OHIO HOSPITAL ASSOCIATION

APPLICATION OF SEPSIS QUALITY CASE REVIEWS

October 18, 2023

SEPSIS WEBSITE

ohiohospitals.org/sepsis

CONTINUING EDUCATION

- The link for the evaluation of today's program is: https://www.surveymonkey.com/r/Sepsis-October2023

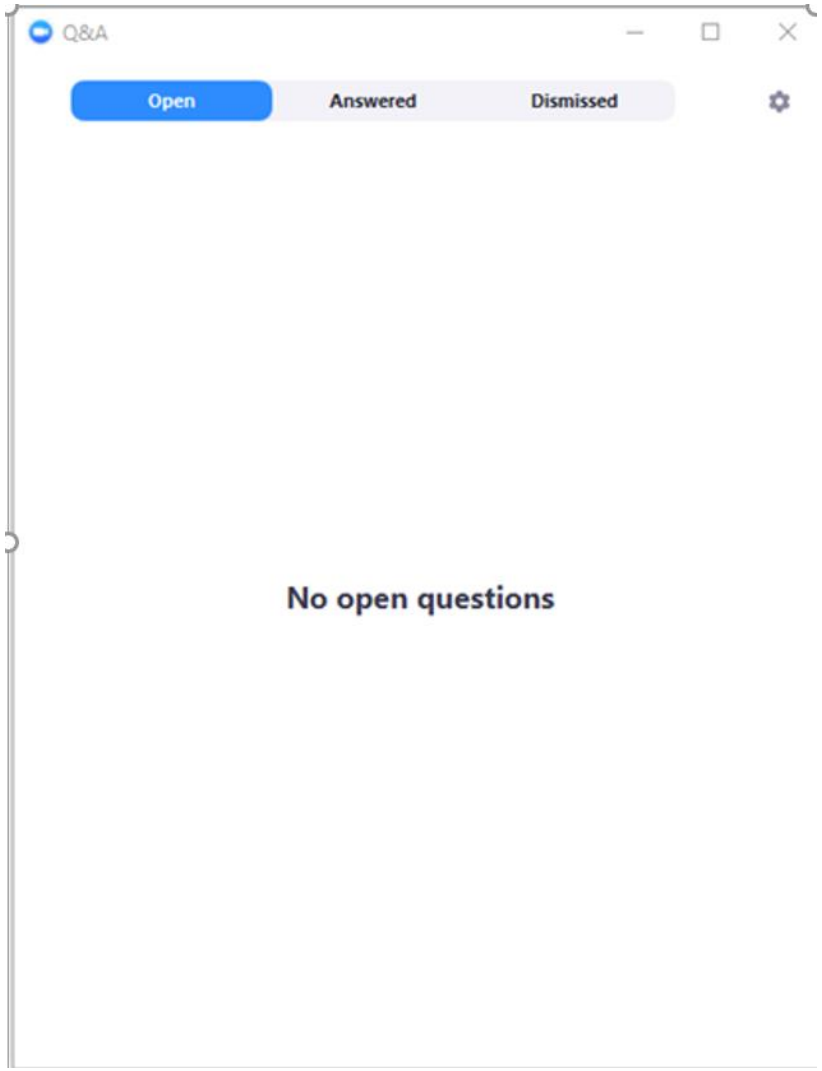
- Please be sure to access the link, complete the evaluation form, and request your certificate. The evaluation process will remain open **two weeks** following the webcast. Your certificate will be emailed to you when the evaluation process closes after the 2-week process.

- If you have any questions, please contact Dorothy Frabott (Dorothy.Frabott@ohiohospitals.org)

CONFLICT OF INTEREST

The presenter for today's program has disclosed no potential or actual conflicts of interest.

SUBMITTING QUESTIONS



PRESENTER

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Managing Sepsis Fallouts in the Emergency Department to Improve Overall Sepsis Care

Brian Kaminski D.O. C.P.P.S

10/18/23

OBJECTIVES

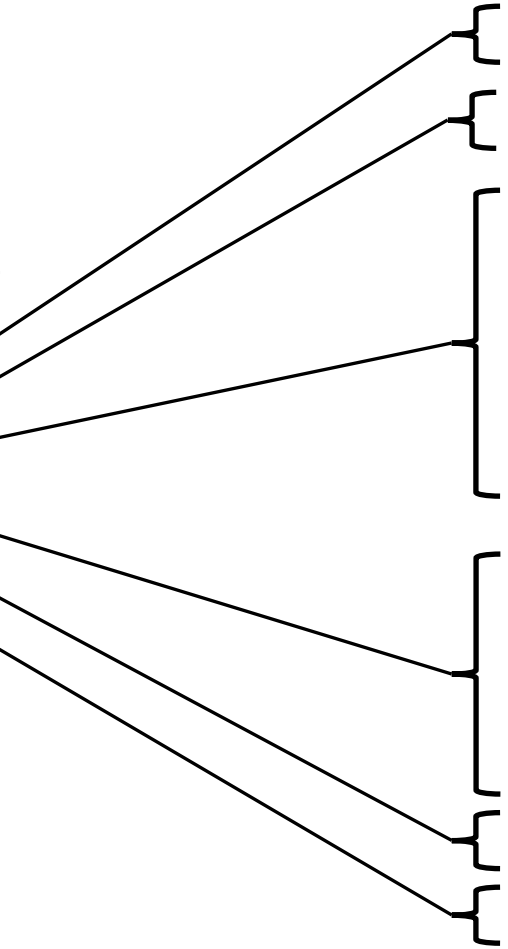
1. OVERVIEW OF SEPSIS DATA COLLECTION AND IMPROVEMENT OPPORTUNITIES

2. PROVIDER SEPSIS QUALITY REVIEW THROUGH CHART ANALYSIS

3. PROCESS FOR DATA DISSEMINATION AND ONGOING SEPSIS EDUCATION

MONTHLY SEPSIS REPORT

- TOTAL SEPSIS CASES
- RANDOMIZATION
- EXCLUSIONS
- PERFECT CASES
- OPPORTUNITIES
- FAILED PROCESS



PROMEDICA TOLEDO HOSPITAL

SUMMARY FOR JUNE 2023 SEPSIS CORE MEASURE/ 85% PASSING

225 TOTAL CASES CODED SEPSIS

26 SELECTED AT RANDOM BY VENDOR FOR REPORTING…7 from FLOWER

19 CASES EXCLUDED FROM MEASURE:

10 TRANSFERS FROM OUTSIDE HOSPITALS

7 NO SEVERE SEPSIS

1 POSITIVE SEVERE SEPSIS/ PALLIATIVE CARE

1 POSITIVE SEVERE SEPSIS/ RECEIVED ANTIBIOTIC FOR MORE THAN 24 HOURS PRIOR TO SEVERE SEPSIS PRESENTATION

THAT LEAVES 7:

3 PERFECT SEPTIC SHOCK TOLEDO ED

1 PERFECT SEVERE SEPSIS TOLEDO ED

2 PERFECT SEVERE SEPSIS FLOWER ED

1 “OPPORTUNITY FOR IMPROVEMENT”:

TOLEDO ED; Lactate and Blood Cultures not ordered; summary sent

SEPSIS DATA SHEET

DOS	MRN	ACCT #	NAME	Arrival Time	SEPSIS IN EC	SHOCK IN EC	LACTATE	BC	ANTIBIOTICS IN 3 HOURS	CORRECT FLUID GIVEN	Levophed started if needed	IF SHOCK- CVL PLACED	Provider	Did this chart meet all requirements? Please let us know by hightlighing the case in question IF IT DID NOT.
12/3/2016	123456			1541	Y	Y	2	Y	1900- >3 hours	No- 0 given		Y	Roberts	

CHART REVIEW

PHYSICIAN SEPSIS POCKET GUIDE

SEVERE SEPSIS

All three of the following must be met within 6 hours of each other.

A. Documentation of a suspected source of clinical infection. There may be reference to "possible infection from xx", "suspect infection from xx", or similar reference in progress notes, consult notes, or similar physician/ APP documentation.

B. Two or more manifestations of systemic infection according to the SIRS criteria, which are:
- Temperature > 38.3 C/101 F or < 36.0 C/96.8 F
- Heart Rate > 90
- Respiration > 20 per minute
- WBC > 12,000 or < 4,000 or >10% bands

C. Organ dysfunction, evidenced by any one of the following:
- SBP < 90, or MAP< 65, or SBP decrease of > 40 pts
- Cr > 2.0, or urine output < 0.5 ml/kg/hour for 2 hours
- Bilirubin >2 mg/dL (34.2 mmol/L)
- Platelet count < 100,000
- INR > 1.5 or a PTT > 60 sec
- Lactate > 2 mmol/L (18.0 mg/dL)

OR if Physician/ANP/PA documentation of severe sepsis, r/o sepsis, possible sepsis or if MD documents septic shock

SEPTIC SHOCK

The criteria for Septic Shock are:

A. There must be documentation of severe sepsis present.
AND
Tissue hypoperfusion persists in the hour after 30ml/kg crystalloid fluid administration, evidenced by either:
- SBP < 90 or Mean Arterial Pressure (MAP) <65 or
- A decrease in SBP by > 40 points from the last previously recorded SBP considered normal for the patient

OR

B. Documentation of severe sepsis with Lactate level greater than or = 4mmol/L

OR

C. If criteria for septic shock are not met, but there is physician/APN/PA documentation of septic shock or suspected septic shock

TREATMENTS

Within 3 hours of presentation of Severe Sepsis:

- Initial lactate level measurement (between 6 hrs prior to and 3 hrs following the presentation of severe sepsis)
- Broad spectrum or other antibiotics administered intravenously (24 hrs prior to and 3 hours following the presentation of severe sepsis)
- Blood cultures drawn prior to antibiotics (48 hrs prior to and 3 hrs following the presentation of severe sepsis)
- If Septic Shock or Severe Sepsis with persistent hypotension, must give 30ml/kg fluid resuscitation over designated timeframe.

Within 6 hours of presentation of Severe Sepsis/Septic Shock:

- Repeat lactate level measurement if initial lactate level is elevated (>2 mmol/L)
- If SEPTIC SHOCK, insert Central Venous Line (CVL); Patient needs focused exam by Physician/APP within 6hrs of meeting SEPTIC SHOCK criteria
- Repeat volume status and tissue perfusion assessment consisting of either:

A. Focused exam performed by physician/APN/PA including:
- ✓ Vital signs review, AND
- ✓ Cardiopulmonary exam, AND
- ✓ Capillary refill evaluation, AND
- ✓ Peripheral pulse evaluation, AND
- ✓ Skin Examination

OR

B. Any two of the following four:
- ✓ Central venous pressure measurement (CVP or RAP/right atrial pressure)
- ✓ Central venous oxygen measurement (SVO2, ScVO2 or oxygen saturation via central catheter)
- ✓ Bedside Cardiovascular Ultrasound (echo, trans-thoracic echo, TTE, TEE, IVC Ultrasound, 2D echo, Doppler echo, Echocardiogram with Doppler, Doppler US of the heart)
- ✓ Passive Leg Raise Exam by physician/APN/PA or Fluid challenge given

PHYSICIAN SEPSIS POCKET GUIDE

ANTIBIOTIC GUIDE IF INFECTION SOURCE UNKNOWN

- Ivanz/Eratepenem
- Imipenem/Cilastatin
- Meropenem/Merrem
- Primaxin
- Cefotaxime/Claforan
- Ceftazidime/Fortaz
- Ceftriaxone/Rocephin
- Cefepime/Maxipime
- Levaquin
- Augmentin
- Unasyn
- Zosyn

ANTIBIOTIC GUIDE FOR SUSPECTED/KNOWN INFECTION

UTI (COMMUNITY ACQUIRED)

- Ceftriaxone 1gm

OR

- Beta lactam allergy: Levofloxacin 500 mg (stat) + Gentamicin 5 mg/kg*

UTI (HEALTH CARE ACQUIRED)

- Cefepime 2gm

OR

- Beta lactam allergy: Levofloxacin 500 mg (stat) + Gentamicin 5 mg/kg*

SKIN/SOFT TISSUE CELLULITIS

- Cefepime 2000 mg IV

OR

- Piperacillin/tazobactam 4.5 gm

OR

- Levofloxacin 500 mg (if beta lactam allergy)
- Suspect MRSA, Add Vancomycin 20 mg/kg

NECROTIZING FASCIITIS

- Piperacillin/tazobactam 4.5 gm STAT + Clindamycin 600 mg + Vancomycin 20 mg/kg

OR

Beta lactam allergy:

- Aztreonam 2000 mg STAT + Clindamycin 600 mg + Vancomycin 20 mg/kg

ABDOMINAL INFECTION (COMMUNITY ACQUIRED)

- Ceftriaxone 2gm STAT + Metronidazole 500 mg

OR

Beta lactam allergy:

- Levofloxacin 750 mg STAT + Metronidazole 500 mg

ABDOMINAL INFECTION (HEALTH CARE ACQUIRED)

- Cefepime 2g (stat) + Metronidazole 500 mg

OR

- Piperacillin/tazobactam 4.5 gm

OR

Beta lactam allergy:

- Aztreonam 2000 mg STAT + Metronidazole 500 mg + Vancomycin 20 mg/kg IV
- Post-op wound, consider Fluconazole 400 mg

COMMUNITY ACQUIRED MENINGITIS

- Ceftriaxone 2 gm + Vancomycin 20 mg/kg
  If > 50 years old or immunosuppressed, add Ampicillin 2000 mg

OR

Beta lactam allergy:

- Levofloxacin 750 mg + Vancomycin 20 mg/kg
  - If > 50 years old or immunosuppressed, add Trimethoprim/Sulfamethoxazole (TMP/SMX) 5 mg/kg**
  - If viral meningitis suspected, add Acyclovir 10 mg/kg (using IBW)
  - If pneumococcal meningitis is suspected, consider dexamethasone

COMMUNITY ACQUIRED PNEUMONIA (NOT PSEUDOMONAS RISK)

- Ceftriaxone 1000 mg STAT +Aazithromycin 500 mg

OR

- Levofloxacin 750 mg STAT + Aztreonam 2000 mg (beta lactam allergy)

PNEUMONIA (PSUEDOMONAS RISK)

- Cefepime 2000 mg + Tobramycin 5mg/kg*

Add azithromycin 500 mg if community acquired
Add Vancomycin 20 mg/kg if MRSA factors present

OR

Beta lactam allergy (Health care acquired)

- Aztreonam 2000 mg + Vancomycin 20mg/kg + Tobramycin 5mg/kg*

OR

Beta lactam allergy (community acquired)

- Levofloxacin 750 mg + Aztreonam 2000 mg

* Aminoglycosides dosed on ideal body weight (IBW), unless patient is > 30% IBW, then use adjusted weight (IBW+ [0.4 x (actual weight-IBW)]

Mission.

SUMMARY

- **IDENTIFICATION OF SEPSIS FALL OUTS**
- **IDENTIFICATION OF SYSTEM FAILURES**
- **IDENTIFICATION OF INDIVIDUAL FAILURES**

PROCESS IMPROVEMENT

- LEARNING OCCURS THROUGH INDIVIDUAL EDUCATION AND COMPLETION OF SEPSIS CHART REVIEW
- SYSTEM LEARNING COMES THROUGH COMMON THEMES AND FIXING PROCESS FAILURES
- NEW IMPROVED SEPSIS DECISION SUPPORT TO START THIS MONTH

QUESTION

How did you build a culture that is receptive to this structured follow-up to sepsis fallouts?

QUESTION

When education has been used as a follow-up intervention to a fallout, what methodology for education delivery have you used and has it been effective?

QUESTION

What has been the most common fallout noted, to date? Does it vary by hospital unit?

QUESTION

Who is responsible for developing and updating the physician sepsis pocket guide? What role does your P&T committee play in this?

QUESTION

Is there an “effective practice” you use for disseminating the data specifically related to sensitivity?

QUESTION

What type of peer support among physicians do you foster?

QUESTION

How do fallouts get communicated to nursing staff and what is the intervention?

QUESTION

Is there a role for the clinical pharmacist in this process and, if so, please explain.

OHA collaborates with member hospitals and health systems to ensure a healthy Ohio

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