

Referring Physician _____ PCP Reason for consult _____ History of Present Illness <input type="checkbox"/> Patient is Nonverbal. History obtained from <input type="checkbox"/> Family <input type="checkbox"/> Medical records <p style="text-align: center; font-size: 24px; font-weight: bold;">www.e-medtools.com</p>	Allergies <input type="checkbox"/> Allergies reviewed <input type="checkbox"/> No drug allergies <input type="checkbox"/> No food allergies
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Review of Systems <small>See HPI WNL</small> <input type="checkbox"/> <input type="checkbox"/> Constitutional Fatigue, malaise, fever, chills, weight loss, change in appetite <input type="checkbox"/> <input type="checkbox"/> Eyes Vision changes, New pain, Scotomas <input type="checkbox"/> <input type="checkbox"/> ENT/mouth Nose bleeds, dental caries, dental abscesses <input type="checkbox"/> <input type="checkbox"/> Resp Dyspnea, Cough, Phlegm, Hemoptysis, Wheeze, <input type="checkbox"/> <input type="checkbox"/> CV Chest pain, diaphoresis, ankle edema, PND, syncope <input type="checkbox"/> <input type="checkbox"/> GI Emesis, dysphagia, GERD, abdominal pain, diarrhea, melena <input type="checkbox"/> <input type="checkbox"/> GU Change in urinary habits, hematuria, dysuria <input type="checkbox"/> <input type="checkbox"/> Musc Myalgias, recent trauma, bony fractures <input type="checkbox"/> <input type="checkbox"/> Skin/breasts Rashes, nonhealing areas, new moles <input type="checkbox"/> <input type="checkbox"/> Neuro New paresthesias, gait abnormalities, seizures, muscle weakness <input type="checkbox"/> <input type="checkbox"/> Endo Hair loss, polydipsia <input type="checkbox"/> <input type="checkbox"/> Heme/lymph Bleeding gums, unusual bruising, swollen lymph nodes <input type="checkbox"/> <input type="checkbox"/> Allergy/Immun Sinus probs, recurrent infections <input type="checkbox"/> <input type="checkbox"/> Psych Mood changes, agitation, psychosis, delirium, dementia	Medications <input type="checkbox"/> Medications reviewed <input type="checkbox"/> Changes as follows
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Past Medical and Social History <table style="width:100%; border: none;"> <tr> <td style="width:33%; border: none; vertical-align: top;"> <input type="checkbox"/> Asthma <input type="checkbox"/> Bronchiectasis <input type="checkbox"/> COPD <input type="checkbox"/> COP (BOOP) <input type="checkbox"/> Cystic Fibrosis <input type="checkbox"/> Histiocytosis <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Pulmonary Hypertension <input type="checkbox"/> Sarcoidosis <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Wegener's Granulomatosis <input type="checkbox"/> Narcolepsy <input type="checkbox"/> Obstructive Sleep Apnea <input type="checkbox"/> Restless Legs Syndrome <input type="checkbox"/> Alcohol <input type="checkbox"/> Tobacco ___ Pac ___ Yrs <input type="checkbox"/> Recreational drugs </td> <td style="width:33%; border: none; vertical-align: top;"> <input type="checkbox"/> Cerebral Artery Disease <input type="checkbox"/> Congestive Heart Failure <input type="checkbox"/> Coronary Artery Disease <input type="checkbox"/> Diabetes <input type="checkbox"/> Type I <input type="checkbox"/> Type II <input type="checkbox"/> GERD <input type="checkbox"/> Hepatic Dysfunction <input type="checkbox"/> HIV/AIDS <input type="checkbox"/> Hypertension <input type="checkbox"/> Inflammatory bowel disease <input type="checkbox"/> Malignancy </td> <td style="width:33%; border: none; vertical-align: top;"> <input type="checkbox"/> Neuro Musc Weakness <input type="checkbox"/> Occupational exposures <input type="checkbox"/> Pancreatitis <input type="checkbox"/> Peripheral Artery Disease <input type="checkbox"/> Seizure Disorder <input type="checkbox"/> Spleen <input type="checkbox"/> Renal Dysfunction <input type="checkbox"/> Rheumatoid arthritis <input type="checkbox"/> Thrombotic Disease <input type="checkbox"/> Thyroid Disease </td> </tr> </table> <input type="checkbox"/> Chemotherapy <input type="checkbox"/> Colonoscopy <input type="checkbox"/> ECHO/Stress Test <input type="checkbox"/> Mammogram <input type="checkbox"/> PFTs <input type="checkbox"/> PapSmear <input type="checkbox"/> Prior Intubations <input type="checkbox"/> Radiation exposure <input type="checkbox"/> Sleep Study <input type="checkbox"/> Steroid use	<input type="checkbox"/> Asthma <input type="checkbox"/> Bronchiectasis <input type="checkbox"/> COPD <input type="checkbox"/> COP (BOOP) <input type="checkbox"/> Cystic Fibrosis <input type="checkbox"/> Histiocytosis <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Pulmonary Hypertension <input type="checkbox"/> Sarcoidosis <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Wegener's Granulomatosis <input type="checkbox"/> Narcolepsy <input type="checkbox"/> Obstructive Sleep Apnea <input type="checkbox"/> Restless Legs Syndrome <input type="checkbox"/> Alcohol <input type="checkbox"/> Tobacco ___ Pac ___ Yrs <input type="checkbox"/> Recreational drugs	<input type="checkbox"/> Cerebral Artery Disease <input type="checkbox"/> Congestive Heart Failure <input type="checkbox"/> Coronary Artery Disease <input type="checkbox"/> Diabetes <input type="checkbox"/> Type I <input type="checkbox"/> Type II <input type="checkbox"/> GERD <input type="checkbox"/> Hepatic Dysfunction <input type="checkbox"/> HIV/AIDS <input type="checkbox"/> Hypertension <input type="checkbox"/> Inflammatory bowel disease <input type="checkbox"/> Malignancy	<input type="checkbox"/> Neuro Musc Weakness <input type="checkbox"/> Occupational exposures <input type="checkbox"/> Pancreatitis <input type="checkbox"/> Peripheral Artery Disease <input type="checkbox"/> Seizure Disorder <input type="checkbox"/> Spleen <input type="checkbox"/> Renal Dysfunction <input type="checkbox"/> Rheumatoid arthritis <input type="checkbox"/> Thrombotic Disease <input type="checkbox"/> Thyroid Disease	IV Medications: <input type="checkbox"/> Pressors <input type="checkbox"/> Diuretics <input type="checkbox"/> Heparin <input type="checkbox"/> Thrombolytic <input type="checkbox"/> Insulin <input type="checkbox"/> Sedation <input type="checkbox"/> Steroids <input type="checkbox"/> Antibiotics <input type="checkbox"/> TPN <input type="checkbox"/> Narcotics <input type="checkbox"/> Antiarrhythmics <input type="checkbox"/> Antihypertensives
<input type="checkbox"/> Asthma <input type="checkbox"/> Bronchiectasis <input type="checkbox"/> COPD <input type="checkbox"/> COP (BOOP) <input type="checkbox"/> Cystic Fibrosis <input type="checkbox"/> Histiocytosis <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Pulmonary Hypertension <input type="checkbox"/> Sarcoidosis <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Wegener's Granulomatosis <input type="checkbox"/> Narcolepsy <input type="checkbox"/> Obstructive Sleep Apnea <input type="checkbox"/> Restless Legs Syndrome <input type="checkbox"/> Alcohol <input type="checkbox"/> Tobacco ___ Pac ___ Yrs <input type="checkbox"/> Recreational drugs	<input type="checkbox"/> Cerebral Artery Disease <input type="checkbox"/> Congestive Heart Failure <input type="checkbox"/> Coronary Artery Disease <input type="checkbox"/> Diabetes <input type="checkbox"/> Type I <input type="checkbox"/> Type II <input type="checkbox"/> GERD <input type="checkbox"/> Hepatic Dysfunction <input type="checkbox"/> HIV/AIDS <input type="checkbox"/> Hypertension <input type="checkbox"/> Inflammatory bowel disease <input type="checkbox"/> Malignancy	<input type="checkbox"/> Neuro Musc Weakness <input type="checkbox"/> Occupational exposures <input type="checkbox"/> Pancreatitis <input type="checkbox"/> Peripheral Artery Disease <input type="checkbox"/> Seizure Disorder <input type="checkbox"/> Spleen <input type="checkbox"/> Renal Dysfunction <input type="checkbox"/> Rheumatoid arthritis <input type="checkbox"/> Thrombotic Disease <input type="checkbox"/> Thyroid Disease		

Surgeries <input type="checkbox"/> Denies surgical history	Family Medical History <input type="checkbox"/> Asthma <input type="checkbox"/> Cerebral Artery Disease <input type="checkbox"/> Congestive Heart Failure <input type="checkbox"/> COPD <input type="checkbox"/> Coronary Artery Disease <input type="checkbox"/> Diabetes <input type="checkbox"/> Type I <input type="checkbox"/> Type II <input type="checkbox"/> Hepatic Dysfunction <input type="checkbox"/> Hypertension <input type="checkbox"/> Malignancy <input type="checkbox"/> Neuromuscular Disease <input type="checkbox"/> Pancreatitis <input type="checkbox"/> Periph Artery Disease <input type="checkbox"/> Renal Dysfunction <input type="checkbox"/> Seizure Disorder <input type="checkbox"/> Thrombotic Disorder <input type="checkbox"/> Thyroid Disease
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Exposure to <input type="checkbox"/> Hot tub <input type="checkbox"/> Pressure washings <input type="checkbox"/> Pets/Feathers <input type="checkbox"/> Chemicals <input type="checkbox"/> Organic/Inorganic dusts	Occupations	Travel history
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Exam	Ventilator Settings	Mode	Rate	Tidal Vol	PEEP	PS	FiO2	PO2/FiO2	
T	*General	<input type="checkbox"/> Alert	www.e-medtools.com						
P	*ENT	<input type="checkbox"/> Nasal mucosa wnl	<input type="checkbox"/> Dentition wnl	<input type="checkbox"/> Oropharynx wnl	Mallampati	<input type="checkbox"/> I	<input type="checkbox"/> II	<input type="checkbox"/> III	<input type="checkbox"/> IV
R	*Neck	<input type="checkbox"/> Normal to palpation	<input type="checkbox"/> Thyroid wnl	<input type="checkbox"/> No JVD					
BP	*Resp	<input type="checkbox"/> Clear to auscultation	<input type="checkbox"/> Clear to percussion	<input type="checkbox"/> No respiratory distress		<input type="checkbox"/> No chest wall defects			
Wt	*CV	<input type="checkbox"/> Clear S1 S2	<input type="checkbox"/> No murmur	<input type="checkbox"/> No gallop	<input type="checkbox"/> No rub	<input type="checkbox"/> Peripheral pulses wnl	<input type="checkbox"/> No peripheral edema		
Sats	*GI	<input type="checkbox"/> No palpable masses <input type="checkbox"/> No hepatosplenomegaly <input type="checkbox"/> No hepatojugular reflux							
I/O	Lymph	<input type="checkbox"/> No lymphadenopathy							
UO(ml/kg/hr)	Musc	<input type="checkbox"/> Tone wnl	<input type="checkbox"/> Gait wnl						
CVP	Extrem	<input type="checkbox"/> No clubbing <input type="checkbox"/> No cyanosis							
PCWP	Skin	<input type="checkbox"/> No rashes, ecchymoses, nodules, ulcers							
SVR	Neuro	<input type="checkbox"/> Oriented	<input type="checkbox"/> Affect wnl		Glasgow Coma Score		<input type="checkbox"/> V	<input type="checkbox"/> M	APACHE II Score

Labs/Tests	Impression/Plan
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SAMPLE

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This patient may benefit from

- Aggressive pulmonary toilet
- DVT prophylaxis
- Stress ulcer prophylaxis
- Daily sedation vacation
- Head of bed elevated > 30° all times
- Intense glycemic control
- Pneumonia vaccine prior to discharge
- Influenza vaccine prior to discharge
- Changing central lines and sending tip for culture
- Physical therapy
- Enteral/Parenteral feeds
- Smoking cessation aids
- Pulmonary Rehabilitation
- PPD Testing

Signature/Date:

CODE STATUS: Full code Do Not Attempt Resuscitation

Data Reviewed: ER Notes Old Chart EMS Note ECG Nursing Notes & Vitals log Labs X Rays MRI US CT PFTs

Coordination of care: Discuss w/ER MD Discuss w/HCOA Discuss w/PCP Case Mgmt or SW Pharmacy Nutrition team Physical therapy Respiratory therapy Nursing

Definitions

Sepsis
 Positive blood culture AND
 Heart rate \geq 90
 Temp \leq 36 C or \geq 38 C
 Resp rate \geq 20 OR
 PCO2 \leq 32 on ABG
 WBC \leq 4000 OR
 \geq 12000 OR
 \geq 10% Bands

Without a positive blood culture, the above findings are consistent with Systemic Inflammatory Response Syndrome (SIRS)

Severe Sepsis

The patient must meet the above criteria AND have hypotension, hypoperfusion or organ dysfunction.
 Hypotension is defined as
 SBP < 90
 MAP \leq 70 mmHg
 OR drop of \geq 40 mmHg

Septic Shock

The patient must meet the above criteria AND have refractory shock (hypotension not responsive to fluid resuscitation).
 Systolic BP \leq 90, or MAP \leq 70

Acute Lung Injury

Bilateral infiltrates on radiograph
 PO2/FiO2 201-300 regardless of PEEP
 No evidence of elevated left atrial pressure OR PCWP < 18 mmHg

Acute Respiratory Distress Syndrome (ARDS)

PO2/FiO2 \leq 200

Sepsis Treatment Goals

Institute for Healthcare Improvement (www.ihl.org)

- Blood cultures before administration of broad spectrum antibiotics
- Broad spectrum antibiotics given in \leq 1 hr (ICU admit) In \leq 3 hr (ED admit)
- CVP of 8-12mmHg in \leq 6 hours
- ScvO2 \geq 70% OR SvO2 \geq 65% in \leq 6 hours
- Low dose steroids, if applicable
- Drotrecogin Alfa administrations in \leq 24 hours, if applicable
- Glycemic control with median blood glucose of < 150 within 24 hours
- Inspiratory plateau pressure of < 30cm H2O With a tidal volume of 6 ml/kg (based on Ideal Body Weight)

Ventilator Strategies (www.ihl.org)

- Head of bed elevated by \geq 30 degrees
- Daily sedation vacation AND assessment of ability to wean from ventilator
- Stress ulcer prophylaxis
- Deep Venous Thrombosis prophylaxis

Oxygen Coverage

PO2 \leq 55 OR Sats \leq 90%
 PO2 56-59 OR Sats 89%
 WITH
 CHF
 Cor pulmonale
 P wave \geq 2mm lead II, III or AVF
 Hct \geq 56%
 Sats \leq 88% for $>$ 5 minutes during sleep

NOT COVERED

PO2 $>$ 59 OR Sats $>$ 89%

APACHE II Score - You are graded within the 2 hours of ICU Admission

APACHE II: a severity of disease classification system Crit Care Med 1985 13(10):818-29
 An evaluation of outcome from intensive care in major medical centers Ann Intern Med 1986 104(3):410
 Prediction of outcome from intensive care: a prospective cohort study comparing Acute Physiology and Chronic Health Evaluation II and III prognostic systems in a United Kingdom intensive care unit Crit Care Med 1997 25(1):9-15

Physiologic Variable	0	1	2	3	4
Temperature	96.8-101.2	101.3-102.1 93.2-96.7	89.6-93.1	102.2-105.7	$>$ 105.7
Heart Rate	70-109	n/a	110-139 55-69	140-179 40-54	$>$ 161 $<$ 50
MAP (2 x DBP + SBP)/3	70-109	70-109	40-59	30-59	$>$ 181 $<$ 40
Resp Rate	12-24	25-34 10-11	6-9	35-49	$>$ 49 $<$ 6
Oxygenation					
If FIO2 $>$ 49%, A-a	$<$ 200		200-349	350-499	$>$ 500
If FIO2 $<$ 50%, PO2	$>$ 70	61-70		55-60	$<$ 54
Serum Na+	130-139	150-154	155-159 120-129	160-169 111-119	$>$ 170 $<$ 111
Serum K+	3.5-5.4	5.5-5.9 3.0-3.4	2.5-2.9	6.0-6.9	$>$ 7.1 $<$ 2.5
Serum Creatinine (Double if in ARF)	0.6-1.4	n/a	1.5-1.9 1.0-2.9	2.0-3.4	$>$ 3.4
Arterial pH	7.33-7.49	7.50-7.59	7.25-7.32 7.20-7.29	7.60-7.69 7.15-7.24	$>$ 7.6 $<$ 7.1
WBC	3.0-14.9	15-19.9	n/a	n/a	$>$ 39 $<$ 1.0
Hematocrit	30-45.9	46-49.9	50-59.9 20-29.9	n/a	$>$ 59 $<$ 20
GCS Score = 15 - GCS Score (Eye + Motor + Verbal)					

Total APACHE II Score = Acute Physiology Score + Chronic Health Points + Age Points

Chronic Health Points for APACHE II
 Non-operative, or emergency procedure & any conditions below 5
 Elective operation & any conditions below 2

Cirrhosis with ascites, renal dysfunction OR end-stage renalopathy; class IV angina; chronic hypoxia; hypercarbia or polycythemia; chronic liver disease; immunodeficiency

Age Points for APACHE II
 \leq 45 = 0
 46-54 = 2
 55-64 = 3
 65-74 = 5
 $>$ 74 = 6

Physiology Score _____
Chronic Health Points (CHP) Score _____
Age Score _____

Total APACHE II Score _____

General Acid-Base Rules

Acute Resp Δ pH = -0.008 x Δ PCO2
 Δ HCO3 = 0.1 x Δ PCO2 (+/-3)

Chronic Resp PCO2 = 2.4(HCO3) - 22
 Δ HCO3 = 0.35 x Δ PCO2 (+/-4)

Metabolic PCO2 = 1.5(HCO3) + 8 +/-2
 PCO2 ~ last 2 digits pH
 Δ PCO2 = 1.2 x Δ HCO3

Acidosis Δ pH = 0.008 x Δ PCO2
 Δ HCO3 = -0.2 x Δ PCO2
 (usually not to less than 18 mEq/L)

Alkalosis Δ pH = 0.008 x Δ PCO2
 Δ HCO3 = -0.4 x Δ PCO2
 (usually not to less than 18 mEq/L)

Physiologic Score _____
Temp _____

HR _____
MAP _____

RR _____
Oxygenation _____

Serum Na _____
Serum K _____

Serum Creatinine _____
Art pH _____

WBC _____
Hct _____

GCS _____
 15 - GCS Score (Eye + Motor + Verbal)

Physiology Score _____
Glasgow Coma Score _____

Eye response _____
 1 - None
 2 - Eyes open to pain
 3 - Opens to verbal command
 4 - Open spontaneously

Verbal response _____
 1 - None
 2 - Incomprehensible sounds
 3 - Inappropriate words
 4 - Confused
 5 - Oriented

Motor Response _____
 1 - None
 2 - Extension to pain
 3 - Flexion to pain
 4 - Withdrawal from pain
 5 - Localizes pain
 6 - Obeys commands

Total Score < 9 indicates severe brain injury LANCET (ii) 81-83, 1974.

Predicted Mortality Based on APACHE II Score

Score	Interpretation
0-4	~4% death rate
5-9	~8% death rate
10-14	~15% death rate
15-19	~25% death rate
20-24	~40% death rate
25-29	~55% death rate
30-34	~75% death rate
over 34	~85% death rate