

# WEST COAST VETERINARIAN

DECEMBER 2023 | Nº 53

## NEURODIVERSITY IN VETERINARY MEDICINE



**ANIGHT IN EMERG**

**TACKLING EQUINE  
CORONAVIRUS**

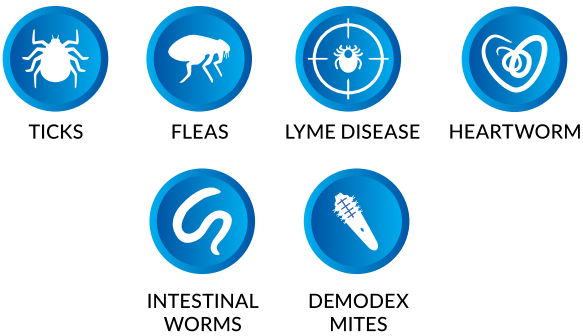
**RVTs AND MARINE  
MAMMAL PATIENTS**



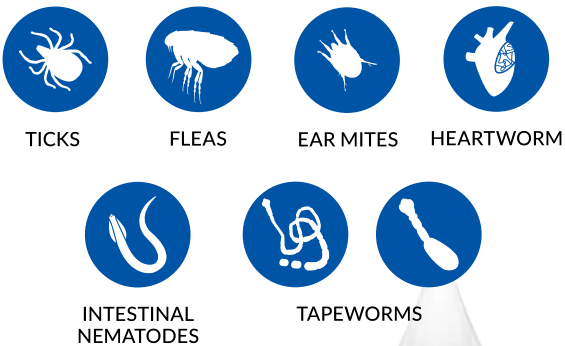


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COREY VAN'T HAAFF  
EDITOR

## » TO THE EDITOR

Letters from members are welcome. They may be edited for length and clarity. Email us at [wcveditor@gmail.com](mailto:wcveditor@gmail.com).

## » ON THE COVER

Photo by  
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I had the pleasure of hosting the Executive Director of the BC Veterinary Technologists Association at my home in October. She was in town for business, all the way from Williams Lake, and my team was in my kitchen stuffing the delegate bags for the SBCV Fall Conference. We enjoyed Maple Ridge's finest Chinese food (I was thrilled to introduce them to the beef chow fun) and talked into the evening regarding some opportunities the BCVTA was considering and the SBCV's ability to support and encourage those activities.

It is important, as we navigate our way through these trying times of labour market shortages and the incredible stress veterinary professionals have suffered due to a few vocal, unhappy, and social media-connected individuals, that we take time to connect with others traveling along a shared path. I'm keen to do what I can to support the RVTs and their desire for change so that they, in turn, can continue to support our veterinarians and the clients and patients who rely on entire veterinary teams.

It occurs to me that despite the unnecessary criticisms displayed in some social media posts, the reality is the individuals in the veterinary profession continue to be some of the most caring, most knowledgeable, and most willing to help of any profession, in my experience. I see it personally, not just from the reception team and animal health staff and the veterinarians at the practice I attend, but also from the specialists and their teams that my girls need to visit with some regularity. With each connection, I'm reminded of the care these folks have for animals and for animal health and welfare, and the sheer skill each staff member exhibits. Such dedication cannot be overshadowed by the stress of staff shortages and social media.

These are the things that we need to spotlight and celebrate—this dedication and genuine desire to help. It's why the editorial team introduced both the technologist column to highlight the skill of these individuals, and A Night in Emerg, to shine a very bright spotlight on many of the behind-the-scenes folks doing work we may otherwise not know about. They all save animals' lives and improve animals' health at each step.

I've been working with veterinarians in some way since 1998; I remain in awe of every single thing they do. I hope you will share that awe after reading this issue. **WCV**

Email: [wcveditor@gmail.com](mailto:wcveditor@gmail.com)



SBCV Past President Dr. Sarah Armstrong presents the SBCV Leadership Award to Madeleine Flahr with WCV Dean Dr. Gillian Muir looking on.



SBCV Past President Dr. Sarah Armstrong presents the SBCV Scholarship to Katriana Van Woudenberg with WCV Dean Dr. Gillian Muir looking on.

# SAVE THE DATES

## SBCV 2024 SPRING SUNDAY CE SESSIONS

Sunday, April 7,  
Sunday, April 14,  
Sunday, April 28, and  
Sunday, May 5, 2024

## SBCV 2024 FALL CONFERENCE & TRADE SHOW

Friday, November 15 - Sunday, November 17, 2024

## WCV DECEMBER 2023

WEST COAST VETERINARIAN ISSUE 53

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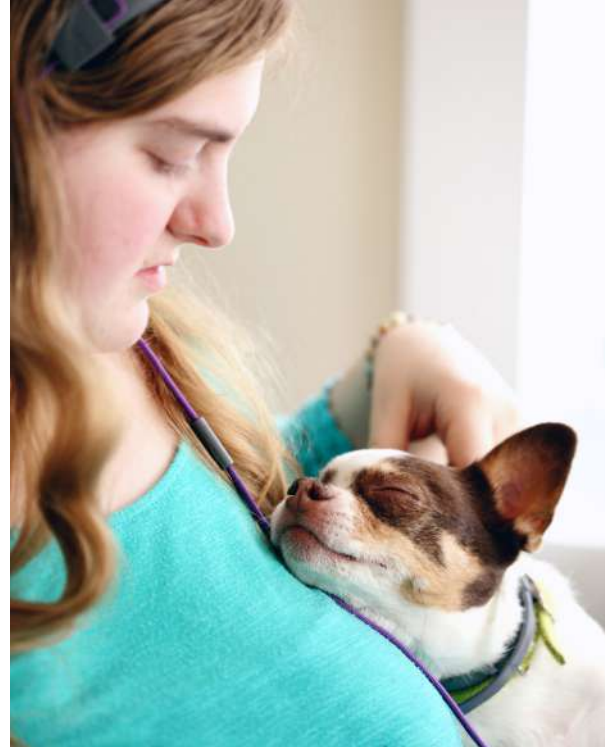
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As a provincial organization, the SBCV recognizes that its members occupy the traditional and unceded lands and territories of BC's Indigenous Peoples and asks its members to reflect on the places where they reside and work.

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**ASHLEE ALBRIGHT, BSc (Honours), DVM**, is the co-owner of PenVet Mobile Veterinary Services, which provides in-home end-of-life care for pets in the Greater Victoria Region. She has worked as a companion animal veterinarian in BC, from Prince George to the South Coast. Dr. Albright keeps busy juggling the daily needs of motherhood, business ownership, marriage, and personal wellbeing, all without taking herself too seriously.

**ANGELICA (ANGIE) BEBEL, DVM, DAVDC**, began her veterinary career as a Registered Animal Health Technician. In 2014, she graduated from the Western College of Veterinary Medicine program and practiced general medicine in Vancouver before starting a residency in veterinary dentistry at West Coast Veterinary Dental Services, Vancouver, where she continued working after receiving Diplomate status in July 2018 with the American Veterinary Dental College. Her interests include feline oral medicine and surgery and promoting oral health in companion animals. When not at work, Angie enjoys time with her family and one-eyed cat, Spook.

**DEVIN BURTON, RVT**, was born and raised on Vancouver Island. In 2016, she attended North Island College's Animal Care Aide certificate program. She then enrolled in the Animal Health Distance Education Program through Thompson Rivers University, studying to become a Registered Veterinary Technologist while working at a general practice. Having hands-on experience while studying helped build her skills and confirmed her passion for this field. Graduating in December 2020, she then moved from general practice to emergency medicine at Central Island Veterinary Emergency Hospital. She wrote her VTNE and became an RVT in March 2021. Since graduating, she has been employed at CIVEH. When she is not working, she can be found hiking, snowshoeing, knitting, or playing with her pack of dogs and her cat.

**SARAH HERRING, BSc**, joined the BC SPCA in summer 2022. After a 15-year career as an urban and rural planner, Sarah shifted her focus to a second career in communications and government relations. As a Government Relations Officer, Sarah combines her experience in communications, stakeholder engagement, and project management with a long history in animal welfare volunteering. Sarah coordinates and fosters the BC SPCA's relationships with local, provincial, and federal government officials and staff.

**TRACY HEYLAND, RVT, PCC**, is the owner of Creative Vision and Movement. She is a professional co-active coach, leader, and trainer, and brings more than 25 years of experience in creating high-performing teams and businesses in VetMed. With a work history in primary care, emergency medicine, teaching, pharmaceutical sales, and operations management, Tracy gives back to the veterinary community by sitting on the Douglas College Veterinary Technology PAC and BCVTA committees, and volunteering with CAAT. In her after-work hours, Tracy can be found on her bike, in a kayak, or on a mountain, enjoying the best of the West Coast lifestyle.

**EMILY JOHNSON, RVT**, graduated from the Veterinary Technology program at the University of Guelph, Ridgetown College, in 1999. Throughout her career as an RVT, she has worked in many aspects of veterinary medicine including ophthalmology, surgery, and internal medicine. Emily joined the Vancouver Aquarium RVT team in 2010, becoming the Assistant Manager in 2017. She is a proud member of the VAMMR Sea Lion Disentanglement Team.

**ELAINE KLEMMENSEN, DVM, CEC**, is always up for an adventure, especially if it involves people, pets, and creating connections in veterinary medicine. A self-described nerd about leadership, workplace culture, and organizational development, Dr. Klemmensen is a Certified Executive Coach holding the ACC-level certification with the International Coaching Federation as well as a certificate in Values-Based Leadership. Dedicated to helping veterinarians and their teams move from surviving to thriving, she founded Evolve Leadership Coaching and Consulting and is currently studying visual facilitation and strategic thinking. She lives in the beautiful West Kootenays and when not learning something new is most likely exploring the world by bicycle with her husband, Rob.

**LEXIS LY, BSc**, is a PhD student at the University of British Columbia's Animal Welfare Program. Her research focuses on how we can use data to understand animal sheltering from a One Welfare perspective. She aims to map the system of pet rehoming to reduce intake of animals to shelters in the U.S. and Canada.

**DEBBIE PARSONS, DVM, DACVIM (LAIM)**, graduated from the Ontario Veterinary College and, after a short period in general private practice, she returned to complete a large animal surgical and medical internship. She completed a large animal internal medicine residency at Texas A&M University and achieved board certification in large animal internal medicine. She returned to join the faculty at the Ontario Veterinary College, followed by a short period as a clinical assistant professor at Kansas State University. She then headed into private referral practice in Idaho. Returning to Canada, she settled in BC, where she now has an ambulatory equine internal medicine practice serving the Lower Mainland and Vancouver Island.

**ALEXANDRA PROTOPOPOVA, PhD, CAAB**, has a doctorate in behaviour analysis from the University of Florida. She is an assistant professor in the University of British Columbia's Animal Welfare Program. Her research focuses on the physiology and behaviour of -- and welfare problems experienced by -- companion animals housed in shelters and pet homes.

**HANNAH WEITZENFELD, DVM**, is the senior manager of animal health for the BC SPCA. After graduating from Ontario Veterinary College, she made British Columbia her home and has been practising locally for over a decade. In her role at BC SPCA, Dr. Weitzenfeld provides animal health support, training, and oversight to all sheltering branches, including population-level shelter medicine and sanitation protocols. Her role also involves liaising with local veterinarians and connecting with the veterinary community.

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It is time to say goodbye. After assessing my personal life, work, health, and age, I have made the difficult decision to retire.

I have enjoyed my many years as a practicing veterinarian, helping the clients that entrust us to help and care for their animals. I will miss interacting with the clients and wonderful staff at our clinic. I consider the people I have worked with to be close friends, as we have been through a lot together. It's nice to know that I will still be able to talk with them to reminisce over the myriad of stories we accumulated over the years.

Part of that reminiscence is recognizing how much veterinary medicine has changed. When I was in my last year at WCV, one of the radiologists was doing a year-long sabbatical to learn about a new imaging structure that was just being developed that would not use radiation and could be very helpful with soft tissue showing more than X-rays. Ultrasound has made tremendous improvements for animal care and is very important for our patients.

Is innovation going to stop? Highly unlikely as more and more people are raising pets and larger animals and are keen to protect their health and extend their lives.

I want to thank you for all your support and ideas in helping the SBCV to improve. The Society has grown considerably, thanks to the hard work of the Board that has spent many years working with our staff. We continuously strive to listen to ideas on how we can best help our members.

Corey Van't Haaff has been at the helm of the Society for many years and has been instrumental in our

improvement and success. She works endlessly to help not just our members, but all BC veterinarians. Corey has a deep respect for veterinarians, and she was a vital voice convincing the government to increase the number of funded seats for students at WCV. Thanks to her dedication and hard work, 40, not 20, BC students now have the opportunity to get their veterinary education at WCV.

I have enjoyed my years helping build our Society. I am sorry to be leaving, but my wife, Jan, will be happy to have more help around the farm and we will both appreciate the opportunity to spend more time with our two grandsons who live on the mainland.

I could go on longer, but I mainly wanted to say thank you, and to tell you to enjoy your work. Despite it being stressful at times, it can also be very rewarding and fun.

Take care and enjoy the winter holidays. I am sending you my best wishes for an enjoyable and comfortable New Year. [WCV](#)



CVMA President Trevor Lawson (far right) enjoys dinner with the 2023/2024 SBCV Board of Directors (from left to right) Cori Stephen, Al Longair, Ko Arman, Sarah Armstrong, Marco Veenis, Fraser Davidson, and Tanya Neville. Missing: Rob Ashburner and Zoe Noble.



Al Longair, BSc, DVM, graduated from the Western College of Veterinary Medicine in 1977. After graduation, he joined a mixed animal practice in Duncan, focusing on small animal practice from 1981 on. He has been involved with the BC SPCA for over 20 years, serving as the president of his local branch for 12 years and on the provincial management committee for 10 years, with four years as president. In the early 1990s, he served as chair of the CVMA Animal Welfare Committee. He lives on a small acreage with his wife, horses, dogs, and cats and coaches youth soccer in his spare time.



As your CVMA President, it's my pleasure to update you on some of the CVMA's recent initiatives.

### 2024 CVMA AWARDS – NOMINATE A DESERVING COLLEAGUE

Each year, through its awards program, the CVMA proudly recognizes individuals and teams who have demonstrated significant accomplishments, exemplary leadership, and tireless commitment to Canada's veterinary community. 2024 award nominations are accepted from November 1, 2023, until January 31, 2024. Award recipients receive complimentary registration to the 2024 CVMA Convention in Calgary, Alberta. Award nominees (excluding those nominated for Honourary Membership) must be current CVMA members; however, they can be nominated by non-members. Find more information on the Awards Page of [canadianveterinarians.net](#).

### WEBINAR RECORDING: FIRST, DO NO HARM: VETERINARY WORKPLACE RESPONSE TO SUICIDE

In honour of World Suicide Prevention Day, Dr. Marie Holowaychuk shares tools and strategies for helping the veterinary community grieve, cope, and memorialize employees, while reducing the risk to vulnerable team members. Visit the Veterinary Health and Wellness section of [canadianveterinarians.net](#) to watch all recorded webinars.

### WORKFORCE SHORTAGE SOCIAL MEDIA AWARENESS CAMPAIGN

The CVMA has created a social media campaign to help inform the public about the ongoing veterinary workforce shortage. Campaign messages are shared across Facebook, X (formerly Twitter), Instagram, and LinkedIn. Facebook messages are boosted as part of a campaign to increase reach to individuals beyond our usual audiences. The paid portion of the campaign began in April 2023 and will continue until April 2024. The messages highlight the workforce shortage and call for patience and kindness towards our veterinary professionals as they try their best to serve their clients and care for all types of animals across the country. Keep an eye out for our posts which use the hashtag [#vetcareeverywhere](#). Visit the Veterinary Workforce Shortage page of our website for updates.

### THE CVMA AND SUSTAINABILITY

The CVMA is committed to sustainability and minimizing the impact of our carbon and overall footprint. Every attendee at this year's annual convention in Quebec City received a 75th anniversary reusable water bottle along with a branded QR code as part of the Fill it Forward campaign. Read more about the CVMA's sustainability contributions under the Latest News section of [canadianveterinarians.net](#). [WCV](#)



Dr. Trevor Lawson grew up on a small farm in rural New Brunswick and was heavily influenced by his grandfather, a lifelong small farmer. Dr. Lawson pursued studies at the Nova Scotia Agricultural College, later known as the Dalhousie Agricultural Campus, the University of Manitoba, and the Atlantic Veterinary College where he earned a DVM in 2004. Dr. Lawson is a committed volunteer and has served with the Nova Scotia Veterinary Medical Association (NSVMA), becoming President in 2010, and has served with the CVMA since 2010 on the Animal Welfare Committee, National Issues Committee, Council, and Executive to present. He is a firm believer that the CVMA, as a national and international leader for our profession, must serve all members of our profession no matter their area of practice. Trevor, his wife Tammy, and children Isaac and Charlotte are proud to call Nova Scotia home.



# BYLAWS AND VETERINARY STUDENTS WORKING IN BC: INSIGHTS, IMPACTS, AND IDEAS

BY FIONA LAMB, BSc

**V**eterinary students seeking work positions to apply the knowledge acquired during the school year often consider many factors, such as mentorship, proximity to family, housing options, relationships, or connections. However, the provincial bylaws describing the scope of practice for student veterinary members in BC is a common factor that contributes to this decision-making process for veterinary students.

For some context, the scope of practice of student veterinary members differs in BC compared to other Western provinces represented at the Western College of Veterinary Medicine (WCVM). According to the bylaws of the College of Veterinarians of British Columbia (CVBC), veterinary students are defined as a “student currently enrolled in the final year of a program of veterinary studies in an accredited school of veterinary medicine.” This means that the surgical procedures listed under section 264(2) in the bylaws only apply to third-year students entering their fourth year. In Manitoba and Saskatchewan, a veterinary student is more broadly defined as being “enrolled in a professional degree program in veterinary medicine at a veterinary college or university [that is] accredited jointly by the Canadian Veterinary Medical Association and the American Veterinary Medical Association.” As a result, veterinary students from any year are permitted equal opportunity to various surgical procedures if direct supervision is provided.

The bylaws describing the scope of practice for veterinary students in the following three Western provincial regulatory bodies represented at the Western College of Veterinary Medicine: CVBC (Part 4: Ethics and Standards (2017). 259, 264(2). <https://www.cvbc.ca/wp-content/uploads/2020/03/Part-4-Ethics-and-Standards.pdf>), SVMA (19.1. <https://svma.sk.ca/wp-content/uploads/2019/12/>

“I DIDN'T REALIZE THAT VETERINARY STUDENTS IN BC WERE RESTRICTED COMPARED TO OTHER PROVINCES UNTIL I STARTED AT THE WCVM...”

BYLAWS-2017-FINAL-COPY-FOR-WEBSITE.pdf), and MVMA (2-10-6. <https://www.mvma.ca/wp-content/uploads/2023/02/General-By-Law-No.-1-Approved-January-20-2023.pdf>).

For some WCVM students working in BC, these interprovincial differences in bylaws have affected their perceived level of surgical proficiency and preparedness. For example, Eden Rowe (class of 2025, Nanaimo) – a third-year student – found that she was not allowed to participate in many surgeries, while working in the summer, due to the regulations restricting what BC students can do. For some, these limitations have added to a level of anxiety associated with an appreciable difference in the practical experience obtained within BC compared to other veterinary students working in different Western provinces. However, the scope of practice for veterinary students is often multifactorial and other aspects, such as the individual practice caseload, may change the capacity for veterinary clinics to accommodate veterinary students performing certain procedures. While working in a clinic this summer in Vancouver as an incoming fourth-year student, Imara Beattie (class of 2024, Vancouver) found that there was a significant surgery backlog due to the pandemic and the veterinary shortage and the clinic was not easily able to involve a student surgeon who would be slower at the procedures while still requiring another veterinarian to be available as a supervisor.

However, the bylaws still appear to be a contributing factor in the decision for veterinary students to return to BC to work during the summer. Despite recently entering the veterinary profession, even first-year BC veterinary students are already considering the implications of the bylaws on available summer opportunities within BC.



PHOTO BY DAVE STROEBE

BC students (41) from the class of 2027 at their White Coat ceremony.

“I didn't realize that veterinary students in BC were restricted compared to other provinces until I started at the WCVM,” said Saylor Martian (class of 2027, Vernon). “As a BC resident, I was hoping to return to my hometown and work at a veterinary practice there during the summer months. However, since learning that my ability to practice and hone my skills obtained throughout the school year will be restricted, I think that it will be more beneficial for me in the long-term to remain in Saskatchewan during the summer.”

Although some veterinary students from BC may intend to return to work within their home communities for various personal reasons (e.g., making connections for future employment, family, pets, relationships, housing options, etc.), the decision to alternatively work in a different province underscores the value students place in breadth of the opportunities available within a clinic. Balancing between conflicting personal and career-related priorities creates challenges, so “it is important that students coming back to BC for various reasons also feel [that] they can get valuable veterinary-related jobs with good experience,” said Kirianne Ashley (class of 2024, Yellowknife).

Given that 40 per cent of graduates have been reported to return to practices where they had previously established a relationship (e.g., completed a summer student work experience), encouraging veterinary students to return to BC to work during the summer through access to comparable learning opportunities may be valuable to recruit and retain future veterinarians within the province.

With the veterinary shortage continuing to affect the capacity to meet the needs of clients and their pets, there is significant interest from veterinary students from BC to facilitate the ability for students to return to their home communities.

Emily Gatto (class of 2024, Nanaimo) suggested that further specification within the bylaws of allowed procedures corresponding to veterinary students in their first and second year may provide additional guidance to veterinary clinics in deciding the type of experience that can be made available to students. Leila Weinerman (class of 2025, Victoria) felt that providing “access to clear information about what clinical skills and general theory have been covered in the curriculum each year” may be useful for veterinary practices in contextualizing the competencies completed by veterinary students.

Most of all, veterinary students are hopeful for the inclusivity of all year levels when defining the scope of practice for students.

To save space, the references for this article are made available on the Chapter's website at [www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine](http://www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine). [WCV](#)



Fiona Lamb, BSc, WCVM class of 2025, is from Coquitlam, BC. Before coming to WCVM, she earned her BSc in Biology at the University of British Columbia including a thesis that focused on human relationships with companion animals. After graduation, she looks forward to exploring her interests in small animal medicine, outreach work, and public health.



# REGISTERED VETERINARY TECHNOLOGISTS WHAT WE ARE AND WHY IT MATTERS – PART 2

BY AMBER GREGG, RVT

In our last column, we explored the Registered Veterinary Technologist (RVT) title and discussed why using the correct title is important for professional acknowledgement and public recognition. Now, I'll explore the difference between "technologist" and "technician".

An internet search of the two terms produces definitions that focus on specialization. A technician develops a set of skills focused on practical knowledge in an industry, such as theatre, or a type of technology, such as laboratory technology.

A technologist develops the same practical skills as a technician, and also learns the theoretical knowledge behind them. For example, a theatre technician would learn the skills to apply lighting as directed, and a theatre technologist would also learn the difference between electronic and digital lighting and why one might be better than the other in certain situations.

The way it was once explained to me is that a technician knows how, and a technologist knows why. While this makes sense, it doesn't explain why some provinces call their RVTs technicians and others call them technologists. A graduate of a program in BC becomes a technologist, and a graduate in Quebec becomes a technician, even though any CVMA-accredited veterinary technology program must meet the same standard.

According to Applied Science Technologists and Technicians of BC (ASTTBC), a Certified Technician is a graduate of an accredited one-year certificate program (or equivalent on-the-job training). An Applied Science Technologist is a graduate of an accredited two-year diploma program (or equivalent on-the-job training). Using this definition, the term "technologist" certainly applies to RVTs.

Some would simply state that students of animal health technology or veterinary technology programs are technologists. I think we can all agree that a professional title should not be decided based on a Google search or varied definitions of unofficial terms. Because, as discussed in Part 1 of this column, Registered Veterinary Technologist is the protected title for the profession in BC, it is the correct title by which to refer to a member of the BCVTA. Other terms used to describe an individual who performs tasks typically delegated to an RVT are misleading.

(On a related note, your valuable trained-on-the-job staff are allowed to use the term "veterinary technician." To refer to them as "registered," however, is inaccurate and may create misunderstanding for some individuals.)

BCVTA members are permitted to input their own title in the association database and many RVTs use "technician." I also see and hear "technician" in daily communications with RVTs, students, practice owners, and managers. I urge you, as veterinarians, mentors, and practice owners, to refer to your RVTs as "technologists," and I encourage RVTs to do the same when introducing themselves.

As we move toward regulation of RVTs, the BCVTA will continue to clarify the appropriate use of titles, why this is important, and how best to utilize the professionals in your practice to improve patient outcomes, build positive team culture, and provide long-lasting, meaningful care. **WCV**



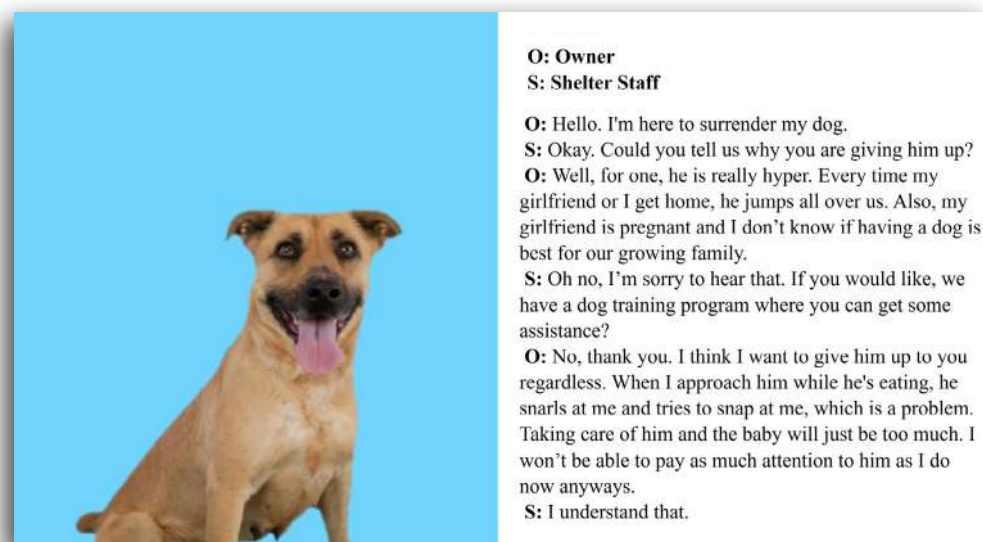
Amber Gregg, RVT, is the executive director and past president of the BCVTA. She graduated from the Thompson Rivers University veterinary technology program in 2007 and spent eight years in mixed animal practice before gaining experience in not-for-profit management. She joined the BCVTA board of directors as vice-president in 2020 and served a one-year term as president in 2021 before being appointed to the executive director position in 2022. Amber is grateful for everyone who made the BCVTA the strong and healthy organization it is today, and she is proud to work with the board of directors and members of the BCVTA to continue to advance the veterinary technology profession.

“...A PROFESSIONAL  
TITLE SHOULD NOT  
BE DECIDED BASED  
ON A GOOGLE  
SEARCH...”



# UNDERSTANDING ANIMAL SHELTER DATA

BY LEXIS LY, BSc, AND ALEXANDRA PROTOPOPOVA, PhD, CAAB



**FIGURE 1:** Example of a photo and scenario shown to animal shelter staff in an online experiment. The four reasons used to construct the scenario were "Too Active," "New Baby/Divorce/Relation Split/etc.," "Growls/Lunges/Claws/Hisses at People," and "No Time for Pet/Pet Is Too Much Responsibility."

PHOTO SUPPLIED BY FIONA LAMB

In Canada, owner relinquishment makes up 20–30 per cent of animal shelter intake. Animal shelters aim to provide community support services to pet owners to reduce the need for relinquishment. Often, organizations will use data collected at intake to understand community and needs. Indeed, there are many reasons why animals come to be relinquished to shelters. Having a better understanding of the reasons for relinquishment is vital to understanding how to support pet owners and reduce intake to shelters.

Data collected historically has been challenged as unreliable for several reasons, most notable being that many shelter data collection software only allow staff to select a single reason for relinquishment, even though the reasons for relinquishment are typically multifaceted.

As well, previous studies suggested that shelter staff may report reasons for relinquishment differently from pet owners' narratives due to differing understanding of term definitions or internal bias of shelter staff. Others have suggested that owners may choose not to disclose the full details about their animal's circumstances upon surrender, particularly regarding behavioral issues, for fear of reducing adoptability. To test these hypotheses, we collected data from 81 shelter staff across the United States and Canada through an online experiment, where staff were asked to enter data into a hypothetical software based on four owner surrender scenarios. The scenarios described a conversation between a shelter staff member and an owner who brought their animal for surrender. Each scenario included two owner-related reasons (e.g., couldn't afford care, moving) and two animal-related reasons (e.g., destroying furniture, overly active) from the owner. An example of a scenario with the accompanied dog photo is shown in Figure 1.

After reading the scenario, staff were asked to enter data about the animal as they would in their own software for the surrender reasons, breeds (primary and secondary), and colours (primary and secondary) of the dog shown in the scenario. Although shelters typically collect a maximum of two surrender reasons, we asked shelter staff to enter and rank as many reasons as they felt contributed to the described scenario (up to a maximum of 10 reasons) to understand whether, when given the option, shelter staff would choose to enter more than two reasons. Following all four scenarios, we asked staff questions about accuracy of data collection and how they selected the primary reason.

Our results showed that data collected at the moment of surrender may be unreliable. Below are reasons why we now think that we should be more careful in analyzing animal shelter data.

1. Shelter staff agree that there are multiple reasons that contribute to surrender.

In response to Likert-scale questions, shelter staff overwhelmingly agreed that there is often more than one reason for surrender. Across all four scenarios, the mean ( $\pm$  SD) number of reasons that a single respondent indicated for a single scenario was 2.77 ( $\pm$ 1.02, range = 1–6). Across the four scenarios, the total number of unique reasons selected by respondents ranged from 12 to 16 reasons.

2. Shelter staff do not agree about the most important contributing reason(s).

For all four scenarios, the rank and frequency of selection varied among staff. For example, for the scenario in Figure 1, 74.1 per cent ( $n = 60$ ) selected "New Baby/Divorce/Relation Split/etc." as one of the contributing reasons for surrender and 43.2 per cent ( $n = 35$ ) selected "Growls/Lunges/Claws/Hisses at People."

3. Shelter staff do not visually identify breed and colour consistently.

The number of unique breeds selected by participants ranged from 22 to 32 across scenarios. Generally, the breed of the dog and whether that breed was the primary or secondary breed was not agreed upon. For the dog in Figure 1, a total of 32 unique breeds were selected among the primary and secondary breeds (primary  $n = 23$ , secondary  $n = 21$ ).

The number of unique colours selected by participants ranged from 4 to 25. While the colour of dogs that had solid black coats were more agreed upon by staff, colours of dogs with intermediate shades or multiple colours were not inputted consistently among staff. For the dog in Figure 1, a total of 16 unique colours were selected among the primary and secondary colour (primary  $n = 9$ , secondary  $n = 9$ ).

4. Staff have various methods of selecting the primary reason.

When asked how staff select the primary reason for surrender, the most common theme was selecting the "most influential" or "best" reason, often without further explanation. While 26.3 per cent of staff suggested that they would input whatever the owner selected or told them directly, 18.8 per cent discussed selecting the underlying or true issue, which was often not the first reason the owner said.

5. Staff-owner interactions influence data collection.

Most, but not all, participants agreed that often, owners will not report the true underlying reason for surrender. As well, when asked to describe a typical owner surrender situation, 12.5 per cent of respondents described instances where they felt that pet owners withheld information about their circumstances in order to justify surrender or to improve the outcome for their animal.

Through surveying animal shelter and rescue staff in the USA and Canada, we found that, when staff are given the same complex fictional owner-surrender narratives, agreement about the number of surrender reasons, and importance of reasons, as well as breed, and colour, was low. To improve the consistency of data both within organizations and across organizations, animal shelter professionals and researchers should consider creating operational definitions and deciding on a common method to select the reasons for surrender. Consolidation of categories within these variables may also improve consistency, but further research may be needed to maintain a balance between ease of data collection and usefulness for both research and decision-making in shelters. Finally, improving staff-owner relations through actions such as encouraging honesty from pet owners and reducing negative attitudes toward shelters may improve data collection at intake. Given the growing applications for data in shelters, ensuring the reliability of these data within and across organizations is an important part of caring for animals, both in shelters and in communities.

To save space, the recommended reading for this article is made available on the Chapter's website at [www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine](http://www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine). **WCV**

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# A NIGHT IN EMERG

## THE ROLE OF THE TRIAGE TECHNICIAN

BY DEVIN BURTON, RVT

**A**nthing can happen. That's the lesson I've learned from working at Central Island Veterinary Emergency Hospital. Rarely can you predict it, and you can always try your best to prepare for it. But for me, by expecting anything, I can do anything.

I can calculate fentanyl, ketamine, and lidocaine doses for a GDV, have two intravenous catheter setups, be prepared for shock boluses, and have the anesthetic systems ready within minutes of the confirmation. This occurred in an alarming way on Christmas Eve of 2022. I was working the night shift and took my dogs out for a pee during a spare moment around 1 a.m. My older boy was acting weird and posturing. I felt his abdomen and immediately knew what was happening. I ran him inside, got a radiograph, and confirmed the worst – a massive bloat. We trocharized him and I put two catheters in immediately. Within half an hour we were going into surgery, and I was monitoring my own dog for an anesthetic.

Throughout the entire shift after that moment, I went into autopilot. Emergencies don't have room for emotion, and you must act and make decisions and perform duties to get through them. The entire time, I was still able to crack jokes and get through as normally as I could, as if my dog wasn't the patient. While it all eventually hit me after I clocked out from my shift, during the entire anesthetic, I was just doing my job as normal. Just using my skills and knowledge to treat a GDV and care for a patient.

As an emergency hospital, we work on a triage basis. Our doctors and technicians are paired up for day shifts, night shifts, and swing shifts to maximize our team's efficiency. Our day/night teams will typically focus their attention on hospitalized patients and treat incoming patients as necessary. The 'swing' team is scheduled from mid-morning to late evening to bridge the triage gap, treating outpatients and admitting them to the hospital as necessary. As we are the only emergency hospital on Vancouver Island north of Langford, we see cases from all over the island: from the tip of the North Island and surrounding Gulf Islands to as far south as Duncan and Mill Bay. On busy weekends and holidays, we will often have a second triage technician to assist with overwhelming caseloads.

My job, as a triage technician, is to triage all

incoming patients while monitoring and managing treatments for hospitalized patients. Every patient who walks through our front doors requires an initial assessment of vital parameters so they can be triaged accordingly. Having the initial assessment done promptly helps me organize case priority for doctors and ensures critical patients are seen and treated as quickly as possible. The assessment involves observing mentation and physical condition of the animal. Weight, heart rate, respiratory rate and effort, mucous membranes colours and capillary refill time, and temperature are documented. If, upon assessment, I believe the patient to be in pain, I will bring this to the attention of the veterinarian who, with client consent, can authorize administration of pain control to provide the patient comfort and relief until further diagnostics and treatments can be performed.

Our hospital has been able to improve this process by creating a generalized consent form which includes consent for hospitalization and treatments that may require sedation or anesthetic. Additionally, our client care team has been trained to gather consent for stabilization of critical patients so we can begin treating these patients immediately. Sometimes this will be done while the doctor is performing their initial assessment, or while they are busy with another critical patient. For example, I may ask for consent to perform radiographs for suspected GDV cases or provide pain relief to those who need it.

If a patient is stable with a low triage issue, such as ear infection or minor laceration, diarrhea, or lameness, they may wait in the hospital treatment room for several hours. While they will be monitored (in that we can see them frequently and they are being let outside or cleaned up after and observed by several staff members), they will not be examined by a veterinarian for several hours. In some cases, we can get an owner to put a deposit down and leave their pet overnight to receive care with the understanding that they will answer their phone. This is ideal for wound repairs that can be done at 3 a.m. when the hospital has settled down, or for patients that need diagnostics when we simply don't yet have the time.

A dog with a laceration will not come before an actively seizing dog with compost toxicity. A referral from a general practice for a patient with pancreatitis that requires overnight monitoring will not take precedence over the hit-by-car cat with a pneumothorax and hemoabdomen with an order to perform CPR on a night shift. I cannot necessarily get to triaging the lineup of patients that have arrived since a more urgent case crashed. On a night shift, the cases can pile up faster than we can treat them. I have had to place intravenous catheters between anaesthetic monitoring rounds, or have the veterinarian monitor while I administer diazepam to a seizing animal.

There are a couple of presenting issues that will always take priority above all else. A blocked cat, a seizing dog, a compost toxicity, and a GDV to name a few. Many of the drugs used to treat these emergencies I can calculate in my head, which has simply come with repetition and having seen them enough times that I can prepare for it. Often, while looking at the incoming patient board, I try to guess what the case will be and set up appropriately. Is the dog that collapsed having a syncope episode, is he or she in heart failure, or is it a THC toxicity? Is the unproductive retching dog a kennel cough rather than a GDV? Is the vocalizing and open mouth breathing cat blocked, or is it a saddle thrombus? Is the massive

PHOTO BY JAKE ESPEDIDO/UNSPLASH.COM



laceration described by the client truly massive, or more of an abrasion? It's a never-ending guessing game that only gets more exciting every shift. With each new case that presents, you get a little better at determining the problem and reading the symptoms to improve your skills and hone your abilities to treat patients.

In order to do my job well, I rely heavily on efficient communication between all team members. Luckily, I work with some incredible veterinarians and RVTs. I have a great relationship with our doctors, which allows me to feel comfortable advocating for my patients and offering suggestions based on my experience. A solid foundation of trust goes a long way in improving overall patient and client care.

I often work night shift, and while day shift can be chaotic at times, it is no comparison to being the overnight RVT. With only one doctor, RVT, assistant, and receptionist, the overnight team will, at times, be overwhelmed with more than ten hospitalized patients, and a line-up of patients to triage. Somehow, through all the madness, we always seem to make it through until the morning crew relieves us. Though many nights are chaotic, on our slower nights, we enjoy taking the time to bond with our patients and reminisce on our favourite moments.

Having worked many night shifts, I have learned to develop my skills to work independently without an assistant to restrain for me. For example, I now exclusively sedate cats alone using a burrito and straddle method. I've placed intravenous catheters in angry Chihuahuas using a muzzle, a towel, neck wrap and hemostats to hold the burrito in place, and a tourniquet. Becoming independent and resourceful has been essential in my continued enjoyment and survival in emergency medicine.

My introduction to veterinary medicine began at a general practice clinic, where I worked through the Thompson Rivers Distance RVT program, which I finished at Central Island Veterinary Emergency Clinic. When I transitioned to emergency medicine, I was introduced to a whole new world of veterinary medicine. I am grateful for my experience in general practice. Looking back, there were many things I wish I knew that would have improved the referral process, for both the client/patient and veterinary professionals involved, some of which are outlined below.

Referrals are stressful for all parties involved, but they can be handled smoothly. There are a few things to mention to practices referring patients to emergency centres that benefit both parties.

First, sending a complete medical history along with all diagnostics makes a huge difference in expediting a care plan. Ideally, information regarding dosing times for medications and treatments is also included.

Second, setting reasonable expectations for clients is beneficial. Countless times we have had referral patients arrive at our

hospital, and our doctors end up being the first to discuss quality of life when the prognosis is poor. Having these conversations prior to sending patients our way helps clients manage expectations and, if humane euthanasia is elected at that time, this can be done in a familiar setting.

Third, following the referral protocol as outlined by your local emergency centre is also beneficial for all parties. At our hospital, the first step is filling out our referral forms and submitting medical records. After that, the attending veterinarian will review the case and provide an estimate for the referring veterinarian to discuss with the client. After that discussion, the client can make an informed decision on whether they will pursue treatment at our hospital, or if other treatment options should be discussed.

Finally, letting us know when we should expect the patient to arrive at our hospital gives the team time to prepare. This is especially important for critical cases requiring immediate intervention.

When these steps are followed, it allows me and the rest of our team to do our best work, with as few hiccups as possible.

Some night shifts, I may get some down time to have a snack and watch some Continuing Education. Others, I don't have a second to breathe between the chaos. The chaos is never-ending, and night shifts bring out the most of it.

Ultimately, I think that is what keeps me in emergency medicine: that chaos, the variety, and the need to be prepared for anything. Staying on my toes has been my key to success in this job. I am constantly learning new things and evolving my skill set. I don't think I could ever get bored in this job. **WCV**

**“...WHILE DAY SHIFT CAN BE CHAOTIC AT TIMES, IT IS NO COMPARISON TO BEING THE OVERNIGHT RVT.”**



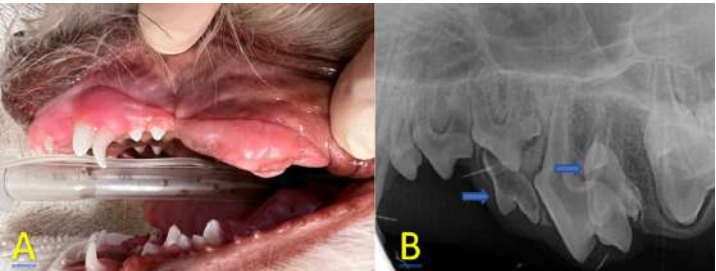
West Coast Veterinarian’s “A Year in the Life” is a four-part column written by one veterinary specialist about one topic that has four distinct life phases. Through the course of the year, each instalment highlights how this topic affects animals at a certain life stage and what veterinarians should know about how to treat it. This year’s focus is canine and feline dentistry.

# A YEAR IN THE LIFE – DENTISTRY CANINE AND FELINE DENTISTRY

BY ANGIE BEBEL, DVM, DAVDC



**FIGURE 1:** Seven-month-old miniature Poodle presented for evaluation of their occlusion. (A) An awake oral examination found a persistent left maxillary deciduous first incisor (701) and the adult left maxillary first incisor (201) was missing. (B) Radiographs found an abnormally shaped and impacted 201 (blue circle).



**FIGURE 2:** (A) Six-month-old Shih Tzu presented with several adult teeth missing with generalized, thickened overlying gingiva. (B) Intra-oral radiographs found, in addition to the thickened, overlying gingiva, areas with thickened overlying bone over the impacted adult teeth. Radiographs also showed the following deciduous teeth were impacted: left maxillary third and fourth premolars (blue arrows).



**FIGURE 3:** Three-year-old Labrador retriever presented with a missing left mandibular first premolar (305). Intra-oral radiographs show the impacted 305 and the formation of a dentigerous cyst (blue circle).

### JUVENILE DENTISTRY

Regardless of life stage, a thorough oral examination is vital in identifying various dental and oral pathology. Once identified, it is important to treat these abnormalities to prevent more serious complications and to alleviate pain and suffering. This article will review some of the more common dental and oral problems that can occur from six months to the first two years of life.

### NORMAL ADULT DENTITION

By six months of age, the process of exfoliation of the deciduous teeth and eruption of permanent teeth should be complete. Adult canine patients have 42 teeth. In the maxillary quadrants this includes three incisors, one canine and four premolars, two molars. The mandibular quadrants have three incisors, one canine, four premolars and three molars. Feline patients have 30 teeth. In the maxillary quadrants this includes three incisors, one canine and three premolars and one molar. The mandibular quadrants should have three incisors, one canine, two premolars and one molar.

### DELAYED TOOTH ERUPTION

By six-to-seven months of age, all permanent teeth should be erupted. In some cases, permanent teeth may fail to erupt. If a tooth is noted to be missing during an oral examination, dental radiographs should be obtained to confirm the presence or absence of the adult tooth. Impacted teeth are those that are in an abnormal position (i.e.: laying sideways) or have a physical resistance to eruption (i.e.: excessive thickening of overlying gingiva and/or bone). Treatment options for these teeth will depend on the presentation and may include extraction or an operculectomy (removal of the overlying thickened gingiva and/or bone) (Figure 1, Figure 2) The early detection of impacted teeth is important to prevent the potential formation of a dentigerous cyst (Figure 3).

### PERSISTENT DECIDUOUS TEETH

A deciduous tooth still present in the mouth at the time of eruption of the succeeding permanent tooth is defined as ‘persistent’. These teeth should be extracted as soon as possible, as they are likely to interfere with the normal eruption of the permanent tooth, resulting in a dental

malocclusion. In addition, this can lead to crowding and encourage the rapid accumulation of plaque and debris predisposing the area to periodontal disease (Figure 4). In patients that have had deciduous teeth extracted, the adult teeth may continue to erupt abnormally. Therefore, these patients should have follow-up examinations to monitor the eruption of the permanent dentition.

Persistent deciduous teeth are more common in small-breed dogs but are also seen in cats and larger dogs. This is most commonly seen with canine teeth but can be seen with other teeth, including incisors and premolars (Figure 4).

### FRACTURED TEETH

Dental fractures result in pulp chamber exposure to the oral bacteria. This results in inflammation and infection with subsequent pulp necrosis and pain. Treatment is necessary, and options include extraction or endodontic treatment. Depending on the age of the patient and length of time a tooth has been fractured, endodontic treatment including a vital pulp therapy or a root canal therapy may be recommended (Figure 5). A vital pulp therapy is an alternative treatment to extraction or root canal therapy that aims to preserve and maintain tooth structure. It is best performed if the trauma is recent (less than 72 hours), allowing the tooth to remain alive and mature. This is particularly important in patients with immature teeth (i.e.: teeth with open root apices). The procedure involves removal of a small amount of pulp tissue, followed by the placement of a pulp dressing and restoration (Figure 6).

### ENAMEL HYPOPLASIA

Enamel hypoplasia results in thin or absent enamel because of incomplete or defective development of enamel. It can be caused by local, systemic, or hereditary factors that occur during the development of enamel during odontogenesis. As a result, the enamel that forms is more porous and weak. As this enamel is lost, due to abrasive forces, there are areas of exposed dentin with rough margins and brown discoloration (Figure 7). These discolorations are due to staining of the exposed dentin and production of tertiary dentin. Dentin contains tubules, which contain small extensions of nerves from the pulp chamber. As a result, this condition can cause increased tooth sensitivity or discomfort. Furthermore, pulp inflammation is possible, as bacteria gain access to the pulp chamber through these exposed dentin tubules.

Local factors causing this include inflammation, infection, or trauma to a deciduous tooth, while systemic factors can include viral infections that result in fevers (most commonly canine distemper) or the use of specific medications, such as tetracycline antibiotics. It has been found that certain breeds, including Poodles and Samoyeds, can carry a recessive mutation causing enamel hypoplasia. Blood tests can now be performed to help identify if a patient is a carrier.

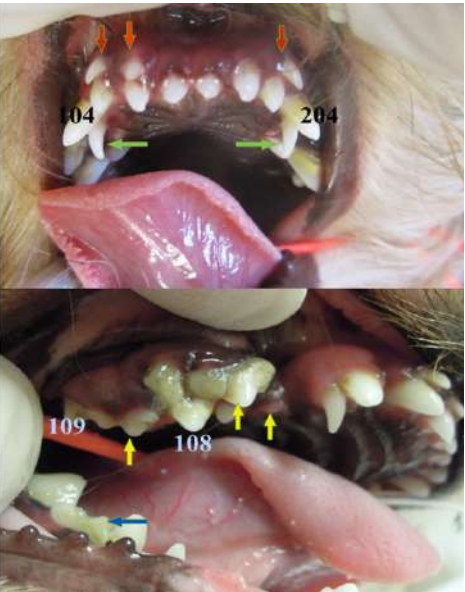
Treatment for generalized hypoplasia includes removal of all the diseased enamel/ dentin tooth structures, polishing, followed by restorations of the defects. The restorations that are placed will help to decrease tooth sensitivity associated with this condition and protect the underlying tooth structure, dentin, from exposure to the oral environment with bacteria. These patients need to be monitored and it is recommended that they receive annual oral health examinations with treatment (cleanings, restorations), as they are more prone to plaque and tartar accumulation and tooth fractures.

### MALOCCLUSION

As discussed in part one of this dental series, occlusion is the term used to describe the relationship of teeth in the same jaw as well as the relationship of teeth in opposing jaws. A malocclusion refers to the abnormal alignment of the maxillary and mandibular teeth.

Malocclusions lead to abnormal contacts between teeth and between teeth and oral soft tissue. This can lead to oral pain, tooth fractures, pulp necrosis, tooth and root resorption, bone loss, and oronasal fistula formation and therefore treatment is needed. Treatment for malocclusions includes extraction and endodontic therapy, such as vital pulp therapy, for linguoverged mandibular canines.

“...IT IS IMPORTANT TO TREAT THESE ABNORMALITIES TO PREVENT MORE SERIOUS COMPLICATIONS AND TO ALLEVIATE PAIN AND SUFFERING.”



**FIGURE 4:** Two-year-old Yorkshire Terrier with several persistent deciduous teeth including (A) maxillary incisors, 502, 503, 603 (red arrows), left and right maxillary canines 504, 604 (green arrows). (B) right maxillary second, third, and fourth premolars 506, 507, 508 (yellow arrows), right mandibular fourth premolar 808 (blue arrow). The presence of these teeth has contributed to marked plaque and calculus accumulation.



**FIGURE 5:** Root canal therapy of the right maxillary canine (104) in a patient following a complicated crown fracture with pulp exposure.

ALL PHOTOS BY ANGIE BEBEL





**FIGURE 6:** Intra-oral radiographs of the left and right mandibular canines (304, 404) treated with vital pulp therapy.



**FIGURE 7:** 1.5-year-old Terrier cross with generalized enamel hypoplasia affecting all teeth. These teeth have loss of enamel, pitting and discoloration.



**FIGURE 8:** Erupting adult dentition in a six-month-old dog. The right mandibular canine (404) is linguoverte. In addition, there are several persistent deciduous teeth.



**FIGURE 9:** Severe class 2 malocclusion in a six-month-old dog, resulting in a traumatic contact between the left mandibular canine (304) and hard palate.



**FIGURE 10:** Severe class 3 malocclusion in a two-year-old Boxer.



**FIGURE 11:** Class 4 Malocclusion (Skeletal malocclusion, maxillomandibular Asymmetry). This one-year-old Goldendoodle presented for evaluation of his occlusion and several missing teeth. This patient had a severe class 3 and class 4 malocclusion (in a side to side and dorsoventral direction).



**FIGURE 12:** Seven-month-old Himalayan with severe, generalized, juvenile hyperplastic gingivitis.

## Types of Malocclusions

### Class 1 Malocclusion (Dental Malocclusion, Neutroclusion, MAL 1)

This dental malocclusion is characterized by a normal rostrocaudal relationship of the maxillary and mandibular arcades but has one or more malpositioned teeth. Examples include linguoversion of the mandibular canine teeth (also known as base narrow) (Figure 8), mesioverted maxillary canines (also known as lanced canines), and rostral crossbite of one or more of the mandibular incisor teeth.

### Class 2 Malocclusion (Skeletal Malocclusion, Mandibular Distocclusion, MAL 2)

This symmetrical skeletal malocclusion results in an abnormal rostrocaudal relationship between the dental arches, and the mandible resides distal or caudal to its normal location in relation to the maxilla (Figure 9).

### Class 3 Malocclusion (Skeletal Malocclusion, Mandibular Mesioclusion, MAL 3)

This symmetrical skeletal malocclusion results in an abnormal rostrocaudal relationship between the dental arches, and the mandible resides mesial or rostral to its normal location in relation to the maxilla (Figure 10).

### Class 4 Malocclusion (Skeletal Malocclusion, Maxillomandibular Asymmetry, MAL 4)

There are several variations of this asymmetrical skeletal malocclusion and include malocclusions that can occur in rostrocaudal, side-to-side or dorsoventral directions (Figure 11).

## ORAL INFLAMMATORY CONDITIONS

### Feline Juvenile Hyperplastic Gingivitis

Juvenile hyperplastic gingivitis occurs after the permanent teeth have erupted between the ages of six to ten months old. On oral examination, the attached gingiva is markedly inflamed, with overgrowth which can cover the crowns of teeth, creating pseudopockets (Figure 12).

Treatment involves cleaning the teeth of affected cats every three to six months and gingivectomy of the hyperplastic gingiva. This treatment must be followed by vigorous daily home care (tooth brushing, dental wipes) to control plaque accumulation. The goal of this treatment is to help patients maintain normal gingival architecture. These patients should be closely monitored as some patients can progress to chronic oropharyngeal inflammation.

# “BY SIX-TO-SEVEN MONTHS OF AGE, ALL PERMANENT TEETH SHOULD BE ERUPTED.”

## Feline Juvenile Onset Periodontitis

Juvenile onset periodontitis usually occurs before nine months of age. Siamese, Maine Coon, and domestic shorthaired cats are predisposed. The most common presenting sign is halitosis at the time of permanent tooth eruption. An oral examination reveals marked generalized inflammation of the marginal gingiva extending to the attached gingiva. Closer examination under general anesthesia will usually reveal marked mandibular incisor mobility, as well as gingival recession, periodontal pocketing, and furcation exposure of the cheek teeth (Figure 13).

Treatment involves cleaning the teeth of affected cats and extraction of diseased teeth. These patients should be closely monitored, as some patients can progress to chronic oropharyngeal inflammation.

## ORAL TUMORS

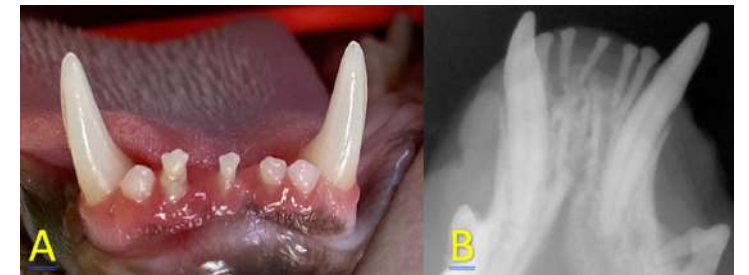
While most oral tumors more commonly occur in older patients (greater than six years of age), swellings and masses can affect patients of any age. Therefore, a thorough oral examination is important during every patient's physical examination.

## ODONTOMA

Odontomas are benign inductive tumors diagnosed in young dogs and cats, generally appearing at 6 to 18 months of age. These contain well-differentiated cells and are characterized by the simultaneous occurrence of a composite of soft and hard dental tissues (enamel, dentin, cementum, dental papilla) of both epithelial and mesenchymal origin. There are two types of odontoma described: compound and complex. An odontoma in which rudimentary tooth-like structures are present indicates advanced cellular differentiation and is referred to as a compound odontoma (Figure 14). An odontoma in which there is a disorganized accumulation of dental tissues bearing no resemblance to a tooth, is called a complex odontoma. Radiographically, complex odontomas appear as opaque amorphous masses while compound odontomas appear as numerous tiny tooth-like structures in a focal area. Marginal excision and/or curettage to remove the abnormal material may be curative.

## PAPILLARY SQUAMOUS CELL CARCINOMA OF YOUNG DOGS

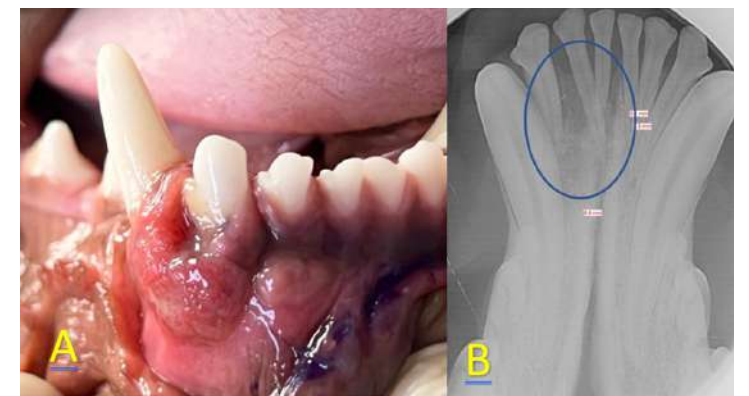
Considered a subtype of one of the more common oral tumors in dogs, squamous cell carcinoma, papillary squamous cell carcinoma occurs in young dogs and may be associated with papillomavirus. While papillary squamous cell carcinoma is considered a malignant oral tumor of very young animals (less than one year), it has also been reported in adult dogs (Figure 15). These tumors can progress rapidly, are locally aggressive, and cause extensive bone lysis. Surgical resection of the tumor is the recommended treatment. Radiation therapy is recommended where surgical treatment alone is challenging, or in cases where surgical excision is incomplete. [WCV](#)



**FIGURE 13:** Nine-month-old domestic shorthair with periodontitis. (A) Oral examination found marked gingivitis, gingival recession, and mobility of the mandibular incisors. (B) Radiographs found severe horizontal bone loss.



**FIGURE 14:** Compound odontoma: eight-month-old Labrador retriever presented for evaluation of a right oral maxillary swelling. (A) Oral examination found a large, poorly defined swelling in the right rostral maxilla with several missing adult teeth. (B) Intra-oral radiographs revealed a large cystic structure with several rudimentary tooth-like structures.



**FIGURE 15:** (A) Three-year-old Labrador retriever with an oral mass along the labial surface of the right mandibular second incisor and canine. Biopsy of this mass found a papillary squamous cell carcinoma. (B) Intra-oral radiographs found early lytic bone changes (blue circle).





“AUTISM IS A KIND OF WAY STATION ON THE ROAD FROM ANIMALS TO HUMANS, WHICH PUTS AUTISTIC PEOPLE LIKE ME IN A PERFECT POSITION TO TRANSLATE ‘ANIMAL TALK’ INTO ENGLISH.” – TEMPLE GRANDIN

# NEURODIVERSITY IN VETERINARY MEDICINE

BY ASHLEE ALBRIGHT, BSc (Honours), DVM

Veterinarians and veterinary support staff are among the most skilled humans at interpreting animal behaviours. Over the past decade, Low Stress Handling and Fear Free training has further intensified our awareness and management of fear, anxiety, and stress in animals. Although many veterinary professionals chose this path to work specifically with animals, common occupational stressors involve human-human interactions. We now know that Canadian veterinarians have higher levels of mental health comorbidities than the wider population of Canadians. Many neurodevelopmental disorders can influence mental health, however there is currently little known about the prevalence of neurodiversity among veterinary professionals.

The term neurodiversity refers to the variation of cognitive functioning and behaviour in people. Although neurodivergence does not impact intelligence, neurodivergent (ND) people often struggle with work performance and physical and mental health because more effort is required to adjust to their work environment and social interactions. Examples of neurodiversity include but are not limited to Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), Dyslexia, Dyspraxia, Dyscalculia, Dysgraphia, Tourette’s Syndrome, Obsessive Compulsive Disorder, and Synesthesia. The bulk of this article will focus on ASD and ADHD.

**AUTISM SPECTRUM DISORDER:**

Although symptoms range in severity and type between individuals, people with ASD are challenged primarily by communication/social interactions and repetitive behaviours (Table 1). ASD is often diagnosed in children under the age of three but those with mild symptoms may be diagnosed later in life or may remain undiagnosed.

**ATTENTION DEFICIT HYPERACTIVITY DISORDER:**

Fifty-to-seventy per cent of people with ASD also present with comorbid ADHD. Among mental health disorders, ADHD is one of the most neglected and misunderstood, contributing to a deficiency in appropriate diagnoses and support of those affected by ADHD. There is often a lack of public awareness and understanding, widespread social stigma, and insufficient community frameworks to detect and diagnose ADHD.

ADHD is currently diagnosed as one of three subtypes: inattentive type, hyperactive-impulsive type, and combined type (Table 2). Symptoms of ADHD centre on executive dysfunction. Executive functions help people regulate focus, concentration, emotions, impulses, and self motivation.

Although ADHD is more commonly diagnosed in boys, women and girls are less likely to be referred for diagnosis and treatment. Research suggests that this is because inattentiveness is more prominent in females, they may develop better coping strategies than males, and because anxiety and depression are common comorbidities in females leading to missed ADHD diagnoses. Could this be relevant to our profession where 62 per cent of Canadian veterinarians are female?

**THE ANIMAL CONNECTION**

Companion animals have a unique ability to act as social facilitators, connecting individuals with ASD to the people around them. People who feel chronically socially isolated and ostracized tend to have lower stress levels if an animal is present compared to a human companion. ASD children who interact with therapy dogs have lower feelings of isolation and depression and increased feelings of socialization and acceptance.

Pets help people with ADHD to keep a regular schedule of walking, feeding, and bathroom breaks. Dogs help occupy children with hyperactive ADHD by engaging them in games and movement. Dogs facilitate meeting and engaging with new people outside the home. But perhaps the most powerful part of pet ownership for an ND person who feels chronically socially isolated and criticized is having a friend and confidant that offers unconditional love.

	Symptoms of Autism Spectrum Disorder
Communication and social interactions	<ul style="list-style-type: none"><li>• Avoid eye contact</li><li>• Difficulty starting conversations</li><li>• Difficulty with facial expressions, body postures</li><li>• Low interest in sharing interests with others</li></ul>
Repetitive behaviours	<ul style="list-style-type: none"><li>• Hyper attached to objects and subjects</li><li>• Strong need for routine</li><li>• Repetitive use of phrases or words (echolalia)</li><li>• Repetitive body movements (spinning, flapping, rocking)</li></ul>

TABLE 1: Symptoms of ASD

PHOTO BY ALEXANDER GREY/PEXELS.COM



	Symptoms of ADHD
Inattentive type	<ul style="list-style-type: none"><li>• Forgetful/absentminded in daily routines</li><li>• Difficulty staying focused/on-task</li><li>• Appear to not be listening</li><li>• Tendency to lose/misplace/forget things</li><li>• Easily distracted by surroundings or thoughts</li><li>• Dislike/avoid boring or tedious tasks</li><li>• Start projects easily but difficulty achieving completion</li><li>• Prone to errors due to inattention</li><li>• Difficulty organizing/setting priorities</li></ul>
Hyperactive-impulsive type*  *Least common in women	<ul style="list-style-type: none"><li>• Squirm/fidget or feel restless</li><li>• Difficulty sitting still</li><li>• Unusually active</li><li>• Talk excessively and “info-dumping”</li><li>• Prone to interrupting or finishing people’s sentences</li><li>• Difficulty with social boundaries</li><li>• Difficulty engaging in quiet activities</li><li>• Impatient</li><li>• Blurt out answers/inappropriate comments</li></ul>
Combined type**  **Most commonly diagnosed	<ul style="list-style-type: none"><li>• Combination of six symptoms from each subtype</li></ul>

TABLE 2: Symptoms of ADHD by subtype

Could this strong ND-animal connection drive a greater interest in veterinary medicine as a career choice for ND individuals? Dr. A explains that “from a social standpoint, I’ve found non-human animals much more straightforward and enjoyable to interact with. Animals have given me meaningful connection, comfort, joy, a sense of purpose and responsibility, and, perhaps most importantly, an excuse to go sit on the floor in the corner and avoid small talk at parties!”

BEING NEURODIVERGENT IN A NEUROTYPICAL WORLD  
“I am different, not less.”– Temple Grandin

Dr. A was officially diagnosed with ADHD at 39 years of age, after years of struggling with burnout, anxiety, and depression. A newsfeed article about ADHD and perfectionism led her into a “deep dive” when, as Dr. A said, “I learned that the ADHD shoe fit, despite my presentation of it being nothing like the classic ‘little boys who can’t sit still in class’ version.” Similarly, Dr. B was over 40 years old when she was diagnosed with ADHD. She said that she “never even thought that my brain might be different from others, I just thought I was a bit lazy and a procrastinator.”

A greater societal awareness of common environmental challenges (sensory overload) and neurodivergent behavioural coping strategies (stimming, masking) could help bridge the gap between ND and neurotypical social interactions. Armed with peripheral understanding, acknowledgement, and acceptance, perhaps ND veterinarians would struggle less with workplace stressors and mental health crises.

Sensory overload, common with ADHD and ASD, is when an individual is hypersensitive to sensory information they receive, causing them to experience sounds and sensations more intensely or for longer. Bright lights, loud noises, and crowds are common environmental stimuli that contribute to feelings of overwhelm and anxiety. Experience with sensory overload offers an ND individual a unique gateway to a better understanding of pets’ experiences with fear, anxiety, and stress in certain environments and situations.

Dr. A said she is consistently challenged by sensory overload. “It makes most workplaces really draining for me. I’m particularly sensitive to and distracted by sound, and to bright or fluorescent lights, and to flickering lights or screens.” Dr. A. also struggles with task switching. Being “interrupted and/or forced to switch tasks before having been able to complete the task is excruciating. It was awful in clinical practice, and it’s still awful in government work.” Conversely, Dr. B’s workplace challenges centre around staying on tasks that she doesn’t enjoy, such as writing medical records, finishing a course, answering emails, or call backs. She says that her “brain is constantly trying to find something to get distracted with, and, in a clinic, it will absolutely find something.” She also struggles with “keeping deadlines to submit requirements for courses or speaking engagements” and dealing with frustration when something just does not work the way she thinks it should.

Stimming is a self-soothing response to social, environmental, and emotional challenges that people with ADHD and or ASD encounter. Self-stimulatory behaviours are displayed by unconsciously repeating certain sounds and movements and may interfere with daily activities. Table 3 provides examples of common stimming behaviours that are triggered by feelings of sensory overload, anxiety, boredom, and lack of focus.

Masking is when an ND individual acts in a socially acceptable way in order to fit in and form better connections with people around them. It is a learned response, sometimes performed unknowingly, to prevent their symptoms from interfering with relationships and social life. Masking involves hiding symptoms by controlling impulses, rehearsing responses, and copying behaviours of neurotypical people. The effort involved in masking can lead to burnout and feelings of isolation.

Despite the daily challenges faced by ND people living in a

Type of stimming	Stimming behaviours
Visual	<ul style="list-style-type: none"><li>• Blinking</li><li>• Drawing</li><li>• Arranging objects</li><li>• Flipping pages</li></ul>
Verbal	<ul style="list-style-type: none"><li>• Humming</li><li>• Repeating words</li><li>• Clicking tongue</li><li>• Clearing throat</li><li>• Whistling</li></ul>
Auditory	<ul style="list-style-type: none"><li>• Listening to same song repeatedly</li><li>• Mimicking noises in surroundings</li></ul>
Touch	<ul style="list-style-type: none"><li>• Playing with hair</li><li>• Grinding teeth</li><li>• Biting inside of mouth</li><li>• Picking at scabs or skin around fingernails</li><li>• Fidgeting with clothing</li><li>• Rubbing fingers together</li><li>• Clenching fists</li></ul>
Smell	<ul style="list-style-type: none"><li>• Sniffing items of a particular scent (e.g., perfume, freshly laundered clothing)</li></ul>
Vestibular	<ul style="list-style-type: none"><li>• Tiptoeing</li><li>• Rocking</li><li>• Pacing</li><li>• Head shaking</li><li>• Leg shaking</li><li>• Spinning in a circle</li></ul>

TABLE 3: Stimming behaviours

largely neurotypical world, there are many unique strengths that ND minds have to offer. People with ADHD have elevated passion and drive in their chosen fields of interest, leading to a superpower ability to hyperfocus. They are creative thinkers and have high levels of spontaneity and empathy. Impulsivity enables them to say things that other people do not have the courage to say, leading to progress and innovation. Dr. B finds that “when I do find something that interests me, there is no holding me back and I can create something amazing.” Dr. A’s superpowers include an “extraordinary ability to gain a detailed understanding, memorize, retain, and recall information, as well as make connections between things and notice patterns.” She has a keen attention to detail and drive to produce high-quality work, and is a good problem solver. She fosters a “willingness to not accept the status quo and push for change when improvements are needed.”

People with ASD are avid visual and auditory learners due to exceptional memories and a high level of attention to complex details. They often excel in math, science, music, or art. Neurodivergent sensory overload experiences facilitate a greater understanding of pets’ experiences in a stressful hospital environment. It is this author’s impression that veterinary medicine provides an excellent fit for individuals with these strengths. How then, can employers and colleagues assist a struggling ND veterinary professional to adapt and thrive?

TIPS FOR EMPLOYERS AND MANAGERS OF ND VETERINARY PROFESSIONALS  
“A good manager creates an environment that reinforces good behavior by employees. The basic principle is make the environment work for you not against you. Never leave up to willpower and self-discipline what you can do with the environment.” – Temple Grandin

Both Drs. A and B are keen to point out that more awareness, compassion, curiosity, and support from employers and colleagues can make a world of difference for an ND professional who is struggling. Some ways employers and colleagues can help include:

- Creating jobs for different kinds of workers to foster individual strengths and support weaknesses.
- Allowing flexibility for different work schedules and working from home when possible.
- Making a flexible work design (when, where, how work happens) that is welcoming.
- Prioritizing patience with ourselves and with members of the team. Everyone struggles with different things that the team may not be aware of. Model and encourage empathy with the team members.
- Addressing and correcting the misperception that ND individuals lack empathy or are not able to interact with others well.
- Providing advanced warning for changes to hospital policies and spaces.
- Using clear wording for feedback/evaluations.

Some other things for employers and colleagues of ND professionals to keep in mind include:

- ND employees may need some extra time to complete tasks, which should be accommodated, without judgment, in the schedule if possible.
- ND employees may need more time to adjust to the work environment. Collaborate to find ways to block out distractions, reduce sensory overload, and to manage social impressions.
- ND individuals will vary greatly in how they want to self-identify.
- ND veterinarians struggling with tedious tasks such as medical records may benefit from a scribe or assistant to record history and physical exam notes.

To save space, the suggested reading and resources that may help neurodiverse veterinary professionals are made available on the Chapter’s website at [www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine](http://www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine). [WCV](#)



# EQUINE INTERNAL MEDICINE FROM DIAGNOSIS TO BIOSECURITY: TACKLING EQUINE CORONAVIRUS

BY DEBBIE PARSONS, DVM, DACVIM (LAIM)



Head pressing.

**V**eterinarians are vital in safeguarding equine health, especially when dealing with contagious diseases. In recent years, equine coronavirus (ECoV) has been an emerging challenge to horse and donkey populations. While typically not life-threatening, ECoV can cause substantial disease and economic losses. The attending veterinarian is not only responsible for recognition, detection, and treatment of ECoV, but also plays a critical role in biosecurity protocols to safeguard equine health against the threat of spreading ECoV.

ECoV belongs to the Embecovirus subgenera along with bovine coronavirus (BCoV) and canine respiratory coronavirus (CCoV). ECoV primarily targets the gastrointestinal tract, particularly the jejunum and ileum, causing clinical signs such as fever, depression, anorexia, colic, and diarrhea. Although ECoV can affect horses of all ages, it is less frequently identified on breeding farms. It can occur at any time of the year, with outbreaks most commonly occurring during the colder months, similar to BCoV.

Prior to 2010 and the identification of ECoV as the novel cause of an outbreak of enteric disease in adult horses, ECoV was primarily associated with foal diarrhea. Since then, and with the development of a commercial quantitative PCR (qPCR) test allowing widespread testing, ECoV has gained more attention with an increasing prevalence and impact on equine populations.

The impact of ECoV has continued to grow. Initially, cases were sporadic and regionally limited, but recently it has become a more

widespread concern. In one study, 7.2 per cent of horses that presented with acute fever were diagnosed with ECoV. Case counts have risen across various geographic areas, including British Columbia where it is becoming a more frequent diagnosis. Equine seroprevalence studies in the United States and Israel found seropositivity rates of 9.6 per cent and 12.3 per cent respectively.

While ECoV's mortality rate is low, morbidity in naturally occurring infections varies from 10 per cent to 83 per cent, often involving a high rate of asymptomatic infections (4 per cent–83 per cent). It is possible that what appear to be isolated individual ECoV cases may be accompanied by many asymptomatic cases that remain unrecognized without testing.

Diagnosing ECoV can be challenging due to its variable and nonspecific clinical presentation. Early recognition of disease is crucial for diagnosis and containment. Unlike BCoV and CCoV, equids show no respiratory signs. The most common clinical signs include fever (>38.6 °C), lethargy, and anorexia, and can last up to seven days. Despite ECoV being an enteric virus, diarrhea and/or colic occur in less than 20 per cent of cases. Some horses may exhibit acute neurological signs, including ataxia, head pressing, circling, wandering, nystagmus, recumbency, and seizures. Neurological signs, attributed to hyperammonemia due to increased ammonia production or absorption due to gastrointestinal barrier alterations and microbiome changes, are frequently fatal.

Most ECoV cases seen by veterinarians in the field will be mild and self-limiting, requiring minimal treatment, usually limited to non-steroidal anti-inflammatory therapy. Horses with colic and/or diarrhea may require more aggressive treatment. More severe cases with enteric or systemic signs are often referred to equine hospitals where hospitalization averages five days with a 96 per cent survival rate to discharge. Colic signs may be mild to severe, with some horses requiring surgical intervention, frequently associated with secondary small or large colon impactions. While mortalities are relatively low (0–7 per cent), they can occur due to hyperammonemia (up to 27 per cent) or severe necrotizing enteritis causing severe endotoxemia, laminitis and circulatory shock. In rare cases, horses may experience sudden death, often linked to necrotizing enteritis.

An accurate and relatively timely diagnosis of ECoV is facilitated by qPCR testing on feces. Prior modalities such as electron microscopy or antigen-capture ELISA were not sensitive enough when a small amount of virus was being shed. The ECoV qPCR performed on feces is highly sensitive and specific. Blood and nasal swab qPCR testing are not recommended due to inconsistent results in natural infections. In experimental infections, positive results from nasal and whole blood tests likely reflect viremia, although environmental contamination of nasal samples cannot be excluded. Infected horses will shed the virus intermittently in their feces, and horses showing colic related to gastrointestinal stasis may not shed enough virus for a positive test; therefore, testing multiple or pooled fecal samples when ECoV is suspected is warranted.

In experimental infection, horses test qPCR positive in feces three-to-four days post-infection, and shedding continues for 12 or 14 days, peaking on days three-to-four after clinical signs develop. Therefore, in acute clinical cases, clinicians should consider testing a second sample three-to-four days after the onset of signs if the initial test is negative. In natural infections, horses typically remain qPCR-positive for three-to-nine days after onset of clinical signs, with rare cases documented to shed for nearly 100 days.

Diagnoses of ECoV infection can be challenging, especially in the

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absence of gastrointestinal signs. Ideally, when a horse exhibits non-specific signs such as fever, lethargy and anorexia, nasal secretions should be tested for common respiratory pathogens and feces for common enteric pathogens, including ECoV. Even if gastrointestinal signs are present, distinguishing severe ECoV from other enteric pathogens is difficult without more comprehensive molecular testing. Clinically and hematologically, severe ECoV is indistinguishable from enteric salmonellosis. Hematology results are nonspecific with leukopenia, neutropenia, and/or lymphopenia evident, while approximately 10 per cent have a normal hemogram. Hematologic abnormalities typically resolve in five-to-seven days in uncomplicated cases.

Serum biochemistry findings in horses with clinical ECoV infection are nonspecific and vary depending on the severity of the gastrointestinal disturbance. Severe cases can exhibit electrolyte imbalances, hypoproteinemia, azotemia, hyperglycemia, and elevated muscle and liver enzymes. If neurological signs are evident, increased serum ammonia concentrations may be detected if the horse being treated is at a center with this testing capability.

ECoV serology confirms seroconversion and can be used retrospectively to document recent infection based on paired acute and convalescent serum samples. In 2021, an ECoV ELISA assay identified ECoV as the cause of a 1998 infectious pyrexia epidemic in Iceland. If cases succumb during an outbreak of pyrexia and diarrhea, clinicians can test both gastrointestinal tissue samples and fecal samples with qPCR for ECoV and other gastrointestinal pathogens. Formalin fixed samples can be tested using immunochemistry and direct fluorescent antibody testing with BCoV reagents.

Currently there is no specific antiviral treatment for equine coronavirus. Fortunately, most clinical cases of ECoV spontaneously recover within a few days with minimal supportive treatment. Treatment protocols



## “SERUM BIOCHEMISTRY FINDINGS IN HORSES WITH CLINICAL ECoV INFECTION ARE NONSPECIFIC AND VARY DEPENDING ON THE SEVERITY OF THE GASTROINTESTINAL DISTURBANCE.”

typically includes antipyretic (e.g., dipyrone) and anti-inflammatory medications (e.g., flunixin meglumine, phenylbutazone, firocoxib, etc.) for 24-48 hours with close attention to hydration. Severe cases with colic, persistent anorexia, dehydration, and/or diarrhea should ideally be referred to a clinic for more intensive care. Additional treatments in the clinic may involve oral and/or intravenous polyionic fluids and pain management.

Antimicrobials, gastrointestinal protectants, anticoagulants, and other agents might be utilized in cases with signs of endotoxemia and/or septicemia. Should hyperammonemia develop, treatment with oral lactulose, acetic acid, neomycin sulfate, metronidazole or fecal transfaunation may be added. In some cases, nutritional support, including enteral or parenteral nutrition may be necessary.

Prompt and accurate diagnosis of ECoV is vital for appropriate treatment and to institute effective biosecurity measures to prevent further spread of the virus within a facility. ECoV primarily spreads through a fecal-oral route, with possible transmission via direct horse-to-horse contact and fomite interactions. The incubation period is relatively short at 48 to 72 hours. Robust biosecurity measures are crucial to reduce ECoV dissemination within equine premises and to minimize the risk of introducing the virus to other premises. Asymptomatic ECoV cases which are likely very common (4 per cent-83 per cent) pose challenges for prevention and outbreak control.

Timely isolation of suspected ECoV cases reduces the number of infected and affected horses and outbreak durations. This, in turn, will shorten the quarantine period required. Ideally any horse presenting with fever, anorexia, and lethargy with or without enteric signs should be isolated until ECoV, and other infectious pathogens, are ruled out. Affected horses should be isolated and herd-mates or stable-mates should be closely monitored, including twice-daily temperature assessments. Once a diagnosis of ECoV is made, full quarantine measures should be

implemented and ideally should remain in place until two-to-three weeks after clinical signs have resolved in the most recently affected horse.

Implementing strategies for isolation, equipment disinfection, and horse and manure handling should be shared with the facility management and horse owners. Effective communication with horse owners and caretakers is crucial to ensure compliance with isolation protocols. Educational resources, such as pamphlets and posters, can be distributed to horse owners to help with education and compliance. These materials should include practical guidelines on biosecurity practices and steps to take. The American Association of Equine Practitioners (AAEP) offers biosecurity guidelines and educational materials on ECoV. These resources can serve as references in educational efforts.

Biosecurity must be tailored to the specific threat and designed for the specific facility. The significance of early reporting of suspected cases to allow for a prompt diagnosis and isolation must be stressed. Customized biosecurity protocols to ECoV should include an emphasis on maintaining strict hygiene practices and use of personal protective equipment, isolating suspected cases, and disinfection of shared equipment and facilities.



Horse lying down.

The biosecurity plan should consider the following:

- **Dedicated Isolation Area:** Designate an isolation area within the clinic/farm to house suspected ECoV cases. Ensure it is well-ventilated, ideally separate from the main barn if possible, or in a low traffic area, and equipped with its own equipment and supplies. Optimize the layout of the facility to minimize the risk of disease transmission by horses and humans. Separate healthy and sick and exposed horses to prevent contact.
- **Strict Access Control:** Limit access to the isolation area to authorized personnel only. Provide appropriate personal protective equipment (PPE) and enforce its use.
- **Quarantine and Testing:** Semi-quarantine in-contact horses and test for ECoV if clinical signs develop or to identify asymptomatic cases.
- **Cleaning and Disinfection:** Establish equipment cleaning procedures, including stall cleaning, and feeding equipment on the farms and tools such as stethoscopes, etc. in the clinic. Ensure thorough cleaning and disinfection after each use. Regularly disinfect common areas, surfaces, and equipment. Use disinfectants effective against enveloped viruses like ECoV. ECoV is susceptible to many detergents and disinfectants including sodium hypochlorite, povidone iodine, 70 per cent ethanol, glutaraldehyde, quaternary ammonium compounds, phenolic compounds, formaldehyde, peroxymonosulfate, and accelerated hydrogen peroxide. ECoV can survive on surfaces for up to 120 hours and even longer in organic medium (e.g., feces, urine, etc.), so cleaning is important.

There is no specific ECoV vaccine. While horses have been shown to produce a serologic response to both killed-adjuvanted and modified-live BCoV vaccines, their efficacy in the horse remains unstudied. Therefore, the use of BCoV vaccines cannot be recommended at this time. A healthy immune system is better equipped to resist infections and is crucial for protection, therefore general health management is important to providing protection.

Equine coronavirus is a dynamic and evolving challenge for the equine healthcare professional. As veterinarians, our commitment to equine health requires us to be well-informed about this infectious agent and its impact on horses. By understanding the nature of ECoV, recognizing its clinical signs, implementing robust biosecurity measures, and educating horse owners, we can collectively work toward minimizing the spread of this virus and ensuring the well-being of our equine companions. In the face of emerging threats like equine coronavirus, veterinarians stand as the first line of defense, equipped with knowledge, compassion, and a dedication to preserving the health and vitality of the equine industry.

To save space, the end notes and references for this article are made available on the Chapter's website at [www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine](http://www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine). **WCV**



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# THE INTEGRAL ROLE OF THE RVT IN A SPECIALIZED FIELD TEAM

BY EMILY JOHNSON, RVT

“DAY TO DAY, THE ANIMAL CARE TEAM AT THE VAMMR, WHICH IS PRIMARILY COMPRISED OF RVTs, IS RESPONSIBLE FOR THE CARE OF APPROXIMATELY ONE HUNDRED MARINE MAMMAL PATIENTS EACH YEAR.”



Race Rocks RVT Sion Cahoon and Dr. Marty Haulena getting the sedatives drawn up and loading the dart.

On September 19, 2022, the Vancouver Aquarium Marine Mammal Rescue Society (VAMMR) received a report from the Eco-guardian at Race Rocks Ecological Reserve, near Victoria, BC, of a severely entangled California sea lion. It was entangled in some type of monofilament that was encircling his neck and had caused gruesome infected wounds, including two large open areas on the dorsal aspect of the neck. For a response to be initiated, there must be consecutive sighting reports documented and ideally a second target (mammal) in the same area to increase the chances of observing at least one target on response day. A second sighting of the above sea lion was reported on October 14, 2022, along with several other entangled sea lions, some with plastic packing bands and others with fishing flasher entanglements. In the early morning of October 19, 2022, the team made their way to Metchosin, on Vancouver Island, in hopes of finding the severely injured California sea lion. Unfortunately, the animal was not observed, but the team was successful in disentangling another sea lion with a plastic packing band around the neck.

Such is the work of the RVTs with specialized training and expertise which makes them a key part of the team at the VAMMR, a nonprofit organization dedicated to the welfare and conservation of marine mammals along the coast of British Columbia. With a rich history of over six decades, this centre plays a pivotal role in the protection and rehabilitation of marine mammals in distress.

Fast forward to one year later when another report was received from the Eco-guardian at Race Rocks of a California sea lion with horrific wounds from some kind of entanglement encircling the neck. At first, we did not connect the current pictures to the animal from the previous year because the wounds had advanced so significantly. There had been reports of several entangled sea lions, both Steller and California, with fishing flasher entanglements, so a response was already in the works.

RVTs were working frantically behind the scenes, documenting the sightings, and communicating with Fisheries and Oceans Canada to procure vessel support. Once the date of the response was confirmed, important work was immediately underway to pack up all the specialized gear and ensure it was all in good working order. The dart gun, darts, and sedatives were carefully inspected and packed into the rescue van. The team ensured that there was an ample supply of sedatives so if given the opportunity of conducting multiple disentanglements they would have enough supplies. Other specialized gear included a backpack anesthetic machine, portable monitoring devices, ultrasound, oxygen tanks, medic packs filled with essential medical supplies, emergency drugs, assorted sizes of endotracheal tubes, specially designed shepherd hooks to elevate sedated animals in the water, special tools to remove fishing hooks embedded in the esophagus, and marine grade PPE to ensure staff safety. This part of the mission is not the only aspect that is the sole responsibility of the RVTs. One RVT is responsible for travel coordination including transportation reservations, rendezvous locations with Fisheries and Oceans Canada personnel, communication with on-site personnel and other network members, and team communication, including an itinerary outlining the day's events.

As with all our cases, once the team was finally on the water, the RVTs became spotters, using binoculars to scan sea lion haul outs for potential tangled animals. When targets had been observed, the work did not stop. The RVTs helped the



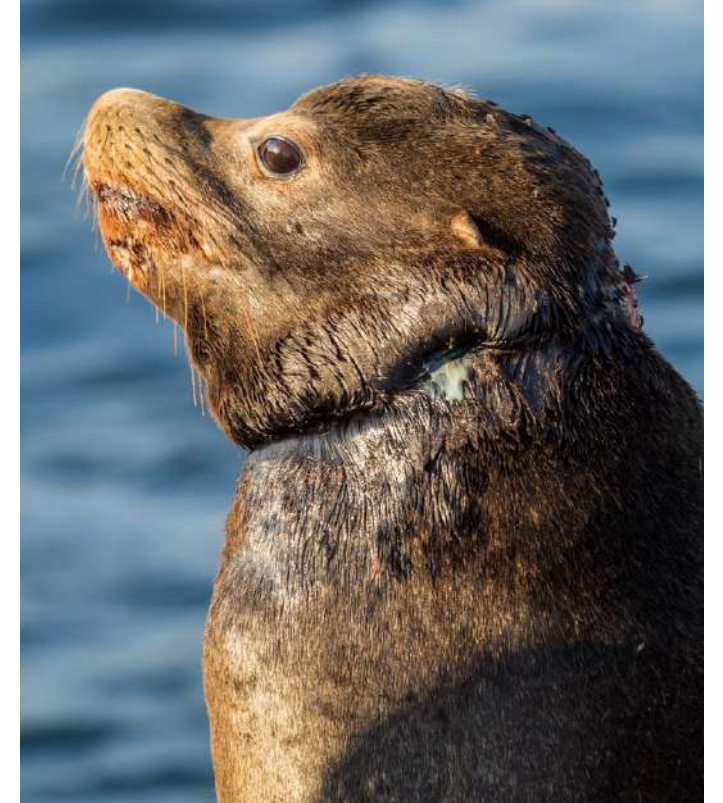
Tangled Cali Oct 2022.

veterinarian determine weight approximation, and they calculated the three-part sedative, reversals, and emergency drugs needed. Once the veterinarian darted the animal, the RVTs all had important assigned tasks and leapt into action. Depending on whether the sea lion stayed on land or went in the water, the three to four RVTs were divided between two boats or split up on land. Boat support RVTs needed to keep searching for the tangled animal in the water as the sedation took effect while the others were drawing up reversals, emergency drugs and getting flipper tags loaded into the tagging guns. Documenting events throughout the response, such as the time the dart was administered, when reversals were given, and total response time is always critical. If the animal stays on land, the team is able to take blood samples and collect other data that the veterinarian or Fisheries and Oceans Canada requests.

With the California sea lion at Race Rocks, we were lucky enough that the animal stayed on the rocks after being darted. After 12 minutes, the sedative had taken effect and one RVT accompanied the veterinarian to assist with cutting and cataloguing the monofilament entanglement, tagging the animal, administering the reversals, and, in this case, an injection of long-acting antibiotics. The sea lion recovered uneventfully, and we observed him exhibiting normal behaviour post-procedure. It was not until we were able to see the wounds up close, when the animal was fully sedated, that we were able to identify this sea lion as the same animal we had hoped to disentangle a year earlier. Although this trip was a huge success, and we were even more ecstatic to have finally gotten the opportunity to help this particular animal, it serves as a stark reminder of the massive impact a small and seemingly insignificant piece of discarded plastic can inflict.

It is estimated that there are approximately 400 entangled sea lions along the coast of British Columbia throughout the year. This important VAMMR program is not a solution to the ocean plastic problem, but it certainly makes a difference for each individual animal that we successfully disentangle. It is also a fitting example of RVTs' contributions to such a unique niche of veterinary medicine.

The dedicated team of experts and volunteers works tirelessly to rescue, rehabilitate, and release injured, stranded, or orphaned marine mammals, ranging from seals and sea lions to sea otters and



Tangled Cali side profile Oct 2022.

wayward sea turtles. Day to day, the animal care team at the VAMMR, which is primarily comprised of RVTs, is responsible for the care of approximately one hundred marine mammal patients each year. The team, whose work is predominantly remote from the veterinarians, has a wide range of responsibilities, including infield assessments and determination of rescue, and implementing individual treatment plans established by the veterinarians and critical care.

The RVTs are immersed in the entire process, from rescue to release. In addition to the RVTs' work on-site at the rescue centre, much of the VAMMR Sea Lion Disentanglement Team is comprised of RVTs. This led by Executive Director and Head Veterinarian, Martin Haulena, who specialized in zoological medicine with a subspecialty in aquatic species. The team responds to both California and Steller sea lions that are horrifically caught in ocean plastic and derelict fishing gear. Together with the support of Fisheries and Oceans Canada, the team tirelessly works to free these magnificent creatures from life-threatening entanglements that are a direct result of human impact and neglect of the marine ecosystem.

From fielding the first report, to reaching out to network members for resighting information, liaising with support partners, organization, maintenance, and expansion of equipment, travel logistics, team communication, allocating equipment between support vessels, and even ensuring there is an ample supply of team snacks, RVTs are the backbone of this team and make an important contribution towards successfully executing responses of this magnitude.

Much of the preparation and planning for these responses happens months in advance. The most important driving factor for a response is receiving sighting reports and the RVTs work year-round organizing outreach and information events highlighting how to properly make a report and what information is required. It's important to get this information to the "eyes on the water" so the outreach events target local mariners, wildlife enthusiasts, eco-tourism companies, Parks Canada, and First Nations Guardians along the BC coast. In this way, the team extends its reach and its ability to help save more marine animals.

For more information on the Marine Mammal Rescue Sea lion Disentanglement Program and how you can help, please visit [www.vammr.org](http://www.vammr.org). **WCV**



# MANAGING INCREASING COMPANION ANIMAL OVERPOPULATION USING A ONE-SHOT APPROACH

BY HANNAH WEITZENFELD, DVM



Dr. Gina Bowen (left) administers medication with assistance from staff.

**S**urgical sterilization via ovariectomy and castration has been the mainstay of fertility control of North American dogs and cats for decades. This modality is effective and permanent, though highly resource-intensive, requiring anesthesia, equipment, a licensed veterinarian with surgical training, along with additional staff and other resources.

An alternative approach gaining attention is non-surgical contraception. The use of these products can be more efficient in terms of veterinarian and staff time, and, in some cases, cost. Non-surgical contraceptives fall into several categories: immunocontraceptives, GnRH agonists and antagonists, sex steroids, gene therapy, and gonad cytotoxic drugs, also known as “chemical castration.” While there have been drugs in each of these categories approved internationally, most have had limitations that have prevented widespread use, including efficacy, cost, duration of action, method of administration, safety, or a combination of these.

## “...NON-SURGICAL STERILIZATION CAN BE A VALUABLE TOOL FOR CONTRACEPTION AND POPULATION CONTROL.”

Earlier this year, a promising study revealed that a viral-vectored gene therapy aimed at stimulating the production of anti-Müllerian hormone (AMH) can achieve enduring sterility in female cats by inhibiting ovulation through a solitary intramuscular injection. Experts suggest this could be an effective tool in feral cat population management. However, this contraceptive injection has yet to be approved or commercially produced.

A noteworthy product now accessible to veterinarians is the Deslorelin-releasing biodegradable implant called Suprelorin. Deslorelin acts as a GnRH antagonist, preventing LH secretion by downregulating GnRH receptors, thereby inhibiting testosterone production. As LH secretion is curtailed, this approach mitigates many risks associated with surgical castration. Suprelorin has been available in various countries, including Australia, the European Union, Mexico, and China, since as early as 2007. In April 2022, Virbac Animal Health received regulatory approval to introduce Suprelorin to the Canadian market, making the 4.7 mg implant available through veterinary distributors in British Columbia.

### REAL WORLD APPLICATION OF NON-SURGICAL STERILIZATION

One veterinarian, Gina Bowen, Director of Veterinary Services for the Winnipeg Humane Society, has extensive experience with Deslorelin. The Winnipeg Humane Society’s programs in remote communities provide preventative care services, including non-surgical sterilization, vaccination, and parasite control. Even before Suprelorin’s recent commercial availability in Canada, Dr. Bowen had been importing Deslorelin through an Emergency Drug Release (EDR) to sterilize animals in remote Manitoba communities.

“We realized that in remote communities in Manitoba, sterilization implants sometimes make more sense than surgery for dogs. Some reasons for this are weather-related. In winter when you’re dealing with a dog population that spends most of their time outside, it’s not ideal to be putting them under anesthesia, shaving them and putting them back outside afterwards... It may also be a resource issue—we may not have access to a facility to do surgery in a community. Implants also require fewer staff and much less equipment.”

Although Suprelorin is only labelled for sexually mature male dogs in Canada, it has been shown to be effective in both male and female dogs as well as cats, including prepubertal animals. “We are now accepted within our EDR that we can administer it to male and female dogs that are over four months of age and over ten kilograms”, says Bowen. Due to its significantly longer duration of action (one-to-two years), the program utilizes the larger 9.4 mg size of Suprelorin, which still requires an EDR.

Suprelorin implants have been hugely beneficial as a sterilization option for dogs in remote Manitoba communities, allowing a safe population control option in communities where this would otherwise not have been possible. By using this non-invasive and transparent form of sterilization, this program allows veterinarians to build trust with clients who may have had limited exposure to veterinarians, anesthesia, and surgery in animals. Identification of animals is by collar and rabies tag for WHS implants; microchip identification can also be used.

Deslorelin reduces the size of reproductive structures, reducing risks and time required if subsequent surgery is performed. “We did our first surgery clinic in God’s Lake last month. It’s a community we have visited three other times and have only offered implants there in the past. We were actually doing surgery on dogs that had been implanted previously. The testicles on adult dogs are the size of cat testicles, and big females have a cat-sized uterus. It’s really interesting because the drug is actually being absorbed and doing something reproductively to the animal, the animals are still healthy, and those owners are now repeat customers—we already implanted their dog and now they’re bringing them back to have permanent sterilization done,” notes Bowen.

Whether in a non-profit or private practice setting, non-surgical sterilization can be a valuable tool for contraception and population control. It offers advantages for animals with high anesthetic or surgical risk and can be a temporary fertility control option for breeder clients. Dr. Bowen emphasizes that the Winnipeg Humane Society will continue to offer a combination of implants and surgical sterilization, recognizing the importance of both methods in their program.

Faced with the challenge of increasing animal populations and limited resources, innovative approaches like high-quality-high-volume spay-neuter practices and non-surgical contraception can play a vital role in providing accessible veterinary care, managing companion animal populations, and promoting animal welfare.

“We were recently in Poplar River; it’s a community we have been to several times. It expands our reach by having the option to offer surgical sterilization or an implant to their dog. We had several people who were just wanting vaccines or not sure if they wanted their dog to have puppies at some point, or just coming to check out what we’re doing. The implant is a really great option for pet owners to provide temporary sterilization [WHS product is labelled for one year but may last for two years depending on the type of patient] and open up the conversation about surgery.”

As veterinarians and animal welfare organizations explore these options, we aim to make informed decisions that benefit animals and communities alike. Through awareness and education, these solutions have the potential to alleviate challenges faced by veterinarians, pet owners, and animal shelters across Canada.

To save space, the end notes and references for this article are made available on the Chapter’s website at [www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine](http://www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine). **WCV**



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# CHANGING GEARS:

## HOW I WENT FROM OFFICE ATTIRE TO SCRUBS FOR THE CANADIAN ANIMAL ASSISTANCE TEAM

BY TRACY HEYLAND, RVT

I traded in my stethoscope for a laptop long ago, but I am a tech-at-heart, so I was excited to don scrubs again and be hands-on with the animals. After more than two decades of wanting to volunteer with the Canadian Animal Assistance Team (<https://www.caat-canada.org>), or CAAT, as we affectionately call it, my goal became a reality. Though wobbly at first, I slipped back quickly into assessing vitals, giving injections, recovering animals, and having caring conversations with clients. Good thing too, as the CAAT team spayed and neutered 112 dogs and cats in the Burns Lake community in just four days.

Altering pets forever alters communities for the better. Spay and neuter projects change the trajectories of pet overpopulations, stray animal numbers, and community kills. Most importantly, the CAAT projects empower owners to provide the kind of veterinary care they truly want to give. In turn, this enhances the bond between people and pets, creating better health outcomes for the animals and for their caregivers.

There are numerous positive mental health impacts of spay and neuter programs on pets and their guardians. One family arriving at our clinic shared their stories of pain and joy about their dog. During the pandemic, the family's child was struggling with depression. Seeking ways to support the child and knowing an animal could make a world of difference, they welcomed a new dog into their family. Their teenager named the dog Hope, a name truly fitting for the pup. Hope helped rebuild the confidence of the young person, who started socializing more again, which led to them landing a new job. With this renewed community connection, this teen's mental health improved.

This heart-touching story, like many others, was gifted to me in a quiet corner of the local arena—transformed into a MASH-style hospital for the four days of community work. Stories like this made the 12-hour days more than worthwhile, and fueled all of us to keep going even when it was past the hours of a typical workday.

CAAT makes a difference in the lives of animals and their owners in remote and under-served communities. The non-profit charity achieves this by providing access to veterinary care right in the community, one such community having been Burns Lake. Here, CAAT started a project in 2011 with five separate visits to spay and neuter more than 700 dogs and cats. By 2016, CAAT had transformed the community's overwhelming and rapidly growing dog and cat population to one that was much more sustainable. The Lakes Animal Friendship Society (LAFS), a critical community partner, developed a SpayAid program which continues to provide funding for low-income families to assist in the vital surgeries being done, typically through the Burns Lake Veterinary Clinic, Bulkley River Veterinary Clinic, and the Vet-to-Pet Mobile service. However, with the changes and pressures of the pandemic, the community began to struggle to keep the cat and dog population under control with local resources.

Having partnered with LAFS in the past, CAAT was happy to return when asked to help with the post-pandemic issues. The goals included performing more than 100 spays and neuters through the SpayAid program, reducing the backlog of surgeries that could not be performed relying solely on local resources, and helping to keep the local pet population growth under control as the community recovered.



Kaitlyn Samut, RVT, giving a recovering dog some extra love and attention.



A dog named Hope and her family.



Tracy Heyland, RVT, recovering a cat and a dog.



Lisa Choi working in the recovery unit with two newly-spayed puppies.

This partnership with LAFS allowed the Canadian Animal Assistance Team to step in with the specific solutions of spay and neuter surgeries, vaccinations of the core antigens, including rabies, and single-dose parasite control. Generous donations of supplies and medications from animal hospitals and veterinary pharmaceutical companies help make these interventions possible.

Many Burns Lake CAAT volunteers spoke about how volunteering for these long days decreased their professional stress and feelings of burnout, allowing them to return to their jobs feeling reinvigorated about their work and commitment to their teams, clients, and patients. It seems curious how 12-hour days of a fast-paced, MASH-style medicine can make one feel refreshed and renewed, yet that is exactly what it does. Many volunteers credit their longevity in veterinary medicine to their volunteer work with CAAT. It begs the question of “why?”.



Dr. Chris Heagle spaying one of the 44 cats at Burns Lake CAAT project.



Burns Lake surgical unit set-up.

CAAT volunteers say they get more than they give when volunteering. They meet local people and their pets, hear their stories, and are uplifted by them. They are also uplifted by their like-minded, positive, and compassionate teammates. Camaraderie is quickly built, and lifetime friendships are formed. The community's response is overwhelmingly positive, and volunteers cannot help but feel deeply appreciated. People are happy to have access to veterinary care for their pets when they could not have accessed it otherwise. They are eager to share their stories and their love for their pets is evident in how they interact with them at our MASH-style hospital. Many locals offer to volunteer to help in whatever way they can to show their appreciation for what we are doing.

One story stands out to me—the story of Rocky, a very matted poodle cross being doted on by an older pet owner. He had been driving his truck down the highway and saw a white flurry of hair and legs, dodging traffic, running alongside the road. It was painfully obvious that inevitably the dog would end up a casualty without an intervention. So, he determinedly followed the dog in his truck and on foot, trying to gain trust so he could safely capture the scared dog. While pursuing the dog, he saw the dog run underneath a semi-truck and pop out between both back wheels unscathed. He knew in that moment, he had to get him as he had just witnessed nothing short of a miracle. Soon enough, ‘Rocky’ was in his truck, and then later with us at the CAAT spay and neuter clinic. This man saw an animal in need and decided to add him to his furry family, now numbering three dogs. It is these kinds of compassionate stories that tug on my heart strings and have me knowing that the work we do in a community is making a difference.

Even with my rusty skills, I was put to work and found a place to contribute, learning or relearning on the spot, adding new skills, and tapping into experiences gathered over my lifetime to help in this community project. We had new grads, close-to-retiring individuals, DVMs, RVTs, technicians, assistants, and receptionists. We all had something to contribute and the directors of CAAT carefully placed individuals for the best success, ensuring that a strong on-boarding and relevant training and information are provided.

Hope, something I didn't realize I was missing, has been renewed with my recent CAAT experience. Hope for the future of the animals we have committed to being guardians for. Hope for the families that love their pets. Hope for a kinder, gentler future where animals can live better lives. I am also hopeful that I can continue donating time to CAAT and be selected again for a future CAAT trip, wherever I am needed, and however I can make a difference. I hope that you may feel inspired to help too. **WCV**

### WHAT CAN YOU DO?

- Volunteer for an animal health project, as a DVM, an RVT, or as an assistant—or for a CAAT committee
- Become a member of CAAT, donate any travel points, or make a financial donation (<https://www.caat-canada.org>)
- Follow Facebook and Instagram pages, resharing community projects and fundraising events <https://www.facebook.com/CAAT.Canada/?> and [https://www.instagram.com/caat\\_canada/?hl=en](https://www.instagram.com/caat_canada/?hl=en)



# DITCH THE RESOLUTION AND START A REVOLUTION!

BY ELAINE KLEMMENSEN DVM, CEC, VISUAL FACILITATOR

As the days shorten and I sit in anticipation of another Kootenay winter, I realize this article will arrive at a time when many of us are entering the holiday vortex. A vortex of “excess” followed by a cloud of “regret” and, shortly thereafter, a season of “resolutions”.

Honestly, a part of me loves the holiday vortex. I find myself enjoying the rollercoaster of debauchery – the over eating, over drinking, and over socializing that arrives in mid-December. As a result, I am destined to accept the regret that will follow in early January. However, after years of making and breaking many well-intentioned New Year’s resolutions, I am ready to embrace a radical approach in 2024.

Let me explain.

More than 80 per cent of people who make these early January vows fail to keep them. January 17 is officially dubbed DRD or Ditch Resolutions Day as, apparently, it only takes 16 days for most of us to give up on our resolutions and return to old habits. As a Certified Executive Coach, I could fill this article with tips on how to make new habits stick but that isn’t my goal.

If you are looking to build better habits, check out “Atomic Habits” by James Clear, a self-help book designed to do just that. We are a society searching for self-improvement, financial independence, individual fulfillment, and personal happiness. An estimated 15,000 self-help books are published in the US each year. Self-help books are one of the fastest-growing non-fiction book categories in North America and, similar to our New Year’s resolutions, they are all about the individual: my goals, my wants, my needs. I want to lose weight—well, I did eat ALL the cookies in December. I want to run a marathon—I can dream, can’t I? This year I will finally write my book—perhaps the most realistic on my list.

Do you see the pattern here? “I” am the star of this show. “So what?” you may ask. Isn’t it healthy to strive, to have goals and be focused on personal fulfillment? Yes, and I can’t help but feel there is something bigger at stake which is worth considering as we step into 2024.

While listening to an interview with Simon Sinek, his statement, “There is an entire section in the bookstore

called ‘Self-Help’, but there is no section called ‘Help Others’”, got me thinking about my life, my career, and my happiness. I discovered a curious paradox. In my quest for personal wellbeing—which is about me, the individual—the times when I felt the most engaged, fulfilled, and happy, have been when I was helping others—which is all about we, or the collective.

Good old Simon might be onto something. Perhaps the most meaningful and effective way to help ourselves is through helping others. Might there be a key to our wellbeing and flourishing that lies hidden in the concept of community? I wonder if we have become so focused on advancing ourselves that we have forgotten how to be in community—to help others and, in turn, be willing to ask for help. In a world where the ability to connect with others is at our fingertips and everything we need can be delivered to our door, we are recognizing that this connectivity might be driving polarization, disconnection, and loneliness.

As humans we need each other, and a growing body of research shows the dramatic effects of social isolation on our mental and physical wellbeing. Too much focus on individualism can, at best, make us unaware and, at worst, indifferent to the suffering of others. Disconnection goes against our human nature and our need to create meaningful ties with others and find a sense of belonging. A place where we can be seen, heard, and understood. A coming home so to speak, where we can make sense of our lives, find our purpose, and engage in meaningful pursuits with the support of our people.

This brings me to the idea of moving beyond the traditional “me” based New Year’s resolution to resolutions focused on the “we”. What if, in 2024, we leaned into resolutions that nurture community? What might this look like and, more importantly, what impact might it have on those around us and on our collective wellbeing? Here are ten ideas to get you started as we find our way back to each other and being in community in 2024.

## COMMIT TO TALK LESS, LISTEN MORE, AND ASK BETTER QUESTIONS.

As you engage with others, start paying attention to how well you listen. Are you genuinely interested in what they have to say or are you just pretending to listen so you can talk? Are you willing to set aside your ego, suspend judgement, and get curious, or are you waiting for an opportunity to share your opinion, thoughts, or knowledge? If you are like me and want to build community in 2024, remember the acronym W.A.I.T – Why am I talking? Followed closely

*“Ours is not the task of fixing the entire world all at once, but of stretching out to mend the part of the world that is within our reach. Any small, calm thing that one soul can do to help another soul, to assist some portion of this poor suffering world, will help immensely.” – Clarissa Pinkola Estes*

by W.A.I.S.T – Why am I still talking?

## MAKE CIVILITY AND MANNERS COOL AGAIN.

In her book “Mastering Civility: A Manifesto for the Workplace”, Christine Porath says bad behaviour, rudeness, and downright incivility are on the rise in our workplaces. She makes a strong argument in favour of bringing back respect, kindness, and politeness as tools to build not only a safer, healthier workplace, but also a more successful and profitable business. Seeking others’ input, listening to their ideas, sharing credit, and saying thank you go a long way toward building strong, connected communities and cost us nothing. Because civility spreads as insidiously as incivility, why not choose manners and respect in 2024?

## REACH OUT AND CONNECT.

Consider the last time you felt truly seen. Maybe it was a simple comment from a colleague upon your return to work after a holiday “It is so great to have you back, I’ve missed your smile”. Maybe a thoughtful gift that made you feel appreciated. Maybe it was the knowing glance from a friend that led to an eruption of laughter over a shared understanding. Look for opportunities to make others feel seen, heard, and understood in 2024. The effort you make will be well worth it in the good vibes that return to you.

## WHAT GETS YOU FIRED UP? NOW DO SOMETHING ABOUT IT!

What makes you angry? What is the one thing your friends are tired of hearing you complain about—it’s hard to pick just one isn’t it? Figure it out and do something about it by putting your passion towards positive change. Be a rebel, rally the troops, and start a revolution. Make 2024 the year to stop complaining, and instead “be the change you want to see in the world”.

## COMMIT TO LEARNING ABOUT SOMETHING THAT MAKES YOU UNCOMFORTABLE.

Challenge yourself to read a book, take a course, or engage in a conversation that moves you out of your comfort zone.

## TALK TO STRANGERS (OR AT LEAST SMILE AT THEM).

Sure, those initial moments when you make eye contact with a stranger can feel awkward and vulnerable, but that’s normal. What’s the harm in smiling and saying hello? Or even better, ask

“What is the best thing that happened to you today?”

## HELP OTHERS BY VOLUNTEERING.

Volunteering is the ultimate way to find your mojo, build community, and make a positive difference in the world. Consider your strengths, skills, passions, and interests and look for opportunities to be of service in a way that is unique to you.

## BECOME A MENTOR.

Mentorship is an intentional way to create relationships that have a lasting positive impact on another person, as well as the future of our profession. Be a source of inspiration and hope.

## SCHEDULE RANDOM ACTS OF KINDNESS.

Look for opportunities to do something good for someone else, with no expectation of anything in return. It doesn’t need to be big or splashy, just thoughtful and kind.

## STOP TAKING IT ALL SO SERIOUSLY AND COMMIT TO HAVING MORE FUN.

Catherine Price, speaker, author, and science journalist, believes most people underestimate how important fun is to their resilience, happiness, and physical and mental health. She says that fun emerges when we experience the intersection of three psychological states: playfulness, flow, and connection. On their own, these three states improve our mood and mental health, but when experienced together, something magical happens.

A revolution does not have to be loud, messy, or radical. It can start with a quiet commitment to doing things differently and a belief that change is possible. A revolution asks us to step outside ourselves and focus on others. We need to find our way back to connecting, caring for each other, and being in community. In 2024, I invite you to ditch the resolution and, instead, start a revolution!

To save space, the end notes and references for this article are made available on the Chapter’s website at [www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine](http://www.canadianveterinarians.net/sbcv/west-coast-veterinarian-magazine). **WCV**



# LOCAL GOVERNMENT BYLAWS ARE FOR THE BIRDS (AND THE CATS, DOGS, CHICKENS, AND VETS TOO)

BY SARAH HERRING, BSc

**V**eterinarians and animal welfare organizations are impacted by societal trends, public attitudes, and varying legal frameworks for animals. From trendy or banned pet breeds to viral social media content (remember ‘scaring your cat with a cucumber’ or all the “cute” photos of toddlers sitting on dogs?), the decisions and actions of individuals and governments affect how veterinary professionals operate.

Veterinary professionals are familiar with provincial and federal laws that regulate animals, but local animal bylaws may be less well known. Local governments are the legal authorities to regulate several issues which directly impact animal welfare; such regulations may also affect what your clients need and want, and impact the animals you see in your daily practice.

Local bylaws, which can be beneficial to animals and owners, can set out basic requirements for the level of veterinary care that animals in the community should receive, or provide more detailed guidance on the animals that may be kept in the community. For exotic animals, bylaws can go above and beyond the provincial Controlled Alien Species Regulation and prohibit the breeding, display, sale, and keeping of all exotic animals and their hybrids. For veterinarians and their staff working in communities that have such specific bylaws, said bylaws could prevent you from receiving requests to care for animals with challenging welfare needs like servals or wolf-dog hybrids.

Veterinarians in urban and suburban communities that permit backyard hens may receive unexpected requests to care for chickens, including euthanizing prohibited roosters or chickens who are no longer laying, dealing with the risks of Highly Pathogenic Avian Influenza, and treating poor health outcomes from well-intentioned but inexperienced owners.

Policies and bylaws from other municipalities can even have a direct impact on veterinary

**“POLICIES AND BYLAWS FROM OTHER MUNICIPALITIES CAN EVEN HAVE A DIRECT IMPACT ON VETERINARY PRACTICES.”**

practices. This summer, the BC SPCA asked the District of Squamish to take action on sporting pigeons. Several municipalities in the Lower Mainland have banned keeping pigeons and/or permitting them to stray, perch, roost, or rest on any property other than that on which their loft is located. This appears to have resulted in pigeon sport competitors travelling to Squamish with their pigeons. When the birds are lost during competitions, which, according to the Canadian Racing Pigeon Union, happens very frequently (CRPU, 2022), concerned residents have been reporting and delivering them to local veterinarians and the BC SPCA’s Sea-to-Sky Community Animal Centre for care.

Aside from concerns about the bird’s welfare during competitions and when left to fend for themselves in the wild, it is challenging for veterinary practices to care for domestic pigeons, given their need for large housing spaces and HPAI biosecurity protocols, both of which may prevent them from being accepted into care in the first place. If the pigeons’ owners cannot be found, there are limited opportunities to rehome these birds.

Dr. Tom Honey from the Garibaldi Veterinary Hospital has also voiced concerns about the use of pigeons at events such as weddings and memorial services in Squamish. After treating, and ultimately having to euthanize a pigeon with a fractured wing that was injured and abandoned during a celebration, he agrees that “bylaws outlawing this practice would be helpful”.

Becoming familiar with the animal-related bylaws in your community and neighbouring areas can help you anticipate and prepare for cases you may be asked to treat and identify issues where you feel policy change is required.

Changing any law can be a lengthy process. A benefit of local government bylaws is that they are adopted locally and thus can be changed, in many cases, locally. Members of City or First Nations Councils and Regional District Boards may be your neighbours or your clients, so local governments are typically the easiest level of government to access. For help drafting animal bylaws, community members, governments, and veterinary professionals can use the BC SPCA’s bylaw search tool (<https://spca.bc.ca/animalbylaws>) to find existing BC bylaws that they might consider adopting or adapting. **WCV**

PHOTO BY JACLOUDL/PXABAY.COM

CUT OUT THIS PAGE IF YOU WISH TO SAVE IT.

## HOW TO ASSESS YOUR RISK(Y) IN BUSINESS

BY SCOTT NICOLL, BA, MA, LLB AND GURINDER CHEEMA, BA, LLB

**T**his column will take a slightly different approach than our usual discussions. I want to explore with you why a rudimentary knowledge of the law as it pertains to business owners is important. It is not important that you have a lawyer’s understanding of how the various parts of the law affect you and your practice. It is important, however, that you have a businessperson’s understanding of how it affects you. The two, as I know you will not be surprised to learn, are different.

A lawyer advises clients of the options available to them. A comprehensive and sometimes detailed understanding of the nuances is necessary to accomplish that. A lawyer also needs experience dealing with different scenarios, at least ideally. Experience, in fact, is often the much more valuable asset when advising business clients. Many scenarios that clients bring a business lawyer do not require uniquely creative solutions. Most require a core understanding of the principles of business law sufficient to affect an expedient solution for your client. An expedient solution, however, can be elusive without the more difficult to obtain asset of experience. The role of your business lawyer is to combine that core understanding of the law with their experience. You do not need Clarence Darrow for every legal problem . . . few, if any, issues facing most businesses rise to the level of the issues in the Scopes Trial<sup>1</sup>. An experienced business lawyer with an understanding of your business will normally be all you need to deal with almost any legal issues affecting your business.

Your most important reason to understand how the law affects you is risk management. You will rely on your lawyer to craft a solution to a legal problem once you have identified it. Your lawyer will present options to you. Your choice will be determined by your risk tolerance. Your risk tolerance will, in turn, be informed by your own assessment of eventualities and your ability to deal with those eventualities. You will be more inclined to choose the option that balances the most favourable outcome with the degree of risk you can accept. You are unlikely to choose an unacceptable measure of risk, regardless of how favourable the outcome is. Everyone, of course, will have their own measure of risk tolerance. The better you understand the legal environment affecting your business and within which your practice operates, the more likely you are to make an educated and informed assessment of that risk. The legal environment in this case is the law affecting you as a business like any other and the law affecting you uniquely as a member

of the College of Veterinarians of BC. You require a minimum level of understanding of the legal environment around you, to accurately assess that risk to your business and practice. Only you can assess your risk tolerance. Your lawyer cannot do that for you.

The point deserves repeating: you need a basic understanding of the law affecting your business to manage the risk to your business. You practice veterinary medicine for a variety of reasons. One of those reasons is to maximize your financial return. This may be a more significant motivation to some than to others, but all those in private practice share this to one degree or another. Your success in this regard will be determined by your choices. You will be successful if you make the right choices, and you will be unsuccessful if you continuously make the wrong choices. Every business choice has a legal consequence on some level. Some, such as whether to practice as a corporation or as a sole practitioner, can have extremely significant consequences from an asset-protection standpoint and the limitation of liability. Others, such as the shape of your sign outside your practice, will likely have much more modest consequences, should it fail to comply with municipal bylaws. Most choices you make for your business, however, have legal implications. Again, and for the last time, your ability to understand those implications will depend upon your understanding of the law affecting your practice and business.

It is the unfortunate reality that much risk management concerns how to avoid losses. You are wrong to assume, however, that an understanding of risk management is only an understanding of how to avoid legal



“...IT IS THE PROCESS OF IDENTIFYING, EVALUATING AND RESPONDING TO THE POSSIBILITY OF HARMFUL EVENTS.”

punishment for making legal mistakes. The law of contract arose specifically from the desire to make promises between businesspeople more reliable and enforceable. The idea that someone should be able to rely on a promise made by another was something that had no legal enforceability until the development of the law of contract. There was no compensation available to you should you suffer losses because of another’s breach of promise. The idea may be traced as far back as Roman and Greek times in some forms, but it was the judicial activism of the English courts during the Industrial Revolution that brought contract law into its own and created the foundation for the principles that underpin so much of modern business law. Your business would be a much riskier venture without it.

I should define risk management. My favourite definition is taken from *Managing the Law: Legal Aspects of Doing Business*<sup>2</sup>: “. . . it is the process of identifying, evaluating and responding to the possibility of harmful events.” We will work through each of these elements in successive future columns. We will begin with an overview of the basic principles and then a more in-depth analysis of some of the particular private law principles, including contracts, torts and regulatory law. It is my intention that by the conclusion of this series of articles that you, dear reader, will be better able to perform each of those three aforementioned functions for your business and practice.

I want you to consider this example before we conclude. You take a vacation from your practice as a rural large animal vet in Smithers. You retain a locum to come in and cover your practice for you while you are away identifying the various species of bats nesting in Carlsbad Caverns. You return from Carlsbad Caverns (complete with your

blow-up alien you obtained along the way in Roswell) to find that your locum has done something less than a competent job attending to your practice in your absence. The patient charts were not properly updated, and you do not believe that all the services performed were actually billed for. You also think that at least some of your equipment has been lost and other pieces broken from apparent misuse. One staff person complained confidentially that the locum’s behaviour towards them made them feel uneasy at times, as if they were paying too much attention to them and for the wrong reasons, although there was nothing overt that they could put their finger on. Again, however, they asked you not to repeat what they told you as they want it kept confidential. The locum also left two days early and simply closed your practice without telling you and left you to deal with the very angry clients on your voicemail upon your return. Ultimately, you decide not to say anything to the locum, as irritated and disappointed as you are. You decide it was hard enough to find this locum and you don’t want to burn any bridges, even if you decide you will not use them again. You decide you will just deal with it and clean up the mess, so to speak. Several weeks later, however, the locum calls. They ask if you will provide a reference to a vet you know in Valemont, as they are applying to do a locum for that vet. What do you do?

Immediately, you remember they were not an employee of yours while a locum, only a contractor. But what difference does that make and how does that help you now? Do you write a positive reference letter? Is there any risk to you writing a positive letter only to have the locum cause even more serious problems at your colleague’s practice? Do you tell them that you would prefer not to write the letter? Do you tell them why? Do you write an honest assessment in the letter, in short, a negative letter? Can you be sued by the locum if you write an honest letter that results in them being deprived of their next locum contract? What about your College Bylaws—do you have a duty to report the locum, that you failed to comply with? These are questions that may occur to you. It is my intention that you will be better equipped to answer them by the end of this series. Or, at the very least, better equipped to spot the issues you should be asking about. Until next time . . . [WCV](#)

<sup>1</sup>While there is no connection with the subject matter of this column, I am nonetheless compelled to recommend a truly excellent film, in my humble and entirely unqualified estimation, and based on a play written about this trial: *Inherit the Wind*, 1960, United Artists, directed by Stanley Kramer.

<sup>2</sup>Mitchell McInnes, Malcolm Lavoie and J. Anthony Vanduzer, 6th ed. (2023) at p2. Incidentally, I recommend this text to anyone seeking a solid understanding of the law as it relates to businesses and business owners. I am unabashedly borrowing from this text and these authors throughout my columns on risk management and business law generally as it presents an excellent overview.



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<sup>1</sup>Logan EJ, Finney O, Hefferren JJ. Effects of a dental food on plaque accumulation and gingival health in dogs. *J Vet Dent.* 2002;19(1):15-18.  
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