

# WEST COAST VETERINARIAN

MARCH 2020 | Nº 38

## VETERINARY FORENSICS

A CRITICAL SCAN OF  
THE LANDSCAPE

DIAGNOSING LAMENESS IN OLDER DOGS

DENTAL RADIOGRAPHY

FELINE ZONOSSES

ONE HEALTH

HORSE BEHAVIOUR PROBLEMS

CANADIAN VIOLENCE LINK CONFERENCE



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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 of the wonderful Leo, the dog-loving editor's own cat. Photo by Corey Van't Haaff

One of the most fun parts of my work for Chapter members is speaking to the students at WCVM. We awarded two Chapter scholarships at September's White Coat Ceremony, attended by Dr. Al Longair, Chapter President. And that event reminded me, as we go about our seemingly never-ending work to convince this government to increase the number of seats at WCVM, that some of the most powerful stories were right there in Saskatchewan.

The opportunity arose for me to interview two BC students who were unable to secure BC-funded seats at WCVM. One had to move to Saskatchewan and apply through that province's pool, and the other had to assume the burden of around \$300,000 in debt to attend a school in the Caribbean. Both, really, were lost to the veterinary community here in BC through either putting down roots elsewhere or having a limited license not recognized here. Both are BC's loss and Saskatchewan's gain.

It's fitting, then, that our WCVM student liaison, the compelling storyteller Reina Fennell, chose this issue to talk about focus and peripheral vision. She writes that perhaps veterinarians as a whole can sometimes become so fixated on what we assumed was our goal that we can end up failing to alter our thinking when the situation changes.

And that is the challenge facing us today as we begin to suffer under the inescapable weight of this shortage of veterinarians. I personally did not need the labour market study to convince me of the shortage. I get calls from veterinarians at their wits' end as they cannot hire staff and cannot continue to work at their current pace. I get calls from the pet-owning public asking if we can force veterinarians to work around the clock to provide on-call veterinary services. And yet, the labour market study proved our shortage was much more serious than I had originally thought.

I had become fixated on proving to the Ministry of Advanced Education that our need was real and our stories compelling, and I had assumed that the necessary funding would follow. This is, after all, the impression I was left with after our meeting with the Deputy Minister and others in December of a year ago: that they wanted proof. And we provided proof.

Yet the Ministry continues to deny additional funding. So the situation has changed, and we need to change our focus and enhance our peripheral vision.

We now need to educate our clients about this shortage and the need to secure these 20 available and additional BC-funded seats for BC students. We need to become individual lobbyists garnering support and momentum from our own constituencies: clients, family, friends. We need to understand that our voice has to be heard with greater clarity and increased volume, and that means that it is now time to ask others to start speaking for us and with us.

By the time you receive this issue of *West Coast Veterinarian*, we will have begun our public awareness campaign. Please feel free to join us in explaining to clients how this current shortage might affect their future. [WCV](https://www.wcvm.ca)

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



2019 WCVM Fall Awards Program presentation of the CVMA-SBCV Chapter Scholarship to Elina Kalamkarova.

LEFT TO RIGHT: Dr. Al Longair, Chapter President, Elina Kalamkarova, and WCVM Dean Dr. Douglas Freeman.

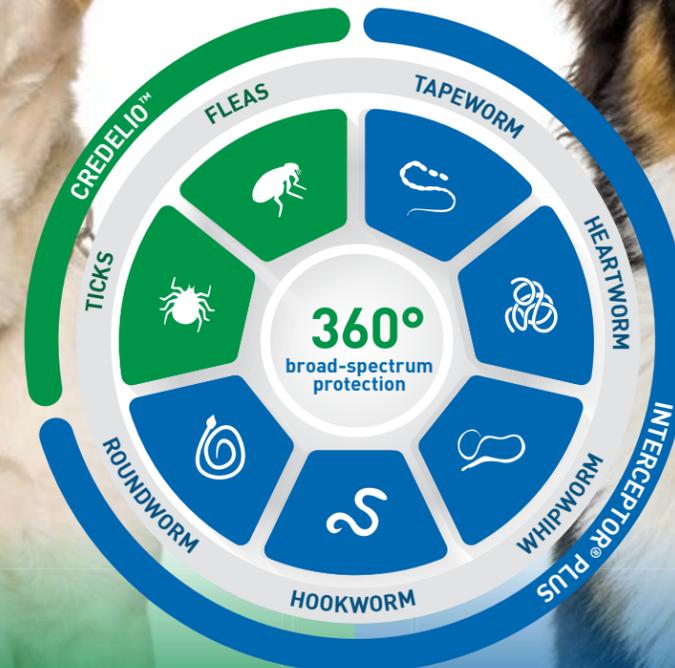


2019 WCVM Fall Awards Program presentation of the CVMA-SBCV Chapter Leadership Award to Chloe Roberts.

LEFT TO RIGHT: Dr. Al Longair, Chapter President, Chloe Roberts, and WCVM Dean Dr. Douglas Freeman.

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**IMPORTANT SAFETY INFORMATION**  
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**ANGELICA BEBEL, DVM, Dipl. AVDC**, began her veterinary career as a Registered Animal Health Technician. In 2014, she graduated from the Western College of Veterinary Medicine program. Following graduation, she practised general medicine in Vancouver before starting a residency in veterinary dentistry at West Coast Veterinary Dental Services in Vancouver. She received her Diplomate status in the American Veterinary Dental College in 2018 and has continued working locally at West Coast Veterinary Dental Services.



**SARAH CHARNEY, DVM, Dipl. ACVIM (ONCOLOGY), Dipl. ACVR (RADIATION ONCOLOGY)**, graduated from University of Illinois College of Veterinary Medicine. She completed residencies at the Animal Medical Center in New York (medical oncology) and Southwest Veterinary Oncology in Arizona (radiation oncology). She is a founding partner of Boundary Bay Veterinary Specialty Hospital in Langley, BC.



**DAVID FRASER, CM, PhD**, joined UBC in 1997 as NSERC Industrial Research Chair in Animal Welfare. His work has led to many innovations in animal housing and management, from designing better pig pens to reducing highway accidents involving wildlife. He was appointed Member of the Order of Canada in 2005 for his work in animal welfare science.



**LAUREN FRASER, MSc, CHBC**, completed her MSc in clinical animal behaviour through the University of Edinburgh's Royal (Dick) School of Veterinary Studies. Her research examined the behaviour of horses subjected to forced "laying down" during training. She sees horses with behaviour problems and offers educational events including monthly workshops for horse owners and an online RACE-approved course for equine veterinarians.



**GEOFF HUTCHINSON, MS, DVM, Dipl. ACVS**, is the staff surgeon and a founding partner of Boundary Bay Veterinary Specialty Hospital. From southern Alberta, he received specialized surgical training and board certification in the USA, and started surgery departments in Arizona and New York before returning to western Canada in 2009 to open Boundary Bay Veterinary Specialty Hospital. Dr. Hutchinson's interests include joint disorders and treatment, minimally invasive techniques, and fracture repair. In addition to TTA and TPLO, he brings several cutting-edge treatments to his practice including arthroscopy, laparoscopy, Kyon Zurich Cementless total hip replacement, PAUL, PGR, and fracture repair using the ALPS titanium locking plate system.



**NICOLETTE JOOSTING, BSc, BVSc, DVM**, graduated from the University of Pretoria (Onderstepoort), South Africa, in 1998. She owned Vancouver Feline Hospital and Vancouver Feline Veterinary Housecall Service. She is a member of the Animal Welfare Committee of the CVMA-SBCV Chapter and currently enjoys semi-retirement in Harrison Hot Springs.



**DORIS LEUNG, BSc, DVM, MPH**, is a graduate of Ontario Veterinary College and has practised in British Columbia since 2016. She is a locum veterinarian working at several small animal practices in the Lower Mainland and completed her Master of Public Health at the University of British Columbia in 2018. Her professional interests include veterinary public health and zoonotic disease prevention, animal welfare, community outreach, and health communication. Since 2016, Dr. Leung has served as the regional director of Community Veterinary Outreach in Vancouver and has organized integrative "One Health" clinics to improve the health and well-being of marginalized pet owners and their companions in Vancouver's Downtown Eastside. As of 2019, she is an elected council member of the College of Veterinarians of British Columbia. She spends her spare time reading, making veterinary-related comic books and zines, climbing, and hiking with her Border Collie/German Shepherd, Mukwa.



**MARGIE SCHERK, DVM, Dipl. ABVP (FELINE)**, graduated from Ontario Veterinary College in 1982. In 1986 she opened Cats Only Veterinary Clinic in Vancouver, practising there until 2008. Dr. Scherk became board certified in feline practice by the American Board of Veterinary Practitioners in 1995, recertifying in 2004 and 2014. She founded the feline medicine folder on VIN in 1994. An active international speaker and past president of the AAEP, Dr. Scherk has authored numerous book chapters and scientific papers and is the co-editor of the *Journal of Feline Medicine and Surgery*.



**HOLLY TILLOTSON, DVM**, graduated from WCV in 1992. She worked in the Lower Mainland until moving to Vancouver Island where she had a small ruminant practice and worked as a locum. Currently, she is a partner in a small animal clinic in Port Alberni. Dr. Tillotson is working on a certificate in veterinary forensic science.



**ZAZIE TODD, PhD**, has a PhD in psychology, a certificate in training and counselling (with honours) from the Academy for Dog Trainers, and a certificate in feline behaviour (distinction) from International Cat Care. She is the creator of *Companion Animal Psychology*, a science blog about how to have happy cats and dogs, and is the owner-operator of Blue Mountain Animal Behaviour. Her book, *Wag: The Science of Making Your Dog Happy*, will be published by Greystone Books in March 2020.



**LISA WATT, DVM**, is a small animal veterinarian practising in the Lower Mainland who spends her spare time time chasing after her beloved son, Landon, a 12-year-old who somehow just surpassed her in height. She is passionate about writing, about animal behaviour and welfare, and about Blue, her one-year-old Border Collie.



**DEVON J. WILSON, MSc, DVM**, is a WCV 2015 graduate who has yet to find a research project she hasn't enjoyed. After spending some time at a feedlot consulting practice, she recently completed her MSc through UBC's animal welfare program. She investigated the health of male dairy calves undergoing long-distance transportation, and hopes to pursue further study in this field in her PhD through Ontario Veterinary College.

# WCV

MARCH 2020

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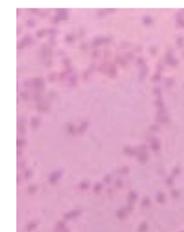
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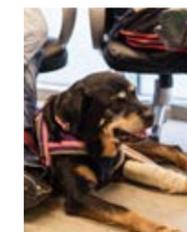
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## WHAT ONE SHOULD KNOW ABOUT ONE HEALTH



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**A**lthough we will be well into the new year by the time this is before your eyes, I want to wish everyone a very healthy, happy, prosperous new year. I hope you were all able to enjoy some time to relax with family and friends over the holiday season. It can be a difficult time of year for many, so I hope you were all able to minimize the stressors and have some down time—whether that means being active outdoors or reading a book in front of a nice warm fire. With our tense and emotional work environment, we all need to find the joys in life to support us in the great things we do to help our patients and their guardians.

Do you ever wonder what the new year will bring? We think about what the last year was like, and what we want to change. The interesting addition this year is that we are now heading into a new decade—the roaring 20s, perhaps. So let's take a quick look at the last decade of the growth and development of the SBCV.

As the calendar turned to 2010, a lot of people were excited to see what the Winter Olympics would bring to our province and especially to Vancouver. It was a wonderful event that I will never forget, and it raised the profile of BC and our country. The streets of Vancouver and Whistler were filled with joyful people, and the decade started with a big party.

Later that year, our profession was presented with the new Veterinarians Act, which was to change the way we were governed and increase protections for the public. The old BCVMA, knowing that this was in the making, had set up a task force to review whether a separate society to provide member services was needed. The task force recommended serious discussions with the members to find out what services they felt were crucial. Unfortunately, we did not know precisely how much our lives would change and thus were unable to make specific plans until the act was unveiled.

The main driving force behind the gestation of our new society was Dr. Diane McKelvey. She was our Border Collie, always keeping the project moving ahead as she shepherded the growth from ideas to formation. Through many meetings full of wide-ranging discussion, Diane kept the focus and drive to succeed. The biggest problem was finding a way to operate, as the fees charged by the new College of Veterinarians of BC were high, and a majority of veterinarians did not want to, or could not afford to, spend more on an organization that they weren't yet sure was valuable to them. To hire staff and rent office space would require significant fees that we felt would be unpopular, but discussion with the CVMA led to an alternative: their office staff would look after communication and handle the monetary side of the emerging organization. For this to work, members would have to be members of both the CVMA and the SBCV.

This option was hotly debated. Many wanted to go it alone and be totally independent, while others felt we could not survive on our own as we simply had no money to work with. After much debate, the founding members held a vote that resulted in the SBCV becoming a chapter of the CVMA. This was a first for both sides, and there were growing pains, but the result was beneficial to our members as well as the CVMA. It started slowly with few members, but the challenge to care about the profession and make it work was a strong driver.

The idea of publishing a membership magazine with various articles of interest that were not strictly educational was the best thing for the growth of the SBCV. The magazine in your hands today has grown to be a well-received magazine with articles substantially written by and for

veterinarians. Past president Dr. Sarah Armstrong was instrumental in directing the development of *West Coast Veterinarian*, and with the hiring of our editor and subsequently our executive director, Ms. Corey Van't Haaff, the magazine continues to be widely read and respected.

The growing pains are receding slowly as we head into our new decade. Our November 2019 conference was our most successful yet, despite having to change venues on very short notice. Corey and her assistant, Adriana, did an amazing job of finding a new place and letting everyone know of the change. The exhibitors were also helpful, and most of them enjoyed the event as well. Thanks to all of you who attended. The lecture rooms were cozy but everyone appeared to be enjoying themselves and benefiting from the sessions. The SBCV's AGM was also attended by more than just the Board of Directors, which was great to see. I'm not sure how much influence the wine and appies had on attendance, but we had some good discussion about the veterinary shortage before we ran out of time. Next year we are already planning for another wonderful weekend to see each other again and learn new things.

As you all know, our focus at this time is lobbying the Ministry of Advanced Education to increase support to the WCVMA and have more BC veterinary students supported provincially, and our animal welfare committee is working on ways to help animals caught in abusive family situations.

There is so much on the go that it is hard to believe what has been accomplished in such a short period of time. Thanks to all of our members for your support and suggestions. This decade started with an amazing world championship hockey game just as the start of the last decade did at the Olympics. Let's hope that it brings us continued success. **WCV**



*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 BCSPCA 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, four horses, and four dogs and coaches youth soccer in his spare time.*

**A**s your CVMA president, it's my pleasure to provide you with updates on some of the CVMA's initiatives.

The CVMA released a 30-second video titled "We're with You Every Step of Your Way" as part of its national membership recruitment and engagement campaign. Watch it at [www.canadianveterinarians.net/members](http://www.canadianveterinarians.net/members) or on the CVMA's YouTube channel (CVMAACMV).

The CVMA invites you the 2020 CVMA Convention. Join colleagues for superior continuing education at Canada's only national, multi-species veterinary convention in Quebec City, Quebec, from July 9 to 12, 2020. The scientific program features more than 30 highly rated speakers from Canada, the United States, and Europe. Tracks include companion animal, equine, ruminant, public health, professional wellness, and animal welfare. View the promotional brochure or register now at [www.canadianveterinarians.net/science-knowledge/annual-convention](http://www.canadianveterinarians.net/science-knowledge/annual-convention).

While one in five Canadian veterinarians and technologists have reported suicidal ideation, burnout, and depression, most will be cautious about talking to a co-worker, friend, or family member about it. They are even less likely to adopt self-care strategies or seek professional help. And while some members of the veterinary profession may not experience mental illness first-hand, it is likely they know someone who has or will experience mental illness. Visit the Mental Health Awareness Resources section of the CVMA website for more information and tools to help you take care of your mental health: [www.canadianveterinarians.net/mental-health-awareness-week](http://www.canadianveterinarians.net/mental-health-awareness-week).

The CVMA revised two position statements: "Elective and Non-Therapeutic Veterinary Procedures for Cosmetic or Competitive Purposes (Formerly Cosmetic Alteration)" and "Complementary and Alternative Veterinary Medicine." Read them under the Policy & Advocacy section of our website.

The CVMA would like to acknowledge the CVMA-SBCV Chapter's media efforts in raising awareness about the shortage of veterinarians across all regions of British Columbia, in most types of practice. In most parts of Canada, there appears to be a shortage of veterinarians and veterinary

technicians. This is underpinned by record numbers of classified ads, anecdotal information, and partially by provincial data collection, including data collected by the SBCV. Additionally, the CVMA is conducting a national labour market study with the intention of using the data for consideration by veterinary college funders, for consideration in Canada's immigration policies, and for consideration in adapting veterinary practice as and if needed. In the meantime, the CVMA has reached out to the AVMA/CVMA Council on Education (CoE) accredited international veterinary colleges who will promote Canada as a marketplace to practise veterinary medicine. **WCV**



*Melanie Hicks, BSc, DVM, obtained her BSc from the Nova Scotia Agricultural College before attending the Atlantic Veterinary College. Originally from Prince Edward Island, she moved with her family in 2003 after graduating to Moncton, New Brunswick, and began her career as a companion*

*animal practitioner. After 10 years of practising, Dr. Hicks joined Abaxis Global Diagnostics as a professional services veterinarian. She has been involved with the New Brunswick Veterinary Medical Association as a council member since 2009 and was acting president from 2011 to 2012. She joined the CVMA as a council member in 2013, serving on numerous task forces including the Business Management Advisory Group, Veterinary Wellness Advisory Group, and an innovation and technology group. Dr. Hicks currently lives in Moncton with her husband and son on a small alpaca farm and is working on her MBA in her spare time.*

Registration Now Open

CVMA CONVENTION  
July 9–12, 2020



CONGRÈS DE L'ACMV  
9–12 juillet, 2020

BY JANE PRITCHARD, DVM, MVetSc

Just before I fade away into retirement from the Chief Veterinary Officer of BC role, I want to take this opportunity to thank all the members of the Society of BC Veterinarians. I have worked closely with some of you, communicated with many of you, and enjoyed supporting all of you. I have particularly appreciated the support and collaboration I have had with the SBCV board of directors.

Animal health is an increasingly demanding area with almost constant challenges from new and emerging diseases that spread with increasing rapidity around the world. It is also an area challenged to keep up with the demands of public trust as we continue to evaluate our roles and responsibilities within our duties for the care of all animals.

Going forward, the office of the Chief Veterinary Officer of BC will be separated from the duties held by the executive director for the Plant and Animal Health Branch and the director of the Animal Health Centre, the veterinary diagnostic lab for the province. This was done so that the next CVO can bring a better focus to the role with more attention on animal welfare in the province. The position will also carry the duties for managing those regulated areas of livestock production such as dairy farms, game farms, and fur farms.

In the meantime, before I go, I will be organizing one last shipment of vaccine for rabbit hemorrhagic disease. The next order will be carried out by the new CVO, who has not yet been named. If you have not ordered vaccine through the CVO office and wish to do this, please email me at

jane.pritchard@gov.bc.ca so that you can be on the email contact list.

When the new CVO has been determined, there will be an announcement to the veterinary community, but you can always connect with the office of the CVO through PAHB@gov.bc.ca, or by calling 604.556.3001.

Again, thank you for your support in guarding the health of all animals in the province. [WCV](#)



Jane Pritchard, DVM, MVetSc, graduated from OVC in 1977 and completed a Master of Anatomic Pathology at WCV in 2000, continuing as an associate professor in the Department of Pathology for two years before embarking on a career with the BC Ministry of Agriculture in 2004. With the exception of a two-year international

development project in China from 2007 to 2009, she has remained with the BC Government. In 2013, she was appointed to the role of Director of the Plant and Animal Health Branch and Chief Veterinary Officer for the Province of British Columbia.

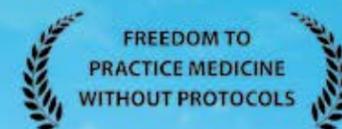
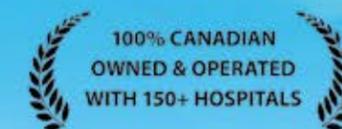


# FAREWELL TO DR. JANE PRITCHARD

Dr. Jane Pritchard's wish to give out stethoscopes to BC students at WCV's White Coat Ceremony finally came true in September 2019. The Chapter thanks Dr. Pritchard for her unwavering commitment to veterinary medicine and hopes she will have the happiest of retirements.

# SUCCESSION

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A cautious dog-to-falcon "hello."

THINK PERIPHERALLY

BY REINA GABRIEL FENNELL

"You see, but you do not observe." —Sherlock Holmes

"You've got to think peripherally." Dr. Carmalt's words from the previous day's lecture echoed in my mind as I watched the Munsterlander stare, fixated, "pointing" at the fake bird on the end of its handler's string. It was to wait for the command to jump on the thing, as it would if it were out hunting ducks. Large Munsterlanders originated from Münster, Germany, and were intended to be an all-in-one utility hunting dog. Due to the multiple hunting breeds in their background, these lithe, medium-sized companions readily track, point, and retrieve for both game and wild fowl, hunting in a variety of terrains—once properly trained, that is.

Dr. Rhonda Shewfelt, a beloved anatomy teacher at WCVM, and her husband have accomplished that exceptionally. The two dogs responded sharply to all of the simple voice commands given to them throughout the demo, with perhaps the exception of this moment:

the female of the sibling duo was pointing in perfect form, but when given the command to fetch the "duck," though her body jolted as if to pounce, she stayed in her pointer position staring as if her life depended on it. The handler explained that he had perhaps focused a little too much on the pointing aspect of her training early on, and the dog had taken to pointing so avidly that she now had a harder time breaking the point to attack a downed bird. And for some reason that made me think about what Dr. Carmalt had said the day before. We veterinary students, and perhaps veterinarians as a whole, can sometimes become so fixated on what we assumed was our goal that we can end up failing to alter our thinking when the situation changes. An abstract connection perhaps, but working with animals

PHOTOS COURTESY/ REINA GABRIEL FENNELL

has a unique way of teaching us things.

Regardless of my philosophical musings, "The Complete Workup of Equine Poor Performance" was what Dr. Carmalt's lecture had actually been about. Dr. Carmalt is an equine surgeon at WCVM, and his talk was one of many that students could attend in the first block of the 2020 SCVMA Symposium. Other topics included "Humans and Their Impact on Wildlife" with Dr. Marc Cattet, "Health Determinants in Africa" with Dr. Claire Card, and "The Role of a Large Animal Veterinarian in Animal Welfare" with Dr. Terry Whiting, manager of the Manitoba Agriculture and Food Animal Health and Welfare Department, also a keynote speaker at the symposium this year.

The symposium is a student-organized, largely student-run annual event for veterinary students hosted at one of Canada's five veterinary schools every year, and this year it fell to WCVM, which swarmed with more students than I thought could possibly fit in its



One of Dr. Shewfelt's Munsterlanders in perfect pointer form: the human-avian-canine hunting partnership.



A glowing group of third-year WCVM students at the symposium's closing banquet.

streptococcal hemorrhagic pneumonia before it was known *Streptococcus equi* could do that, a group of salt-encrusted geese that drowned, another horse with a supposed traumatic lameness that turned out to have a neurological disease (protozoan, though, not rabies)—the list goes on. He said his lecture title was actually a bit of a misnomer, “because the problem is not usually with the animal but with the person interpreting what’s going on.” With each case, he stressed the need for veterinary students and veterinarians to have expectations but not be limited by assumptions (because sometimes it IS rabies). And occasionally when we hear hoofbeats, it IS a zebra, and it may end up being the highlight of our careers, so we don’t want to miss it. But even for all those times it isn’t zebras, being open-minded, observant, and imaginative will ultimately make us better clinicians—and having a sense of humour about our mistakes helps too.

Dr. Shewfelt’s demo with her Munsterlanders, which ultimately led me to connect all of this in my mind, was part of the “Dogs with Jobs” tour Saturday morning of the symposium. Dr. Shewfelt, her husband, the two dogs, and their hunting falcon showed us that even in the 21st century there can be multi-species symbiosis in hunting and gathering. This was impressive on multiple levels (I mean, when is hanging out with a falcon not impressive?), not least the glimpse of history it gave. Food-gathering was probably the instigator of the

human-animal bond in many if not most situations in ancient times. Other tours that morning, which I’m sure were equally enjoyed, included snow-shoeing in Wanuskewin Heritage Park and a visit to the Saskatoon Forestry Farm Park and Zoo.

The symposium was a phenomenal organizational and networking feat. Going to lectures, labs, and social events with veterinary students from all over Canada was a necessary reminder that my future in this profession includes colleagues from across the country. The world of veterinary medicine is simultaneously very broad and yet very small, and we need each other. Swapping stories with students from other programs, comparing and contrasting our experiences, made me realize I will depend on these people to keep my mind open. We will all end up as very different clinicians but with very similar training. For some, our connection will be only meeting or touching base every now and again at conferences and CE; for others, it will be learning to work together through a variety of media, and both situations will be crucial to minimizing perceptual narrowing in the future. Think peripherally. **WCV**



Reina Gabriel Fennell, WCV class of 2021, grew up on an acreage on Haida Gwaii surrounded by marine and forested wilderness, which started her on her journey of getting as many experiences with different species as she could on the islands, in other parts of Canada, and abroad. She completed two years of a BSc in bioveterinary science at Dalhousie University’s Faculty of Agriculture before being accepted into WCV in 2017. After graduation, she would like to be a large animal veterinarian with a focus in equine medicine and surgery.

# IN MEMORIAM



**DR. JOHN ALLEN FORSYTH**  
1931–2019

It is with sadness that we announce the passing of John Allen Forsyth on November 23, 2019, in Eagle Ridge Hospital in Port Moody. For many years Al served our profession with conviction, honesty, humour, and a desire to leave our profession in a better place. Al was born on December 31, 1931, in Pickardville, Alberta. He studied agricultural sciences at UBC, where he was also an accomplished basketball player. It was at UBC that Al met Joan. Joan was accepted into OVC, and Al followed her to Guelph. He worked on campus during Joan’s first year, and using his gift of the gab and charm, he was accepted into second year at OVC. Al and Joan were married on May 26, 1955, and both graduated from OVC in 1958. They moved west, and in 1960 they opened Central Park Veterinary Hospital on Kingsway in Burnaby. They ran a very successful practice for many years. Al practised at Central Park until its sale in 1973.

After the sale, Al did a few locums and kept his finger on the pulse of veterinary medicine through the BCVMA and the Vancouver Academy. Al wasn’t about to leave his profession. He served on the council for many years and as registrar for the BCVMA in the early 1980s. After one stint as registrar, he was asked to serve again. He later went on to serve for many more years on various committees, notably the discipline committee. He navigated the successful relationship with the BCSPCA. He worked to help develop the first veterinary assistant program in BC. He served as BC’s representative to the Western College of Veterinary Medicine where he helped select candidates for enrollment. Over the years, both formally and informally, Al was a strong guiding light in the BCVMA’s many interactions with the provincial government in areas of support for veterinary students and the eventual rewriting of the Veterinarians Act. Al was also instrumental in establishing AVP, a new BC concept that has greatly benefited BC veterinarians and the pet-owning public.

We will never forget the council meetings in the 1980s. The late Dr. Dave Perrin was elected to council primarily so that he could question the need for and the quality of the BCVMA exams. Al and Dave developed a mutual respect for each other’s point of view. They agreed on many other important council issues and soon found themselves agreeing on how to move forward on the exam issue. They soon established a solid friendship which lasted their entire lives. Respect for everyone’s point of view was one of Al’s great strengths.

We are not alone in feeling the support of Al’s generous advice. He was not only extremely helpful with his advice, he took and lived the advice he so honestly gave. He was a person we all looked up to. But while Al was usually right, he was never one to hog the limelight. He was the first to encourage many of us to step forward and serve our profession by volunteering for the many committees or by running for and serving on Council. He especially liked to encourage those who challenged his ideas to step up and be part of the solution. Those of us who did quickly realized that things usually look a whole lot different when seen from the inside.

In short, he was instrumental in establishing solid relationships based on common ground. His negotiating abilities put animal welfare and the welfare of veterinarians foremost. He, more clearly than most, understood and accepted that the mandated role of the BCVMA was self-regulation on behalf of the public. But he clearly understood that promotion of and support for the highest standards of ethics and practice by veterinarians was the best way to achieve and maintain that public mandate. He taught us all by example that being a member of a self-regulated profession brought enormous privilege, but that could only be honoured by accepting and acting upon the enormous ethical responsibility that came along with it.

One of Al’s favourite things to ruminate on over a glass of Scotch was the idea of “knowing when to leave” . . . how to not to overstay your welcome . . . how to step aside before you’re asked to. I know that he was referring to the political things in life, but I think he would be pleased to know that he has “stepped aside” for the last time while he was still much loved and appreciated deeply by those whom he served for so long.

We all owe Al a debt of gratitude for his foresight, his honesty, and his deep commitment to his beloved veterinary medicine.

Al was predeceased by his wife, Joan, who passed away on January 3, 2018. Al is survived by one daughter, Dawn, two sons, Chris and Andy, and a profession that he made so much better.

Provided by Dr. Roger Kocheff and Dr. Dave Kirby



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# WHAT THE CAT SAID

## HOW VETERINARIANS CAN HELP OWNERS MAKE THEIR FELINES FEEL CONTENT

BY ZAZIE TODD, PhD

The biggest welfare issue facing pet cats is behaviour problems due to a poor home environment, according to a recent survey of cat welfare experts published in *Veterinary Record*. This is a serious welfare issue because the poor conditions may persist for a long time, and behaviour problems may ultimately result in the cat being relinquished. So what would cats like their veterinarians to tell their owners?

### THE FIVE PILLARS OF A HEALTHY FELINE ENVIRONMENT

The feline environmental guidelines set by the American Association of Feline Practitioners are always a good place to start. While these five pillars of a healthy environment may seem easy to provide, in practice many cat owners could make significant improvements.

#### A safe space

Veterinarians know that when cats are confronted with something stressful, they typically run and hide. Teach your clients to create

safe spaces that are cat-sized (although cats that like to cuddle together will often choose to share a space) and maybe high up because cats like to perch. Cat condos, cat beds on shelves, even a cardboard box can all make good hiding places. Ideally, the cat carrier (with nice bedding inside) will be one of the cat's safe spaces. All members of the household (including children) should know that if the cat is choosing to hide, they should be allowed to do so, and not forced out to play.

#### Multiple and separated key environmental resources

Cats like to have multiples of their resources, and they should be laid out in separate places (water separate from food separate from the litter box and so on). This is especially important in multi-cat households. With litter boxes, a well-known rule of thumb is to have one per cat plus one spare. A common mistake is to put them all in the same room, which means one cat can still block access to all of them.

#### Opportunities for play and predatory behaviour

Play provides exercise and enrichment, and allows the cat to use behaviours from their predatory sequence. Cats should have toys they can play with on their own, as well as interactive toys (such as wand toys) for playtime with their owner. A study published in the *Journal of Feline Medicine and Surgery* found that cats that had longer play bouts with their owner were less likely to have behaviour problems. Play is especially helpful for cats that are bored or frustrated. Catnip is well known, but silver vine, Tatarian honeysuckle, and valerian are also attractive to many cats and can be a helpful component of toys.

#### Consistent interactions with people

Cats that were socialized with people as kittens can be very affectionate, but whereas people prefer fewer, long interactions, cats like to have frequent, short interactions with people. In particular, older cats may prefer shorter petting sessions. It is important to give the cat a choice and the opportunity to leave (or not to be petted in the first place) if that's what they choose. The AAFP guidelines remind us that these interactions should be positive experiences and predictable.

#### Respect for the cat's sense of smell

Some owners would be surprised to learn just how amazing their cat's nose is, and that they should create an environment that reflects this. When cats rub their cheeks on things, they deposit pheromones that help them to feel safe, so a little less cleaning may be beneficial. For example, wash cat beds in rotation and not all at once. The cat's scent can be transferred onto new items by petting the cat with a cotton glove to pick up scent from the scent glands, and then rubbing the item. Cats don't like strong smells, so don't use strongly scented cleaners, especially in areas the cat uses regularly (such as near the litter box) in case they choose to use other areas instead. In the case of house soiling, it's important to use an enzyme cleaner to properly remove the smell.

#### FOOD, TOYS, AND MEALTIMES

The AAFP's consensus statement on feeding cats recommends the use of food puzzle toys. There are many on the market, as well as simple DIY options. Cats should start with easy toys so they don't find it frustrating, and treats inside to get them interested. The toys can be gradually made harder. Cats should also have multiple small meals; International Cat Care recommends five small meals a day. Meals can be left in different locations so the cat has to use their nose and forage for them, and they can also be in high-up locations (unless the cat has arthritis or other physical issues that would make it difficult to reach those locations). Since most people are used to feeding their cat via a bowl once or twice a day, these changes can increase enrichment and be part of the solution to some behaviour problems.

#### SCRATCHING POSTS

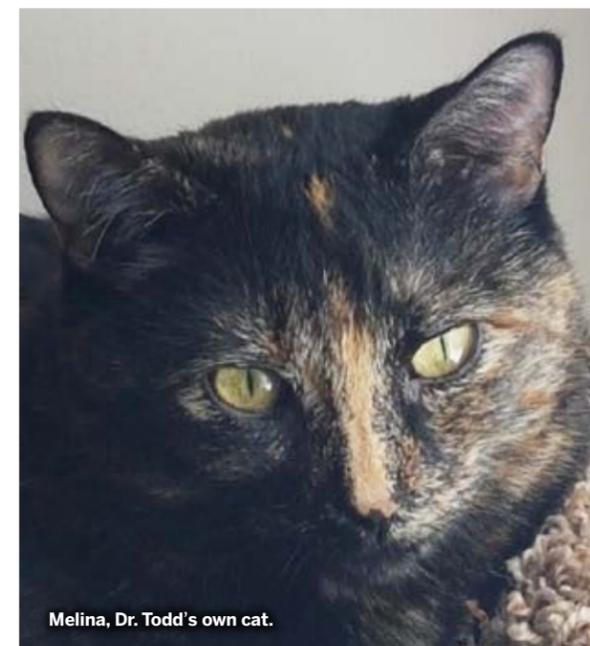
Scratching is a natural behaviour for cats. It helps keep their claws in good condition, and it deposits pheromones from glands in their paw pads. Inappropriate scratching is a common problem that cat owners find very frustrating. A study published in the *Journal of Feline Medicine and Surgery* found that two things are important when it comes to getting the cat to scratch in the right place. The first is to provide the right kind of scratching post, as many people provide ones that don't allow the cat to get a full stretch or that are too flimsy (such as those that attach to a door). People who provide a rope (sisal) scratching post and those who provide a multi-level cat condo are less likely to report inappropriate scratching. Cats do have individual preferences and some (especially older cats) may prefer carpet, while others like a horizontal scratching surface, so it is important to find out what the cat prefers. Secondly, it is a good idea to reward the cat with a treat or petting for using the scratching post, as people who do this are much less likely to report cat scratching issues.

#### CATS SHOULD BE TRAINED TO USE THEIR CARRIER

Cats can be trained to like their carrier, although it may take time and patience. It's best to start with a carrier with a removable lid. Remove the lid and leave treats in the base for the cat to find. Then progress to having the lid on, always with the door open for the cat to come and go as they please. Only when the cat is very happy at this stage is it time to start closing the door for short periods. Continue being generous with treats. Teaching the cat to like their carrier does not just make it easier to actually get the cat to the veterinarian. Research published in *Applied Animal Behaviour Science* found that cats trained to use the carrier were less stressed in the car on the ride to a mock veterinary exam and less stressed during the exam than cats that had not received the training. Most of the cats stayed in the bottom of the carrier for the exam, which suggests they felt safer there.

#### CONCLUSION

Clients may need your support and encouragement, as well as education, to make these changes for their cat, and it is a good idea to discuss specifics (e.g., to consider the type of scratching post, rather than just saying to provide one). Following these guidelines can help cats feel more content and less stressed, which means behaviour problems are less likely. [WCV](#)



Melina, Dr. Todd's own cat.

PHOTO BY ZARIFA/ISTOCKPHOTO.COM

PHOTO COURTESY ZAZIE TODD, PhD

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 lameness.

# DIAGNOSING LAMENESS IN OLDER DOGS

BY GEOFF HUTCHINSON, MS, DVM, Dipl. ACVS,  
WITH ONCOLOGICAL INFORMATION BY SARAH CHARNEY, DVM,  
Dipl. ACVIM (ONCOLOGY), Dipl. ACVR (RADIATION ONCOLOGY)

**M**illie, an 11-year-old lab mix, was referred for evaluation of chronic progressive left forelimb lameness. The clients reported that she has always been a very active dog with a "very high drive" when off leash. As a younger dog, she would occasionally be sore following big days, but the soreness would improve in the time between her "weekend warrior" activities. About six months ago, her left forelimb seemed to be bothering her consistently, and the lameness would never completely resolve between activities. Radiographs were not sent for the referral but reportedly indicated only chronic osteoarthritis changes in the shoulder joint. Millie was given an NSAID, which seemed to help improve her stamina and reduce her lameness initially, but over the next couple of months the pain seemed to progress steadily. She eventually needed gabapentin in addition to the NSAIDs to help her to be comfortable at rest. Bloodwork done before starting NSAIDs (six months ago) was normal overall but showed a mildly elevated globulin of 4.1 g/dl (normal 2.4 to 4.0 g/dl). Before her referral, updated bloodwork indicated that the globulins were even more elevated (4.4 g/dl) and her albumin was at the low end of normal. Updated radiographs showed irregular mineralization along the cranial aspect of the proximal humerus extending distal to the shoulder joint. On physical exam, Millie was friendly and bright. Her overall exam was normal for an aging lab mix with the exception of a grade 4/5 lameness of the left forelimb accompanied by moderate to marked left forelimb muscle atrophy. Millie was very stoic on examination and, despite the obvious discomfort with use of her limb, would only react mildly to manipulation of the left shoulder joint and direct palpation over the proximal cranial humerus.

I discussed Millie's case with her owners, including differential diagnoses, along with the diagnostics needed to differentiate the possibilities and hypothetical treatments and outcomes. The clients were advised that although the cause of lameness might be orthopedic, there was some concern for neoplasia given Millie's age, the progressive unilateral lameness over months (in the face of pain medication), the marked muscle atrophy, the localization of discomfort, the changes in bloodwork, and the proliferative

mineralization on radiographs. Possible orthopedic and neurologic causes were also discussed, and a diagnostic plan was developed with the goals of coming to a definitive diagnosis in the most minimally invasive, time-efficient, and cost-efficient way. Only once the diagnosis was reached could therapeutic options be discussed and pursued.

Diagnosing a chronic forelimb lameness in an aging dog is challenging in any circumstance. Millie's case had several confounding variables to make her diagnosis even more difficult.

Although a dog of any age can sustain a traumatic injury, aging dogs are generally not primarily affected by conditions that affect the developing skeleton such as OCD (osteochondrosis dissecans), and elbow or hip dysplasia. The exception to this is if the developmental disease led to initiation of osteoarthritis (OA) at an early age that becomes more clinically significant as the dog slows down and as the OA progresses (hence they may be secondarily affected). Many dogs will have some radiographic evidence of OA, but the clinical significance of the OA must be determined in the context of the current presentation. Care should be taken to avoid jumping to the conclusion that the OA is the only cause of discomfort. OA has usually taken years to develop, and if it resulted from developmental disease, it is often bilaterally symmetrical. The clinician should be cautious that the OA is not the only cause of lameness if the patient has a short-duration, unilateral, progressive lameness but has bilateral chronic OA changes on the radiographs. The OA was likely present for years—so it is important to determine what is new. That said, recent exacerbation of chronic OA may be the actual cause of lameness, but this is often a diagnosis of exclusion.

"Soft tissue injury" is a catch-all reference to traumatic injury of tendons, ligaments, or muscles—often surrounding the upper limb/shoulder. The cause of these may be an acute overload or may be chronic/repetitive. Because these injuries involve connective tissue structures with very low metabolism (tendons, ligaments) that are difficult to immobilize, they are slow to heal and prone to reinjury. Thus, lameness is often very chronic, and secondary muscle atrophy may be significant. Soft tissue injuries are notoriously difficult to diagnose, as they may include multiple structures and, until they are very chronic, often produce no radiographic changes. Definitive diagnosis usually requires diagnostic ultrasound or MRI. MRI is excellent for evaluating all of the soft tissues surrounding the shoulder joint, and ultrasound is good for evaluating biceps and supraspinatus tendon injuries (but not medial glenohumeral structures). Treatment options vary depending on the site and degree of injury but usually involve some combination of rest, physical therapy treatments, supporting vests, or arthroscopic surgery. Regenerative medicine treatments may also be beneficial. Prognosis is variable depending on the diagnosis, treatment regimen, and severity or chronicity of injury. Almost all soft tissue injuries require a compliant and patient owner to achieve a successful outcome.

Nerve root signature secondary to chronic or acute cervical intervertebral disk herniation is another rule-out of unilateral forelimb lameness. Although neurologic deficits may be present in some cases, some patients present with pain as the only symptom. Patients with cervical disk disease are usually more likely to guard their head and neck movement than those with orthopedic or neoplastic causes. Advance imaging such as MRI or CT scan is usually necessary to make the definitive diagnosis. With surgical decompression, recovery from intervertebral disk disease usually warrants an excellent prognosis for return of comfort.

As dogs age, the likelihood of neoplasia as a cause of lameness increases significantly. Neoplastic causes of lameness may involve cancers of the bone, the joints, the soft tissues, or the nerves.

For Millie, given the consistently elevated globulins and the lack of a definitive radiographic diagnosis, a protein electrophoresis was submitted as

## NEOPLASIAS AS A CAUSE OF LAMENESS IN OLDER DOGS

Primary bone neoplasia (osteosarcoma) is the most common tumour causing lameness. Although it can affect any bone including the axial skeleton, osteosarcoma (OSA) occurs most commonly in the appendicular skeleton in the proximal humerus and tibia, and in the distal radius and femur (near the stifles and away from the elbows). Radiographic changes usually include a variable combination of osteoproliferation and osteolysis and in certain cases may be challenging to differentiate from severe OA or fungal osteomyelitis. OSA generally does not "cross" joints, but care should be taken with this rule in cases with pre-existing OA as there may be OA on the opposite side of the joint from the OSA lesion. Definitive diagnosis is made by bone biopsy and histopathology. Needle aspirate and cytology can offer a less invasive, lower cost, and faster diagnosis in certain cases (but be cautious of false negatives). Amputation is usually indicated to reduce discomfort and to treat or avoid pathologic fractures. Radiation therapy can provide some palliative relief if amputation is not a good option for the patient. Chemotherapy is proven effective at extending lifespan with good quality of life.

Synovial cell sarcoma may also cause a progressive lameness but is less common and often more challenging to diagnose than osteosarcoma. Radiographic signs of synovial cell sarcoma are usually more subtle than OSA, more likely to be osteolytic than osteoproliferative, usually include increased soft tissue density within joint spaces and, as it is a tumour of joint cells, will cross the joint. Definitive diagnosis requires a biopsy and histopathology, and additional immunohistochemistry may be needed to advise the clients about prognosis and treatment options. Even core biopsies may yield false negatives for this tumour type.

Nerve sheath tumours will often cause progressive unilateral lameness and/or root signature. Nerve sheath tumours are a type of soft tissue sarcoma that are characterized by progressive (often over the course of months) lameness and discomfort in the face of pain medication and rest. Physical

ABOVE AND PAGE 20:  
Chronic mineralization of the biceps tendon sheath.

exam findings usually involve marked muscle atrophy and nerve placement or reflex deficits. Deep palpation in the axilla may reveal a soft tissue mass or marked discomfort. Plain radiographic imaging is usually unremarkable given the location of the tumour in the deep soft tissues or spinal nerve roots—CT or MRI imaging is ideal. The treatment of choice for nerve sheath tumour is surgical excision, but the feasibility and prognosis depend substantially on the location of the mass with respect to the spinal cord.

Plasma cell tumours are unusual but occasional causes of bone pain/lameness. Radiographic changes are usually lytic without proliferation. Plasma cell tumours may result in elevated globulins as a result of monoclonal gammopathies—protein electrophoresis may be helpful to differentiate. Bone biopsy is required to confirm the diagnosis, although a presumptive diagnosis may be made by aspiration of involved visceral organs. Treatment of solitary osseous plasma cell tumours is usually surgical (if possible) and follow-up chemotherapy may be recommended. If surgery is not possible, radiation and/or chemotherapy may be considered. The prognosis depends on extent of disease, treatment option chosen, and response to treatment; survival time can range from a few months to a year or more.

Occasionally, lameness will present because primary neoplasia elsewhere has metastasized to bone. Carcinomas are the most likely tumour type to metastasize to bone, and carcinomas of mammary or prostatic tissue are more likely to have bony metastasis than other carcinomas. Radiographic changes will usually appear as lytic lesions. Early or subtle lesions will usually be more apparent on CT scan than standard radiographs. Biopsy or cytology of the lesion is usually diagnostic, although staging of the patient to evaluate for a primary tumour is often sufficient to make the diagnosis. Prognosis is guarded for metastatic cancers, and their treatment centres on palliation.

a non-invasive first step to rule out plasma cell tumour. The result indicated that the globulins were polyclonal (monoclonal gammopathy would be expected with plasma cell tumour). Serology was negative for tick-borne disease, and the cause of the hyperglobulinemia was attributed to chronic skin inflammation. A radiologist performed an ultrasound of the shoulder that indicated severe, chronic biceps tendonitis with multiple tendon tears. The osteoproliferation of the proximal humerus was attributed to chronic mineralization of the biceps tendon sheath. The client was given the option of physical therapy treatments of the tendonitis (therapeutic ultrasound, stretching, tendon massage/fibre realignment, therapeutic laser, cryotherapy). However, given the chronicity and severity of the tendonitis and the fibre rupture, arthroscopic tenotomy was recommended to achieve a more rapid and definitive return of comfort. Millie received an arthroscopic tenotomy procedure followed by rest, physical therapy, and gradual return to activity over two to three months. Although her shoulder arthritis causes some occasional discomfort, her return to comfort and function have been very good. **WCV**



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# VETERINARY FORENSICS

## A CRITICAL SCAN OF THE LANDSCAPE

BY HOLLY TILLOTSON, DVM

**T**he Whistler sled dog investigation in 2011 catapulted BC onto the world stage of veterinary forensics and pushed the state of this discipline in Canada into a new age. The investigation, which has been reported to have cost \$225,000, was called “one of the world’s biggest ever animal cruelty cases” by one news outlet. The BCSPCA called it “the most complex investigation the SPCA has ever undertaken.” The investigation brought together forensic experts who had worked on the Robert Pickton murders, as well as experts who worked on mass graves in Rwanda, Afghanistan, and Iraq. Local veterinarians and SPCA investigators rounded out the team. The investigation took two weeks in the field and countless hours after that to produce evidence reports that would allow the crown to file charges.

There would have been many lessons learned in the field on the importance of solid investigative techniques, documentation, and interpretation. I suspect too that the limitations of our knowledge at that time came to the forefront.

Veterinary forensics is an emerging discipline within veterinary medicine. Each year there is an increase in the number of animal abuse cases investigated by the BCSPCA; many of them require veterinarians to offer their expertise. For many of us, our role has been mostly examining the animal, writing a report on our findings, and possibly testifying in court. But as the field of veterinary forensics develops, it is becoming apparent there is so much more that veterinarians can contribute in cases involving animals and, as we will see, in cases involving humans as well.

For many years our collective interest in veterinary forensics was limited to looking at blood, hair, and tissue to identify whether the samples were of human or animal origin, and sometimes to identify the species of origin; this was especially the case in wildlife forensics. However, in the 1990s, interest in veterinary forensics began to rise. At that time Frank Ascione and Randall Lockwood, both psychologists studying the human-animal bond, published work identifying a link between animal abuse and domestic abuse. Overnight, veterinarians were being called upon to investigate animal abuse to support investigations into human abuse. However, at that time we did not have the knowledge or expertise to investigate cases at a level that would stand up in court and survive cross-examination.

Since then, veterinarians interested in forensic medicine have begun to self educate, turning to our counterparts in human medicine for direction and inspiration. I think it is safe to say that both the UK and the US have become leaders in veterinary forensics. While Canada has followed in developing veterinary forensics and recognizing its importance in preventing both human and animal cruelty, our nation is sadly lacking in enthusiasm. Occasional lectures or workshops have been offered to help bring practitioners up to speed on forensics, but any formal forensic training has yet to materialize. In 2016, the September issue of *Veterinary Pathology* was dedicated to veterinary forensic pathology, helping to fill the void in forensic pathology at the time.



**TOP:** A severely underweight dog (BCS 2) with overgrown claws.  
**BOTTOM LEFT:** Dog with a heavily matted coat obstructing the eyes, ears, and mouth.  
**BOTTOM RIGHT:** Dog with oro-nasal fistula caused by untreated severe dental disease.

**LEFT (PAGE 25):**  
 Documenting possible chemical burns on a cat's feet.  
**RIGHT (PAGE 25):**  
 Gunshot entrance wound on a cat.

One of the roadblocks that I see in veterinary forensics is our lack of collaboration with law enforcement. I don't think it is an intentional unwillingness to work together but rather a lack of understanding by law enforcement of what assets we bring to forensic investigations. Certainly veterinarians should be involved in any legal cases where animals are the victims. They can also play an important role when animals are involved but may not be the primary victim. Many domestic abuse cases involve animals, as do child abuse cases. In a case where a starving dog is found in a home along with a starving child, the dog may not be investigated as a victim, but rather as evidence used to build a stronger case of neglect of the child. There are many domestic abuse cases where animals can provide evidence. We have to do a better job of informing law enforcement what our skills are and how we can add to the investigation.

**"WE HAVE VETERINARY FORENSIC RESOURCES AVAILABLE TO US THAT LAW ENFORCEMENT LIKELY DOESN'T KNOW EXIST."**

Another scenario that most veterinarians and law enforcement staff don't think about is animals as witnesses. While they may not be able to testify directly, they can speak in other ways. Their hair, blood, urine, feces, and DNA can help to place perpetrators at a crime scene. There was a case where a woman had been sexually assaulted by her former boyfriend. The investigators were unable to place the man at the home of the victim due to lack of evidence until she remembered that her dog had urinated on the front wheel of the perpetrator's car. The investigators collected swabs of the urine still on the wheel and isolated DNA that matched the victim's dog's DNA. As well, animal hair has been useful in many cases to place victims and perpetrators alike at a crime scenes, as has animal DNA regularly been used in poaching cases.

Veterinarians don't always realize that there are contributions they can make to an investigation outside of our examination rooms. Veterinarians at a crime scene will see things that regular

investigators may overlook, such as the implications of animal behaviour for a scene that is being reconstructed. Blood splatter patterns take on new meaning when seen through the lens of a veterinarian.

We have veterinary forensic resources available to us that law enforcement likely doesn't know exist. We have a growing canine DNA database housed at the University of California-Davis: the Canine Combined DNA Index System, or Canine CODIS. This was started to help investigate dog fighting cases. A cat hair database has been set up in the UK and the US using mitochondrial DNA. Animal hair can be transferred from perpetrator to victim and vice versa, helping enormously to link perpetrators and victims together.

Where there has been a paucity of resource material available to general practitioners to help them with forensic cases, we now have excellent resource material to help us. Dr. Melinda Merck's textbook *Veterinary Forensics: Animal Cruelty Investigations* is a great resource as is *Veterinary Forensics: Investigation, Evidence Collection, and Expert Testimony*, edited by Rogers and Stern. Another invaluable resource is the two-volume *Veterinary Forensic Pathology* from 2018, edited by Jason W. Brooks.

As our knowledge of veterinary forensics grows and evolves, we are finding an ever emerging role in the use of 3D imaging: CT, MRI, and now photogrammetry. These, along with 3D printing, can help with documentation and understanding of wounds, and these models also give us a tool to use for teaching and demonstration during expert testimony.

Veterinary forensics is moving rapidly as it tries to catch up with our counterparts in human forensics. I hope we can start to introduce veterinary forensics to our students, possibly as an elective, and to introduce our local law enforcement to the skills and knowledge that we can bring to help with of both animal and human investigations. [WCV](#)



PHOTOS COURTESY HOLLY TILLOTSON, DVM

PHOTO COURTESY JENNIFER WOOLF, MS, DVM, WOOLF VETERINARY FORENSICS CONSULTING

# CATCH AS CATS CAN: UPDATING KNOWLEDGE ABOUT FELINE ZOONOSES

BY MARGIE SCHERK, DVM, Dipl. ABVP (FELINE)

The American Association of Feline Practitioners (AAFP) published a new set of guidelines on feline zoonoses in December 2019. Written by veterinarians and physicians, the guidelines are designed to help members of these healthcare groups understand what the realistic risks are, and to inform and allay the fears of all stakeholders, including clients and cat owners. The panellists drew on veterinary and human zoonotic literature as well as recommendations from groups listed in the resources section on page 28. This summary provides updated practical advice for healthcare professionals when making recommendations to people living with or working with cats. It is not a comprehensive review of the guidelines. The resources section includes client information and supplemental material.

By definition, zoonotic diseases are those that can be transmitted from non-human vertebrates to humans. While it is possible for anyone to become infected, the people most at risk are those with less robust immune systems. This includes people with AIDS, people receiving immunosuppressive medication (e.g., glucocorticoids, chemotherapy, and agents to prevent organ rejection), splenectomized individuals, pregnant women, adults over 65, and children (especially under the age of five).

Veterinary and human healthcare providers

should be aware of zoonotic issues. These should not deter people from adopting a cat; however, people need to be informed so that they can make appropriate decisions. Veterinarians and physicians are encouraged to interact when a veterinary client or human patient has questions and when a cat is diagnosed with a condition of zoonotic importance. Information regarding zoonotic agents, routes of transmission, principal clinical syndromes in people, and clinical signs in cats is available through the AAFP guidelines ([catvets.com/guidelines/practice-guidelines/zoonoses-guidelines](http://catvets.com/guidelines/practice-guidelines/zoonoses-guidelines)).

People can become infected via:

- Direct contact with feces, infected skin, respiratory secretions, or urogenital secretions.
- Saliva from bites or grooming open wounds and scratches.
- Contaminated food or water.
- Shared exposure to vectors.
- Sharing an infected environment.

## BASIC RECOMMENDATIONS FOR PEOPLE WORKING OR LIVING WITH CATS

- Wash your hands with soap and water after and between handling cats or their litter.
- Don't get bitten, but if you do, see your physician.
- Avoid needle sticks.
- Treat all cats regularly for external and internal parasites.
- Don't feed raw food.
- Take a travel history.
- Don't routinely reach for antibiotics in cats with diarrhea unless they have sepsis.
- Educate veterinary staff to recognize high-risk situations and be especially careful.

## FEEDING AND EATING

Do NOT feed cats or dogs raw food. Numerous organizations advise strongly against feeding raw or undercooked protein to pets: these include the Canadian Veterinary Medical Association, American Veterinary Medical Association, American Animal Hospital Association, Companion Animal Parasite Council, and Centers for Disease Control and Prevention. All meat should be cooked. Raw protein diets are a health risk not just for the animals eating the diet, but also for other animals, for humans in contact with those animals or their feces, and for the public. Freezing meat does not kill all bacteria, and feeding raw meat to cats or dogs can amplify enteropathogenic bacteria in feces (see Marks et al. in the resources section). A recent study (see Van Bree et al. in the resources) evaluated 35 frozen pet food products containing raw meat, bones, and animal byproducts and found that 80 per cent of these products contained *E. coli* spp., including *E. coli* O157:H7. *Listeria monocytogenes* was present in 54 per cent.

Wash your hands after handling meat, whether for pets or people, and after handling any pet food. Don't share food utensils with cats. Wash all produce and fruit carefully, and remember that water from the environment should be filtered, boiled, or chemically treated before drinking.

## TOXOPLASMOSIS

Myths and misunderstandings about *Toxoplasma gondii* remain. Cat ownership is not a risk factor for toxoplasmosis, even in HIV-infected people. Pregnant women do not need to rehome cats they already own, but they should not adopt a new cat or handle stray cats, especially kittens. And they can delegate the daily litter cleaning to someone who isn't pregnant. If this is not possible, they should wear disposable gloves and wash their hands with soap and water afterward.

To keep cats from being exposed, prevent hunting and don't feed cats undercooked meat. Cats only shed viable oocysts for up to three weeks (after that they develop immunity). Cats that are positive for *T. gondii* antibodies are unlikely to be a direct public health risk. Oocysts require one to three days to sporulate and become infectious, so scooping the litter to remove fecal material once a day is recommended to prevent exposure during that narrow window.

Oocysts remain infectious for up to 18 months, making gardening or eating unwashed produce a risk. Ingesting sporulated *T. gondii* oocysts is far more likely to be from environmental contamination (gardening without gloves, eating unwashed produce, handling raw meat, eating undercooked meat, or drinking unpasteurized milk) rather than from petting cats. To avoid becoming infected with *T. gondii*, cook meat to at least 63°C (145°F). Cook ground meat (excluding poultry) to at least 71°C (160°F) and all poultry products to at least 74°C (165°F), as measured with a food thermometer placed in the thickest part of the meat.

## BITES AND SCRATCHES

Avoid getting bitten and scratched. Use (and teach clients) cat-friendly handling techniques (see the resources). Seek medical attention for all cat bites and deep scratches, especially if you might be immunodeficient. Cat bites and scratches routinely become infected by *Pasteurella* sp. or *Staphylococcus* sp., resulting in cellulitis; however, 28–80 per cent of bites reportedly can result in severe illness in immunocompetent people. *Pasteurella* sp. and *Capnocytophaga* sp. are associated with systemic illness in immunocompromised people. Also, don't let cats lick human abrasions or wounds.

Rabies is the most serious disease to be transmitted by bites and scratches and is life-threatening. In British Columbia, we are fortunate to not be at a high risk. Although several species of bats carry rabies, the prevalence is only about 0.5 per cent. However, cats may play with a rabid bat even if they don't have free access to the outdoors (e.g., on a balcony). (Never touch a bat yourself.) Based on the AAFP 2013 vaccination guidelines, rabies vaccination is optional in BC. However, the cat may have travelled from or be travelling to an area in which rabies is endemic. Get a travel history!

Cat scratch disease is a result of infection by *Bartonella henselae*, a bacterium found in flea frass. While most infected cats are asymptomatic, bartonellosis may cause uveitis, endocarditis, and CNS disease. Testing or treating healthy cats for *Bartonella* infection is not indicated unless they live with an immunocompromised person. Flea feces under the nails is transmitted by scratching and potentially by biting. Clients should be advised to prevent flea infestation with year-round flea control in all cats, even in BC. Declawing is not recommended (and not permitted in BC). Recommending at-home nail trims might be helpful.

## EXUDATES, SECRETIONS, AND EFFUSIONS

Sporotrichosis and dermatophytosis (ringworm) may be acquired from an infected cat. Cats with draining tracts should be evaluated for sporotrichosis. While ringworm in people is more often from other species, household cats should be cultured even if no lesions are seen, as they may share an infected environment. A thorough history, including past travel, is required to raise suspicion of infection with other fungi including *Cryptococcus*, *Aspergillus*, *Histoplasma*, *Blastomyces*, or *Coccidioides* spp. Infection with *Cheyletiella* sp. can occur through a shared infected environment.

While cats may carry methicillin-resistant *Staphylococcus aureus* and *Staphylococcus pseudintermedius*, they are generally infected by humans ("reverse zoonosis"). The World Association for Veterinary Dermatology has excellent guidelines for dealing with cats with suspected resistant *Staphylococcus* species (see resources).

Ocular and respiratory zoonoses from cats are uncommon. In general, *Bordetella bronchiseptica*, *Chlamydomyces felis*, and influenza viruses cause mild disease in cats and in rare cases may be transmitted to people. Wash your hands.

Cats with fever, cough, or dyspnea and a history of living and hunting in an area in which *Yersinia pestis* or *Francisella tularensis* are endemic should be handled with great care to avoid transmission of respiratory secretions.

Birthing and aborting queens infected with *Coxiella burnetii* pose a risk to people attending them. Wear masks and gloves. Q fever should be mentioned as a differential to the physician if a person develops respiratory disease or fever 4–30 days after exposure.

## ENTERIC ZOONOSES

To protect yourself from enteric zoonoses:

- Wash your hands. Scott Weese's version of this advice is "Don't eat poop!"

- Handle raw meat and milk carefully.
- Don't let cats (or dogs) drink from the toilet.

The prevalence of enteric zoonotic agents is highest in young cats with diarrhea; however, cats may also be asymptomatic. Therefore, the minimum database to evaluate whether cats with acute diarrhea may harbour enteric zoonoses is a fecal flotation and a *Giardia* species antigen assay or immunofluorescent assay (despite assemblage specificity). Healthy cats or cats with diarrhea but without sepsis that are found to have *Salmonella* spp. or *Campylobacter* spp. should not be treated with oral antibiotics to prevent antimicrobial resistance or inducing prolonged bacterial shedding.

Some organisms are infectious when passed in feces of infected cats. These include *Campylobacter* spp., *Salmonella* spp., and *Yersinia enterocolitica*. Infections with *Giardia* spp. and *Cryptosporidium felis* are usually with cat-specific strains that are unlikely to infect humans. Like *Toxoplasma gondii*, *Ancylostoma* spp. and *Toxocara cati* require a period outside the cat before becoming infectious to humans. Infection is from environmental sources or ingesting contaminated food or water.

Deworm kittens and continue scheduled deworming for adult cats as per the Companion Animal Parasite Council recommendations (capcvet.org). Preventatives against roundworms and hookworms should also be used year-round.

#### VECTOR-BORNE ZOOSES

Fleas can transmit *Bartonella* spp., *Yersinia pestis*, and *Rickettsia felis*. Ticks can spread *Francisella tularensis*, *Borrelia burgdorferi* and the rickettsia *Anaplasma phagocytophilum* and *Ehrlichia* spp. All cats going outside should be treated with acaricides to control fleas and ticks. Control flies and cockroaches that may bring zoonotic agents into the home. Travel history is important, as cats from Mediterranean countries may

**“WITH COMMON SENSE AND HYGIENIC BEHAVIOUR, THERE IS NO REASON PEOPLE, INCLUDING THOSE WITH LESS ROBUST IMMUNE SYSTEMS, CAN'T LIVE WITH ANIMAL COMPANIONS.”**

be a source of *Leishmania*.

#### HELPING IMMUNOCOMPROMISED PEOPLE

Signs or posters in the clinic that describe which conditions result in immunocompromise enable people to identify themselves discreetly and to receive appropriate information. To reduce the risk of zoonotic infection, people with compromised immune systems who want to adopt a new cat should consider a clinically healthy, arthropod-free adult from a private home; this cat should be examined by a veterinarian for health and potential zoonotic risks before moving in. Immunocompromised people should avoid cats of unknown health status, especially those with diarrhea. Feces should be scooped daily, preferably not by the immunologically fragile person.

#### SUMMARY

Cats without gastrointestinal, ocular, respiratory, skin, or urogenital tract disease that receive internal and external parasite control are unlikely to be a zoonotic risk. There are many emotional, mental, and physical benefits from living with cats and other pets. With common sense and hygienic behaviour, there is no reason people, including those with less robust immune systems, can't live with animal companions. [WCV](#)



To access the 2019 AAEP Zoonoses Guidelines, client brochure, or client resource webpage, visit [catvets.com/zoonoses](http://catvets.com/zoonoses). Used with permission.

#### RESOURCES

- American Association of Feline Practitioners Zoonoses Guidelines: [catvets.com/guidelines/practice-guidelines/zoonoses-guidelines](http://catvets.com/guidelines/practice-guidelines/zoonoses-guidelines)
- World Small Animal Veterinary Association One Health: [www.wsava.org/Committees/One-Health-Committee](http://www.wsava.org/Committees/One-Health-Committee)
- Cat Healthy: [cathealthy.ca/protocols/zoonotic-diseases](http://cathealthy.ca/protocols/zoonotic-diseases)
- Centers for Disease Control: [cdc.gov/healthypets](http://cdc.gov/healthypets)
- All things infectious in cats: [abcdcatsvets.org](http://abcdcatsvets.org)
- All things infectious: [wormsandgermsblog.com](http://wormsandgermsblog.com)

#### Food handling

- <https://canadianveterinarians.net/documents/raw-meat-based-diets-for-pets>
- <https://avma.org/policies/raw-or-undercooked-animal-source-protein-cat-and-dog-diets>
- <https://aaha.org/about-aaha/aaha-position-statements/raw-protein-diet>
- <https://cdc.gov/healthypets/publications/pet-food-safety.html>
- <https://www.wormsandgermsblog.com/files/2008/04/M2-Raw-Meat-Owner1.pdf>
- Marks, S. L., S. C. Rankin, B. A. Byrne, J. S. and Weese. "Enteropathogenic bacteria in dogs and cats: Diagnosis, epidemiology, treatment, and control." *Journal of Veterinary Internal Medicine* 25, no. 6 (November 2011): 1195–208. <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1939-1676.2011.00821.x>.
- Van Bree, F. P. J. et al. "Zoonotic bacteria and parasites found in raw meat-based diets for cats and dogs." *Veterinary Record* 182, no. 2 (January 2018): 50–50. doi:10.1136/vr.104535.

#### Toxoplasmosis

- [cdc.gov/parasites/toxoplasmosis/epi.html](http://cdc.gov/parasites/toxoplasmosis/epi.html)
- [cdc.gov/parasites/toxoplasmosis/prevent.html](http://cdc.gov/parasites/toxoplasmosis/prevent.html)

#### Rabies in British Columbia

- [bccdc.ca/Documents/BC%20Rabies%20Guidance%20for%20Veterinarians\\_Nov%202017.pdf](http://bccdc.ca/Documents/BC%20Rabies%20Guidance%20for%20Veterinarians_Nov%202017.pdf)
- [bccdc.ca/Documents/BC%20rabies%20summary%20table%20for%20veterinarians.pdf](http://bccdc.ca/Documents/BC%20rabies%20summary%20table%20for%20veterinarians.pdf)
- [wsava.org/WSAVA/media/Documents/Guidelines/WSAVA-Vaccination-Guidelines-2015.pdf](http://wsava.org/WSAVA/media/Documents/Guidelines/WSAVA-Vaccination-Guidelines-2015.pdf)
- [catvets.com/guidelines/practice-guidelines/feline-vaccination-guidelines](http://catvets.com/guidelines/practice-guidelines/feline-vaccination-guidelines)
- [catvets.com/public/PDFs/PracticeGuidelines/Guidelines/Vaccination/Rabies\\_FactSheet.pdf](http://catvets.com/public/PDFs/PracticeGuidelines/Guidelines/Vaccination/Rabies_FactSheet.pdf)

#### Reducing stress and the likelihood of being bitten or scratched

- Training in how to be a cat friendly practice: [catvets.com/cfp/veterinary-professionals](http://catvets.com/cfp/veterinary-professionals)
- How a practice can minimize stress for the cat and client during veterinary visits: [catvets.com/education/online/videos/make-feline-friendly-changes](http://catvets.com/education/online/videos/make-feline-friendly-changes)
- Scratching educational resources: [catvets.com/content/scratching-resources](http://catvets.com/content/scratching-resources)

#### Methicillin-resistant *Staphylococcus* guidelines

- Morris, D. O., et al. "Recommendations for approaches to methicillin-resistant staphylococcal infections of small animals: Diagnosis, therapeutic considerations and preventative measures: Clinical consensus guidelines of the World Association for Veterinary Dermatology." *Veterinary Dermatology* 28, no. 3 (2017): 304–e69. <https://onlinelibrary.wiley.com/doi/epdf/10.1111/vde.12444>.

#### Information for clients

- [catvets.com/public/PDFs/PressReleases-Media/AAFP\\_Feline\\_Zoonoses\\_Client\\_Broch\\_Final.pdf](http://catvets.com/public/PDFs/PressReleases-Media/AAFP_Feline_Zoonoses_Client_Broch_Final.pdf)
- [bccdc.ca/resource-gallery/Documents/Educational%20Materials/Epid/Zoonoses/rabiesbrochure.pdf](http://bccdc.ca/resource-gallery/Documents/Educational%20Materials/Epid/Zoonoses/rabiesbrochure.pdf)
- [cdc.gov/parasites/toxoplasmosis/resources/printresources/catowners\\_2017.pdf](http://cdc.gov/parasites/toxoplasmosis/resources/printresources/catowners_2017.pdf)

### PRACTICE FOR LEASE, SALE OR ?

Well established (1979) centrally located companion animal practice in Penticton is looking for BC licensed Veterinarian(s) to take over lease from retiring Vet as of June, 1/20. Several options are available. These include lease renewal, purchase of the operating company with equipment and patient records, and/or purchase of the clinic real estate holdings.

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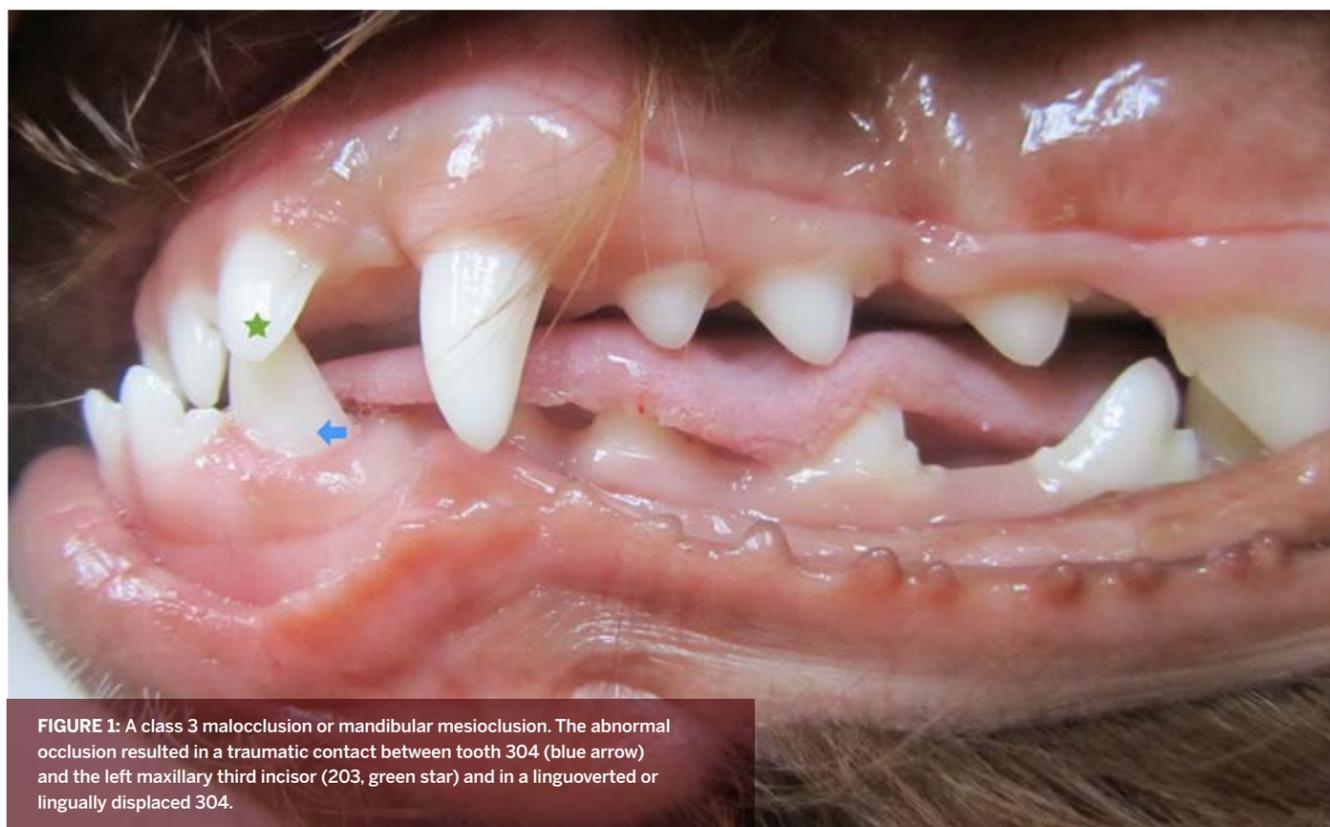
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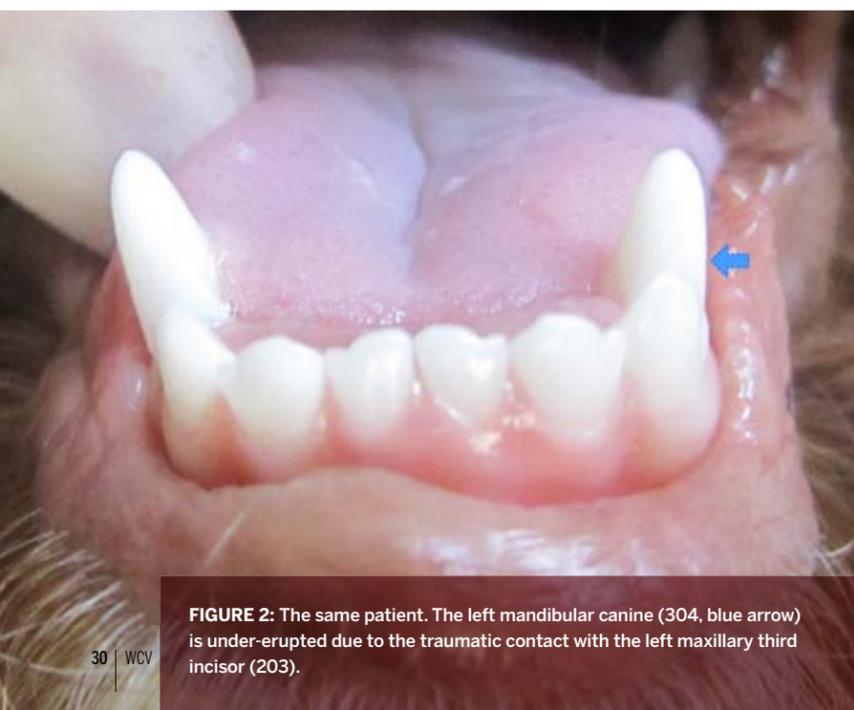
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# VETERINARY DENTAL RADIOGRAPHY:

A CASE REPORT  
BY ANGELICA BEBEL, DVM,  
Dipl. AVDC



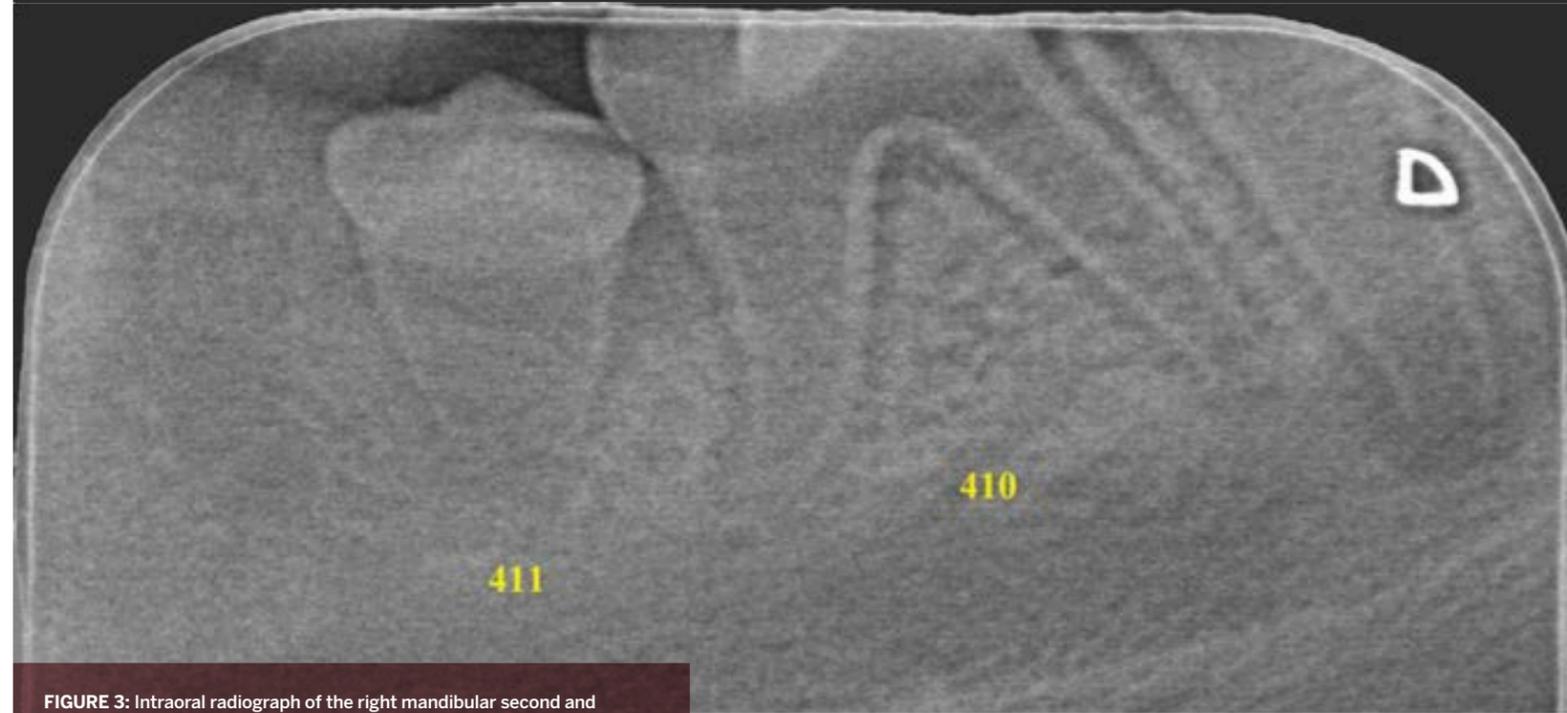
**FIGURE 1:** A class 3 malocclusion or mandibular mesioclusion. The abnormal occlusion resulted in a traumatic contact between tooth 304 (blue arrow) and the left maxillary third incisor (203, green star) and in a linguoverted or lingually displaced 304.



**FIGURE 2:** The same patient. The left mandibular canine (304, blue arrow) is under-erupted due to the traumatic contact with the left maxillary third incisor (203).

**A**six-month-old female Labradoodle presented for evaluation and treatment of a malocclusion. On physical examination, the patient was bright, alert, and responsive. No signs of systemic disease were detected. An initial awake oral examination found this patient had a class 3 malocclusion or mandibular mesioclusion. This occurs when the mandible resides mesial or rostral to its normal location in relation to the maxilla. In this patient, the abnormal occlusion resulted in a linguoverted or lingually displaced left mandibular canine (304) and a traumatic contact between tooth 304 and the left maxillary third incisor (203) (see Figure 1). Furthermore, this contact was preventing full eruption of tooth 304 (see Figure 2).

Treatment options, including corrective and interceptive orthodontics, were discussed, and extraction (interceptive orthodontics) of 203 was chosen. This

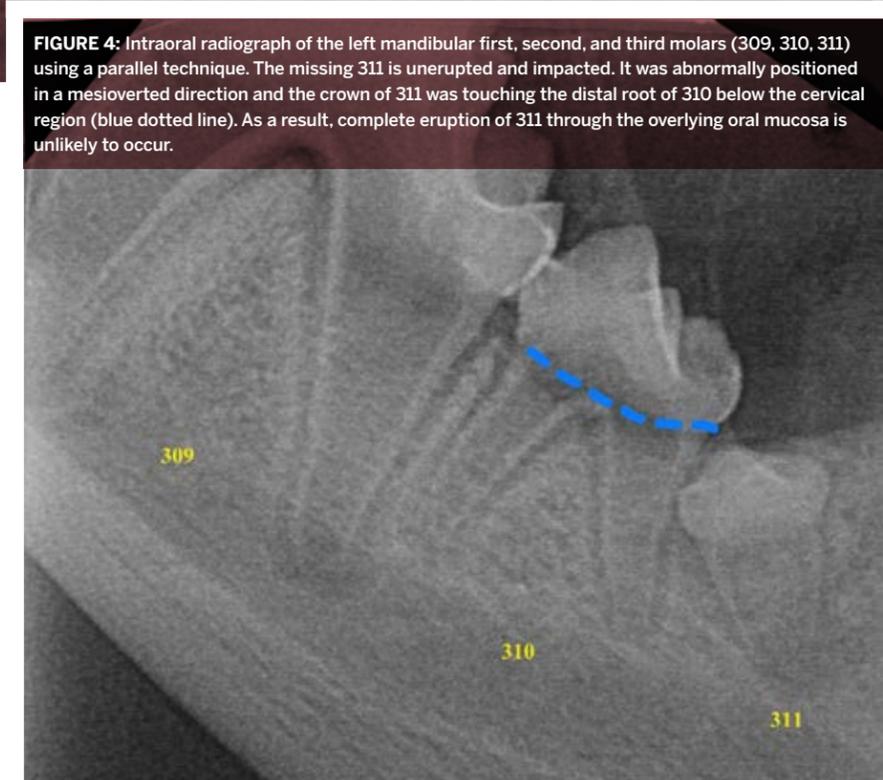


**FIGURE 3:** Intraoral radiograph of the right mandibular second and third molars (410, 411) using a parallel technique. In this radiograph, the unerupted 411 is normally positioned.

would remove the traumatic contact between 203 and 304, resulting in a more comfortable occlusion while enabling additional eruption of 304. In addition, extraction of tooth 203 would create an appropriate space for the placement of tooth 304 rostral to the left maxillary canine (204).

The patient was anesthetized, and a complete oral examination was performed. This examination confirmed the malocclusion and traumatic contact between 203 and 304. There were no retained deciduous teeth, and all of the adult dentition was present except for the left and right mandibular third molars (311, 411), which appeared to be missing. Full-mouth intraoral radiographs were obtained and confirmed the presence of both unerupted molars (see Figures 3 and 4). However, on radiographs, 311 was abnormally positioned (mesiovertd). As a result, the crown of 311 was touching the distal root of the left mandibular second molar (310) below the cervical region (Figure 4).

During the examination of a juvenile patient's adult dentition, one would expect to see areas with absent teeth. Which teeth are missing will depend on the patient's age and the stage of permanent tooth eruption. In dogs, replacement of deciduous teeth by permanent teeth usually occurs between three and seven months of age. Eruption of the molars typically occurs between five and seven months, and this can vary depending on the breed and size of the dog. In the case presented, one might assume that the missing 311 and 411 had not yet erupted due to the young age of the patient. However, this patient also presented with other dental abnormalities (a class 3 malocclusion), and in such cases, obtaining full-mouth dental radiographs is always recommended. Furthermore, intraoral dental radiographs are necessary to differentiate between missing teeth from



**FIGURE 4:** Intraoral radiograph of the left mandibular first, second, and third molars (309, 310, 311) using a parallel technique. The missing 311 is unerupted and impacted. It was abnormally positioned in a mesiovertd direction and the crown of 311 was touching the distal root of 310 below the cervical region (blue dotted line). As a result, complete eruption of 311 through the overlying oral mucosa is unlikely to occur.

unerupted teeth or other dental pathologies.

An unerupted tooth is a tooth that has not perforated the oral mucosa. While the mechanisms that control tooth eruption are not fully understood, it is known that there must be a space or a path available into which a tooth can erupt. Tooth impaction occurs when a physical barrier is present, such as an adjacent tooth, bone, or soft tissue, whereas an embedded tooth is an unerupted tooth whose eruption is compromised by lack of eruptive force. In the case of the patient above, 311 is impacted because it is abnormally positioned with the crown in contact with the distal root of 310.

The early detection of an impacted or embedded tooth is important to prevent the potential formation of a dentigerous cyst. These lesions are a type of odontogenic cyst that forms secondary to an embedded or impacted

PHOTOS COURTESY ANGELICA BEBEL, DVM, Dipl. AVDC

permanent tooth and can cause significant bone destruction and potentially secondary pathologic fractures due to the expansion of the cyst. Surgical removal of the impacted or embedded tooth with removal of the cyst lining is necessary. In severe cases, more extensive surgery may be required, including extraction of additional surrounding teeth, a mandibulectomy, or a maxillectomy.

While unerupted teeth can occur in any breed of dog, a study performed by Babbitt et al. in 2016 demonstrated that brachycephalic patients are particularly prone to this condition.<sup>1</sup> The most commonly unerupted tooth in dogs found in this study was the left and right mandibular first premolar (305, 405). Furthermore, 29 per cent of those unerupted teeth found had radiographic evidence of clinically significant cyst formation requiring surgical intervention. Premolars typically erupt between four and six months of age. Therefore, a thorough oral examination should begin as soon as possible in all juvenile patients. Those with dental or skeletal malocclusions or retained deciduous teeth require immediate treatment. Other abnormalities, such as missing teeth, should be re-examined at a later date or during a scheduled spay or neuter procedure. This should include counting the adult dentition and obtaining radiographs for areas with absent teeth. Extraction for all impacted or embedded teeth is recommended to avoid potential cyst formation. Adult patients seen during

annual physical examinations should also receive the same thorough examination, particularly if there is no known history of a dental procedure with extractions to explain the missing teeth.

In this patient, tooth 311 had an abnormally positioned crown. Therefore, removal of the overlying gingiva or an operculectomy would not be possible treatments as tooth 310 would prevent normal eruption of 311. Extraction of 311 was the recommended treatment to prevent possible formation of a dentigerous cyst and to maintain the periodontal health of 310. A follow-up examination was also recommended in three to four months to evaluate the completed eruption of 411. **WCV**

<sup>1</sup> S. G. Babbitt, V. M. Krakowski, and I. R. Luskin. "Incidence of radiographic cystic lesions associated with unerupted teeth in dogs." *Journal of Veterinary Dentistry* 33, no. 4 (December 2016): 226–233.

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#### MENTAL HEALTH RESOURCES IN BC

- BC211 provides free information and referral regarding community, government, and social services in BC. Call 211 for information and referrals.
- 310Mental Health Support at 310.6789 (no area code needed) for emotional support, information, and resources specific to mental health.
- HealthLinkBC ([healthlinkbc.ca](http://healthlinkbc.ca)) is a website with resources and phone numbers for issues including mental health and substance use.
- Canadian Mental Health Association ([cmha.ca](http://cmha.ca)) is an excellent source of information about mental illness.
- Not Myself Today Campaign ([www.notmyselftoday.ca](http://www.notmyselftoday.ca)) offers good resources on how to talk to a co-worker or friend if you are concerned about their mental health.

**M**any years ago as a preveterinary student, I worked with a quirky veterinarian who spoke at supersonic speed and always appeared to have consumed an espresso a minute, all day long. One time, this veterinarian asked me to trim some suture ends on their own lacerated palm they had sutured themselves.

I thought my supervisor was weird.

Later, after leaving that practice to attend veterinary school, I would learn that this veterinarian was caught dipping into the drug cabinet and fired. Shortly thereafter they were found dead from an overdose at the new clinic. They had passed away before reaching their 28th birthday.

This person had a quirky sense of humour and was a quick learner with an undeniably brilliant mind. Although we worked together for a summer, I did not know the story, the background, or the true source of their pain. And I hadn't suspected the presence of those demons. That self-induced lacerated palm was a cry for help, a scream I never heard.

Suicide prevention is real. Research shows that 1 in 20 people may have thoughts of suicide. A lack of prevention often leads to tragic loss, a lifetime vanished forever—and another life filled with the deepest regret for actions that cannot be done over, cannot be changed, and cannot be forgiven of oneself. Perhaps one caring friend could have made all the difference for the young veterinarian mentioned above, someone's precious child, lost for eternity. I will never know.

Fast-forward to the present. In November, I had the immense pleasure of attending a highly illuminating seminar on suicide prevention. This workshop, called safeTALK, proved to be both supremely current and impressively well-designed.

And for me, long overdue.

It was intended to provide concrete guidelines for handling one of the most frightening mental health issues we could possibly encounter: that of an individual, a soul, thinking of suicide.

Faced with such a consequential situation, most of us would freeze or find ourselves lost, or worst of all, like me, utterly clueless about what to do. How could a brief

seminar provide us with tools to confidently handle such a situation?

Yet this is precisely what happened. As a workshop designed to condense the most important information into a memorable toolkit for future use, safeTALK succeeded brilliantly. I could not help feeling both immensely enriched and hugely eager to help facilitate more workshops—the words “everyone should attend this” spilled effortlessly from my mouth as the seminar progressed.

The effervescent Kathy Keil, DVM, spoke warmly and passionately about the ways we could identify and help those who may be entertaining devastating thoughts of suicide. She helped us realize that most people thinking of suicide actually want help to stay alive. They may send an “invitation,” a call for us to help, that we could miss, such as self-injury (okay, that's obvious NOW) or neglecting their work. They may speak in a hopeless, negative manner about being alone, rejected, overburdened, purposeless, with no escape, or they may show excessive moodiness, excessive worry, fear and anxiety, or excessive irritability. These are all potential red flags that a person may be thinking about suicide.

Directly asking about a person's intentions is not dangerous, as we would assume, but is the best way to gauge those intentions. If we are worried, we can simply say, “I am worried about you.” Easy, but potentially of enormous help. If things are more serious (frequent angry outbursts, threatening behaviour, agitation), we can say, “You need help now.”

If a person expresses suicidal thoughts, you can say, “Let's go to an emergency clinic together. Let's get help now.” Call 911. NOW. Or call the suicide prevention hotline: 1.833.456.4566. Or text “Start” to 45645.

I was floored to learn in detail about the specific resources available to help someone in distress. I found this monumentally empowering. I expelled a heavy sigh of relief knowing that we can help in one of the most difficult situations imaginable.

I now know that there is so much that can be done to help others. First, we can notice signs of distress, more subtle than the self-harm I was too naive to identify. We can start talking, showing care and compassion but never, ever, judgment. And we can direct a person in distress to one of many excellent resources and expert organizations designed to help them turn their lives around.

At the conclusion of the safeTALK seminar, I found myself feeling far more hope than I would expect—imagining that I could potentially be of genuine use in such a difficult situation. I strongly encourage not just everyone in the veterinary community, but every living person to sign up to attend this seminar.

It has been more than 20 years, but I can still see that veterinarian offering their wound to me, palm up. And I judged. And I still hang my head in shame.

I know—we all know—that we can do better than this. **WCV**



# GETTING HELP IN AN UNREGULATED INDUSTRY:

## THE PROBLEM WITH HORSE BEHAVIOUR PROBLEMS

BY LAUREN FRASER, MSc, CHBC

**“THE PROGNOSIS FOR RESOLVING BEHAVIOUR PROBLEMS IS MORE FAVOURABLE WHEN INCITING PHYSICAL ISSUES ARE ADDRESSED WITHOUT DELAY, MAKING ROUTINE WELLNESS EXAMS OR ELECTIVE PROCEDURES AN IDEAL TIME TO ASK OWNERS ABOUT THEIR HORSE’S BEHAVIOURAL HEALTH.”**

**J**ust as with medical problems, resolving behaviour problems in horses requires a qualified professional. For the owner, equine behaviour problems can result in stress, increased expenses or lost revenue, devaluation of the horse, risk of injury, and damage to the horse-human bond. Horses displaying unwanted behaviours may experience resultant short-term or chronic stress, compromised welfare, or euthanasia. Certain behaviour problems may also prevent owners from providing the health care the horse needs to live a longer, pain-free life. To complicate matters further, misguided attempts to treat behaviour problems can result in additional distress and compromised welfare for the horse, should the client hire an unqualified professional.

Clients experiencing horse behaviour problems seek help from numerous sources. Because many behaviour problems have an underlying physical, and often pain-related cause, veterinarians are in a unique position to help in these situations. The prognosis for resolving behaviour problems is more favourable when inciting physical issues are addressed without delay, making routine wellness exams or elective procedures an ideal time to ask owners about their horse’s behavioural health.

If underlying physical causes have been ruled out, veterinarians can still be a valuable source of evidence-based information to help clients resolve the issue. Even in instances where a veterinary facility does not provide behaviour modification services, veterinarians can educate clients and positively influence the choices they make when seeking help. Helping a client choose an appropriate professional increases the likelihood of a positive outcome, while simultaneously promoting positive welfare for the horse and enhancing the human-horse bond.

### STATE OF THE INDUSTRY

When considering whom to refer to when addressing behaviour problems, it is critical to understand the skill sets of various equine professionals within the industry. In general, most equine professionals have specific areas of expertise. For example, horse trainers teach horses to consistently respond to set cues by performing desired behaviours, often for a specific discipline (that is, they teach a horse how to perform a new, wanted, behaviour). Riding instructors and coaches teach people how to ride, or coach them to excel in a specific discipline or horse sport. Behaviour consultants or animal behaviourists help horse owners resolve or eliminate unwanted behaviours. These behaviours are frequently accompanied by an adverse emotional response, for example anxious behaviour when trailer loading or being clipped, specific phobias about injections or the farrier, aggression, “herd-bound” behaviour, stereotypic behaviours, bucking, bolting, and so on.

In Canada, the animal training industry is wholly unregulated; any person can call themselves a horse trainer or behaviour professional, regardless of their education or experience. Such lack of trainer regulation perpetuates the use of aversive and inappropriate training techniques, and offers owners little recourse should their horse suffer a physical or behavioural injury during training.

Without an understanding of how horses learn, any animal trainer’s toolbox will be limited. Recent research has shown that many horse trainers and riding coaches are unable to define basic terms of learning theory. This lack of knowledge about how animals learn is especially problematic when trainers attempt to address unwanted behaviours. Unwanted behaviours in animals may occur for numerous reasons, such as pain or other underlying medical conditions, genetics, emotions such as fear, or prior reinforcement. The techniques commonly used to appropriately address unwanted behaviour including counterconditioning, systematic desensitization, or differential reinforcement, which are not generally used or understood by trainers or riding instructors.

Even though the way animals learn is a well-studied science, this information is slow to be accepted in the horse world. Rather, many popular training modalities are based on handed-down traditions and incorrect information about horse behaviour. Without academic understanding of the techniques they are using, trainers may unknowingly use positive punishment and flooding to try and address unwanted behaviours. Numerous animal behaviour organizations, including the American Society of Veterinary Animal Behavior, recommend against such techniques because they increase the risk of causing animals pain, fear, or distress, which can potentially worsen the existing problem, create new problems, or damage the human-animal bond.

Sadly, as can be seen in countless horse training DVDs and training demonstrations at horse expos, these commonly used techniques appear, to the untrained eye, to work—often providing seemingly instantaneous results whereby the unwanted behaviour stops. But effectiveness isn’t enough: cessation of unwanted behaviour does not mean that the animal’s underlying motivations to perform the behavior have been addressed, it just means that the behaviour has been temporarily suppressed. For example, a horse refusing to trailer load may quickly load when the trainer punishes any non-loading behaviour, but only because the consequence for not loading is worse than the fear or pain that may have motivated non-loading behaviour in the first place. All behaviour serves a purpose for the animal performing it; non-loading could be a way for an arthritic horse to avoid pain, or for a fearful horse to reduce anxiety. Additionally, training techniques that result in behaviour suppression cannot tell the horse what behaviour they should do instead, nor do they enhance the bond between horse and human.

### REFERRAL OPTIONS

While qualified help can be hard to find when horses have behaviour problems, it can be done. Here are some guidelines to aid your client in getting the help they need.

#### BOARD-CERTIFIED VETERINARY BEHAVIOURISTS

As underlying physical conditions frequently cause horses to behave in ways that owners view as problematic, a veterinarian should be a client’s initial appointment. Many veterinary behaviourists will work remotely with a client’s primary veterinarian to help with diagnosis and to devise treatment plans. A list of veterinary behaviourists in North America can be found at [avsab.org](http://avsab.org).

#### CERTIFIED APPLIED ANIMAL BEHAVIOURISTS

Certified applied animal behaviourists and associate certified applied animal behaviourists are academically trained animal behaviour professionals. The difference between veterinary behaviourists and certified applied animal behaviourists has been likened to that of the psychiatrist-psychologist model in human behavioural medicine. The Animal Behavior Society’s website lists both types of behaviour professionals:

[www.animalbehaviorsociety.org](http://www.animalbehaviorsociety.org)

#### CERTIFIED HORSE BEHAVIOUR CONSULTANTS

The International Association of Animal Behavior Consultants certifies animal behaviour consultants who work with dogs, cats, parrots, or horses. Members are tested on their knowledge in core areas of competency related to animal behaviour consulting, and on their adherence to least intrusive, minimally aversive (LIMA) techniques to modify behaviour. While in-person consults are ideal, in the absence of local help, consultants may also work remotely with clients. The organization’s consultant locator can be found at [iaabc.org](http://iaabc.org).

#### POSITIVE REINFORCEMENT HORSE TRAINERS

While this is still an unregulated profession, the number of horse trainers who use positive reinforcement-based training methods is increasing. These trainers use positive reinforcement in their training to teach new, wanted behaviours, but as with other horse trainers, they may lack experience in using other behaviour modification techniques or working with more challenging cases. Therefore, they may work best under the supervision of one of the professionals listed above.

## HELPING CLIENTS GET HELP

This gap in knowledge makes it challenging for owners to find qualified help for their horse's behaviour problems. Section 9.1 of the Prevention of Cruelty to Animals Act states that "(1) A person responsible for an animal must care for the animal, including protecting the animal from circumstances that are likely to cause the animal to be in distress. (2) A person responsible for an animal must not cause or permit the animal to be, or to continue to be, in distress." This presents a dilemma for equine veterinarians if they cannot determine whether a trainer they refer to might cause horses to experience distress or be using techniques not condoned by veterinary behaviour specialists.

To complicate matters, there currently is a dearth of qualified help available to horse owners. As certification of animal trainers is voluntary, the number of academically trained horse trainers or qualified behaviour professionals in Canada is minimal. In contrast, small animal veterinarians find it easier to access qualified trainers and professionals. Although dog training is equally unregulated, greater numbers of dog trainers and behaviour professionals are seeking voluntary certification with organizations committed to promoting the use of evidence-based, low-stress training techniques. While not a perfect system, it does make the task of recommending an outside trainer somewhat easier for small animal veterinarians. Equine veterinarians should

be aware of the liability and risks of referring to unregulated trainers and use caution when referring clients to outside sources for behavioural help.

## HORSE TRAINERS TO AVOID

In an absence of credentials or a specific list of how they train or modify behaviour, a trainer's website or other marketing materials can give clues to the techniques they may use. Here are some flags that may indicate caution is needed:

- Uses the term "natural horsemanship" or "horsemanship" to describe their approach.
- Uses the words "respect," "leadership," or "dominance" in describing the human-horse relationship.
- Claims to use positive reinforcement but is opposed to using food to train, or states that release of pressure is a reward.
- Trademarks their training techniques or has a proprietary methodology.
- Is observed to use techniques or equipment that cause the horse to feel pain or fear or exposes the horse to stimuli at an intensity that triggers escape or avoidance behaviours. It is *not necessary* to deliberately trigger unwanted behaviour to resolve it. Doing so is also counter-productive.
- Offers guarantees on training results.

In summary, as horse training is an unregulated industry, horse owners and equine veterinarians must do their own research when choosing a professional. There are generally no quick fixes when it comes to resolving unwanted behaviour, especially when the root of the problem lies in fear, or the behaviour has been occurring for an extended period of time. Choosing the right professional for the job will not only increase the likelihood that the unwanted behaviour can be resolved; it will also improve the horse's welfare and strengthen the human-horse bond. **WCV**



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1. Lavan RP, Armstrong R, Normile D, Zhang D, and Tunceli K. Results from a U.S. dog owner survey on the treatment satisfaction and preference for fluralaner against flea and tick infestations. *J Vet Sci Technol* (2017) 8:3. DOI: 10.4172/2157-7579.1000439  
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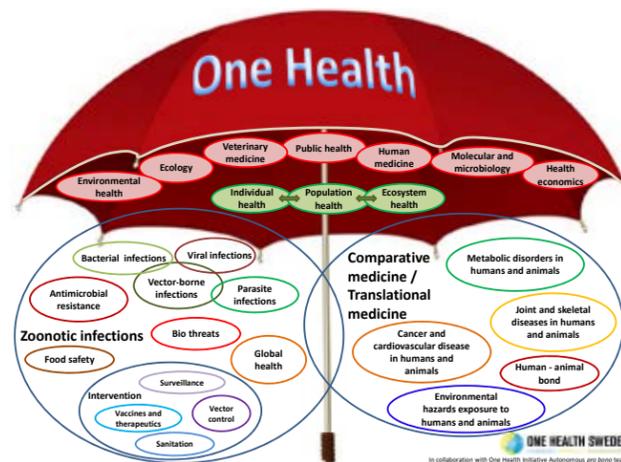
# WHAT ONE SHOULD KNOW ABOUT

# ONE HEALTH



"Bonnie" waiting to be seen at a CVO clinic event at Directions Youth Centre in July 2019.

BY DORIS LEUNG, BSc, DVM, MPH



**FIGURE 1:** One Health aims to solve problems from across disciplines and sectors of animal, human, and environmental health (OIE World Organization for Animal Health).

Source: [www.researchgate.net/publication/272096112\\_The\\_concept\\_of\\_health\\_in\\_One\\_Health\\_and\\_some\\_practical\\_implications\\_for\\_research\\_and\\_education\\_what\\_is\\_One\\_Health](http://www.researchgate.net/publication/272096112_The_concept_of_health_in_One_Health_and_some_practical_implications_for_research_and_education_what_is_One_Health)

the understanding of the One Health model. For instance, small animal practitioners act as first-line responders to educate owners on pet zoonoses, provide risk assessments on possible rabies exposures, and act as stewards in the prudent use of antimicrobials. Food production veterinarians collaborate with other stakeholders to protect public health, notably in the realm of food safety and security. Regardless of the scope of practice, veterinarians interact with and treat various animals daily, collaborate with multisectoral stakeholders, have access to robust laboratory diagnostic systems, and are committed in reporting to and collaborating with local, provincial, and national surveillance systems to protect public health.

## ONE HEALTH IN THE SMALL ANIMAL PRACTICE

Pet ownership has increased at dramatic rates and is a significant contributing factor in the increased risk of zoonoses, due to the close physical association of pets with their owners.

## WHAT IS ONE HEALTH?

One Health is an integrative approach involving veterinarians and professionals from different backgrounds to protect animal, human, and ecosystem health (Figure 1). It is defined as the understanding that “human health and animal health are interdependent and bound to the health of the ecosystems in which they exist,”<sup>1</sup> recognizing that animals and humans have a shared reservoir for pathogen exchange. The One Health initiative represents a paradigm shift, deconstructing traditional academic silos and sectors by creating an interdisciplinary approach to infectious disease research and intervention. Its multilevel interface relies on the knowledge and expertise of veterinarians, ecologists, physicians, microbiologists, epidemiologists, policy makers, and more. In addition to fostering strong partnerships and collaboration across disciplines, One Health aims to promote high-quality research, disease surveillance, and the establishment of evidence-based policy framework, tackling issues related not only to emerging zoonotic disease but also to food safety and security, antimicrobial resistance, climate change, and the recognition of the human-animal bond.

## HISTORY OF ONE HEALTH

The One Health concept can be traced back to as early as the 19th century, when public health activist and pathologist Dr. Rudolf Virchow stated that there should be no dividing lines between animal and human medicine.<sup>2</sup> Virchow appreciated the interconnectedness of diseases afflicting both animals and humans, and later coined the term “zoonoses.”<sup>3</sup> Today, the term is largely unchanged and is defined as bacterial, viral, or other infections transmitted between vertebrate animals and humans.<sup>4</sup> The unprecedented rate of global population growth, population mobility, urbanization, climate change, globalization, increased demands for food animal production, and the rising popularity of companion animals are key drivers that have resulted in an increased risk of exposure to zoonotic diseases.<sup>5</sup> It is important to note that approximately 75 per cent of emerging infectious diseases from the last decade are zoonotic in origin, and that 60 per cent of known human infectious diseases originate from animals.<sup>6</sup>

Zoonotic diseases that have garnered international attention in recent years include SARS, H5N1 influenza, Zika virus, anthrax, and Ebola virus, but many remain largely under-prioritized. Regardless of the outbreak potential, zoonotic diseases create significant burden to global, national, and community health and its economy, with negative impacts on humans, animals, and the environment. Therefore, a One Health approach to address animal and human interrelations should be considered and implemented to allow effective control and prevention of such emerging zoonotic diseases.

## ROLE OF VETERINARIANS IN ONE HEALTH

Veterinarians, with their expertise in cross-species disease diagnosis and treatment, training in infectious disease control and surveillance, and knowledge of population health and epidemiology, can play a crucial role in bridging the knowledge gap and enhancing

Approximately 35 per cent of Canadian households own a dog and 38 per cent own a cat, with an estimated 5.9 million dogs and 7.9 million cats across the country.<sup>7,8</sup> Companion animals, whether dogs, cats, small mammals, birds, or reptiles, are potential reservoirs to zoonotic diseases, and can directly or indirectly transmit diseases to their human guardians. Zoonoses in small animal practice include but are not limited to rabies, salmonellosis, leptospirosis, toxoplasmosis, ringworm, bartonellosis, borreliosis (Lyme disease), and cutaneous larval migrans. Small animal practitioners can play a key role in reducing the risk of developing a zoonotic disease through early detection and management of infected cases, as well as educating owners and the public on appropriate animal handling and husbandry, disease risk factors and transmission, and proper hygiene and sanitation techniques among owners and within the environment. Veterinarians may also ask owners whether there are immunocompromised people, pregnant women, or children in the household, as these people may be more susceptible to certain infectious diseases. Knowledge of zoonotic disease etiology, clinical symptoms, and how the disease manifests in companion animals may cause the small animal veterinarian to recommend that the pet owner seek medical advice and treatment from their family physician. Collaboration allows stakeholders including veterinarians, physicians, epidemiologists, and public health officials to share relevant information to determine whether the disease was an isolated or outbreak-related event.

Moreover, pet ownership contributes to One Health in a different aspect. The human-animal bond provides a multitude of positive protective factors to the physical and mental health of owners. Studies have shown that pet ownership could reduce cardiovascular disease and blood pressure,<sup>9</sup> promote a healthier lifestyle and tackle obesity, and support people with mental health issues. For instance, a veterinarian could discuss smoking cessation methods with a pet owner and mention how smoking at home could correlate with an increased risk of respiratory illness among companion animals.

Zoonotic diseases can be transmitted from companion, livestock, and wild animals to humans and can cause significant health and economic burden within the international, national, and local context. Public health problems could be addressed in the context of One Health, which forges interdisciplinary collaboration from veterinary, medical, and environmental health professionals that address individual health, population health, and comparative medicine.

More information on zoonoses and the One Health initiative can be found from the following resources:

- [onehealthinitiative.com](http://onehealthinitiative.com)
- [cpha.ca/one-world-one-health](http://cpha.ca/one-world-one-health)
- [cahi-icsa.ca/one-health](http://cahi-icsa.ca/one-health)
- [cphaz.ca/onehealth](http://cphaz.ca/onehealth)

## ALSO OF INTEREST

- “One Health and the expansion of veterinary education and practice in Canada”: [www.ncbi.nlm.nih.gov/pmc/articles/PMC5680741](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5680741)
- “One Health: The importance of companion animal vector-borne diseases”: [parasitesandvectors.biomedcentral.com/articles/10.1186/1756-3305-4-49](http://parasitesandvectors.biomedcentral.com/articles/10.1186/1756-3305-4-49)
- “Pets, vets and One Health”: [veterinaryrecord.bmj.com/content/170/15/376](http://veterinaryrecord.bmj.com/content/170/15/376) **WCV**

<sup>1</sup> [www.oie.int/en/for-the-media/onehealth](http://www.oie.int/en/for-the-media/onehealth)

<sup>2</sup> [ncbi.nlm.nih.gov/pmc/articles/PMC2289972](http://ncbi.nlm.nih.gov/pmc/articles/PMC2289972)

<sup>3</sup> [ncbi.nlm.nih.gov/pmc/articles/PMC2603088](http://ncbi.nlm.nih.gov/pmc/articles/PMC2603088)

<sup>4</sup> [ncbi.nlm.nih.gov/pmc/articles/PMC2958532](http://ncbi.nlm.nih.gov/pmc/articles/PMC2958532)

<sup>5</sup> [ncbi.nlm.nih.gov/books/NBK215318](http://ncbi.nlm.nih.gov/books/NBK215318)

<sup>6</sup> [bccdc.ca/health-info/disease-types/zoonotic-diseases](http://bccdc.ca/health-info/disease-types/zoonotic-diseases)

<sup>7</sup> <https://cahi-icsa.ca/preventative-animal-care>

<sup>8</sup> [www.canadianveterinarians.net/documents/canada-s-pet-wellness-report2011](http://www.canadianveterinarians.net/documents/canada-s-pet-wellness-report2011)

<sup>9</sup> [www.nature.com/articles/s41598-017-16118-6](http://www.nature.com/articles/s41598-017-16118-6)

<sup>10</sup> [mcs.bc.ca/pdf/connections\\_and\\_companionship.pdf](http://mcs.bc.ca/pdf/connections_and_companionship.pdf)

## ONE HEALTH IN THE COMMUNITY

Current research has demonstrated that the human-animal bond of pet ownership in marginalized populations provides significant protective factors against depression, anxiety, and substance use, and can generate strong motivators for positive change, resulting in improved health and well-being. Approximately 20 per cent of homeless

people in Canada have companion animals. In BC, more than half of street-involved youth are pet owners.<sup>10</sup> Community Veterinary Outreach is a not-for-profit organization based in Canada. Its One Health model aims to improve the health, welfare, and well-being of marginalized people and their companion animals within the local community in which it serves.

Since 2016, Community Veterinary Outreach, Vancouver region, has partnered with multiple organizations, including Paws for Hope Animal Foundation, Royal Canin, PetSmart Charities, University of British Columbia (Schools of Nursing and Pharmacy), and local community and health partners to organize One Health clinics in Vancouver’s downtown region to support vulnerably housed pets and their guardians. One Health clinics provide veterinary services that improve not only the health of animals in need, but in turn support the physical and mental health and well-being of their owners, ultimately contributing to public health. Clinics encourage establishing rapport and building trust between volunteers and clients, leveraging the human-animal bond, and promoting healthy living for marginalized pets and their owners.

Community Veterinary Outreach clinic volunteers are an interdisciplinary team of veterinarians, veterinary technicians, veterinary assistants, nurses, pharmacists, dental hygienists, and students providing integrative health services and support. Paws for Hope Animal Foundation provides spay and neuter referrals, comprehensive health examinations, laboratory diagnostics, core vaccinations, parasite prophylaxis, and veterinary-grade pet food supplied by Royal Canin. Human health services provided to marginalized clients

include dental assessments, harm reduction education and take-home naloxone kits, flu vaccinations, education to promote healthy living, referrals to primary health care and community clinics, and mental health support.

One Health clinics promote a low-barrier and destigmatizing environment for marginalized clients to seek primary care for themselves and their pets. Since its inception, Community Veterinary Outreach and its partners have effectively served over 400 vulnerable dogs, cats, rats, and ferrets and their owners in downtown Vancouver. Moreover, clinics have inspired veterinary, nursing, and pharmacy students to become champions of social change within their local community. More information on Community Veterinary Outreach and their work can be found at: [vetoutreach.org](http://vetoutreach.org).

# AWC REPORT

## CANADIAN VIOLENCE LINK CONFERENCE

BY NICOLETTE JOOSTING, BSc, BVSc, DVM



aware of the human-animal bond, and an abuse victim's pet is usually harmed as well. In Canada, 760,000 people have reported intimate partner abuse in the last five years. Of the 64 per cent of the women in Canadian shelters who had pets, 89 per cent reported that their partners had mistreated their pet, and 56 per cent delayed leaving because of their pet. Of those who had left their pets behind, one-third considered returning to their abuser, because the abuser still had leverage over them.<sup>1</sup>

Veterinarians, along with hairstylists and dentists, are in one of the professions most likely to encounter abused women. We are on the front lines of reporting animal abuse. Did you know we, along with every adult in BC, are also mandated to report child abuse?

A theme repeated throughout the two days was that the different sectors responding to domestic violence are often working alone, in a silo. Where cross-collaborations have been forged between police departments, animal welfare, social services, and veterinarians, the responders perceived better outcomes, felt less stress, and expressed greater positivity about their ability to tackle this huge issue. Members of police departments learned how veterinarians trained in forensics could help them with human and animal abuse cases. Many expressed interest in cross-training with animal welfare enforcement officers, especially for making arrests or entering premises in response to domestic violence, helping identify potential animal abuse, or simply dealing with the animals involved.

Integrated case assessment teams in BC now include trained BCSPCA constables as well as police, social services, and mental health care.<sup>2</sup>

A recent study of bestiality cases showed that a horrific 82 per cent of bestiality cases involved the sexual abuse of a child, either separately abused or incited to commit bestiality, in sustained campaigns of abuse, usually involving the family dog, by male members of

the family. Six out of 38 cases involved a dangerous offender. Only four of the cases began with bestiality as the complaint.<sup>3</sup> Non-penetrative acts are more common, although offenders attempting penetration can cause significant injury to the animals. Bill C-84, passed June 21, 2019, broadened the definition of bestiality to include non-penetrative acts and ensures offenders are added to the sex-offender register.

Given that many women will not leave an abusive situation because their pets are threatened, even when their children are at risk, or will return to the abusive household out of concern for the pet, having women's shelters ask if there are pets in the home and need care will help identify these at risk women. Programs for the animals caught up in domestic abuse are essential, since many pet owners will not access resources or may end up homeless trying to take care of their pets. We learned about some of the resources available from organizations such as RedRover, SafePet Ottawa, Saskatchewan SPCA, and the Purple Leash Project.

Various departments at the University of Guelph are collaborating in the FIDO program, exploring different research projects in social services with dog-human relationships as a context for learning and resilience in the wake of domestic violence, extending anti-oppressive dog training practices in interactions between humans and dogs, and positioning dogs as teachers to help break the cycle of violence.<sup>4</sup> I look forward to hearing more from this program.

The second most common theme of the two days, repeated by many sectors, was the need for veterinarians to get more involved. Not all of us are interested in forensics, but knowing what information to include in medical records and how to make it understandable to court can make or break a case. Although we are on the front lines, there are many reasons we may not report abuse—fear of repercussions, lack of awareness, not knowing what to do or who to report to, a sense of isolation, feeling overwhelmed, and exhaustion. Training veterinarians to recognize both human and animal abuse, as well as providing them with resources to help with victim assistance and reporting, was defined as the first step. While not every clinic can employ a social worker, it is essential that veterinarians and veterinary staff have access to psychosocial support. There are many ways individual veterinarians can get involved to help provide care for the pets, collaborating with shelters, animal welfare agencies, and local community responders.

The CVMA-SBCV has recognized the role that veterinarians play in this aspect of one welfare. The Animal Welfare Committee has a subcommittee dedicated to exploring how the association can assist members in helping the victims of domestic violence. [WCV](#)

### VIOLENCE LINK RESOURCE LIST

SITUATION	RESOURCE	HOURS
IMMEDIATE DANGER	911 (ask for police)	24/7
	VictimLinkBC 1.800.563.0808 text 604.836.6381 TTY 604.875.0885	24/7
ADULTS REQUIRING ASSISTANCE	VictimLinkBC 1.800.563.0808 Text 604.836.6381 TTY 604.875.0885 Email VictimLinkBC@bc211.ca	24/7
CHILDREN (UNDER 19 YEARS): ANY SUSPICION OF ABUSE OR NEGLECT	Child Protection Services BC 1.800.663.9122	24/7
SENIORS	Seniors Abuse and Information Helpline 1.866.437.1940 604.437.1940 (Lower Mainland)	8 AM–8 PM, EXCLUDING HOLIDAYS
ANIMALS	BCSPCA cruelty hotline 1.855.622.7722	9 AM–6 PM, EXCLUDING HOLIDAYS
	After hours: local police or RCMP	6 PM–9 AM, HOLIDAYS
FOR KIDS TO GET HELP	1.800.668.6868 Kidshelpphone.ca	24/7
	310.1234 (no area code needed) Helpline for children	24/7
MENTAL HEALTH	811 or TTY 711 310.6789 (no area code needed) 1.800.SUICIDE (1.800.784.2433)	24/7
ALCOHOL AND DRUG	811 or TTY 711 1.800.663.1441 604.660.9382 (Lower Mainland)	24/7
WOMEN'S SHELTERS	Transition houses and safe homes list at <a href="#">BChousing.org</a>	
ANIMAL SAFE PLACES	<a href="#">Safeplaceforpets.org</a> <a href="#">RedRover: redrover.org</a>	
OTHER HELP	Ending Violence Association of BC: <a href="#">Endingviolence.org</a>	

<sup>1</sup> Dr. Amy Fitzgerald, associate professor, criminology, University of Windsor

<sup>2</sup> [Endingviolence.org](#); Marcie Moriarty, BCSPCA

<sup>3</sup> Monique St. Germain, general counsel, Canadian Centre for Child Protection

<sup>4</sup> Dr. Andrea Breen, associate professor, Department of Family Relations and Applied Nutrition, University of Guelph

# NEW REGULATIONS WILL AFFECT A VULNERABLE GROUP OF ANIMALS

BY DAVID FRASER, CM, PhD, AND DEVON J. WILSON, MSc, DVM

**T**his year, new regulations for humane transportation of animals are due to come into force in Canada, and hundreds of thousands of calves are likely to be affected. We explored the potential implications last spring when we hosted a national expert consultation on the marketing of male dairy calves. These calves—which are sometimes seen as a byproduct of the dairy sector—are commonly shipped at a few days of age to specialized facilities to be raised for veal or “dairy beef.” Because the marketing of such young animals raises potential issues of animal welfare and biosecurity, the National Farmed Animal Health and Welfare Council commissioned the consultation.

The meeting—which we held at Vancouver’s Sylvia Hotel—brought together 17 people with long experience in calf health, dairy farming, calf rearing, livestock auctions, enforcement, and research, with participants from Nova Scotia to Vancouver Island.

The group began by reviewing how male calves are marketed from coast to coast. The simplest case was Ontario, where many veal and dairy farms are located in the same region. As a result, calves are often trucked directly from the dairy farm to the veal producer in a matter of hours, although some pass through an auction. Quebec also has both dairy and veal production, but the process tends to be longer because most calves are marketed through auctions. BC has few facilities that buy male dairy calves, so most are shipped over the mountains to calf growers in Alberta in a process that can take 12 to 24 hours. Similarly, calves from Manitoba and Saskatchewan are often trucked to Alberta. Those from the Maritime provinces are often sold to veal producers in Quebec in a lengthy process that may extend over two days and involve a rest stop. In all cases, calves are most commonly marketed between a few days and two weeks old.

As the group described the different marketing systems across the country, we realized how profoundly things will have to change with the new Transportation of Animals Regulations that come into force in 2020. Under the new regulations, calves under nine days can be shipped directly from the farm of origin to the final destination, but the journey is not to exceed 12 hours, and the calves cannot be off-loaded at an auction or assembly yard. In regions that depend heavily on auctions, therefore, dairy farms may keep calves to nine days. However, research shows that dairy farms are highly variable in how they manage calves, and some do not currently have the facilities—or perhaps the staff expertise—to raise this many additional calves successfully.

Even at nine days, however, calves that are too young to be fed exclusively on hay and grain will still be limited to 12 hours of transport even though this can include a stop at an auction. This would be difficult to achieve in much of BC, and impossible for some locations such as the



Calf at the UBC Dairy Centre.

PHOTO COURTESY UBC

**“... WE REALIZED HOW PROFOUNDLY THINGS WILL HAVE TO CHANGE WITH THE NEW TRANSPORTATION OF ANIMALS REGULATIONS THAT COME INTO FORCE IN 2020.”**

Maritime provinces and Vancouver Island. In time, local calf-growing facilities might develop in these areas, especially if greater use of beef genetics by dairy farms increases the market value of the calves. However, a possible short-term outcome might be that many male calves would be killed at birth—as used to be common in the distant past—because they cannot legally be transported for further rearing.

Thanks to the meeting that helped clarify these challenges, the National Farmed Animal Health and Welfare Council flagged the need for the Canadian Food Inspection Agency and the industry to develop a workable implementation plan, and a working group has been established to carry this out.

The full report of the consultation, including the resulting recommendations by the National Farmed Animal Health and Welfare Council, is available on the council’s website at [ahwcouncil.ca](http://ahwcouncil.ca). You can click “Work Areas” and then “Animal Welfare” for this and other publications. The expert consultation was funded by the Canadian Agricultural Partnership through the BC Ministry of Agriculture. [WCV](#)



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<sup>1</sup>Kruger JM, Lulich JP, MacLeay J, et al. Comparison of foods with differing nutritional profiles for long-term management of acute nonobstructive idiopathic cystitis in cats. *J Am Vet Med Assoc.* 2015;247(5):508-517. <sup>2</sup>Lulich JP, Kruger JM, MacLeay JM, et al. Efficacy of two commercially available, low-magnesium, urine acidifying dry foods for the dissolution of struvite uroliths in cats. *J Am Vet Med Assoc.* 2013;243(8):1147-1153. Average 27 days *in vivo* study in urolith forming cats. <sup>3</sup>Pereira GG, Fragoso S, Pires E. Effect of dietary intake of L-tryptophan supplementation on multi-housed cats presenting stress related behaviours, in *Proceedings.* BSAVA 2010. <sup>4</sup>Beata C, Beaumont-Graff E, Coll V, et al. Effect of alpha-casozepine (Zylkene) on anxiety in cats. *J Vet Behav.* 2007;2(2):40-46. ©2020 Hill's Pet Nutrition Canada, Inc. ®/™ Trademarks owned by Hill's Pet Nutrition, Inc.