Triage & Patient Assessment

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VCA

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Triage

- Process to assess the urgency of illness in order to prioritize the order of treatment
- Team approach
  - Reception
  - RVT
  - DVM

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Triage

Category	Response Time & Type of Injuries
Critical	Must be attended to immediately e.g shock, toxicity, hemorrhage, head trauma, dystocia, seizures
Urgent	Must be attended to within 1 hour e.g open fractures, trauma with no signs of shock/CNS changes, active vomiting, profuse diarrhea
Stable	Must be attended to within 24hrs e.g lameness, anorexia

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Initial Evaluation

- Brief history
- Primary survey
- Rapid diagnostic tests

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1-Brief history

- Signalment (breed, age, sex)
- Presenting complaint
- Relevant prior medical history
  - Active illness/chronic illnesses
  - Current therapy
- Onset and progression
- Recent therapy

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Example

- 10yr MN GRD – Collapsed this morning
- 8 wk old F puppy – V/D and lethargy
- 6yr MN DSH – straining in litter box

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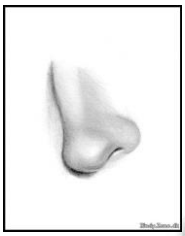
2-Primary Survey

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Primary Survey

- Mentation
- RR/effort
- MM & CRT
- Auscultation
- Femoral/dorsal pedal pulses
- Temperature

- Pain

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"ABC vs **CAB**"

- **C**irculation and level of **C**onsciousness

- **A**irway and **A**nalgesia

- **B**reathing and **B**leeding

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Circulation

- Identify Shock (impaired circulation)
  - Mental alertness
  - Capillary refill time (CRT)
  - Mucous membrane color (MM)
  - Heart rate (HR)
  - Peripheral pulses (PP)
  - Temperature

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Shock

- Compensatory shock
  - Most reversible stage of shock
  - Excellent prognosis
  - ***Tachycardia*** as a physiologic response to shock is often only identifiable sign

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Tachycardia

- Pain
- Stress/Anxiety
- Hypotension
- Hypovolemia
- Cardiac
- Hypoxia
- Hypercapnea
- Hyperthermia
- Toxin
- Hyperthyroidism

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Types of Shock

- Hypovolemic
  - Hemorrhage or marked fluid loss (e.g. HGE)
- Distributive
  - Vasodilatory (e.g. sepsis/anaphylaxis)
- Obstructive
  - Impaired venous return (e.g. GDV or pericardial effusion)
- Cardiogenic
  - Cardiomyopathy or arrhythmia

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Level of **C**onsciousness (LOC)

- Mental status
  - Perfusion must be restored (MAP > 60mmHg)
- Pupil size, symmetry and PLRs
  - Preserved with metabolic diseases/shock
  - Alerted with primary CNS disease
- Monitor changes/Assess frequently

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Airway

- Absent or Sporadic breathing pattern

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Analgesia

- Reduces stress and anxiety
- Facilitates patient assessment
- Prevent cardiopulmonary arrest
- Will NOT mask the signs of shock or blunt compensatory mechanism
- TITRATE

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Analgesia/Sedation in Urgent Care

- ***Titrate*** to effect
- Analgesia
  - Use CV sparing agents with reversal
  - Eg hydromorphone, fentanyl, methadone
- Sedation
  - Benzodiazepines (eg. Diazepam or midazolam)
  - Butorphanol
  - Alfaxalone (IM) or Propofol (IV)
  - Acepromazine (low dose)
  - Ket/Val 1:1 or 1:2

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Breathing

- Sedate or intubate?
- Upper airway vs lower airway
  - Audible sound
- Thoracic vs extrathoracic disease
  - Examine MM (pale, cyanotic, injected?)
- Lung parenchyma vs pleural space
  - Examine the pattern
- Auscultation
  - Crackles? Wheezing? Dull/absent?

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Oxygen support

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Bleeding

- Signs of shock?
- Compressible bleeding
  - External bleeding
- Non-compressible bleeding
  - Internal bleeding
- Acute or Chronic?

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% Blood Loss	Clinical Signs
15% of Blood volume (~10-12ml/kg)	None to minimal (mild tachycardia, normal BP and RR)
15-30% of blood volume (~12-25ml/kg(	Quiet, pale mm, tachycardic, tachypneic with weak dpp and hypotension
30-40% of blood volume (~25-32ml/kg)	Dull to obtunded, pale to white mm, prolonged CRT, tachycardic, tachypneic, weak to absent dpp, hypotensive
>40% of blood volume (>35ml/kg)	Obtunded, white mm, CRT absent, cold extremities, tachycardic to bradycardic, tachypneic to hypoventilating, absent dpp, hypotensive

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IV Access

- Essential
- Patient status dictates placement
- Sedation over manual restraint
- Obtain blood for ICU quick assessment tests via catheter

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Fluid Plan

- Hypotensive
  - 10-20ml/kg bolus until SAP 90/MAP 60+ mmHg
- Dehydrated
  - Volume to be infused = % dehydration + maintenance + ongoing losses
- Hemorrhage
  - Volume to be infused = % blood loss + maintenance fluids + ongoing losses

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Temperature

- Hyperthermia
  - Environmental/Exertion
  - Airway obstruction
- Fever
  - Infectious
  - Non infectious
  - Immune-mediated
  - Neoplastic
- Opioids
- Hypothermia
  - Shock
  - Environmental

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3-Rapid diagnostic tests

- PCV and total protein
- Blood smear
- Blood glucose
- Lactate
- Electrolytes +/- blood gas
- Creatinine/BUN +/- USG/SDMA
- Bedside abdominal u/s
- +/- ACT or in house coagulation

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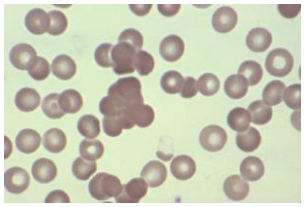
PCV/TP



- Anemia
  - Hemolysis
  - Bone marrow
  - Hemorrhage
- Slide agglutination
- Platelet estimate

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Blood Glucose

- Glycogen stores (nutritional)
- Sepsis
- Liver failure
- Hypoadrenocorticism
- Insulin secreting tumours
- Insulin overdose
- Toxins (e.g. xylitol)

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Hyponatremia

- Diarrhea
- 3rd spacing/effective circulating volume
- Hypoadrenocorticism
- Renal disease
- Liver disease
- Hyperglycemia (pseudo)

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Lactate

- Assessment of global tissue hypoperfusion
- By product of anaerobic metabolism
- Muscle and splanchnic circulation
- Prognostic significance
  - Trends

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Metabolic acidosis

- Lactate
- Uremic acids
- Ketones
- Ethylene glycol
- ASA

- pH < 7.4
- HC03 < 24
- ABE < -4

- Electrolyte imbalance
  - Na- Cl

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Metabolic alkalosis

- Upper GI obstruction
- Diuretic use (furosemide)
  - pH > 7.4
  - HC03 > 24
  - ABE > +4

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"FAST" ultrasound

- **F**ocused **A**ssessment with **S**onography in **T**rauma
- aFAST
  - Abdomen
  - Evaluation of free fluid, intact bladder +/- free air
- tFAST
  - Thorax
  - Evaluation of pleural & pericardial effusion, lung changes, pneumothorax +/- cardiac chamber size

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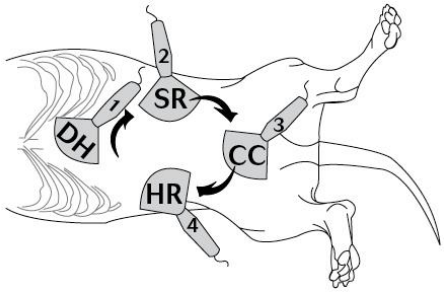
aFAST



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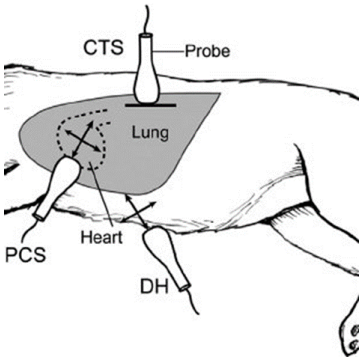

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Assessment & Plan

- Assessment
  - Critical inpatient?
  - Stable inpatient?
  - Outpatient?
- Formulate DDx list and refine as work thru above
- Plan

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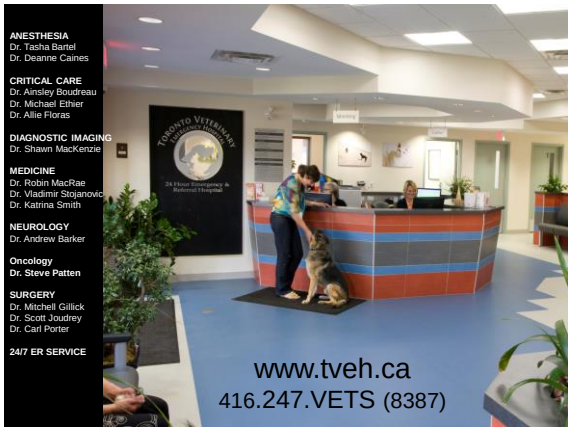

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