Module 3

Paediatric Triage

Assigning CTAS Scores Using CEDIS Chief Complaint and Modifiers

Version 2.5b, 2013

CTAS National Working Group

CAEP | Canadian Association of Emergency Physicians
ACMU | Association canadienne des médecins d'urgence
NENA
AMUQ ASSOCIATION DES MÉDECINS D'URGENCE DU QUÉBEC
Canadian Paediatric Society
OHA ONTARIO HOSPITAL ASSOCIATION

Module 3 - Objectives

- Understand the differences between paediatric and adult triage
- Apply the Critical look - Paediatric Assessment Triangle
- Identify presenting complaint and utilize the CIAMPEDS
- Interpret vital signs in paediatric patients
- Apply paediatric specific modifiers

Triage Guidelines for Paediatrics

- Apply to:
  - Children from birth up to and including adolescents (age 16)
  - Challenged and technologically dependent individuals older than 16 years of age

*Hospital policies on paediatric ages vary

Compare Adult & Paediatric Triage

What is the same?

- Triage process
- Five CTAS levels
- Triage decision--based on critical first look assessment, presenting complaint and application of modifiers

What is different?

- Paediatric assessment techniques and method of interviewing are age specific
- Paediatric specific modifiers

CTAS Five Level Triage

Level 1 - Resuscitation
Level 2 - Emergent
Level 3 - Urgent
Level 4 - Less Urgent
Level 5 - Non-Urgent

The Triage Process

Critical Look - rapid visual assessment PAT

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Infection Control

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Presenting Complaint

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1st Order Modifiers

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2nd Order Modifiers - complaint-based

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CTAS Level – Assign Triage Level

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Reassessment

How Does Paediatric Triage Differ from Adults?

- First look is based on the Paediatric Assessment Triangle (PAT) (across the room assessment)
- Anatomic and physiologic assessment for paediatrics differ
- Significance of presenting complaints/ symptoms differ
- Symptom reports may not accurately reflect the child's condition
- Significant impact of age/development and psychosocial considerations

Special Paediatric Considerations

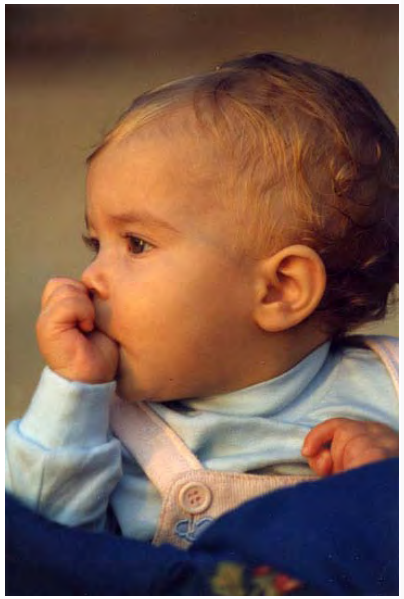
Psycho-social, anatomical and physiological differences.

Other special circumstances may include:

- Prematurity
- Congenital anomalies
- Metabolic disease
- Technology dependent children
- Developmentally challenged children
- Child maltreatment

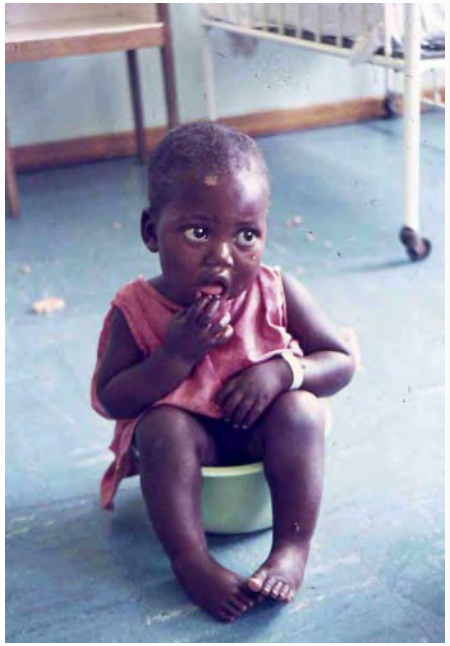
Anatomical Differences

- Relatively large head
- Smaller airway
- Breathing patterns vary with age
- Smaller size
- Weight dependent therapy



Physiologic Differences

- Immature immune system
- Increased metabolic rates
- Increased Body Surface Area (BSA)
- Smaller circulating blood volume
- Higher body fluid volume
- Kidneys unable to concentrate urine
- Heart rates vary with age



Psycho-Social Differences

Age	Likes/Dislikes
0 - 1	Likes cuddling, soother, music, to be wrapped in a blanket
1 - 3	Likes bubbles, distract and play during exam Fears separation
3 – 5	Likes stickers, games during exam Take words literally
5 -12	Like to be involved, touch equipment, given choices, explanations. They fear pain and disfigurement
12+	Body image is important, interview alone Be alert for substance abuse, depression, sexual activities Respect confidentiality
Special needs	Technologically dependent or challenged, provide comfort, determine what is normal based on parents perception/feedback

Psycho-Social Assessment

Examine general appearance and level of consciousness

- Note the child's emotional response to stimuli.
  - Anxiety, indifference and inability to be consoled may indicate an altered level of consciousness.
- Look at the caregiver/child interaction.
  - Does the story make sense?
  - Is what you hear and see the same?

Critical Look:

General Appearance

Work of Breathing

Circulation

CRITICAL LOOK → **INFECTION CONTROL** → **PRESENTING COMPLAINT** → **1st Order Modifiers** → **2nd Order MODIFIERS**

Critical Look - Tips

- Sleeping babies are the same as unconscious babies!!!
- **Wake them up!**
- **Child's head and torso need to be observed!**

Critical Look - General Appearance

- Alert and responsive?
- Interacting with caregiver?
- Normal skin colour, eyes, general appearance?
- Is there speech or crying?
- Dressed appropriately for the weather?
- Content or consolable?

Change in Behaviour

- Important to recognize & interpret in preverbal infants
  - rejecting feeds, general disinterest, lethargy, unexplained irritability, loss of tone
  - **ALL** are very worrisome, should be be triaged level 2 or higher based on Critical Look
  - **may represent sepsis, metabolic disorder, pain disorder, toxin, child maltreatment**

Critical Look - Work of Breathing

- Assess respiratory rate
- Assess respiratory effort
- Listen for adventitious sounds

A marked decrease in respiratory effort may signal a life threatening situation

Critical Look - Circulation

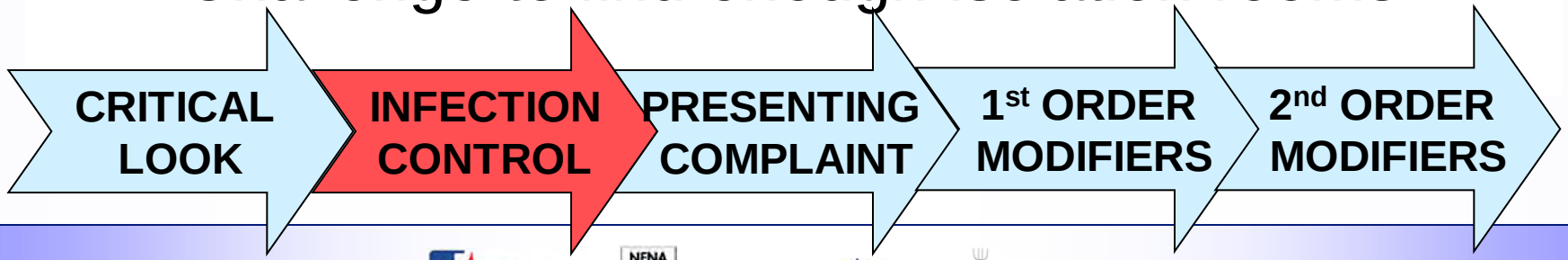
- Look at the skin for colour
- Check for uncontrolled bleeding
- Note signs of dehydration
  - sunken fontanelles or eyes
  - recent weight loss
  - dry mucous membranes, absent tears
  - skin mottling
- Assess level of consciousness

Assessment Tips

- Wake sleeping babies- consider them the same as unconscious babies !
- Interview before you touch the child
- Listen to parents/caregivers
- Check caregiver's perception of illness
- Do most invasive examination at end of assessment

Infection Control

- After the ‘Critical Look’ stable patients need a risk assessment for communicable disease
  - Droplet precautions for the very young = isolation
  - Older children can wear a mask
  - Children with rash also present a high risk, especially with conflicting parental attitudes towards immunizations
  - Challenge to find enough isolation rooms



Paediatric Presenting Complaints

- Common childhood presentations differ from adults
- Symptoms reported may not accurately reflect the child's condition
- For complete paediatric symptom list see Appendix: CEDIS Presenting Complaints

Common Presenting Complaints

- Five common paediatric presenting complaints:
  - Fever
  - Respiratory difficulties
  - Vomiting and/or diarrhea (dehydration)
  - Injuries
  - Change in behaviour

Paediatric CEDIS Complaint Examples

Complaint Category	***New* Complaint**
GASTROINTESTINAL	*Oral/Esophageal foreign body**
	Feeding difficulties in newborn
	Neonatal jaundice
MENTAL HEALTH	*Concern for patient's welfare**
	Paediatric disruptive behaviour
ORTHOPEDIC	*Paediatric gait disorder/painful walk*
NEUROLOGIC	*Floppy child*
RESPIRATORY	*Stridor*
	Wheezing - no other complaints
	Apneic spells in infants
GENERAL & MINOR	*Congenital problems in children*
	Newly Born

* Also applicable to adults

Subjective Assessment - History

Age Group	Technique
Infant	Ask the caregiver questions. Interview child in caregiver's arms. Do invasive procedures such as temperature measurement last.
Toddler	Observe child in the caregiver's arms. Note the way child plays and interacts. Do invasive procedures last.
Preschooler	Use age appropriate language for explanations. The child may participate in the history. Do invasive procedures last.
School Aged and Adolescents	Allow the child to participate by involving them in the interview, using age appropriate language. Privacy is very important for this age group.

Paediatric Assessment Tool - CIAMPEDS

C	Chief complaint
I	Immunizations/Isolation (contacts/travel)
A	Allergies
M	Medications
P	Past medical history/caregiver perception of illness
E	Events surrounding the illness or injury
D	Diet/diapers (intake and output)
S	Symptoms associated with the illness/injury

First Order Modifiers

Vital Signs

Respiratory Distress…….....**A**irway

……**B**reathing

Hemodynamic Status……**C**irculation

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

Temperature

Other

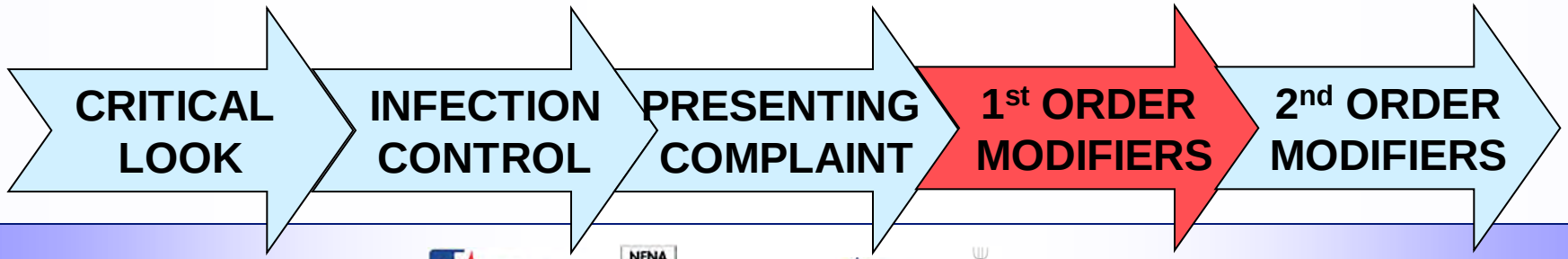
Pain Score

Bleeding Disorder

Mechanism of Injury

Vital Signs: Physiologic Assessment

- Respiratory rate and effort
- Heart rate and perfusion
  - capillary refill
- Appearance/neurologic status
- Documentation at triage essential unless child immediately directed to treatment area



Vital Signs: 1st Order Modifiers

- Should be completed on all paediatric patients during their emergency visit
- Time & place vital signs are measured will depend on presentation
- Vary depending on age and development
- Must be considered with general appearance, in triage level assignment
- Level I and 2 patients have ‘abnormal vital signs’ - Level I patients have ***unstable,*** ‘abnormal vital signs’

Vital Signs in Acuity Determination

- Attempt to measure while child is quiet
- Normal vital signs vary individually
  - depending on age, development, & physiologic status
- Abnormal vital signs will determine CTAS level
- Vital signs must be appropriate for child's general condition
  - in the child who appears ill, vital signs in the normal range may indicate a pre-cardiopulmonary arrest state

Respiratory - Rate and Effort

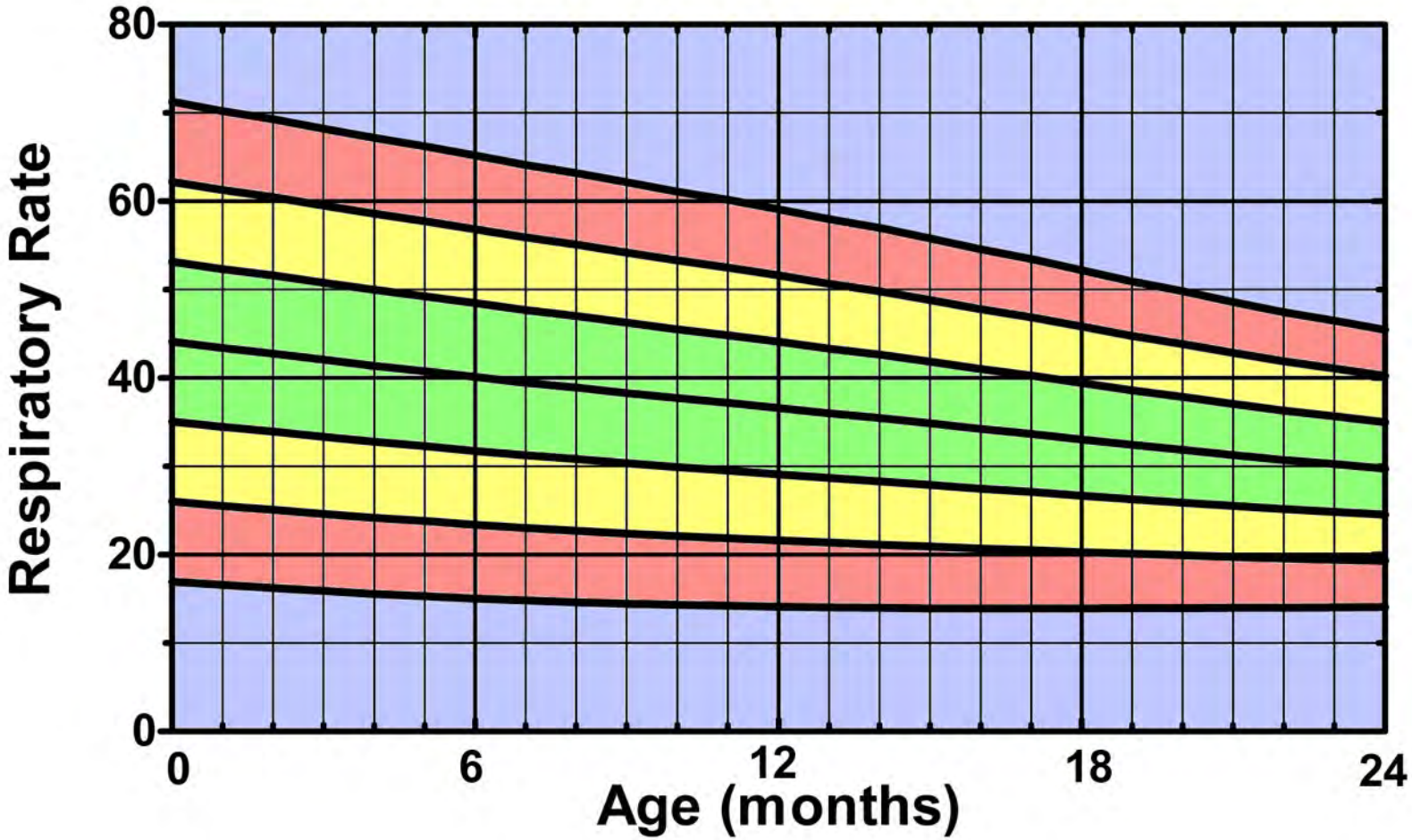
- Measure respiratory rate
- Assess respiratory effort
- Listen and auscultate for
  - stridor, grunting, wheezing, and adventitious sounds
- Use age based physiologic scales
- Look for preferred posture, drooling, dysphasia, abnormal sounds

Respiratory Distress

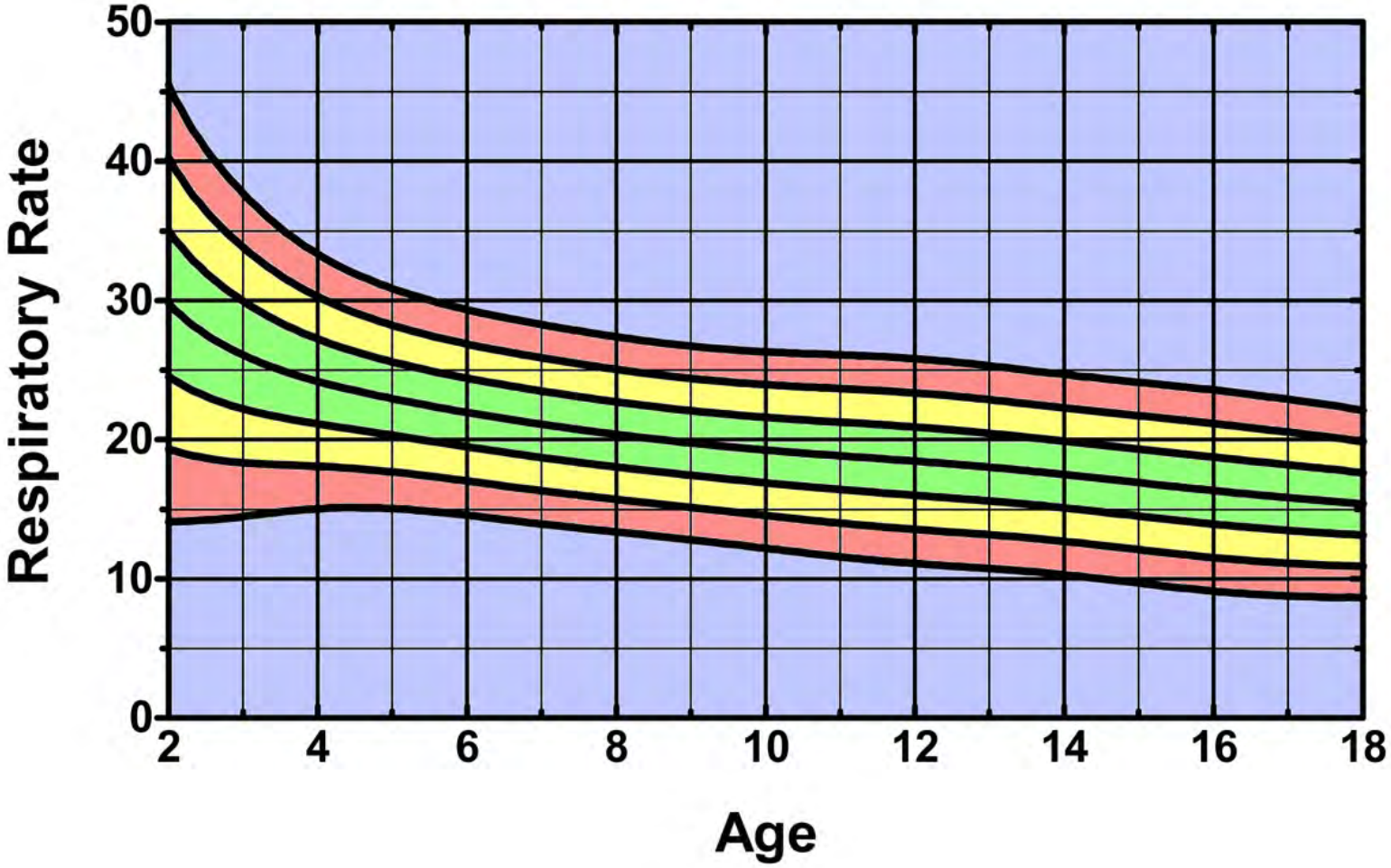
Level of Distress	Patient Description*	O_2 Saturation	CTAS Level
Severe	Fatiguing from excessive work of breathing, cyanosis; lethargy, confusion, inability to recognize caregiver	<90%	1
Moderate	Increased work of breathing, restlessness, anxiety, or combativeness	<92%	2
Mild/ Moderate	No obvious increased work of breathing, able to speak in sentences	92% - 94%	3

*Refer to manual for more complete definitions

CTAS Respiratory Rate Age 0 - 2



CTAS Respiratory Rate Age 2-18



Oxygen Saturation Measurement

- Do not delay triage completion to do oxygen saturation measurement in a critically ill child
- Indications:
  - children with respiratory or cardiovascular symptoms
  - children with altered vital signs
- Use size appropriate equipment
- Consider geographical location (altitude)

Using CTAS – Respiratory

- Age 6 asthmatic, RR 28/min, indrawing
  - Critical look: moderate breathing distress
  - Vital signs: RR 28/min, HR 140/min, O_2 Sat 84% *
- Age 5, choked on peanut, RR 26/min coughing
  - Critical look: moderate breathing distress *
  - Vitals: RR 26/min, HR 120/min, O_2 Sat 96%

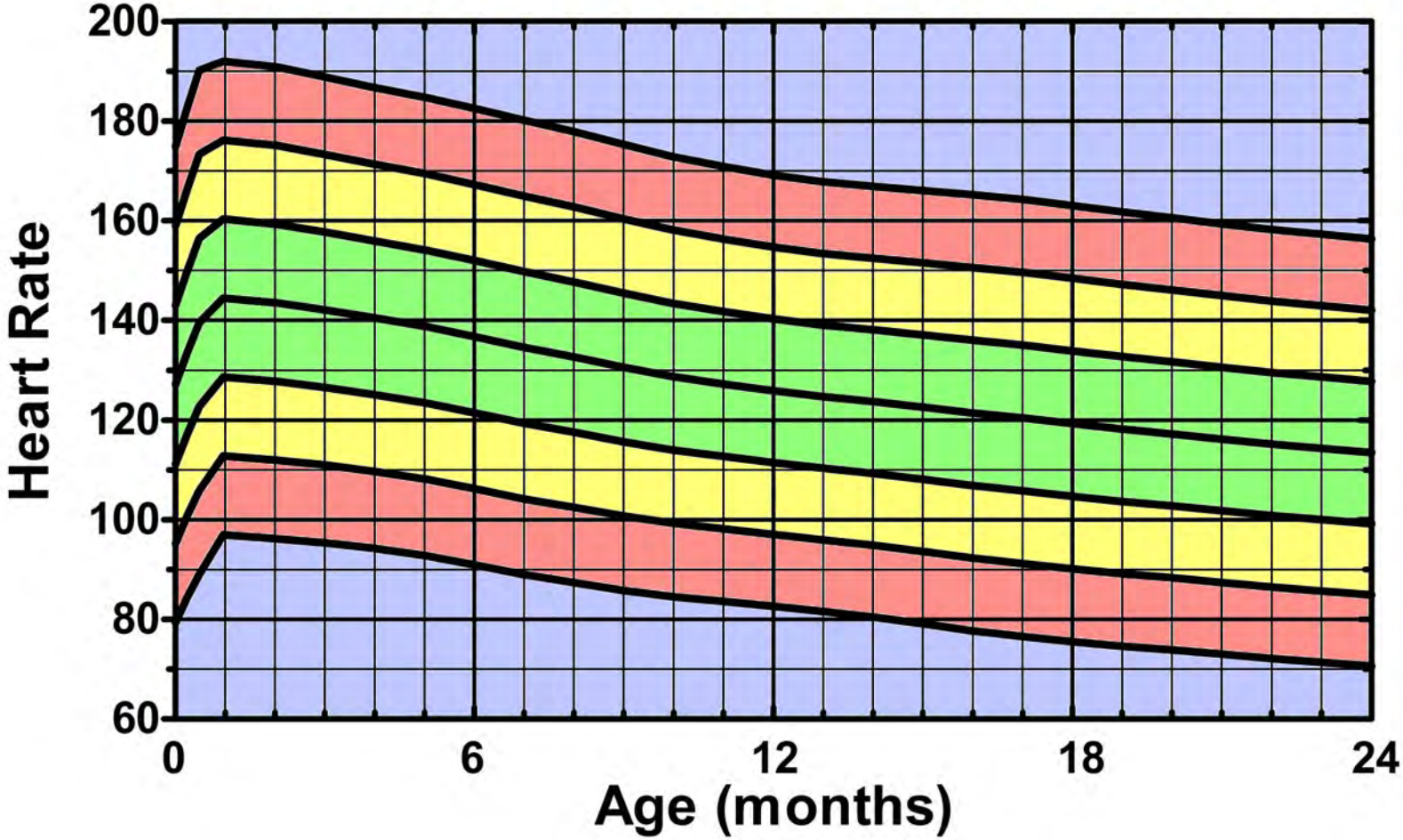
Circulatory - Heart Rate and Perfusion

- Measure heart rate
  - Tachycardia is an early response;
  - Bradycardia late
- Assess capillary refill
- Skin colour, temperature, moisture
- Check for uncontrolled bleeding
- Use age based physiologic scales

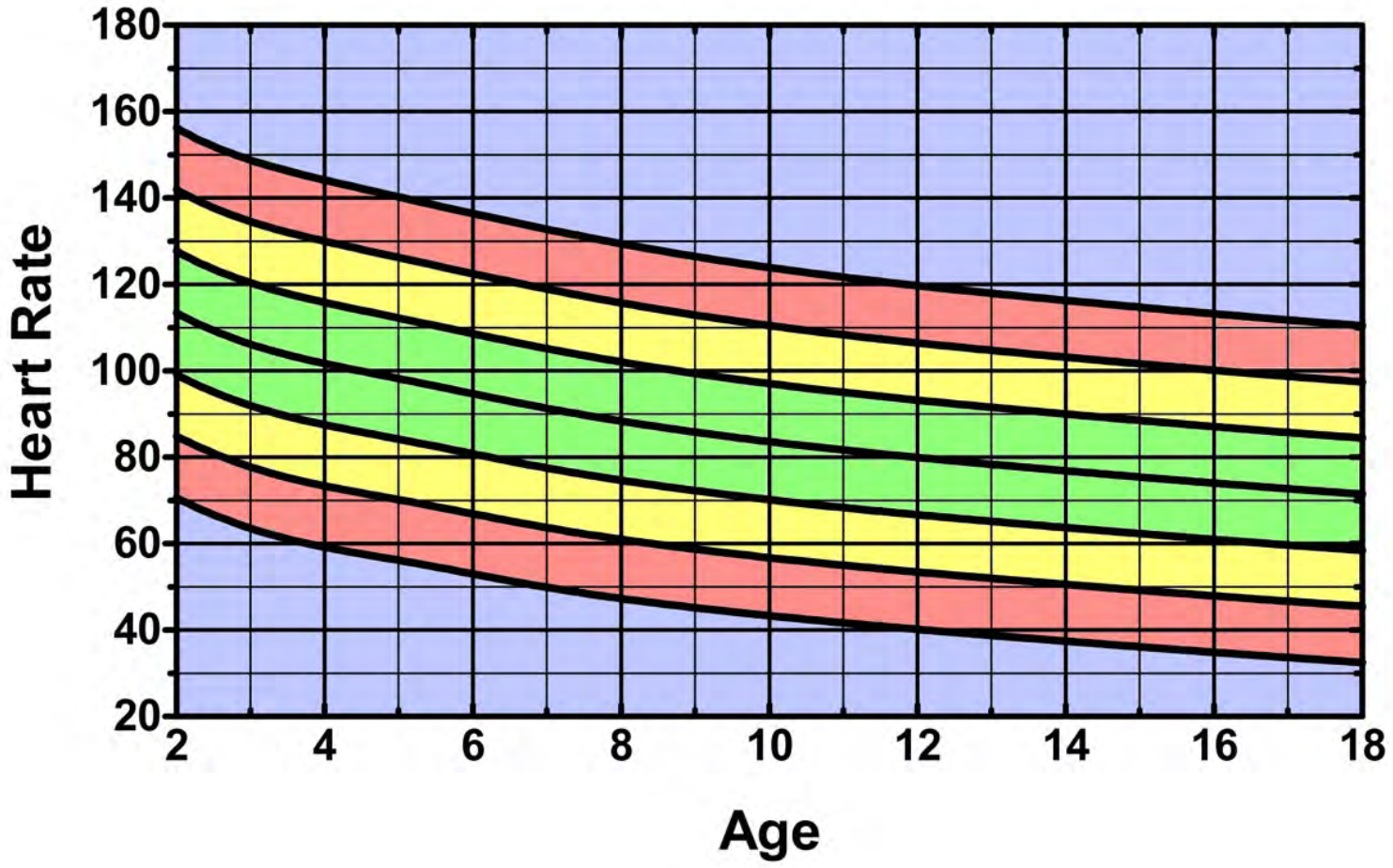
Hemodynamic Stability

Circulatory Status	CTAS level
Shock: Evidence of severe end-organ hypoperfusion, weak or thready pulses, absent peripheral pulses, hypotension, significant tachycardia or bradycardia, ineffective ventilation or oxygenation, decreased LOC. Possibly flushed, febrile, toxic, as in septic shock.	1
Hemodynamic Compromise: Evidence of **borderline perfusion**: pale or mottled skin, tachycardia, delayed capillary refill, decreased urine production. Signs of dehydration not always reliable.	2
Vital signs outside the limits of normal.	3
Normal vital signs	4, 5

CTAS Heart Rate Age 0-2



CTAS Heart Rate Age 2 - 18



Using CTAS – Circulation

- Age 4, diabetic, vomiting and rapid breathing
  - Critical look: pale, effortless tachypnea
  - Vital signs: RR 60/min, HR 170/min*
  - CIAMPEDS – Insulin dependent diabetic, not tolerating fluids, recent weight loss
- Age 7 months, vomiting and diarrhea
  - Critical look: pink, active
  - Vital signs: RR 36/min, HR 170/min*

Level of Consciousness

Neurologic Status	GCS	CTAS
Unconscious: unable to protect airway, response to pain or loud noise only and without purpose, continuous seizure or progressive deterioration in level of consciousness.	3-9	1
Altered level of consciousness: response inappropriate to verbal stimuli; loss of orientation to person, place or time (as age appropriate); altered behavior (such as irritable/agitated/inconsolable).	10-13	2
Normal: other modifiers are used to define the CTAS level.	14-15	3, 4 or 5

Using CTAS- LOC

- Age 12, EMS reports he was thrown from bike, combative at the scene and now only responds to painful stimuli
  - Critical look: responds only to painful stimuli *

Fever

- Fever is one of the more common presenting complaints bringing children to the ED
- Temperature is used as a specific modifier in young infants and immunocompromised
- Vitals and other modifiers must be used to assign a triage level in older children
- Fever protocols for initial treatment, and reassessment should be utilized

Paediatric Temperature Measurement

Age	Recommended technique
30 days to 2 yrs	First choice: Rectal (definitive) Second choice: Axillary (screening)
>2 yrs - 5 yrs	First choice: Rectal Second choice: Ear Third choice: Axillary
>5 yrs	First choice: Oral Second choice: Ear Third choice: Axillary

*Adapted from Tables 1 and 2 of: Community Paediatrics Committee, Canadian Paediatric Society (CPS). Temperature measurement in paediatrics [position statement]. *Paediatric Child Health 2000;5(5)*:ref no CP00-01. Reprinted with permission of CPS. Reaffirmed in 2011.

Temperature

Age	Temperature	Descriptor	CTAS
0 – 3mo	**>38.0 C** **<36.0 C**		2
All Ages	**>38.0 C** **<36.0 C**	Immunocompromised (e.g. neutropenia, transplant, steroids)	2
>3 mo to 3 yr	**>38.5C**	Looks unwell	2
		Looks well	3
>3 yr	**>38.5C**	Looks unwell – consider RR and HR	3
		Looks well	4

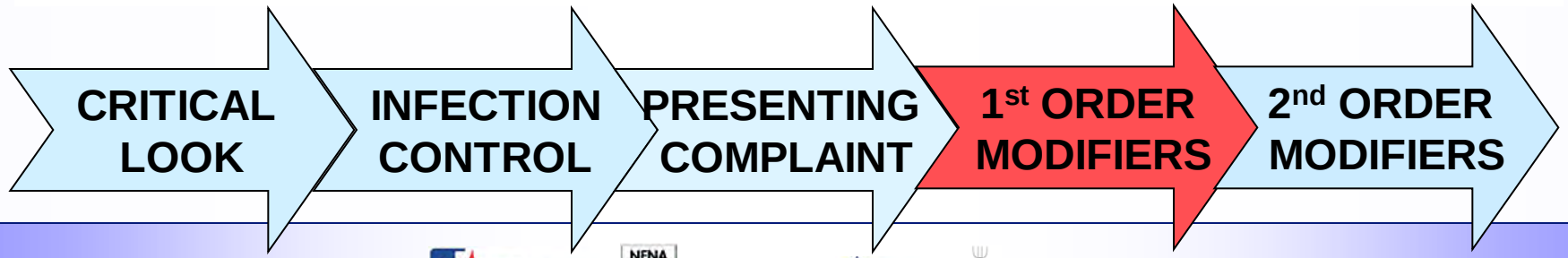
Using CTAS - Fever

- Age 2 months* with fever 38.6°C, appears well
  - Pulse & respirations in normal range
- Age 8 years, sickle cell anaemia* with a fever 38.6°C, appears well
  - Pulse & respirations in normal range

Other 1st Order Modifiers

- May be required to determine correct CTAS level, depending on presenting complaint and CIAMPEDS

Pain
Mechanism of injury
Bleeding Disorder



Paediatric Pain Assessment

- Intense pain can be associated with benign processes (otitis media).
- Tachycardia, pallor, sweating and other physiological signs are useful in the evaluation of pain level
- Past experience may influence the child's reaction to illness or injury
- The evaluation of pain is a subjective measurement. The accuracy of pain scales varies with age.

Pain Assessment

Severity & Score*	Pain	CTAS Level
Severe 8–10	Acute	2
	Chronic	3
Moderate 4–7	Acute	3
	Chronic	4
Mild 1–3	Acute	4
	Chronic	5

* Chronic pain can be triaged one level lower if considered appropriate

Non Verbal Pain Assessment

Faces Pain Scale Left to Right pain score 0, 2, 4, 6, 8,10

FLACC

- behavioural observational tool for acute pain
- 10 point scoring system

Key Concepts / Descriptors

- Infants with severe pain: ‘inconsolable’, ‘physiological distress’
- Infants with moderate pain: ‘consolable’, ‘no or limited physiological distress’
- Infants with mild pain: ‘easily distractible’, ‘no physiological distress’

Bleeding Disorder

Life or Limb Threatening Bleed	Moderate/Minor Bleed
CTAS level 2	*CTAS level 3*
Head (intracranial) & neck	Nose (epistaxis)
Chest, abdomen, pelvis, spine	Mouth (including gums)
Massive vaginal hemorrhage	Joints (hemarthroses)
Iliopsoas muscle & hip	Menorrhagia
Extremity muscle compartments	Abrasions
Fractures & dislocations	Superficial lacerations
Deep lacerations	
Any uncontrolled bleeding	

*Patients with bleeding disorders presenting with significant bleeds require rapid factor replacement or other relevant interventions. Therapy usually takes precedence over investigations.

www.hemophilia.ca/emergency [English] www.hemophilia.ca/urgence [French]

GUIDELINES FOR EMERGENCY MANAGEMENT OF HEMOPHILIA AND VON WILLEBRAND DISEASE

FactorFirst

Canadian Hemophilia Society
Help Stop the Bleeding

Association of Hemophilia Clinic Directors of Canada

www.hemophilia.ca/emergency

LIFE OR LIMB-THREATENING BLEEDS

- Head (intracranial) and neck
- Chest, abdomen, pelvis, spine
- Iliopsoas muscle and hip
- Massive vaginal hemorrhage
- Extremity muscle compartments
- Fractures or dislocations
- Any deep laceration
- Any uncontrolled bleeding

MODERATE/MINOR BLEEDS

- Nose (epistaxis)
- Mouth (including gums)
- Joints (hemarthroses)
- Menorrhagia
- Abrasions and superficial lacerations

TREATMENT FOR LIFE OR LIMB-THREATENING BLEEDS

PATIENT MUST RECEIVE PRODUCT URGENTLY

Hemophilia A: (all severities)
Recombinant factor VIII concentrate 40-50 units/kg

Hemophilia B: (all severities)
Recombinant factor IX concentrate 100-120 units/kg >15 yrs
Recombinant factor IX concentrate 135-160 units/kg <15 yrs
The dosage for recombinant factor IX is substantially higher because of its lower recovery, particularly in children.

Von Willebrand Disease:
A VW factor containing factor VIII concentrate such as Humate-P 60-80 Ristocetin cofactor units/kg

It is critical to raise the factor level to 80-100% urgently for all life or limb-threatening bleeds.

TREATMENT FOR MODERATE/MINOR BLEEDS

PATIENT MUST RECEIVE PRODUCT WITHIN 30 MINUTES WHENEVER POSSIBLE

Hemophilia A: (severe/moderate)
Recombinant factor VIII concentrate 20-30 units/kg

Hemophilia A: (mild)
Desmopressin (Octostim/DDAVP) 0.3 mcg/kg (max. 20 mcg)–SC/IV

Hemophilia B: (severe/moderate/mild)
Recombinant factor IX concentrate 35-50 units/kg >15 yrs
Recombinant factor IX concentrate 50-70 units/kg <15 yrs
The dosage for recombinant factor IX is substantially higher because of its lower recovery, particularly in children.

Von Willebrand Disease:
Type 1 and Type 2A or 2B known to have used desmopressin safely and effectively – (Octostim/DDAVP) 0.3 mcg/kg (max. 20 mcg)–SC/IV

For patients not responding to desmopressin (such as Type 3 or Type 2B) use Humate-P 40-60 Ristocetin cofactor units/kg

For mucosal bleeds in all above add:
Tranexamic Acid (Cyklokapron) 25 mg/kg po tid 1-7 days (contraindicated if hematuria)

Dosages are patient specific – these are general guidelines only. Round doses up to the nearest vial.
If the products listed are not available, please call the nearest Canadian Blood Services or Héma-Québec Centre.

Remember... FactorFirst

PROMPT INFUSION will halt bleeding, minimize long-term complications and can save life. If bleeding persists, follow the guidelines for life or limb-threatening bleeds and call the:

Hemophilia Treatment Centre

Physician: _____

Nurse: _____

Day Phone: _____

Night Phone: _____

This treatment card is not intended to replace comprehensive guidelines developed by the Association of Hemophilia Clinic Directors of Canada (AHCDC)
www.ahcdc.ca/publications.html

Delay in the restoration of hemostasis to the patient with hemophilia or von Willebrand disease may be life or limb-threatening.

- **PROMPT TRIAGE AND ASSESSMENT.**
- Determine the severity of the bleed.
- Recognize that bleeding in the head, spine, abdomen or pelvis may initially be occult and potentially life-threatening.
- **TREAT FIRST AND INVESTIGATE LATER – "FACTOR FIRST".**
- Avoid invasive procedures such as arterial punctures unless the patient has factor replacement.
- **NO** IM injections and **NO** ASA.
- The patient or guardian may be your most important resource, so do ask about specific treatment protocols.
- Contact the patient's Hemophilia Treatment Centre where a hematologist is always on call.
- Provide clear discharge instructions and arrange a follow-up plan or admit to hospital if necessary.

Use Universal Precautions

Patient Information:

Name: _____

Date of Birth: _____

Diagnosis: _____

Severity: _____ Level: _____

Response to desmopressin (DDAVP): ❑ no ❑ yes to _____ %

Inhibitors: ❑ no ❑ yes

Other Medical Information: _____

Date of Recommendation: _____ / _____ / _____

Signature of Physician _____

Recommended Treatment:

Product and Dose/kg for Life or Limb-threatening Bleeds:

_____

Product and Dose/kg for Moderate/Minor Bleeds:

_____

GUIDELINES FOR EMERGENCY MANAGEMENT OF RARE BLEEDING DISORDERS

se/kg for moderate/minor bleeds:

Remember... TreatFirst

PROMPT TREATMENT will halt bleeding, minimize long-term complications and can save life. If bleeding persists, follow the guidelines for life or limb-threatening bleeds and call the:

Bleeding Disorder Treatment Centre

Hospital: _____

Physician: _____

Nurse: _____

Day Phone: _____

Night Phone: _____

DELAY IN THE RESTORATION OF HEMOSTASIS TO THE PATIENT WITH A RARE BLEEDING DISORDER MAY BE LIFE OR LIMB-THREATENING.

- **PROMPT TRIAGE AND ASSESSMENT.**
- Determine the severity of the bleed.
- Recognize that bleeding in the head, spine, abdomen or pelvis may initially be occult and potentially life-threatening.
- **TREAT FIRST AND INVESTIGATE LATER.**
- Avoid invasive procedures such as arterial punctures unless the patient has received treatment.
- **NO** IM injections and **NO** ASA.
- The patient or guardian may be your most important resource, so do ask about specific treatment protocols.
- **CONTACT THE PATIENT'S BLEEDING DISORDER TREATMENT CENTRE WHERE A HEMATOLOGIST IS ALWAYS ON CALL.**
- Provide clear discharge instructions and arrange a follow-up plan or admit to hospital if necessary.

Use Universal Precautions

LIFE OR LIMB-THREATENING BLEEDS

PATIENT MUST RECEIVE TREATMENT URGENTLY

- Head (intracranial) and neck
- Chest, abdomen, pelvis, spine
- Iliopsoas muscle and hip
- Massive vaginal hemorrhage
- Extremity muscle compartments
- Fractures or dislocations
- Any deep laceration
- Any uncontrolled bleeding

MODERATE/MINOR BLEEDS

PATIENT MUST RECEIVE TREATMENT WITHIN 30 MINUTES WHENEVER POSSIBLE

- Nose (epistaxis)
- Mouth (including gums)
- Joints (hemarthroses)
- Menorrhagia
- Abrasions and superficial lacerations

Mechanism of Injury

- Mechanism of injury itself can determine CTAS Level
- **High-risk** mechanism assigns a CTAS Level 2.
- Lower-risk mechanism patients have acuity determined using other modifiers

Mechanism of Injury

MOI	CTAS Level 2
General Trauma	**MVC**: **MCC**: **Pedestrian or bicyclist:** **Fall:** From >3 ft (>1 m) or 5 stairs **Penetrating injury** To high risk anatomical regions
Head Trauma	**MVC**: **Pedestrian:** struck by vehicle **Fall:** From >3 ft (>1 m) or 5 stairs **Assault:** With blunt object
Neck Trauma	**MVC**: **MCC**: **Fall:** From > 3ft (1 m) or 5 stairs **Axial load** to the head

Using CTAS - MOI

- A 13 year old female jogger was hit by a car*:
  - arrives by ambulance, is uncomfortable and grimacing with pain.
  - denies loss of consciousness, headache, or neck pain.
  - complains of moderate abdominal pain (5/10) mostly left upper abdomen.
  - Vital signs: RR18/min, HR 102/min, BP 100/70, GCS 15.
  - no obvious bony injuries, contusions arms

2nd Order Modifiers

- Definition 2nd Order Modifiers are specific to a limited number of complaints and:
  - may be required to supplement 1st Order Modifiers to ensure the patient is assigned an appropriate acuity score or
  - may be an absolute requirement to assign a triage score for patients with certain complaints where1st Order Modifiers are either irrelevant or totally inadequate to assign acuity.
  - Examples:
    - Blood glucose level
    - Degree of dehydration

Second Order Modifiers

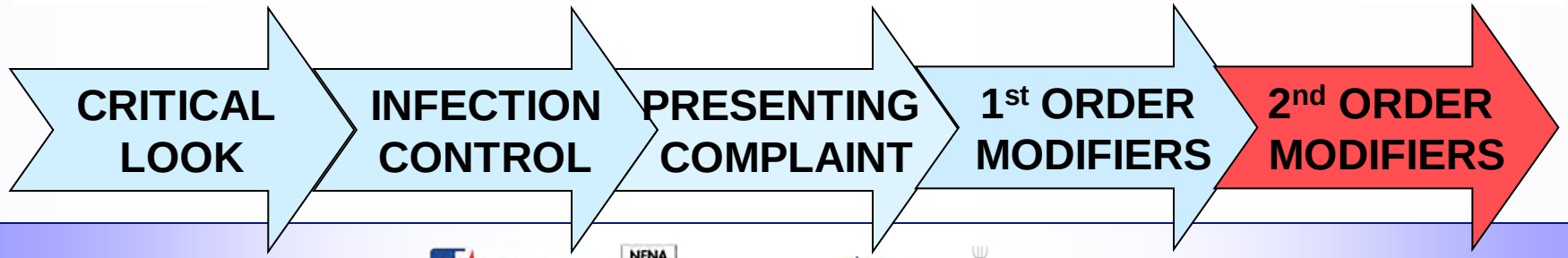
May up triage specific complaints over 1st order modifiers

Glucose

Blood Pressure

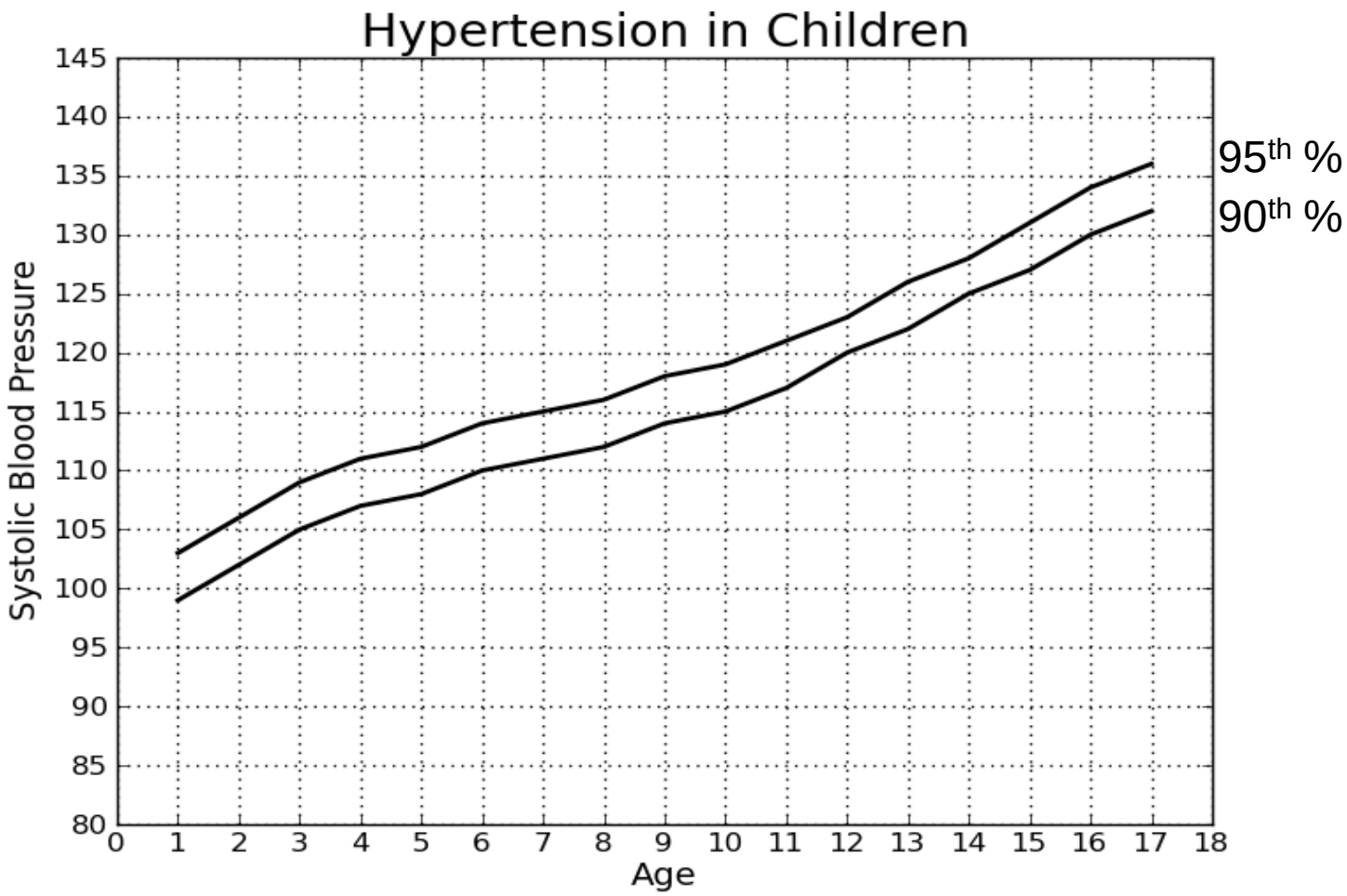
Complaints where 1st order modifiers have limited applicability

*** Module 4** *focuses on 2nd order modifiers*



Paediatrics - Blood Pressure

- Blood pressure is a late indicator of a serious circulatory volume problem.
- Important to measure in:
  - Known renal disease
  - Conditions associated with hypertension
  - Children on medications which may affect blood pressure



Borderline Hypertension = 90th percentile for age

Hypertension = 95th percentile for age

Blood Glucose Level

CEDIS Presenting Complaint	Blood Glucose Level	Symptoms	CTAS Level
Altered level of consciousness; Confusion; Hyperglycemia; Hypoglycemia	<3mmol/L	Confusion, diaphoresis, behavioral change, seizure, infant < 1 yr	2
		None	3
	>18mmol/L	Dyspnea, dehydration, weakness	2
		None	3

Dehydration Severity

CEDIS Presenting Complaint	Second Order Modifier	CTAS Level
Vomiting and / or nausea; Diarrhea; General Weakness	***Severe dehydration:*** marked volume loss with classic signs of dehydration and signs and symptoms of shock	1
	Moderate dehydration: dry mucous membranes, tachycardia, plus or minus decreased skin turgor and decreased urine output.	2
	Mild dehydration: stable vital signs with complaints of increasing thirst and concentrated urine & a history of decreased fluid intake or increased fluid loss or both.	3
	Potential dehydration: no symptoms of dehydration but presenting cause of fluid loss ongoing or difficulty tolerating oral fluids.	4

New Paeds 2nd Order Modifiers

Complaint	2nd order modifier	CTAS level
Stridor	Airway compromise	1
	Marked stridor	2
	Audible stridor	3
Apneic spells in infants	Apneic episode on presentation	1
	Recent spell consistent with apnea or respiratory compromise	2
	History of spell consistent with apnea	3
Inconsolable crying in infants	Inconsolable infant - abnormal vital signs	2
	Inconsolable infant - vital signs stable	3
	Irritable but consolable	4

**Don’t forget 1st order modifiers may make 2nd order modifier redundant

New Paeds 2nd Order Modifiers

Complaint	2nd order modifier	CTAS level
Floppy child	No tone, unable to support head	2
	Limited/less than expected muscle tone	3
Paediatric gait disorder/ painful walk	Gait or limp problems with fever	3
	Walking with difficulty	4
Congenital problem in children	Conditions and protocol letters identifying concerns for rapid deterioration or need for immediate therapy Vomiting/diarrhea in a child with inherited metabolic disease, type 1 diabetes or adrenal insufficiency	2
	Caregivers identifying need for care	3
	Stable child with congenital disease with potential for problems	4

Selected 2nd Order Modifiers

Presenting Complaint	Revised Modifier	CTAS level
Extremity weakness / symptoms of CVA	time of onset of symptoms 4.5 hrs	2
	> 4.5 hrs or resolved	3
Difficulty swallowing / dysphagia	drooling or stridor	2
	possible foreign body	3
Upper or Lower extremity injury	obvious deformity †	3
Respiratory foreign body OR Foreign body nose OR Oral / esophageal foreign body	*Button battery, no symptoms	3

*Not an immediate danger, however, caustic leaks can be serious

Reassessments

- Advise patients/parents/caregivers to return to triage if their condition changes while waiting
- Reassess waiting patients within the following time frames:

  Level 1 - continuous nursing care

  Level 2 - every 15 minutes

  Level 3 - every 30 minutes

  Level 4 - every 60 minutes

  Level 5 - every 120 minutes
- Document reassessments & acuity changes - but never change the original CTAS Level

Questions

Case Scenarios

1. Review your assigned case
2. Determine the triage level
3. Present your rationale
4. Confirm using COT
   - COT stands for Complaint Oriented Triage and refers to an electronic support reference freely available on the CAEP website
   - Created in power point, can be housed on any computer for quick reference

Case 1

- A 15 year old male was hit by a car and fell from his bicycle. He arrives by ambulance, is uncomfortable and grimacing with pain. He denies loss of consciousness, headache, or neck pain. There are no obvious bony injuries.
- He complains of severe abdominal pain (8/10) mostly left upper abdomen and splinting left chest.
- Vital Signs: RR 18, HR 110, BP 110/70, GCS 15.

Case 2

- A mother states that her 11 week old baby felt hot while breast feeding. She checked his temp with a fever strip and it read 38.2°C. He is perhaps slightly less active, but Mom has not noted anything else suspicious in his behaviour.
- At triage he looks well.
- RR 54, HR 185, T 38.2°C (same as at home).

Case 3

- A 6 year old presents 7 days post tonsillectomy with bleeding.
- At triage he is spitting blood into a basin. He looks pale.
- RR 28, HR 130, BP 100/70.

Case 4

- A mother arrives with an 18 month old infant who has experienced fever, vomiting and diarrhea for 2 days. At the after-hours clinic last evening she was told to continue Tylenol and oral fluids.
- This morning the child “looks sick.” The child has not voided overnight.
- RR 35, HR 150, Temp 39.4°C.

Case 5

- A 2 year old boy was running and fell on his face on the carpet.
- He did not lose consciousness and he cried immediately.
- He has a superficial abrasion on the tip of his nose, with no deformity or active bleeding noted.
- RR 26, HR 112, T 37.1°C
- He is in no distress and no complaints of pain.
- No history of bleeding disorder.

Case 6

- A 2 month old infant arrives with mother. He has had a “high” fever for 2 days and was given Tylenol with some effect. Yesterday the baby was irritable.
- Today the baby is not feeding and is sleepy.
- The baby looks unwell, floppy and makes no eye contact.

Case 7

- At 1400h a 2 year old arrives with a scalp laceration that occurred when he fell and hit his head on the edge of a coffee table.
- There is no active bleeding.
- The child cried immediately and there was no loss of consciousness.
- The child appears sleepy.
- RR 36, HR 148, BP 85/60.

Case 8

- The paramedics were dispatched to a home for a 3 month old who stopped breathing. No intervention was needed.
- Mother states she has an apnea monitor at home and has noted an increased number of alarms when the baby is asleep.
- At triage the baby is alert and sucking on a soother.
- She appears well and in no distress with VS normal for age.

Case 9

- A 4 year old daughter of Chinese immigrants presents with a history of vomiting bright red blood.
- She looks chronically ill and parents admit she has been slow to grow and often ill.
- She had no childhood vaccinations and has a distended abdomen.
- RR 24, HR 112, BP 96/68.

Case 10

- An 11 year old is brought in by his mother because of pain and swelling of his left scrotum. The boy reports pain started at lunch time and has become progressively worse. The boy is crying with pain and walking with difficulty.
- RR 18, HR 90

Case 11

- A 7 year old boy is brought in by his father. He has been coughing for 3 days and now seems congested with reported temperature of 37.6°C.
- The boy has Muscular Dystrophy (diagnosed at 4 years of age). He was started on oral antibiotics as soon as he became ill.
- PAT indicates RR rapid, irregular and shallow, skin is mottled and capillary refill >2 secs.

Case 12

- An 8 year old boy was standing behind his older brother who was practicing his golf swing. He was struck on the side of his head and has a 2 cm laceration, but no loss of consciousness.
- RR 21, HR 96, BP 112/76.
- He says the pain is mild and appears in no distress.
- He is not actively bleeding.

Case 13

- A 13 year old girl presents with severe chest pain (9/10).
- RR 20, HR 117, BP 160/120

Case 14

- A 3 year old boy, brought in by EMS, was found in a garage unresponsive.
- RR 40, HR 120
- O_2 Sat 95%, glucose 4.0 mmol/L

Case 15

- A 10 month old infant presents with a 1 week history of increasing cough. Today parents were concerned about slight colour change with coughing.
- The infant is alert, quiet and pink.
- RR 30, HR 130, Temp 37°C, O_2 Sat 98%.

Case 16

- A 6 year old girl arrives with a teacher who states the girl fell in the schoolyard and struck the side of a slide. There is dried blood on the girl's face and she is crying.
- The girl is alert, respirations are normal and she is in discomfort.
- She has a swollen right forearm that is splinted and a 4 cm laceration above her left eyebrow.
- RR 18, HR 110, GCS 15.
- Complaining of moderate pain.

Case 17

- A 5 year old presents with fever and abdominal pain 2 days after returning from vacation.
- RR 30, HR 135, Temp 41°C.

Case 18

- A 6 year old girl presents with a history of vomiting and diarrhea for the past day.
- She vomits a small amount on arrival to the ED.
- She is alert and talkative.
- RR 24, HR 110, T 37.9°C.

Case 19

- A 12 year old presents with her first menstrual period. She has been bleeding for 10 days and complains of dizziness.
- RR 26, HR 120

Case 20

- A 14 year old girl presents with recurrent knee pain, worse when climbing stairs. Currently 4/10, improves with ibuprofen & worsens with activity. It has bothered her on and of for 2 years, worse when playing volleyball. There is no redness or swelling.
- The vital signs are normal.

Case 21

- A 7 year old girl presents with a 6 month history of a skin lesion on her finger. There is no history of infectious contact, travel or underlying disease.
- She looks well.