INTRIQUIP instruments inc.

EMERGENCY & CRITICAL CARE SERIES · CLINICAL RESOURCE 1 OF 3

Veterinary Emergency Triage & Initial Assessment

Clinical Quick Reference

For: veterinarians, RVTs, veterinary nurses & technicians **Setting:** Canadian small-animal practice **Edition:** November 2026

The hard part of triage is rarely remembering which values to collect. It is recognizing what the first measurements cannot yet tell us while a patient is compensating. A normal PCV does not exclude acute blood loss, an acceptable blood pressure does not establish adequate tissue perfusion, and a quiet patient is not necessarily a stable one. This reference organizes those distinctions for use in the treatment area.

1 First-assessment checklist

The initial (primary) survey targets the systems in which deterioration is most rapidly life-threatening. It is not a shortened full physical examination; the secondary survey follows once immediate problems are under control.

PRIMARY SURVEY & INITIAL STABILIZATION

- ☐ **Respiratory:** airway patency, rate, effort, pattern, posture and audible upper-airway noise. In distress, consider oxygen and minimal handling before further work-up.
- ☐ **Cardiovascular:** heart rate and rhythm, pulse quality, mucous membrane colour, capillary refill time, extremity temperature.
- ☐ **Neurological:** mentation and any change in it; obvious neurological deficits or seizure activity.
- ☐ **Urinary:** bladder size and pain on palpation, ability to urinate. A cat "vomiting" at home may have an obstructed urinary tract.
- ☐ **Haemorrhage:** external bleeding, and the possibility of occult blood loss after trauma.
- ☐ **Initial database:** PCV/TS, glucose and a blood smear, with further tests guided by presentation.
- ☐ **Baseline monitoring** appropriate to the presentation, recorded with the time.

SECONDARY SURVEY (ONCE STABLE ENOUGH)

- ☐ Complete history, including timing, toxin or trauma exposure and current medications.
- ☐ Full physical examination, system by system.
- ☐ Diagnostic plan matched to the problem list, staged to the patient's tolerance.
- ☐ Serial reassessment of perfusion, respiration and mentation; compare against baseline.
- ☐ Definitive treatment plan, cost discussion and, where needed, referral or transfer.

Monitoring supports, not replaces, examination



A Bionet Brio X5Vet patient monitor can support serial ECG, SpO_2 and non-invasive blood-pressure trends when appropriately configured. It does not replace palpating a pulse, watching respiratory effort or noticing a change in mentation.

2 Red flags by system

System	Findings that should change priority	Interpretation cautions
Respiratory	Increased respiratory effort; orthopnoeic posture (extended neck, abducted elbows); open-mouth breathing in a cat; audible upper-airway noise; altered breathing pattern.	Patterns help localize (Section 1 of Resource 3) but are not diagnoses. Handling a patient already working hard to breathe can precipitate decompensation.
Cardiovascular	Weak or poor-quality peripheral pulses; pale mucous membranes; prolonged capillary refill; cool extremities; tachycardia in dogs.	Cats in shock may present hypothermic with bradycardia or an inappropriately normal heart rate. "Shock equals tachycardia" does not hold reliably in cats.
Neurological	Altered or declining mentation; seizure activity; new neurological deficits.	A quiet patient is not necessarily stable. Reduced mentation can reflect poor perfusion as well as primary neurological disease.
Urinary	Large, firm or painful bladder; straining or inability to urinate, particularly in male cats.	Owner histories can be misleading; "vomiting" or "constipation" may be the presenting complaint.
Haemorrhage	Trauma history; pale mucous membranes with weak pulses; abdominal or thoracic signs without external bleeding.	An initially normal PCV does not exclude significant acute blood loss (Section 3).

3 Interpreting PCV and total solids

Why an initially normal PCV does not rule out acute haemorrhage

- In acute haemorrhage, red cells and plasma are lost **together**, so the concentration of red cells in the remaining blood may initially change little.
- In dogs, **splenic contraction** can release red cells and support the early PCV.
- A fall in PCV may only become apparent as interstitial fluid shifts into the vascular compartment, or after fluid administration.
- Total solids may fall earlier than PCV. Reading the pair together, and repeating it, is more informative than a single value.

Pattern	May be compatible with	Differential considerations
Normal PCV, low TS	Acute haemorrhage, in the appropriate clinical context.	Hypoproteinaemia has other causes (for example, protein loss). Interpret with history, perfusion findings and trend.
Low PCV, low TS	Haemorrhage once fluid shifts have occurred; haemodilution after fluid therapy.	Concurrent anaemia and protein loss can produce the same pattern.
High PCV, high TS	Haemoconcentration, for example dehydration.	Interpret with hydration assessment and fluid history.
Normal PCV, normal TS	No early change detected.	Does not exclude early acute haemorrhage. Reassess perfusion and repeat the pair.

The matrix supports interpretation only; it is not diagnostic. Species- and laboratory-specific reference intervals are intentionally not reproduced here.

In-house PCV and smear work depends on suitable equipment and competence. Confirm that a specific centrifuge and rotor are validated for microhaematocrit use, since a routine serum-separation centrifuge cannot be assumed suitable (see Intriquip's veterinary centrifuges). A microscope is only useful if the team can prepare and read a satisfactory sample (see veterinary microscopes).

4 Blood pressure, perfusion and their limits

Why blood pressure alone is insufficient

In compensated circulatory shock, sympathetic responses can preserve arterial pressure while peripheral tissues remain underperfused. Assess perfusion as a set of findings:

- Pulse quality, central versus peripheral
- Mucous membrane colour and capillary refill time
- Peripheral (extremity) temperature
- Heart rate, interpreted by species
- Mentation
- Blood pressure, as one component

If a reading does not fit the patient, reassess the patient and the technique before acting on the number.

Non-invasive measurement: technique matters

- **Cuff width:** for Doppler and many oscillometric units, approximately **30–40% of the limb or tail circumference** at the cuff site. Where a veterinary oscillometric device has purpose-designed cuffs, use them and follow the manufacturer.
- **Too narrow** tends to overestimate; **too wide** tends to underestimate.
- **Record** cuff size, site, site circumference, patient position and operator, so serial readings are comparable.
- **Reliability** is affected by movement, low perfusion and device-specific algorithms.

Accessories are part of the system

Keep a measured, labelled range of cuffs for the patient sizes you treat. Intriquip lists Bionet NIBP accessories; confirm cuff and hose compatibility with your specific monitor model.

Cuff-width guidance is drawn from the ACVIM consensus statement on systemic hypertension (Acierno et al., 2018); its technique recommendations are applied here to emergency measurement.

5 Vascular access and controlled fluid administration

Catheter selection should reflect vessel size, intended therapy and urgency. When rapid flow is needed, short, relatively wide-bore catheters generally offer lower resistance than long, narrow ones, all else being equal; that does not make the largest catheter appropriate for every patient.

The 2024 AAHA Fluid Therapy Guidelines treat fluids as prescribed therapy rather than harmless background support. Separate the components of the plan, individualize volume and rate, and reassess repeatedly.

Plan component	Purpose	Reassess with
Resuscitation	Restore intravascular volume and perfusion.	Perfusion parameters and response to each intervention.
Rehydration	Replace the interstitial deficit (dehydration).	Hydration findings, bodyweight trend.
Maintenance	Cover expected ongoing needs.	Bodyweight, fluid balance, laboratory trends.
Ongoing losses	Replace measured or estimated continuing losses.	Measured outputs and clinical course.

A PUMP DELIVERS A RATE; IT DOES NOT DECIDE THE NEED

A programmable device such as the Mindray AniFM I3 veterinary infusion pump helps deliver a prescribed rate, and the Mindray AniFM S3 syringe pump may be considered for compatible syringe-based therapies. Neither determines whether the patient needs more fluid. Clinical response, bodyweight, fluid balance, respiratory findings and signs of volume overload remain the basis for adjustment. This resource intentionally contains no volumes, rates or bolus recommendations; refer to the AAHA guideline text and patient-specific assessment.

A dyspnoeic patient, particularly a cat, may not be a candidate for immediate full work-up or radiographic positioning. Quiet observation and oxygen support can take priority; see Resource 3 for oxygen delivery and monitoring.

6 Treatment-area equipment readiness checklist

The most useful readiness audit is done with the people who use the room. RVTs and technicians are central to serial observations, equipment checks and communicating deterioration; a good monitor cannot compensate for readings that are not interpreted or shared.

Emergency treatment area: readiness check

Print and keep at the treatment station

MONITORING

- ☐ Multiparameter monitor powered, charged and alarms configured
- ☐ ECG leads and SpO_2 probes for the patient sizes treated
- ☐ NIBP cuffs: full size range, measured and labelled; Doppler available if used
- ☐ Thermometer and a place to record serial values with time

LABORATORY

- ☐ Centrifuge and rotor validated for microhaematocrit use
- ☐ Microhaematocrit tubes, sealant and a means of measuring total solids
- ☐ Glucose measurement available
- ☐ Slides, stain and a maintained microscope for smears

VASCULAR ACCESS & FLUIDS

- ☐ Catheters across the sizes treated, with securing supplies
- ☐ Fluids and administration sets accessible
- ☐ Infusion and syringe pumps checked, charged and sets on hand
- ☐ Accurate scale for bodyweight trend

OXYGEN

- ☐ Oxygen source functioning and immediately accessible
- ☐ Backup oxygen supply in case of power or concentrator failure
- ☐ Delivery interfaces available (for example flow-by, mask, oxygen cage)
- ☐ Staff know who sets up and checks the delivery system

TEAM & PATHWAYS

- ☐ Roles assigned: who assesses, who records, who communicates
- ☐ Escalation route when serial values deteriorate
- ☐ Referral and transfer contacts current
- ☐ Plan for equipment failure during a case

Checked by: _____ Date: _____ Next check due: _____

7 Equipment in context



Bionet Brio X5Vet patient monitor

Serial ECG, SpO_2 and NIBP trends during stabilization when configured with the appropriate parameters.

Bionet NIBP accessories

Cuff sizes matched to the patients you see. Confirm compatibility with your monitor model.



Veterinary centrifuges

In-house PCV/TS. Pictured: LW Scientific E8.



Veterinary microscopes

Blood-smear evaluation alongside PCV/TS and glucose.



Mindray AniFM I3 infusion pump

Delivers a prescribed fluid rate; assessment of need remains clinical.

Mindray AniFM S3 syringe pump

For compatible syringe-based therapies.

8 Key takeaways

Prioritize, don't complete.
The primary survey decides what cannot wait. History, full examination and the definitive plan follow once immediate threats are addressed.

A normal PCV is not reassurance.
Early in acute haemorrhage, red cells and plasma are lost together; interpret PCV with total solids, perfusion and serial trends.

Pressure is not perfusion.
Compensatory vasoconstriction can preserve arterial pressure while tissues remain underperfused.

Fluids are a prescription.
Vascular access, delivery device and fluid plan are separate decisions, and the plan is reassessed repeatedly.

9 Clinical references

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2. Brown, A. J., & Drobatz, K. J. (2018). Triage of the emergency patient. In L. G. King & A. Boag (Eds.), *BSAVA manual of canine and feline emergency and critical care* (3rd ed., pp. 1–7). British Small Animal Veterinary Association.
3. Pardo, M., Spencer, E., Odunayo, A., Ramirez, M. L., Rudloff, E., Shafford, H., Weil, A., & Wolff, E. (2024). 2024 AAHA fluid therapy guidelines for dogs and cats. *Journal of the American Animal Hospital Association, 60*(4), 131–163. https://doi.org/10.5326/JAAHA-MS-7444
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Educational resource. This companion resource summarizes published veterinary guidance for veterinary professionals. It is not a treatment protocol and does not replace clinical judgment, patient-specific assessment, current guideline text or manufacturer instructions for use. Product mentions illustrate equipment available through Intriquip and are not claims of clinical superiority; confirm configuration, accessories and compatibility with Intriquip before purchase.

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Dr. Pat is a Doctor of Veterinary Medicine and marketing professional helping veterinary and pet industry brands grow. She writes for her fellow veterinary professionals, delivering knowledgeable and practical insights to help clinic owners and veterinarians make smarter, more informed decisions about veterinary equipment and practice investments.

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