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!
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 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:
☐ No change from last assessment ☐ Change from last assessment

Gen: __________________
HEENT: __________________
CV: __________________
Resp: __________________
Abd: __________________
Psychiatric: __________________

Test Results:
☐ No change from last assessment ☐ Changes

Vital Signs:
T ______ BP ______ HR ______ RR ______

Drugs and Medications:
☐ No change from last assessment ☐ 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

(WHO, 2022)
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

<table>
<thead>
<tr>
<th>Infection Known or suspected</th>
<th>Within 6 hours of each other</th>
<th>One of These</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2 SIRS:</strong></td>
<td>1 NEW Organ Dysfunction:</td>
<td>1 sign of Shock</td>
</tr>
<tr>
<td>HR &gt; 90</td>
<td>BP SBP &lt; 90, MAP &lt; 65, vasopressor</td>
<td>Lactate &gt; 4</td>
</tr>
<tr>
<td>RR &gt; 20</td>
<td>Resp: New CPAP/ BiPAP/ Vent</td>
<td>or Hypotensive despite IVF</td>
</tr>
<tr>
<td>T &lt; 96.8 (36°C)</td>
<td>Neuro: New MS change</td>
<td>Hypotension within 1 hour after IVF bolus completed</td>
</tr>
<tr>
<td>T &gt; 100.9 (38.3°C)</td>
<td>Lactate &gt; 2</td>
<td>• SBP &lt; 90</td>
</tr>
<tr>
<td>WBC &lt; 4</td>
<td>Creatinine &gt; 2</td>
<td>• MAP &lt; 65</td>
</tr>
<tr>
<td>WBC &gt; 12</td>
<td>Total Bili &gt; 2</td>
<td></td>
</tr>
<tr>
<td>WBC &gt; 10% Bands</td>
<td>Platelets &lt; 100,000</td>
<td></td>
</tr>
</tbody>
</table>

**Infection**

Positive SEPSIS SCREEN = 2 SIRS + Infection

Send Lactate & √ for Organ Dysfunction

**SEVERE SEPSIS =**

Sepsis + 1 new Organ Dysfunction

**SEPTIC SHOCK =**

Severe Sepsis + ↓BP after bolus or Lactate ≥ 4
The BPA Alert

Together Care Computes a Sepsis Score

Score > 6 means high risk for sepsis
Factors That Contribute to the Sepsis Score - Adults

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

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Diagnoses</th>
<th>SIRS Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Chronic kidney disease</td>
<td>Blanded Neutrophils &gt; 10% in last 24 hours</td>
</tr>
<tr>
<td>Legal sex is male</td>
<td>Chronic liver disease</td>
<td>Pulse &gt; 90 in last two hours</td>
</tr>
<tr>
<td>Ethnicity is unknown</td>
<td>Congestive heart failure</td>
<td>Respiratory Rate &gt; 20 in last two hrs</td>
</tr>
<tr>
<td>Is married</td>
<td>COPD</td>
<td>Temperature &gt; 100.4F or &lt; 96.8F in last 24 hrs</td>
</tr>
<tr>
<td></td>
<td>Coronary artery disease</td>
<td>WBC &lt; 4000/U.L. or &gt; 12000/U.L. in last 24 hrs</td>
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<tr>
<td></td>
<td>Diabetes</td>
<td></td>
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<td></td>
<td>HIV</td>
<td></td>
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<td></td>
<td>Hypertension</td>
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<tr>
<td></td>
<td>Obesity</td>
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</tbody>
</table>

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

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
  - Flurouracil
  - Glucocorticoids
  - Hypnotics
  - Leukocyte Stimulators
  - Local Anesthetics
  - Loop Diuretics
  - Narcotic Analgesics
  - Penicillins
  - Proton Pump Inhibitors
  - Sodium/Saline
  - Vancomycin and Glycopeptides

(EPIC will calculate Every 15 mins)
Five Options to Answer BPA

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

<table>
<thead>
<tr>
<th>Infection</th>
<th>Positive SEPSIS SCREEN = 2 SIRS + Infection</th>
<th>SEVERE SEPSIS = Sepsis + 1 new Organ Dysfunction</th>
<th>SEPTIC SHOCK = Severe Sepsis + ↓BP after bolus or Lactate ≥4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Begin Sepsis bundle:</td>
<td>1 Lactate Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Blood Cultures</td>
<td></td>
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</tr>
<tr>
<td>Draw PRIOR to antibiotics. If unable to obtain, document attempted.</td>
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<tr>
<td>3 IV Antibiotics – within 1 HR. Don’t delay antibiotics! Give broad spectrum first (one that runs in the fastest)</td>
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<tr>
<td>4 Repeat lactate Level</td>
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<tr>
<td>Within 3 hrs. after initial lactate if first &gt; 2</td>
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</table>

**Act fast! Use the IP or ED Sepsis Orderset**

**Hypotensive or lactate ≥4**

5 IVF bolus 30 ml/kg LR (or NS) Or document amt given & reason for less. Infuse quickly within 1 HR

6 Vitals Q15 min x 2 after bolus then at least Q1x - be sure to document

**If hypotension persists:**

7 Administer Vasopressors

Low BP not responding to IVFs – 1st line is Norepi - target MAP of 65

8 Sepsis Reassessment

Additional fluid/pressors based on reassessment of volume status
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)

<table>
<thead>
<tr>
<th></th>
<th>Height (in)</th>
<th>Height (cm)</th>
<th>IBW* (kg)</th>
<th>Approximate LBW in class III obesity†(kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Female (adult)</strong></td>
<td></td>
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<tr>
<td>60</td>
<td>60</td>
<td>152</td>
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<td>75</td>
<td>75</td>
<td>191</td>
<td>80</td>
<td>80</td>
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<tr>
<td><strong>Male (adult)</strong></td>
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<td>60</td>
<td>60</td>
<td>152</td>
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<td>203</td>
<td>103</td>
<td>112</td>
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</tbody>
</table>

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

* IBW male = 50 + (2.3 x height in inches over 5 feet); IBW female = 45.5 + (2.3 x 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 x TBW)/(A + B x BMI) where A and B are 6680 and 216 respectively for males and 8780 and 244 respectively for females.

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