PBL TRIAGE seminar

IT IS A SPECIALITY OF THE PEOPLE, BY THE PEOPLE AND FOR THE PEOPLE

… IS A TIME-DEPENDENT SPECIALITY

Guarantee of justice in health care

ALLOCATION

- MICROALLOCATION
- MACROALLOCATION

ALLOCATION=SORTING= TRIAGE

IN THEORY: EVERYTHING AT THE LEVEL OF RETHORICS ....

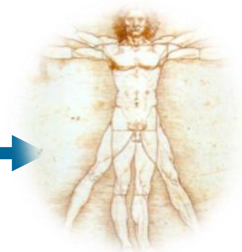
IN PRACTICE: PLENTY OF „DEALS”

PRIMARY INSULT

PROGRESSIVE DERANGEMENT

SECONDARY INSULT

OUTCOME

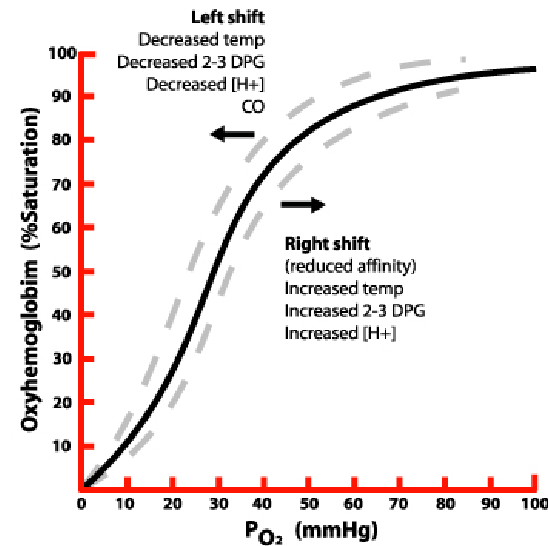


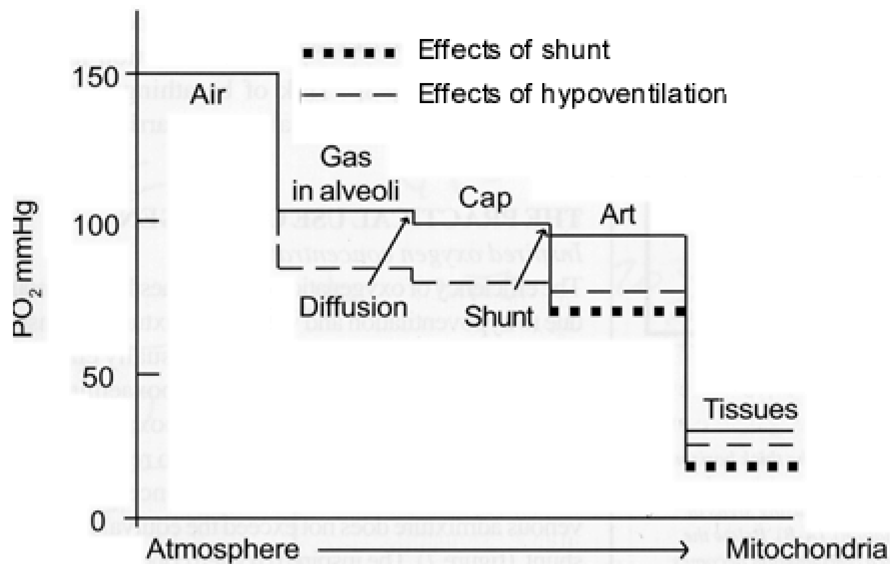
BIOLOGIOCAL RESPONSE

$DO_2 = CAO_2 \times CO$

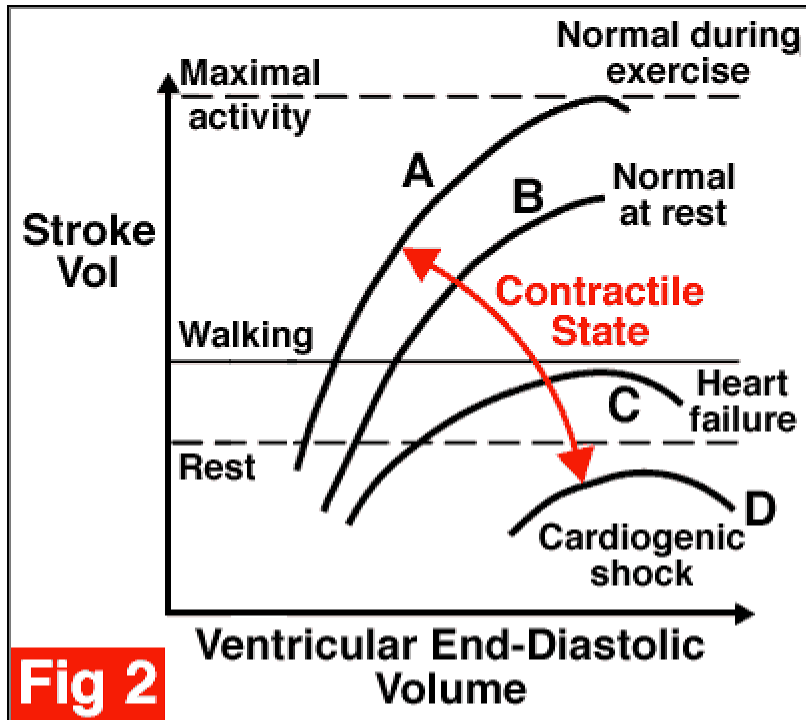
$CAO_2 = Hgb \times 1.34 \times SAO_2 + (pO_2 \times 0.03)$

CO= PULSE X STROKE VOLUME





Dr Rob Law,
Bristol Royal Infirmary, Bristol, UK



MAP = CO x SVR

HAGEN-POISSEUILLE

$$F = \frac{\Delta P \times \pi \times r^4}{8\eta \times l}$$

© Guyton and Rudas

PRIMARY INSULT

OUTCOME

PROGRESSIVE DERANGEMENT

SECONDARY INSULT

BIOLOGIOCAL RESPONSE

TIME

00
01
0 hours 02 mins
1 03
2 04

Communication using SBAR

Communicate and Share Information Using SBAR

S — **Situation**
Briefly describe the current situation.
Give a clear, succinct overview of pertinent issues.

B — **Background**
Briefly state the pertinent history.
What got us to this point?

A — **Assessment**
Summarize the facts and give your best assessment.
What is going on? Use your best judgement.

R — **Recommendation**
What actions are you asking for?
What do you want to happen next?

The SBAR technique provides a standardized framework for communication between members of the healthcare team about a patient's condition. SBAR is an easy-to-remember mechanism useful for framing conversations, especially critical ones, requiring immediate attention and action.

Using the SBAR model allows for an easy and focused way to set expectations for what will be communicated between members of the team, which is essential for developing effective teamwork and fostering a culture of patient safety.

- Military roots
- Introduced to hospitals in early 1960s
    - Number of cases increasing
    - People with non-urgent conditions come to EDs for treatment
- Initially, a 3-level triage (emergent, urgent, deferrable/non-urgent) was used
- In 1999, CTAS 5-level triage implementation guidelines published as recommended national guidelines

Role of Triage Nurse

1. Assessing patients and determining acuity
2. Communicating with health professionals
3. Determines treatment location
4. Initiating treatment protocols/first aid measures
5. Monitoring and reassessing
6. Participating in patient flow
7. Documenting

The Process of Triage

- Patient arrives (‘critical look’)
- Screened for infectious disease
- Triage assessment conducted
- Presenting Complaint (CEDIS) documented
- Modifiers considered
- Triage Level assigned (CTAS)
- Assigned to waiting/treatment area
- Symptom relief provided or nursing protocols initiated
- Waiting patients reassessed

Patient Arrival

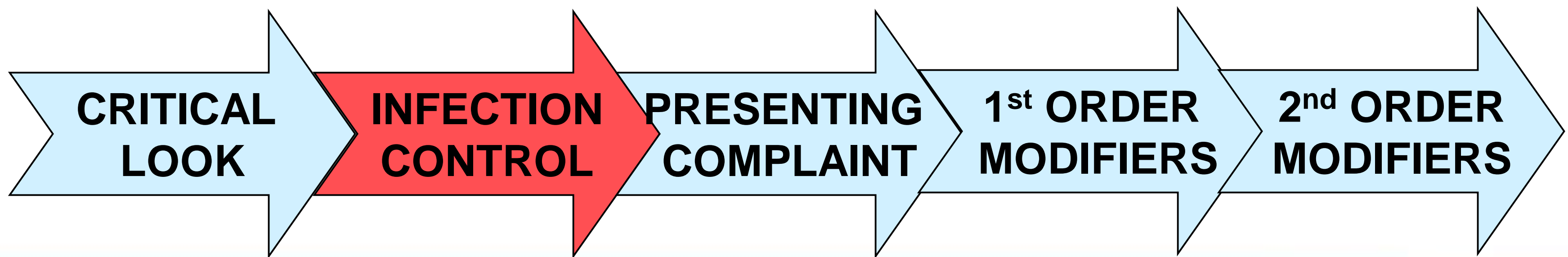
- A variable % of patients arrive by ambulance. Their acuity ranges across all triage levels
- More patients arrive by other means of transport (known as “walk-ins”). Their acuity also include all levels

Critical Look

- 'Critical first look' across-the-room begins as soon as the patient arrives in the ED
- Perform a quick check of
  - **A: Airway**
  - **B: Breathing**
  - **C: Circulation**
  - **D: Disability (neurological)**
- Should take 3 to 5 seconds
- Take action as indicated

Infection Control Screening

- If positive (eg ILI, FRI), appropriate protective measures (respiratory etiquette, hand washing, isolation) need to be taken
- Use latest information available (from provincial, state, or national guidelines)



Subjective Assessment

The “story” in the patient’s own words:

- Their account of why they came to the hospital
- The symptoms they are experiencing
- Pain severity
- The injury history (mechanism of injury)
- Their concerns

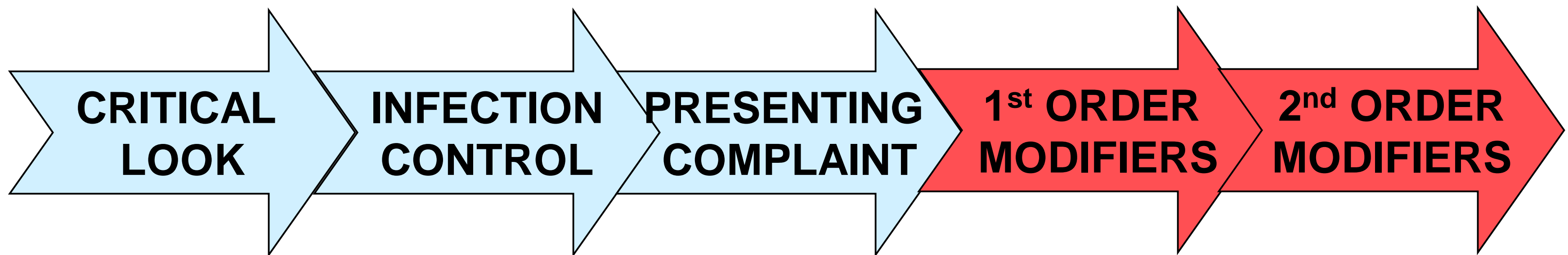
Selecting Presenting Complaint (CEDIS)

- Patient driven
  - "What concern brought you to the ED today?"
    - Headache, Cough, SOB, etc.
  - "Which of the complaints bothers you most?"
    - "My fever and shaking chills!"
- Nurse driven
  - "Patient complains of leg swelling & moderate thigh pain, but nurse note moderate SOB."
    - Could choose SOB or Lower extremity pain

Objective Assessment

Draws on observable indicators (signs):

- Wounds, rashes, bleeding, cough, etc.
- Vital signs
- Reaction to pain
- Other indicators



Triage Decision

Based on the critical look, chief complaint, subjective and objective assessments, application of modifiers as required, then decide:

What is the patient's priority?

IS THE PATIENT ALIVE?

NO

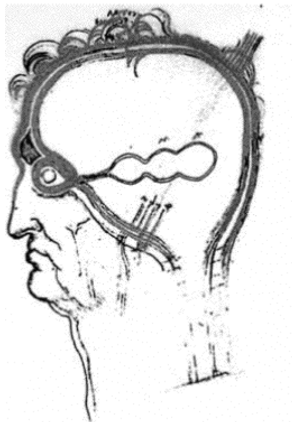
YES

CAN THIS PATIENT WAIT?

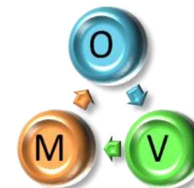
NO

YES

HOW MANY HCP IS NEEDED?



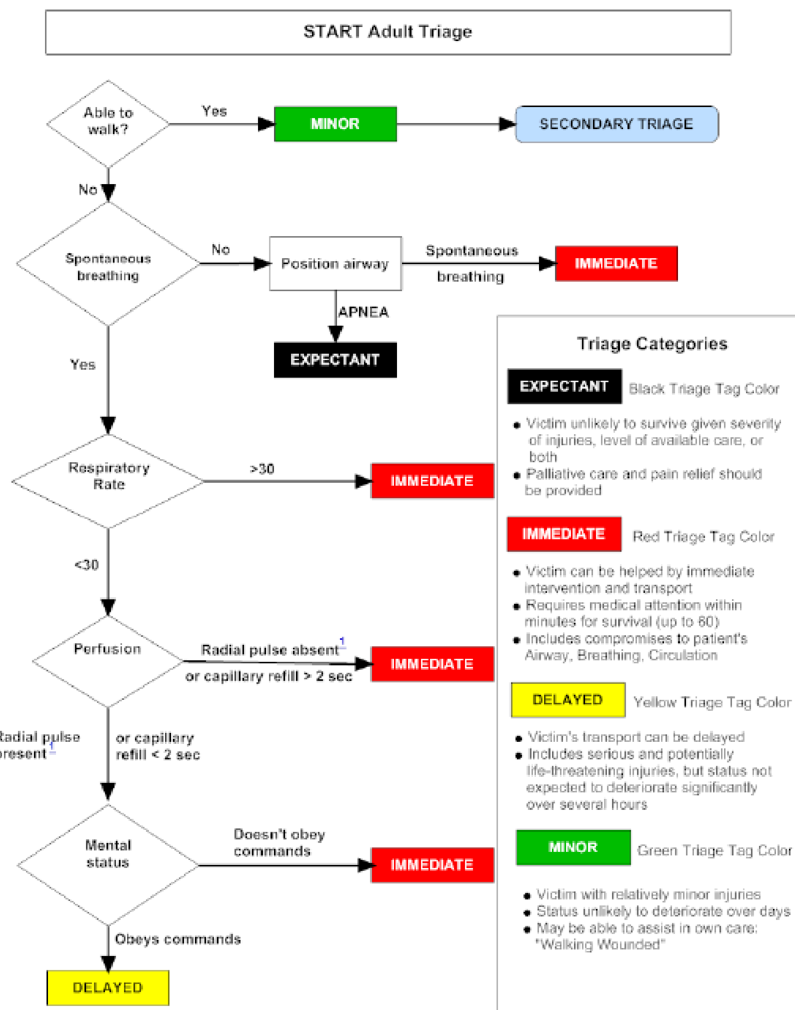
A
• AIRWAY
B
• BREATHING
C
• CIRCULATION
D
• DISABILITY
E
• EXPOSURE EVENTS / ENVIRONMENT



OXYGEN

VEIN

MONITOR



START Adult Triage
Able to walk?
Yes
MINOR
SECONDARY TRIAGE
No
Spontaneous breathing
No
Position airway
Spontaneous breathing
IMMEDIATE
APNEA
EXPECTANT
Yes
Respiratory Rate
>30
IMMEDIATE
<30
Perfusion
Radial pulse absent
or capillary refill > 2 sec
IMMEDIATE
Radial pulse present
or capillary refill < 2 sec
Mental status
Doesn't obey commands
IMMEDIATE
Obeys commands
DELAYED
Triage Categories
EXPECTANT
Black Triage Tag Color
Victim unlikely to survive given severity of injuries, level of available care, or both
Palliative care and pain relief should be provided
IMMEDIATE
Red Triage Tag Color
Victim can be helped by immediate intervention and transport
Requires medical attention within minutes for survival (up to 60)
Includes compromises to patient's Airway, Breathing, Circulation
DELAYED
Yellow Triage Tag Color
Victim's transport can be delayed
Includes serious and potentially life-threatening injuries, but status not expected to deteriorate significantly over several hours
MINOR
Green Triage Tag Color
Victim with relatively minor injuries
Status unlikely to deteriorate over days
May be able to assist in own care: "Walking Wounded"

The Canadian Triage Acuity Scale (CTAS)

Patients should have an
INITIAL TRIAGE ASSESSMENT WITHIN 10 MINUTES* of arrival

TRIAGE LEVEL I - *RESUSCITATION*

Time to NURSE Assessment
IMMEDIATE*

Time to PHYSICIAN Assessment
IMMEDIATE*

USUAL PRESENTATION	SENTINEL DIAGNOSIS
Code / Arrest	Traumatic Shock
Major Trauma	Pneumothorax - Traumatic / Tension
Shock States	Facial Burns with Airway Compromise
Near Death Asthma	Severe Burns > 30% TBS
Severe Respiratory Distress	Overdose with Hypotension / Unconscious
Altered Mental State (unconscious, delerious)	AAA
Seizures	AMI with Complications / CHF / Low BP
	Status Asthmaticus
	Head Injury - Major / Unconscious
	Status Epilepticus

TRIAGE LEVEL II - *EMERGENT*

Time to NURSE Assessment
IMMEDIATE*

Time to PHYSICIAN Assessment
15 MINUTES*

USUAL PRESENTATION	SENTINEL DIAGNOSIS
Head Injury (Risk Features ± Altered Mental State)	Head Injury
Severe Trauma	Trauma, Multiple Sites, Multiple Rib Fracture,
	Neck Injury / Spinal Cord
Altered Mental State (lethargic, drowsy, agitated)	
Chemical Exposure - Eyes	Alkaline / Caustic Occular Burns
Allergic Reaction (Severe)	Anaphylaxis
Chest Pain • Visceral, Non-Traumatic	AMI, Unstable Angina, CHF, Chest Pain NOS,
• ± Associated Symptoms	Gastroesophageal Reflux
Overdose (conscious), Drug Withdrawal	Unspecified Drug / Medicinal Overdose, "d.t.'s"
ABD Pain (Age >50) with Visceral Symptoms	AAA, Appendicitis, Cholecystitis
Back Pain (Non Trauma, Not MSK)	
GI Bleed with Abnormal Vital Signs	Gastrointestinal Bleed, Hypotension
CVA with Major Deficit	CVA
Asthma Severe (PEFR <40%)	Severe Asthma
Moderate / Severe Dyspnea / Diffuculty Breathing	COPD, Croup
Vaginal Bleeding • Acute, Pain scale >5	Spontaneous Abortion
• ± Abnormal Vital Signs	Ectopic Pregnancy / Rupture
Vomiting and/or diarrhea	
(with suspicion of dehydration)	
Signs of serious infection (purpuric rash, toxic)	
Chemotherapy or immunocompromised	
Fever (age ≤ 3 months) Temp ≥ 38.0 (rectal)	Epiglottitis, Meningitis, Sepsis
Acute Psychotic Episode / Extreme Agitation	Acute Psychotic Episode / Agitation
Diabetes: Hypoglycemia, Hyperglycemia	Hypoglycemia, Diabetic Ketoacidosis, Hyperglycemia
Headache (Pain Scale 8 - 10/10)	Migraine
Pain Scale 8-10 (CVA, Back, Eye)	Renal Colic, LBP / Strain (Disc), Keratitis, Iritis
Sexual Assault	
Neonate (≤ 7 days old)	

TRIAGE LEVEL III - *URGENT*

Time to NURSE Assessment
30 MINUTES*

Time to PHYSICIAN Assessment
30 MINUTES*

USUAL PRESENTATION	SENTINEL DIAGNOSIS
Head Injury, Alert, Vomiting	Head Injury
Moderate Trauma	Anterior Dislocated Shoulder, Tibia / Fibula Fracture,
	Bimalleolar, Trimalleolar Ankle Fracture
Abuse / Neglect / Assault	
Vomiting and/or diarrhea (≤ 2 years)	
Dialysis problems	
Signs of Infection	Pyelonephritis
Mild / Moderate Asthma (PEFR > 40%)	Asthma without Status / COPD
Mild / Moderate Dyspnea	Bronchiolitis / Croup, Pneumonia
Chest Pain • No Visceral Symptoms (Sharp/MSK)	Chest Pain NOS (MSK, GI, Resp)
• No Previous Heart Disease	
GI Bleed with Normal Vital Signs	GI Bleed, No complications
Vaginal Bleeding Acute, Normal Vital Signs	Spontaneous Abortion
Seizure, Alert on Arrival	Seizure
Acute Psychosis ± Suicidal Ideation	Acute Psychosis ± Suicidal Ideation
Pain Scale 8 - 10 / 10 with minor injuries	
Pain Scale 4 - 7 / 10 (Headache, CVA, Back)	Migraine, Renal Colic, LBP / Strain (Disc)

TRIAGE LEVEL IV - *LESS URGENT*

Time to NURSE Assessment
60 MINUTES*

Time to PHYSICIAN Assessment
60 MINUTES*

USUAL PRESENTATION	SENTINEL DIAGNOSIS
Head Injury, Alert, No Vomiting	Head Injury, Alert, No Vomiting
Minor Trauma	Colles Fracture, Ankle Sprain
ABD Pain (Acute)	Appendicitis, Cholecystitis
Earache	Otitis Media / Otitis Externa
Chest Pain, Minor Trauma or MSK, No Distress	Chest Pain NOS (MSK, GI, Resp),
	Gastroesophageal Reflux
Vomiting and diarrhea (>2 years/no dehydration)	
Suicidal Ideation / Depression	Suicidal Ideation / Depression
Allergic Reaction (Minor)	Urticaria
Corneal Foreign Body	Corneal Foreign Body
Back Pain (Chronic)	LBP /Strain
URI Symptoms	URI
Pain Scale 4 - 7	
Headache (Non Migraine / Not Sudden)	

TRIAGE LEVEL V - *NON URGENT*

Time to NURSE Assessment
120 MINUTES*

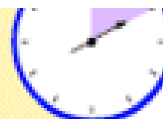
Time to PHYSICIAN Assessment
120 MINUTES*

USUAL PRESENTATION	SENTINEL DIAGNOSIS
Minor Trauma, Not Necessarily Acute	LBP / Strain
Sore Throat, No Resp Symptoms	URI
Diarrhea alone (no dehydration)	Gastroenteritis
Vomiting alone normal mental status	Vomiting
(no dehydration)	Disorders of Menstruation
Menses	Dressing Changes
Minor Symptoms	Cast Changes
ABD Pain (Chronic)	Constipation
Psychiatric complaints	Symptoms / Neurotic, Personality and
Pain Scale < 4	Nonpsychotic Mental Disorders
	Unspecified Superficial Laceration(s)

RESUSCITATION

~~Patients should have an~~

*INITIAL TRIAGE ASSESSMENT WITHIN 10 MINUTES** of arrival



TION

USUAL PRESENTATION	SENTINEL DIAGNOSIS
Code / Arrest	Traumatic Shock
Major Trauma	Pneumothorax - Traumatic / Tension
Shock States	Facial Burns with Airway Compromise
Near Death Asthma	Severe Burns > 30% TBS
Severe Respiratory Distress	Overdose with Hypotension / Unconscious
Altered Mental State (unconscious, delerious)	AAA
Seizures	AMI with Complications / CHF / Low BP
	Status Asthmaticus
	Head Injury - Major / Unconscious
	Status Epilepticus

EMERGENT

USUAL PRESENTATION	SENTINEL DIAGNOSIS
Head Injury (Risk Features ± Altered Mental State)	Head Injury
Severe Trauma	Trauma, Multiple Sites, Multiple Rib Fracture, Neck Injury / Spinal Cord
Altered Mental State (lethargic, drowsy, agitated)	
Chemical Exposure - Eyes	Alkaline / Caustic Occular Burns
Allergic Reaction (Severe)	Anaphylaxis
Chest Pain • Visceral, Non-Traumatic • ± Associated Symptoms	AMI, Unstable Angina, CHF, Chest Pain NOS, Gastroesophageal Reflux
Overdose (conscious), Drug Withdrawal	Unspecified Drug / Medicinal Overdose, "d.t.'s"
ABD Pain (Age >50) with Visceral Symptoms Back Pain (Non Trauma, Not MSK)	AAA, Appendicitis, Cholecystitis
GI Bleed with Abnormal Vital Signs	Gastrointestinal Bleed, Hypotension
CVA with Major Deficit	CVA
Asthma Severe (PEFR <40%)	Severe Asthma
Moderate / Severe Dyspnea / Diffuculty Breathing	COPD, Croup
Vaginal Bleeding • Acute, Pain scale >5 • ± Abnormal Vital Signs	Spontaneous Abortion, Ectopic Pregnancy / Rupture
Vomiting and/or diarrhea (with suspicion of dehydration)	
Signs of serious infection (purpuric rash, toxic)	
Chemotherapy or immunocompromised	
Fever (age ≤ 3 months) Temp ≥ 38.0 (rectal)	Epiglottitis, Meningitis, Sepsis
Acute Psychotic Episode / Extreme Agitation	Acute Psychotic Episode / Agitation
Diabetes: Hypoglycemia, Hyperglycemia	Hypoglycemia, Diabetic Ketoacidosis, Hyperglycemia
Headache (Pain Scale 8 - 10/10)	Migraine
Pain Scale 8-10 (CVA, Back, Eye)	Renal Colic, LBP / Strain (Disc), Keratitis, Iritis
Sexual Assault	
Neonate (≤ 7 days old)	

OLD CARS

O- ONSET

L- LOCATION

D- DURATION

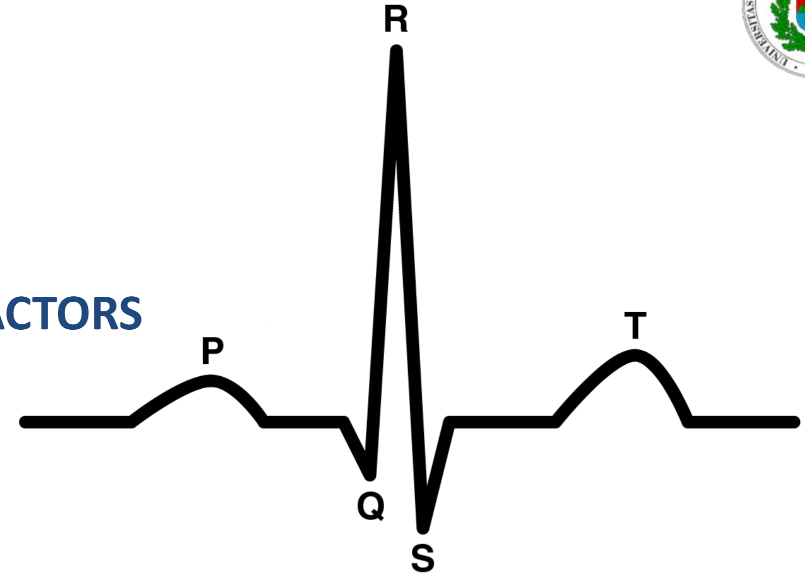
C- CHARACTER

A-ALLEVIATING/AGGRAVATING FACTORS ASSOCIATED SYMPTOMS

R- RADIATION

S- SEVERITY

P	**PALLIATIVE AND PROVOCATIVE FACTORS**
Q	**QUALITY**
R	**RADIATION**
S	**SYMPTOMS ASSOCIATED WITH PAIN**
T	**TIMING**



Aneszteziológiai és Intenzív Terápiás Klinika
Semmelweis Egyetem

PAIN RATING SCALE

For patients unable to use visual 1-10 or faces scale, refer to the behavioral scales for child/adults in Pain Management Protocol/Patient Care Service.

1-3	4-6	7-10
MILD	MEDIUM	SEVERE

The CEDIS Categories

- Cardiovascular (CVS)
- ENT – Ears (ENT-E)
- ENT – Mouth, throat, neck (ENT-MTN)
- ENT – Nose (ENT-N)
- Environmental (ENV)
- Gastrointestinal (GI)
- Genitourinary (GU)
- Mental Health (MH)
- Neurologic (CNS)
- OB – GYN (OB-GYN)
- Opthamology (OPTH)
- Orthopedic (ORTHO)
- Respiratory (RESP)
- Skin (SKIN)
- Substance Misuse (SUBST)
- Trauma (T)
- General and Minor (GEN)

The process of triage

1. Select appropriate CEDIS complaint
2. Apply appropriate 1st order modifiers
3. Select relevant complaint-specific 2nd order modifiers

First Order Modifiers

1st Step

Respiratory Distress................**A**irway

...............**B**reathing

Hemodynamic Status............**C**irculation

Level of Consciousness.........**D**isability

Temperature

2nd Step

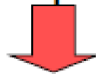
Pain Score

Bleeding Disorder

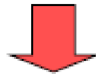
Mechanism of Injury

Assessing Acuity Process

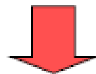
Critical Look - rapid visual assessment



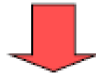
Presenting Complaint - Hx / Infection Control



Vitals – physiologic parameter assessment
(1st order modifiers: 1st step)

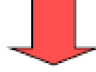


Additional Keys - non physiologic parameters
(1st order modifiers: 2nd step)



Special Modifiers - complaint-based
(2nd order modifiers)

CPAS Level – Assign Acuity Level



Reassessment

Second order modifiers

Presenting complaint	Revised modifier	CTAS level
Chest pain, noncardiac features	Other significant chest pain (ripping or tearing)*	II
Upper extremity injury; lower extremity injury	Obvious deformity†	III
Nausea and/or vomiting; diarrhoea	Severe dehydration‡	I
General weakness	Moderate dehydration§	II
	Mild dehydration¶	III
	Potential for dehydration**	IV
Pregnancy issues > 20 weeks††	Presenting fetal parts, prolapsed cord	I
	Vaginal bleeding, third trimester	I
	Active labour (contractions $\leq$ 2 min)	II
	No fetal movement or no fetal heart tones	II
	Headache with or without edema, abdominal pain or hypertension	II
	Postdelivery	II
	Active labour (contractions > 2 min)	III
	Possible leaking amniotic fluid	III

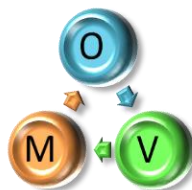
Table 4. Mental health complaints and second order modifiers

CEDIS presenting complaint	Description	CTAS level
Depression, suicidal or deliberate self harm	Attempted suicide or clear suicide plan	II
	Active suicidal intent	II
	Uncertain flight or safety risk	II
	Suicidal ideation, no plan	III
	Depressed, no suicidal ideation	IV
Anxiety or situational crisis	Severe anxiety or agitation	II
	Uncertain flight or safety risk	II
	Moderate anxiety or agitation	III
	Mild anxiety or agitation	IV
Hallucinations or delusions	Acute psychosis	II
	Severe anxiety or agitation	II
	Uncertain flight or safety risk	II
	Moderate anxiety or agitation, or with paranoia	III
	Mild agitation, stable	IV
	Mild anxiety or agitation, chronic hallucinations	V
Insomnia	Acute	IV
	Chronic	V
Violent or homicidal behaviour	Imminent harm to self or others, or specific plans	I
	Uncertain flight or safety risk	II
	Violent or homicidal ideation, no plan	III
Social problem	Abuse physical, mental, high emotional stress	III
	Unable to cope	IV
Bizarre behaviour	Chronic, nonurgent condition	V
	Uncontrolled	I
	Uncertain flight or safety risk	II
	Controlled	III
	Harmless behaviour	IV
	Chronic, nonurgent condition	V

To Do:

S
B
A
R

A
B
C
D
E


O
V
M

R R
I I
S S
K K

18 yr old girl with known asthma

- Having a temp and a bit of cough in the last few days
- This morning she deteriorates
- Her father calls the ambulance
- You are the ambulance control ☺

54 year old man with a fall

- Known alcoholic
- Comes out of the pub
- Found collapsed on the pavement
- No fits, but unconscious
- As a pedestrian you walk past
- You call the ambulance