

MSH ED Sepsis Recognition and Management Algorithm



Time= 0 minutes starting at triage

Patient identified at triage with possible sepsis:

Identify Sepsis

0 minutes



If they have a suspected infection

OR

If patient has any of the following risk factors:

- hospitalized in the last 6 wks
- receiving treatment for active cancer
- indwelling catheter present
- central line present

AND

2 or more of the SIRS variables

OR

unexplained low blood pressure

SIRS is defined as 2 or more of the following variables:
 -Temperature greater than 38C or less than 36C
 -Heart rate greater than 90bpm
 -Respiratory rate greater than 20bpm
 -Abnormal WBC (less than 4 or greater than 12 or greater than or equal to 10% bands)

Triage patient as a CTAS 2 or 1 and assign to major Triage nurse to trigger sepsis flag in Firstnet
 Notify team leader and major MD to sign sepsis pre-printed order set

Resuscitate

5 minutes



- Primary nurse to complete the following utilizing the ED sepsis symptom order set as signed by major MD:
- 1) Apply oxygen to maintain O2 sats greater than or equal to 90%- consult RT if patient does not respond to O2 therapy or requires FiO2 greater than or equal to 50% oxygen therapy
 - 2) Start two 18-20 gauge IVs and initiate 1 liter of normal saline over 30-60minutes
 - 3) Start sepsis blood work in priority sequence;**a)**VBG with lactate, electrolytes and glucose,**b)**CBC,**c)**creatinine,INR/aPTT and liver enzymes,**d)**Blood cultures x2
 - 4) ECG
 - 5) Chest x-ray if appropriate by medical directive
 - 6) Start ongoing vital signs q 1 hour and PRN

Refine Diagnosis and Management

35 minutes



Patient investigation suggests sepsis

NO

Major doctor to consider alternate diagnosis and continue ongoing management
 Primary nurse to repeat VBG with lactate level in 2 hours from start of first bolus

YES

Major doctor to: - initiate further investigation and antibiotics (*see guidance on reverse)
 - if CT scan and/or ultrasound required follow sepsis imaging protocol

Primary nurse to: - assess fluid resuscitation status
 -monitor urine output
 - if MAP less than 65 initiate 2nd liter of normal saline and immediately notify doctor
 - if MAP greater than 65 please see order set for intravenous fluid rate
 - continue vital signs q 1 hour and PRN
 -repeat VBG with lactate level in 2 hours from start of first bolus

Ongoing monitoring
 Refer to appropriate service
 Reassess antibiotic therapy

NO

Patient remains hypotensive with MAP less than 65 and/or high lactate concentrations greater than or equal to 3mmol

YES

Major doctor to discuss goals of care with the patient/substitute decision maker

Major doctor to consult ICU and/or appropriate service and consider central line or arterial line insertion and vasopressor or transfusion
 Reassess antibiotic therapy

Completion time
 65 minutes



Antibiotic Recommendations

Antibiotics and doses provided are appropriate for first time dose,
patients with no known allergies and normal renal function

Please consult pharmacy if necessary

- 1) Community Acquired Pneumonia: ceftriaxone 1g IV q24h + azithromycin 500mg IV daily
- 2) Community Acquired Urinary Tract Infection: ampicillin 2g IV q6h + ceftriaxone 1g IV q24h
- 3) Community Acquired Intra Abdominal Infection: ceftriaxone 1g IV q24h + metronidazole 500mg IV q12h
- 4) Febrile Neutropenia: piperacillin-tazobactam 4.5g IV q8h + gentamicin(5mg/kg) IV q24h
- 5) Undifferentiated Sepsis and/or Hospital Acquired Infection (hospital exposure within the last 6 weeks): piperacillin-tazobactam 4.5 g IV q8h + vancomycin 15mg/kg IV q12h +/- gentamicin (5mg/kg) IV q24h (for hospital acquired infection)

Best practice guidelines can be found under clinical tools on the intranet or at
www.antimicrobialstewardship.com

