



STRATEGIES FOR SUSTAINING REDUCTION IN NPOA SEPSIS MORTALITY

Coleen Mast, RN, MS
Clinical Outcomes Manager
Quality and Patient Safety
OhioHealth Mansfield Hospital

DEMOGRAPHICS OF HOSPITAL

County: Richland

City: Mansfield

Part of a health system: OhioHealth

Bed size: 326 beds, Inpatient & Outpatient

Services: Neurological & CV Surgery, Level II
OB Unit, Comprehensive Cancer Care, Level II
Trauma, Stroke Center, Orthopedic
Certification.

Accreditation: The Joint Commission

Designation(s): Level II Trauma, Stroke Center

OHIOHEALTH MANSFIELD HOSPITAL



LEADERSHIP COMMITMENT

- KPI rounds, daily to twice daily
- Alert builds: SIRS Alert, Reassessment Alert
- Financial Resources: Lab equipment, new ABG machines in ED & critical care areas, full panel blood gas includes chemistries, LA. POCT, rapid results.
- Sepsis mortality reduction goal on scorecard.

ACCOUNTABILITY

- Physician leader (champion):
 - Ryan C. Kamp, MD, Intensivist, Pulmonology
 - Michael Patterson, DO, Nephrologist, VP Medical Affairs, Shelby Hospital
 - Bashar Alalao, MD, Hospitalist
- Nursing leader (champion): Coleen Mast, RN, MS
- Pharmacy leader (champion): John Emanuel, MS, Pharm. D

EXPERTISE

- Subject Matter Expert(s):
 - Michael Patterson, MD
 - William Phipps, MD
 - Ryan Kamp, MD
- Incorporation of evidence-based practice:
Sepsis order sets, reflex order for repeat LA (if initial > 2.0 & when BC ordered within 2 hours of each other). MEWS screening every shift and as indicated.

ACTIONS

- MedFlight to provide sepsis lecture for EMS this year
- Access to antibiotics—Tube system, Stocked Levaquin IV
- Hot pink labels—alerts nurse retrieving the antibiotic it is for a sepsis case and must be administered as soon as possible.

ACTIONS, CONT'D

- Challenges:
 - Consistency among providers
 - Use of Sepsis Order sets
 - MEWS: Sometimes staff may be advised not to call the RRT, prefer that the RRT called to help screen for sepsis
- Successes:
 - MEWS very helpful to increase monitoring of patient
 - Saving Lives annually
 - Reflex order for repeat LA very effective.
 - CDI Team very helpful, well- received by physicians
- Tools:
 - MEWS
 - Tube system
 - Drill down template—ED cases, successes and OFI's. Potential to expand to inpatients. Provides feedback to all caregivers. Criteria tighter than CMS, best practices.



SEPSIS ALERT

OhioHealth Mansfield Hospital
January 2018 Patient

Age: XX Gender: Female

Disposition: Admitted Inpatient

Chief Complaint: Difficulty breathing, unresponsive, Hx of ESRD with HD

EMS Team

R-1

ED Team

Dr. C
TB, RN, IB, RN

Sepsis Alert Times: Pt. intubated 08:16

Arrival: 08:00 End Triage: 09:14 SIRS criteria: P135, AMS, R 24

Source or Suspected Infection: BSI, serratia

Arrival to labs ordered/by: Dr. C, 08:28

Serum lactate result: 5.9 @ 08:25

Antibiotics ordered/time: Cefepime & Vancomycin 08:28

Sepsis Alert Performance Metrics:

- Door to Doctor: <10 Minutes Goal is < 10 minutes GOAL MET
- Arrival to time LA result: 25 Min. Goal is < 60 minutes GOAL MET
- Arrival to BC x 2 drawn: 21 Minutes Goal is < 60 minutes GOAL MET
- BC drawn prior to ATB given: Yes
- Arrival to 1st ATB given: 65 Minutes Goal is < 60 minutes CLOSE ENOUGH
- Arrival to 2nd ATB given: 65 Minutes Goal is < 60 minutes CLOSE ENOUGH
- Arrival to Fluid bolus ordered: 35 Min. Goal is < 60minutes GOAL MET
- Fluid bolus 30ml/Kg ordered: Yes
- Arrival to Fluid bolus started: 12 Min. Goal is < 60 minutes GOAL MET
- Repeat LA if initial ≥ 2 , within 4 hrs. of arrival: Yes
- Sepsis checklist completed: Yes
- Patient outcome: Expired, LOS 8 days



SEPSIS is a medical emergency, just like AMI and Stroke.

Sepsis contributes to 1 in every 2 to 3 deaths in hospitals. Majority had sepsis on presentation to the hospital.

Liu et al. JAMA May 18, 2014.

Every hour in delay of appropriate antibiotic & crystalloid fluids = 7.6% lower survival

By getting shock-to-antibiotic times of <2h for ALL septic shock patients, we would save 32,360 lives per year.
(89 people a day)
(3.7 people an hour)
(3.5 times the effect of STEMI intervention)

MONITORING

- Data collection/analysis:
 - Concurrent audits
 - Monthly summary of Mortality, SEP-1 Bundle sampling
 - Monthly reporting of Mortality, % of Antibiotic administration > 3 hours to Goal Deployment team.
- Feedback to clinicians:
 - Sepsis drill down template for ED cases
 - Fall outs reported to appropriate resources:
 - Nurse Manager, Educator
 - Physicians (peer to peer)
 - Peer review
 - Midas reports
- Case reviews:
 - Each Sepsis Committee meeting, successes and opportunities

EDUCATION

Sepsis Quick Facts

- Content: Criteria, interventions & actions.
- Intended Audience: Nursing
- Frequency: annually and as needed
- Methodology: postings on units

EDUCATION, 2

SKILLS DAYS

- Content: SIRS criteria, signs of organ dysfunction, 3 hour bundle interventions
- Intended Audience: Nursing
- Frequency: Annually
- Methodology: Posters, verbal and written review. Healthstream presentation.

EDUCATION, 3

Sepsis Checklist

- Content: Roadmap for early recognition and care of sepsis
- Intended Audience: ED nurses, in particular new associates
- Frequency: Each patient meeting SIRS criteria
- Methodology: Checklist. Useful for case reviews and patient handoff. Not a part of the medical record.