

**SEPSIS- INITIAL MANAGEMENT
ADULT (17 years of age or older)
IH Emergency Departments**

Weight (kg)

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For initial management only – NOT AN ADMISSION ORDER SET

1. **ALLERGIES:** see #826234 – Allergy and Adverse Reaction Record

2. **ED DIET:** General Clear Fluids NPO

3. **MONITORING**

- Intake and output Q1H
- Point of Care Urinalysis STAT
- Continuous cardiac monitoring
- Continuous ETCO₂ monitoring

4. **LABORATORY**

STAT LABS

- CBC, Lytes4, Creatinine (incl. GFR), Urea, C-Reactive Protein, Calcium, Mg₂, PO₄, Bilirubin Total, AST, ALT
- INR, PTT, Fibrinogen
- Blood C&S X 2 before antibiotics

Do not delay initial dose of antibiotics if difficulty obtaining cultures

- Blood Gases- Venous ****OR**** Blood Gases- Arterial

Physician to order repeat lactate Q2H if greater than 2 mmol/L

Lactate greater than 4 mmol/L requires urgent action

- Group and Screen
- Quantitative serum BHCG
- Other _____

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4. LABORATORY (cont'd)

MICROBIOLOGY (URGENT)

Respiratory

- Sputum C&S
- Throat swab C&S

Nasopharyngeal Swab for Influenza A&B / RSV / COVID-19

- Virus Covid / Flu- Nasopharynx

****OR****

- Virus Covid / Flu + Magpix Nasopharynx

If pneumonia suspected and any of the following: necrotizing process on imaging, IV drug use, or recent influenza:

- ARO MRSA Nose / Nares

Cerebrospinal Fluid (CSF)

- Lumbar puncture
 - CSF Panel (Cells, Glucose, Protein)
 - CSF C&S
 - CSF Virus Panel-Herpes / VSV / EV

Wound

- Wound C&S
Location _____
- Wound / abscess aspirate / fluid C&S
Location _____

Urinary

- Urinalysis and urine culture

5. DIAGNOSTICS

- ECG 12 LEAD [CARD]
- CXR [CHEST ADULT]
- CXR [PORT]

6. TREATMENTS

- Oxygen to keep SpO₂ greater than 92%
- Initiate peripheral IV access × 2; if unable to insert peripheral IV within 5 minutes OR after 2 failed attempts notify physician immediately
- In and out catheter to obtain urine sample PRN if patient unable to void
- Insert indwelling urinary catheter to urometer

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7. INTRAVENOUS THERAPY AND HYDRATION

A. SIGNS OF SHOCK

Administer IV crystalloid bolus 30 mL/kg to a maximum of 2,000 mL over 30 minutes. Lactated Ringer's preferred. If signs/symptoms of fluid overload move to vasoactive therapy.

Rapid IV Fluid Bolus

- **Lactated Ringer's Solution** _____ mL (30 mL/kg to a maximum of 2,000 mL) **IV/IO over** _____ **minutes** (recommended over 30 minutes)

****OR****

- Sodium Chloride 0.9%** _____ mL (30 mL/kg to a maximum of 2,000 mL) **IV/IO over** _____ **minutes** (recommended over 30 minutes)

B. EVIDENCE OF HYPOPERFUSION AND NO SIGNS OF SHOCK

Administer IV crystalloid bolus 30 mL/kg to a maximum of 2,000 mL within the first 3 hours. Lactated Ringer's preferred.

IV Fluid Bolus

- **Lactated Ringer's Solution** _____ mL (30 mL/kg to a maximum of 2,000 mL) **IV/IO over** _____ **hours** (recommended over 1 to 3 hours)

****OR****

- Sodium Chloride 0.9%** _____ mL (30 mL/kg to a maximum of 2,000 mL) **IV/IO over** _____ **hours** (recommended over 1 to 3 hours)

C. NO EVIDENCE OF HYPOPERFUSION AND NO SIGNS OF SHOCK

Administer maintenance IV fluids if NPO, or encourage PO fluids if tolerated. Do not give IV boluses unless clinical signs of shock or hypoperfusion arise or if directed by Intensivist. Lactated Ringer's preferred.

Maintenance IV Fluids

- **Lactated Ringer's Solution** _____ mL/H **IV/IO**

****OR****

- Sodium Chloride 0.9%** _____ mL/H **IV/IO**

8. MEDICATIONS

VASOACTIVE THERAPY

If hypotensive despite crystalloid bolus

- norepinephrine 0 to 15 mcg / min IV infusion** titrated to goal MAP of 65 mmHg ****OR**** _____ mmHg (can administer peripherally in or proximal to the antecubital fossa for up to 6 hours)

If unable to obtain target MAP within 15 minutes of reaching norepinephrine 15 mcg / min

****ADD****

- vasopressin 0.03 units / minute IV fixed dose**

If unable to obtain target MAP notify physician

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8. MEDICATIONS (cont'd)

STAT EMPIRIC ANTIBIOTIC THERAPY

Do not delay antimicrobial administration if difficulty obtaining blood culture / urine samples.

If allergy or contraindications to recommended empiric antibiotic therapy, consult Infectious Diseases.

For vancomycin dosing guidelines including renal dose adjustments refer to IH Vancomycin Dosing Guidelines (Adult)

A. URINARY TRACT - PYELONEPHRITIS

cefTRIAxone 2 g IV/IO STAT, THEN Q24H

****OR****

*If obstructive uropathy, recent instrumentation, immunocompromised or cephalosporins in last 3 months, **instead use:***

piperacillin-tazobactam 3.375 g IV/IO STAT, THEN Q6H

B. SKIN AND SOFT TISSUE INFECTION

ceFAZolin 2 g IV/IO STAT, THEN Q8H

****OR****

*If rapidly progressive / necrotizing cellulitis / fasciitis, **instead use:***

cefTRIAxone 2 g IV/IO STAT, THEN Q24H

****AND****

clindamycin 900 mg IV/IO STAT, THEN Q8H

****OR****

*If severe polymicrobial (groin / perirectal / progressive diabetic / bite / traumatic wound), or if immunocompromised, **instead use:***

piperacillin-tazobactam 3.375 g IV/IO STAT, THEN Q6H

If history of MRSA, IV drug use, or recent admission to hospital

****PLUS****

**vancomycin _____ (25 mg/kg, maximum 3,000 mg per dose) mg IV/IO loading dose,
THEN _____ (15 mg/kg, maximum 1,500 mg per dose) mg IV/IO Q _____ H**

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8. MEDICATIONS *(continued)*

C. PNEUMONIA – COMMUNITY ACQUIRED

cefTRIAxone 2 g IV/IO STAT, THEN Q24H

****AND****

azithromycin 500 mg PO/IV/IO STAT, THEN Q24H x 2 doses

****OR****

*If recent admission to hospital and/or hospital acquired pneumonia suspected, **instead use:***

piperacillin-tazobactam 4.5 g IV/IO STAT, THEN Q6H

If necrotizing process pneumonia, IV drug use, recent influenza, or history of MRSA

****PLUS****

vancomycin _____ (25 mg/kg, maximum 3,000 mg per dose) mg IV/IO loading dose, THEN _____ (15 mg/kg, maximum 1,500 mg per dose) mg IV/IO Q _____ H

D. INTRA-ABDOMINAL

cefTRIAxone 2 g IV/IO STAT, THEN Q24H

****AND****

metroNIDAZOLE 500 mg PO/IV/IO STAT, THEN Q12H

****OR****

*If post-op infection, immunocompromised, valvular heart disease, prosthetic intravascular device, or cephalosporin use in last 3 months, **instead use:***

piperacillin-tazobactam 3.375 g IV/IO STAT, THEN Q6H

E. MENINGITIS

cefTRIAxone 2 g IV/IO STAT, THEN Q12H

If risk of ceftriaxone-resistance (e.g. travel outside of Canada or recent beta-lactam antibiotic use)

****PLUS****

vancomycin _____ (25 mg/kg, maximum 3,000 mg per dose) mg IV/IO loading dose, THEN _____ (15 mg/kg, maximum 1,500 mg per dose) mg IV/IO Q _____ H

If greater than 50 years, immunocompromised, pregnant, or alcohol use disorder

****PLUS****

ampicillin 2 g IV/IO STAT, THEN Q4H

If viral encephalitis suspected

****PLUS****

acyclovir _____ (10 mg/kg) IV/IO STAT, THEN Q8H

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8. MEDICATIONS *(continued)*

F. SEPSIS OR SEPTIC SHOCK- UNKNOWN SOURCE OR FEBRILE NEUTROPENIA

piperacillin-tazobactam 3.375 g IV/IO STAT, THEN Q6H

****OR****

*If P. aeruginosa suspected or proven **OR** febrile neutropenia, instead use:*

piperacillin-tazobactam 4.5 g IV/IO STAT, THEN Q6H

If IV drug use, intravascular catheter/medical device, or previous MRSA

****PLUS****

vancomycin _____ (25 mg/kg, maximum 3,000 mg per dose) mg IV/IO loading dose,
THEN _____ (15 mg/kg, maximum 1,500 mg per dose) mg IV/IO Q _____ H

****OR****

If septic shock - unknown source OR febrile neutropenia AND in last 3 months: ceftriaxone-resistant organism or piperacillin-tazobactam use or travel to Southeast Asia, instead use:

meropenem 1 g IV/IO STAT, THEN Q8H

****AND****

vancomycin _____ (25 mg/kg, maximum 3,000 mg per dose) mg IV/IO loading dose,
THEN _____ (15 mg/kg, maximum 1,500 mg per dose) mg IV/IO Q _____ H

ANALGESICS / ANTIPYRETICS

acetaminophen 650 to 1,000 mg PO/PR Q4H to Q6H PRN for pain/fever (maximum 650 mg per dose PR, maximum 4,000 mg from all sources in 24 hours)

ANTINAUSEANTS

dimenhydrinate 25 mg to 50 mg PO/IV/IO Q6H PRN for nausea *(avoid in older adults due to risk of delirium)*

ondansetron 4 mg PO/IV/IO Q8H PRN for nausea

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