

Improving Patient Outcomes in Patients Presenting Through the Emergency Department with Severe Sepsis/Septic Shock

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EMT-P
Sepsis Coordinator
Baptist Health Corbin



Problem

- Delays in arrival-antibiotic orders



- Increased CMS SEP-1 case failures



- Increase in Sepsis Mortality Rates

Objectives

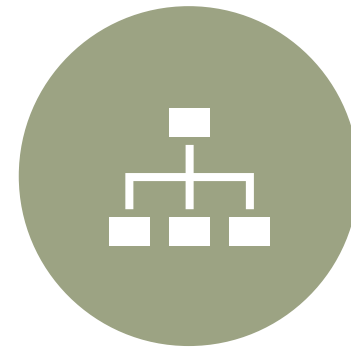
- Increase SEP -1 Bundle Compliance - Facility goal 70%
- Decrease Arrival to Abx Orders - Goal < 60 minutes
- Reduce Sepsis Mortality Rates



ED NURSES, ED
PHYSICIANS



ED LEADERSHIP



ADMINISTRATION



SEPSIS COMMITTEE



QUALITY & PATIENT
OUTCOMES

TEAM

Assessment

Model for Improvement

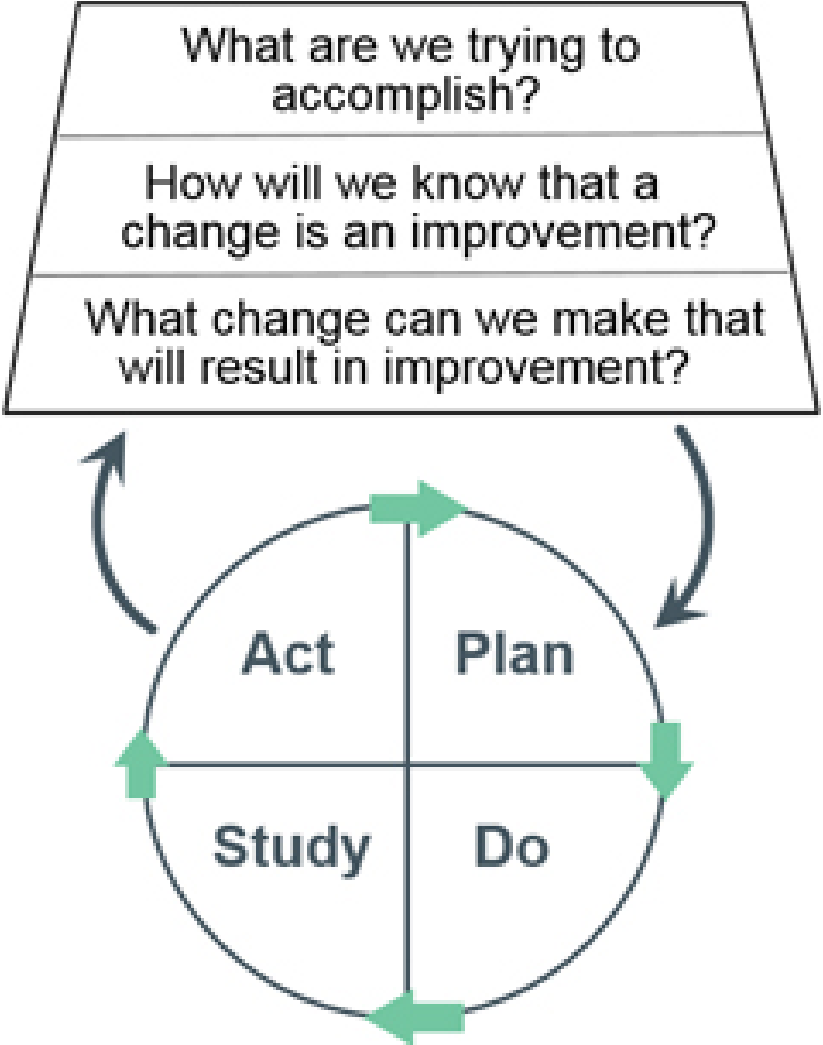


Image: Institute for Healthcare Improvement, 2025

- Concurrent Audits
- Surveys
- Gap Analysis
- Plan, Do, Study, Act
- RCA
- Gap Analysis

Hospital Sepsis Gap Analysis

Element	Yes	No	N/A	Unsure	Comments
Leadership Support					
1. Do you have a sepsis program? If yes, please describe in comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Does your sepsis program have leadership support, i.e. administrator, medical director, medical staff, clinical staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Is your medical staff actively involved in sepsis prevention?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Committees					
4. Do you report on sepsis at?					
a. Quality Committee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Infection Control Committee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Do you share infection or sepsis data with staff? If yes, list type of data under comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Do your share information with patients and families? List how under comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Education					
7. Do you have a sepsis early recognition training program?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
a. If No, do you need assistance setting up a training program?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Does hospital staff have an annual competency for sepsis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Do you utilize skills days for nursing assistant sepsis training?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. What are the tools you use to train staff, i.e., INTERACT, Seeing Sepsis 100, or other? List under comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
a. Do you have sepsis education materials for staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Do you have sepsis education materials for patients and families?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Early Identification of Sepsis & Infection Risk					
11. Does your admission assessment include an infection and sepsis risk assessment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Do you audit the admission nursing assessment to ensure it is completed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Image: HQIN, 2025



**Inconsistent use of nurse-driven
protocols for sepsis**

**Lack of
stakeholder buy-
in**

**Underutilization of “Sepsis
Quick List” order set by
providers**

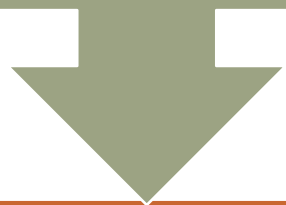
BARRIERS IDENTIFIED

REINFORCED USE OF RN PROTOCOLS

Added Sepsis, Stroke, Chest Pain RN protocol processes to Triage policy



Educated Nursing staff on adherence to policy, importance of early identification and treatment. Empowered nurses to utilize available resources, reaffirm autonomy.



ED Medical Director, Provider Champions worked toward cultural change reducing negative feedback on protocol orders.



Provided monthly feedback to Sepsis Team on nursing order set usage, missed opportunities. Real time feedback, when possible, via concurrent audits.

BARRIER SURVEYS

ED RN Sepsis Order Set Usage

Questions about RN use of order set for patient's screening sepsis positive.

1. Sepsis order sets are only for patients that screen positive for Severe Sepsis.

☐ True

☐ False

2. I feel unsure when it is appropriate to use the RN Sepsis order set.

☐ Strongly agree

☐ Agree

7. Providers have expressed that they would rather put their own orders in on sepsis patients.

☐ Yes

☐ No

8. I am required by facility policy to notify a provider when a patient screens positive for sepsis.

☐ True

☐ False

9. Do you think that using the RN Sepsis order set effects patient outcome?

☐ Yes

☐ No

☐ No

☐ Maybe

10. In your experience, what are the biggest barriers in using the RN Sepsis order?

Enter your answer

Submit

10. In your experience, what are the biggest barriers in using the RN Sepsis order?

[More details](#)

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Responses

Latest Responses

"providers"

...

12 respondents (75%) answered providers for this question.

Pushback from the providers
sepsis protocol
sepsis screen
positive for sepsis
pts
fluid
pt with anxiety
order set
ordering order
providers
complete
sepsis orders
Providers state
things
peds positive
negative r/t
liters of fluids
triage is complete
RN's put in orders

ED-90 UPDATE

PURPOSE

- Clarify nurse driven processes for existing order set use.
- Promote early recognition of life-threatening conditions, treatment and patient disposition.



STANDING ORDERS: STROKE, CHEST PAIN, SEPSIS, PEDIATRIC FEVER

- ADDITION OF WORKFLOW ALGORITHMS FOR STANDING ORDERS
- UPDATES TO ESI TRIAGE ALGORITHM V.5
- TRIAGE EXTREMITY INJURY GUIDELINES

Hour-1 Bundle Initial Resuscitation for Sepsis and Septic Shock

Surviving Sepsis Campaign

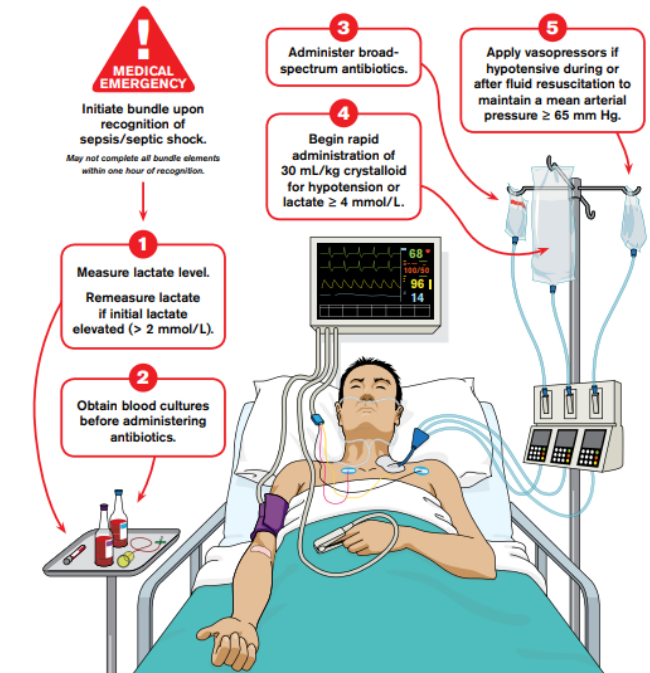
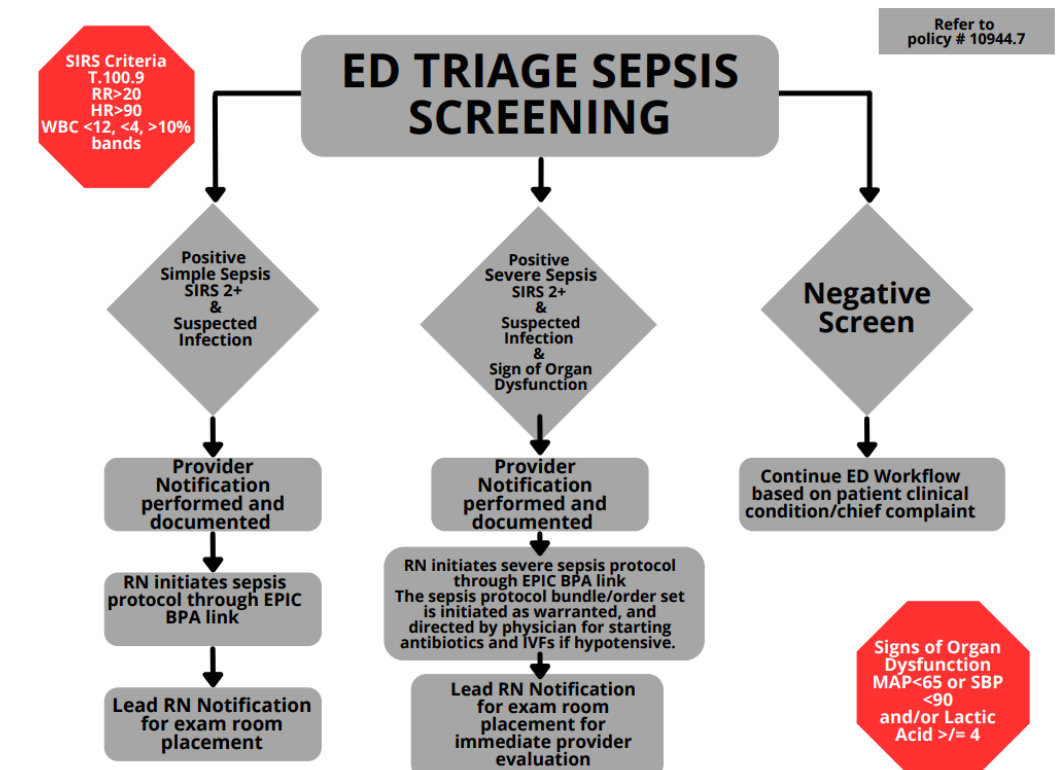


Image: Surviving Sepsis Campaign, 2021



PROVIDER SCORECARD & ORDER SET UTILIZATION

Data obtained from concurrent audits to determine each ED provider's median & average arrival to antibiotic order times



Sample= > 18 yo, non-viral, not hospice/comfort measures, admitted to hospital, meets severe sepsis/septic shock clinical criteria or provider documentation of "severe sepsis" or "septic shock"



Scorecards unblinded, sent out monthly, includes volume of patients in sample seen, median & abx times, BPA reliance.



ED Medical Director reviews for performance issues. Provider Champions provide coaching, promote Sepsis Quick List Utilization

SCORECARD ELEMENTS

Elements Included

- Provider Names
- Median Arrival to Antibiotics Order
- Average Arrival to Antibiotics Order
- Volume of Patients in Sample
- Ranked by Color
- Unblinded



Green= < 60 minutes - 90 minutes



Yellow= > 90 minutes – 120 minutes



Orange= > 120 minutes – 180 minutes



Red= Average arrival to abx order > 180 minutes

STAKEHOLDER BUY-IN

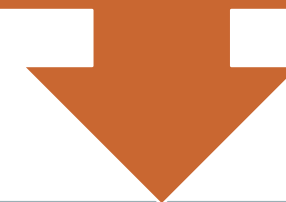
Staff Recognition



Thank You Campaign



Accountability



Real time feedback, when possible, via
concurrent audits.

Sepsis Stats

- Arrival to Abx order Median < 30 minutes
- Abx Score 100%
- ED Cultural Ambassador to the United Kingdom



St George's Hospital
Medical School
Class of 2010

MARCH 2025
MOST VALUABLE
PLAYER-DOCTOR

Sepsis Stats

- Abx Score 100%
- Certified SCUBA diver
- Card Carrying Gen X'er
- 2013 ED Most Push Ups Award Winner



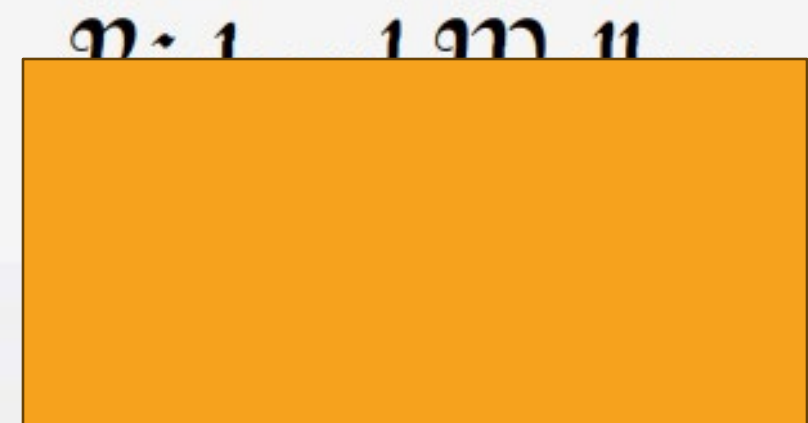
University of Kentucky
Class of 2000
Emergency Department

MARCH 2025
MOST VALUABLE
PLAYER-MID LEVEL

MAY 2024



PROUDLY PRESENTED TO



For Outstanding Care of Sepsis Patients

- Arrival to blood cx order, lactic acid - 9 minutes
- Blood culture/lactic order to collection- 1 minute
- Arrival to antibiotic order- 10 minutes
- Antibiotic order to administration- 10 minutes

Signature



Thank You!

Your hard work and dedication in caring for sepsis patients does not go unnoticed. You have to be experts in so many things. We appreciate you and we value your expertise. What you do makes a difference.



RESULTS

Increase in SEP-1 Bundle Compliance

- At project initiation bundle compliance was 63.9%, within 3 months, bundle compliance had increased to 82.09%

Mortality Rates decreased

- Sepsis Mortality rate 11.3% at project initiation, decreased to 4.0% when entering monitoring phase.

Reduction in CMS case failures related to delay in broad spectrum antibiotic administration.

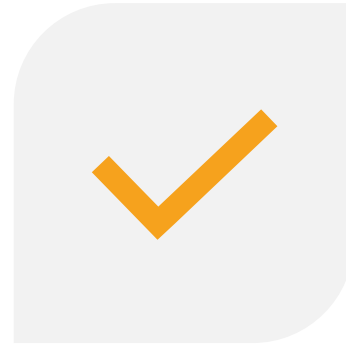
- At project initiation, abx failures accounted for 27% of case failures.
- When entering monitoring phase of project, abx failures accounted for 15% of outlier cases



**STANDARD
TRIAGE PRACTICE**



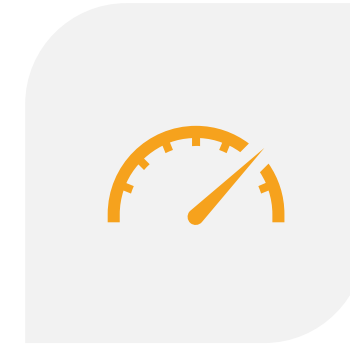
FEEDBACK



ADAPTATION



EDUCATION

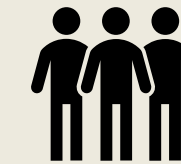


MONITORING

SUSTAINABILITY

Key Takeaways

- ✓ **Early Recognition/Treatment is Critical-** Empowering frontline staff is essential.
- ✓ **Standardized Protocols Improve Consistency-** Nurse-driven and evidence-based protocols reduce variability in care and improve SEP-I compliance. If you use them!
- ✓ **Multidisciplinary Engagement is a Game Changer-** Success required buy-in from nursing, providers, pharmacy, lab, IT, leadership, and quality teams.
- ✓ **Real-Time Feedback Drives Change-** Sharing data with staff helped connect actions to outcomes.
- ✓ **Data Transparency Builds Accountability-** Making SEP-I performance visible at the department or provider level motivated behavior change and promoted a culture of quality.
- ✓ **Continuous Monitoring is Essential-** Ongoing chart reviews and audits are necessary to catch gaps, reinforce best practices, and sustain gains.
- ✓ **Education is Not One-and-Done-** Ongoing training, especially during onboarding and during high turnover periods, is vital.



Acknowledgments

- **Baptist Health Corbin Leadership** – for supporting implementation and resource allocation

Special Thanks To:

- **Emergency Department Staff** – for frontline engagement and protocol compliance
- **ED Providers & Hospitalists** – for collaboration and responsiveness
- **Sepsis Committee Members** – for review, guidance, and support
- **Quality & Patient Outcomes**- Executive Director Heather Napier, MSN, RN, CCRN, CPHQ, HACP, T-CHEST



REFERENCES

- <https://www.ihl.org/resources/tools/plan-do-study-act-pdsa-worksheet>
- <https://www.sccm.org/survivingsepsiscampaign>
- https://hqin.org/wp-content/uploads/2021/05/Hospital-Sepsis-Gap-Analysis_508.pdf

Questions?

