2e Blood Culture Contamination

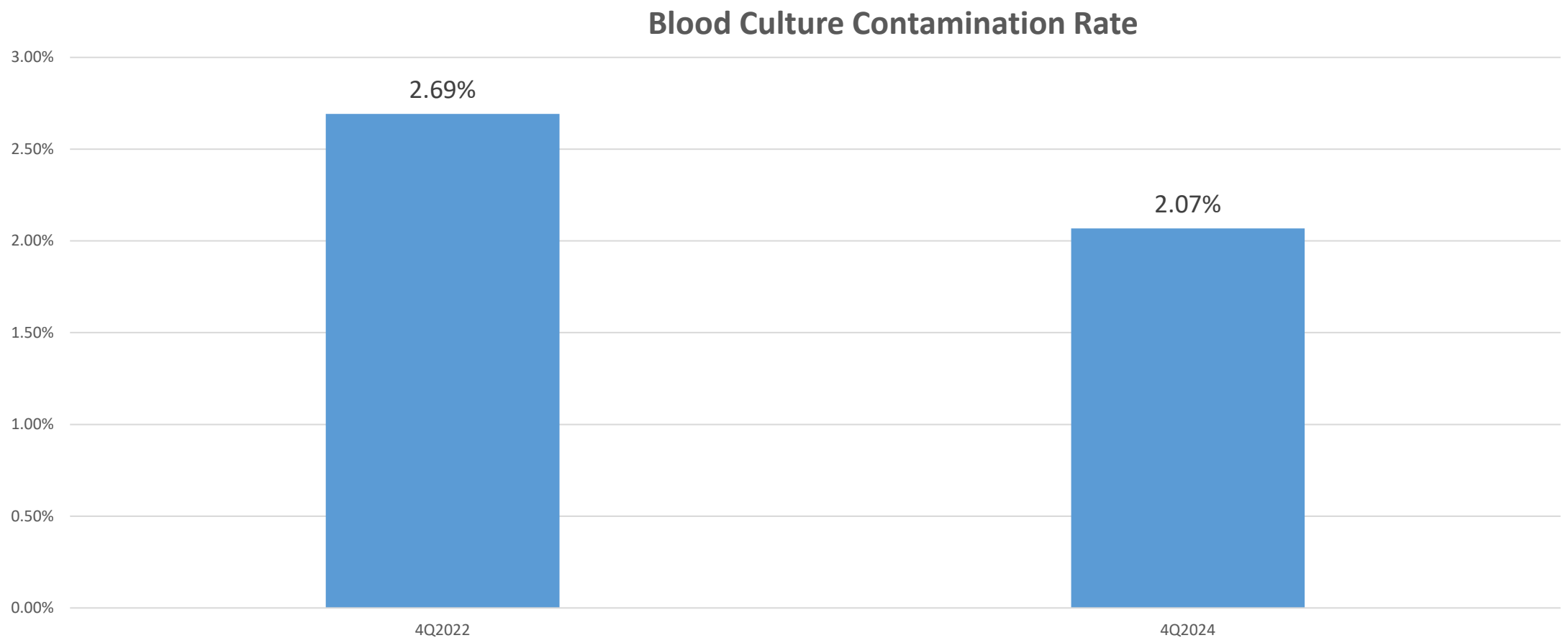
Kentucky Sepsis Consortium

SEPSIS-2e Blood Culture Contamination

Goal Type: Decrease



*Data is in review


Blood Culture Contamination Rate
3.00%
2.50%
2.00%
1.50%
1.00%
0.50%
0.00%
2.69%
2.07%
4Q2022
4Q2024

CDC Sepsis Core Elements

Priority examples of action include:

- Implementing a standardized process to screen for sepsis
- Developing and maintaining a hospital guideline or a standardized care pathway for management of sepsis
- Hospital order sets for management of sepsis
- Structures and processes to facilitate prompt delivery of antimicrobials
- Structures and processes to support effective hospital hand-offs in patients with sepsis
  - I-PASS?

CDC Sepsis Core Elements

Additional examples of action include:

- Rapid response teams trained in sepsis recognition and care
- A "Code Sepsis" protocol
- Peri-discharge evaluation
- Post-discharge care coordination and anticipatory guidance
- Prevention of healthcare-associated infections and hospital-onset sepsis

** We have these on our future webinar list! Coming soon to a monthly webinar near you!

Monitoring Compliance

Audit Tool- abbreviated

Name: _____ DOB: ___/___/___ AGE: ____ Male or Female

Arrival Date: ___/___/___ Time: _____ Weight: _____kg

Arrived from: _____ Symptoms: _____

Initial Vitals: Temp_____ Pulse_____ RR_____ BP_____ WBC: _____

1. SIRS Criteria Met: (2 or more must be present to qualify)

- Temperature greater than 100.9 (38.3 C) or less than 96.8 (36.0 C)) _____

-Heart Rate greater than 90 _____ RR greater than 20 _____

-WBC greater than 12 or less than 4 or Bands greater than 10% _____

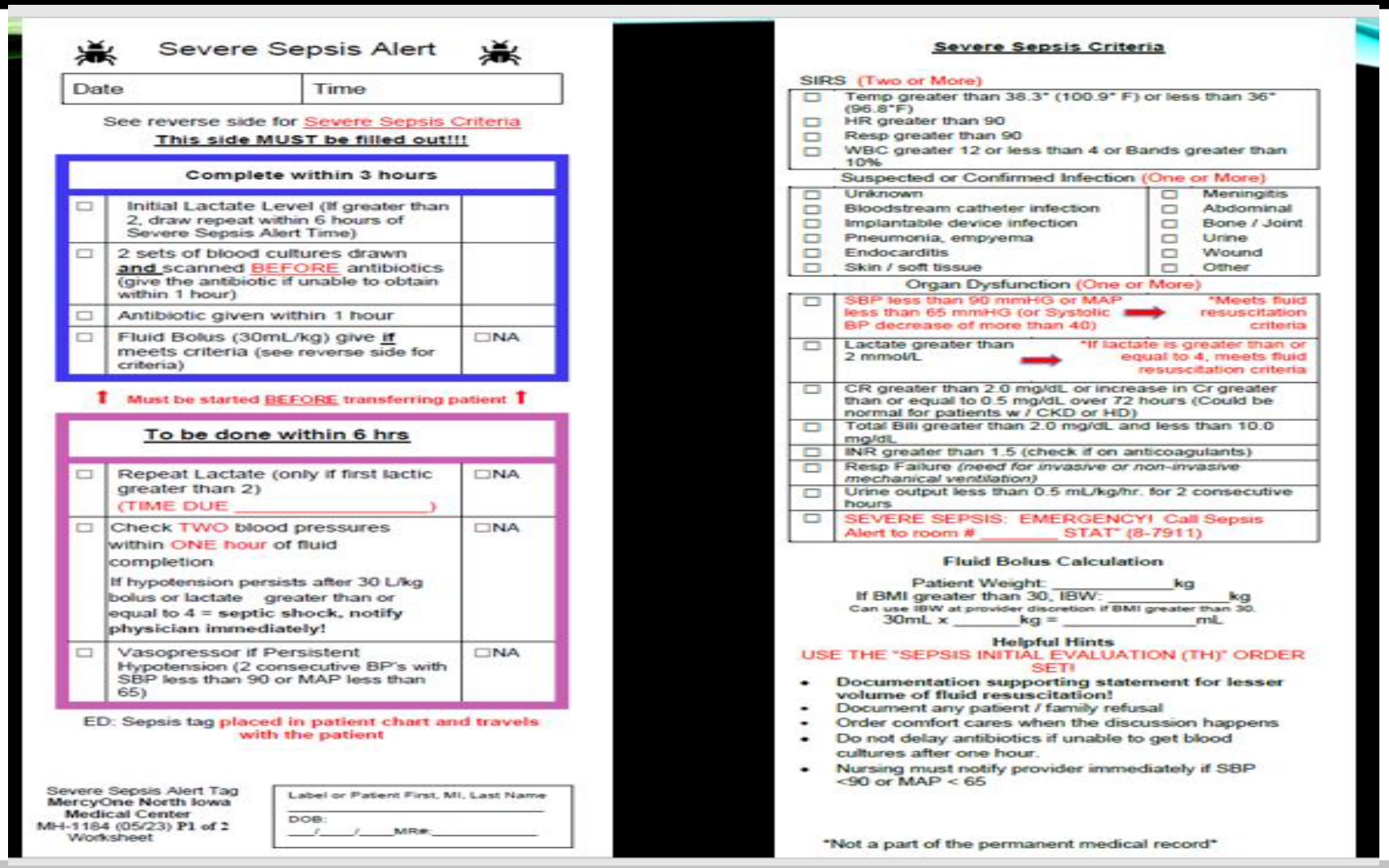
2. Suspected or Confirmed Infection (one or more) _____

- 3. Organ Dysfunction Present (one or more) _____

Was 3- hour Severe Sepsis Bundle met? YES____ No____

- Did patient require a vasopressor? _____ Time: _____ Medication: _____
- IF initial lactate > 4 or SBP <90 x 2 in the hour after initiation of fluid bolus, was **Septic Shock** ongoing treatment bundle followed? _____

Sepsis "Tag"



Severe Sepsis Alert

Date	Time

See reverse side for Severe Sepsis Criteria

This side MUST be filled out!!!

Complete within 3 hours

☐	Initial Lactate Level (If greater than 2, draw repeat within 6 hours of Severe Sepsis Alert Time)	
☐	2 sets of blood cultures drawn **and** scanned BEFORE antibiotics (give the antibiotic if unable to obtain within 1 hour)	
☐	Antibiotic given within 1 hour	
☐	Fluid Bolus (30mL/kg) give **if** meets criteria (see reverse side for criteria)	☐NA

⬆ Must be started BEFORE transferring patient ⬆

To be done within 6 hrs

☐	Repeat Lactate (only if first lactic greater than 2) (TIME DUE _____)	☐NA
☐	Check TWO blood pressures within ONE hour of fluid completion If hypotension persists after 30 L/kg bolus or lactate greater than or equal to 4 = **septic shock, notify physician immediately!**	☐NA
☐	Vasopressor if Persistent Hypotension (2 consecutive BP's with SBP less than 90 or MAP less than 65)	☐NA

ED: Sepsis tag placed in patient chart and travels with the patient

Severe Sepsis Alert Tag
MercyOne North Iowa Medical Center
MH-1184 (05/23) **P1 of 2**
Worksheet

Label or Patient First, MI, Last Name
_____
DOB:
___/___/___MR#:_____

Severe Sepsis Criteria

SIRS (Two or More)

- ☐ Temp greater than 38.3° (100.9° F) or less than 36° (96.8°F)
- ☐ HR greater than 90
- ☐ Resp greater than 90
- ☐ WBC greater 12 or less than 4 or Bands greater than 10%

Suspected or Confirmed Infection (One or More)

☐	Unknown	☐	Meningitis
☐	Bloodstream catheter infection	☐	Abdominal
☐	Implantable device infection	☐	Bone / Joint
☐	Pneumonia, empyema	☐	Urine
☐	Endocarditis	☐	Wound
☐	Skin / soft tissue	☐	Other

Organ Dysfunction (One or More)

☐	SBP less than 90 mmHG or MAP less than 65 mmHG (or Systolic BP decrease of more than 40) ➡	*Meets fluid resuscitation criteria
☐	Lactate greater than 2 mmol/L ➡	*If lactate is greater than or equal to 4, meets fluid resuscitation criteria
☐	CR greater than 2.0 mg/dL or increase in Cr greater than or equal to 0.5 mg/dL over 72 hours (Could be normal for patients w / CKD or HD)	
☐	Total Bili greater than 2.0 mg/dL and less than 10.0 mg/dL	
☐	INR greater than 1.5 (check if on anticoagulants)	
☐	Resp Failure *(need for invasive or non-invasive mechanical ventilation)*	
☐	Urine output less than 0.5 mL/kg/hr. for 2 consecutive hours	
☐	SEVERE SEPSIS: EMERGENCY! Call Sepsis Alert to room # _____ STAT" (8-7911)	

Fluid Bolus Calculation

Patient Weight: _____kg
If BMI greater than 30, IBW: _____kg
Can use IBW at provider discretion if BMI greater than 30.
30mL x _____kg = _____mL

Helpful Hints

USE THE "SEPSIS INITIAL EVALUATION (TH)" ORDER SET!

- **Documentation supporting statement for lesser volume of fluid resuscitation!**
- Document any patient / family refusal
- Order comfort cares when the discussion happens
- Do not delay antibiotics if unable to get blood cultures after one hour.
- Nursing must notify provider immediately if SBP <90 or MAP < 65

Not a part of the permanent medical record

Another example excerpt

****NOT A PART OF THE MEDICAL RECORD****

Sepsis Alert Level 1 (Septic Shock)

- Sepsis Alert Called
  - Time: _____
- Remind Provider to order ED.SEPSIS2 order set
  - Time: _____
- Initial Lactate Collected
  - Time: _____
  - Result: _____
- Repeat Lactate Collected
  - Time: _____
  - Result: _____+
- Blood Cultures Collected **(BEFORE ABX)**
  - Set 1 time: _____
  - Set 2 time: _____
- Antibiotics Administered
  - Time: _____
- Vital Signs Documented in Meditech Q15 Minutes
- Fluid Resuscitation required **even if no hypotension present**:

Example of a requested inclusion

Y-Site Drug Compatibility in Antibiotics and Fluids Commonly Used for Sepsis				
	Cefepime	Piperacillin/ Tazobactam	Vancomycin	Lactated Ringers Normal Saline
Cefepime			Compatible*	Compatible
Piperacillin/ Tazobactam			Compatible**	Compatible***
Vancomycin	Compatible*	Compatible**		Compatible

**All Zosyn products stocked contain EDTA

***Hosp Pharm. 2021. 56(4):228-234 - Y-site compatibility with LR

Provider Feedback Form

Appropriateness of Care: Sepsis Bundle Compliance Review Worksheet:

Supervising Physician

_____

Emergency Department APP_____

MRN#	_____
HAR	_____
Admit Date	_____
Admit Time	_____
Lactic Acid Drawn	_____
Repeat Lactic Acid	_____
Bolus Needed	_____
Bolus Given	_____
Antibiotic	_____
Blood Cultures Drawn	_____
Change In Vital Signs	_____
Vasopressors Given	_____
Death	_____
30-Day Readmission	_____
Chief Complaint	_____

Comments:_____

Sepsis Gap Analysis

- Homework for next call!

Sepsis Process Discovery Tool

Instructions:

-Complete the spreadsheet for your last five sepsis cases

-Type responses in boxes without dropdown list

-For the remaining boxes, choose your answer from the dropdown list

The box will populate with red, yellow, or green, based on choice selected

Red: Not best practice and should try to implement change,

Yellow: Neutral, but may need to consider practice change,

Green: Best practice

Kentucky Hospital Association

QUALITY KENTUCKY

Health Care Quality Improvement Continues

Did sepsis occur within 30 days of surgery?				
Screening				
Patient was screened for sepsis starting at triage in ED	Yes			
Inpatient sepsis screen completed at least once per shift (NA once sepsis identified in ED or unit)	Yes			
If sepsis screen is positive, sepsis alert activated per facility protocol	Unknown			
3 hour bundle compliance (blue cells indicate HOUR 1 BUNDLE)				
Blood cultures drawn prior to antibiotic administration	Yes			
Serum lactate drawn after positive sepsis screen	Yes			
Broad spectrum antibiotics initiated after positive sepsis screen	Yes			
Fluid 30ml/kg initiated after positive sepsis screen and patient has lactate greater or equal to 4mmol/dL OR 2 incidents of MAP <65 or SBP <90	Yes			
6 hour bundle compliance (blue cells indicate HOUR 1 BUNDLE)				
Vasopressors administered for persistent hypotension (2 incidents of MAP <65 or SBP <90)	No			
Repeat serum lactate drawn and resulted within 6 hours after initial elevated lactate (if lactate was >2mmol/dL)	No			
Fluid reassessment done at the end of the fluid resuscitation	Yes			

Today's presentations

Topic- Bundle Compliance Review and Use of Tools

Speakers- Laura White- Med Center Health

Carrie Davis- Baptist Corbin

Future topics

- Abstraction Q and A (provide venue)
- Moving Upstream
  - Preventing sepsis through infection prevention
  - Preventing sepsis through promoting vaccines
  - Educating our families and the community
- Staffing as a component of compliance barriers?
- We Are Screening, but Are We Doing It Accurately? (In Urgent Care?)
- Rapid Response Mechanisms
- Expansion of Blood Culture Specimen Collection Metrics- appropriate volumes
- Rapid Molecular Diagnostics
- I'm Going Home- Help Me Not Come Back (Functional and Cognitive Impairment Assessment at DC)

Next Steps

- Regular schedule
  4th Thursday of each month 1-2ET
- **Next: May 22, 2025**
- **Topic: Maternal Sepsis- Challenges and Opportunities**
- **Speaker**: TBA

- For questions, contact **Deb Campbell** at **dcampbell@kyha.com**
  Vice President of Clinical Strategy and Transformation

Antibiotic Stewardship

- A randomized controlled trial conducted in the United Kingdom found that a procalcitonin (PCT)-guided monitoring protocol safely reduced antibiotic duration in critically ill sepsis patients compared with standard care, according to a **study** published yesterday in *JAMA*
- But C-reactive protein (CRP)-guided protocols did not.

Study links discharge settings to sepsis readmissions
A study published in the American Journal of Critical Care found that 23.6% of sepsis survivors are readmitted to the hospital within 30 days, with sepsis often being the cause. Patients discharged to skilled nursing facilities or home health care had the highest readmission rates. Researchers used the Medical Information Mart for Intensive Care database and assessed the status of 7,107 adults. Full Story: Healio (free registration) (10/3)