

February 2014 Educational Packet for Medical Staff

Topics Include:

- AHD
- Time Outs
- Restraints and Seclusions
- Sepsis

ADVANCED HEALTH DIRECTIVE (AHD) MANAGEMENT

AHD Management

Advanced Health Directives

- ⦿ DNV requires the hospital to have a process to allow the patient to formulate an AHD immediately upon entering the healthcare system.
- ⦿ New York State law requires that notice is given to a patient about how to formulate an AHD. We give this to our in- and out-patients in a registration packet
- ⦿ Must document if patient has AHD in medical record:
 - ❑ ED documents in the initial RN assessment note
 - ❑ Inpatients are asked by the admitting RN within 8 hours of admission
- ⦿ DNV requires a policy for follow up if AHD is not in the record (Nursing Responsibility)
- ⦿ Each Nursing Unit monitors AHD status and paperwork daily with an electronic report (pulls AHD status from nursing assessment) and RN closes the loop on missing paperwork.
- ⦿ Nursing will request the Medical Provider complete a new MOLST if unable to obtain existing one from home or other facility after 24 hours of admission.

Code Status Documentation

- Code status order required in SJLinked/Epic at the time of order entry.
- Three code status choices to comply with NYS MOLST:
 1. Full Code
 2. DNR
 3. DNR/DNI
- Further details are available from MOLST or scanned MOLST (SJLinked/Epic).
- MOLST form (paper copy) must be completed for DNR and DNR/DNI.

Key Message Points:

1. **DNR**: when a patient has no pulse and/or is not breathing, no cardiopulmonary resuscitation will be performed.
2. **DNI**: when a patient has a pulse and is breathing, no intubation will be performed for respiratory distress.
3. **Patients should not be DNI without DNR.**

THE TIME OUT BEDSIDE PROCEDURES

New York State Required
Surgical and Invasive Procedure Protocol

Why review Time Out ?

Recall The Institute of Medicine, *To Err is Human*

Code 911 -- Wrong Patient , Wrong Site surgical
procedure

Code 912 -- Incorrect Procedure or Treatment –
invasive

Code 901 -- Serious occurrence

All Bedside procedures must have a time out

All Bedside procedures must have:

- ⦿ Consent
- ⦿ Marking of site if laterality present
- ⦿ Time out procedure

This includes all invasive procedures performed in the hospital , inpatient and outpatient . Not just the surgical arena.

Communication is a MUST !



Time OUT

Immediately before starting a procedure



Identify the patient

Identify the site and side

Announce the procedure to be performed

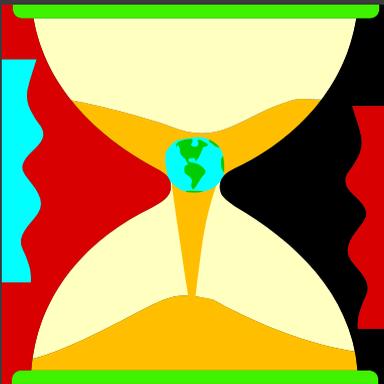


Proper patient position

Availability of implants , if apply

Verification of wristband and chart

Radiological images present ,
when germane to case .



List of Possible Procedures requiring timeout (non- inclusive)...

- Abscess drainage
- Arterial line placement
- Bone marrow aspiration, Bone marrow biopsy
- Central venous line (single- or multilumen) placement or replacement and removal
- Cardiac pacing, initiation of, using external wires
- Chest exploration
- Chest tube placement and removal
- Circumcision
- Closed reduction of a fracture
- Dialysis catheter placement, replacement and removal
- Epidural catheter placement
- External ventricular device placement
- Externalization of tunneled ventriculoperitoneal (VP) shunt
- Halo placement
- Incision and drainage
- Insertion of pins for traction
- Intraosseous line placement
- Intubation
- Intraaortic balloon pump placement and removal
- Intracranial line placement, replacement and removal
- Laceration repair
- Lumbar (CSF) drain placement
- Lumbar drain removal
- Lumbar puncture
- Nerve block
- Paracentesis
- Pericardiocentesis
- PICC line placement
- PICC line removal
- Resection of skin tags
- Resection of extra digits
- Setting of a fracture
- Shrapnel removal (shallow)
- Steinmann pin placement
- Suprapubic cystocentesis (bladder tap)
- Swan-Ganz catheter placement or replacement
- Thoracentesis
- Transvenous pacemaker placement
- Transvenous pacemaker removal
- Triple lumen catheter removal
- Umbilical catheter placement
- Umbilical catheter removal
- Wound debridement
- Wound vac dressing change
- Wound vac placement
- Ventriculostomy placement
- Ventriculostomy removal

Should I or Shouldn't I ?



If you question the need to perform a time out ?

Then you should perform a time out .

All *invasive* procedures anywhere in the hospital setting require a time out at the start of the procedure .

Don't forget to document completion of your Time Out !

Recall

not all procedures need a time out

Emergencies

- Intubation in a code
- Unstable pts prior to surgery ie... Code C cesarean section, MVA
- Foley catheter
- IV
- Blood draws

Required Policy and Procedure

All organizations must have a policy and procedure that incorporates the contents of NYSSIPP, and ensures that the requirements for patient identification, site marking, pre-operative/pre-procedural verification, and “time out” are consistently followed whenever invasive procedures are performed, including, but not limited to procedures performed in the operating room, radiology, obstetrics/labor and delivery, emergency departments, cardiac catheterizations lab, clinical units, and outpatient areas. The institutional policy and procedure must specify the actions to be taken when a discrepancy occurs at any step in the process.

**PHYSICIAN RESPONSIBILITIES
IN THE USE OF RESTRAINTS
AND SECLUSION**

The clinical team at St. Joseph's Hospital is committed to:

- A safe environment for patients
- Using restraints as a last resort when least restrictive interventions have failed.

What is our definition of restraints?

- ⦿ Any manual method, physical or mechanical device, materials or equipment that immobilizes or reduces the ability of a patient to move his/her arms, legs, body or head freely.

Physician Responsibilities for the Use of Restraints and Seclusion

- a. Evaluate the patient's physical and mental status.
- b. Write an order for each episode of the use of restraints or seclusion.
- c. Renew orders as follows:
 - Non-violent patients = each calendar day
 - Violent patients = every 8 hours for restraints and every 6 hours for seclusion.
- d. Evaluate with the nurse any patient who has been on restraints or seclusion for ≥ 72 hours.
- e. Complete a face to face evaluation of all patients on restraints or seclusion for violent behavior within one hour of the initiation of the intervention. This evaluation includes both a physical and behavioral assessment of the patient and should be documented using the One Hour Face-to-Face Evaluation Form ([Click here for Draft](#)).

One Hour Face-to-Face Evaluation (Violent Restraints including Seclusion) **DRAFT**

NOTE: THE ONE HOUR FACE-TO-FACE EVALUATION MUST BE COMPLETED BY A PHYSICIAN IN CPEP, ED AND 3-6, FOR ALL OTHER UNITS IT CAN BE COMPLETED BY A PHYSICIAN OR CLINICAL AFFILIATE

Service Area: _____ Date/Time Restraint/Seclusion Ordered: _____

Reason for Restraint/Seclusion: _____

Date/Time Face-to-Face Evaluation completed: _____

Review of systems:	
<input type="checkbox"/> No change from last assessment	<input type="checkbox"/> Change from last assessment
	Gen: _____
	HEENT: _____
	CV: _____
	Resp: _____
	Abd: _____
	Psychiatric: _____

Test Results:	
<input type="checkbox"/> No change from last assessment	<input type="checkbox"/> Changes _____

Vital Signs:
T _____ BP _____ HR _____ RR _____

Drugs and Medications:	
<input type="checkbox"/> No change from last assessment	<input type="checkbox"/> Changes _____

What factors are contributing to patient's violent or self-destructive behavior? (Check all that apply)

- Drug or medication interactions
- Electrolyte imbalance
- Hypoxia
- Sepsis
- Other: _____

Plan:

- Discontinue restraints
- Continue restraints

NP/PA/MD Signature (**SEE NOTE ABOVE**) Date/Time

If NP or PA, spoke with Dr. _____ on _____
Date Time

Chemical Restraints

A chemical restraint is a medication that is used for short term (1-2 doses) restriction of the patient's behavior or freedom of movement when there is a danger to physical safety of the patient and others.

Chemical restraints should be documented using the One Hour Face-to-Face Evaluation Form

FIGHTING SEPSIS AT ST. JOSEPH'S HOSPITAL

Early Detection and Treatment of Sepsis and
Severe Sepsis Workflow.

Early Recognition and Management



St. Joseph's Health has sepsis protocols in place to assist early recognition and intervention.

IMPORTANCE OF TIMELY RECOGNITION

- 1.7 million U.S. adults develop sepsis each year
- At least 350,000 people either die annually in the hospital or are sent to hospice due to sepsis
 - Sepsis survival depends on rapid detection
 - There is no individual test that detects sepsis
- Symptoms of sepsis can mimic many other conditions

WEINER, 2023





◎ Symptoms of Sepsis

Fever or low temperature and shivering

Altered mental status

Difficulty/rapid breathing

Increased HR

Weak pulse/low BP

Low urine output

Cyanotic or mottled skin

Cold extremities

Extreme body pain/discomfort

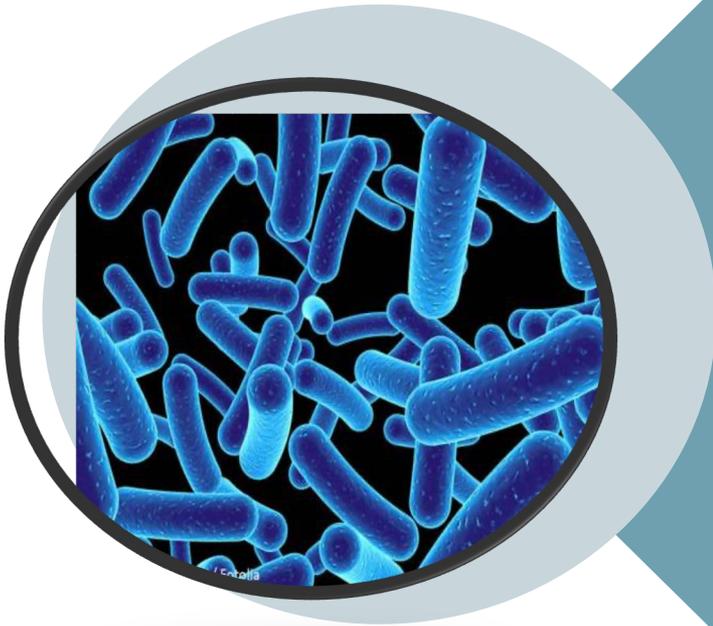
◎ What is Sepsis?



- ◎ **Sepsis is defined as life-threatening organ dysfunction caused by a dysregulated host response to infection (JAMA, 2016).**

Potential Sources of Infection:

- Intravascular catheters
- Endotracheal/tracheostomy tubes
- Indwelling urinary catheters
- Surgical wound drains
- Orthopedic hardware
- Nasogastric tubes
- Gastrointestinal tubes
- Bloodstream
- Lungs (pneumonia)
- Meningitis
- Acute Abdominal Infection
- Endocarditis
- Recent Chemotherapy/Immunocompromised



CMS Sepsis Definitions

	Within 6 hours of each other		One of These
Infection Known or suspected	2 SIRS: HR > 90 RR > 20 T < 96.8 (36C) T > 100.9 (38.3C) WBC < 4 WBC > 12 WBC > 10% Bands	1 NEW Organ Dysfunction: BP SBP < 90, MAP < 65, vasopressor Resp: New CPAP/ BiPAP/ Vent Neuro: New MS change Lactate > 2 Creatinine > 2 Total Bili > 2 Platelets < 100,000	1 sign of Shock Lactate ≥ 4 or Hypotensive despite IVF Hypotension within 1 hour after IVF bolus completed • SBP < 90 • MAP < 65
Infection	Positive SEPSIS SCREEN = 2 SIRS + Infection Send Lactate & $\sqrt{}$ for Organ Dysfunction	SEVERE SEPSIS = Sepsis + 1 new Organ Dysfunction	SEPTIC SHOCK = Severe Sepsis + \downarrow BP after bolus or Lactate ≥ 4

Adult Sepsis Criteria

Severe Sepsis Treatment Adults

The BPA Alert

Sepsis Advisory

This patient meets Early Detection of Sepsis Predictive Model Criteria and may be septic.

Predictive Model Details

34 (High)
Calculated 8/21/2023 08:37
Identification of Sepsis Model

Factor	Value
SIRS temperature criterion	met
SIRS pulse criterion	met
Age	81
SIRS WBC criterion	met
Number of active electrolyte maintenance orders	4
Procalcitonin	high (5.02 ng/mL)
SIRS respirations criterion	met
Diagnosis of hypertension	present
Neutrophils	high (86.2 %)
Number of active cephalosporin orders	1
Number of active vancomycin orders	3
Diagnosis of diabetes mellitus	present
Number of incisions	1
Number of PICCs	1
MCHC	normal (32.6 g/dL)
Hematocrit	low (21.8 %)
Segmented neutrophils	high (86.2 %)
Diagnosis of obesity	present
Number of active beta-adrenergic agent orders	3
RDW	high (15.0 %)
Number of pressure ulcers	1
Number of active saline orders	6
Hemoglobin	low (7.1 g/dL)
Lymphocytes	normal (1.6 10 ³ /uL)
RBC morphology	normal (1+)
Monocytes	normal (0.7 10 ³ /uL)

Do one of the following:

**Together Care
Computes a Sepsis
Score**

**Score > 6
means high risk
for sepsis**

→ BPA Alert

Factors That Contribute to the Sepsis Score - Adults

The sepsis score for admitted adult patients is determined by evaluating the following factors.

Demographics Age Legal sex is male Ethnicity is unknown Is married	Diagnoses Chronic kidney disease Chronic liver disease Congestive heart failure COPD Coronary artery disease Diabetes HIV Hypertension Obesity	SIRS Criteria Banded Neutrophils > 10% in last 24 hours Pulse > 90 in last two hours Respiratory Rate > 20 in last two hrs Temperature > 100.4F or < 96.8F in last 24 hrs WBC < 4000/uL or > 12000/uL in last 24 hrs
Lab Results (last 72 hours) Absolute lymphocyte, monocyte, neutrophil, reticulocyte, and segmented neutrophil counts Base excess, arterial Creatinine Hematocrit Hemoglobin Hemoglobin A1c MCHC nRBC Platelet count Procalcitonin RBC count, distribution width (RDW), and morphology	LDAs Lines, drains, airways, wounds, and tubes in the following groups: Central venous catheters Closed/suction drains Endotracheal tubes Feeding tubes Incisions Peripheral IVs PICCs Ports Pressure ulcers Swan-Ganz catheters	Medications Medication orders in the following pharmacy subclasses: Alpha/Beta Blockers Analgesic Antipyretics Antianginals Antiemetics/Antivertigos Antifungals Antihypertensives Beta-Adrenergic Agents Betalactam Antibiotics Cephalosporins Coronary Vasodilators Electrolyte Maintenance Solutions Fluoroquinolones Glucocorticoids Hypnotics Leukocyte Stimulators Local Anesthetics Loop Diuretics Narcotic Analgesics Penicillins Proton Pump Inhibitors Sodium/Saline Vancomycin and Glycopeptides

Factors used for sepsis score

(EPIC will calculate Every 15 mins)

Five Options to Answer BPA

Open Order Set	Do Not Open	General - Inpatient Sepsis Management Preview
Open Order Set	Do Not Open	Emergency Medicine - Sepsis Management Preview
Order	Do Not Order	 Labs- Lactate with Repeat in 3 Hours

[↗ If an Inpatient, open Sepsis Navigator](#)

[📄 View model formula and coefficients](#)

! Acknowledge Reason _____

Treating Associated Infection	Completing Further Clinical Review	Does Not have Sepsis	Chart Review Only
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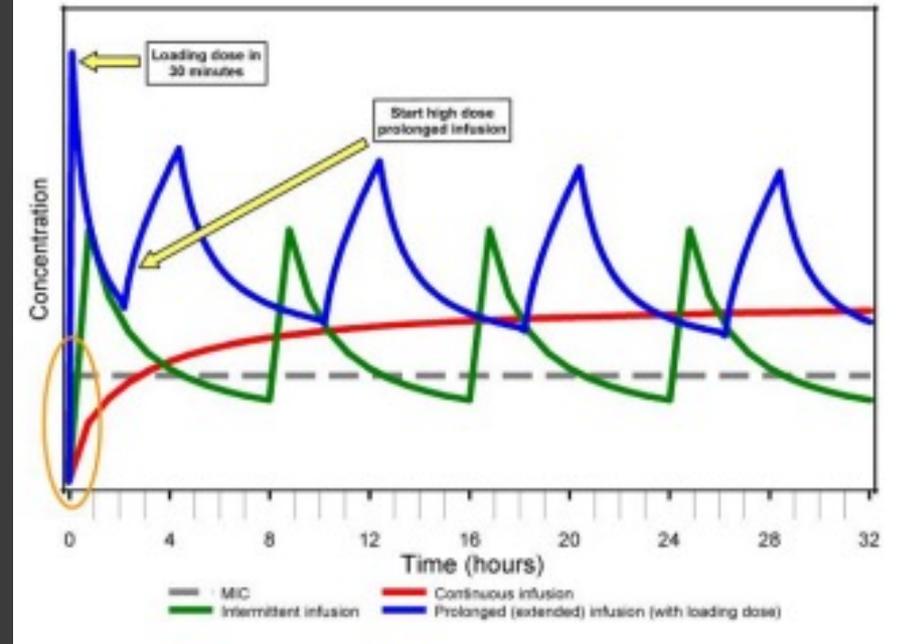
1. New sepsis identified – Click “Open Order Set”
2. Need a lactate to evaluate further – Click “Order”
3. Already treating sepsis – Click “Treating”
4. Need further review – Click “Further Clinical Review”
 - You will get an hour for review.
5. NO sepsis present – Click “Does Not Have Sepsis”
6. DO NOT use “Chart Review Only”

Severe Sepsis and Septic Shock Bundle

THE SEPSIS PROTOCOL

Infection	Positive SEPSIS SCREEN = 2 SIRS + Infection Send Lactate & \checkmark for Organ Dysfunction	SEVERE SEPSIS = Sepsis + 1 new Organ Dysfunction	SEPTIC SHOCK = Severe Sepsis + \downarrow BP after bolus or Lactate ≥ 4
<p>Begin Sepsis bundle:</p> <p>1 Lactate Level</p> <p>2 Blood Cultures Draw PRIOR to antibiotics. If unable to obtain, document attempted.</p> <p>3 IV Antibiotics –within 1 HR. Don't delay antibiotics! Give broad spectrum first (one that runs in the fastest)</p> <p>4 Repeat lactate Level Within 3 hrs. after initial lactate if first > 2</p>		<p>Hypotensive or lactate ≥ 4</p> <p>5 IVF bolus 30 ml/kg LR (or NS) Or document amt given & reason for less. Infuse quickly within 1 HR</p> <p>6 Vitals Q15 min x 2 after bolus then at least Q1x - <i>be sure to document</i></p> <p>If hypotension persists:</p> <p>7 Administer Vasopressors Low BP not responding to IVFs – 1st line is Norepi - target MAP of 65</p> <p>8 Sepsis Reassessment Additional fluid/pressors based on reassessment of volume status</p> <p style="text-align: center;"><i>Act fast! Use the IP or ED Sepsis Orderset</i></p>	

Antibiotics



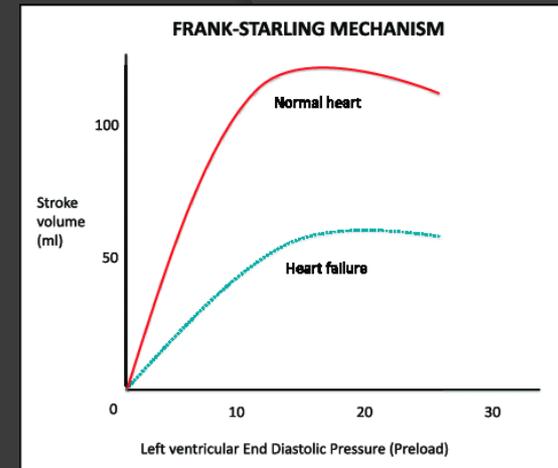
1. **Empiric Therapy:** Consider the source
2. **Review previous cultures** (or ask a pharmacist for help)
3. **Loading Doses** and Extended Infusion:
 - *Especially for hydrophilic antibiotics, like beta-lactams
 - Piperacillin-tazobactam
 - 4.5g IV over 30 minutes x 1, then 4.5g IV over 4 hours q 8h
4. **Daily Evaluation for De-escalation**
 1. **“20%** of hospitalized patient who receive antibiotics suffer an adverse effect, and each day of antibiotic use increased the risk of *C. difficile*, acute kidney injury, antibiotic resistance, and disruption of the gut microbiome”.

Antibiotics

- Mortality increases by 7.6% for every hour delay in giving antibiotics to a patient with severe sepsis.
- Give BROAD SPECTRUM antibiotics initially then narrow the coverage once cultures are back.

IV FLUIDS

- What are we "treating" with fluids?
 - Element of hypovolemia?
 - Actual losses/reduced intake vs capillary leak syndrome
 - Decreased venous tone/preload
- Looking for "fluid responsiveness" - increase in cardiac output and perfusion
 - Improvement in HR +/- BP
 - Increased UOP, improved cap refill, decreased lactate, improved mental status
- Harms
 - 50% of patients are not "fluid responders"
 - Delay to pressors
 - Sequelae of fluid overload – independently associated with hospital mortality
- There is NO indication for albumin for treatment of severe sepsis or septic shock



IV Fluid Tips

- ⦿ Patients with fluid overload usually don't need much more fluid
- ⦿ Patients at high risk of fluid overload don't need full 30 ml/kg – see calculating IBW (next slide)
 - MUST document reason for not giving full IV fluids in patients with low BP or lactate > 4
- ⦿ Patients with history of volume loss (i.e. N/V/D) often need >> 30 ml/kg
- ⦿ REASSESS FLUID STATUS AND PERFUSION AFTER FLUID BOLUSES

Ideal body weight and approximate lean body weight in obesity (adult)

	Height (in)	Height (cm)	IBW* (kg)	Approximate LBW in class III obesity† (kg)
Female (adult)	60	152	46	52
	65	165	57	60
	70	178	68	70
	75	191	80	80
Male (adult)	60	152	50	63
	65	165	62	73
	70	177	76	85
	75	191	89	97
	80	203	103	112

IBW: ideal body weight; LBW: lean body weight; TBW: total body weight; BMI: body mass index

* IBW male = $50 + (2.3 \times \text{height in inches over 5 feet})$; IBW female = $45.5 + (2.3 \times \text{height in inches over 5 feet})$.

† Approximate LBW in class III obesity (BMI 40-45 kg/m²) for dosing emergency drugs; LBW estimate (kg) = $(9270 \times \text{TBW}) / (A + B \times \text{BMI})$ where A and B are 6680 and 216 respectively for males and 8780 and 244 respectively for females.

Formulas from: Devine BJ. *Drug Intell Clin Pharm* 1974; 8:560 and Hanley, MJ et al. *Clin Pharmacokinet* 2010; 49:71.

TIME TO PRESSOR ONSET

- Prolonged hypotension = worsening organ dysfunction, mortality
 - 5.3% increase in death/hour of delay
- Surviving Sepsis guidelines 2018
 - Start pressors within 1st hour if fluids not achieving hemodynamic goals
- Phenylephrine 40 mcg/min = norepinephrine 2 mcg/min (i.e. VERY low dose)

Conclusions

- ⦿ Sepsis is a critical illness accounting for a high percentage of in-hospital mortality.
- ⦿ Early diagnosis and treatment is critical.
- ⦿ Increased clinical awareness, the Sepsis BPA and protocolized responses will help to identify and treat infections, Severe Sepsis and Septic Shock early and reduce in-hospital mortality.
- ⦿ Reassessment after fluid resuscitation is critical.
- ⦿ If the patient remains hypotensive after IVF's, **START PRESSORS.**

Let's Test your knowledge...

What is SIRS?

- a. Systemic Inflammatory Response Syndrome
- b. Can be due to infectious or non-infectious causes
- c. Characterized by two or more abnormal clinical signs in four categories including temperature, heart rate, respiratory rate, and WBC
- d. All of the above

CORRECT ANSWER:

d. All of the above

True or False

Lactate is very important to risk stratify patients with Sepsis. A lactate of more than 2mmol/L indicates Severe Sepsis, and a lactate level of 4mmol/L, associated with hypotension has a mortality rate which approaches 50%

CORRECT ANSWER:

True

True or False

Mortality increases by 7.6% for every one hour delay of initiation of antibiotics in a hypotensive, septic patient

CORRECT ANSWER:

True

BPA stands for Best Practice Advisory. A Sepsis BPA has been designed to alert the nurse and provider when a patient is at high risk for severe sepsis. In response to this BPA the provider will perform which of the following:

- a. Determine if an infection is present or suspected as a cause of the Sepsis BPA
- b. Order a lactate to risk stratify the patient if an infectious etiology is suspected
- c. Complete the Sepsis Order Set once sepsis confirmed
- d. All of the above

CORRECT ANSWER:

d. All of the above

The Goal of treating Sepsis is to identify patients at risk, obtain labs and cultures, initiate fluid resuscitation management, and initiate antibiotic therapy. When Severe Sepsis is identified the provider will initiate the sepsis order set which will:

- a. Initiate antibiotics within 60 minutes
- b. Initiate IV fluid therapy when there is hypotension or a lactate > 4
- c. Give albumin
- d. Both a and b
- e. None of the above

CORRECT ANSWER:

- d. Both a and b

[Click Here to Complete](#)