

Pocket T-Tools



T-System®

2010 - 2011 Edition

This copy of Pocket T-Tools belongs to:

Name

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Important Notice: "Pocket T-Tools" is a compilation of evidence-based clinical guidelines and reference information useful to the practice of emergency medicine. Exhaustive efforts have been made to make this booklet as accurate as possible. However, despite our best efforts, this booklet may contain errors and omissions. Users of the information contained in the booklet assume all risks associated with the use of this information. T-System is not responsible for errors, omissions, or any consequences that may arise from the use of this information. The user acknowledges and agrees that a healthcare professional's professional duty to the patient in providing healthcare services lies solely with the healthcare professional providing patient care services. No physician-patient relationship is established with T-System or any contractor, agent, employee, officer, director, or shareholder of T-System. The user also understands and agrees that the clinical guidelines contained in this booklet may change with time, and it is the responsibility of the user to up-date and amend these guidelines when necessary. "Pocket T-Tools" should be used as a reference only, and is not intended to replace or guide the clinical judgment of any healthcare professional.

Pocket T-Tools

(Companion to the Clinical Tool Boxes in The T System® for Physicians)

I. Risk Stratification Rules and Guidelines Acute Coronary Syndrome (ACS) – Risk Assessment

❖ ACC/AHA Guidelines

	High	Intermediate	Low
History	<ul style="list-style-type: none">• Chest or left arm pain or discomfort typical of prior angina• Known history of CAD or MI	<ul style="list-style-type: none">• Chest or left arm pain or discomfort• Age > 70• Male• Diabetes	<ul style="list-style-type: none">• Probable ischemic symptoms without any high or intermediate likelihood features• Recent cocaine use
Exam	<ul style="list-style-type: none">• Transient mitral regurgitation• Decreased BP• Diaphoresis• Pulmonary edema• Rales	Extracardiac vascular disease	Chest discomfort reproduced by palpation
ECG	New ST-segment deviation (≥ 0.05 mV) or T-wave inversion (≥ 0.2 mV) while having symptoms	Stable chronic changes (Q waves, abnormal ST segments or T waves)	Normal or T-wave flattening or inversion in leads with dominant R waves
Cardiac Markers	Elevated	Normal	Normal

Community Acquired Pneumonia (CAP) – Risk Assessment

❖ CURB-65 Score (1 point each)

- Confusion
- Uremia (BUN >19)
- Respiratory rate – high (≥ 30)
- Blood pressure – low (SBP <90 or DBP ≤ 60)
- 65 (age ≥ 65)

MANAGEMENT

Score	Risk of Death	Disposition
0 or 1	0.6 – 2.7%	outpatient*
2	6.8%	inpatient or closely supervised outpatient
3 or more	14.0 – 27.8%	inpatient (consider ICU)

* outpatient only if normal SaO₂, and reliable, well appearing patient with close follow-up

❖ PORT Score / Pneumonia Severity Index

Step 1: Assess Mortality Risk

1. Patient >50 years of age
2. History of following:
 - o Neoplasm
 - o Cerebrovascular disease
 - o Renal/liver disease
3. Exam:
 - o New AMS
 - o HR \geq 125
 - o RR \geq 30
 - o SBP < 90
 - o Temp < 35 or \geq 40°C

None of above: Risk Class I

Step 2: Calculate the PORT Score

Age (in yrs)	_____
Nursing home resident	10
Neoplastic disease	30
Liver disease	20
Congestive heart failure	10
Cerebrovascular disease	10
Renal disease	10
Altered mental status	20
Respiratory rate \geq 30	20
Systolic blood pressure <90	20
Temp <35 or \geq 40°C	15
HR \geq 125	10
pH <7.35	30
BUN \geq 30	20
Sodium <130	20
Glucose \geq 250	10
Hematocrit <30	10
PO2 <60 or sat <90	10
Pleural effusion	10
Female sex	-10
Total Score	_____

MANAGEMENT

Points	Risk Class	30 Day Mortality	Disposition
--	I	0.1 - 0.4%	outpatient*, PO antibiotics
<70	II	0.6 - 0.9%	outpatient*, PO antibiotics
71-90	III	0.9 - 2.8%	outpatient* or OBS unit, PO antibiotics
91-130	IV	8.5 - 9.3%	inpatient (floor), IV antibiotics
>130	V	27 - 31.1%	inpatient (unit), IV antibiotics

* outpatient only if normal SaO₂, and reliable, well appearing patient with close follow up

Deep Venous Thrombosis (DVT) - Risk Assessment

❖ Well's Criteria

Points

- Active cancer (pt receiving tx for cancer w/in the previous 6 mos or currently receiving palliative tx) 1.0
- Paralysis, paresis, or recent plaster immobilization of the lower extremities 1.0
- Recently bedridden for ≥ 3 days, or major surgery w/in the previous 12 wks requiring gen or reg anesthesia 1.0
- Tenderness along the distribution of deep venous syst 1.0
- Entire leg swollen 1.0
- Calf swelling at least 3 cm larger than that on the asymptomatic side (10 cm below tibial tuberosity) 1.0
- Pitting edema confined to the symptomatic leg 1.0
- Collateral superficial veins (nonvaricose) 1.0
- Previously documented deep vein thrombosis 1.0
- Alternate dx at least as likely as deep vein thrombosis -2.0

Total Score _____

Note: Negative D-Dimer only useful if total < 2

MANAGEMENT

Score of 2 or higher indicates that the probability of DVT is likely and ultrasound should be performed regardless of D-Dimer.

Score of less than 2 indicates that the probability of DVT is unlikely, especially if the D-Dimer is negative.

Pulmonary Embolism (PE) – Risk Assessment

❖ Pulmonary Embolus Rule-out Criteria (PERC) Rule

- Age < 50
- SaO₂ $> 94\%$
- No unilateral leg swelling
- No Hemoptysis
- Pulse < 100
- No recent trauma or surgery
- No prior DVT or PE
- No hormonal use

Utility: a clinically “low risk” patient meeting ALL of the above criteria has $< 2\%$ chance of a PE; usually no further work-up necessary

❖ Wells Criteria

	Points
• Suspected DVT (minimum of leg swelling and pain with palpation)	3.0
• An alternative diagnosis is less likely than PE	3.0
• Heart rate >100 beats per minute	1.5
• Immobilization or surgery in the previous 4 weeks	1.5
• Previous DVT or PE	1.5
• Hemoptysis	1.0
• Malignancy (on treatment, treated in the past 6 months or palliative)	1.0
Total Score	_____

Note: Negative D-Dimer only useful if total ≤ 4

MANAGEMENT

Points	Risk of PE	D-Dimer	Imaging
0 - 1.5	low	neg	no imaging required
		pos	CT or VQ
2 - 4	med	neg	no imaging required
		pos	CT or VQ
4.5 - 6	med	n/a	CT or VQ
>6	high	n/a	CT or VQ, if neg consider LE imaging

Stroke with Atrial Fibrillation – Risk Assessment

❖ CHADS2

- Congestive Heart Failure (1 point)
- Hypertension – SBP>160 (1 point)
- Age >75 (1 point)
- Diabetes (1 point)
- Prior Stroke or TIA (2 points)

Note: Mitral Stenosis and Prosthetic Valve carry similar risk as prior Stroke or TIA

MANAGEMENT

Points	Risk	Recommended Intervention
0	Low	Aspirin 81-325mg daily
>1	Intermediate	Warfarin or Aspirin
>2	High	Warfarin - with goal of INR 2-3

Suicide – Risk Assessment

❖ SAD PERSONS (1 point each)

- Sex – male
- Age <24 or >65
- Depression (or bipolar disorder)
- Prior attempt
- ETOH abuse/dependence
- Rational thought lost (psychosis/schizophrenia)
- Social support lacking
- Organized plan
- No spouse (divorced, widowed, separated, single)
- Sickness (chronic/debilitating/terminal)

Note: other significant risk factors that may favor admission include seriousness of the attempt, availability of a lethal weapon, recent life stressors (divorce/loss of job), severe hopelessness, attraction to death/reckless behavior, family history of suicide

MANAGEMENT

Points	Disposition
0-1	usually little risk, outpatient follow-up
2-4	concern, needs social/family support or observation
5-6	strongly consider hospitalization
7-10	very high risk, committal if necessary

Syncope – Risk Assessment

❖ San Francisco Syncope Rule – High Risk Associations

- History of congestive heart failure
- Hematocrit <30%
- Abnormal ECG result (new changes or non-sinus rhythm)
- Complaint of shortness of breath
- Systolic blood pressure <90

Transient Ischemic Attack (TIA) - Risk Assessment

❖ Johnston/ABCD Score

- A - Age: 1 pt for age ≥ 60 years
- B - Blood pressure: 1 pt for hypertension at the acute evaluation
- C - Clinical features: 2 pts for focal weakness, 1 pt for speech disturbance w/o weakness
- D - Duration of symptoms; 1 pt for 10-59 min, 2 pts for ≥ 60 min

MANAGEMENT

Scores: <4 - low risk (may discharge); 4 or 5 - intermediate risk (consider admission); 6- high risk (admit)

II. Imaging Guidelines

Cervical / C-Spine Imaging (following blunt cervical trauma)

❖ Cervical Vessels (Carotids / Vertebrales)

Consider imaging (CTA/MRA) for any of the following:

- Injury mechanism compatible with severe hyperextension or flexion and rotation of the neck
- Significant soft-tissue injury of the anterior neck
- Cervical spine fracture
- Displaced midface fracture or mandibular fracture associated with a major injury mechanism
- Basilar skull fracture involving the sphenoid, mastoid, petrous, or foramen lacerum

❖ C-Spine

A. NEXUS Criteria

Radiography is indicated unless the patient meets all of the following criteria:

- No posterior midline cervical tenderness
- No evidence of intoxication
- A normal level of alertness
- No focal neurologic deficit
- No painful distracting injuries

B. Canadian Rule

Radiography is indicated for any of the following high risk factors:

- Age \geq 65
- Dangerous mechanism
 - Fall from elevation \geq 3ft or 5 stairs
 - Axial load to head (e.g. diving)
 - High speed MVA ($>$ 60mph), rollover or ejection
 - Collision involving (ATV)
 - Bicycle collision

Radiography is indicated if patient is unable to rotate neck actively (45°)

Low risk factors that allow for assessment of neck range of motion

- Simple rear-end MVA (not pushed into oncoming traffic, hit by large bus or truck, rollover or in a high-speed vehicle)
- Sitting position in emergency department
- Ambulatory at any time
- Delayed (not immediate) onset of neck pain
- Absence of midline cervical-spine tenderness

Head CT Rules (following minor head trauma)

❖ Canadian CT Head Rule (CCHR)

- High risk (for neurosurgical intervention)
- GCS score < 15 at 2 hours or more after injury
- Suspected open or depressed skull fx
- Any sign of basilar skull fx
- ≥ 2 episodes of vomiting
- Age ≥ 65 - exclusions: anticoagulation, age ≤ 16
- Medium risk (for brain injury on CT)
- > 30 min amnesia of events prior to injury
- Auto vs ped, ejection, fall > 3 ft or from ≥ 5 stairs

❖ New Orleans Criteria (NOC)

- head CT is indicated for patients with minor head injury and any of the following:

- Headache
- Vomiting
- Age >60 - exclusions: coagulopathy, GCS ≤ 15
- Drug or alcohol intoxication
- Persistent anterograde amnesia
- Visible trauma superior to clavicle
- Seizure

Note: CT should be considered for patients in any of the exclusion groups, especially if any of the high or medium risk signs are present

Indications for X-Rays

❖ Ottawa Ankle/Foot Rule

Any pain in the malleolar or midfoot area, and any one of the following:

- Bone tenderness along the distal 6 cm of the posterior edge of the fibula or tip of the lateral malleolus
- Bone tenderness at the base of the fifth metatarsal (for foot injuries).
- Bone tenderness at the navicular bone (for foot injuries).
- An inability to bear weight for 4 steps both immediately and in the ED.

❖ Knee Rules

A. Pittsburgh Rule

- Recent fall or blunt trauma mechanism
- Age less than 12 years or older than 50 years
- Inability to bear weight for 4 steps in the ED

B. Ottawa Rule

- Age 55 years or older
- Tenderness at the head of the fibula
- Isolated tenderness of the patella (no bone tenderness of knee other than patella)
- Inability to flex knee to 90 degrees
- Inability to bear weight for 4 steps both immediately and in the ED regardless of limping

III. Treatment Guidelines

Empiric Antibiotics Selection for Community Acquired Pneumonia (CAP)

❖ IDSA/ATS Guidelines

Outpatient treatment

- Previously healthy and no risk factors for drug-resistant *S. pneumoniae* (DRSP) infection:
 - Macrolide (azithromycin, clarithromycin, or erythromycin)
 - Doxycycline (alternate)
- Presence of comorbidities, such as chronic heart, lung, liver, or renal disease; diabetes mellitus; alcoholism; malignancies; asplenia; immunosuppressing conditions or use of immunosuppressing drugs; use of antimicrobials within the previous 3 months (in which case an alternative from a different class should be selected); or other risk for DRSP infection:

- Respiratory fluoroquinolone (moxifloxacin, gemifloxacin, or levofloxacin [750 mg])
- β -lactam plus a macrolide (High-dose amoxicillin [e.g., 1 g 3 times daily] or amoxicillin-clavulanate [2 g 2 times daily] is preferred; alternatives include ceftriaxone, cefpodoxime, and cefuroxime [500 mg 2 times daily]; doxycycline is an alternative to the macrolide.)
- In regions with a high rate of macrolide-resistant *S. pneumoniae*, consider the use of alternative agents listed in the above recommendation for any patient, including those without comorbidities.

❖ Joint Commission Guidelines

Inpatient, non-ICU treatment

- β -lactam (ceftriaxone, cefotaxime, ampicillin/sulbactam, ertapenem) plus macrolide (erythromycin, clarithromycin, azithromycin) or
- Antipneumococcal quinolone (levofloxacin [750 mg], moxifloxacin, gemifloxacin) or
- β -lactam plus doxycycline or
- If <65 and no risk factors for DRSP, macrolide monotherapy can be used

Inpatient, ICU treatment

- β -lactam (ceftriaxone, cefotaxime, ampicillin/sulbactam) plus macrolide (erythromycin, azithromycin) or
- β -lactam plus antipneumococcal quinolone (levofloxacin [750 mg], moxifloxacin) or
- If β -lactam allergy: antipneumococcal quinolone plus aztreonam

Pseudomonal risk (ICU or non-ICU) treatment

- Antipseudomonal β -lactam (cefepime, imipenem, meropenem, piperacillin/tazobactam) plus antipseudomonal quinolone (levofloxacin [750 mg], ciprofloxacin) or
- Antipseudomonal β -lactam plus aminoglycoside (gentamicin, tobramycin, amikacin) plus either an antipneumococcal quinolone (levofloxacin [750 mg], Moxifloxacin) or macrolide (erythromycin, azithromycin)
- If β -lactam allergy: aztreonam plus antipneumococcal quinolone plus an aminoglycoside (may omit aminoglycoside for renal insufficiency)

Note: Pseudomonas risk must be documented

Early Goal Directed Therapy (EGDT) for Sepsis

❖ Systemic Inflammatory Response Syndrome (SIRS)

Inclusion Criteria:

Must meet 2 of 4 of the following SIRS criteria:

- T $<36^{\circ}\text{C}$ or $>38^{\circ}\text{C}$
- HR >90
- RR >20 or $\text{PCO}_2 <32$
- WBC >12 or <4 or $>10\%$ bands

AND SBP ≤ 90 (after fluid challenge of 20-30 mL/kg) or lactate ≥ 4

Exclusion Criteria:

- Age <18
- Pregnancy
- Acute CVA
- Drug overdose
- Burn injury
- Trauma
- Seizure
- Acute coronary syndrome
- Acute pulmonary edema
- Status asthmaticus
- Cardiac dysrhythmia (as primary diagnosis)
- Contraindication to central venous access
- Active gastrointestinal bleed
- Requirement for immediate surgery
- Uncured cancer (during chemotherapy)
- Immunosuppression (transplant or systemic dz)
- Do not resuscitate orders

MANAGEMENT

blood cultures
empiric antibiotics within 1 hour of recognition
initial fluid bolus of 20-30 ml/kg NS for SBP <90
central line (capable of CVP and ScVO_2 monitoring)
fluid bolus (500 ml NS q30 min prn) to CVP 8-12 for SBP ≤ 90
vasopressors or vasodilators to maintain MAP between 65 and 90
raise Hct with RBCs to >30 for $\text{ScVO}_2 <70$
dobutamine titrated for $\text{ScVO}_2 <70$
H ₂ blocker / proton pump inhibitor

Thrombolytic Therapy in Acute Ischemic Stroke

❖ Guidelines for IV tPA

Inclusion Criteria:

- 18 yrs or older
- Ischemic stroke with measurable deficit (using NIH Stroke Scale)
- Onset <3 hrs

OR EXTENDED WINDOW - Onset between 3 and 4.5 hrs

Exclusion Criteria:

- Evidence of intracranial hemorrhage on CT
- Presentation suggests SAH
- CT reveals defined area of hypodensity
- Evidence of AVM, neoplasm, aneurysm
- Seizure at stroke onset
- Active internal bleeding or acute trauma
- Platelet count < 100,000
- Heparin within 45 hrs (PTT >lab normal limits)
- INR >1.7 (warfarin use)
- Use of IIb/IIIa inhibitors within 24 hrs
- Intracranial / intraspinal surgery, head trauma, or prior CVA within 3 months
- Arterial puncture of non-compressible vessel within 7days
- Lumbar puncture within 7days
- At the time of treatment, SBP > 185 mm Hg or DBP >110 mm Hg despite repeated measurements

Additional exclusion items for extended window only

- Patient on anticoagulant regardless of INR
- Patient older than 80
- History of both stroke and diabetes
- Baseline NIHSS score > 25

Relative Contraindications:

- CT reveals extensive area of infarct defined as > 1/3 of the MCA territory
- Minor or rapidly improving stroke symptoms
- Within 14 days of major surgery or serious trauma
- AMI within 3 months
- GI or GU bleed within 21 days
- Post-AMI pericarditis
- Blood glucose level (<50 or >400mg/dL)

IMPORTANT:

1. All Inclusion Criteria must be met and all Exclusion Criteria must be absent BEFORE GIVING IV tPA.
2. If a patient has any Relative Contraindications, expert consultation should be obtained BEFORE GIVING IV tPA.
3. If considering EXTENDED WINDOW, additional items for extended window only in the Exclusion Criteria must all be absent BEFORE GIVING IV tPA.

IV. Pediatric Fever Guidelines

Excerpted from: *American College of Emergency Physicians. Clinical Policy for Children Younger than Three Years Presenting to the Emergency Department With Fever. Ann Emerg Med. 2003;42:530*

- Infants between 1 and 28 days old with a fever should be presumed to have a serious bacterial infection. (level A)
Note: Full septic work-up and admission recommended for fever in this age group
- A response to antipyretic medication does not change the likelihood of a child having serious bacterial infection and should not be used for clinical decision making. (level A)
- A chest radiograph should be obtained in febrile children aged younger than 3 months with evidence of acute respiratory illness. (level B)
- There is sufficient evidence to determine when a chest radiograph is required in a febrile child aged older than 3 months. Consider a chest radiograph in children older than 3 months with a temperature greater than 39°C (102.2°F) and a WBC count greater than 20K. A chest radiograph is usually not indicated in febrile children aged older than 3 months with temperature less than 39°C (<102.2°F) without clinical evidence of acute pulmonary disease. (level C)
- Children aged younger than 1 year with fever without a source should be considered at risk for urinary tract infection. (level A)
- Females aged between 1 and 2 years presenting with fever without source should be considered at risk for having a urinary tract infection. (level B)
- Urethral catheterization or suprapubic aspirations are the best methods for diagnosing urinary tract infection. (level B)
Note: Indications for urethral catheterization include: all females <24 months; uncircumcised males <12 months; circumcised males <6 months
- Obtain a urine culture in conjunction with other urine studies when urinary tract infection is suspected in a child aged younger than 2 years because a negative urine dipstick or urinalysis result in a febrile child does not always exclude urinary tract infection. (level B)
- The current prevalence of occult bacteremia among febrile children aged 3 to 36 months is most likely between 1.5% and 2%. Preliminary studies indicate that approximately 5% to 20% of patients aged 3 to 36 months with occult bacteremia will develop significant sequelae (e.g. pneumonia, cellulitis, septic arthritis, osteomyelitis, meningitis, sepsis). Approximately 0.3% of previously

well children (aged 3 to 36 months) who have a fever without source will develop significant sequelae; however, only 0.03% will develop sepsis or meningitis. (no level specified)

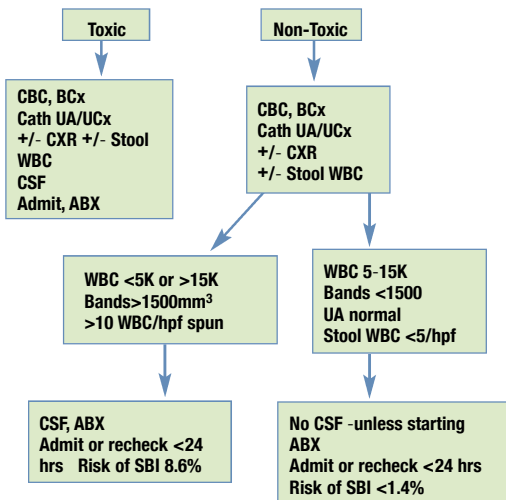
- Consider empiric antibiotic therapy for previously healthy, well-appearing children, aged 3 to 36 months, with fever without a source with a temperature of 39.0°C or greater ($\geq 102.2^{\circ}\text{F}$) when in association with a WBC count of 15K greater if obtained. (level B)
- In those cases when empiric antibiotics are not prescribed for children who have fever without a source, close follow-up must be ensured. (level C).

❖ High Risk Criteria for Serious Bacterial Infection (SBI)

- age ≤ 28 days
- toxic appearance
- temp $>39^{\circ}\text{C}$
- underlying med problems
- irritability/non-consolability
- fever duration > 48 hrs
- absolute band count $>1.5\text{K}$
- WBC count $>15\text{K}$ or $<5\text{K}$
- weak cry/suck

Note: most studies involve children up to 3yrs of age

❖ Guideline for ED evaluation of infants 29-90 days of age with fever (Temp $>100.4^{\circ}\text{F}$) without a source:



V. Useful Mnemonics for Emergency Medicine

❖ **ABC's - Critical Patient Evaluation and Treatment:**

A B C⁴ D² M² T² V²

Airway (assess, secure, maintain)

Breathing (assess, O₂, Pulse Ox, ETCO₂)

Circulation (assess, IV access, fluids)

C-Spine (consider, stabilize)

Consciousness (AVPU)

Clothing (remove)

Drugs (emergent, reversal agents)

Diagnostic Tests (labs, imaging)

Monitors (cardiac, BP, O₂ sat, ETCO₂)

Medications (and allergies)

Tubes (chest, NG, foley, ET)

Transfer (to a higher level facility or specialist)

Vitals (initial)

Vitals (repeat)

❖ **Altered Mental Status/Coma - Etiologies (Differential Diagnoses):**

A E I O U T I P S

Alcohol

Epilepsy/Electrolytes (low Na⁺)

Infection (meningitis, encephalitis, sepsis)

Overdose/Opiates

Uremia (plus hepatic encephalopathy)

Trauma (head-especially subdural hematoma)

Insulin (hypoglycemia/DKA)/Inhalation (CO, cyanide)

Psycho-genic

Stroke (includes ICH/SAH)/Shock

❖ **Altered Mental Status/Coma - Etiologies (Differential Diagnoses):**

M I D A S T O U C H

Meningitis (includes encephalitis)/Metabolic (low Na⁺)

Intoxication (alcohol, CNS depressants)

Diabetes (hypoglycemia, DKA)

Anoxia/hypoxia (includes inhalation – CO, cyanide)

Seizure (postictal, persistent)

Trauma (head - especially subdural hematoma)

Overdose/Opiates

Uremia (plus hepatic encephalopathy)

CVA

Hemorrhage (especially subarachnoid)

❖ ARDS - Etiologies (Differential Diagnoses):

STIFFEN UP IN ARDS

Sepsis

Inhalation (O₂ toxicity/toxic gasses)

Trauma

Near drowning

Infection

Fat emboli

Aspiration/altitude

Fluid overload

Radiation

Ecclampsia

DIC/Drugs (opiates, barbiturates)

Neurogenic

Shock

Uremia

Pancreatitis

❖ Chest Pain - Etiologies (Differential Diagnoses):

CHEST PAIN

Cardiac (angina, AMI, pericarditis, myocarditis)

Hepatic (includes gallbladder and pancreas)

Esophageal (esophagitis, spasm)

Skeleto-muscular (includes costochondritis)

Traumatic

Pulmonary (PE, pneumothorax, pneumonia)

Aortic (dissection, aneurysm)

Infectious (abscesses, H. zoster)

Neuro-psychiatric (includes hyperventilation syndrome)

❖ Cholinergic Crisis (Organophosphate Poisoning) -

Signs and Symptoms:

DUMB BLONDES

Driaphoresis

Urinary incontinence

Muscle fasciculations

Bronchospasm/
bronchial secretions

Bradycardia (or tachycardia)

Lacrimation

Ocular (pupillary) constriction

Neural (CNS) effects (e.g. AMS)

Diarrhea

Emesis/Erection

Salivation

❖ Cholinergic (Parasympathetic) Effects:

SLUDGE Bob

Salivation

Lacrimation

Urination

Defecation

GI activity

Erection

Bradycardia

ocular (pupillary) constriction

bronchiolar constriction/secretions

Note: the o and b of Bob are small case to denote constriction

❖ Community Acquired Pneumonia – High Risk Factors:

CURB – 65

Confusion

Uremia (BUN >19)

Respiratory rate – high (≥ 30)

Blood pressure – low (SBP <90 or DBP <60)

65 - age ≥ 65

❖ Differential Diagnoses for Any Complaint/Finding:

VINDICATE

Vascular

Infectious

Neurogenic

Degenerative

Idiopathic/iatrogenic

Congenital

Autoimmune

Traumatic

Endocrine/Metabolic

Note: VITAMIN C and D

can be used in place of

VINDICATE by simply switching

endocrine/metabolic to

metabolic/endocrine

❖ **Fever in Children (Bacterial Causes):**

O P O S S U M

Otitis media

Pneumonia

Osteomyelitis (includes septic joint)

Sepsis

Strep pharyngitis/Skin infection (cellulitis)

Urinary tract infection

Meningitis

❖ **Glasgow Coma Scale:**

E L M

Eye opening (best eye response) - 4

Language (best verbal response) - 5

Motor (best motor response) - 6

❖ **Ingestions in which Activated Charcoal is Ineffective or Contraindicated:**

I P E C A C and B L E A C H

Iron

Bromide

Potassium

Lithium

Ethanol

Ethylene glycol

Caustics (acids/alkalis)

Alcohols (toxic – methanol, isopropanol)

Arsenic

Camphor

Cyanide

Hydrocarbons

❖ **Metabolic Acidosis with an Anion Gap (Causes):**

K L U M P I E S T

Ketoacidosis (Diabetic, Alcoholic)

Lactic acidosis

Uremia

Methanol

Paraldehyde

INH/Iron

Ethylene glycol

Salicylates

Toluene

❖ **PEA/Asystole - Etiologies (Differential Diagnoses):**

THAI POT

Tension pneumothorax

Hypo (-volemia, -thermia, -xemia, magnesemia)

Acidosis

Infarction (AMI)

Pulmonary embolus

Overdose

Tamponade (cardiac)

❖ **Shock - Types:**

SNATCH

Septic

Neurogenic

Anaphylactic

Traumatic (hemorrhagic)

Cardiogenic

Hypovolemic

❖ **Stroke with Atrial Fibrillation - Risk Assessment:**

CHADS

Congestive Heart Failure

Hypertension – SBP>160

Age >75

Diabetes

Stroke or TIA History

❖ **Syncope: High Risk Associations (San Francisco Rule):**

CHESS

CHF

Hemoglobin <30

EKG abnormality

SBP <90

Shortness of breath

❖ Syncope - Serious (Life-threatening) Causes:

C R A P S

Cardiac structural defects (e.g. aortic stenosis, IHSS)

Ruptures (aortic, ectopic)

Arrhythmias

Pulmonary embolism

Subarachnoid hemorrhage

VI. Useful Websites for Clinical Information and Guidelines

- **Agency for Healthcare Research and Quality**
www.ahrq.gov
- **Ambulatory Care Quality Alliance (AQA)**
www.aqaalliance.org
- **Best BETS** www.bestbets.org
- **Centers for Medicare and Medicaid Services (CMS)**
www.cms.hhs.gov
- **Cochrane Collaboration** www.cochrane.org
- **Drug Information Online** www.drugs.com
- **e medicine** www.emedicine.com
- **Emergency Care Coordination Center**
www.hhs.gov/aspr/oepo/eccc/index.html
- **Health Care Compliance Association (HCCA)**
www.hcca-info.org
- **InfoRetriever** www.info poems.com
- **Institute for Healthcare Improvement** www.ihl.org
- **Institute of Medicine (IOM)** www.iom.edu
- **MDCalc** www.mdcalc.com
- **Medscape** www.medscape.com
- **National Center for Emergency Medicine Information**
www.ncemi.org
- **National Committee for Quality Assurance (NCQA)**
www.ncqa.org
- **National Guidelines Clearinghouse** www.guideline.gov
- **National Quality Forum (NQF)** www.qualityforum.org
- **PubMed** www.pubmed.gov
- **Toxicology Data Network (Toxnet)** www.toxnet.nlm.nih.gov

VII. T-System Contact Information

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