Overview
The word triage derives from the French and is a term meaning “to sort” or “choose.” Triage is the process of prioritizing patients based on the severity of their condition. The concept of triage first came about during World War I to help sort and classify wounded soldiers based on the severity of their wounds. Triage was eventually integrated into hospitals’ emergency departments during the 1960’s.

Triage
The primary purposes of triage are to assess which patients need immediate care and to prioritize care when there is more than one incoming patient. Triage can be divided into two types, telephone triage and hospital triage.

Often times, triage begins over the phone when a client or potential client calls with a concern about their pet. Technicians who answer client concerns over the phone should have a strong clinical knowledge to be able to ask questions aimed at fact finding to be able to make sound recommendations. This is important since they cannot touch, see and feel the pet the owner is calling about. Information that should be gathered over the phone at a minimum should include the age and breed of the pet, the duration of symptoms, and any medical history or current medications. Based on the present concern, questions should then be catered to the reason for the call. For instance, if a pet has been vomiting, other questions may include if there was any exposure to a toxin/foreign substance or if there was a recent diet change. It is also important to keep in mind that individual clinics may have different policies about what can and cannot be advised over the phone. For instance, if a pet ingested something toxic (i.e. xylitol gum, ibuprofen, lilies, etc.), or is potentially having an allergic reaction (i.e. the owner wants advice on a diphenhydramine dose), make sure you know your clinic’s policy about what recommendations you are allowed to give prior to advising the owner. Remember, veterinary technicians cannot diagnosis, and therefore the safest advice is to welcome the owner/pet in for evaluation. A phone script that can be adopted is, “If you’re concerned enough to call, we’re concerned enough to evaluate your pet.”

Once presented to the clinic, the pet should be evaluated within one minute to determine their acuity level. Hospital triage is hands on, and includes observing the pet, taking a brief 1-2 minute history, and performing a primary survey. This also includes appropriate client/owner communication, and being able to listen and acknowledge their concerns.

Triage System
Working in a non-emergency practice (i.e. general or specialty practice) means emergency walk-in patients may be few and far between. However, being prepared for an emergency to walk in the door includes appropriate patient triage. As such, it may be beneficial to implement a triage scale to help categorize and prioritize whether patients are critical or stable to wait.

One example of a triage scale is as follows:

- Class I life-threatening
- Class II emergent/critical
- Class III urgent
- Class IV non-urgent

A life-threatening triage is when the patient is about to die or dying and needs to be seen within seconds. Examples include cardiopulmonary arrest, severe respiratory distress, severe trauma/penetrating wounds, GDV, and status epilepticus.

An emergent/critical triage is when the patient is in an unstable state that could quickly progress to a life-threatening state, and needs to be seen within minutes. Examples include dyspnea, shock, toxicity, hemorrhage, head trauma, and severe pain.
An urgent triage is when the patient needs medical attention within one hour. Examples include open fractures, urethral obstruction, compensated cavitary effusions, and mild-moderate pain.

A non-urgent triage is when the patient should be seen by a veterinarian within 24 hours. Examples include lameness (with no wounds), inappetence, lethargy, one episode of either vomiting or diarrhea, or one seizure episode (that’s no longer post-ictal).

For Class I and Class II triages, the owner should be informed of the severity of their pet’s condition and give verbal consent to stabilization treatments (i.e. oxygen, IV access, IV fluids, injectable medications, minimum database). It would also be beneficial to obtain an advanced directive status (CPR vs. DNR). Often times, a more detailed history is postponed until after stabilizing measures are initiated.

For Class III and Class IV triages, the owners concerns are identified and full vital signs and history are taken prior to stabilization treatments. Often a written consent to treatments is given.

Primary Survey & Initial Assessment
When triaging a patient, the veterinary technician should focus on evaluation of the three major body systems: neurological, respiratory, and cardiovascular. The primary survey is the tool used to determine what triage class the patient belongs to. It involves looking from a distance, then moving closer to the patient to listen and feel.

Neurological
Neurological assessment includes evaluation of mentation/level of consciousness (LOC) as well as posture/ambulation.

Mentation is the first parameter you will assess as you approach the patient and begin your assessment. Evaluation of a patient’s mentation can be classified as normal/alert, dull/depressed/obtunded (slowed/inappropriate response to sensory stimuli), stuporous (unconscious but rousable to noxious stimuli) or comatose (unconscious and unresponsive). Changes in mentation can be indicative of decreased cerebral function (i.e. lack of oxygen supply, change in cerebral perfusion, head trauma) and should be addressed quickly to prevent further deterioration.

Normal posture is achieved by coordination of the central and peripheral nervous systems. Abnormal head posture can be indicative of something minor like an ear infection or more systemic like vestibular disease. Abnormal trunk posture, such as decerebrate rigidity, decerebellate rigidity, or Schiff-Sherrington, can be indicative of a spinal cord lesion or proprioception deficit.

Respiratory
Respiratory assessment includes evaluation of the respiratory rate (RR), respiratory effort (RE), and respiratory character/pattern.

A normal RR is generally accepted as 16-40bpm in dogs and cats. Normal respiration is a passive process, often going unnoticed until a respiratory ailment develops. Tachypnea is considered a higher than normal RR while dyspnea can be described as difficult/abnormal breathing. Changes in respiration are often considered as a triage class I or II; intervention needs to be swift, as respiratory compromise can quickly evolve to respiratory failure. Evaluation of the RR also includes auscultation in multiple lung fields to detect the presence of abnormal lung sounds (i.e. crackles).

RE refers to the amount of work the patient has to do for each breath. It is important to differentiate RE from RR as a patient can have a normal RR and abnormal RE, or vice versa. When an animal has an increased RE, they are often focused solely on the act of breathing. An inspiratory RE can be indicative of upper airway obstruction. An expiratory RE can be indicative of lower airway obstruction or collapse.

The overall character of respirations should also be noted. Respirations can be characterized as shallow (minimal chest wall movement), deep (slow chest wall movement), restricted (indicating pleural space disease), paradoxical (abdominal movement), or open-mouth. Respiratory patterns can also include changes in posture, such as reluctance to lie down or orthopnea (extension of head and neck and abducted elbows).
Cardiovascular

Cardiovascular assessment includes evaluation of the heart rate (HR), pulse rate, pulse quality, mucous membrane (mm) color and capillary refill time (CRT).

Heart rate is usually the first cardiovascular parameter you perform when going through your initial assessment. Tachycardia is generally accepted as a heart rate greater than 160-180bpm in dogs and greater than 200bpm in cats. Bradycardia is generally accepted as a heart rate less than 80-100bpm in dogs and less than 150-160bpm in cats. Tachycardia could be indicative of fear, excitement, anxiety, pain, or shock (hypovolemia, hypotension). Bradycardia could be indicative of conduction disturbances, decreased cardiac output, poor perfusion, neurologic disease (i.e. increased intracranial pressure), hypothermia, increased vagal tone, drug overdose, or severe electrolyte disturbances. In addition to noting the HR during auscultation, it should also be noted if there are any irregularities, which can indicate an arrhythmia and would warrant performing further diagnostics, such as an electrocardiogram (ECG). Since changes in heart rate can occur secondary to a variety of factors, HR should be assessed in addition to other cardiovascular parameters.

Pulse rate and quality should be taken in conjunction with HR auscultation. Pulse rate is reflective of systemic perfusion, and should match the auscultated HR. Pulse quality is reflective of the amount of blood that is pumped through the body with each heartbeat, which is known as stroke volume. An animal’s pulse quality can be described as normal (a steady pulsation against your finger that is synchronous with the heart rate), bounding (a harder than normal pulsation against your finger), weak (a lighter than normal pulsation against your finger), or absent (lack of pulsation against your finger). A normal pulse is indicative of normal stroke volume. Weak pulses are concerning for decreased stroke volume, poor contractility, or peripheral vasoconstriction. It should also be noted whether or not pulse deficits (absent pulses during cardiac contraction) are present, as they are also an indicator of inadequate stroke volume. Bounding pulses are reflective of systolic-diastolic difference in arterial blood pressure, which is concerning for increased stroke volume and vasodilation. Absent pulses indicate a failure in appropriate peripheral perfusion.

Mucous membrane color evaluation provides information about peripheral capillary perfusion. Normal mucous membrane color is pink, which indicates normal oxygenated hemoglobin in red blood cells. During cardiovascular and circulatory problems, mucous membrane color changes in response to changes in perfusion. Pale mucous membranes can be indicative of blood loss and vasoconstriction. Injected (reddened) mucous membranes can be indicative of vasodilation. Cyanotic (blue) mucous membrane can be indicative of inadequate oxygenation (a SpO2 < 70%). Another abnormal mucous membrane color is icterus (yellow), which can be indicative of liver disease (i.e. obstructed bile duct) or autoimmune disease (i.e. hemolysis).

Capillary refill time (CRT) provides further information about peripheral perfusion. A prolonged CRT suggests poor perfusion from peripheral vasoconstriction, as with hypovolemic and cardiogenic shock states. A rapid CRT suggests a hyperdynamic (systolic-diastolic difference) state, which is associated with distributive shock states.

Hospital Readiness

There is a well-known quote that the ER field likes to remember by Benjamin Franklin, “By failing to prepare, you are preparing to fail.” In order to be ready for a potential emergency, you need to be prepared. There should be a designated triage “station” that is equipped and can be used in case of a critical/emergent patient. This includes exam gloves, an oxygen source, IV catheter supplies, IV fluids, fluid pumps, syringes/needles for injections, blood collection tubes, and blood pressure and ECG machines.

It should also be noted that a stocked and ready crash cart needs to be available. This means the crash cart should be regularly inventoried (ensure no supplies/drugs are missing or expired) and organized (i.e. ET tubes are easily arranged, laryngoscope isn’t missing).

When an emergency presents, a team approach should be implemented, often times meaning “all hands on deck.”
Other Considerations
Pets may act differently in a hospital setting versus at home. It’s important to note that sometimes animals can become perkier during a car ride or when in a new environment. Keep this in mind as you go through your primary survey, as a temporary perkier animal doesn’t necessarily mean the animal isn’t critically ill.

Avoid “red herrings” during your triage! Don’t become distracted by what the primary complaint is and not complete a full primary survey because of it. For instance, a golden retriever comes in for what the owner calls a possible seizure. This is the first time an episode has happened (making him a class III or IV), but the owner is having a hard time describing it. In the back of your mind, you should be thinking what else this episode could be; the pet could have had a seizure, but also could have had a syncope or collapse episode (which would move his triage status up to a class II).

Be considerate of what an owner considers an emergency compared to what you know is an emergency. Remember conditions and diseases we see every day are not common to the average pet owner. It’s important to take their concerns seriously and calm the pet owner; often times, they are stressed, anxious and concerned about the well-being of their pet. It’s also important to appropriately explain the triage system and how it works; most critical patients are seen first but all patients will eventually be seen.

Keep the communication lines open as much as possible. Make sure the lobby is updated on wait times if an emergency comes in. Keep the owner of the emergent pet updated on what’s been done so far and what still needs to be done in terms of stabilization.

Lastly, when in doubt, have another veterinary technician or the veterinarian assess the pet as well. Not every patient will easily be classified into a triage class. It’s never wrong to bring the pet to the treatment area for another set of eyes/hands if you’re unsure; if deemed stable you can always bring the pet back to wait with the owner.

Conclusion
Triage is an art that takes practice and an experienced clinical judgment. Remember what’s included in the primary survey and to use critical thinking during your initial assessment.

References