KERN MEDICAL CENTER: Sepsis Resuscitation and Maintenance Bundle

Severe Sepsis Interventions (To be completed within 3 hours)

Nursing

☐ Initiate Rapid Response Team to implement standardized procedure, notify MD and expedite transfer to ICU/DOU as necessary
-(ER/ICU/DOU notify charge nurse)

☐ Document vitals every 15 minutes until stable, then every 30 minutes x2,Temperature every hour until normal,
Temperature every hour until normal, then every 4

☐ STAT labs: ❍ **2 sets of Blood Cultures prior to antibiotics** ❍ **Stat Serum Lactate and Procalcitonin, if not collected in last 6 hours**
❍CBC w/diff ❍CMP ❍PT/PTT/INR ❍ABG *If not collected in last 12 hours*

☐ **For hypotension/lactate greater than 4, immediately infuse fluid bolus 30ml/kg Normal Saline**

☐ **Administer broad spectrum IV Antibiotics**: ❍ER within 3 hours ❍In-patient within 1 Hour

☐ Complete the following once order obtained (if no order received, request):
❍Ensure 2 large bore IV's in place, 20g minimum❍Administer supplemental oxygen to keep SpO2 greater than or equal to 95%
❍Insert urinary catheter and assess urine output hourly ❍Carry out diagnostic tests for source identification stat

Physician

☐ Order 2 large bore IV's to be placed STAT

☐ **Order broad spectrum antibiotics, Mark "Give additional Dose Now" box**

☐ Order urinary Catheter and medical necessity

☐ Order supplemental Oxygen Administration to keep SpO2 greater than or equal to 95%, prepare for intubation if indicated

☐ Order vitals every 15 minutes until stable, then every 30 minutes x2 and Temp every hour until normal, then every 4 hours

☐ Order continuous Cardiac Monitor with Pulse Oximetry

☐ Order labs for stat Sputum/Wound gram stain and C&S; UA gram stain stat and C&S

☐ Stat chest X-ray and other diagnostic tests needed to identify source

Septic Shock Interventions (To be completed within first 6 hours if refractory hypotension present)

Nursing

☐ Verify Rapid Response Team and MD aware of patient

☐ Assist with central line insertion (if necessary) and complete central line checklist

☐ Document CVP hourly and after each fluid bolus (if ordered)

☐ Aggressive fluid resuscitation per MD orders

☐ **For refractory hypotension administer vasopressors per MD orders**

Physician

☐Obtain an ICU consult and transfer patient to higher level of care (ICU/DOU or Trauma Room for ED)

☐Insert Central Line (optional) and continue fluid resuscitation.

Reassess/Document volume status and tissue perfusion by repeat focused exam (after initial fluid resuscitation) including vitals, cardiopulmonary, capillary refill, pulse and skin finds or two of the following: Measure CVP/Measure ScvO2, Bedside cardiovascular ultrasound, Dynamic assessment of fluid responsiveness with passiveleg raise or fluid challenge.

☐**Order vasopressors if MAP less than 65 and refractory to fluid boluses**, *Titrate to map greater than or equal to 65mmHg

❍*1st choice*: NORepinephrine (Levophed®) IV drip
- Start at 4mcg/min ▸ Titrate 2mcg/min every 10 minutes
- Max 20mcg/min[JW1], per MD orders

❍ *If bradycardia present 1st choice*: DOPamine IV drip
-Start 5 mcg/kg/min ▸ Titrate 2.5 mcg/kg/min every 10 minutes
-Max 20mcg/kg/min, per MD orders

❍*If second vasopressor required add*: Epinephrine IV drip
- Start at 1mcg/min ▸ Titrate 1mcg/min every 5 minutes
- Max 10mcg/min, per MD orders

❍ Only use corticosteroids if adequate fluids and vasopressors have not achieved hemodynamic stability:
*Order Hydrocortisone drip for total daily dose of 200mg

❍ (Optional) ScvO2 hourly and PRN, if less than 70%, CVP/MAP goals are met and Hgb greater than or equal to 9 ▸ initiate Dobutamine
*For ScvO2 less than 70% and Hct less than 30, consider blood products

❍Arterial line insertion for mechanically ventilated patients

☐ Order procalcitonin to be drawn 6 hours after initial lab draw for all results 0.5 or greater and order in AM labs Q 24 hours times 2.

$$\frac{(Lactate^{Baseline} - Lactate^{6hour}) \times 100}{Lactate^{Baseline}}$$

Severe Sepsis/ Septic Shock Maintenance Bundle (To be completed within first 24 Hours):

☐Continue all Sepsis Resuscitation Bundle Interventions until expected outcomes are met.

☐Control blood glucose/institute insulin drip to maintain blood sugars less than 140-180 mg/dl

☐Control inspiratory plateau pressures*Maintain less than 30cmH2O for mechanically ventilated patients

☐Cultures checked daily and antibiotics changed based on sensitivities.

☐Institute Critical Care Standards of Care including:

❍VTE Prophylaxis ❍GI Prophylaxis ❍Nutritional Support per Dietary recommendation ❍VAE Prevention ❍Pressure Ulcer Prevention

Goals of Treatment

1) MAP greater than or equal to 65 with **fluid boluses*,** and vasopressors if **needed***
2) **Blood Cultures*** X2 prior to antibiotics – Do not delay **antibiotic*** administration – must be given within 1 hour in patient and 3 ED
3) Baseline **lactate*** collected and serial lactates drawn to evaluate effectiveness of treatment
4) Urine Output greater than or equal to 30ml/hour
5) Identify Source

*Indicates elements for reporting

(Last Revised 1.23.14)

PATIENT LABEL

ER/ACUTE CARE SEVERE SEPSIS SCREENING TOOL

Must be completed for all patients 18 and older in ER/ICU/DOU/3C/2C/3D/PACU (Excludes Trauma patients within first 48 hours)

Do not mark criteria if chronic or obvious rational. Example: Tachycardia in active hemorrhage patient

*****Must RE-SCREEN IF NEW SIRS DEVELOP*****

Place a check mark (√) in box if patient meets criteria

	Triage	PRN	1200	PRN	0000	PRN	Admit
1) Systemic Inflammatory Response Syndrome (SIRS): *Are any of the following NEW or WORSE in the past 24 hours?*							
Temperature greater than or equal to 101°F or less than 96.8°F							
Heart Rate greater than 90 bpm							
Respiratory Rate greater than 20/minute							
Acutely Altered Mental Status							
WBC Count greater than 12 or Diff with greater than 10% bands							
WBC Count less than 4 or Diff with greater than 10% bands							
2) Index of Suspicion: *Is there suspected, documented or high risk for infection?*							
Mark if yes.							

Simple Sepsis
2 or more SIRS
+
Index of Suspicion

FLOOR: Immediately notify Charge Nurse, Rapid Response Team (5#) and Physician. Evaluate patient for organ dysfunction.

ER/ICU/DOU: Immediately notify Charge Nurse, Physician and complete the following:

▪Initiate Standardized Procedure. Draw STAT CBC with Diff, CMP, Lactate, Procalcitonin, PT/PTT, BC x 1. Evaluate for organ dysfunction.

☐ **Simple Sepsis Suspected**

		Triage	PRN	1200	PRN	0000	PRN	Admit
3) Organ Dysfunction: *Are any of the following present and changed from baseline (New)?*								
CNS:	▪Acutely Altered Mental Status							
Cardio:	▪SBP less than 90 or MAP less than 65 ▪SBP decrease greater than 40 from baseline							
Resp:	▪New O2 requirement to maintain SpO2 greater than 90% ▪PaO2/FiO2 ratio less than 300							
Bowel:	▪Severe abdominal pain with distention ▪Absent bowel sounds							
Renal:	▪Urine output less than 30mL/hour for 2 consecutive hours ▪Creatinine greater than 2							
Hepatic:	▪Bilirubin greater than 2							
Hematologic:	▪Platelets less than 100,000 ▪INR greater than 1.5 or PTT greater than 60							
Metabolic:	▪Lactate greater than 4 ▪Blood glucose more than 140 in the absence of Diabetes							

Severe Sepsis
2 or more SIRS
+
Index of Suspicion
+
Organ Dysfunction

FLOOR: Immediately notify Charge Nurse, Rapid Response Team (5#) and Physician. Prepare to implement Severe Sepsis Bundle.

ER/ICU/DOU: Immediately notify Charge Nurse, Physician and complete the following:

▪Initiate Standardized Procedure (draw labs if not done), implement Severe Sepsis Bundle on reverse of form under MD guidance.

☐ **Severe Sepsis Suspected**

All POSITIVE SCREENS are to be copied & submitted to Supervisor. ORIGINAL TO STAY IN CHART.

Date/Time:	Triage Signature/M#:
Date/Time:	Admit Signature/M#:
Date/Time:	1200 Signature/M#:
Date/Time:	0000 Signature/M#:
Date/Time:	PRN Signature/M#:
Date/Time:	PRN Signature/M#:
Date/Time:	PRN Signature/M#:

Severe Sepsis Not Suspected

☐Triage ☐PRN☐1200 ☐PRN ☐0000 ☐PRN ☐Admit

Ruled out or criteria not met:

Will continue to monitor patient and re-screen PRN if new criteria develop

Diagnosed with Severe Sepsis

☐Triage ☐PRN☐1200 ☐PRN ☐0000 ☐PRN ☐Admit

Will resume screening once:

-Lactate below 4 and/or

-Vasopressors discontinued

Communication to Receiving Nurse

Actions Pending:

☐Draw CBC with DIFF/CMP/LACTATE/PT/PTT

☐Draw Blood Cultures: ☐X1 ☐X2

☐ Evaluate pending lab results

☐ Fluid bolus 30ml/kg

☐Broad Spectrum Antibiotic

☐MD Notification

PATIENT LABEL

OBSTETRIC SEVERE SEPSIS SCREENING TOOL

Must be completed for all patients 18 and older in L&D Triage, L&D and Postpartum (Excludes Trauma patients within first 48 hours)
***Do not mark criteria for which there is other logical rationale, unless index of suspicion is present.

*****Must RE-SCREEN IF NEW SIRS DEVELOP*****
Place a check mark (√) in box if patient meets criteria

	Triage	PRN	1200	PRN	0000	PRN	Admit
1) Systemic Inflammatory Response Syndrome (SIRS): *Are any of the following NEW or WORSE in the past 24 hours?*							
Temperature greater than or equal to 100.4°F or less than 96.8°F							
Heart Rate greater than 110 bpm							
Acutely Altered Mental Status							
Respiratory rate greater than 20/minute							
Fetal Tachycardia greater than 160 bpm							
Uterine tenderness on palpation							
Urine positive for Leukocytes or Nitrates							
WBC Count less than 4 or Diff with greater than 10% bands							
2) Index of Suspicion: *Is there suspected, documented or high risk for infection?* Examples:							
▪PROM (greater than 18 hours) ▪Fetal Demise ▪Manual extraction of placenta ▪Trauma/Surgery/Burns in the last 30 days ▪UTI ▪Invasive Devices ▪Antibiotics (not prophylaxis) ▪Chronic Liver/Kidney Disease ▪Immunocompromised ▪IV Drug Abuse ▪Trauma/Surgery/Burns in the							

Simple Sepsis

2 or more SIRS
+
Index of Suspicion

FLOOR: Immediately notify Charge Nurse, Rapid Response Team (5#), and Physician. Evaluate patient for organ dysfunction.
ICU/DOU: Immediately notify Charge Nurse, Phyisician and complete the following:
▪Initiate Standardized Procedure and draw STAT CBC with Diff, CMP, Lactate, Procalcitonin, PT/PTT, BC x **2**. Evaluate for organ dysfunction.

☐ **Simple Sepsis Suspected**

3) Organ Dysfunction: *Are any of the following present and changed from baseline (New)?*								
CNS:	▪Acutely Altered Mental Status							
Cardio:	▪SBP less than 90 or MAP less than 65 ▪SBP decrease greater than 40 from baseline							
Resp:	▪New O2 requirement to maintain SpO2 greater than 90% ▪PaO2/FiO2 ratio less than 300							
Renal:	▪Urine output less than 30mL/hour for 2 consecutive hours ▪Creatinine greater than 2							
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Metabolic:	▪Lactate greater than 4 ▪Blood glucose more than 140 in the absence of Diabetes							

Severe Sepsis

2 or more SIRS
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Organ Dysfunction

FLOOR: Immediately notify Charge Nurse, Rapid Response Team (5#) and Physician. Prepare to implement Severe Sepsis Bundle.
ICU/DOU: Immediately notify Charge Nurse, Physician and complete the following:
▪Initiate Standardized Procedure (draw labs if not done), implement Severe Sepsis Bundle on reverse of form under MD guidance.

☐ **Severe Sepsis Suspected**

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Date/Time:	0000 Signature/M#:
Date/Time:	PRN Signature/M#:
Date/Time:	PRN Signature/M#:
Date/Time:	PRN Signature/M#:

Severe Sepsis not suspected
☐Triage ☐PRN☐1200 ☐PRN ☐0000 ☐PRN ☐Admit
Ruled out or criteria not met:
Will continue to monitor patient and re-screen if new criteria develop

Patient diagnosed with Severe Sepsis
☐Triage ☐PRN☐1200 ☐PRN ☐0000 ☐PRN ☐Admit
Will resume screening once:
Lactate below 4 and/or
-Vasopressors discontinued

Communication to Receiving Nurse
Actions Pending:
☐Draw CBC with DIFF/CMP/LACTATE/PT/PTT
☐Draw Blood Cultures: ☐X1 ☐X2
☐ Evaluate pending lab results
☐Fluid bolus 30ml/kg
☐Broad Spectrum Antibiotic
☐MD Notification
Other:_____