Canadian VET Practice

CANADA'S VETERINARY TEAM NEWSMAGAZINE

JANUARY/FEBRUARY 2019 VOLUME 1, NO 1

VET Activating the entire veterinary team to achieve optimal veterinary outcomes

BANFF, AB - To truly maximize the outcomes of veterinary care, the focus of a veterinary practice must extend beyond the one on one interaction between veterinary staff and a client to include the role and influence of relationships among all levels of the veterinary healthcare team. Veterinary practices need to consider the role and function of all relationships within a veterinary care system including veterinarian-to-client; support staff-to-client; and veterinarian-to-support staff, affirmed Jason Coe, DVM, PhD, speaking at the CanWest Veterinary Conference.

Relational coordination

Within the human healthcare field, the term 'relational coordination' has been used to capture the provision of team healthcare in a manner that involves 'frequent, timely, accurate communication, as well as problem solving, shared goals, shared knowledge and mutual respect among healthcare providers, Dr. Coe noted. He said that relational coordination can be a powerful driver of quality and efficiency within organizations that rely on a high level of interdependence

Optimal veterinary outcomes *continues on page 5*

Table of Contents

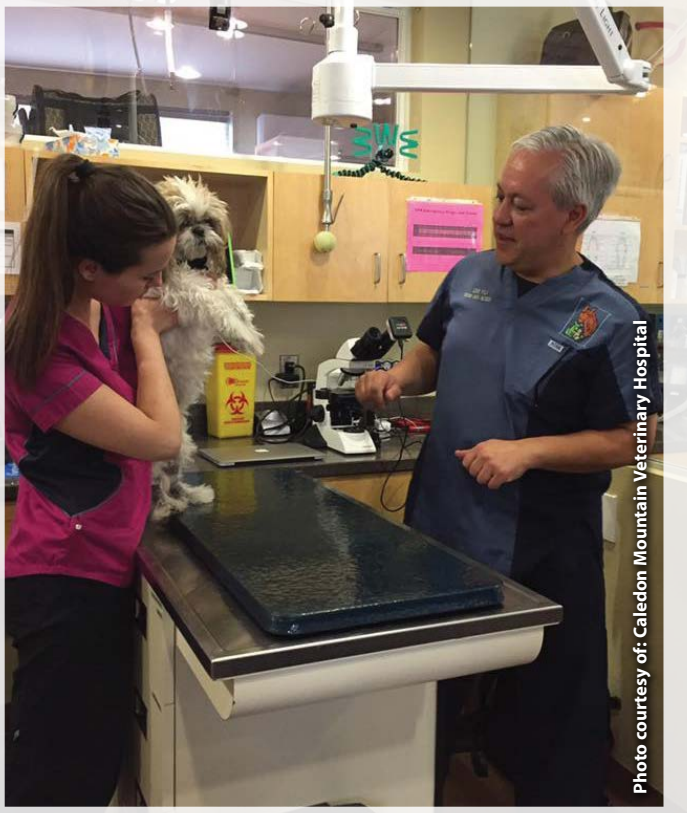

Photo courtesy of: Caledon Mountain Veterinary Hospital

Dr. Anthony Yu giving an education session on dermatology to a vet tech at the Caledon Mountain Veterinary Hospital in Caledon, ON

VET Integration of hospice and palliative care into general and specialty practices

BANFF, AB - Animal Hospice is not about how a pet will die, but how they will LIVE their last days, said Shea Cox, DVM, speaking at the CanWest Veterinary Conference. It is a philosophy of care that addresses the physical, emotional, and social needs of animals in the advanced stages of a progressive, life-limiting illness or disability; it recognizes that curative intention is not the goal, and focuses on palliation at end of life. Provided to the patient from the time of a terminal diagnosis through death, hospice focuses on addressing needs of the caregiver, helping prepare for the death of their pet and offering a collaborative and supportive partnership.

Canine and feline patients who are candidates for hospice care generally have at least one of the following *conditions*:

- A terminal diagnosis (e.g., malignancy)
- A chronic progressive disease (e.g., CKD, CHF)
- A progressive, undiagnosed disease
- A chronic disability (e.g., degenerative myelopathy, debilitating OA)
- Or a terminal geriatric status exacerbated by wasting or a failure to thrive.

Hospice and palliative care *continues on page 6*

VET Pediatric and neonatal emergencies

BANFF, AB - Puppies and kittens are not small adults! They have a unique physiology, which the clinician needs to understand in order to successfully treat them when ill, noted Scott Shaw, DVM, DACVECC, speaking at the CanWest Veterinary Conference.

Normal pediatric physiology

Cardiac physiology

Puppies and kittens are normally hypotensive. Normal blood pressure readings are:

- Birth: 54/30 (40) mmHg
- 4 weeks 70/45 (60) mmHg
- Adult 130/80 (100) mmHg

Normal heart rate will be over 200 at birth.

Pulmonary physiology

Blood will flow through the ductus arteriosus until birth, bypassing the lungs. At birth, there is production of surfactant on the alveolar sac, resulting from

Emergencies *continues on page 8*

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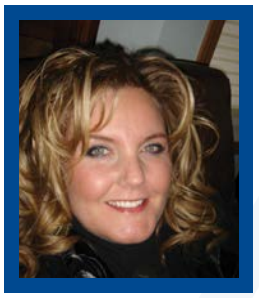

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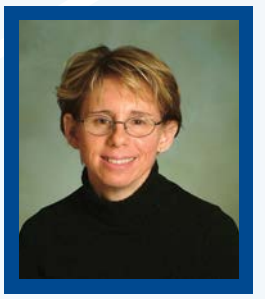

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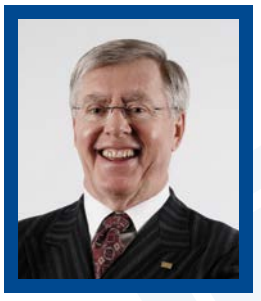

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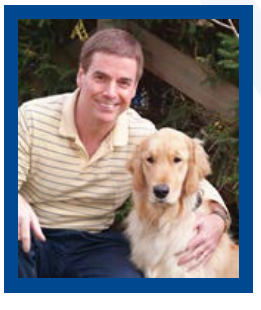

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Canadian VET Practice

NEWSMAGAZINE FOR VETERINARIANS ACROSS CANADA

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VetLaw

'The widening web' - Veterinary malpractice and professional negligence claims

Douglas C. Jack, B.A., LL.B.

In the last decade, there has been a marked increase in claims for professional negligence raised against veterinarians by their clients, arising from a less than optimal outcome in treatment plans; the animal either fails to improve and thrive, or dies. We find ourselves in a litigious society where a previously observed resistance to sue a professional has been abandoned. In some cases, the claims that are raised go beyond the conventional delivery of veterinary medical services to include alleged compromises in the health of the animal's owner that are somehow causally-related to the veterinary care provided.

Principles of professional negligence

In order for the animal owner (the plaintiff) to successfully sue the veterinary professional for malpractice, the onus is upon the plaintiff to prove three things: first, that a duty of care was owed by the veterinarian; second, that there has been a breach of that duty which was causally-connected to the consequences; third, that damages arose from the breach. All three elements must be proven on a balance of probabilities (a lower evidentiary threshold than that of criminal law cases where the evidence must be 'beyond a reasonable doubt'); if the plaintiff fails to prove any one of the three elements, then the lawsuit will be dismissed.

Duty of care

Without question, English common law principles have firmly established that professionals, who hold themselves out to the public as having particular skills and expertise, owe a duty to their clients to deliver their services in a competent and skillful manner. A duty of care exists between veterinarians and the animal owners that entrust their animal's healthcare to them.

In more recent years, there have been claims raised against veterinarians for problems experienced by the animal's owners; in particular, cases where the owner is immunosuppressed and becomes subject to a parasitic zoonotic disease. Courts have been called upon to consider whether it is the duty of the veterinarian to warn the pregnant cat owner of the potential compromising consequences of cleaning the litter box. For example, in one case in the United States, an obstetrician was found liable for damages when it was discovered that a newborn was blind arising from zoonosis. One wonders if such a claim might also have been brought against the veterinarian or if the veterinarian might have been joined in the lawsuit.

How do you react to the client that attends at the clinic and you discover that he or she is currently undergoing chemotherapy treatments or is otherwise immunosuppressed? Do you offer unsolicited advice that truly relates to human health? Does such advice go beyond the scope of your professional licensing? It seems that the current movement towards 'one health' initiatives, where veterinary and human healthcare are being viewed in a co-operative way, would suggest that courts are likely to extend such duties to the veterinary profession.

Standard of care

All professionals must discharge their duties to the standard of a reasonable practitioner in similar circumstances. If the veterinarian meets or exceeds the applicable standard of care, then the plaintiff will fail in the lawsuit; similarly, if the conduct of the practitioner falls below the applicable standard, then the second element of professional negligence will be satisfied.

The 'standard of care' is often established by seeking the opinions of other veterinary professionals as 'experts' to opine on the management of the case.

Of particular import, is that there must be a 'causal connection' between the alleged negligent acts of the veterinarian and the harm caused to the animal; for instance, in cases where there has been non-compliance by the animal's owner with specific discharge instructions, it is likely to be found that no causal connection exists and that the compromise in the animal's medical condition was caused by the failings of the non-compliant owner and not the acts of the veterinarian. In the case of parasitic zoonotic disease above, courts would likely find that such a causal connection exists and that it was encumbent upon the veterinary professional to offer some direction with a view to avoidance of the human medical problems.

Damages

In the event that the conduct of the veterinarian is found to be below the standard of care, then judges must determine what damages are compensable to the plaintiff. In simple cases involving the death of an animal, most contemporary courts continue to uphold the common law principle that animals are property such that damages are limited to the value of the animal. That being said, the impact of the human-animal bond has started to challenge that long-held notion and plaintiffs are now regularly seeking damages for loss of companionship, intentional infliction of mental suffering and, in some rare cases, seeking damages for pain and suffering experienced by the animal itself.

The law of damages in veterinary professional negligence is currently in a state of flux; that being said, the prudent practitioner will discharge his or her duties in a responsible manner, ensuring to keep accurate medical records (which will later be reviewed as key evidence) in order to avoid such claims.

Mr. Jack is counsel at the law firm of Borden Ladner Gervais, LLP ("BLG") with a mandate to serve the needs of the veterinary community and enhance it on a national basis. Mr. Jack chairs a focus group relating to veterinary legal matters within the firm's Healthcare Group. He can be reached by email at dcjack@blg.com or by telephone at 1-800-563-2595.

Optimal veterinary outcomes *continued from page 1*

among people. Given that veterinary healthcare is reliant on a team-based approach for providing successful outcomes of care, relational coordination has an important application in the provision of high quality and efficient veterinary care.

Providing optimal care for a veterinary patient requires a number of basic coordinated needs, including getting information from the client; getting information from previous care providers; sharing acquired information with all assigned to care for the patient; keeping everyone informed of tests, diagnosis, and interventions performed; integrating all information to develop next steps with those involved in the care; and sharing information with the client or the next care provider, as needed, to continue on with the appropriate care of the patient.

Toxic attitudes and environments within veterinary teams

A recent study conducted at the Ontario Veterinary College, at the University of Guelph, involving an independent series of four veterinarian focus groups and four registered veterinary technician focus groups explored the concept of effective veterinary healthcare teams.[2] One major theme that was common to both the veterinarian and veterinary technician focus groups was the negative impact that a toxic attitude or environment has on the function of a veterinary team.

Toxic attitudes were described by participants as:

- individuals that are chronically negative
- individuals that are not willing to assist others stating 'that's not my job'
- individuals who try to hold power over others by manipulating information
- individuals whose personality is not compatible with the rest of the team.

Toxic environments existed where there was a lack of trust within the team; members did not feel appreciated or respected; members did not feel supported in their role by others; and where personnel problems were left unaddressed. Many participants expressed a belief that a lack of leadership often set the stage for a toxic environment.

Interestingly, remarked Dr. Coe, the description of toxic attitudes and environments described by the veterinarian and veterinary technician participants of the focus group study are in direct contrast to the core elements of relational coordination: shared goals, shared knowledge and mutual respect. Toxic attitudes and environments within the veterinary practice undoubtedly have an effect on outcomes for the practice, the staff, the client and ultimately the patient.

Fostering relational coordination to strengthen a veterinary team

Both communication and the quality of the communication occurring during

Leading the way for veterinary teams to work and learn together

Welcome to *Canadian Vet Practice* newsmagazine, a merger of the previously published *Canadian Vet* + *Canadian Vet Tech* newsmagazines. Leading the way, with a 'One Health' vision of caring for animals, *Canadian Vet Practice* offers insight and learning for the whole veterinary healthcare team!

While maintaining the same format and style as the previous magazines, *Canadian Vet Tech* offers both articles written specifically for veterinarians and articles written for vet techs; some articles will appeal to both. Practice managers will also benefit from the magazine, as editorial will also include articles on clinic communications and current business management topics.

The magazine is available in both print and digital format to all Canadian veterinary practices, to fulfill the requirements of all veterinarians and hospital staff members. Even though your clinic currently receives a printed copy of *Canadian Vet Practice*, individual team members are welcome to receive a copy emailed to them bi-monthly.

Canadian Vet Practice is made available to practicing veterinarians, technicians and practice managers at no charge, through the support of our advertisers and sponsors. As such, we encourage you to support the business partners that advertise and/or sponsor columns , reports and client handouts published in the magazine.

Happy 2019 to all of our readers! We trust that you will find *Canadian Vet Practice* to be useful to your practice. As always, we welcome your feedback and suggestions.

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Canadian Vet Practice newsmagazine - bringing the whole veterinary healthcare team together in a 'One Health' vision of caring for animals. One exciting print + digital publication to keep busy veterinarians, animal health technologists, and other hospital staff up-to-date on the latest advancements in patient care, as presented by specialists and other key opinion leaders at veterinary conferences.

the care of an animal are important to the successful outcome of veterinary care. To achieve coordinated patient care the communication between providers of care must be frequent, timely and accurate. Even so, said Dr. Coe, if the receiver does not respect the source, have shared knowledge or have shared goals with the source, the communication runs a good chance of being ignored.

Although 12 workplace practices that foster relational coordination have been identified, findings from the focus group research on veterinary teams revealed three important ones: selecting for teamwork; resolving conflicts proactively and making job boundaries flexible.

Selecting for teamwork

By selecting for teamwork when hiring, a practice has the potential to affect the relational coordination of their team in two ways:

- It has the direct effect of selecting someone who works well as part of a team
- It delivers a message to the new hire and the rest of the staff that the veterinary practice places high value on teamwork.

The relational coordination of a practice can also be enhanced by involving members of the current team, from different employee groups, to be a part of the hiring process. This allows current staff to have input into the selection process, allows the leadership in the practice to observe how the candidates interact with different members of the current team, and allows the practice to further communicate the team-oriented culture of the veterinary practice.

Resolving conflicts proactively

The often intense and interdependent task driven environment of veterinary practice provides a breeding ground for interpersonal conflict. Conflict is not all bad, added Dr. Coe, as change and progress arise out of effectively managed conflict. However, unresolved interpersonal conflict can damage relationships within the veterinary healthcare team, leading to a toxic environment, which negatively impacts overall team effectiveness and productivity.

As considerable differences exist between people and their ability to manage conflict, it behooves veterinary practices to take on a level of responsibility to provide a mechanism to assist staff in managing interpersonal conflicts, advised Dr. Coe. A culture and process that enables the opportunity for staff to understand and address their personal differences is important, particularly for staff with different roles in a veterinary practice. This helps to gain a better understanding and appreciation for the work of others. Dr. Coe suggested that when developing a process to proactively resolve conflicts in a veterinary practice, a specific staff liaison could be assigned to address perceived power differentials that may exist within the team (e.g., clinic owner to high school student).

Make job boundaries flexible

Boundaries for acceptable workplace behavior are often governed by work rules; the work rules most likely to impact upon relational coordination within a veterinary practice are the rules that identify which tasks belong to which role or individual in the practice. The traditional method of assigning very specific tasks to workers provides role clarity, but also introduces rigidity to work flow that can generate a culture of "it is not my job". This attitude can actually impede upon work efficiency within a highly interdependent task-oriented profession.

Job flexibility allows for staff to share knowledge about different areas of a veterinary hospital, build mutual trust, and reduce traditional status boundaries.[1] Cross training staff within and across roles can make job boundaries more flexible. However, Dr. Co said, overlapping job boundaries can be threatening to some staff's sense of security, and can also threaten the traditional hierarchy that may exist within a veterinary practice. Successfully creating flexible boundaries involves achieving job flexibility within a practice while still preserving distinct areas of professional expertise.[1] For example, the kennel attendant would not be permitted to perform an ovariohysterectomy; however, a veterinarian could pitch in and help the kennel attendant clean an animal's cage, if needed.

Conclusion

Achieving successful veterinary teams benefits the veterinarians, veterinary staff, veterinary clients and veterinary patients. However, work practices that support relational coordination within a veterinary team may require changes in deeply engrained patterns of behaviors and relationships. Veterinary practices should embrace relational coordination one step at a time, advised Dr. Coe. The three work practices of selecting for teamwork; resolving conflicts proactively and making job boundaries flexible provide a starting point for any veterinary practice looking to activate their veterinary team to achieve optimal veterinary outcomes! CVP

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***Jason Coe, DVM, PhD**, is an Associate Professor at the Ontario Veterinary College. After graduating from the College in 2001, he returned from mixed-animal practice to complete a PhD in the area of veterinary communications in 2008. In the same year, Jason joined the Ontario Veterinary College as a faculty member in the Department of Population Medicine where he has established an active research program examining human-animal relationships as well as the role of interpersonal communications on the outcomes of veterinary care. In his current role at the College, he coordinates the clinical-communication curriculum across all 4 years of the veterinary program and is involved in teaching students about the relationships that exist between people and animals.*

Over the past decade, Jason has established an international reputation for his leadership in veterinary communications, primary-care veterinary education and understanding the human-animal relationship. Jason has published over 50 peer-reviewed journal articles, contributed to several book chapters and is regularly invited to speak nationally and internationally at scientific and continuing-education conferences. As a result of his many achievements, Jason has been recognized by the Ontario Veterinary College Alumni Association as one of their Distinguished Young Alumnus. Outside of his professional activities, Jason relishes personal time with his wife, son and two daughters.

Hospice and palliative care *continued from page 1*

Patients who are candidates for hospice care generally fall into one of five *categories*:

- Diagnosis of a life-limiting disease
- Decision not to pursue diagnosis or curative treatment
- Curative treatment has failed
- Progressive illness with complications
- Clinical signs of chronic illness that interfere with normal routine or QOL

Why is hospice care important?

Dr. Cox shared that while hospice/end of life care is 'offered' in all practices, developing 'specialized' services that are dedicated to this growing subset of the pet population dramatically improves the level of patient care and client satisfaction/retention. It costs ten times more to acquire a new client than it does to retain one, and how a practice handles a pet's end of life event will greatly influence a client's loyalty and their willingness to return to the practice and/or refer new clients. Offering a hospice program shows that you believe that pets are truly family members.

The 'hospice mindset'

When the healthcare team and caregiver recognize that death is a likely outcome, entering the pet into a hospice care program can allow the veterinary team and client to develop a collaborative plan for the time between that recognition and the pet's death. Hospice is 75% communication, 25% medicine – the opposite of what 'we are used to' when managing complex cases at EOL.

Listening is the largest part of delivering hospice care; it's taking the time to understand pet owner needs, goals, fears, frustrations and concerns. A hospice relationship is built around understanding and meeting the

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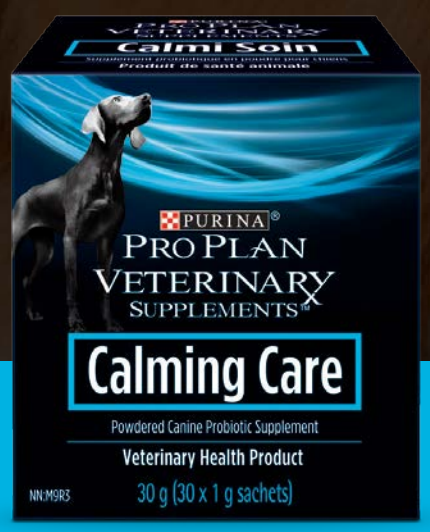

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individualized needs of clients and their pets and involving the pet parent as an equal partner in determining the course of care.

Dr. Cox said she finds it helpful to start all conversations with "what are your goals for you and your pet?" Beginning in this manner makes the conversation client-centric right from the start and is a way to show that you care most about their needs and what they want. If owners do not wish to implement recommended therapies, try to understand the reasons *why*; it is surprising what will be uncovered, and understanding their perspective can help bridge the gap, allowing you to provide improved care.

Identifying your practice or clinic's goals

Establishing goals for hospice care will raise your practice's level of success. Questions to ask include: 'What do you wish to accomplish with this service?' and 'Who will you serve?'.

Determining your care delivery model

Multiple types of practice structure can be implemented for hospice care (HPC) services:

- **Mobile**: hospice care provider(s) travels to the home, delivering care at set intervals
- **In-clinic**: patients come to the hospital for hospice care on an as needed basis
- **Telehealth**: embracing technology to better care for your patients
- **Fusion**: elements of both in-clinic, mobile, and telehealth services
- **Hospice consultant**: working in a network of hospitals as adjunctive staff, guiding care and overseeing the hospice program

Fee setting

When setting fees, start by understanding what costs you need to cover then work backwards to price. Don't be afraid to charge accordingly; people will happily pay more to have more time with you and it is important to meet these client needs.

Developing a team approach

HPC services are best delivered utilizing a collaborative approach between the entire veterinary staff and client, stressed Dr. Cox. Each member of the healthcare team should have defined caregiving and client-support responsibilities, preferably ones that utilize individual skills, strengths, and experience. No member of the veterinary staff should be left out of hospice and end of life (EOL) training, she said.

Developing and executing a HPC treatment plan

A four-step process helps the care team implement an effective HPC plan:

Step 1: Educate the client about the pet's disease

Education should include discussion of diagnostic and treatment options, therapies, and prognosis. The care team should communicate information in a language that the client can easily understand.

Step 2: Evaluate the pet owner's needs, beliefs, and goals for the pet's end of life care

It is helpful to have a checklist of questions to discuss with the client; this can serve as a guideline for developing a personalized HPC plan (*Hospice Intake Form*).

Step 3: Develop a personalized HPC/EOL treatment plan

All HPC plans begin with a thorough assessment of the patient's physical, social, and emotional needs. It is essential for the veterinary team to understand the client's ability and willingness to provide the increased level of care that is often needed for a pet with a terminal status. Of equal importance is the assessment of the *patient's* willingness and capacity to receive care, such as willingness to take medications or receive subcutaneous fluids. The HPC plan should be entered into the patient's medical record.

The HPC plan should include disease sheets with information about the illness, euthanasia-specific information, information regarding what to do in an emergency or after-hours situation, a Comfort Kit of several pre-loaded syringes containing a sedation and opioid to be administered subcutaneously to the pet at home in the event of an acute crisis, information on what to expect with a natural death, should this occur before euthanasia intervention can take place, resources such as QOL assessment tools, pain assessment tools, grief and pet loss resources, referrals to adjunct mobile services such as pet-sitting, if available, and an estimate of costs.

Step 4: Implement the HPC plan

As soon as a pet enters a hospice program, flag the medical record so that the entire staff is aware. In this way, a family can elect euthanasia at any time without having to repeat history. Dr. Cox also recommended that the medical records be shared with your local emergency clinic in case a client presents to the ER for an emergency or euthanasia. Whenever possible, care should be administered at home. Caregivers should be taught therapeutic techniques, how to assess their pet's response to therapies, and symptom recognition. Encourage clients to record daily activities and monitor for changes in their pet's clinical status. It is important to share that hospice remains appropriate as long as pain and other symptoms of disease are controlled, and it is vital to discuss and determine clear stopping points, or 'lines in the sand,' which would indicate an inadequate QOL and need for euthanasia.

Summary

As with any specialized program that you add to your practice, communication is a key ingredient to overall success. Dr. Cox outlined a nuanced approach to your HPC marketing message and provided effective communication strategies for engaging in hospice conversations. Look for an article on marketing and communications tools to make your hospice service a success in the next issue of *Canadian Vet Practice* newsmagazine. CVP

***Additional resources**: Dr. Cox has developed a free online resource for vets and pet parents that includes video modules to help families navigate some of the more common EOL/QOL issues, including 'Understanding quality of life' and 'Recognizing pain in pets'. In the near future, 'Knowing when' will be added. Free to sign up, www.pethospice.com is a very good resource for veterinarians to refer their clients to.*

Pain Scale Charts for dogs and cats, as well as sample Hospice Questionnaire medial and nursing intake forms, provided by Dr. Cox, can be downloaded from www.k2pubishing.ca or the K2 Animal Health Publishing Facebook page.

***Dr. Shea Cox** is a progressive leader in animal hospice with a hyper focus on technology, innovation, and education. She founded the country's first fully-integrated hospice practice within a specialty referral hospital setting and has successfully challenged the traditional model of veterinary health care. She has authored twelve hospice-related chapters in three veterinary textbooks, served as a Hospice and Palliative Care Consultant for the Veterinary Information Network (VIN), helped develop the American Animal Hospital Association End of Life Guidelines, and led the development of a 125-hour RACE approved Certification Program to certify veterinarians and veterinary nurses in hospice and palliative care. She is also the current Past President of the International Association for Animal Hospice and Palliative Care.*

Feel free to contact: shea@pethospice.com / pethospice.com / bridgevs.com

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Emergencies *continued from page 1*

increased fetal cortisol and stress of birth. Secretions are squeezed out of the alveolar sac during birth, making the newborn relatively tolerant to hypoxia. Physical stimulation of the newborn will increase respiration, said Dr. Shaw.

Urogenital physiology

After birth, micturition should occur with 24 hours. Urine specific gravity (USG) results should be between 1.006 – 1.017. The testicles should be descended at 4-6 weeks of age. Possible anomalies that may be evident after birth include patent urachus, or Atresia Ani.

Gastrointestinal physiology

Puppies and kittens should exhibit a strong suckle at birth; this is an indicator of vigor. They will effectively swallow at 3 weeks. The GI tract is sterile at birth due to being rapidly colonized by maternal flora.

The meconium, or first stool, is made up of amniotic fluid, mucous, bile and epithelial cells. If the meconium is not passed in the first 48 hours, this is a sign of fetal distress.

Hepatic physiology

The liver is immature at birth but develops rapidly during the first 4 weeks; it will be fully mature at 10 weeks.

Musculoskelatal
Hyperkinesia may be seen in newborn puppies for up to 3 weeks after birth. In terms of mobility, at birth we will see flexion of the limbs; extension will occur at day 4 or 5 after birth. At around 3 weeks the puppy will stand; around 4 weeks it will walk and by 6 weeks we'll see it trotting or galloping.

Eyes and ears
Ankyloblepharon will exist in newborn puppies. The eyelids will gradually open in 10-16 days. Sight will be realized at about 3 weeks and pupillary reflex will be apparent at 4 weeks. The menace reflex is poor for 2-3 months. Although puppies will respond to sound at birth, it takes 12-14 days for the ear canal to open; the ears will be fully developed at 5 weeks.

Thermoregulation
Since they have a high surface area to body mass ratio, and no body fat, newborns have a lower body temperature. See Chart 1 (slide 16) Though body temperature self-regulates, a heat lamp or heating pad can be used to ensure the ambient temperature is ideal, at 80 degrees Fahrenheit. This must be monitored closely, stressed Dr. Shaw, as overheating can result in dehydration.

In cases of hypothermia, the patient should be warmed slowly and adequate ventilation should be ensured in order to avoid hypoxia.

Colostrum
After nursing the colostrum, needed antibodies are absorbed within the first 24 hours. Care should be taken to avoid failure of passive transfer. Early lactation is also a concern, as there will be no colostrum left for the puppies or kittens.

Glucose metabolism
Newborns have a high metabolic rate due to having a large brain to body mass ratio, minimal glycogen reserves, limited glycogenic precursors and renal glucose loss. Normal blood glucose levels will be > 50 mg/dl, and > 2.9 mmol/L.

Hypoglycemia may result from agalactia, inadequate milk production, competition between offspring, or poor maternal instincts. Other possible causes include trauma, sepsis, parasitism, or diarrhea.

Nutritional requirements
Normal puppies and kittens will nurse every 2 hours initially and will feed until full. Orphan neonates will require bottle or tube feeding very 4 hours for the first week, then every 6 hours. Do not feed if temperature is <94 degrees F. Weaning can take place at 3-4 weeks. A milk replacer, such as Esbilac for puppies or KMR for kittens, should be given. Bottle feeding is time consuming and it can be difficult to judge intake. Tub feeding is faster and easily learned, but there is risk of pneumonia, cautioned Dr. Shaw.

Weight
Puppies will lose weight in the first 2-5 days, but they should double in weight by day 12. Kittens lose weight in the first 5-7 days, but should double in weight by day 14.

Clinical pathology

Anemia
Anemia is common in newborns due to decreased erythropoietin, decreased RBC life span, and low levels of fetal hemoglobin. However, the blood should test normal by 8 weeks. Total protein is decreased until 6 weeks and low albumin levels may result in decreased liver function.

Shock and dehydration
Dehydration may be difficult to assess; look for a lack of suckle. Causes may be due to GI issues, trauma or inadequate caloric intake. Treatment of shock and dehydration includes administration of a fluid bolus for ongoing maintenance and to replace losses. Keep the puppy or kitten warm but be careful not to warm it too quickly to avoid overheating.

Sepsis
Sepsis may result from several circumstances, including failure of passive transfer of milk, umbilical infection, pneumonia, gastrointestinal conditions, or tail docking. Clinical signs may include hypothermia, pale mucous membranes, decreased urine output, decreased suckle, and crying. Treatment includes administration of fluids, antibiotics, oxygen to prevent retinopathy, and serum.

Hypoglycemia
Hypoglycemia occurs with the body's blood glucose is below 40mg/dl. Administration of 1ml/kg of 25% dextrose by constant rate infusion will aid recovery. Keep the patient warm and fed. Osmotic diuresis is common.

Emergency drugs
Use of Atropine is not recommended for pediatric patients. Doxapharm may be used as a central respiratory stimulant, and Epinephrine can be administered in cases of cardiac arrest.

Common diseases

Conditions that are often seen in newborn puppies and kittens include anasarca due to fluid retention, and cleft palate. Other condition that may present to the veterinary practitioner include:

Immaturity
Physical immaturity accounts for many deaths during the first 24 hours of life. Immaturity may be du to cyanosis, emaciation, anemia, weakness, hypoglycemia, weak suckling, hypothermia, or a weak swallowing reflex.

Runting
Runting is the cause of 40% of all early neonatal deaths. It is associated with inherited or acquired congenital defects.

Neonatal Isoerythrolysis
Neonatal Isoerythrolysis occurs when maternal antibodies are directed against the fetal blood antigens. The worst cases are seen with a type B queen and a type A kitten. Dogs that have had a prior transfusion or a prior pregnancy are more at risk. Possible outcomes include acute death, failure to thrive as a result of hemoglobinuria, icterus or anemia, and tail tip necrosis.

Pneumonia
Pneumonia may result from improper feeding techniques. Treatment includes supportive care and antibiotics.

Neonatal conjunctivitis
Conjuntivitis may be caused by *staph* or *strep*, and treatment includes opening the eyelids by flushing and administering ophthalmic ointment.

Toxic milk syndrome
Occult mastitis due to *Staph, E. coli, Proteus , Strep,* or *Klebsiella* may cause toxic milk syndrome; the patient will present with yellow-green diarrhea and a bloated abdomen.

Canine herpesvirus
With canine herpesvirus the litter is exposed at birth during passage through the infected genital tract. Bitches often maintain a latent infection. Clinical signs present at 5-6 days after birth and can include crying, anorexia, vomiting, and diarrhea. Treatment involves supportive care and warming to 100 degrees F.

Swimmer syndrome
Swimmer syndrome involves and inability to support the body due to an underdeveloped appendicular skeleton. It is most common in short-legged dogs and results in the dog having hobbles.

Neonatal resuscitation
Normal puppies require very little assistance with resuscitation. The practitioner should remove the fetal membrane, clamp and ligate the umbilicus, dry the puppy and return it to the whelping box.

If a puppy requires resuscitation post C-Section, the oropharynx should be suctioned and vigorous stimulation should be applied all over. Do not swing the puppy! Naloxone or Dopram can be administered sublingually .

Postnatal care
Dr. Shaw said that newborn puppies and kittens should be weighed daily. Some weight loss is normal in the first 48 hours, but they should begin to gain by 72 hours. Good colostrum/milk intake should be ensured so that their bellies are full. CVP

Scott Shaw, DVM, DACVECC is a 1998 graduate of the Tufts Cummings School of Veterinary Medicine and he completed a rotating internship at the Veterinary Referral and Emergency Center in Norwalk, CT before returning to Tufts to complete a residency in Emergency and Critical Care Medicine. After completing his residency in 2002, Dr. Shaw joined the faculty at Tufts. He spent the next 10 years as a faculty member at Tufts. In 2012, Dr. Shaw left Tufts to help open New England Veterinary Center & Cancer Care in Windsor, CT. In 2014, he became the Regional Vice President for the VCA Specialty Hospitals in the Northeast. Dr. Shaw lives in Oxford MA with his wife and son. They breed and show Labrador retrievers and standard dachshunds.

VET Getting more pets the care they deserve

TORONTO, ON - Veterinary visits have declined in the past 10 years even though the human-pet bond is stronger than ever and pet spending continues to go up every year. This is in part because people have many choices for pet care and have become more cautious consumers, said Amanda L. Donnelly, DVM, MBA, presenting a session titled *Getting more pets the care thy deserve,* at the Veterinary Education Today Conference. Another major factor, she stressed, is that pet owners still don't fully understand the *value* of regular veterinary visits.

Dr. Donnelly advised that, in today's crowded marketplace, it's vital that veterinary practice teams strive to maintain their trusted advisor role for pet owners. Trust can be built by focusing on client engagement and client education before, during and after visits. Teams that know how to create an exceptional experience will help more pets get the care they deserve, encouraged Dr. Donnelly.

Client engagement

Client engagement is about making authentic connections with pet owners. Dr. Donnelly said clients may say to a friend or co-worker "I wouldn't dream of going anyplace else with my little Sophie." However, due to a variety of factors within the marketplace (such as Internet pharmacies, low-cost providers, effects of the recession and increased ease of gathering information on the Internet just to name a few) clients are not as easily bonded to their veterinary hospital as they used to be 10 years ago.

It's imperative that concerted efforts are made by all team members to enhance levels of client engagement. To connect emotionally with clients, teams need to recognize the unique needs of each client while endeavoring to exceed their expectations. For example, a new puppy owner may need reassurance and praise for their socialization efforts as well as thorough information about preventative healthcare.

The following communication skills can help teams build rapport and trust with clients:

Creating a positive first impression

Studies have shown that people form a first impression in 7 seconds, noted Dr. Donnelly. Although this isn't much time to impress clients, she said specific actions can be taken to create positive lasting impressions.

On the telephone:

- Don't rush your greeting. Clients may not understand what you said and they immediately will feel like they are an imposition to your day.
- Make sure your first sentence in response to the client's request or question is positive. For example, if a new client asks about fees and what services their puppy needs say *"I'd be happy to help you and give you some information about our practice."*

In the reception area:

- Make eye contact. Don't just glance up at the client and then look back at your computer screen.
- Smile and convey a positive attitude that says, "I'm glad you're here."

Veterinary Business Today

Practicing telemedicine: added value or increased risk for your practice

By Mike Pownall, DVM, MBA

If you want to get a group of veterinarians in a heated discussion start talking about telemedicine. I have been in several meetings when the subject has come up and it seemed like there were more opinions than people in the room. It truly is a challenging concept in veterinary medicine, so let us explore some of the pros and cons of it assuming that there is a valid VPCR in place.

The pros

Many veterinarians think that telemedicine is a wonderful opportunity to keep clients closer to the practice and some look at it as an additional revenue stream. For example, some vets love the idea of clients emailing photos or videos of their pets. They feel it is better they ask their vet and get appropriate advice than relying on whoever they could reach out to over the internet. These vets feel that these online interactions lead to more appointments because the vet can tell the client that the condition in question needs to be seen in person. When asked if they charge for these online consultations only a small minority tend to raise their hands.

Those vets that do charge for online consultations wouldn't think of offering free advice. They feel that as veterinarians all we can offer our clients is our knowledge, so why would we give this away for free. They worry that, as the world becomes more digital, the expectation from pet owners will be that we offer online advice and if we don't begin to charge for online services now the profession will have to play catch up in the future. This line of thought is similar to all of the newspapers that gave away their content for free and are now scrambling to create paywalls. Free is not a business model.

The cons

On a medical basis, a shared concern with all vets is that photos and videos don't tell the whole story. It's one thing to look at a picture of a laceration - but is it just that, or is there something else going on? I learned the limitations of telemedicine the hard way. I was sent a photo of a cut and I was asked if it needed to be seen as an emergency, or if it could wait until the following morning. Based upon what I saw, it looked like a small superficial cut that could wait until the following morning. Well, my colleague was not happy with me the next day when he discovered that the tiny innocuous laceration was a penetrating wound that extended far beyond the border of the margins and the poor animal had a significant amount of crepitus and dirt under a skin flap that I could not appreciate in the photo. Lesson learned; photos and videos cannot explore, palpate or otherwise physically assess an animal. This is fine in human medicine when there are nurse practitioners or a physician on the other end of the line, but we don't have this luxury with veterinary medicine at this time.

Digital exams for rechecks

The one scenario where digital exams are likely appropriate is for rechecks. Using the wound example, we can look at follow-up photos taken days and weeks afterwards to see how it is healing. We would also ask our clients pointed questions such as, "Is there a smell?", and "Is the wound draining?", etc. Our clients would value having a quick assessment rather than the hassle of bringing their pet to the clinic.

Controlling the medical care

The question remains how veterinary practices deal with the increasing expectation that we offer telemedicine. First of all, we have to understand the limitations of videos and photos. They are two-dimensional and tend to focus on what the client thinks is important. If we passively accept what we see, then we are not controlling the medical care for the animal. Imagine if a client brought their dog or cat to you with a cough, but only let you use your stethoscope. We know that is but one tool in our arsenal so we would want to be able to examine the whole animal. It is our role to explain that a complete exam, with diagnostic testing, is appropriate. The same applies to telemedicine examinations.

When we are aware of the limitations of photos and videos it creates a path for us to turn most online requests into face to face appointments. Whether a fee is charged for the initial online assessment, or that fee is rolled into the price charged for a physical visit, is a matter of preference. The key thing is staff and vet training so that they communicate to the client that there is a fee involved for the digital exam. Rechecks should have a fee associated with them. It may not be as much as an in clinic visit to account for the decreased resources needed for the exam, but a fee should be charged nonetheless.

Summary

Telemedicine is in its infancy in veterinary medicine. As technology progresses, and the training of support staff advances, there is no doubt that it will play an increasingly bigger role in all of our practices in the years to come. In the meantime, it is crucial to recognize the limitations with it and recognize that if we don't start billing for it now it will be harder to do so in the future. In spite of what we may personally feel, most people now recognize that the internet has a cost involved with it, so there is less of an assumption that everything online is free.

Prior to becoming a veterinarian, Dr. Mike Pownall worked as a farrier. His interest in equine lameness led him to attend the Ontario Veterinary College, graduating in 2001. In 2002 he and his wife, Dr. Melissa McKee, started McKee-Pownall Equine Services, an organization represented by three equine veterinary clinics with 11 vets and 20 support staff spread across the Greater Toronto Area. He is also a partner with Oculus Insights, offering business education to veterinarians throughout the world.

Dr. Pownall received his MBA from the Richard Ivey School of Business at the University of Western Ontario, and was the class valedictorian. He presents internationally on business strategy, pricing, digital marketing, and technology for veterinarians. He also contributes to numerous journals on business management topics.

You can visit Dr. Pownall's website at www.veterinarybusinessmatters.com, on twitter @dvmbusiness, and the Veterinary Business Matters Facebook page. The website for McKee-Pownall Equine Services is www.mpequine.com and for Oculus Insights is www.oculusinsights.net.

- Tailor your greeting to the client. You can say, "*Hi Mrs. Jones, how are you and Sophie doing today?"*

Using client and pet names

A very simple way to make service more personalized is to use the name of the client and the name of the pet when speaking with pet owners. Be sure to use the client's last name and an appropriate title unless you know the client well or they have invited you to call them by first name.

Using the pet's name also helps avoid having to worry about getting the pet's gender correct because you'll be saying 'Scooter' rather than 'he;' or 'she'. Dr. Donnelly said to remember that using client and pet's names applies to the phone also; callers should be asked their name and their pet's name so these can be used throughout the conversation.

Ask open-ended questions

By asking owners open-ended questions, you can gather more information, gain insight, and create stronger connections with clients. This helps to develop a more meaningful client relationship, which leads to greater client loyalty. An example is:

- *You seem uneasy Mr. Taylor. Can you tell me about your concerns?*

Engage clients with compliments

Always praise clients about how well they take care of their pet because this will reinforce your position on patient advocacy and show you care about keeping pets healthy and happy. For example, you may be able to comment on what a great job a client did with getting their pet to lose weight.

Don't forget to compliment pets since owners love to hear team members show interest in their pets. You may be able to comment on how attractive the pet is, tell the owner you like their collar, or compliment the pet for being so cooperative and friendly.

Thank clients

Strive to thank clients whenever possible. Send thank-you cards and/or gifts to clients who refer other clients. Thank clients for waiting and for being patient. Thank clients when they are flexible with their schedules. And thank clients for trusting you to care for their beloved pets.

Practice reflective listening

Listening to clients is important for two primary reasons, Dr. Donnelly noted. First, it is often critical to ensuring that you have gathered all the relevant medical history and information about the pet. In addition, it demonstrates interest and compassion towards the client.

Reflective listening helps to make sure that we have listened to clients, that we are processing the correct information and that we are cognizant of what pet owners are feeling and thinking. An example of a reflective listening statement is:

- *"I'm hearing you say that you think Oliver's quality of life is not good, is that correct?"*

Reflective listening statements invite clients to affirm that you have understood them correctly. If you have made erroneous assumptions, clients have the opportunity to clarify their thoughts and feelings. In addition, reflective listening invites client to give you more information.

Use empathy statements

While veterinary teams generally do an excellent job of showing compassion to grieving clients, many team members miss out on opportunities every day to convey empathy to pet owners. Empathy statements are important because they convey to the client that you understand their perspective and feelings. An example of an empathy statement is:

- *"I can understand that this is a difficult time for you."*

Educate clients about the value of services

Reflect on your communication protocols and staff roles for routine wellness visits. What messages are your team members conveying to clients? Do staff members quickly state what services are due or do they first ask questions about how the pet is doing? Are team members trained to talk about the benefits of services and products that are being recommended?

Define team member roles before, during and after appointments

The best way to improve client communications about the value of services is to work as a team, stressed Dr. Donnelly. This way, clients are more likely to receive consistent client education messages and to understand the value of your services.

The first step is to make sure everyone knows how to fulfill their specific role as a trusted advisor to pet owners. For pets to get the care they deserve, everyone on the veterinary healthcare team needs to build trust with clients by providing accurate and thorough information about pets' medical care. They also need to build trust by focusing on client engagement. Remember trusted advisors focus on client engagement and client education *before* making recommendations.

Train your team to enhance client education

Clients may think someone is trying to 'sell' services, cautioned Dr. Donnelly, if team members immediately provide recommendations for their pet before even asking questions, taking a thorough history or performing a physical exam. Strategies to use to better educate pet owners and inform them about the value and benefits of services include:

- Don't assume clients are knowledgeable about basic services. Ask if they have questions and offer information.
- Ask open-ended questions about pets before launching into what services you recommend.
- When team members do make recommendations for wellness care prior to the veterinarian doing a physical exam, be sure to let client's know the doctor will do a full evaluation of their pet's health.
- Make sure all aspects of the physical exam and procedures are thoroughly explained. The client should be informed of normal and abnormal findings and the reason for each part of the exam.
- Even if you take the pet to the treatment room for procedures, use visual aids to reinforce verbal messages when possible.
- After recommending wellness care such as diagnostic testing, give the client more detailed information and what the tests will reveal about the pet's health.
- Don't just make recommendations; tell the client why the pet needs the tests.
- To effectively communicate the value of a veterinary service or product to clients, make sure everyone on the team understands and agrees with the value of the hospital's services and products.

Talk with confidence about money

Money can be a barrier for clients agreeing to say 'yes' to recommendations, especially if they don't fully appreciate the value of the services and products, said Dr. Donnelly. She said it's important to train team members that they should remain committed to providing the best care possible to pets and focus on communicating the value of this care to pet owners. Should a pet owner express a concern or complaint about fees when presented with treatment plan recommendations, the team member should be able to convey empathy, identify possible other underlying causes for an owner's reluctance to agree to services and focus on how to overcome objections.

Since veterinary care can be expensive, it's important to take steps as a business to offer clients as many payment options as possible. To increase the affordability of care for clients, you can offer third party payment plans. Make sure all employees are familiar with the plans offered at your practice and are comfortable presenting these plans, concluded Dr. Donnelly. CVP

This article was adapted from Dr. Connelly's VET Conference proceedings.

Amanda L. Donnelly, DVM, MBA *is a speaker, consultant, and author with over 29 years of experience in the veterinary profession. She combines her practice experience and business expertise to help veterinarians communicate better with their teams and clients.*

Dr. Donnelly is a graduate of the College of Veterinary Medicine at the University of Missouri. She is the author of the book 101 Practice Management Questions Answered and writes the Talk the Talk communication column for Today's Veterinary Business journal. Dr. Donnelly has twice been named Practice Management Speaker of the Year for the VMX Conference. She consistently delivers programs filled with actionable takeaways.

Canadian Veterinary Medical Association News

By Tanya Frye, Manager, CVMA Communications and Public Relations

Whatever and wherever you practice veterinary medicine and wherever you are in your career, the CVMA's advocacy and resources can help make you more successful. This information is provided to update you on the CVMA's recent activities and resources across Canada.

You speak for those who cannot speak. And we speak for you.

The CVMA released a new 30-second video as part of its national membership recruitment and engagement campaign. You can view the video at canadianveterinarians.net/members or on the CVMA YouTube channel (youtube.com/user/CVMAACMV).

The CVMA and World Small Animal Veterinary Association (WSAVA) joint Congress runs from July 16 -19, 2019 in Toronto. Ten CE tracks per day will include dentistry, dermatology, business management, equine welfare, and more (preview the scientific program here: wsava2019.com/scientific-program). CVMA signature events include the CVMA Global Summit, CVMA Global Forum, Emerging Leaders Program sponsored by Virox Animal Health, and the CVMA AGM and Awards Ceremony. Take advantage of early bird savings before April 10, 2019 at wsava2019.com/registration.

The CVMA recently welcomed the following members to various committees:

- Dr. Bettina Bobsien; Animal Welfare Committee
- Dr. Louis Kwantes; Executive Committee
- Dr. Trevor Lawson; NS Representative, Council

We help shape national policy and legislation that affects you.

In October 2018, the Honourable Jody Wilson-Raybould, Minister of Justice and Attorney General of Canada, introduced legislation that will update the Criminal Code to strengthen protections for children, other vulnerable individuals, and animals by broadening the scope of the bestiality and animal fighting offences. In December 2017, the CVMA, along with 11 other stakeholder groups, submitted a letter to the Minister of Justice and Attorney General of Canada calling for an update to Canada's laws to address the shortcomings in relation to bestiality and animal fighting during its review and update of the Criminal Code. The CVMA is pleased to see that recent announcements address the concerns we raised on behalf of Canadian veterinarians.

We advocate on your behalf to improvements in animal welfare

The CVMA participated in the Federation of Veterinarians of Europe (FVE) General Assembly in November 2018 in Rome, Italy. In 2015, the CVMA signed a collaborative agreement with the FVE and American Veterinary Medical Association (AVMA) to aid in discussions and negotiations on an international level. The CVMA, AVMA and FVE are three of the leading veterinary professional organizations in the Western world. Together, they represent over 330,000 veterinarians in all disciplines of the veterinary profession.

Leadership on national veterinary issues and animal welfare advocacy are two of the CVMA's key strategic priorities. Two of the CVMA's initiatives that underpin these strategic priorities and support the entire veterinary profession include:

- The 2019 CVMA Global Summit, July 16, 2019: The Gold Standard of Animal Welfare – Positive and Negative Impact on Animals and Veterinarians.
- The 2019 CVMA National Issues Forum, July 16, 2019: Telehealth and Animal Welfare – Pros, Cons and Implications for Veterinary Patients.

Our resources help you succeed throughout your career

Each year the CVMA proudly recognizes individuals who have demonstrated significant accomplishments, exemplary leadership, and tireless commitment to Canada's veterinary community with our *CVMA Awards*.

2018 CVMA Guidelines for Veterinary Antimicrobial Use online platform rolled out in December 2018. Building off the existing 2008 CVMA Prudent Use Guidelines for Antimicrobial Use, the original scope of four species groups (beef, dairy, poultry swine) was expanded to include small ruminants and companion animals. The shift to an electronic format allows more frequent information updates and the addition of new resources, accessibility via a variety of devices (e.g. laptop, tablet, smartphone), and a searchable interface and filtering for quicker access to information. A French version of the platform will be available in the coming months. All licensed veterinarians in Canada will have full access to the content on the new online platform hosted on the CVMA website until April 1, 2019, when only active CVMA members will have access to all areas. Access the online guidelines at: canadianveterinarians.net/AMU-UAM.

The 2019 CVMA Emerging Leaders Program will be held at the 2019 WSAVA/CVMA joint Congress in Toronto, Ontario, on July 16 and 17. Generously sponsored by Virox Animal Health, this highly interactive eight-hour workshop, spread across two half-days, helps Canadian veterinarians, registered veterinary technicians/technologists, and veterinary leaders/managers identify and develop leadership skills while building a leadership network within the profession. A full sponsorship to participate is open to all DVM CVMA members who graduated within the last 10 years (2008 or later). Sponsored participants will receive the following:

- Travel to and from Toronto
- Two nights' accommodation at the Intercontinental Hotel
- Eight-hour workshop with Dr. Rick DeBowes
- Complimentary registration for the 2019 WSAVA/CVMA Congress (value $1,300)

Up to two sponsored participants per province will be selected. Visit the CVMA website (Science & Knowledge > Emerging Leaders Program) or more information. Please email Sarah Cunningham at scunningham@cvma-acmv.org by **March 1, 2019** to apply for sponsorship.

The CVMA created a ***Career and Business Toolkit*** section on its website to provide veterinarians easy access to pertinent online resources and information. The resources are grouped into three categories; Financial and Practice Management, Human Resources, and Communications and Marketing. You can find links to free CE courses, articles, tools, calculators, services, guides, blogs, and advice. The Toolkit is updated on an ongoing basis as relevant resources are identified. Access it here: canadianveterinarians.net/toolkit.

Again this year, the CVMA teamed up with the OVMA and industry partners (IDEXX, Petsecure Pet Health Insurance, Merck Animal Health, and Scotiabank) to ***report on compensation and benefits for associate veterinarians across Canada***. Information in these reports can be used by both practice owners and associate veterinarians to compare hours worked, incomes, and benefits across the province and across Canada. Visit the Business Management section of the CVMA website to access your province's economic reports.

The Canadian veterinary economy is strong. Results from the most recent ***Practice Owners Economic Survey*** show increased revenues and net incomes for both mixed, large, and companion animal hospitals. According to Scotiabank Global Economics, the outlook for 2019 is guardedly positive, suggesting continued growth for veterinary hospitals. How did the average Canadian veterinarian fare in the past decade? Look for this article in its entirety in the November 2018 issue of *The Canadian Veterinary Journal* or have your CVMA website log-in ready and visit the CVMA's Practice Management Resources web section.

As of December 1, 2018, all medically important antimicrobials for veterinary use are now sold by prescription only. Through this initiative, the number of feed prescriptions issued by veterinarians and received by commercial feed mills have increased. Health Canada and the Canadian Food Inspection Agency created tools to assist you when writing feed prescriptions. Visit the ***Veterinary Oversight of Antimicrobial Use in Animals in Canada*** section of the CVMA website to download the following documents.

- Required Items Checklist – Veterinary Feed Prescription
- Veterinary Prescription for Medicated Feed – SWINE
- Veterinary Prescription for Medicated Feed – RUMINANT
- Veterinary Prescription for Medicated Feed – POULTRY

The CVMA is a proud Associate Member of ***Partners for Healthy Pets (PHP).*** We are pleased to announce another program between PHP, Veterinary Medical Association Executives, and our association that focuses on the importance of re-engaging inactive clients and bringing them back into the veterinary practice. The program is based upon a client's visitation history and not a timetable for a specific service. PHP's unique empathetic messaging consists of three compelling points: recognizing that pet owners are busy but want to provide the best care for their pets, expressing sincere concern from the practice for their pets' health, and conveying that an annual exam is as important as food and love. This program does not replace, but is complementary to, your current reminder program. To get started, go to the Partners for Healthy Pets website at partnersforhealthypets.org/inactive_client_program.aspx and review the readily accessible resources provided.

CANADIAN VETERINARY MEDICAL ASSOCIATION
L'ASSOCIATION CANADIENNE DES MÉDECINS VÉTÉRINAIRES

TECH The A, B, C's of transfusion medicine in dogs and cats

BANFF, AB - Technicians are paramount to the successful completion of a blood transfusion, as they are often charged with monitoring the patients, said David Liss, RVT, speaking at the CanWest Veterinary Conference. As such, understanding the need for transfusions, products available, the physiology of transfusions, and how to administer/monitor a transfusion is essential.

The need for a transfusion

The need for a transfusion can arise in various situations, including acute hemorrhage, non-hemorrhagic anemia, and in patients with coagulopathies or other conditions. With acute hemorrhage, oxygen-carrying red blood cells are lost, as well as essential plasma proteins. Whole blood transfusions might be used here to replace what was lost. In the case of non-hemorrhagic anemia, a transfusion of packed red blood cells may be required. These patients do not need the plasma component. Patients with coagulopathies or other conditions may require a plasma transfusion. There are also other rare conditions (such as von Willebrand's disease (vWD) that may receive a transfusion as a medical therapy. Finally, transfusions of albumin (human or canine), intravenous immunglobulin (IVIG), or antivenin should be monitored according to the same guidelines as blood products.

Transfusion products

Numerous blood products are used in transfusion medicine, including:

Whole blood products:

- **Fresh whole blood** is harvested from a donor and contains red blood cells, white blood cells, platelets, and plasma. It contains labile (fragile) clotting factors (which only last for a short time in refrigerated products) and platelets (which are also fragile and do not last long).
- **Stored whole blood** is typically kept for upwards of 28 days. It contains red blood cells, white blood cells, and plasma proteins (excluding labile clotting factors). It should be noted that cells in stored whole blood (notably RBC's) are not "normal" and do not have the same oxygen-carrying abilities as normal red blood cells. There can also be an accumulation of chemicals in stored whole blood from cell breakdown.

The whole blood products are colloid solutions, meaning they will increase blood pressure greatly by the effects of the large plasma proteins. Fluid overload can be a concern with use of these products, cautioned Mr. Liss.

Packed red blood cells:

- **Packed red blood cells** are prepared by taking a whole blood donation, centrifuging the blood and removing the red blood cells after the plasma has been decanted off. The red blood cells are washed and suspended in 0.9% normal saline to rid them of any remaining white blood cells or plasma proteins.

The PCV of a packed red blood cell transfusion is approximately 70-80%. Packed red blood cells are typically not considered colloids; however, they are suspended in a crystalloid solution and can still be implicated in volume overload.

Plasma products:

- **Fresh frozen plasma** (FFP) is prepared by the removal of the plasma portion of the whole blood donation, and freezing it immediately. Fresh frozen plasma contains labile clotting factors (V, VIII, and vWF) as well as the remainder of the non-labile clotting factors, relatively small amounts of albumin and immunoglobulins, fibrinogen, alpha-macroglobulin, antithrombin III, and other physiologically important proteins.
- **Frozen plasma** (FP) is plasma that has been frozen for 4 years or longer. It contains all of the above proteins with the exception of the labile clotting factors.
- **Cryoprecipitate** is the supernatant from a special centrifugation of plasma (after it has been removed from the red cells). This contains high levels of vWF and is often removed and stored for infusion during a vWF crisis.
- **Cryo-poor plasma** is he remaining plasma, after the cryo has been separated off. It contains all parts of the fresh frozen plasma, except for vWF.

Miscellaneous transfusion products:

- **Human/canine albumin** is typically used to treat severe hypoalbuminemia.
- **IVIG** is an anti-inflammatory infusion used in severe hematologic/dermatologic autoimmune disease states (IMHA, ITP, etc).
- **Antivenin** is an immunoglobulin infusion that has been sensitized to snake venom and is used to treat snake envenomations.

All of the above products can cause some sort of an antigenic reaction in the patient they are administered to.

Blood types

Giving blood products requires knowledge of the physiology of blood types in the canine and feline patient, said Mr. Liss. Canine patients have a receptor and allele system, where their red blood cells express receptors for various different receptors corresponding to a corollary blood type. Canines may have upwards of 18 different blood types; the most notable being DEA (dog erythrocyte antigen) 1, (with 1.1, 1.2 and 1.3 subgroups), DEA 2, DEA 3, DEA 4, DEA 5, DEA 6, etc. There is another antigen that may be of importance called the dal antigen, present in Dalmatian dogs. Canines are either positive or negative for the various receptors and can have multiple receptors present on their red blood cells. The most antigenic receptors are the DEA 1.X antigens which is why commercial kits test for the DEA 1.1 antigen.

Dogs do NOT have naturally occurring alloantibodies, meaning they are not sensitized to different blood types initially. However, after they receive a transfusion they now create circulating antibodies against the blood type infused. Most dogs (99%) are positive for the DEA 4 allele, so a DEA 4+ dog can be considered a universal donor if they are negative at all other allele sites. Ideally, dogs should be typed and cross-matched prior to infusion of DEA 4+ (only) blood products.

Feline patients have a slightly different system, the AB system. Cats either have an A protein, B protein, or A AND B protein present on their red blood cells. Cats DO possess naturally occurring alloantibodies and can react to any blood type but their own on the first transfusion. A type cats have weak anti-B antibodies and will typically have a delayed hemolytic reaction where some, but not all, of the infused red blood cells (if Type B blood was infused to a Type A cat) will become destroyed and unusable. In contrast, type B cats have very strong anti-A antibodies and can die if transfused with type A blood.

The majority of all domestic shorthair cats are type A. Type B occurs in a decent percentage of Abyssinian, Birman, British Shorthair, Cornish Rex, Devon Rex, Exotic shorthair, Himalayan, Persian, Scottish fold, Somali, Sphinx, and Turkish Angora/Van cats. All cats should be typed if a transfusion might be in their future, given type-specific blood products, and cross-matched prior to infusion as well. There are a small percentage of cats that are type AB. They contain both the A and B-type sugar on their red blood cells and have no natural alloantibodies. Mr. Liss said use of Type A blood is recommended for transfusing AB cats.

There are various kits available to type patients in the hospital. The canine versions typically screen for DEA 1.1 to see whether the patient is 1.1 positive

Life of a Vet Tech

Capturing the passion of this profession!

The life of a vet tech can be demanding and exhausting, but at the end of the day, it is a career fuelled by passion. Below are captions from many of the Life of a Vet Tech articles published to date. Vet techs – we salute you – your passion shines through in the way you care about animals and devote each day of your career to their welfare!

"I always knew I wanted to help animals, and growing up I always managed to find them, whether it was in a park, zoo, or my own backyard."
Katrina Mari, RVT

"Thick skin, passion and a lot of hard work are essential for RVTs. That's how we continue to grow as a profession, and as people. Things can get physically and emotionally exhausting, and we know that. It's okay to be emotional sometimes, and we all deal with that differently."
Kevin Valdes, RVT

"There are always more good days than bad, and in our profession you understand that. I would like to remind all techs to take some time for 'you' every day. Self-care is so important in our field of high stress, burnout, and the emotional rollercoaster that comes with dealing with pets and their owners."
Lorna Verschoore (Dickieson), RVT

"I do this for many reasons: to help the animals and the people in the communities we visit; to meet new people and learn new things; to make some amazing friendships; and to have fun. And to share my love of what we do at CAAT, and convince more people to join."
Laura Sutton, RVT

"Our responsibility as veterinary professionals lies in our ability to be compassionate and kind; the more we know about animal behaviour the better we can do for our patients."
Jessica Benoit, RVT, CPDT-KA Certified Fear Free Professional

"While it is always varied and exciting, working as a wildlife technician can also be very challenging. Not every animal can be returned to the wild, and despite our best efforts, some of our patients don't make it. We do, however, still make a difference by reducing their suffering."
Gylaine Andersen, B.Sc., RVT, CWR (Certified Wildlife Rehabilitator)

'To my fellow empaths, it is a blessing and a burden to feel things so deeply, but by far it is the essence of who you are, so let it be your strength. Thank you to RVTs everywhere advocating and working tirelessly for animals, whether you are in front of a blackboard, behind a book, with your arm in a cow, back bent over in a dentistry, or running madly in ICU."
Purvi Patel, RVT

'I am honoured to work in a field that helps animals live longer, happier, more comfortable lives. The best piece of advice I ever received is to never forget what it's like to be a pet owner. We sometimes take for granted all the knowledge we have gained over the years, and remembering how scary it can be to be a client with a sick pet can help us to remain compassionate and supportive in what can be a challenging and emotionally charged profession.'
Julia Colangelo, RVT

"To describe a "typical" day of work at the Zoo is near impossible. I Don't think one exists! But, for me, the chance to increase the public's awareness of what our animals' wild counterparts are experiencing, and to directly help with conservation programs encourages me to continue to do my best for as long as it's needed."
Dawn Mihailovic,, RVT, BSc

"Over my 20 years as an RVT, I have had incredible opportunities that have shaped my life. I have ben able to build my career around my passion for animals, which has been both gratifying and enriching."
Tammy Mazubert, RAHT

"The most rewarding parts for me are seeing such ill patients get well and go home, and seeing the vet students progressing throughout the year. I always enjoy watching them graduate knowing that I had a part in their education. Knowing that maybe something I taught them will help a patient return home to their family happy and healthy is really a wonderful part of my job."
Aleasha Nimec, RVT

"One of the aspects of the clinic that surprised and impressed me most was how quickly the volunteers came together as a team. Despite the heat, the long days, the aching feet and sore backs, there were no complaints and everyone worked hard all day long. When you are united by a common purpose of helping others, it's easier to set aside conflicts and work together to achieve your goals."
Joye Sears, RVT

"In my opinion, a strong work ethic and a positive attitude are assets that all technicians should aspire to. These qualities bring about many opportunities to experience a variety of avenues within the field of veterinary technology."
Charlotte Donohoe, RVT, VTS (ECC)

"Caring for dogs and cats can have its unpredictable moments, but working with wildlife is, well, a completely different animal. No two days are ever alike in wildlife rehabilitation, and every day amazes me with the great variety of species to care for and enormous range of potential ailments and injuries to treat."
Maureen Lilley, RVT

"The best part of my job is watching that animal walk out our front doors with their new family in tow. Some animals are easy to adopt out, but others are more challenging, such as senior pets or those with specific medical requirements. Recently I was brought to tears as I watched a long-term resident of the shelter get adopted by a great family including a little boy who would soon be the dog's best friend."
Stephanie Miller, RVT

or negative. Many canine patients are DEA 1.1 negative and should only be transfused with DEA 1.1 negative blood. DEA 1.1 positive patients can receive DEA 1.1 positive or negative blood. The biggest concern is transfusing DEA 1.1 positive blood to a DEA 1.1 negative patient. Feline blood typing kits identify Type A and Type B blood types, and potentially Type AB cats. Blood typing is very important to prevent serious life-threatening mismatched blood types. Crossmatching can identify blood type incompatibilities and other potential antigen-antibody reactions by causing agglutination. Crossmatching can be done with a manual method or a gel tube method (using a commercial kit).

Administering transfusions

Regardless of the product being administered, transfusions are not entirely safe, stressed Mr. Liss. There are several categories of transfusion reactions, each of which with their own pathogenesis and clinical signs.

Acute immunologic reactions:

- Acute hemolytic reactions
- Allergic reactions
- Febrile non-hemolytic transfusion reactions

- Transfusion-related acute lung injury (TRALI).
  The acute reactions occur immediately and tend to be life-threatening.

Delayed immunologic reactions:
- Delayed hemolytic transfusion reactions
- Post-transfusion purpura.

Acute non-immunologic reactions:
- Volume overload (TACO)
- Citrate toxicity
- Hypothermia
- Bacterial contamination (sepsis)

Delayed non-immunologic reactions:
- Infectious disease transmission.

Monitoring transfusions

Monitoring the infusion of a transfusion is incredibly important and veterinary technicians should be diligent about doing so, advised Mr. Liss. He said the transfusion is typically administered slowly (1/4 of the normal rate) and the rate is slowly increased if the patient can tolerate the transfusion. Most transfusions of blood products NEED to be given over 4 hours to reduce the chance of bacterial contamination.

All blood product transfusions must be given through filters to prevent foreign material (notably clots) from entering the patient. Special filters are made to screen for bacteria and WBC's. Filters contained within pre-made intravenous sets can typically handle an entire transfusion load. In-line filers must be used according to the manufacturer directions. There is a brand of filter that can only handle 25-30 cc of packed red blood cells; after which it cannot be considered effective.

Blood transfusions are often administered on an IV pump, but red blood cell viability is determined, in part, by the mechanism of administration. If IV pumps that are NOT rated for blood are used RBC's can be lysed before administration, or may have their cell walls weakened and they will not survive in circulation long. Thus, recommendations include to free-drip the transfusion (or hand push it) if you are not using a blood-rated pump. Contrary to popular belief, the HESKA IV pumps are not actually rated for blood products.

Summary

Mr. Liss concluded by saying that diligent monitoring and knowledge of the biology of blood types is essential to perform high-quality transfusion medicine. He advised that veterinary technicians stay updated on new and emerging trends in transfusion medicine and are proactive about monitoring patients receiving a transfusion. Transfusions can be life saving, but he cautioned, they can do more harm than good if not administered properly. CVP

David Liss, RVT, VTS (ECC, SAIM), CVPM *is a renowned technician educator, double board-certified veterinary technician specialist in emergency/critical care and internal medicine, and a certified veterinary practice manager. He has a diverse background in emergency and critical care nursing including lecturing internationally, authoring numerous articles and book chapters, and serving on various technician association committees. He has also received numerous awards including the Veterinary Technician Educator of the Year by Western Veterinary Conference and the Southern California Technician of the Year.*

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TECH

The blocked cat

BANFF, AB – Most, if not all, ER techs are familiar with the 'blocked cat', said David Liss, RVT, presenting at the CanWest Veterinary Conference. These patients, he added, are suffering from a urethral obstruction, most often show lower urinary tract disease signs: stranguria, dysuria, hematuria, pollakiuria, and most often have urolithiasis. Cats tend to get oxalate and struvite stones evenly, thus technicians should be familiar with urinalysis and the appearance of these crystals. Mr. Liss stressed that although these patients are most often stable when presenting, around 12% can have life-threatening electrolyte and acid-base abnormalities that, if aren't treated immediately, may result in death.

History and clinical signs

Owners often report a myriad of clinical signs with their male cats. Often an owner will notice urine spotting, potentially with hematuria, frequency of visits to the litter box, excessive perineal licking, yowling, vocalizing, lethargy, anorexia, constipation, or actual visualization of straining to urinate. These patients should have their bladder palpated immediately upon arrival, in addition to a TPR and primary survey. Clinical signs of these patients include a large firm bladder, abdominal pain, tachycardia, bradycardia, hypothermia, hyperthermia, tachypnea, lateral recumbency, obtundation, and vocalization.

Pathophysiology

Most cats obstruct because of a mucous plug or small urolith (grit) that lodges in their urethra. As urinary output decreases, the bladder fills. Inability to urinate causes an increase in uremic toxins, such as BUN and creatinine, and a decreased excretion of potassium and phosphorus ions. Because these patients stop taking in water, they become dehydrated and hypovolemic. The severe metabolic derangements can contribute to a metabolic acidosis, caused by inability to excrete hydrogen ions and accumulation of lactate, and this worsens the process. Hyperkalemia can cause a large amount of detrimental cardiovascular arrhythmias which can result in death. As the bladder continues to fill, wall necrosis occurs, placing the animal at risk for bladder rupture and subsequent uroperitoneum. In addition to mucous plugs, neoplastic causes of urethral obstruction are seen. These are typically associated with transitional and squamous cell carcinomas. Urethral strictures can also cause obstruction, albeit rare.

Initial interventions

When a critical blocked cat presents to the emergency room **there are several treatment goals**:
- Identify and treat any underlying metabolic/acid-base abnormalities
- Relieve the urethral obstruction
- Restore urethral patency

Treating a blocked cat involves placing an IV catheter, attaching an ECG, and running a minimum database. The minimum database often reveals: low pH, low bicarbonate, low calcium, high potassium, high BUN, and high lactate. The high lactate, low bicarbonate and low pH levels indicate a metabolic acidosis. The high BUN is a result of post-renal, pre-renal, and potentially renal azotemia. The high potassium is a result of decreased ability

Chart 1: Treatments used in hyperkalemia:

Drug	Dose	Mechanism of action
Calcium gluconate	50-100mg/kg IV slow	Cardioprotective, reduces excitability of myocytes. Does not lower serum potassium
Regular insulin	0.1-0.25U/kg IV	Mobilizes serum potassium ions intracellularly
50% Dextrose	0.5g/kg (1mL/kg) diluted 1:3	Counteracts hypoglycemia from regular insulin administration. ALSO: incites insulin release from pancreas to lower K+ levels
Sodium bicarbonate	0.3 x Base Deficit x BW (kg). Administer ½-1/3 dose IV SLOW (20-30 mins). BD is typically calculated on a blood gas machine.	Not often needed. Fluids plus additional treatments above often necessary. Do not use unless other treatments not working. Will cause worsening of hypocalcemia. Also will cause metabolic alkalosis

to excrete potassium. Initial IV fluid therapy is achieved with a balanced crystalloid solution. Sometimes an initial fluid bolus will be enough to lower the serum potassium to normal, or lower than critical range, noted Mr. Liss. In addition, fluids may help restore perfusion and return lactate levels to normal. Common ECG findings with hyperkalemia include: depressed or absent P-waves (atrial standstill), wide QRS complexes, tall T-waves, ventricular tachycardia, or sinus tachycardia.

Mr. Liss advised that metabolic and acid-base disturbances should be addressed before the patient is anesthetized/sedated for urethral deobstruction procedures. Once IV fluids have been given, if the patient is still severely hyperkalemic other treatment should be instituted to address that. See chart 1.

Once the blocked cat has been stabilized, and serum potassium has been lowered, they are ready for deobstruction. A variety of anesthesia protocols have been studied in these patients:

1. Opioid/benzodiazepine combinations (termed neuroleptanalgesia) may provide enough sedation for urethral catheterization.

- ***Hydromorphone*** 0.05mg/kg IV and ***Diazepam/Midazolam*** 0.2-0.4mg/kg
- ***Oxymorphone*** Cats do not tend to do well with large doses of opioids. Oxymorphone, anecdotally, seems to be a decent choice for a pure mu opioid in the cat.
- ***Butorphanol*** (0.2-0.4mg/kg) is an excellent sedative, but provides not much analgesia. It can be combined with a benzodiazepine for excellent sedation.

2. Ketamine/Diazepam combinations are controversial. Ketamine is excreted in the kidney in the cat, and urethral obstruction can cause accumulation of the drug. Yet if the goal is to quickly deobstruct these patients some authors think it is not much of a concern. It is also contraindicated in heart disease, so make sure the cat has been ausculted first!

- ***Ketamine*** 2-5mg/kg and ***Diazepam*** 0.2-0.4mg/kg IV

3. Propofol can be used but it is a negative inotrope and vasodilator. Thus, it is recommended to use as little Propofol as possible.

- ***Propofol*** (1-2mg/kg IV slow) Once anesthesia is achieved, these patients can be maintained on gas anesthesia and titrated as needed.

Mr. Liss stressed that any critical patient should receive adequate analgesia before the deobstruction procedure. He also said that all equipment should be ready before induction of anesthesia, to minimize anesthesia time, and full monitoring equipment should be available including Spo2, BP, ECG, Temp, and ETCO2 if possible. Patients should be kept on surgical rate of fluids during the procedure, and kept warm, if possible. All general principles for anesthesia of critical patients (MAP reduction, pre-oxygenation, monitoring/treatment of hypotension, anticipation of problems) should occur with these patients as well.

Deobstruction procedure

Mr. Liss then described the appropriate deobstruciton procedure. He started by saying that once the patient is ready for catheterization, the penis can be extruded and should be examined for mucous or grit. Sometimes this can be teased out and the obstruction relieved, he commented. If urohydropropulsion is to be used, an open-end tomcat catheter, or sterilized olive tip catheter can be used. The catheter is lubricated and gently advanced into the urethra until resistance or grit is felt. Saline is gently pulsed into the catheter to relieve the obstruction. The process can be long and tedious, but once the obstruction is popped back into the bladder, the bladder should be emptied. Then longer-term urinary catheterization is performed using a 3.5Fr or 5Fr Red rubber catheter. This catheter should be pre-measured, and an x-ray post placement should be taken to avoid excessive lengths of catheter in the bladder. This can be sutured in using a variety of methods including placing stay sutures, tape or Elastikon, staples, or suturing directly to the prepuce. An E-collar should be placed on the patient to avoid removal, advised Mr. Liss. The bladder should be flushed with copious amounts of saline. Anecdotally, it is recommended to flush until the urine is somewhat clear, especially if gross hematuria is present. Once this is done, the urinary catheter should be connected to a sterilized closed system. This is often done using a re-sterilized IV bag, and new IV line tubing. A closed system is recommended to prevent development of a UTI.

The majority of cases of urethral obstruction are caused by sterile cystitis, and some are caused by idiopathic cystitis unlrelated to urolithiasis. Leaving a catheter open puts the patjent at risk for an iatrogenic resistant UTI, cautioned Mr. Liss. Antibiotics are also listed as relatively contraindicated when a urinary catheter is in place, he noted. Patients can be stabilized, discharged, and seen a few days later for a cystocentesis and urine culture submission. Rarely, patients cannot be catheterized and cystocentesis is a viable option for urine removal. However, there is certainly a risk of bladder rupture. Urohydropropulsion can cause bladder rupture as well, causing uroperitoneum and requiring surgical repair of the bladder wall.

Nursing care

Post-obstruction patients require intensive nursing care:

1. **They need their analgesic needs met** as best as possible. Most often intravenous, and later transmucosal, buprenorphine is sufficient. Patients may be started on anti-spasmodic medications such as phenoxybenzamine or Prazosin. Phenoxybenzamine takes 72 hours for full effect, while Prazosin has a much shorter onset of action. However, these drugs are vasodilators and hypotension can occur. It is recommended to monitor the cat's cardiovascular status when starting these drugs.
2. **These patients have an invasive device in place**; the urinary catheter. Proper care and maintenance is required to prevent iatrogenic UTI development. Catheters should be inspected for patency q4-6h, and cleaned with a dilute chlorhexidine solution.
3. **Urinary output should be monitored** q4hours by using a needle and syringe, and not disconnecting the IV bag from the soluset. The bag and line should be changed q24hours as needed. Urine output should be monitored closely in these patients. They often suffer from post-obstructive diuresis and the kidneys go into overdrive. Urine output can exceed 3-5ml/kg/hr! In this case, the patient needs their IV fluids increased, not decreased. Lowering the fluids in evidence of excessive urinary output could be detrimental. These patients may be on 2-4x maintenance fluid rates!
4. **Once patients are more stable**, 12 hours after deobstruction, their nursing care can be limited to pain assessment/scoring, urinary catheter care, and TLC (food and water should be offered). Most patients go home 2-3 days after obstruction relief!

Medical management

Medical management is very important in feline patients to prevent recurrence of FLUTD. If the cause is not a urolith, it is often feline idiopathic sterile cystitis. Mr. Liss said that treatments include: stress reduction, moist food, increased water intake, glycosaminoglycans (glucosamine and chondroitin), and, potentially, feline pheromones (Feliway®). If uroliths are the cause, feeding a canned urinary diet, with increased access to water (fountains, etc) will help dilute urine. In addition, glycosaminoglycans can also be used. He concluded by saying that urine should be submitted for culture, and sensitivity and antimicrobial medications used, if indicated. CVP

David Liss, RVT, VTS (ECC, SAIM), CVPM is a renowned technician educator, double board-certified veterinary technician specialist in emergency/critical care and internal medicine, and a certified veterinary practice manager. He has a diverse background in emergency and critical care nursing including lecturing internationally, authoring numerous articles and book chapters, and serving on various technician association committees. He has also received numerous awards including the Veterinary Technician Educator of the Year by Western Veterinary Conference and the Southern California Technician of the Year.

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TECH Feline feeding programs: addressing behavioural needs to improve feline health and wellbeing

The American Association of Feline Practitioners (AAFP) published a Consensus Statement, '*Feline feeding programs: addressing behavioral needs to improve feline health and wellbeing*', on October 30, 2018. Written by Drs. Tammy Sadek, (chair), Beth Hamper, Debra Horwitz, Ilona Rodan, Elizabeth Rowe, and Eliza Sundahl, the Statement explores the medical, social and emotional problems that can result from the manner in which most cats are currently fed, and it provides strategies to allow normal feline feeding behaviors to occur in the home environment. These strategies include offering frequent small meals using appropriate puzzle feeders, forage feeding, and multiple food and water stations.

Problems associated with current feeding methods

Two key types of problems with the way we feed our cats are obesity-related problems and stress-related problems. The AAFP Statement explains that feeding one or two large meals day, a common household practice, does not address the domestic cat's need for both eating alone and eating multiple small meals a day.

Weight can result from cats eating too t rapidly, as modern cat food is highly palatable. As well, boredom can lead to overeating, even in cats with outdoor access. Overweight cats have more difficulty performing physical activities such as jumping, climbing, hunting and paying, which further exacerbates the obesity problem.

Stress-related problems include the cat developing the habit of gorging it's food, with subsequent vomiting, in order to attempt to avoid a stressful encounter with another pet or even a household member, such as an active toddler, or inadequate nutrition due to a lack of food.

Developing appropriate feeding programs

The AAHA Statement notes that a feeding program that mimic's the cat's natural feeding behaviour will diminish begging for food, feline frustration and inter-cat conflict. It also helps reduce relinquishment and enhances the bond between cats and their owners.

Feeding plans for cats should include frequent small meals, use of elevated space when physical health allows, separate water stations, recognition of multi-cat household social dynamics when locating resources, and regular weight monitoring to ensure adequate food consumption of each cat in the household. Some recommendations to help develop a cat-feeding program include:

Puzzle feeders and foraging

Puzzle feeders hold food and must be manipulated by the cat to release the food. Using puzzle feeders and hiding kibbles around the house increases activity, provides mental and physical stimulation and improves weight management without contributing to distress for the cat or the owner. Puzzle feeders vary in their complexity, can be stationary or rolling, and can be designed for wet or dry cat foods. Simple, easily manipulated puzzle feeders should be introduced first.

Cat owners should be encouraged to be patient and willing to slowly teach cats how to forage and use puzzle feeders. Individual cats will differ in their foraging strategies and abilities. Several types of puzzle feeders are available to meet various levels of ability.

Placing food portions in different or new locations, including making use of elevated space when the cat's physical status allows, can also enable cats to forage and engage their senses in searching for food.

Frequent meals and appropriate nutrition

The cat's daily food allowance should be split into multiple small meals and fed throughout the 24 h period, using puzzle feeders when possible. Owners must ensure that their cat is actually eating an appropriate amount and that food placement is such that the cat is able to procure it. This can be done by regularly monitoring the cat's weight and body condition. This is especially important in cats that are aged or debilitated, or have chronic illnesses or particular needs.

The veterinary team must educate cat owners on how to evaluate their cat's behavior for signs of illness, evidence of stress from inter-cat tension, food bowl guarding or other problems.

Veterinarians should counsel their clients as to how many calories their cat should eat on a daily basis and help determine the best way to measure food portions, either by using a digital gram kitchen scale or by volume using a measuring cup.

Separate resource areas for multi-cat households

Forcing a cat to eat in proximity to another cat that it otherwise chooses to avoid creates anxiety, stress and health problems.

Determining the household group dynamics can help direct where feeding and water stations (as well as litter boxes) should be located. The owner should answer these questions: Which cats spend time together? Which cats avoid each other? Where does each cat spend its time?

Feeding plans should include multiple feeding stations that are visually separated, consider the agility of each cat and meet dietary needs. Food and water stations should be placed where individual cats spend the majority of their time. Feeding areas can be separated by baby gates, or by using size-limiting entrances to access the food. Cats should be fed in locations where they feel safe, and feeding stations should not be close to litter boxes.

Summary

It is crucial that veterinary staff share with clients not only what type of food to feed their cat, but also how to feed cats. Feeding programs that incorporate puzzle feeders and multiple small meals reduce inactivity, anxiety and obesity in cats. In multi-cat households, separate feeding stations with adequate distance and visual separation can reduce stress and associated health issues. As part of providing optimal healthcare to feline patients, veterinarians and their staff should help clients to develop feeding strategies at each veterinary visit; this is an important part of nutritional counseling.

Source: The American Association of Feline Practitioner's (AAFP) Consensus Statement on *Feline feeding programs: Addressing behavioural needs to improve feline health and wellbeing*. (2018)

A client brochure may be downloaded from catvets.com/client-brochures and is also available as supplementary material at jfms.com. DOI: 10.1177/1098612X18791877

For information on food puzzles, see www.foodpuzzlesforcats.com

Survey reveals 99+% satisfaction rate among Cat Friendly Practices®

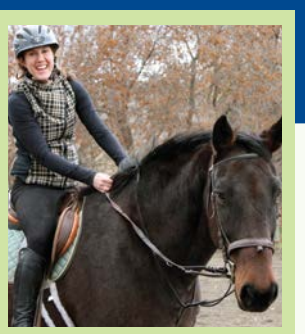
The American Association of Feline Practitioners (AAFP) results of the 2018 Cat Friendly Practice® survey indicate a 99% satisfaction rate from practices among the 460 survey respondents. The program continues to grow and positively influence veterinary care for cats, caregivers, and veterinary teams.

Some results from this year's CFP survey are:

- 99%+ satisfaction rate proves the CFP program meets or exceeds members' needs
- 93% reported an improvement in feline knowledge and care among practice staff
- 83% have recorded increased visits from better feline handling and CFP marketing
- 81% received positive feedback from clients on being a CFP
- 80% have gained new feline patients due to their CFP designation
- 79% report increased practice revenue since implementing the CFP program.
- The program is sponsored by Zoetis, Purina Veterinary Diets, Boehringer Ingelheim, Ceva Animal Health, and Hill's Pet Nutrition, as well as supported by Kit4Cat and Wedgewood Pharmacy. It is endorsed by the Association of Shelter Veterinarians, CATalyst Council, Cat Healthy, National Association of Veterinary Technicians in America, and the Winn Feline Foundation.
- As of December 7, 2018, the AAFP had designated 1,213 Cat Friendly Practices®

Case Study: Animal Welfare and Ethical Issues

Bernard Rollin, BA, PhD



Erica Gray, RVT

Ethical case study #4: Placebo prescription

We had been working for several months with a client and their exotic pet that they were bringing in regularly for reported signs of illness and pain. Several times they were prescribed oral antibiotics and analgesia, but often came back many weeks before their prescription was due to run out, requesting never ending refills of both pain relief and antibiotics. We were highly suspicious that the medication was being administered at many times higher than the prescribed dose. Every time the pet was brought in for a physical exam, there were no signs of illness, pain, or infection. We are not a clinic that specializes in exotics, but are the only clinic in the area for many miles.

The doctor working the case expressed her concerns about improper antibiotic use and the risk of developing multi-resistant bacteria, and also ceased dispensing the pain control - despite the client's protests. The client demanded that she continue to receive refills of antibiotics until the end of the pet's life.

The doctor became exasperated by the demands of this client, and asked me to refill the antibiotics...but to fill the container with a placebo in sterile water instead and not tell the owner that it was a placebo. I felt it was wrong to lie to the client, and this made me very uncomfortable, but these were the veterinarian's directions.

What would you do? Would you fill the placebo prescription and lie to the client?

Response by Theresa Stirling, AHT student

Clients come to us because they trust us and respect our opinions as members of the Veterinary field. I would be very uncomfortable lying to the client as well, and would talk to the doctor about the situation. A conversation like this can make an RVT, Vet assistant, or any other professional that works under a DVM feel like they are "walking on thin ice," as they are disobeying a direct order. However, with proper preparation you and your DVM can create a plan that doesn't involve lying to your client and breaching the trust they put in you.

The first step in creating your "game plan" for the talk with the DVM would be to keep the atmosphere calm and professional. Prepare your main points. In this case, the RVT would tell the DVM that filling a placebo prescription would make her very uncomfortable, and that she does not want to offend the client by lying to them.

I know from my experience as a current veterinary technology student that sometimes you may feel like your opinion may be wrong, due to a lack of experience with the situation at hand. You may doubt that you're making the right choice to confront your DVM. I've also learned that no matter how long you've been in the Veterinary field, if you notice something that makes you uncomfortable, there is a good chance that you aren't the only one feeling this way. Be confident and remember that your opinion matters. The DVM will listen and help fix the problem!

The second thing I would do is to provide options to the DVM in order to help dissolve the issue. I would ask the DVM to consult with the client about the prescription further. Ask if she could take a short break from using the antibiotics and bring the pet back for a recheck, if there is no change noticed in the pet then that would give the DVM a different excuse to halt the prescriptions from being filled. Another option may be to contact the owner's partner or family member and ask them to monitor the owner and see if they give the animal the prescription regularly, or if it is being misused.

In the end, the client may still be quite unhappy with her pet's prescriptions not being filled. The client may not want to stay at your practice, and that is a risk you and your DVM will have to take. What is important is that you are being honest with them and keeping your conscience clear.

Ethical case study #5: Burn out and compassion fatigue

I live and work in a remote northern community where the general population is very small and widely spread out. Often our clients are unable to gain access to veterinary care because the travel is such a burden. We are unable to travel to them because we can't risk leaving our patients here unattended, and our practice is a one doctor, one tech practice so we don't have extra staff to send out.

Our other major challenge is the socioeconomic status of our clients. We have a local rescue group that brings in cats and dogs for spay, neuter and vaccinations at no charge but this is often the only veterinary care these animals will receive throughout their lifetime. At this time, we do not have an SPCA Special Constable or local animal control by law officer in our community that can seize an animal or provide temporary housing for it in times of critical distress. The RCMP does have authority to intervene only because we don't have a Special Constable and SPCA but their primary mandate is to serve people and more resources and training are needed to recognize and intervene in times of animal's distress.

Due to the lack of resources and education, we often see signs of serious neglect such as chain collars that have become imbedded in the animal's skin and other signs such as lack of proper diet, grooming, shelter, and daily enrichment in the animal's life.

Our local rescue is doing the best job they can to get animals to us for basic care but it is taking an emotional toll on them, as well as myself and my DVM, seeing these animals returned to homes where they will continue to suffer. We are getting burnt out and starting to suffer from compassion fatigue from the lack of help and from witnessing the neglect of the animals.

What can we do to stop this cycle of neglect? How can we prevent burn out and compassion fatigue?

Submit your answers to ethicalcasestudies@k2publishing.ca

Bernard E. Rollin (B.A. CCNY, Ph.D. Columbia) is University Distinguished Professor, Professor of Philosophy, Professor of Biomedical Sciences, Professor of Animal Sciences, and University Bioethicist at Colorado State University. He was a major architect of the 1985 U.S. Federal laws protecting laboratory animals. Dr. Rollin is the author of 20 books and over 600 articles. He is considered the "father of veterinary medical ethics," and has written a column dealing with veterinary medical ethics for the Canadian Veterinary Journal since 1990.

Erica Gray, RVT is an instructor in the Animal Health Technology program at Thompson Rivers University. She has worked in both large and small animal practices. She has a strong interest in animal welfare and community outreach and has spent time volunteering in Nicaragua, here at home in Kamloops, BC, and is currently the Treasurer at the BCVTA. She shares her home with a Jack Russell Terrier, Brighty, and participates in scent detection games with him. She often spends time riding her horses, Buddy and Uno, and is working on an equine behaviour research project.

British Columbia Veterinary Technologists Association News

By Brynne Trites BSC, RVT, BCVTA Vice President

Greetings from the West (aka WET) Coast! Welcome to 2019 and some exciting things in the year ahead!

We had our most successful and well attended Fall Conference on October 21st, 2018! For the first time, we incorporated video recordings of all our sessions in order to offer online webinars to our members that weren't able to attend the conference in person. If you weren't able to be there on October 21st, or you're in need of some CE credits, take a look at some exceptional lecture topics by Liz Hughson, MEd., RVT, CVT, VTS (SAIM,ECC). Check out our website at bcvta.com for the link – webinars are being offered at a cost of $25 each and there are 6 sessions to choose from!

October also proved to be an exciting RVT month for us. This was the first time that we offered RVT month kits electronically for our membership/clinics, in an effort to be more environmentally and financially conscious. We also really ramped up our social media presence, and our Facebook stats told us that people were quite engaged. One of the successes we saw were BCVTA Facebook posts from RVTs in B.C. quoting…."I'm proud to be an RVT because….". During RVT Month, we reached approximately 46,000 people, had about 11,000 post engagements, and many new page likes. That brings us to well over 1,000 pages likes!

Something we are looking at this year is ways to engage with the community of veterinarians in B.C. Our goal is to focus on collaboration with local vets to promote RVTs, and the importance of our roles in veterinary medicine. Also being considered, is participation in tradeshows or events that pet owners attend. Our goal is simple – to educate pet owners on our profession, and explain why Registered Veterinary Technologists are important to them and their pets!

Finally, our Spring Conference planning is well underway! It will be held in Kamloops April 12-13, 2019. The theme of our conference this year is 'Live. Work. Thrive….Shaping your future'. We will be offering 4 streams to participants focusing on: 1) Senior equine care

2) Self care

3) Communication/Asking for what you're worth

4) Anesthesia with Tasha McNearny CVT,CVPP, VTS (Anesthesia)

We will be hosting a job fair this year as well, on Friday April 12th, so be sure to bring some copies of your resume if you're interested!

Don't forget to follow us on Facebook, Instagram and Twitter!

Alberta Veterinary Technologists Association News

By Amanda Barker, RVT, 2019 ABVTA President

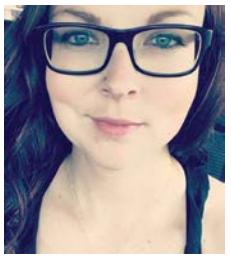
2019 is under way and the ABVTA has a lot to be excited for this year! The Board of Directors met on January 18 and 19, at the ABVMA office in Edmonton for our first meeting of the year. Our Directors were educated on the importance of Board Governance and the legislation surrounding it. After a long day of training, we were treated to a night out to view the Telus World of Science's Animal Inside Out Exhibit, which is definitely recommended! Saturday's meeting was more business than training, and we accomplished – the year is definitely off to a great start!

In February our Executive team will be attending the ABVMA's Annual Leadership Weekend in Calgary. The agenda features sessions including, but not limitd to, Fundamentals of Governance and Antimicrobial Stewardship.

We are eagerly preparing for our '40 and Fabulous' conference to take place on May 4 -5, in Edmonton. We hope to see fellow RVT's join us from across Canada – it will be a fantastic weekend with a lot of great networking and learning opportunities! If you attend, be sure to stop by and say "hello" to one of our hardworking committee or board members.

If you have any questions regarding the ABVTA or membership in Alberta, please don't hesitate to reach out at info@abvta.com.

Saskatchewan Association of Veterinary Technologists News



By Breanne Barber, RVT, SAVT President Elect

Happy New Year to All!

The Saskatchewan Association of Veterinary Technologists (SAVT) works hard on matters that make us the strong association that we are. Membership deadline has come and gone with a total of 475 active memberships! The SVMA and SAVT worked together in many ways in 2018 to strengthen our relationship and we look forward to it continuing throughout 2019.

On November 2-4, we held our 34th Annual SAVT Conference in Saskatoon and the total number in attendance was 310. All who attended found ways to support the conference theme: **'Facing the Future'** along with colleagues, speakers and guests from other VT Associations - Alberta, Manitoba and British Columbia. Back by popular demand, on the Friday evening we included a mashini bar, market place and job fair. New this year, we included animal welfare sessions that were very well attended. It is something that we hope to offer for our members again at future conferences.

Planning for the 35th Annual SAVT Conference has already begun! Award recipients this year include: Veterinarian of the Year- Dr. Tanya Duke, DVM; Conference Appreciation Award – Jackie Elsasser, RVT; SAVT Appreciation Award- Family Pet Crematorium (Saskatoon, SK); SAVT Technologist of the Year- Brenda Smith, RVT; Merck Mentorship Award- Lois Ridgway, RVT.

The 2018 – 2019 SAVT Board of Directors includes: President- Breanne Barber, RVT; President Elect – Tamara McLoughlin, RVT; Past President – Lois Ridgway, RVT; Secretary- Wanda Flynn, RVT; Executive Director- Jasmin Carlton; Financial Officer- Shannon McCallion, RVT; Members at Large- Tara Holland, RVT, April Penner, RVT, and Sheila Kucher, RVT; RVTTC Representatives- Darlene Ford, RVT, Carolyn Cartwright, RVT; Second year Saskatchewan Polytechnic Student Reps – Mabel Ng & Marlayna Morgan; First year Saskatchewan Polytechnic Student Rep- Ashley Martin and Conference Coordinator – Kenzie Makowsky, RVT.

From January 18-20, 2019 the SAVT Board of Directors retreated to 'The Outerbanks', near Melfort, to plan strategically for the upcoming year. Goals and priorities were identified to ensure that SAVT and members needs are addressed. The 2019 SAVT Board of Directors is comprised of a great group of people who live throughout Saskatchewan. We are all looking forward to new ideas and diversity of thoughts to improve our association.

Eastern Veterinary Technicians Association News

By Stephanie Hall, RVT

Happy New Year from the EVTA! We ended 2018 with our annual board meeting. Our main focus was planning for the new year. We are so excited about 2019 because this is our 30th anniversary! To celebrate, we are hosting a conference June 14-15, in Truro, NS. The conference will start off on Friday evening with cocktails and dinner. Awards for tech of the year for all four provinces will be presented that evening, instead of at each provincial conference. There are plans for a slideshow as well, so if anyone has photos or memorabilia from the past 30 years please email to share them with us! Saturday will be a full CE day with speakers from our association that have VTS in various areas. There will be 45-minute sessions and we will end the day with a round table discussion. There will be industry there with lots of information, and some fun 30th Anniversary swag! Early registration will be open soon!

The next EVTA general meeting will be held during the Atlantic Provinces Veterinary Conference (APVC), to be held April 12th at the Marriot Hotel in Halifax, NS. This meeting usually generates our biggest attendance. The conference is shaping up to be amazing! David Liss and Amy Newfield are headlining the technician talks and there is also a wetlab on blood smears to be given by Dr. Gilroy and Dr. Burton. EVTA will have a booth set up so please stop by!

If you have any questions regarding the EVTA please contact myself steph_smiling@hotmail.com or Bev our Executive Director at bev@evta.ca

EVTA
EASTERN VETERINARY TECHNICIANS ASSOCIATION

Registered Veterinary Technologists and Technicians of Canada News

By Ivana Novosel, RVT, RVTTC/TTVAC Vice President

Looking back at 2018, the RVTTC has had many noteworthy accomplishments. We are advancing more and faster every year and we are extremely excited for all that 2019 will bring!

This past July, at the CVMA Convention in Vancouver, BC, the RVTTC Board of Directors held their annual in-person meeting over three days. During this meeting the board elected our new president, Heather Shannon RVT (BCVTA member) and new vice president Ivana Novosel RVT (ABVTA member). Our board collaboration was a huge success and we are excited with the strategic planning that will make 2019 an amazing year.

For a comprehensive look at all the accomplishments and wins, please take a look at our annual report. https://rvttcanada.ca/annual-reports/

Some of the items we have on the go for 2019 include:

- ***National RVT Career Ladder Task Force***: to develop a national document identifying a broad pathway for a long term RVT career progression specifically identifying skills, experience and personal contribution. This pathway is to act as a guide for RVTs to use as a model to advance their career within their personal interest and promote a productive and sustainable career.
- ***At the 2018 World Small Animal Veterinary Association General Assembly, RVTTC was granted Affiliate Membership***. We look forward to further involvement in both collaborative CE delivery as well as active members on WSAVA guideline groups and committees. As a new member of WSAVA, we are learning about the committees and look forward to facilitating RVT representatives within the WSAVA global community.
- ***RVTTC is working directly with WSAVA/CVMA Congress planning committee*** to bring high level speakers and topics for RVTs to the 2019 WSAVA/CVMA Congress to be held from July 16-19, in Toronto, ON.
- ***Our 2018-2019 ProudlyRVT t-shirt campaign*** has raised $933.00 so far this year with 3 conferences still remaining! Last year, 700 t-shirts were disturbed across Canada raising $1,849.90 in donations by RVTs for our Travel Bursary. This was matched by a sponsoring donation from Petplan raising a total of $3,700.00 launching our new RVTTC Travel Bursary and offering three $1000.00 bursaries for RVTs to attend a CE event of their choice. Yet another great opportunity for our members to take advantage of as they continue building their skills for success in this awesome and ever-growing industry.
- This February we will see the launch of our ***new e-newsletter***, which will provide RVTs with direct information from RVTTC and the provinces, plus interesting items in veterinary medicine both nationally and internationally.
- ***2018-2019 RVTTC Student Bursary***: this will be our 3rd year offering several $500 bursaries to final year VT students, sponsored by Petplan Pet Insurance.
- ***Renewing our relationship with National Association of Veterinary Technicians of America (NAVTA)*** to collaborate on mutual interests of our profession. As one of the global leaders in veterinary technology profession, we feel it is important to support and collaborate with other international organizations.

One can see how easy it is to look back and feel accomplished for the year. Feel #ProudlyRVT! Surely, there is no better way to enter 2019! On behalf of the entire RVTTC board of directors, wishing you the best start to the year.

Visit our Website at www.rvttcanada.ca, and the RVTTC Facebook page at: https://www.facebook.com/RVTTC/ to stay up to date with all our events, latest industry information and member support!

RVTTC TTVAC

RVTTC Executive: L to R: Shannon Brownrigg RVT, Executive Director; Heather Shannon RVT, President; Ivana Novosel RVT, Vice President; Nancy MacFarlane RVT, Financial Officer

Figure 2: RVTTC Board of Directors visiting Marine Mammal Rescue Centre with BCVTA members.

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Continuing Veterinary Education Calendar

January 31-February 2
Toronto, ON
Ontario Veterinary Medical Association (OVMA) Conference
info@ovma.org
www.ovma.org

February 1-3
Winnipeg, MB
CenCan Conference
mneault@mvma.ca
www.mvma.ca

February 17-20
Las Vegas, NV
Western Veterinary Conference (WVC)
info@wvc.org
www.wvc.org

February 28-March 2
Niagra Falls, ON
Ontario Association of Veterinary Technicians (OAVT) Conference
conference@oavt.org
www.oavt.org

March 19-21
Whistler, BC
Vet Vacation CE
www.vetvacationce.com

April 4-6
Indianaoplis, IN
Veterinary Hospital Managers Association (VHMA) Management Exchange
www.vhma.org

April 4-7
Playa Herradura, Costa Rica
Veterinary Emergency and Critical Care Society (VECS) Spring Symposium
info@veccs.org
www.veccs.org

April 5-7
Montreal, QC
AMVQ Congress
www.congres.amvq.quebec

April 12-13
Kamloops, BC
British Columbia Veterinary Technologists Association (BCVTA) Conference
ed@bcvta.com
www.bcvta.com

April 12-14
Halifax, NS
Atlantic Provinces Veterinary Conference (APVC)
www.apvc.ca

April 14-15
Montreal, QC
2019 National Animal Welfare Conference
https://conference.humanecanada.ca

April 26-28
Banff, AB
International Conference on Communication in Veterinary Medicine (ICCVM)
info@iccvm.com
www.iccvm.com

May 4-5
Edmonton, AB
Alberta Veterinary Technologist Association (ABVTA) Conference
info@abvta.com
www.abvta.com

May 14-16
Niagra Falls, ON
Animal Nutrition Conference of Canada
www.animalnutritionconference.ca

June 3-5
Bromont, QC
Canadian Animal Health Institute (CAHI) Annual Meeting
cahi@cahi-icsa.ca
www.cahi-icsa.ca

June 16-19
Toronto, ON
Canadian Veterinary Medical Association (CVMA) Conference in partnership with the World Small Animal Veterinary Association (WSAVA)
admin@cvma-acmv.org
www.canadianveterinarians.net
www.wsava2019.com

June 17-19
Guelph, ON
Ontario Small Ruminant Veterinary Conference
osrvc@srvo.ca
www.srvo.ca/srvo-conference/

September 6-10
Washington, DC
International Veterinary Emergency and Critical Care Symposium (IVECCS)
info@veccs.org
www.veccs.org

September 26-28
Glendale, AZ
Veterinary Hospital Managers Associaiton (VHMA) Conference
www.vhma.org

October 3-5
Toronto, ON
Veterinary Education Today (VET) Conference
registration@veterinaryeducationtoday.ca
www.veterinaryeducationtoday.ca

October 19-22
Banff, AB
CanWest Veterinary Conference
Mandi.duggan@abvma.ca
www.canwestconference.ca

October 31 – November 3
San Francisco, CA
American Association of Feline Practitioners (AAFP) Veterinary Conference
Complex Disease Management
www.catvets.com

December 7-11
Denver, CO
American Association of Equine Practitioners (AAEP) Convention
www.aaep.org

Email *your* meeting announcement to info@k2publishing.ca

Industry News

Exploring value-based pricing in the veterinary industry

The Veterinary Hospital Managers Association (VHMA), has published a white paper that explores *value-based pricing* in the veterinary industry. The paper was developed to help veterinary managers better understand strategic pricing.

The white paper offers a smart analysis of current pricing approaches, an overview of the downside of current strategies and illustrations of the utility of *value-based* pricing. Also included is a historical analysis, current pricing review and a discussion of the future of pricing and highlights these topics:

- The importance of strategic pricing in the industry
- The current state of pricing
- The role of costs in a veterinary practice's pricing strategy
- An explanation of the importance of customer value and veterinary services
- Customer focus and value propositions
- Developing a pricing structure
- Ways to improve pricing in veterinary practices
- The steps involved in conducting a pricing audit

The white paper can be downloaded for free at https://www.vhma.org/store/ViewProduct.aspx?id=13025952.

Vet Updates conference series

Veterinary Education Today (VET) has announced a new conference series and a call for content sponsors. VET is currently looking for sponsors to provide a minimum of a 1-hour CE approved session. Vet Updates offers a regionally targeted, low-cost, high quality Ontario conference series located in Ottawa, Toronto East, Toronto West and London.

The event is designed to attract DVM's, practice managers, RVT's, administrators and students. Each targeted city is geared to attract up to 150 veterinary professionals. Further details can be found at: https://www.veterinaryeducationtoday.ca/updates/sponsor.html

Pets and Ticks: 2018 year in review

Pets and Ticks has posted 2018 year in review information, based on data collected through the Pet Tick Tracker. This report, along with detailed tick maps and charts, can be found at www.petsandticks.com.

Some of the key findings are:

- A total of 513 locally-acquired submissions and 6 travel-related submissions (i.e., outside of Canada) were received in 2018.
- The majority of submissions were from Ontario.
- Peak submissions were received in May and June.
- Dogs accounted for the greatest number of submissions.
- Adult female ticks accounted for >75% of submissions.
- Ticks were most likely to be found on the head (~40%).
- Owners / caregivers were the most active submitters (~67% of submissions).

MyCatHealthy app update

MyCatHealthy, the world's first app connecting cats and their owners with the aim of helping cats live healthier, happier lives, has not officially launched as noted in the previous issue of *Canadian Vet* newsmagazine. Rather, the actual launch will occur later this spring in an app format. Look for an announcement when the app officially launches.

Latest Canadian pet population figures released

On January 28, 2019, results of a nation-wide survey conducted by Kynetec (formerly Ipsos) of over 3,026 pet-owning households, on behalf of the Canadian Animal Health Institute (CAHI), were released.

Survey results included:

- From 2016 to 2018, the Canadian dog population has continued to grow while the population of cats has stabilized. The Canadian dog population is now nearly equal to the cat population for the first time since these measures were established in 2004.
- Cats continued to outnumber dogs with 8.3 million cats considered household pets in 2018, down slightly from 2016.
- Dog population figures for 2018 increased to 8.2 million, up from 7.6 million in 2016.
- The percentage of both dog and cat owners rating the value they receive at the veterinarian as "good" (8, 9 or 10 on a 10-point scale) has improved significantly.
- The proportion of pet owners consulting a veterinarian or veterinary technician 'frequently' as an information source continues to rise and has improved significantly since 2014.
- When asked for their top of mind concern as it relates to their pet, pet owners are more likely to identify animal wellbeing concerns in 2018 (flea infestation, tick infestation, disease/illness concerns) than affordability of veterinary services.
- Members of CAHI provide Canada's veterinarians and animal owners with the animal medications necessary to maintain the health of our pets and food animal population. More information can be found at www.cahi-icsa.ca.

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