Introduction to Triage Assessment in A&E 2015

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Objectives

1. What is triage

2. Triage assessment model

3. Primary & secondary assessment

4. Three approaches in assessing patients
   → symptomatic based
   → systemic based
   → protocol driven assessment

5. Documentation
History

– Triage- a French words means ‘to sort’
– History - World War I
– “the best for the most with the least by the fewest” (Simoneau, 1985)

– the classification of patients for the purpose of determination treatment priorities
What is triage?

- Sorting / categorizing.

- It is a process of setting priorities for treatments for a patient or a group of A&E patients.

- Triage system was imposed until 1960 in USA.

- Triage system was imposed in 1990 in HK.
Triage system

• Traffic director – the most simplistic form

• Spot check- 2 mins.

• Comprehensive -5 mins.
## Triage Category

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
</tr>
</thead>
</table>
| **I** (Critical) | • Suffers from a **life-threatening condition** caused by a major event.  
                   • **Unstable vital signs** requiring immediately resuscitation. |
| **II** (Emergency) | • Suffers from a **potentially life threatening condition**.  
                          • **Borderline vital signs** but with potential risk of rapid  
                            deterioration.  
                          • Require emergency treatment & immediate continuous close-monitoring. |
| **III** (Urgent)  | • Suffer from a **major condition with potentially risk of deterioration**.  
                          • **Stable vital signs**. |
| **IV** (Semi-urgent) | • Suffer from **acute but stable condition**.  
                                • **Stable vital signs**.  
                                • Afford to wait some time without serious complications. |
| **V** (Others)    | • Suffer from **minor or stable condition**. Afford to wait without  
                          deterioration. |
Triage Assessment Skills in A&E
Summary of Questioning Technique

- Use open-ended questions for C/O
- Use CLOSED-ENDED QUESTIONS
- Use examples
- Provide general leads
- Clarify and restate
- Offer reality
- Provide focus
- State observations
- Summarize

Document in Chinese characters / diagram if indicated.
Characteristics

- Always new faces
- Short contact time
- No provisional diagnosis made
- **NURSE** have to do initial assessment and intervention
- **NURSE** have the rights to upgrade or downgrade the patient’s category.
Practical principles of assessment

• It will not be comprehensive.
• Aim at pick out the life threatening and potential unstable patients.
• Select the essential components (life threatening systems).
• Protocol driven type approach (ACLS, PALS, TNCC,....).
Triage Assessment Model
1° Assessment
G A B C D

2° Assessment
Hx, Vital Signs

Focus assessment +
Extend assessment

Reassessment
- Borderline parameters
- Change conditions

Cat. I, II
Resuscitation Room

Cat. ?
Interventions

Cat. ?
Interventions

Upgrade triage ?
Interventions
General Principles

• Greet pts and identify yourself as the triage nurse.
• Maintain privacy & confidentiality.
• Try visualize all incoming pts even while triaging others.
• Know your local guidelines, protocols and most important of all - your own limitations.
• Universal precautions.
Primary assessment
Primary Assessment (~ 30 seconds)

Aim to identify and screen out the obvious problems and require immediate resuscitation

• Rapid scanning assessment begins when seeing the patient

• To scan by
  — GABCD
Primary Assessment

~ General Appearance

Look at a glance for ... ...

• Ambulatory Vs. Non-ambulatory

• Conscious level

• Skin condition (hydration / color)

• Posture, gait, smell, interaction with others / environment

• Facial / eye expression (pain, fear, anger, confusion, anxiety ... ...)
Primary Assessment
~ General Appearance
Primary Assessment

~ General Appearance
Primary Assessment

~ General Appearance
Primary Assessment
~ Airway

Assess *(look, listen & feel)* ... ...

- Vocalization
- Tongue obstruction
- Loosen teeth / foreign body
- Bleeding
- Vomitus / other secretion
- Odema
- Drooling / stridor
Primary Assessment

~ Airway

Intervene  ... ...

• **Open**
  – Head tilt - chin lift (sniffing position), jaw thrust (suspect cervical injury), tongue-jaw lift, cross finger

• **Clear**
  – Position, manual, suction

• **Maintain**
  – Position, airway adjuncts

• **Ventilation**
  – Face mask, nasal cannula, BVM
Open the airway

Jaw thrust

Chin Lift
Orapharyngeal Airway

Nasopharyngeal Airway
Primary Assessment

~ Breathing

Assess *(Inspect & Palpate)* … …

• Chest rise & fall
• Skin color
• Respiration rate & depth
• Soft tissue & bony chest wall integrity
• Use of accessory / abdominal muscles
• Bilateral *breath sounds*
• Jugular veins (distension ?)
• Position of trachea (in midline ?)
Anterior sequence
Primary Assessment

~ Breathing

Intervene ... ...

• Nil (check SpO₂)

• Oxygen therapy
  (using nasal cannula / ventrui mask / 100% facemask)

• BVM assist breathing
# Respiratory Assessment

## Assess patient using following algorithm

### Symptoms
- General appearance
- Speech
- Breath sounds and chest auscultation
- Respiratory rate (per minute)
- Respiratory rhythm
- Breathing effort
- Pulse rate (per minute)
- Skin
- Conscious state

### Severe distress (life-threatening)
- Distressed, anxious, fighting to breathe, exhausted, catatonic
- Speaks in words only or unable to speak
- May be unable to cough
- **Asthma**: expiratory wheeze, later may also be inspiratory wheeze and, if severe, may be no breath sounds.
- **LVF/PO**: coarse crackles full field, with possibly a wheeze expiratory +/- inspiratory
- **Upper Airway Obstruction**: Inspiratory stridor
- Tachypnoea (>20) or Bradypnoea (<6-8)
- **Asthma**: prolonged expiratory phase
- Marked chest movement with accessory muscles, intercostal retraction and/or tracheal tugging
- Tachycardia (>120), bradycardia late sign in severe cases
- Pale and sweaty, may be cyanosed
- Altered or unconscious

### Consider:
- Presenting problem
- Medication
- Trends of observations
- Response to interventions

### Severe distress (life-threatening) continued
- **Asthma**: expiratory wheeze, may also be inspiratory wheeze
- **LVF**: crackles at bases - to mid-zone
- **Tachypnoea (>20)**
- **Asthma**: prolonged expiratory phase
- Marked chest movement and may be some use of accessory muscles,
- Tachycardia 100-120
- May be pale and sweaty
- May be alert

### Normal
- Calm, quiet
- Clear and steady sentences
- Usually quiet, no wheeze
- No crackles or scattered fine basal crackles, e.g. postural
- **LVF**: may be some fine crackles at bases
- 12-16
- Regular even cycles
- Little with small chest movement
- 60-100
- Normal
- Alert
Primary Assessment

~ Circulation

Assess *(Inspect & Palpate)* ... ...
- Responsiveness (?restless)
- Pulse quality, rate, regularity
- Skin color, moisture, temperature
- External hemorrhage
- Capillary refill (?less than 2 seconds)
Primary Assessment

~ Circulation

Intervene … …

• No pulse $\rightarrow$ CPR
• Pulse $\rightarrow$ stop ext. bleeding $\rightarrow$ shock?
• ? IV - O$_2$ - Monitor
Assess the Circulation

*Estimating Blood Pressure by Location of Pulse*

<table>
<thead>
<tr>
<th>Location</th>
<th>Estimated Systolic BP (mm Hg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carotid 頸</td>
<td>60</td>
</tr>
<tr>
<td>Femoral 股</td>
<td>70</td>
</tr>
<tr>
<td>Brachial 肱</td>
<td>70</td>
</tr>
<tr>
<td>Radial 橈</td>
<td>80-90</td>
</tr>
</tbody>
</table>
Perfusion Assessment

Perfusion status assessment (Adult)  Version: 3  Reviewed: December 2007

Assess patient using following algorithm

<table>
<thead>
<tr>
<th>No circulation</th>
<th>Extremely poor circulation</th>
<th>Inadequate circulation</th>
<th>Borderline circulation</th>
<th>Adequate circulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Skin</td>
<td>Skin</td>
<td>Skin</td>
<td>Skin</td>
</tr>
<tr>
<td>• Cool, pale, clammy</td>
<td>• Cool, pale, clammy</td>
<td>• Cool, pale, clammy</td>
<td>• Cool, pale, clammy</td>
<td>• Warm, pink, dry</td>
</tr>
<tr>
<td>HR</td>
<td>HR</td>
<td>HR</td>
<td>HR</td>
<td>HR</td>
</tr>
<tr>
<td>• &lt;50 or &gt;110/min</td>
<td>&lt;50 or &gt;100/min</td>
<td>&lt;50 or &gt;100/min</td>
<td>50 - 100/min</td>
<td>60 - 100/min</td>
</tr>
<tr>
<td>BP</td>
<td>BP</td>
<td>BP</td>
<td>BP</td>
<td>BP</td>
</tr>
<tr>
<td>• &lt;60 mmHg systolic, or unrecordable</td>
<td>60–80 mmHg systolic</td>
<td>80–100 mmHg systolic</td>
<td>&gt;100 mmHg systolic</td>
<td>&gt;100 mmHg systolic</td>
</tr>
<tr>
<td>Conscious state</td>
<td>Conscious state</td>
<td>Conscious state</td>
<td>Conscious state</td>
<td>Conscious state</td>
</tr>
<tr>
<td>• None</td>
<td>• Altered or unconscious</td>
<td>• Alert +/- altered</td>
<td>• Alert and orientated</td>
<td>• Alert and orientated</td>
</tr>
</tbody>
</table>

Consider:
- presenting problem
- medication
- trends of observations
- response to interventions

Remember:
Other factors may affect the interpretation of the observations made, e.g. - the environment, ambient temperature may affect skin signs, anxiety/pain may affect heart rate, head injury, alcohol, drugs and many other things may affect consciousness. Consider the whole patient - there is no single sign that is definitive.
Primary Assessment
~ Disability (Neurological)

Assess ... ...

• Level of consciousness (GCS, AVPU)
• Pupil size & reaction (?equal ?reactive)
• Mental status
  – Mood & behavior
  – Cognitive & memory
Primary Assessment ~ Disability (Neurological)

Assess ... ...

• s/s of Head injury
## Glasgow Coma Scale

<table>
<thead>
<tr>
<th>Child 4 years or less</th>
<th>Child over 4 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye opening</strong></td>
<td></td>
</tr>
<tr>
<td>Spontaneously</td>
<td>Spontaneously</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Reacts to speech</td>
<td>To voice</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Reacts to pain</td>
<td>To pain</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>No response</td>
<td>No response</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Best verbal response</strong></td>
<td></td>
</tr>
<tr>
<td>Appropriate words or social smile, fixes, follows</td>
<td>Orientated</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Cries but consolable</td>
<td>Confused</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Persistently irritable</td>
<td>Inappropriate words</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Restless and agitated</td>
<td>Incomprehensible sounds</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>No response</td>
<td>No response</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Best motor response</strong></td>
<td></td>
</tr>
<tr>
<td>Spontaneous</td>
<td>Obey commands</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Localises to pain</td>
<td>Localises to pain</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Withdraws from pain</td>
<td>Withdraws from pain</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Flexion response</strong></td>
<td>Flexion response</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Extension response</strong></td>
<td>Extension response</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>No response</td>
<td>No response</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Decorticate / Flexion

Decerebrate / Extension

6 Medvetslös
Stereotyp böjrörelse vid smärta

7 Medvetslös
Stereotyp sträckrörelse vid smärta
Primary Assessment

~ Disability (Neurological)

Intervene ... ...

• Secure airway & ventilation

• Restrain the patient if needed
Universal Interventions

- Designated area
  - O2 – Monitors - IV
  - Vital signs / History taking
  - Physical examination
    - Extended assessment

- Resuscitation
Airway management at the scene
Secondary Assessment
Secondary Assessment

1. History taking
2. Vital signs taking
   - BP, P, RR, T°, SpO2, PS, GCS
   - Pain scale
   - MEWS
3. Focus assessment
   - Symptomatic based approach
   - Systematic based approach
4. Head to toes assessment
   - Kellermann Model
History Taking
Focused History

**SAMPLE Questions**
- Signs & symptoms
- Allergies
- Medications (just-taken)
- Past medical history
- Last oral intake
- Events prior to illness

**OPQRST Questions**
- Onset
- Palliation/provocation
- Quality
- Region / Radiation
- Severity
- Time

 SAMPLE Questions

 OPQRST Questions

 nset
 alliation/provocation
 uality
 egion / Radiation
 everity
 ime
OLD CART: Chief Complaint

Onset of symptoms
Location of problem
Duration of symptoms
Characteristics of the symptoms described
Aggravating factors
Relieving factors
Treatment administered before arrival
Vital signs
# Vital Signs Taking

<table>
<thead>
<tr>
<th>Vital Signs</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature</strong></td>
<td>• Temp. at home</td>
</tr>
<tr>
<td>Thermometer Vs.</td>
<td>• Fever pattern</td>
</tr>
<tr>
<td>Thermoscan Vs. IR Gun</td>
<td>• Anti-pyrexia effect</td>
</tr>
<tr>
<td><strong>Pulse</strong></td>
<td>• Difference at peripheral (shock, aneurysm)</td>
</tr>
<tr>
<td>Rate &amp; Quality of radial</td>
<td>• Apical rate deficit (arrhythmia)</td>
</tr>
<tr>
<td>pulse</td>
<td></td>
</tr>
<tr>
<td><strong>Respiration</strong></td>
<td>• Peak flow rate (ventilation capacity)</td>
</tr>
<tr>
<td>&amp; SPO2 (5th vital)</td>
<td>• SPO2 (measurement of oxygenation)</td>
</tr>
<tr>
<td>Rate, depth, effort &amp;</td>
<td></td>
</tr>
<tr>
<td>symmetry</td>
<td></td>
</tr>
</tbody>
</table>
## Vital Signs Taking

<table>
<thead>
<tr>
<th>Vital Signs</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blood Pressure</strong></td>
<td>• Presence of central / peripheral pulse (rough SBP)</td>
</tr>
<tr>
<td>Manual Vs. NIBP</td>
<td>• Compare of both arms (dissecting aneurysm)</td>
</tr>
<tr>
<td>SBP x Shock</td>
<td>• Tilt test (rule of 15)</td>
</tr>
<tr>
<td></td>
<td>• Shock index = SBP / Pulse Rate (if &lt; 0.9 = shock)</td>
</tr>
<tr>
<td></td>
<td>• Mean Arterial Pressure = SBP – (2/3 x Pulse Pressure)</td>
</tr>
</tbody>
</table>
# Vital Signs Taking

<table>
<thead>
<tr>
<th>Pupil size</th>
<th>Light response</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilaterally small (1-3mm)</td>
<td>Reactive / sluggish</td>
<td>1. Early Central Herniation</td>
</tr>
<tr>
<td>Midpoint (3-5mm)</td>
<td>Sluggish / non-reactive</td>
<td>2. Progress of central herniation (midbrain)</td>
</tr>
<tr>
<td>Unilaterally dilated (5-6mm)</td>
<td>Sluggish / fixed</td>
<td>3. 3rd nerve compression (Uncal Herniation)</td>
</tr>
<tr>
<td>Bilaterally dilated</td>
<td>Sluggish / fixed</td>
<td>4. Late herniation</td>
</tr>
</tbody>
</table>
Vital Signs taking ~ Interpretation

Normal Vs. Abnormal
- age
- medications
- patient’s usual parameters

Stable Vs. Unstable
- ?underlining pathology
- ?just-taken / current medications

Obviously impossible readings
Consciousness
- Speaking?
- Moving?
- Eyes open/closed?

Glasgow Coma Score

Temperature

Blood pressure

Respiratory rate

A Airway patent

B Breathing

C Circulation

Well
- Talking normally
- Moving normally
- Eyes open
- Normal: pulse
  - blood pressure
  - temperature
  - respiratory rate
- Pink
- Comfortable

Unwell
- Confused, not speaking
- Keeping still
- Eyes closed
- Pulse <50 >90
- Blood pressure <100 >180
- Temperature <35 >37.5
- Respiratory rate <10 >15
- Pale/jaundiced/cyanosed/grey/sweaty
- In pain/distressed
Modified Early Warning Score
MEWS
早期預警修正計分法
**Modified Early Warning Score**

早期預警修正計分法

- A tool to **identify** abnormalities in the patient’s observation by appointing each physiological parameter with a score from 0-3

- Total score range from 0-14
Clinical benefits

• Common language
• Quickly identify deteriorating condition
• Rapidly manage
• Early intervene
• Empower nursing
## VITAL SIGNS OBSERVATION CHART

### Modified Early Warning Score (MEWS)

<table>
<thead>
<tr>
<th>MEWS</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

### VDS (1-4)
- **NO PAIN**
- **MILD PAIN**
- **MODERATE PAIN**
- **SEVERE PAIN**

### NRS (0-10)
- **NO PAIN**
- **SLIGHT PAIN**
- **MILD PAIN**
- **MODERATE PAIN**
- **SEVERE PAIN**
- **EXTREME PAIN**
- **PAIN AS BAD AS IT COULD BE**

### Pain Scale for Children (0-10)
- **0 HURTS LITTLE BIT**
- **1 HURTS LITTLE MORE**
- **2 HURTS EVEN MORE**
- **3 HURTS WHOLE LOT**
- **4 HURTS WORST**

### Pain Character
- **AC** - Aching
- **CM** - Cramping
- **DU** - Dull
- **NB** - Numb
- **PU** - Pulling
- **SL** - Shocking
- **SQ** - Squeezing
- **TB** - Tugging
- **BN** - Burning
- **DT** - Distending
- **ES** - Electric shock
- **FM** - Pins and needles
- **SP** - Sharp
- **ST** - Shooting
- **SB** - Stabbing
- **TL** - Tingling

### Vital Signs
- **Time**
- **Temperature**
- **Respiratory Rate**
- **Heart Rate**
- **Blood Pressure**
- **Oxygen Saturation**

### Additional Notes
- **O2 (L/min) (%)**
- **CVP (cm H2O)**
- **Pain Score**
- **Pain Character**
- **Sedation (Level)**

### Instructions
- **Sign and Date**
- **Patient Name**
- **Hospital No.**
- **Bed No.**
- **Dept.**
# MEWS scoring in Hong Kong

<table>
<thead>
<tr>
<th>Score</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVPU / GCS</td>
<td>U</td>
<td>P</td>
<td>V</td>
<td>A / 15</td>
<td>14</td>
<td>9-13</td>
<td>&lt;9</td>
</tr>
<tr>
<td>Systolic BP</td>
<td>&lt;70</td>
<td>71-80</td>
<td>81-100</td>
<td>101-199</td>
<td>&gt;200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart rate (BPM)</td>
<td>≤40</td>
<td>41-50</td>
<td>51-100</td>
<td>101-110</td>
<td>111-130</td>
<td>&gt;130</td>
<td></td>
</tr>
<tr>
<td>Respiratory rate (RPM)</td>
<td>&lt;9</td>
<td></td>
<td>9-14</td>
<td>15-20</td>
<td>21-29</td>
<td>≥30</td>
<td></td>
</tr>
<tr>
<td>Temperature (°C)</td>
<td>≤35</td>
<td>35.1-36</td>
<td>36.1-38</td>
<td>38.1-38.5</td>
<td>&gt;38.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MEWS

**Respiratory rate is the most important parameter because ... ...**

- It is the most sensitive indicator of patients physiological well being

- It is the only factor to show a statistical significant change over time
Now Try This Parameter Sample

GCS : 14/15 ; AVPU  
Score : 1

BP : 110/70 mmHg  
Score : 0

Pulse : 115 /min  
Score : 2

Respiratory rate : 28 /min  
Score : 2

Temp : 37.4 °C  
Score : 0

Total Score : 5
Pain Assessment: the 6th vital signs
Pain Level Assessment

- Subjective Vs Objective.

- **Objective symptoms** of moderate to severe pain requires cat.3 or above:
  - shock like (pallor, cold skin)
  - BP ↓, Pulse ↑

- **Subjective symptoms**:  
  - verbalize pain level.
  - facial expression.
  - guarding posture.
  - require resting positions.
  - ↓ mobility.
Use of Pain Ladder

• It is developed by Manchester AEDs in U.K.
• It gives a tools to quantify the interpretation of patient’s subjective and observable behavior of pain
• Pseudo pain could be reflected by the ladder
# Patient’s behavior

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Descriptions</th>
<th>Common term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal activities</td>
<td>No painful expression / moving freely / continue reading books or newspaper</td>
<td>Not painful</td>
</tr>
<tr>
<td>Few problems / do most things</td>
<td>Express painful / localized / needs support e.g. sling, cold pad, wheelchair</td>
<td>Pain, +</td>
</tr>
<tr>
<td>Cause difficulties / stop some things</td>
<td>Express painful / partial limited movement / needs resting position</td>
<td>Pain, + +</td>
</tr>
<tr>
<td>Disabling / stop normal activities</td>
<td>Painful look / affect generalize / guarding posture / needs trolley bed / moving around in bed</td>
<td>Severe pain, + + +</td>
</tr>
<tr>
<td>No control</td>
<td>Moving around and scream out / together with cold sweating skin</td>
<td>Very severe pain, + + +</td>
</tr>
</tbody>
</table>


PAIN LADDER

Excruciating
Worst Ever

Very bad
Severe

Moderate
Quite bad

Stinging
Mild

Stops some things
Causes difficulties

No control
Disabling

No pain at all
Normal activities

Do most things
Few problems

0

1

2

3

4

5

6

7

8

9

10
Normal activities

Few problems
Do most things

Causes difficulties
Stops some things

Disabling Stops
normal activities

No control

Very bad
Severe

Mild
Stinging

No pain at all

PAIN LADDER

0

1

2

3

4

5

6

7

8

9

10

Excruciating
Worst Ever
1º Assessment
G A B C D

2º Assessment
Hx, Vital Signs

Focus assessment
+
Extend assessment

Reassessment
- Borderline parameters
- Change conditions

Cat. I, II
Resuscitation Room

Cat. ?
Interventions

Cat. ?
Interventions

Upgrade triage ?
Interventions
FOCUS ASSESSMENT
Symptom based Assessment for Common Present Symptoms
Symptom based approach

• Focus history taking and health assessment
• Commonly used by Nurse Practitioner
• Start on with the patient’s chief complaint
• To rule in a diagnosis
• To rule out the potential dangerous diagnoses
• More appropriate in current practice.
• Require higher level of knowledge
C/O : Dizziness / syncope (1)

To rule out potential deteriorating causes:

1. Cardiac $\rightarrow$ any sweating / palpitation / resting chest pain / SOB / weakness when in episode, +/- ECG

2. Fluid loss $\rightarrow$ nausea, vomit, diarrhea

3. HI $\rightarrow$ ? Hx of HI, check scalp

4. Occult blood loss $\rightarrow$ ? Pallor, (GI) coffee ground, melena, abd. Pain
   $\rightarrow$ female (ectopic) : LMP, vaginal bleeding, lower abd. pain
C/O : Dizziness / syncope (2)

To rule out potential deteriorating causes :

5. Hypoglycemia → H’stix

6. TIA → ? Frequency, ? Syncope, limb power

7. Medication → on new anti- H/T therapy, add drug dose, postural hypotension

8. Vasovagal → hyperventilation, carpopedal spasm
Dizziness

**History**
- What?
- When?
- Precipitation
- Deafness
- Tinnitus
- Other symptoms? e.g. nausea, vomiting

**Examination**
- Any signs of shock, hypotension?
- Any cardiovascular abnormalities?
- Any neurological abnormalities?
  - Especially:
    - Hearing
    - Nystagmus
    - Balance
    - Cerebellar function
**Syncope**

**History**
- When?
- Where?
- Warning?
- What precipitated?

Other symptoms:
- Palpitations
- Chest pain
- Shortness of breath

**Collapse**
- Detailed description from patient and witnesses
- Previous episodes
- Cardiac/neurological disease
- Alcohol
- Drugs

**Examination**
- Recovered?
- Still shocked?
- Pulse/BP
- Postural blood pressure
- Cardiac signs
- Neurological signs

**Reduced cardiac output**
- Tachycardia
- Bradycardia

**Diagnostic approach**

1. Loss of consciousness
   - Yes → Pre-syncope
   - No

2. Spontaneous recovery
   - Yes → Serious neurological event (e.g., stroke)
   - No → Prolonged hypotension (e.g., MI/PE)

3. Syncope
   - Occurred on standing
     - Yes → Postural hypotension — Volume depletion
     - No → Cardiological cause
   - Heart disease
   - Palpitations
   - Chest pain

4. Other neurological causes
   - Autonomic dysfunction
Systematic based assessment
Focus Assessment

~ systematic based approach

• General emergency approach from A to I
  – Airway
  – Breathing
  – Circulation
  – Disability
  – Environment / Exposure / ECG
  – Fit
  – Glucose
  – History
  – Immediate comfort & Investigations
General Emergency Approach

• **Airway**
  - open, clear & maintain with positioning, ± C-spine control

• **Breathing**
  - adequate ventilation, ± O2 therapy, ± Needle decompression

• **Circulation**
  - circulation volume, ± fluid challenge / ?over, Cardiac + SpO2 monitoring
General Emergency Approach

• **Disability**
  - ?altered level of conscious, pupil size, consider cause (e.g. head injury)

• **Environment / Exposure / ECG**
  - Confirm T°, keep warm,
  - expose whole body for exam
  - protect from further harm
  - Consider for ECG
General Emergency Approach

- **Fit**
  - Consider for fit attack / post-ictal state

- **Glucose**
  - Consider for hypoglycemia or hyperglycemia
<table>
<thead>
<tr>
<th><strong>Fit</strong></th>
<th>Twitching, S/F, syncope, dizziness, HI, collapse, confusion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Glucose</strong></td>
<td>Twitching, S/F, syncope, dizziness, HI, collapse, confusion + slurred speech, limb weakness, cold sweating, pale, acute abd., malaise, dehydration, DM with fever,</td>
</tr>
<tr>
<td><strong>ECG</strong></td>
<td>Twitching, S/F, syncope, dizziness, HI, collapse, confusion, slurred speech, limb weakness, cold sweating, pale, acute abd., malaise, dehydration + chest pain, palpitation, SOB, headache, back pain,</td>
</tr>
</tbody>
</table>
General Emergency Approach

• **History**
  - SAMPLE / OLD CART

• **Immediate comfort & Investigations**
  - Give analgesia & splint
  - Relieve remaining dyspnea
  - Symptomatic relieve
  - Give reassurance
  - Request investigations (ECG, blood tests ... ... )
Cardiovascular System

1. Chest pain, radiation?
2. Palpitation
3. SOB, sweating, syncope, resting chest pain, bil. basal crep.
4. Nausea & unusual epigastric pain
5. JVP / Edema-where?
6. ? TNG taken (no. & time)
7. Peripheral pulse quality (four limbs)
8. + Heart murmur (Yes or No)
9. Others
Measuring JVP

Diagram showing the highest level of venous wave, internal jugular vein, external jugular vein, venous pressure, and sternal angle.
Respiratory System

1. SOB, Sweating
2. Respiration rate & effort ( ? labored / retraction)
3. Audible wheeze / stridor
4. Chest expansion (? Symmetrical)
5. Tenderness - where ?
6. Cough, Sputum color
8. Others
Signs & symptoms of SOB

- Anxious expression
- Nasal flaring
- Circumoral cyanosis
- Suprasternal and intercostal retraction
- Hyperexpanded chest
- Sternocleidomastoid contractions
Protocol Driven Assessment
Use of Protocol Driven Assessment

- Set up in accordance to standards.
- Easy to set standard assessment in the department
- Easy to learn and check.
- Easy to self monitor.
- Provide tools for auditing and evaluation.
# Quick Stroke Assessment

<table>
<thead>
<tr>
<th>Stroke Assessment</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facial droop</td>
<td>Normal – both sides of face move equally</td>
</tr>
<tr>
<td>Patient shows teeth or smiles</td>
<td>Abnormal – one side of face does not move as well as the other</td>
</tr>
<tr>
<td>Speech</td>
<td>Normal – the patient says the correct words no slurring</td>
</tr>
<tr>
<td>Patient repeats “You can’t teach an old dog new tricks”</td>
<td>Abnormal – the patient slurs words, says the wrong words, or is unable to speak or understand</td>
</tr>
<tr>
<td>Hand grip</td>
<td>Normal – equal grip</td>
</tr>
<tr>
<td>Test as for GCS</td>
<td>Abnormal – unilateral weakness</td>
</tr>
<tr>
<td>Blood Glucose</td>
<td>Normal RBG</td>
</tr>
<tr>
<td>Test for RBG</td>
<td>Abnormal – If hypoglycaemia manage as per Hypoglycaemia Guideline</td>
</tr>
</tbody>
</table>
Has their face fallen on one side? Can they smile?
Can they raise both arms and keep them there?
Is their speech slurred?
Time to call 999 if you see any single one of these signs.
Kellermann Model

• Apply when you receive a case with unclear information
• This is not a trauma case
• A head to toes assessment has to be conducted
• This model of assessment can be adjusted as required
Quick medical assessment

- ABCD
- Mental status (orientation / level of co-operation / mood / memory)
- Hydration status / skin color
- Head (s/s of HI, facial symmetry)
- Neck (JVP)
- Chest (central / peripheral color, clubbing fingers?, A.E.)
- Cardiac (AR rate and regularity \(\rightarrow\) apical radial deficit, murmur ?, ankle edema, peripheral pulse volume deficit / delay)
- Abd. ( distention, B.S.?, light palpate \(\rightarrow\) tenderness)
- GU (continent ?, bladder distention?, Folley’s output)
- Limbs (edema, power, calf muscle pain, distal CSM)
CPR Quality
- Push hard (≥2 inches [5 cm]) and fast (≥100/min) and allow complete chest recoil
- Minimize interruptions in compressions
- Avoid excessive ventilation
- Rotate compressor every 2 minutes
- If no advanced airway, 30:2 compression-ventilation ratio

- Quantitative waveform capnography
  - If PETCO₂ <10 mm Hg, attempt to improve CPR quality
- Intra-arterial pressure
  - If relaxation phase (diastolic) pressure <20 mm Hg, attempt to improve CPR quality

Return of Spontaneous Circulation (ROSC)
- Pulse and blood pressure
- Abrupt sustained increase in PETCO₂ (typically ≥40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

Shock Energy
- Biphasic: Manufacturer recommendation (120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- Monophasic: 360 J

Drug Therapy
- Epinephrine IV/IO Dose: 1 mg every 3-5 minutes
- Vasopressin IV/IO Dose: 40 units can replace first or second dose of epinephrine
- Amiodarone IV/IO Dose: First dose: 300 mg bolus. Second dose: 150 mg.

Advanced Airway
- Supraglottic advanced airway or endotracheal intubation
- Waveform capnography to confirm and monitor ET tube placement
- 8-10 breaths per minute with continuous chest compressions

Reversible Causes
- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary
Trauma Nursing Process

A—Airway and Alertness w/cervical spinal immobilization
B—Breathing & ventilation
C—Circulation & Control of hemorrhage
D—Disability (neurologic status)
E—Exposure & Environmental control
F—Full set of vital signs & Family presence
G—Get resuscitation adjuncts (LMNOP)
H—History & Head-to-toe assessment
I—Inspect posterior surfaces
En-"ABLE" Safety Transfer of Care

ABLE Model

Assessment

Be communicate

Loading

En-route & End

Airway Management

ABCDM Approach

ISBAR MEWS

Safety Check

On-going Assessment

Theory ......................................................... Simulation
Pediatric Assessment Triangle

Appearance

Breathing

Circulation
SAVE A CHILD : Pediatric (1)

SAVE : Observation made prior to touching the patient.

A CHILD : History, brief examination.

S Skin (mottled, patchier, pallor)
A Activity (responsive)
V Ventilation (retractions, rate, strider)
E Eye contact (glassy stare, fails to engage)
SAVE A CHILD : Pediatric (2)

A Abuse (unexplained bruising, inappropriate parent)

C Cry (high pitched, inconsolable)

H Heat (fever)

I Immune system (sickle cell, corticosteroids)

L Level of consciousness (irritable, lethargic)

D Dehydration (capillary refill, mucus membrane, change of diapers, Hx of severe vomiting / diarrhea)
Documentation
Documentation

The importance of documentation:

1. To record all your findings
2. To record what you have done
3. To justify your triage decision retrospectively
4. As legal evidence in legal matters
Key points in documentation

1. Clear and legible writing.
2. Only document the significant information.
3. Subjective information Vs Objective parameter.
4. Be accountable for your documentation.
5. Document time precisely.
Objectives

1. What is triage

2. Triage assessment model

3. Primary & secondary assessment

4. Three approaches in assessing patients
   ➔ symptomatic based
   ➔ systemic based
   ➔ protocol driven assessment

5. Documentation
Recommended Textbook


Question?    Thank You !