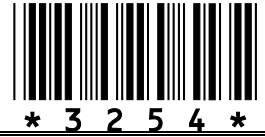




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		ADULT SEVERE SEPSIS/SEPTIC SHOCK ORDERS		
		Deviation from this protocol may be required depending on clinical situation or physician's judgment		
		<p>Criteria for initiating order set must include SUSPECTED/CONFIRMED INFECTION and evidence of both of the following:</p> <ol style="list-style-type: none"> 1. Two or more signs of inflammation: <ol style="list-style-type: none"> a. Temp greater than 100.9 (38.3 C) or less than 96.8 (36 C) b. HR greater than 90 c. RR greater than 20 or PCO₂ less than 32 d. WBC greater than 12,000 or less than 4,000 or greater than 10% Bands 2. SBP less than 90mmHg after fluid bolus <p>OR</p> <p>Lactate greater than or equal to 4 mMol/L</p> <p>OR</p> <p>Evidence of one or more organ dysfunction</p>		
		1. Admit to Critical Care Unit; Physician:		
		2. Diagnosis:		
		3. Condition: Critically Ill		
		4. Weight: kg Allergies:		
		5. Consults a. Multidisciplinary Trauma Team b. Cardiology: _____ c. General Surgery: _____ d. Hospitalist: _____ e. Infectious Disease: _____ f. Nephrology: _____ g. Pulmonology: _____ h. Other: _____		
		6. Activity: Bed rest with head of bed elevated at 30 degrees.		
		7. Nursing a. Calculate APACHE II score on arrival. b. Vital signs every 1 hour c. I & Os every 1 hour d. Foley to dependent drainage () Bladder pressure protocol e. () Nasogastric tube to low intermittent suction		

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		<p>7. Nursing (continued)</p> <p>f. <input type="checkbox"/> Neuro checks every 1 hour (include GCS)</p> <p>g. Incentive spirometry every 1 hour while awake</p> <p>h. DVT Prophylaxis – Mechanical <input type="checkbox"/> Sequential Compression Devices <input type="checkbox"/> Foot Pumps</p> <p>i. Heel Protectors</p> <p>j. Assess for scalp, sacral and heel skin breakdown every shift</p> <p>k. Turn patient every 2 hours or <input type="checkbox"/> Triadyne Bed <input type="checkbox"/> RotoRest Bed</p> <p>l. EKG on arrival, hospital day #1 and hospital day #6</p> <p>m. Wound Care: _____</p> <p>n. Other: _____</p>		
		<p>8. Diet:</p> <p>a. NPO <input type="checkbox"/> Place small bowel feeding tube within 24 hours of admission and begin Crucial at 20 ml/hour upon confirmation of correct tube placement.</p>		
		<p>9. IV Fluids: NS at 2 ml/kg/hour</p>		
		<p>10. Cultures (Prior to antibiotics):</p> <p><input type="checkbox"/> Blood cultures drawn X 2 from two separate sites STAT</p> <p><input type="checkbox"/> Obtain blood from existing lines</p> <p><input type="checkbox"/> Sputum; consider NT suction</p> <p><input type="checkbox"/> Urine</p> <p><input type="checkbox"/> CSF (aerobic, anaerobic and fungal)</p> <p><input type="checkbox"/> Stool culture</p> <p><input type="checkbox"/> Wound (aerobic, anaerobic and fungal)</p> <p><input type="checkbox"/> Other: _____</p>		
		<p>11. Radiology: Reason for exam: _____</p> <p>Symptoms: _____</p> <p>Exam desired: _____</p> <p>Serum Creatinine: _____ Date: _____</p> <p>PCXR <input type="checkbox"/> STAT <input type="checkbox"/> AM</p>		
		<p>12. Order Sets:</p> <p>Critical Care Admission Orders</p> <p><input type="checkbox"/> Sedation and analgesia for mechanically ventilated patients</p> <p><input type="checkbox"/> Chemical paralysis on mechanically ventilated patients</p> <p><input type="checkbox"/> Critical Care Insulin infusion orders</p> <p><input type="checkbox"/> Drotecogin alpha (Xigris) – (consider if APACHE II greater than or equal to 25)</p>		

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		<p>13. Labs (unless ordered previously within the last 6 hours, please obtain):</p> <ul style="list-style-type: none"> a. Basic, Magnesium, PO₄, and Albumin <input type="checkbox"/> every ___ hours X ___ hours <input type="checkbox"/> every AM b. CBC with differential <input type="checkbox"/> every ___ hours X ___ hours <input type="checkbox"/> every AM c. HCG – in childbearing women only d. Lactate now and every 8 hours X 3, then every AM until normal e. Prealbumin, then every Monday AM f. Random cortisol level STAT g. Urinalysis <input type="checkbox"/> ABG on arrival <input type="checkbox"/> ABG every AM <input type="checkbox"/> Amylase/Lipase on arrival <input type="checkbox"/> BNP <input type="checkbox"/> C. diff toxin <input type="checkbox"/> LFTs, STAT <input type="checkbox"/> every AM <input type="checkbox"/> every Monday AM <input type="checkbox"/> PT/aPTT/FIB and D-Dimer for DIC every _____ <input type="checkbox"/> Uric acid and acetone <input type="checkbox"/> TNI, cardiac isoenzymes <input type="checkbox"/> Type and Screen <input type="checkbox"/> Type and crossmatch for _____ units PRBC 		
		<p>14. Respiratory Therapy</p> <ul style="list-style-type: none"> <input type="checkbox"/> Oxygen per nasal cannula 2-5 liters/minute; Titrate to keep SpO₂ greater than 92%. Call physician STAT if patient requires greater than 5 liters/minute <input type="checkbox"/> Ventilator Settings Mode (circle one): AC SIMV TV: _____ (6-8 ml/kg, adjust to keep Ppl less than 30 mmH₂O) Rate: _____ (Adjust to keep PCO₂ greater than or equal to 35) PEEP: _____ (5-15 mmHg; adjust to keep SpO₂ greater than 92% and Ppl less than 30 mmH₂O) FiO₂ 100%; Titrate to 60% keeping SpO₂ greater than 92%) Other: <input type="checkbox"/> NTS every 6 hours and PRN X 24 hours <input type="checkbox"/> Chest percussion/postural drainage (CPPD) QID and PRN <input type="checkbox"/> Albuterol 2.5 mg in 3 ml NS nebulized every _____ hours <input type="checkbox"/> Ipratropium (Atrovent) 0.5 mg nebulized every _____ hours (Usually every 6-8 hours and may be given with Albuterol) <p>Document P:F ratio, PiP, Ppl on RT Flowsheet every 4 hours.</p>		

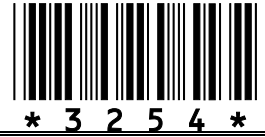
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		<p>15. Antibiotics – Pharmacy: Dose antibiotic appropriate for renal function.</p> <p>() Suspect MRSA: Vancomycin 1000 mg IV every 12 hours. Trough after third dose. If Vancomycin allergy: Linezolid (Zyvox) 600 mg IV every 12 hours.</p> <p>() Suspect Fungal Infection: Fluconazole (Diflucan) 800 mg IV times 1 dose, then 400 mg IV daily.</p> <p>() Life-threatening and Etiology Unclear (suspect intra-abdominal or skin source)</p> <p> a. Imipenem/cilastatin (Primaxin) 500 mg IV every 6 hours If carbapenem allergy: Levofloxacin (Levaquin) 750 mg IV daily plus Metronidazole (Flagyl) 500 mg IV every 8 hours.</p> <p> b. Vancomycin 1 gram IV every 12 hours If Vancomycin allergy: Linezolid (Zyvox) 600 mg IV every 12 hours</p> <p>() Biliary Source: Ampicillin/Sulbactam (Unasyn) 3 grams IV every 6 hours. If PCN allergy: Levofloxacin (Levaquin) 750 mg IV daily plus Metronidazole (Flagyl) 500 mg IV every 8 hours. May need an anti-fungal agent.</p> <p>() Intra-abdominal Source: Imipenem/cilastatin (Primaxin) 1 gram IV every 8 hours. If carbapenem allergy: Levofloxacin (Levaquin) 750 mg IV daily plus Metronidazole (Flagyl) 500 mg IV every 8 hours.</p> <p>() Petechial rash: Ceftriaxone (Rocephin) 2 grams IV every 12 hours.</p> <p>() Urinary Source: Piperacillin/Tazobactam (Zosyn) 4.5 grams IV every 8 hours. If penicillin allergy: Levofloxacin (Levaquin) 750 mg IV daily</p> <p>() Pulmonary Source: Piperacillin/Tazobactam (Zosyn) 4.5 grams IV every 6 hours plus Levofloxacin (Levaquin) 750 mg IV daily. If penicillin allergy: Levofloxacin (Levaquin) 750 mg IV daily plus Tobramycin – Pharmacy to dose.</p> <p>() If suspect Aspiration: Clindamycin (Cleocin) 600 mg IV every 8 hours.</p> <p>Other Antimicrobials:</p> <p>() Nystatin 500,000 units Swish and Swallow TID</p> <p>() Miconazole 2% powder. Apply to groin/axilla BID</p> <p>() _____</p> <p>() _____</p>		

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		<p>16. Steroids:</p> <p>a. If random cortisol is less than 15 mcg/dl: Administer</p> <ul style="list-style-type: none"> i. Hydrocortisone 100 mg IV every 8 hours ii. Fludrocortisone 0.5 mg PO/NG daily <p>b. If random cortisol 15 – 25 mcg/dl: Initiate Cosyntropin Stimulation Test</p> <ul style="list-style-type: none"> • Obtain another Cortisol level and immediately • Administer 0.25 mg of Cosyntropin IV • Repeat Cortisol levels every 30 minutes x 2 and 6 hours after Cosyntropin • Normal response = Cortisol level doubles in response to Cosyntropin. NO steroids. • Adrenal insufficiency: Serum cortisol levels fail to rise. <ul style="list-style-type: none"> i. Hydrocortisone ii. Fludrocortisone <p>c. If random cortisol is greater than 25 mcg/dl: NO steroids.</p> <p>*If vasopressors are discontinued, contact physician for steroid weaning orders.</p>		
		<p>17. Medications</p> <p>Oral care: All intubated and non-intubated patients receive Q-Care Sage oral care protocol.</p> <p>Stress ulcer prophylaxis</p> <ul style="list-style-type: none"> () Famotidine (Pepcid) 20 mg IV every 12 hours. Dose for renal insufficiency. () Esomeprazole (Nexium) 40 mg IV daily. <p>DVT prophylaxis</p> <ul style="list-style-type: none"> () Enoxaparin (Lovenox) 40 mg subcutaneously daily () Heparin unfractionated 5,000 units subcutaneously every 8 hours 		
		<p style="text-align: center;">Time of Patient Arrival: _____</p> <p>18. EARLY GOAL DIRECTED THERAPY (within 6 hours of diagnosis) The following goals should be achieved with Early Goal Directed Therapy. ScvO₂ capable central line or pulmonary artery catheter placement and arterial line are required immediately upon diagnosis of sepsis.</p> <ul style="list-style-type: none"> • CVP 8 – 12 mmHg • Mean arterial pressure (MAP) greater than or equal to 65 mmHg • SBP greater than or equal to 90 mmHg • ScvO₂ greater than or equal to 70% • UOP greater than 0.5 ml/kg/hour 		

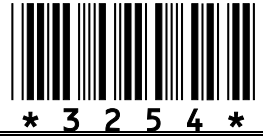
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		<p>19. OPTIMIZATION OF CVP Check CVP</p> <ul style="list-style-type: none"> • CVP less than 4 mmHg: Give albumin 5%, 250 ml x 1 • CVP less than 8 mmHg: Administer 500 ml, NS bolus • Recheck CVP every 15 minutes and repeat 500 ml NS bolus every 15 minutes x 3 doses until CVP is 8 – 12 mmHg. Call physician if further fluid resuscitation is required. • Target goal CVP of 8 – 12 mmHg (or 12 – 16 mmHg if on mechanical ventilation) achieved: Continue NS at 2 ml/kg/hour to maintain CVP of 8 – 12 mmHg. Continue to OPTIMIZATION OF MAP. 		
		<p>20. OPTIMIZATION OF MAP (mean arterial pressure) Check MAP</p> <ul style="list-style-type: none"> • MAP less than 65 mmHg, give vasopressor to maintain a MAP greater than or equal to 65 mmHg. <input type="checkbox"/> Norepinephrine _____mcg/minute (2 – 20 mcg/minute); then <input type="checkbox"/> Dopamine _____mcg/minute (5 – 20 mcg/kg/minute); then <input type="checkbox"/> Phenylephrine _____mcg/minute (40 – 200 mcg/minute); then <input type="checkbox"/> Vasopressin _____units/minute (0.01 – 0.06 units/minute); then <input type="checkbox"/> Epinephrine _____mcg/minute (1 – 10 mcg/minute) • When goal MAP of greater than or equal to 65 mmHg is achieved, continue to OPTIMIZATION OF ScvO₂. • Ask physician if next vasopressor should be added or if it replaces previous vasopressor. • Pharmacy: Maximum concentration on all vasopressor drips. 		
		<p>21. OPTIMIZATION OF ScvO₂ (Mixed venous O₂ Sat) Check ScvO₂</p> <ul style="list-style-type: none"> • ScvO₂ less than 70% and Hgb is less than 10 grams: Transfuse _____units packed red blood cells until Hgb is greater than or equal to 10 grams and recheck ScvO₂ and CBC after transfusion. • ScvO₂ is less than 70% and Hgb is greater than or equal to 10 grams: Infuse Dobutamine 2.5 mcg/kg/minute and increase every 30 minutes until ScvO₂ is at least 70%. Maximum dose of Dobutamine not to exceed 20 mcg/kg/minute. (Usual dose 2.5 – 10 mcg/kg/minute) • ScvO₂ is greater than or equal to 70%: Early goal directed therapy is complete. <p style="text-align: center;">***REASSESS EACH STEP EVERY 30 MINUTES TO MAINTAIN OPTIMIZATION GOALS***</p>		

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		<p>22. Notify physician STAT of any significant changes in the patient's status or treatment regimen:</p> <ul style="list-style-type: none"> a. HR greater than 120 per minute or less than 60 per minute b. MAP less than 65 or SBP less than 100 c. CVP less than 8 for 2 consecutive hours d. Temperature greater than 102 degrees F (greater than 38.9 degrees Celsius) e. SpO₂ less than 92 or RR greater than 26 f. Urine output less than 30 ml per hour for 2 consecutive hours g. ScvO₂ less than 65% or greater than 80% h. PAWP less than 10 or greater than 16 mmHg i. CI less than 2.5 or greater than 3.5 L/minute/m² j. Bladder pressure greater than 16 mmHg k. Change in mental status l. Worsening abdominal exam/distention 		

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