Kentucky SEPSIS Consortium

SEPSIS KENTUCKY

Virtual Meeting

July 27, 2023

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
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Lifepoint Health

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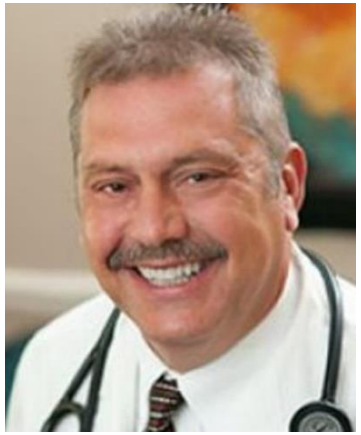
St Elizabeth Healthcare

Ashel Kruetzkamp,
Program Mngr, Emergency Services
St Elizabeth Healthcare

Consortium Steering Committee Regional – Cumberland District



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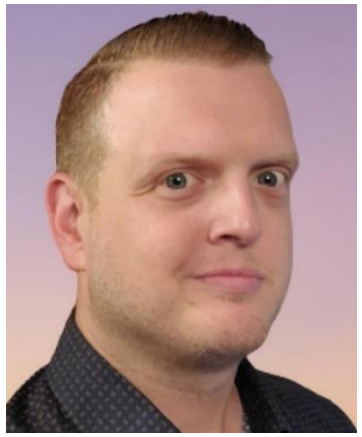

James J. Hensley
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Consortium Steering Committee
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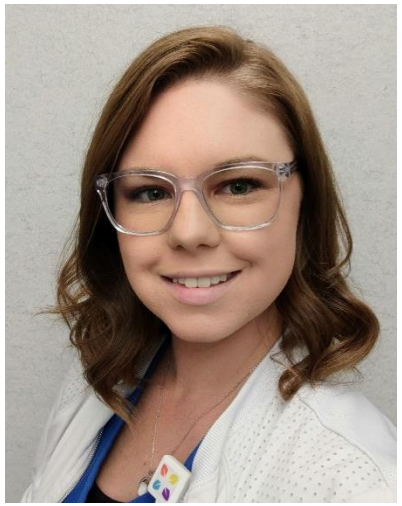

Stacy Monarch
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Consortium Steering Committee
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Consortium Steering Committee
Patient/Family Advocate

Darrell Raikes

Consortium Steering Committee
Kentucky Hospital Association

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Infection Preventionist

Jessica Covington
Pharmacist Consultant

SEPSIS-2c SEPSIS Screening Performed at Triage

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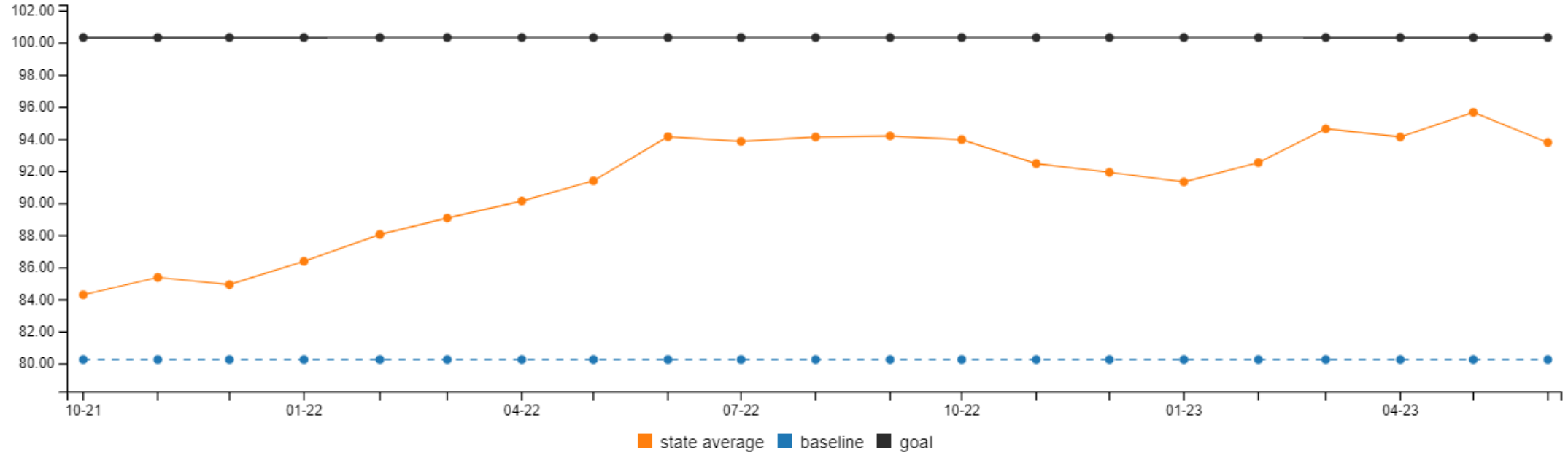
SEPSIS-2c SEPSIS Screening Performed at Triage

Goal Type: Increase



Data was pulled on 07/24/23

SEPSIS-2d 3 & 6 Hour Sepsis Bundle Compliance

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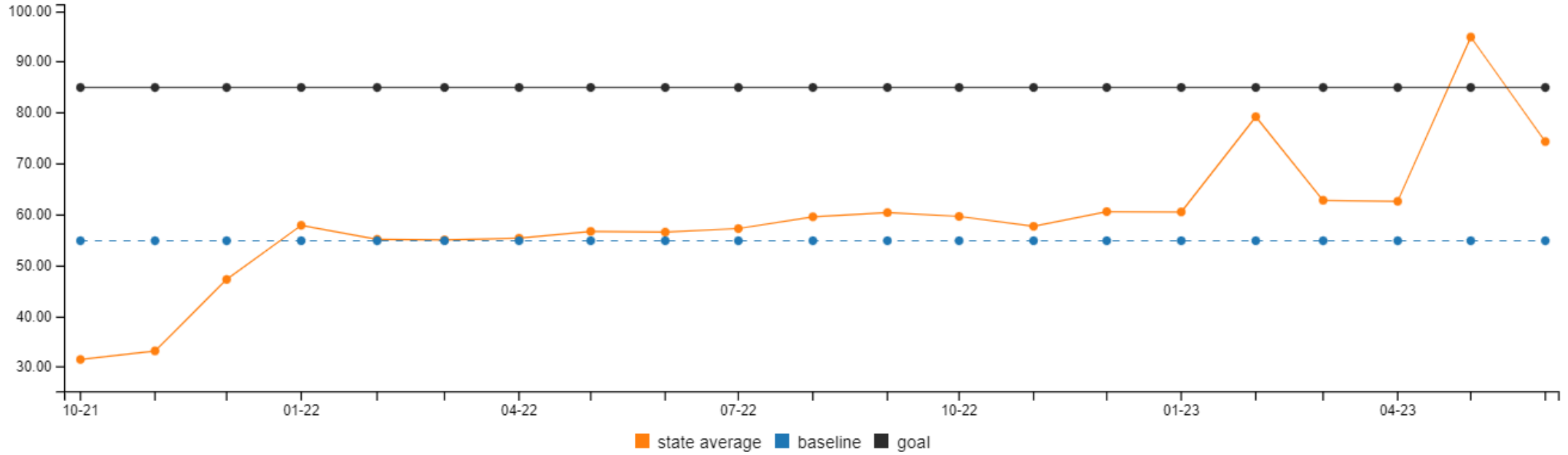
SEPSIS-2d 3 and 6-Hour Sepsis Bundle Compliance

Goal Type: Increase



*Possible data entry errors, in review

SEPSIS-2e Blood Culture Contamination

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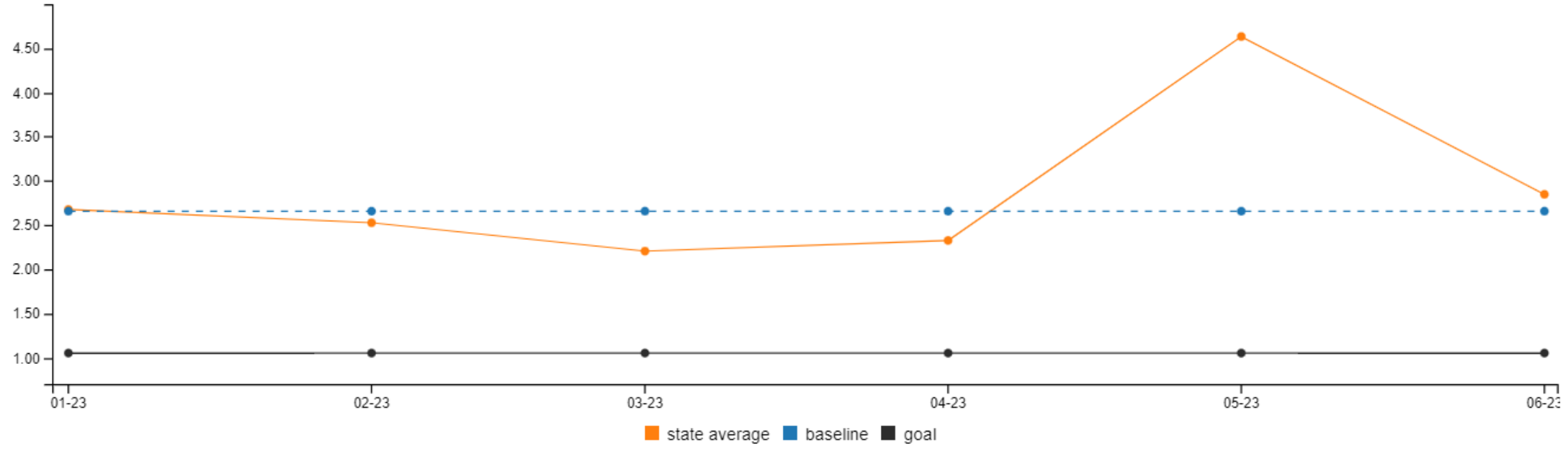
SEPSIS-2e Blood Culture Contamination

Goal Type: Decrease



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Sepsis Screening Tool

1. **Suspicion of infection (Y or N)**
2. **SIRS criteria (need 2)**
   - **a.** Temp >100.9 F (38.3 C) or <96.8 F (36 C)
   - **b.** HR >90 bpm
   - **c.** RR >20 bpm
   - **d.** WBC >12,000 or <4,000 or 10% bands

If YES to 1 & 2 = POSITIVE sepsis screen. Order a STAT lactic acid, blood cx x2, CBC, & CMP per protocol. Notify provider.

3. **Organ dysfunction (need one)**
   - **a.** SBP <90 mmHg or MAP <65 mmHg
   - **b.** SBP decreases >40 mmHg from baseline
   - **c.** Creatinine >2 mg/dl or urine output <0.5 ml/kg for 2 hrs
   - **d.** Bili >2 mg/dl
   - **e.** Lactate >2mmol/L
   - **f.** Platelet <100,000
   - **g.** INR >1.5 or aPTT >60 sec
   - **h.** Acute resp failure with new invasive/non-invasive mechanical ventilation

YES to 1, 2, + 3 = POSITIVE screen suggestive of SEVERE sepsis

3-Hour Bundle

Stat lactic acid

Blood cx x2 (before ABX)

Broad spectrum ABX started

Isotonic fluid bolus 30ml/kg for:
- MAP <65 mmHg
- SBP <90 mmHg
- Initial lactic acid >/= 4

6-Hour Bundle

Repeat lactic acid within 6 hrs of time zero if >2

Vasopressors to keep MAP >65 and/or SBP >90

Focused exam with fluid reassessment

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Health Care Quality Improvement Continues

KENTUCKY HOSPITAL RESEARCH & EDUCATION FOUNDATION

Children's Hospital Association Improving Pediatric Sepsis Outcomes Collaborative

- Most recent publication
- Significant improvement in mortality strongly linked to high levels of bundle compliance
  - 25% decrease in mortality in all care settings
  - 284 lives saved

- "Bundled Care Reduces Sepsis Mortality in the Improving Pediatric Sepsis Outcomes (IPSO) Collaborative", Pediatrics, Raina Paul MD[a]*, Matthew Niedner MD[b]*, Ruth Riggs[c], Troy Richardson PhD[c], Heidi Gruhler DeSouza MPH[c], Jeffery J. Auletta MD[d], Frances Balamuth MD[e], **Deborah Campbell RN-BC[f]**, Holly Depinet MD, MPH[g], Leslie Hueschen MD[h], W. Charles Huskins MD, MSc[i], Sarah B. Kandil MD[j], Gitte Larsen MD, MPH[k], Elizabeth H. Mack MD, MS[l], Gregory P. Priebe MD[m], Lori E. Rutman MD, MPH[n], Melissa Schafer MD[o], Halden Scott MD, MSCS[p], Pete Silver MD, MBA[q], Erika L. Stalets MD, MS[r], Beth A. Wathen MSN, RN, CCRN-K[s], Charles G. Macias MD, MPH[t^], Richard J. Brilli MD[u^], July 12, 2023.

Children's Hospital Association
Improving Pediatric Sepsis Outcomes Collaborative

- Huddles- move from a "wellness" bias to a "sepsis" bias
- Order Set Utilization- "mostly eliminated human error by pre-checking items that are standard of care
- Bolus Timeliness- readily available bolus kits
  - hands on training with practice sessions
  - nurse driven protocol
- Gathering executive support session
- Result of equity of care data
- Antibiotic Timeliness-
  - Direct staff feedback
  - Visible charts
  - Process mapping
  - Prioritizing abx over other meds (Caveat: not interrupting vasoactive drips)
- Spread to referring facilities, EMS, PCPs

Today's presentation

- **Speaker**:
  - Dr Roy Davis has over 30 years' experience in clinical medicine (Neonatal, Pediatric Critical Care) and hospital administration. Clinical Assistant Professor, Department of Pediatrics, University of Washington. He has served as a consultant in health care standards and quality of care delivered. CMO at Providence Alaska assisted in the implementation of MEWS and sepsis surveillance algorithms using the Microsoft Amalga platform across Providence Health & Services. In 2012 he won a national Microsoft Healthcare innovation award for work with MEWS. Dr Davis has a passion for improving sepsis diagnosis and care management.
- **Presentation**
  - Dr Davis will describe the role of a host response gene expression test, SeptiCyte RAPID, which can accurately differentiate sepsis from non-infectious systemic inflammation (SIRS) in an hour. The clinical validation of SeptiCyte RAPID will be shown along with how it aligns with the Surviving Sepsis Campaign sepsis management guidelines and illustrated with case histories.

Consortium Trajectory

- High Impact-Low Burden
  - Started with Screening in ED at triage (where most sepsis presents)
  - Included sepsis bundle compliance data collection
  - New metric-blood culture contamination
  - Sprints in progress
- Inpatient Screening and Treatment
  - When sepsis starts in the hospital->worse outcomes
  - Sepsis screening for earlier recognition
  - Will expand consortium participants to those without EDs
- Survey of current state results

Inpatient Screening Survey

- 49 respondents
- Q1- only 255 responded they are not currently screening inpatients.
- Q2 50/50 as far as running automatically in the background v. manually entered into EMR
- Q3 Screening frequency- Almost 40% responded Q12 hours (remember 50% are constantly running in the background)
  - The few remaining were either daily or “as deemed necessary based on condition”
- Wide variation in what is being screened for- more on this later
- Very little data is being collected around this among the responding hospitals and what is collected was reported as not being used consistently.

Next Steps

- Regular schedule
  4th Thursday of each month 1-2ET

- **Next webinar:**
  - **August 24, 2023 1-2pm ET**
  - **Stratifying Risk**

  For questions, contact **Deb Campbell** at dcampbell@kyha.com 502-992-4383