

WEST COAST VETERINARIAN

DECEMBER 2021 | Nº 45

SERVICE DOGS

**BRACHYCEPHALIC
BREEDS: THE COST
OF CUTE**

**FEARFUL,
ANXIOUS,
STRESSED EQUINE
PATIENTS**

**REFRAMING
RESILIENCE**

**PRACTICE
INSPECTION**

**THINKING ABOUT
NATURALNESS**



GET READY TO CHANGE THE FACE OF FELINE PARASITE MANAGEMENT



TRANSFORM THEIR DEFENCES

NexGard COMBO™ is the first all-in-one monthly topical solution to protect against the following:



TICKS



FLEAS



INTESTINAL
NEMATODES



HEARTWORM



TAPEWORMS



EAR MITES

NexGard
COMBO™

ONE AND DONE™



SUMMIT
veterinary pharmacy ltd

Formulating quality
compounds since 2001.



Prescribe with confidence.

1-866-794-7387

www.svprx.ca



COREY VAN'T HAAFF
EDITOR

Corey hangs on to—and doesn't want to let go of—a puppy at the BC and Alberta Guide Dogs Gala in Vancouver.

» TO THE EDITOR

Letters from members are welcome. They may be edited for length and clarity. Email us at wcveditor@gmail.com.

» ON THE COVER

Stéphane Marcotte and service dog Sarge.

A few years ago, when we used to be able to gather in large groups, eat, drink, and air kiss total strangers, I attended a fundraiser for BC and Alberta Guide Dogs. To be brutally frank, I was there for the dogs. They told me there would be puppies there, so I coughed up the money for the tickets, pulled my dressy clothes from the closet, and went knowing my face would be covered with doggy slobber for the next several hours.

Of course, I cannot pass a dog without a kiss—and for sure these puppies were NOT working—but if they had been, I would have looked away. That's why I know it is possible to leave working dogs alone when you encounter them on the street. If I, who cannot pass a dog without a greeting, a touch, and a nuzzle, can totally ignore a working dog, anyone can. At times, the safety of the dog and their owner is at stake.

Here's what I was not prepared for at the fundraiser. The human stories. I was entranced as I listened to a dad tell the story of his child with autism who had been ostracized too many times to count. I heard of the heartbreak of this dad watching what was happening to his child and being powerless to stop it. I thought how he must have wanted to scream at the other kids to just pay attention to and include his child. I know I would have felt that way.

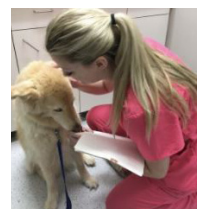
Instead, his child was matched with a service dog specially trained for a child with autism. It made magic happen. His kid was now the kid with the dog, which is a marvellous thing for any of us to be. Suddenly his kid wasn't ostracized but instead was marvelled at; welcomed; cool even. The dad started crying telling his story, and I did a bit too.

Writing this message, I am down to two dogs from four a year ago. Dogs remain my favourite thing in the whole wide world. I ask little of my own dogs: just to know how much I love them. The two dogs I have left are the two difficult dogs; one with serious anxiety and behavioural issues, and one who has taken three years to let me kiss her neck (but still won't let me cuddle her). Loving dogs simply must be on their terms; a lesson I was unaware I would need to learn. For me, it's been a one-way street of what I can do for them, not what they can do for me.

Dr. Welsman's emotionally charged story on service dogs for those who face special challenges is proof that as much as we love dogs, they may just love us more, and they are willing, with the proper training, to put that love into practice and make a difference. [WCV](#)

Email: wcveditor@gmail.com

CHAPTER SCHOLARSHIP AWARD WINNERS



Billy McLaughlin

SBCV CHAPTER LEADERSHIP AWARD

The Society of British Columbia Veterinarians Chapter of the Canadian Veterinary Medical Association has created an award for a student from British Columbia who has completed their second year of the DVM program. The winner of this \$2,500 award not only demonstrates strong leadership skills but has also contributed to student life at the WCV.



Jessica Lim

SBCV CHAPTER SCHOLARSHIP

This award was created by the CVMA-SBCV Chapter to recognize the student from British Columbia with the highest academic average, entering their second year. This award is valued at \$2,500.

WCV
DECEMBER 2021

WEST COAST VETERINARIAN ISSUE 45

West Coast Veterinarian is the quarterly magazine of the CVMA-SBCV Chapter



EDITORIAL COMMITTEE

Sarah Armstrong, DVM, Chair
Christiane Armstrong, DVM
Sarah Graham, DVM, DACVS (Large Animal)
Cori Stephen, DVM
Kathryn Welsman, DVM

EDITOR

Corey Van't Haaff
Email: wcveditor@gmail.com

ART DIRECTOR

Karim Sharobim, BDes

COPY EDITOR

Eva van Emden

PUBLISHER

CVMA-SBCV CHAPTER
Email: cvma-sbcv@cvma-acmv.org
Telephone: 604.406.3713
PO Box 21088 Maple Ridge Square RPO
Maple Ridge BC V2X 1P7
www.canadianveterinarians.net/SBCV

PUBLISHER'S ASSISTANT

Lily Laverton

PROOFREADER

Nafoni Modi

AD SALES

Inga Liimatta
Email: ingal@telus.net
Phone: 604.202.3826

**CVMA-SOCIETY OF BC VETERINARIANS
CHAPTER 2021/2022 BOARD OF DIRECTORS**

PRESIDENT

Al Longair, DVM
ANIMAL WELFARE COMMITTEE LIAISON

VICE PRESIDENT

Jessica Robertson, DVM
HUMAN RESOURCES LIAISON

SECRETARY-TREASURER

Rob Ashburner, DVM
DELTA EQUINE SEMINAR LIAISON

PAST PRESIDENT

Sarah Armstrong, DVM
EDITORIAL COMMITTEE LIAISON

DIRECTORS

Christiane Armstrong, DVM
MEMBERSHIP COMMITTEE LIAISON
CVMA COUNCIL MEMBER REPRESENTING THE CVMA-SBCV CHAPTER
Fraser Davidson, DVM
PROJECTS COMMITTEE LIAISON
Paul Kennedy, DVM
REGIONAL DIRECTOR FOR THE NORTH
Marco Veenis, DVM
CONTINUING EDUCATION COMMITTEE LIAISON

© 2021 CVMA-SBCV Chapter. No part of this publication may be duplicated or reproduced in any manner without the prior written permission of the CVMA-SBCV Chapter. All efforts have been made to ensure the accuracy of information in this publication; however, the CVMA-SBCV Chapter accepts no responsibility for errors or omissions. The views presented in West Coast Veterinarian are those of the respective contributors and do not necessarily represent the Chapter.

I have more
time to hit
the ice.



The flexibility to be you.

At VetStrategy, we believe community is what makes us stronger. As a veterinary practice owner, being part of ours means helping you get more out of your days. By designing a partnership solution to meet your needs, you'll get more time to achieve your goals, whatever they may be.

Ready to learn more about a flexible partnership?

vetstrategy.com/partnership | partnerwithus@vetstrategy.com





ELLEN BOYD, BSc, DVM, is a veterinarian with experience in disease surveillance and regulatory medicine. She is currently a graduate student at the University of British Columbia School of Population and Public Health, and her thesis will look at establishing prevalence and identifying risk factors for *Salmonella dublin* in dairy cattle in BC. Her thesis supervisor is Dr. Chelsea Himsworth, veterinary epidemiologist and pathologist at the BC Ministry of Agriculture.



THERESA BURNS, MSc, PhD, DVM, is a veterinary epidemiologist and has experience working as a practising veterinarian in mixed, equine, and small animal practices. She received DVM and MSc degrees from the Western College of Veterinary Medicine and a PhD in Epidemiology from the University of Guelph. Over her career, Dr. Burns has had the opportunity to use methods from multiple disciplines to collaborate on complex issues at the interface of human, animal, and environmental health in Canada and in other countries. She is interested in understanding systems and stakeholder perspectives to develop real-world solutions to complex problems.



JUDY CURRIE, DVM, is a 1986 WCV grad who spent the majority of her practice life in Saskatoon despite being from Vancouver. She worked for several years in small animal practice and about 10 years with the CFIA. Before retirement and following the sale of her practice, Dr. Currie spent seven years as the registrar for the Saskatchewan Veterinary Medical Association. During her career, she sat on Council as well as several SVMA committees. She is a chronic volunteer, a trait that has followed her into retirement. She continues to do committee work for the American Association of Veterinary State Boards. Always wanting to be near mountains, she is now mostly retired in Fernie working part-time as an associate veterinarian.



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 there examined the behaviour of horses subjected to forced "laying down" during training. She sees horses, dogs, and cats with behaviour problems, both in person and remotely. She also teaches and lectures on horse behaviour and training.



CHELSEA HIMSWORTH, PhD, DVM, MVetSc, DACVP, is a diagnostic pathologist and the leader for veterinary science and diagnostics at the Animal Health Centre, BC Ministry of Agriculture. She has over 14 years of experience studying infectious diseases in animal populations. She is also the BC regional director for the Canadian Wildlife Health Cooperative and an assistant professor in the School of Population and Public Health, University of British Columbia.



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



LOUISE LATHEY, BLES, completed her Bachelor of Law Enforcement Studies at the Justice Institute of British Columbia and uses her knowledge of the law in her work at the BC SPCA. Her passion for animals has led to cross-sector collaboration on helping vulnerable people and pets. Her master's research in criminal justice at the University of the Fraser Valley explores the rationale behind animal cruelty with a focus on how it relates to other types of crime.



DORIS LEUNG, BSc, MPH, DVM, is a veterinary epidemiologist with the Ministry of Agriculture, Food, and Fisheries and the communications lead with the Canadian Animal Health Surveillance System (CAHSS). She graduated from the Ontario Veterinary College in 2014 and obtained her Master of Public Health from the University of British Columbia in 2018. Her professional interests are in One Health, disease surveillance, veterinary epidemiology, and health communication. She currently lives in Vancouver, British Columbia.



ADRIANA REGALADO, MVZ, AVDC, graduated from the University of Guadalajara, Mexico, in 2000. During her internship at the Small Animal University Hospital at the University of Guadalajara, she published a manual of gastroenterology of dogs and cats. She moved to Vancouver in 2005, where she worked as a veterinary technician while preparing for her NAVLE and CPE exams. Dr. Regalado joined the West Coast Veterinary Dental Services team, where she completed a residency program and became a Diplomate of the American Veterinary Dental College. Dr. Regalado has a particular interest in BOAS and brachycephalic dental pathologies.



MARINA A. G. VON KEYSERLINGK, PhD, grew up on a cattle ranch in British Columbia. She joined UBC's Animal Welfare Program in 2002 and was appointed as an NSERC Industrial Research Chair in 2008. She is recognized internationally for her research on the care and housing of dairy cows and calves.



KATHRYN WELSMAN, DVM, has written for West Coast Veterinarian for nearly 10 years and enjoys telling a story. During that time, she's worked as an emergency veterinarian, general practitioner, and CVBC inspector. She's volunteered as a board member for the Langley Animal Protection Society and as a veterinarian for the BC Wildlife Park. Recently, she has taken on an advisory role with Ned's Wish, a non-profit society that assists with medical bills for retired police dogs. Her biggest passion is working dogs. She spends a lot of time learning about working dogs, especially police dogs, providing education for the dogs' handlers, and advocating for the dogs.



LAURA WHALIN, PhD, completed her PhD in the Animal Welfare Program at the University of British Columbia, and will be continuing to research animal welfare as a postdoctoral fellow at the Norwegian Veterinary Institute. Her research explores different ways to house and feed dairy calves to promote natural behaviours. Specifically, Laura has studied the effect of different gradual weaning programs on calf feeding behaviour and the effects of outdoor or pasture access on the behaviours of pre-weaned dairy calves.

Elanco

That friendly
**MANURE
CONNOISSEUR**

could be a
**WHIPWORM
GOURMET**



INTERCEPTOR® PLUS
(milbemycin oxime/praziquantel)

CANINE INTERNAL PARASITES: A GREATER THREAT TO YOUR PATIENTS THAN YOU MIGHT THINK



50%
OF DOG PARKS IN THE US TESTED POSITIVE FOR WHIPWORM, ROUNDWORM, OR HOOKWORM!

4 out of 5
DOG PARKS IN THE US TESTED POSITIVE FOR INTESTINAL PARASITES!

INTERCEPTOR® PLUS PROTECTS AGAINST FIVE TYPES OF COMMON PARASITIC WORMS.
Protect your patients. Talk to your Elanco representative today.

References

1. 2019 Elanco. Data on File. US Study.

Important Safety Information

The label contains complete use information, including cautions, and warnings. Always read, understand and follow the label, and use directions.

Indications

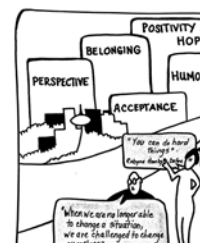
Interceptor Plus is indicated for the prevention of heartworm disease caused by *Dirofilaria immitis*; and for the treatment and control of adult roundworms (*Toxocara canis*, *Toxascaris leonina*), adult hookworm (*Ancylostoma caninum*), adult whipworm (*Trichuris vulpis*), and adult tapeworms (*Taenia pisiformis*, *Echinococcus multilocularis*, *Echinococcus granulosus*, and *Dipylidium caninum*) infections in dogs and puppies.

24 SERVICE DOGS: THE DOGS WHO WORK TO HELP



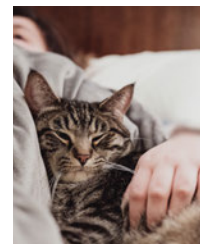
DECEMBER

- 04 FROM THE EDITOR
- 06 WCV CONTRIBUTORS
- 10 FROM THE CVMA-SBCV CHAPTER PRESIDENT
- 11 FROM THE CVMA PRESIDENT
- 12 FROM THE CVMA-SBCV CHAPTER
WCVM STUDENT LIAISON
THE PAWSITIVE IMPACT OF HAVING A PET IN VET SCHOOL
- 14 FROM UBC'S ANIMAL WELFARE PROGRAM
HOW THINKING ABOUT NATURALNESS CAN HELP US IMPROVE
ANIMAL CARE ON FARMS
- 20 FEARFUL, ANXIOUS, STRESSED EQUINE
PATIENTS? A NEW TOOL CAN HELP
- 32 SPECIALIST COLUMN
BRACHYCEPHALIC BREEDS: THE COST OF CUTE
- 38 SALMONELLA WHAT? GETTING TO KNOW
SALMONELLA DUBLIN IN BC
- 40 CAHSS: ANIMAL HEALTH SURVEILLANCE
ACROSS CANADA
- 43 FROM A LAWYER



16 REFRAMING RESILIENCE

36 PRACTICE INSPECTION

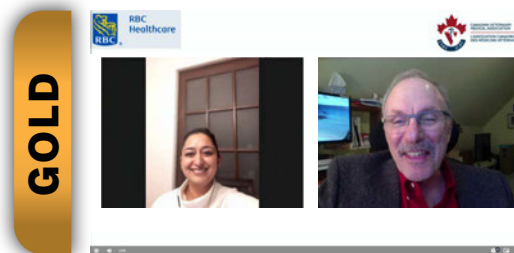


42 VETERINARIANS ASSISTING ANIMALS OF DOMESTIC VIOLENCE



SBCV CHAPTER 2021
FALL CONFERENCE
& TRADE SHOW

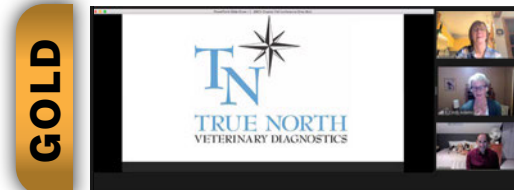
THANK YOU, SPONSORS



THANK YOU TO FOR SPONSORING



Mr. Phil Arkow



THANK YOU TO FOR SPONSORING



Dr. Christiane Armstrong, DVM,
and Dr. Cindy Adams, MSW, PhD



THANK YOU TO FOR SPONSORING



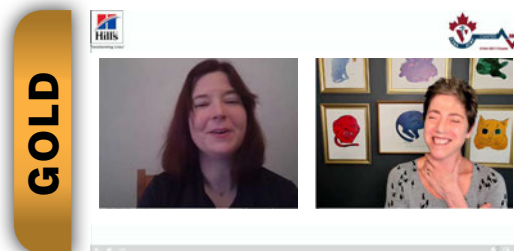
Dr. Conny Mosley, DVM, DACVAA, CVA



THANK YOU TO FOR SPONSORING



Mr. Darren Osborne



THANK YOU TO FOR SPONSORING



Dr. Margie Scherk, DVM, DABVP

hope that when this edition reaches you, you will be looking forward to a holiday season full of family and friends. We have all been affected by the pandemic and have had to change how we live and work. This has often meant forgoing meetings with family and friends and living in a reclusive way outside of our work. This holiday season looks promising at the time of writing in mid-October (Thanksgiving Day to be precise). We will still have restrictions, but they should be looser if we reach significantly higher vaccination levels in the population. Opening vaccination to young children was a huge step forward, and I'm sure teachers and parents will breathe more easily. We should all be thankful to teachers, who are doing their best to keep the students under their care safe while keeping up with the curriculum they are to follow.

Like you, I'm hoping to be able to spend time with some of our family. As we are approaching the year end, I think about how the last few years have been and try to foresee what will be happening in the next few years.

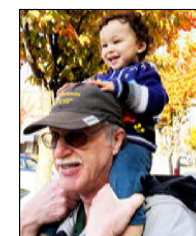
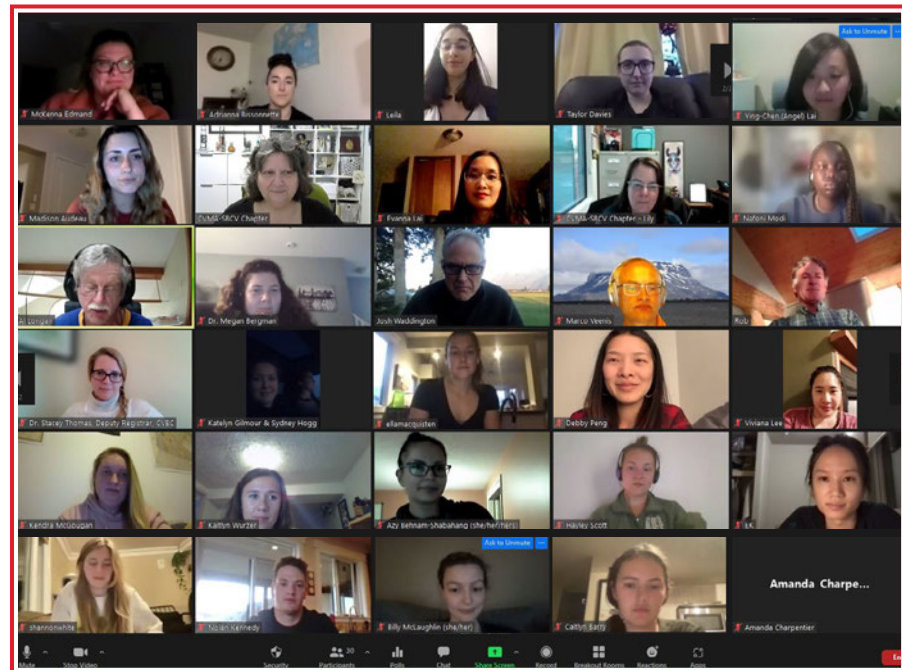
In reviewing the last few years, other than my work with the SBCV, there has not been much to enjoy other than video calls with my young grandson. It has been extraordinary going to work with increasing demands while adjusting to the restrictions. We have an incredible profession that has adjusted and changed as we care about doing the best we can for our patients. Some of our clients are not very pleased, but the majority understand that we are doing the best we can. We have to be honest with our clients and understand their frustration and concerns. If you are having mental health issues, seek some help; the CVMA and SBCV have a variety of options to help you. Please contact us if you need to. We have been working on our Resiliency Program, which has three components: peer support, a resiliency toolkit, and mentorship for first-year veterinarians. Thanks to our fantastic staff and the involvement of Board member Dr. Fraser Davidson; we are hoping that this will help our members.

When I look back further, I wonder how a kid who grew up on the north side of Burnaby mountain, never had a pet, and never stepped into a veterinary clinic or met a veterinarian became one. Back then I was at Simon Fraser University and wanted to learn more about how animals worked. I applied by February and then got a letter in July saying to show up in Saskatoon in a month to start. That's right, no interview—just references, academic standing, and a letter about why I wanted to go to the veterinary college. I am very thankful that I came to be accepted into this amazing profession. I have learned a lot and met some of the best people on the planet. The profession has also allowed me to travel to various places I had dreamed about but never thought I would ever get to see. In the early years of this century, the World Congress in Veterinary Dermatology was in Vienna. My wife, being addicted to horses, was thrilled at the prospect because Vienna is the home of the Spanish Riding School, where

the famous Lipizzaners perform. When we arrived, she asked for directions to the riding school as soon as we checked into the hotel. Needless to say, while I was listening to lectures, Jan was at the riding school.

I have been fortunate to have had a variety of experiences over the last 45 years because of being a veterinarian. When we had our annual meeting with the BC veterinary students at WCVM via Zoom (photo below) this October, it renewed my core feeling that we are the best profession, and that our students are going to continue the legacy of care, compassion, and constant learning—that will keep our profession strong—although it is a shame that some, who were not eligible for funding under the interprovincial agreement, will graduate with excessive debt due to their significantly increased tuition fees that are not covered by the BC Ministry of Education and Advanced Skills Training. I will be able to drift off into retirement knowing that veterinarians will thrive and work together to stay strong. We have important work to do and important contributions to our society to make.

On behalf of the Board and staff of the CVMA-SBCV chapter, I wish you all a wonderful holiday season and all the best for the new year. [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 BC SPCA for over 20 years, serving as the president of his local branch for 12 years and on the provincial management committee for 10 years, with four years as president. In the early 1990s, he served as chair of the CVMA Animal Welfare Committee. He lives on a small acreage with his wife, three horses, three dogs, and two cats and coaches youth soccer in his spare time.

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

2022 CVMA AWARDS

Annually, the CVMA proudly recognizes people who demonstrated accomplishments, leadership, and commitment to Canada's veterinary community. Nominations for the 2022 CVMA Awards are accepted until January 31, 2022. Award nominees (excluding honorary membership nominees) must be CVMA members; however, non-members may nominate.

Nominate a colleague for one of the CVMA's following awards:

- CVMA Humane Award
- CVMA Industry Award
- Merck Veterinary Award
- CVMA Small Animal Practitioner Award
- CVMA Practice of the Year Award
- CVMA Life Membership
- CVMA Honorary Membership

Please visit canadianveterinarians.net/about/awards for further information.

MENTAL HEALTH WEBINARS

The CVMA and Merck Animal Health, as part of the It's Time to Talk about Mental Health in Veterinary Medicine awareness campaign, held two mental health webinars this fall. The first webinar, "Creating Hope through Action," was held on September 9, 2021, in recognition of World Suicide Prevention Day and featured guest speaker Dr. Lori Kogan discussing impostor syndrome and sharing insights from her research on why some veterinary professionals feel like fakes and what to do about it. The second webinar, "Perfectionism Can Be Both Good and Bad," was held on November 26 and featured guest speaker Dr. Colleen Best teaching about adaptative and maladaptive perfectionism and how to manage perfectionism with a growth

mindset. Visit canadianveterinarians.net/mental-health-webinars to watch past webinar recordings and learn more about the CVMA and Merck Animal Health It's Time to Talk about Mental Health in Veterinary Medicine awareness campaign.

THE CVMA DIVERSITY, EQUITY, AND INCLUSION WORKING GROUP

The CVMA appointed a working group with the mandate to "Make suggestions regarding the CVMA's role regarding diversity, equity, and inclusion related to veterinary medicine." The working group submitted a report and recommendations for consideration, and Council prioritized the following items:

- Short term: focus CVMA social media and website content on existing diversity within the Canadian veterinary community instead of using stock veterinary illustrations.
- Medium term: integrate concepts of diversity, equity, and inclusion in CVMA's Emerging Leaders Program, convention, and student symposium.
- Long term: interact with educational institutions and policy-makers at the elementary level, high school level and post-secondary level (post-secondary institutions and veterinary colleges), especially related to recruitment and admission. [WCV](#)



Louis Kwantes, MSc, DVM, was born in Michigan and raised in Japan. He now lives Sherwood Park, Alberta, and has for the past 28 years. He graduated from Ontario Veterinary College in 1987 and completed an MSc in Tropical Veterinary Medicine at the University of Edinburgh in 1989. Dr. Kwantes's professional background includes mixed animal practice in Ontario and overseas veterinary postings in Haiti, Uzbekistan, and the Middle East. He is presently at National Veterinary Associates at Park Veterinary Centre, a companion and exotic animal veterinary clinic he co-founded in 1997. He is a past board member of the Edmonton Veterinary Emergency Clinic, past president of the Edmonton Area Small Animal Veterinarians group, and served the Alberta Veterinary Medical Association for over 12 years in a variety of capacities, including as president in 2015. Dr. Kwantes was presented a CVMA award for scholarship and leadership in 1987, shared the CVMA Hill's Public Relations Award in 2006, and was awarded a Rotary Integrity Award in 2015. He is grateful to have represented colleagues as executive member of the CVMA's Executive Committee the past few years and is excited to serve as the 2021–2022 CVMA president. Together with his wife, Janet, he is now an empty nester, save for a spoiled cat. Dr. Kwantes still loves working with animals and people and feels honoured to share in the bond between pets and their caretakers.

The winner of the \$250 gift card for attending the SBCV Annual General Meeting is Dr. Sue McTaggart.

The winners of the \$100 gift cards for visiting and collecting the secret words from the trade show exhibitors at the 2021 SBCV Fall Conference and Trade Show are:

- Dr. Carole Ann Brown
- Dr. Michelle Hughes
- Dr. Jan Craven
- Dr. Jay Van Oostdam

THE PAWSITIVE IMPACT OF HAVING A PET IN VET SCHOOL

BY MADISON AUDEAU, BSc

After 18 months of remote learning, WCVM students returned en masse to the hallways and classrooms of 52 Campus Drive this September. Our entire third-year class was in the same room together for the first time since March 2020. It's been so great to see all our classmates again. Smiles and laughter, though concealed behind blue paper masks, abound.

Though so much is starting to feel normal again, some things have indeed changed. Now, in addition to chugging as much coffee as we can in the 10 minutes between lectures (no food in classrooms anymore!), I'm also on my phone looking at live footage from the security camera I recently installed to spy on my dog.

I adopted Koa, one of the college's retired teaching beagles, last year as WCVM was just transitioning to online learning. As is the case with so many dogs brought home during the pandemic, me suddenly being out of the house all day after having been home with her 24/7 for our entire relationship created the perfect recipe for separation anxiety. Thankfully, periodically telling her what a good girl she is through the camera's microphone seems to provide some relief.

The busy schedules of veterinary students can undoubtedly make caring for a pet challenging, but I know most of us would agree the benefits far outweigh the added responsibility. The so-called pet effect linking pet ownership with reduced feelings of loneliness and anxiety, more positive moods, and enhanced self-esteem is well documented. Considering that veterinary students experience anxiety and depression at higher rates than medical students or the general public, getting a pet makes sense for many students. For BC's veterinary students, relocating to Saskatoon usually means leaving behind family and friends, and having a pet can help provide some level of emotional support.

Personally, especially during the period of online coursework in social isolation, I feel I owe my mental well-being in large part to the company of my dog and cat. Koa gave me a reason to get out and explore new trails and hikes around Saskatoon, something I'd really been missing since leaving BC. Her silly antics never fail to make me smile, and having her around reminds me not to take everything so seriously. Whether I didn't do as well as I'd hoped on an exam, or I'm struggling to wrap my head around some material—she loves me just the same.

Knowing others surely feel the same way, I invited BC's veterinary students to share how their pets have helped them get through the DVM program.

"Adopting my cat, Kevin, last year drastically turned a depressing and isolated first year into a fun and tolerable one," says Katelyn Gilmour, a second-year student from Victoria. "He attentively watched countless lectures with me and offered hilarious breaks by zooming around tangled up in my lab coats and coveralls."

Kendra McGougan, a third-year student, also from Victoria, credits her dog Yukon with helping her get outside during her first two years of the program. "Having him with me forced me to take breaks and step away from studying to take him for walks and to the park, and gave me something else to focus on whenever things got too overwhelming."

Besides being a welcome distraction from our studies, pets can also help with school in more direct ways. Victoria Wallace's cat Errol has been a big help to her. "Errol has provided me so much joy and support since I picked him up two years ago," says Wallace, a fourth-year student from Chilliwack. "He has been great to have around to practise palpating a cat and performing ophthalmic, neurologic, and orthopedic exams. He helped to complete an animal behaviour elective assignment, as I was able to teach him to jump through my arms!"

Taylor Westbrook, a first-year student from Vanderhoof, has three dogs who have already been helping her through the veterinary school experience. "Sage is my German Shepherd, Willow is my Aussie Shepherd, and Hazel is my Teacup Yorkie. Through COVID, they have all supported me emotionally, mentally, and physically," says Westbrook. "Even though I'm only at the beginning of my first year in vet med, I have already used my dogs to practise palpating, counting heart rates, and learning anatomy on. They're my world!"

As veterinary students, of course, we always gravitate toward the unique animals as pets. ZigZag, a two-year-old cat with cerebellar hypoplasia, was adopted from SCAT Street Cat Rescue (a local Saskatoon institution) by Olivia Rad, a fourth-year student from Invermere. "She has helped me with learning how to do a physical exam, auscultate, and palpate, among various other skills I have learned in my time in vet school. She is a very calm and friendly cat, which gives me someone to study with and cuddle when having a rough day."

Truth be told, we students are not always the best judges of when we're overworking ourselves, so it can be helpful to have someone forcefully insist. Cleo, a cat owned by Avery Chora, a second-year student from Oliver, has a foolproof technique. "She helps with school by sitting on my laptop and making me take breaks."

Similarly, there's Rigby, a SCAT cat who was taken in by a second-year student from Nanaimo, Emily Holmes, and became a foster fail. "He's incredibly cuddly and helps relieve anxiety by lying on me and pressing his cheek against mine while purring loudly. He helps me keep my sleep schedule by meowing at me if I stay up too late, or will sit on my lap while I work if I insist on staying up to study," says Holmes. "He improves my mental health every day."

Pets give their veterinary student owners so much. And soon, many of us look forward to careers dedicated to giving back to companion animals. In the meantime, as another cold Saskatoon winter approaches with the promise of many late-night study sessions, I'm grateful to have two live-in lap warmers to help me through and remind me why I applied to veterinary school in the first place.

To save space, the references for this article are made available on the Chapter's website at www.canadianveterinarians.net/documents/west-coast-veterinarian-winter-2021-list-of-references. **WCV**

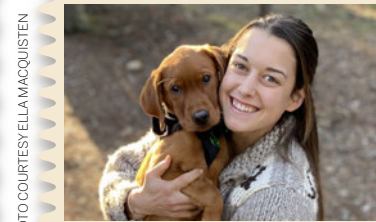
"ADOPTING MY CAT, KEVIN, LAST YEAR DRASTICALLY TURNED A DEPRESSING AND ISOLATED FIRST YEAR INTO A FUN AND TOLERABLE ONE,"



Kendra McGougan with Yukon.



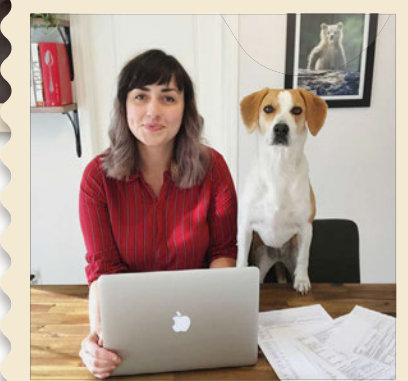
Katelyn Gilmour with Kevin.



Ella Macquisten and Winston.



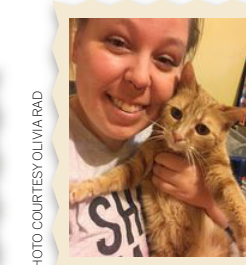
Madison Audeau and Zoey.



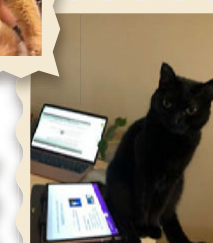
Madison Audeau and Koa.



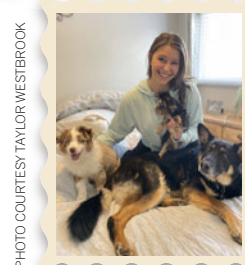
Victoria Wallace and Errol.



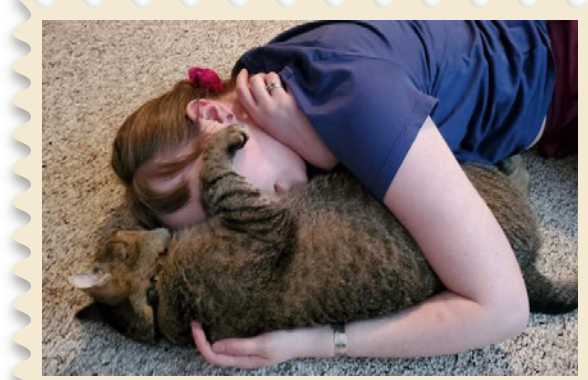
Olivia Rad and ZigZag.



Avery Chora's cat Cleo.



Taylor Westbrook with Willow, Hazel, and Sage.



Emily Holmes and Rigby.



Madison Audeau, BSc, WCVM class of 2023, is from Nanaimo, BC. After a career in radio broadcasting, she earned a BSc in Biology at Vancouver Island University before coming to WCVM. After graduation, she looks forward to returning to the BC coast as a small animal clinician.

HOW THINKING ABOUT NATURALNESS CAN HELP US IMPROVE ANIMAL CARE ON FARMS

BY LAURA WHALIN, PhD, AND MARINA A. G. VON KEYSERLINGK, PhD

Animal welfare is a concern for an animal's health, affective state, and/or natural living. Care of farmed animals has historically focused on health, with less attention given to affective states and natural living. In this article, we will focus on the aspect of natural living and discuss how dairy calf management can be refined to promote natural behaviours.

NATURAL SYSTEMS FOR CALVES

In natural systems, calves are raised with their mothers in a herd with other cattle on a pasture or range system. Young calves suckle from their mothers approximately 10 times per day. When sufficient milk is available, calves will consume approximately 15 litres per day of milk. As calves grow older, they suckle fewer times throughout the day and increase their time spent grazing. The mother models for the calf which plants to eat and how to graze efficiently. A gradual change from milk to forages prepares calves for weaning, which naturally occurs when calves are 7 to 14 months of age. Throughout the weaning process, calves remain in the herd, continually strengthening their bonds with other herd-mates. In herds with animals of varying ages, calves learn appropriate feeding behaviours, and they are frequently groomed by their mother, protected by the herd, and able to form grazing and play groups with other calves.

COMMERCIAL SYSTEMS FOR DAIRY CALVES

In commercial dairy systems in North America, most calves are removed from their mother within 24 hours of birth. Most female calves are housed individually without pasture until they are 8 to 10 weeks of age. Many farms feed calves less than 6 litres per day of milk from a bucket in two feedings. Bucket-fed calves may direct their sucking behaviour to other calves or objects in their pen, and frequently visit the milk feeding area due to hunger. Dairy calves are usually weaned abruptly from milk around 8 to 10 weeks of age, which can lead to growth checks and increased vocalizations. Individually housed calves do not experience social support during weaning, nor social grooming, social play, or social learning.

INCORPORATING NATURAL LIVING INTO DAIRY CALF CARE

In Canada there is a shift to feeding higher volumes of milk from nipple systems. Many farms have invested in automatic milk feeding systems while others are pair-housing calves. Successful social housing systems feed high milk volumes through a nipple, with groups no bigger than 8 to 10 calves. Commercial dairies and natural systems are different, yet calves in both systems perform sucking for milk, eventually shift to consuming a solid diet, and engage in social behaviours when provided with the opportunity. Several aspects of natural living can be practically incorporated on dairy farms.

- Milk feeding: Consider feeding calves high volumes of milk (more than 8 litres per day) from a teat in at least two feedings; the teat allows calves to direct their sucking behaviour to an appropriate outlet.
 - Weaning from milk: Gradual weaning can be done by programming automatic milk feeders to decrease the milk allowance at certain ages or based on meeting thresholds of starter intake. When hand feeding, the milk volume can also be gradually decreased. For example, for the first five weeks, provide 6 litres at the morning and 6 litres at the evening feeding. When calves are 35 days old, offer 1 litre per day less of milk, so that at 40 days old calves are down to 3 litres provided at each feeding (6 litres per day). At 65 days of age, again reduce the milk allowance 1 litre per day over five days so that at 70 days of age, calves are fully weaned. Gradual weaning encourages calves to transition to solid feed and minimizes the growth check calves can experience when abruptly weaned.
 - Social housing: Farms can pair-house calves using existing infrastructure. For example, two hutches can be placed together with the outdoor area extended so that the fence goes around both hutches. Social housing allows calves to engage in natural social behaviours and has been shown to improve cognitive performance and reduce food neophobia.
 - Space to graze and/or play: A large space where calves can play and graze may be challenging for farms to manage for pre-weaned dairy calves. Instead, "play pens" could be offered to calves in the evenings to promote natural levels of play and grazing.
- Animal behaviour in natural settings can be used to inform solutions to management challenges.

This article was based on a previously published review article by Whalin et al. (see references made available on the Chapter's website at www.canadianveterinarians.net/documents/west-coast-veterinarian-winter-2021-list-of-references). For further reading on how natural behaviour can be used to refine freestall barn management, please see Beaver et al. in the references. ^{WCV}

"MANY FARMS HAVE INVESTED IN AUTOMATIC MILK FEEDING SYSTEMS WHILE OTHERS ARE PAIR-HOUSING CALVES."

VCA
Vancouver Animal Emergency
& Referral Centre

2303 Alberta Street
Vancouver, BC V5Y 4A7
604-879-3737

REFERRALS

Vancouver Animal Emergency & Referral Centre is excited to introduce Referral Coordinator, Samarra Goldglas, as well as our streamlined referral process.

REFERRAL PROCESS

To refer to our Specialty departments, please complete the Patient Referral Form online. Records, radiographs, and diagnostic results can be attached to the referral form or emailed separately.

To refer to our Emergency department, please call the hospital to speak with a veterinarian directly to transfer the case. This will allow for an expedited admission process for your patient and client. Our veterinarian will be able to provide a tentative treatment plan and anticipated cost.

We look forward to supporting patients, clients, and primary care veterinarians across the lower mainland.

vcacanada.com/vancouveremergency

Departments Accepting Referrals:

Internal Medicine: Dr. Susan Ford
Internal Medicine: Dr. Casey Gaunt
Ophthalmology: Dr. Jacqueline Pearce
Surgery: Dr. Sherisse Sakals

REFERRAL COORDINATOR

If you would like to schedule a meet and greet with any member of our referral team, please contact Samarra Goldglas, our new Referral Coordinator.



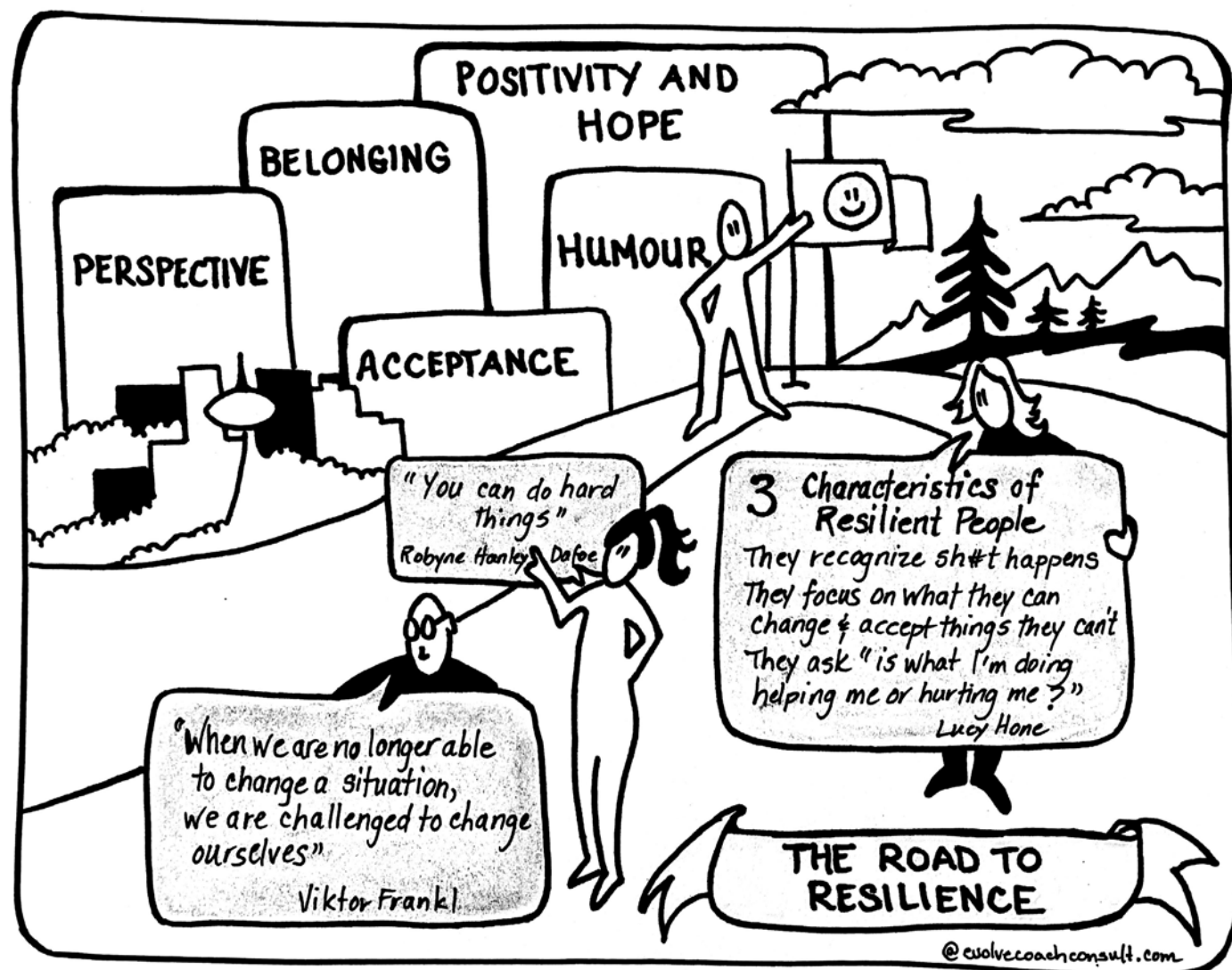
Samarra is excited to join the outreach program and to connect our team to the referring community.

Please do not hesitate to contact Samarra via email at samarra.goldglas@vca.com or by phone at 604-879-3737.

REFRAMING

RESILIENCE

BY ELAINE KLEMMENSEN, DVM, CEC



Has the universe ever presented a great life lesson that you completely missed? Following graduation from WCV, I joined a mixed animal practice in rural Alberta to discover my new boss was the Canadian version of the eccentric character Siegfried Farnon, immortalized in the books of James Herriot. He regularly offered confident proclamations and blustering bravado, and he often exploded in frustration as his new graduate missed diagnoses, broke the computer, and trashed her truck on the icy winter roads.

There was little in the way of mentorship, but beneath an intimidating exterior lay a heart of gold. I approached my first calving season with a sense of dread fuelled by a big dose of impostor syndrome and decided to adopt the “fake it ‘til you make it” approach. It was with this mindset that I found myself in a state of panic over a calving gone wrong. The heifer was in a bad way—the calf’s forelimbs were firmly lodged below the pelvis, and she had pushed so hard that the little guy’s swollen head was fully exposed.

To make matters worse, the calf was very much alive. After an epidural, lots of lube and more than a little cursing, I was no further ahead. I decided to perform a Caesarean, thinking it would allow me to pull on the calf’s back feet while the rancher pushed the head through the pelvis. The situation quickly went from bad to worse when the heifer went down with the calf still firmly lodged in the pelvis. I started to sweat, my gut clenched, and my focus narrowed to a single thought, “I don’t know what to do.” It was in this moment, as I was seconds from melting down, that the seasoned rancher walked over, put his arm around my shoulder, and said, “It’s okay, Doc. We’re in this together.”

As I look back, I see how my mindset at the time prevented me from learning a valuable lesson about resilience. My childhood and the success I had experienced to this point led me to believe the following:

- Resilience = stubborn tenacity
- Asking for help = failure or weakness

I cannot help but wonder how much easier life might have been if I had recognized the lessons that wise rancher offered. Asking for help does not make you a failure; it makes you human. Being vulnerable isn’t weak; it is, in fact, an act of courage. Giving yourself the grace to be human, to struggle and to fail, is necessary if you want to become more resilient. I am embarrassed to admit how long I held tight to the above beliefs, and I wonder if I am alone in my misguided definition of resilience.

As a coach, I define resilience as the ability to recover one’s balance in the face of uncertainty, change, and life’s challenges. It is the ongoing process of building a strong foundation that keeps you grounded and centred so that you are better able to manage yourself amid the chaos going on around you. It moves you from being a spectator in the stands “watching things happen to you” to being in the game and choosing how you want to play. Defining resilience as strength and stubborn tenacity can serve your purpose in the short term, getting you through the immediate challenge. Life, however, is a marathon, not a sprint. Expanding your mindset and developing behaviours that build resilience from the inside out will set you up to finish the marathon and enjoy the experience of being in the race.

So what are the building blocks needed to construct a healthy foundation upon which resilience can grow? We can learn a lot about resilience by looking at the habits of those who have lived through great hardship or tragedy. Viktor Frankl, holocaust survivor, author, and psychotherapist, noticed that prisoners who were more likely to survive the concentration camps developed rich inner lives, had future-oriented goals, found meaning in their experience, and resisted giving in to hopelessness. Although she did not experience the horrors of the holocaust, Lucy Hone, a researcher with a PhD in positive psychology, suffered a devastating loss: the sudden and traumatic death of a child. From her research and her own experience, she identified three characteristics of resilient people:

- They recognize that sh#t happens
- They have a habit of focusing on what they can change and accepting things they cannot
- They regularly ask, “Is what I am doing helping or harming me?”

Research consistently identifies resilient people as those with the ability to reframe situations from what happened to them to what they can take away. They see the good, the bad, and the ugly in their experiences, and they feel the big emotions. However, they recognize what is within their circle of control and what is outside of it. Resilient people see the choices available to them and become intentional about where they place their focus. It isn't about hiding from the bad stuff but rather accepting that the bad stuff is part of “running a marathon.” You get to choose how you will show up and run the race.

Dr. Robyne Hanley-Dafoe, a psychologist who specializes in resilience and coined the mantra “You can do hard things,” created a framework of five key competencies to help build a strong foundation.

1. Belonging—The Harvard Study of Adult Development identified that the most important factor in having a happy, fulfilling, healthy life is the quality and depth of our relationships. We all need people who make us feel valued, loved, and safe. The number of people in our inner circle is less important than the quality of those relationships. Invest time in finding and nurturing a diverse and supportive community that allows you to show up authentically, solid in the knowledge that you matter.

2. Perspective—Our internal narrative often distorts reality causing us to lose perspective or get stuck in our heads. Start listening to the wisdom of your body and learn to trust all your senses to get a balanced view of a situation. Perhaps your exhausted body is telling you that your battery is depleted and you need to make recharging it a priority. Perhaps your unsettled gut is telling you your actions are out of alignment with your values and you need to have a difficult conversation with someone. Learn to foster mind-body awareness to close the gap between intellect and emotion and find a more balanced view of a situation.

3. Acceptance—For many of us our first reaction to a negative situation is to ask, “Why did this happen to me?” This question not only places us in a victim orientation, but also wastes precious energy by focusing on the past and trying to control things that are outside our control. Instead, accepting what happened and asking “what” or “how” questions like, “What can I do to influence this situation?” or “How do I want to show up here?” shifts our focus to the future, builds positive momentum, and helps us regain our balance.

4. Positivity and hope—Fear and negativity are hardwired into our DNA for a reason: they helped keep our ancestors safe on the savanna. However, allowing our fear or anxiety to control our actions limits our options and depletes our capacity to build resilience. In his book *The Anatomy of Hope*, Dr. Jerome Groopman defines hope as “the elevating feeling we experience when we see—in the mind’s eye—a path to a better future.” “Hope,” he writes, “acknowledges the significant obstacles and deep pitfalls along that path” and is not deluded but rather “gives us the courage to confront our circumstances and the capacity to surmount them.” Step back to gain perspective, use mindfulness techniques to calm your amygdala, and once you are in your “thinking brain,” consciously choose hope over fear. In this way, you can find the courage to confront life’s challenges and in doing so learn from them.

5. Humour—Leadership coach Kevin Cashman said, “The more rigid and self-centered we are, the more out of balance we become.” Humour is an important tool that allows us to reset, gain perspective, defuse a difficult situation, or build empathy and rapport. Taking yourself less seriously brings play and positive energy into your life. It allows you to take a momentary break from life’s challenges and create a space for hope to grow.

Building resilience is a dynamic process. It isn't a place you arrive at but an ongoing journey built upon your experiences and ability to reflect on the lessons learned along the way. Focusing on your foundation creates conditions that support reframing, helping you gain perspective and start building your resilience from the inside out. Rather than moving through a world where life happens to you, you can intentionally create the life you want. To borrow from the words of Dr. Hanley-Dafoe, you will be secure in the knowledge that “you CAN do hard things.”

To save space, the references for this article are made available on the Chapter’s website at www.canadianveterinarians.net/documents/west-coast-veterinarian-winter-2021-list-of-references. [WCV](#)

“THE MORE RIGID AND SELF-CENTERED WE ARE, THE MORE OUT OF BALANCE WE BECOME.’ HUMOUR IS AN IMPORTANT TOOL THAT ALLOWS US TO RESET, GAIN PERSPECTIVE, DEFUSE A DIFFICULT SITUATION, OR BUILD EMPATHY AND RAPPORT.”



The Scotia Professional® Plan for Veterinarians

Offering customized advice and solutions for every stage of your veterinary career. Speak to a Scotiabank Healthcare Specialist today.

Harjeet Mand
Healthcare & Professional Specialist
harjeet.mand@scotiabank.com
236.688.6801

Char Sandher
Group Lead, Healthcare & Professionals, Western Canada
charandeep.sandher@scotiabank.com
604.351.4772



® Registered trademarks of The Bank of Nova Scotia.

When to Use MFAP

Support for a wide variety of situations

- Stress, anxiety, depression, low mood
- Grief, bereavement
- Alcohol, drug, gambling, smoking issue
- Life change and transitions
- Relationship concerns
- Family and parenting challenges
- Child care coaching and resources
- Elder care coaching and resources
- Financial worries
- Legal concerns
- Financial worries
- Desire for healthier lifestyle
- Medical or health-related information
- Career development

Counselling • Coaching • Support

1-800-663-1142

Numéro sans frais - en français : 1-866-398-9505

International (Call collect) : 604-689-1717 | TTY: 1-888-384-1152

homeweb.ca

Vancouver Island's Board certified Veterinary Ophthalmologist

Dr. Stephanie Osinchuk Welcomes your referrals!



- Medical and surgical care available including:
- Corneal ulcer/perforation repair
 - Cataract surgery
 - Glaucoma surgery
 - Large eyelid mass removal
 - Entropion/Ectropion
 - Ocular prosthesis
 - And much more



Island Veterinary Eye Specialist
778-404-0680
IslandVeterinaryEyeSpecialist.com

FEARFUL, ANXIOUS, STRESSED EQUINE PATIENTS? A NEW TOOL CAN HELP

BY LAUREN FRASER, MSc, CHBC



“PROBLEMS CAN ARISE WHEN ANIMALS ARE UNABLE TO ADAPT TO STRESS, OR WHEN THEIR RESPONSES DON’T LEAD TO EXPECTED OUTCOMES, AND THE STRESSOR PERSISTS OR INTENSIFIES.”

Fear, anxiety, and stress can occur in equine patients, making them difficult to handle and challenging to treat. To complicate matters, subtle shifts in arousal and affective state may go unnoticed during critical treatments, leading to the horse performing a rapid escalation of potentially dangerous escape or avoidance behaviours. Teaching all staff to recognize changes in emotional states before such escalations happen can keep your staff safer and your equine patients both happier and easier to treat.

Fear Free, founded in 2016 by veterinarian Dr. Marty Becker, provides online education to veterinary professionals, pet professionals, animal welfare communities, and pet owners. The educational content is developed and written by professionals such as board-certified veterinary behaviourists, anesthesiologists, and internists, and is intended to help both veterinary staff and other animal professionals reduce feelings of fear, anxiety, and stress in animals under their care.

Recently, Fear Free created an Equine Fear, Anxiety, and Stress (FAS) scale to aid equine veterinary staff and other professionals in assessing emotions of equine patients during treatment. The scale details objective, measurable units of behaviour that can indicate a horse's level of fear, anxiety, or stress. As will be discussed in further detail in this article, being able to accurately assess the emotional state of animals under one's care can greatly enhance their welfare, improve response to treatments and treatment compliance, and improve the safety of veterinary staff too.

WHAT ARE FEAR, ANXIETY, AND STRESS?

Fear

Fear is a normal, involuntary emotional state experienced by all animals. When an animal perceives a stressor in their environment that threatens their well-being, a cascade of chemical changes occurs within the animal's brain and body. This rapid-fire response, the triggering of the sympathetic branch of the autonomic nervous system, prepares the animal's body to have a better chance at surviving the encounter. Simultaneously, the animal also experiences a rush of fearful emotion, further motivating the animal to perform escape or avoidance behaviours and increase the distance between themselves and the threat. In horses, these behaviours may include any variety that fall under one or more of the “four F's”: fidgeting, fleeing, fighting, or “fainting” (a misnomer, used to describe the state of tonic immobility). Fear is generally reduced when animals manage to escape perceived threats, making it a highly adaptive emotion under such conditions.



Using an “open bar, closed bar” form of counter-conditioning can help quickly habituate a horse to a novel stimulus: stimulus appears, the handler free-feeds treats; stimulus disappears, treats stop; repeat. In this image, the Elizabethan collar was the novel stimulus.



The whole horse should be observed when assessing FAS scores, from nose to tail. Body parts in isolation, e.g., ear positions, don't always give a full picture of the horse's arousal level and affective state.

Anxiety

While fear occurs in the presence of something perceived to be an imminent threat, anxiety is the emotional anticipation about possible future threats. Anxiety can occur in situations where, after repeated experience, the animal has learned that certain stimuli predict a fearful event will follow. For example, the horse who is frightened of injections may become anxious when the handler brings them into an area designated for veterinary work in a boarding barn, despite the veterinarian not yet being present.

Stress

Stressors are stimuli in an animal's environment that challenge the animal's homeostatic state. When animals are faced with stressors, physiological and emotional changes occur that can help the animal cope with the situation. Not all stressors are undesirable. For example, physical stressors that occur as a result of appropriate, increased workload can enhance a horse's fitness, coordination, and endurance. Mentally, appropriate stressors in training encourage confidence while learning new skills and can improve a horse's emotional resiliency. Exposure to an ideal intensity of stressors is clearly important for the physical and mental health and well-being of all animals. But problems can arise when animals are unable to adapt to stress, or when their responses don't lead to expected outcomes, and the stressor persists or intensifies.

It is critical that veterinary staff be able to objectively measure the emotions and stress levels of individual horses under their care. Just like people, horses respond differently to a variety of stressors. Horses experiencing fear, anxiety, or stress can be readily identified using strictly behavioural measures, making hands-off assessment possible even by staff who may lack horse handling experience, such as receptionists. When the entire veterinary team has a cohesive system for scoring stress in horses, many benefits can be gained by both staff and patients.

Tools to assess behaviour

The use of evidence-based, standardized scales, ethograms, and other assessment tools to measure animal behaviour is common, in both research settings and normal veterinary environments. For example, the Horse Grimace Scale, the Ridden Horse Pain Ethogram, and Qualitative Behaviour Assessments have all proven useful tools to help trained observers detect pain, negative affective states, or compromised welfare in horses, with a high degree of accuracy and agreement between observers.

Fear, anxiety, and stress can be detrimental to a horse's health and welfare, in both the short and long term. In a clinical setting, elevated FAS scores can negatively impact the horse's physiology or alter the effects of medications or treatments. Horses showing elevated FAS scores also pose a greater risk of injury to themselves and any staff with whom they interact. Finally, increased treatment time may be needed to work with these horses, derailing the day's schedule, colouring the client's perception of their horse's treatment, and affecting the clinic's bottom line.

The FAS scale offers a way for observers in veterinary settings to assess and grade a horse's level of fear, anxiety, or stress—ranging from a FAS score of 0 (relaxed), to a FAS score of 4 or 5 (severe without or with aggression). Whether the horse is experiencing fear, anxiety, or stress is somewhat irrelevant, as behaviours displayed in any of the three states will be similar, as will any remedies.

PHOTOS COURTESY LAUREN FRASER



Taut muscles, elevated head, arched neck, ears stiffly forward, triangular-shaped eyes: all indicative of an elevated FAS score and a horse requiring support to avoid iatrogenic behavioural injury.



Small, subtle signs of fear, anxiety, and stress can include things such as wrinkles above the eye, or ears held to the side with the tips wide apart.



Bodyweight unevenly distributed, i.e., the equid leaning forward or backwards, can be a sign of an elevated FAS score.

FAS as behavioural expressions

Compared to dogs, horses have a limited vocalization repertoire, but their body language provides ample clues to their arousal and affective states. Horses experiencing lower arousal levels and positive affective states present a picture of relaxation: fluid movements, soft, steadily blinking eyes, neck and head level or slightly above the withers with relaxed musculature and so on. The Fear Free FAS scoring system would rank this horse a FAS level 0. At the other end of the spectrum, a horse ranked at a FAS level 5 would present with behaviours such as pinned ears, elevated head and neck, visible sclera, frenetic movements, and active displays of aggressive behaviours such as biting, kicking, and so on.

As a horse's FAS score can change rapidly, having all staff trained to detect and respond to changing levels can mitigate some of the problems discussed previously.

Responses to changing FAS scores

As with much in veterinary medicine, prevention and early intervention are critical when an animal is experiencing an issue with their behavioural health. The sooner an intervention can occur, ideally at the first signs of an elevated FAS score, the better. Once an animal's sympathetic nervous system has been triggered, the resulting chemical cascade takes time to dissipate—time a veterinarian may not have if the horse requires immediate care.

To avoid causing an increase in FAS scores and risking iatrogenic behavioural injuries to equine patients, it can be helpful to remember that there is a difference between “wants” and “needs” in the veterinary clinic: needs are urgent, life-saving treatments, and wants are everything else. By understanding these differences, veterinary staff can more easily keep patients' FAS scores low with appropriate interventions.

When a horse's FAS score begins to rise, options are available. Sometimes simply allowing the horse to see another calm horse nearby or giving them access to a hay net can lower their score. Other possible alternatives include giving the horse a break, switching to a staff member more skilled in low-stress handling, or using edible distraction tools such as Likits or treat-filled snuffle mats. Skilled practitioners can use systematic

desensitization or counter-conditioning to rapidly habituate a horse to various procedures.

Occasionally, a horse's FAS score may increase during examination or treatment as a result of lack of training by the owner. If the purpose of the horse's visit is a want that day, you could suggest that the owner rebook and give them instructions on how to prepare their horse for veterinary care (or consider pre-visit pharmaceuticals for their rebooked appointment, rather than risking iatrogenic injury). If the treatment is a need, however, and not a want, increasing FAS scores may require early intervention with anxiolytic medications and sedatives to facilitate treatment.

Physical and behavioural health of horses cannot be separated. Keeping fear, anxiety, and stress to a minimum during treatment and hospitalization for equine patients benefits not only the horses themselves, but also the clinic staff, the horse's owner, and the hospital's bottom line. A short investment in time spent training staff to recognize and respond to changes in FAS scores of equine patients can pay dividends. You can learn more about the Fear Free Equine FAS scale at www.fearfreepets.com. WCV

“ALTERNATIVES INCLUDE GIVING THE HORSE A BREAK, SWITCHING TO A STAFF MEMBER MORE SKILLED IN LOW-STRESS HANDLING, OR USING EDIBLE DISTRACTION TOOLS.”

2 Billion

Value of veterinary practice sales handled by Simmons & Associates in North America

500 Million

Value of Corporate Consolidator sales handled by Simmons in North America

1,000's

Of veterinary practice sales handled by Simmons in North America

1

Of practices the average veterinarian buys or sells in their lifetime

Selling your practice will likely be your biggest lifetime financial transaction.

Do you really want to do this alone?

Get the experts on your side of the table.

Contact us for a complementary and confidential conversation.



SIMMONS
Veterinary Practice Sales & Valuations

800.333.1984 | simmonsinc.com

Practice Sales · Practice Valuations
Buyer Agency · Sale Facilitation · Exit Strategy



Caleb Minchinton and Cory.

SERVICE DOGS: THE DOGS WHO WORK TO HELP

BY KATHRYN WELSMAN, DVM

If not for his trained service dog, Sarge, owner Stéphane would likely not be here with us today. That is the power and influence of a service dog.

Stéphane is a veteran of the Canadian Armed Forces.

He served 28 years in the navy, and 18 of those years were in submarines. He was part of a horrific submarine accident, which played a major part in his PTSD. I've never had PTSD; therefore I, like many people, find it difficult to understand what this chronic debilitating disease must be like, but I got a glimpse of the ramifications while speaking with Stéphane.

Stéphane was paired five years ago with Sarge, a trained PTSD dog. While everyone involved with service dogs has passion about how service dogs can change lives, Stéphane has raw emotion. We talked for 45 minutes, and at the end he said, "This dog saved my life. I wouldn't be here without him. He gave me purpose and quality of life for me and my wife." I had been writing furiously up until that point, taking down notes, but that statement stopped me in my tracks. He wasn't kidding, and it was poignant and almost painful to hear.

Sarge came to Stéphane fully trained, but then they spent around a year working together to complete their partnership. He said, "The dog knows what to do, but it is [the human partners] that need training." They meet up weekly with other service dogs in his local area, and the older service dogs can teach younger ones what to do.

Luckily Sarge has been very healthy and has a good rapport with his local veterinarian. I asked Stéphane what he wanted veterinarians to know about dogs like Sarge, and his response was that it's important to remember that the dog is part of the human partner's medical team. "Yes, they are pets, but they are more than that; they are very special." With that in mind, he wanted all veterinary clinics to know not to separate the human partner from the dog unless it is absolutely necessary. He said he found COVID-19 measures very hard because Sarge would have to go into the clinic without him.

Sarge's special ability—what he was trained for—is to know when Stéphane is stressed. When this happens, Sarge starts to

whine to get Stéphane's attention, making Stéphane focus on the great big yellow lab instead of focusing on the situation that might be triggering the PTSD. Although Stéphane says Sarge isn't a guard dog, Sarge will always put himself between Stéphane and people around him to create the space many people with PTSD require. Stéphane says that although this happens much less frequently now, Sarge will also wake him up from a nightmare, allowing him to focus on the dog and move away from the nightmare. Stéphane chuckled slightly when he described Sarge as a 90-pound lap dog who will put his nose, head, or whole body on Stéphane to help ground him. Interestingly, although it wasn't part of the job description, Sarge can also alert Stéphane to hypoglycemia, as Stéphane has diabetes.

Stéphane went on to explain how Sarge has allowed him to have his life back. Sarge's companionship makes it possible for Stéphane to go out of the house. Since Sarge is a fully accredited service dog, he goes everywhere with Stéphane. Stéphane also says how beneficial having a service dog has been for his wife, allowing some normalcy to return to the household. I asked Stéphane if people question why he has a service dog if he doesn't have an obvious disability. He replied, "No, most people see him as a legit service dog, probably because he is a yellow lab." He said that most people are very polite and like to ask him questions about Sarge.

Stéphane says he is one of the few veterans he knows who likes to talk about his service dog and how the dog helps him. He has spent time talking at schools and universities to highlight the importance of these dogs. He also explained why people shouldn't pat or talk to service dogs; he said it takes the dog's focus off their partner. It may be just for a few minutes, but in those few minutes a partner with epilepsy could have a seizure as the dog wasn't paying attention to alert them. In Stéphane's case, Sarge might stay a bit distracted after the interaction and might not be as focused on Stéphane as he needs to be to prevent or respond to an evolving situation.

I think dogs with jobs are honestly the most amazing creatures. I work with police dogs across the country, and they astound me every day. This week, I had the opportunity to chat with the folks in charge of BC and Alberta Guide Dogs (BC/ABGD), and I was blown away at what these dogs can do. I was also mesmerized by the passion in their voices. Bill and Linda Thornton, a husband-and-wife team, each play massive roles in this non-profit organization, and it was a pleasure to listen to them talk.

Bill recounted to me the history of BC/ABGD. He started it in 1996 and was servicing BC only at the time. In 2002, they started to work in Alberta. In 2008, they added autism service dogs to their programs in both provinces, and in 2019 Vancouver Island

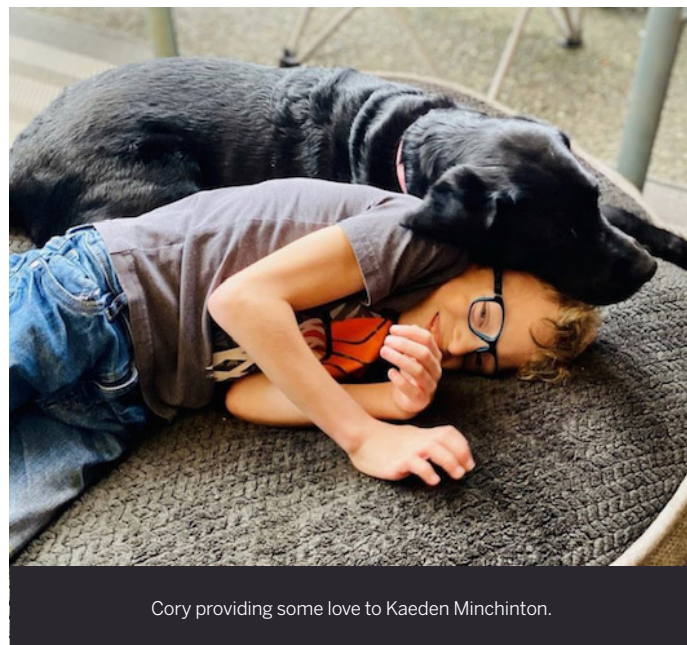
"SARGE HAS ALLOWED HIM TO HAVE HIS LIFE BACK. SARGE'S COMPANIONSHIP MAKES IT POSSIBLE FOR STÉPHANE TO GO OUT OF THE HOUSE."

PHOTOS COURTESY LINDA THORNTON, BC AND ALBERTA GUIDE DOGS

“IT IS MUCH BETTER TO USE TREATMENT AND PREVENTION TO KEEP A DOG WORKING THAN TO RETIRE THEM AND TRAIN A NEW ONE.”



Caleb Minchinton with his autism support dog Cory, shortly after graduation.



Cory providing some love to Kaeden Minchinton.

Compassion Dogs amalgamated with them to provide PTSD dogs to first responders and veterans. About 70 per cent of the dogs they breed become guide or service dogs in one of the three programs: guide, autism, or PTSD. The other 30 per cent will either be donated to another organization around the world that needs dogs or will be sold to a family with a child with special needs as a companion dog. Each year they match about 30 dogs to partners, and they are hoping to be up to 50 in the next few years. This may not seem like a massive number, but it certainly is impressive when you think about the time, cost, and effort to get to the point where a dog can assist someone.

Bill explained they use only Labrador Retrievers or a 50/50 mix with Golden Retrievers, but they won't go with even 51 per cent Golden. We laughed about that, since I'm a Golden owner myself. He explained that they find Golden Retrievers aren't as trainable as the Labradors, which I can attest to. The bloodlines of the dogs in this program are known back to the 1950s and are all registered with the International Working Dog Registry. These dogs share genetics with dogs in programs in New Zealand, France, the US, Canada, and the UK. They use very few chocolate labs; instead they use mainly yellow and black labs—I personally find that chocolates can be a bit wild, so maybe that is why they don't use that colour.

Bill's wife, Linda, took over the story at this point, as she is in charge of the breeding and whelping program. They whelp about 80 to 100 puppies per year, and Linda attends all the births. The bitches are housed with host families, and the pups are raised until eight weeks of age with that family. Linda visits the puppies every week and provides support to the families. Dr. Irene O'Brien of Scottsdale Veterinary Hospital in Surrey, BC, is one of the main veterinarians assisting this organization. She handles all of the dystocia cases and performs any Caesarean sections, although these are rarely required. Once the puppies are eight weeks old, they are housed by puppy raisers who will have them until they are one and a half to two years old, when they are paired with their new partner. The dogs work until about 10 years of age, depending on their health, and then can retire with the family they've been working with as long as someone can be at home with the dog. These dogs have been around humans constantly since birth, and retiring them to an empty home isn't the right thing to do. Bill was quite passionate about this.

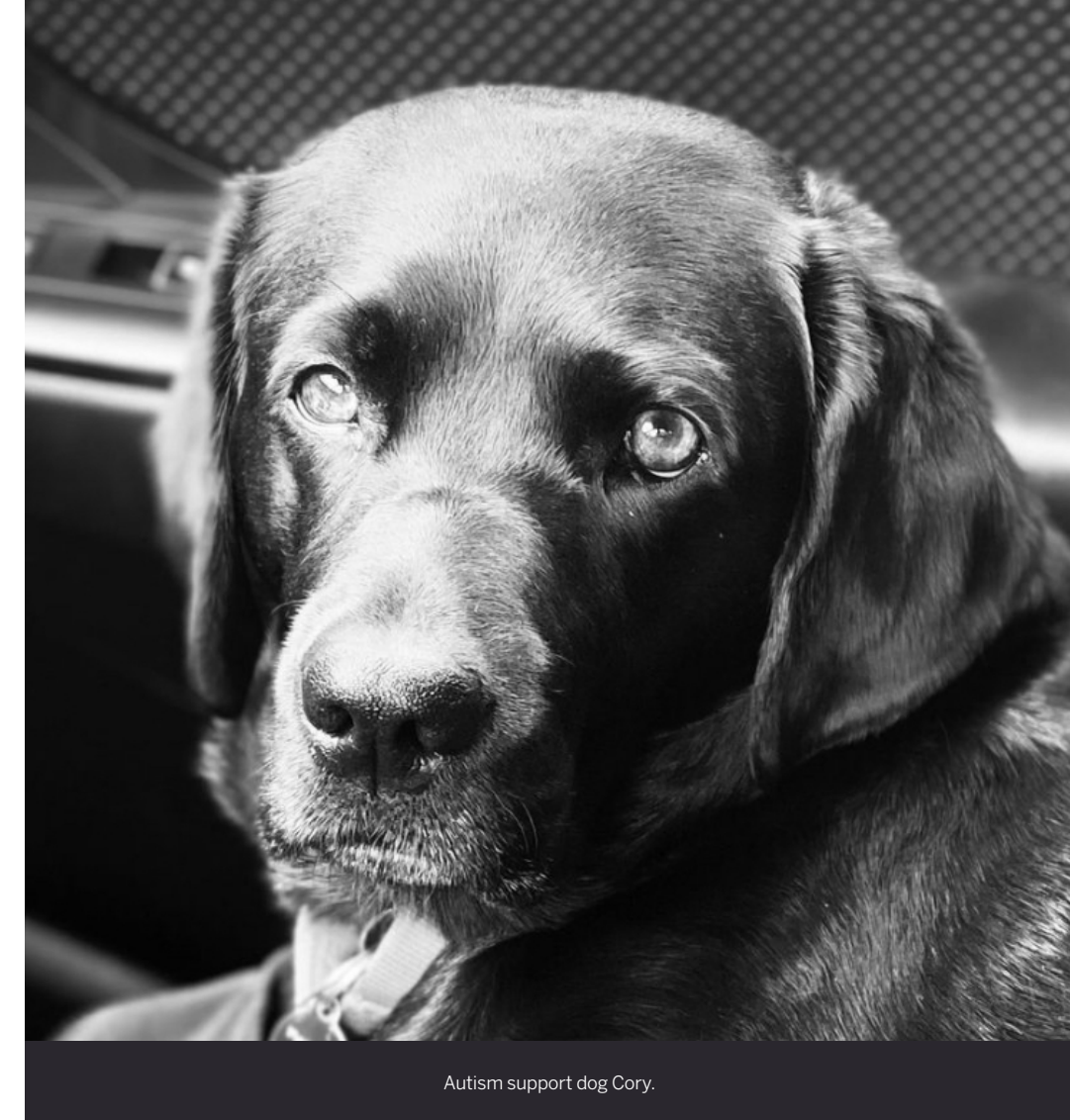
Medical expenses are paid for by the client for routine medical care; however, the organization will help with major bills or unforeseen issues. This is where we as veterinarians could help this organization that is fulfilling such a vital role. We can provide financial assistance with these bills to keep these dogs on the road. Just like with the police dogs I work with, it is much better to use treatment and prevention to keep a dog working than to retire them and train a new one. The cost of training a new service dog can exceed \$40,000.

I asked Bill what he wanted veterinarians to know about his organization. He jokingly said, "Please give us a handsome discount!" He followed up by saying that he has never been dissatisfied with a veterinarian he has worked with in Alberta or BC.

BC/ABGD obviously has a great working relationship with Dr. O'Brien, who explained that they "have very high health standards, and any dog with suspected allergies, for example, or other chronic medical conditions would not be able to continue

in the program either as brood stock or in training." Many other veterinarians provide support to this organization. Linda said they are well known at Boundary Bay Veterinary Specialty Hospital and Canada West Veterinary Specialists, where they have taken several dogs for emergencies. They also go to the cardiologist (Dr. Mark Harmon) at Boundary Bay Hospital to have all of their breeding stock screened. The breeding dogs have radiographs taken of their hips and elbows, which are read by Dr. O'Brien and a radiologist (Dr. Laurie Head), and the dogs are OFA certified. They also have their eyes checked by an ophthalmologist (Dr. Graham Lewis). They also screen all of the breeding stock with the Paw Prints genetic screening panel. The screening includes centronuclear myopathy, myasthenic syndrome, copper toxicosis, degenerative myelopathy, exercise-induced collapse, nasal parakeratosis, macular corneal dystrophy, two forms of progressive retinal atrophy, retinal dysplasia, skeletal dysplasia, and Stargardt disease, a degeneration of both rod and cone photoreceptors of the retina. They certainly do their due diligence in trying to keep a bloodline that is sound in body and mind.

In BC, the act that regulates guide and service dogs has been newly updated as of 2020. Any member of Assistance Dogs International (ADI) or the International Guide Dog Federation (IGDF) who graduates dogs from their program doesn't need to pass a test but is granted status in BC. Their dogs are issued a government ID card allowing them to access public venues where most pets aren't allowed. The other way to gain this status is to train your own dog and then pass a test administered by the Justice Institute of BC. The only issue with this avenue is that there is no one monitoring how these dogs are trained. Groups working with ADI/IGDF do not allow aversive methods to be used. If a private trainer takes the test and passes, unfortunately the training could have been done with aversive methods such as a shock or choke collar, and the examiners have no way of knowing this. This means there could be accredited service dogs



Autism support dog Cory.

walking around with prong collars on, which in my opinion, is terrible at any time, but more so when that dog is performing a job. That would indicate to me that the dog isn't willingly participating in what is being requested of them. Bill said that if a dog doesn't want to work with them in their program, they "set them free with love" to whatever home might suit them.

Bill, Linda, the veterinarians, and all the staff and volunteers are providing a service that will change people's lives profoundly. These dogs do not only change lives—indeed, they save lives. I don't say that just figuratively; I mean it literally.

Such is the story of Heather Minchinton, whose service dog Cory, a black lab, has helped her nine-year-old son Caleb with his autism. Heather explained that "Although children with special abilities experience a lot of joy, having children with autism also presents many challenges and stressors." She said that one of the big things Cory has helped with is her son's safety. She said, "When out in the community, Caleb is tethered to Cory on one side, and I hold the leash on the other side. This prevents Caleb from bolting into traffic or wandering away." In addition to safety, Cory gives Caleb some freedom so that he doesn't have to hold his parents' hands all the time. And Heather said he is comforted by having "his pal" beside him. Cory also helps with social interactions for Caleb. Other kids come up to Caleb wanting to know about his dog, which allows Caleb to engage with his peers, which is "something that most parents of children with autism want for their kids," said Heather. As a parent myself, that resonated profoundly with me, and it made me quite emotional to think about how this dog is helping Heather and her family.

This dog has really been life changing for Heather's family. Although Cory is paired with Caleb, she also helps Heather's other two sons, who are also on the autism spectrum. Cory provides comfort and helps the boys by reducing anxiety, especially at night when she sleeps in their beds. She helps the boys fall asleep without a parent in the room, which allows Heather to carry on with night-time parenting activities such as getting lunches



Stéphane Marcotte and Sarge.

ready and preparing for the next day. I'm a parent of two kids, so I can only imagine the endless to-do list Heather must have with three children at home and the extra challenges parenting children on the autism spectrum.

Cory has been with their family since 2019, and I asked Heather what she wanted veterinarians to know about dogs like Cory. She said, "The BC and Alberta Guide Dog Association works with their dogs since puppyhood to increase their tolerance for the different types of check-ups and tests that are performed at the clinic. Cory was at the vet last week, and I was told that Cory was the easiest exam that the veterinarian had that whole day. So, I would say to vets to expect that they will have a very cooperative dog because of the tolerance training that the staff has done." She also said that she wanted people in general to know about all the time, hard work, and money that goes into training these dogs. "It is a great organization for people to support."

After hearing about Sarge and Cory, I asked Dr. Irene O'Brien if she had a specific case that stood out to her of the many dogs she has helped in this program. She described an autism support dog who is a patient of hers but is now a retired senior dog with diabetes: "She is sweet and the mom has been an inspirational speaker for the Autism Support Program, sharing how helpful their dog has been in bringing comfort, companionship, and support to her autistic daughter. Until you hear firsthand from someone, many of us are unaware of the impact these dogs can have to make a difficult life much easier." Dr. O'Brien went on to explain that before the dog joined the family, simple tasks like going to the grocery store were difficult, as the family would worry that the child would bolt away. However, after the dog joined the family, "If the child became overwhelmed, the dog would be there to calm her, and as the dog was identified as a support dog, people around them would look at them with kindness and understanding rather than judging her as a poorly behaved child having a temper tantrum. These dogs become life changing to a family."

Hearing about the work of Bill and Linda and the experiences of Stéphane and Heather with service dogs has cemented my belief that dogs are amazing creatures and that dogs have healing powers. The work of the amazing people who raise, train, and care for these dogs must be heavy at times. I leave you with words from Dr. O'Brien: "We had a fairly



Dr. Irene O'Brien with a BC/ABGD puppy.

young working guide dog diagnosed with a very aggressive mass that caused significant facial deformity, and it was heartbreaking for the young woman she was paired with and for all involved with the case. After specialty referral, she was deemed inoperable, and when we euthanized her, the school did everything possible to pair the woman with a replacement dog as quickly as possible. The reality is that the list of people needing guide, autism support, and PTSD support dogs is much longer than the list of available dogs." I think it is tough enough on most veterinarians when we are involved with sad medical cases, but when you know that the dog you are euthanizing is someone's lifeline, the burden becomes much greater.

We as veterinarians have the ability to help these dogs and by extension, to help those people who depend on them—fathers, daughters, sisters, uncles, and friends who make up the communities we live in. [WCV](#)

DEFINITIONS FROM THE GUIDE DOG AND SERVICE DOG ACT

"Service dog" means a dog that a) is trained to perform specific tasks to assist a person with a disability, and b) is certified as a service dog.

"Guide dog" means a dog that a) is trained as a guide dog for a blind person, and b) is certified as a guide dog.

False representation: A person must not falsely represent a dog as being a member of a guide dog team, service dog team, retired guide or service dog team or dog-in-training team.

SERVICE DOG ETIQUETTE

1. Don't make assumptions about the human partner or their disability. Do not assume someone does not need a service dog because you do not notice a disability. Invisible disabilities exist, and no one is required to explain their medical history to you.
 2. Don't judge the validity of the service dog by the human partner. Do not police people in public on whether you believe their dog to be a service animal or not.
 3. Don't distract the service dog while they're working. Do not attempt to pet or cuddle a service dog while they are working, as it may distract them from the task at hand.
- Taken from Jocelyn Johnson's talk at TEDxWinnipeg, "Service Dogs Are Not a Pet Project." See www.ted.com/talks/jocelynn_johnson_service_dogs_are_not_a_pet_project.

CVMA CHAPTER POSITION STATEMENT ON SERVICE ANIMALS

June 7, 2021

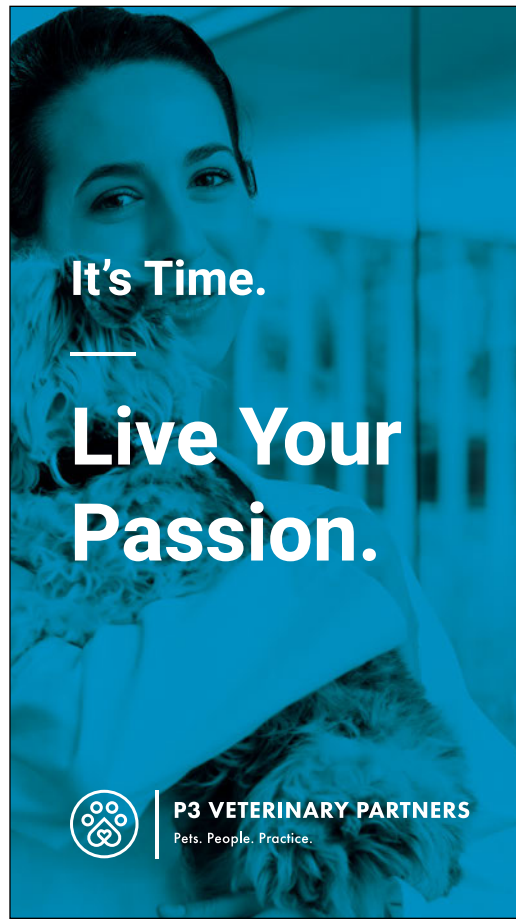
Position

The Canadian Veterinary Medical Association (CVMA) holds that the veterinary profession should contribute to the development and maintenance of a national standard for service animals. Furthermore, veterinarians should provide expert advice on the proper care of service animals to support animal health and welfare, and public health and safety.

Summary

- The CVMA supports the definition of "service animal" as an animal that is required by a person with a disability for assistance and is certified, in writing, as having been trained by a professional service animal institution to assist a person with a disability.
- Depending on the jurisdiction, an animal identified as a "therapy animal," "emotional support animal" or "working animal" (e.g. military, police or search and rescue) may not be considered as a service animal and therefore may not have the same rights to access facilities or services such as workplaces, stores, restaurants, airlines.
- The CVMA encourages the development of a national standard for service animals that supports animal health and welfare, training, and suitability of the animal for their intended purpose.
- Veterinarians should be directly involved in the development of a national standard given their expertise in animal health and welfare, and animal behaviour.
- Standards developed by organizations such as the International Guide Dog Federation and Assistance Dogs International should be considered as models for a national standard for service animals.
- Veterinarians should work in close collaboration with colleagues in human healthcare and recognized institutions to support the health and welfare of service animals.
- Veterinarians should limit advice they provide to clients on service animals to matters pertaining to animal health and welfare, and animal behaviour.

For the full statement, please visit www.canadianveterinarians.net/documents/service-animals-PS.



It's Time.

Live Your Passion.



P3 VETERINARY PARTNERS
Pets. People. Practice.

Ready to Grow Your Career?

P3 Veterinary Partners is an innovative Canadian veterinary practice group whose vision is to be the best place to work in veterinary health care.

With opportunities in our hospitals across Canada, we are committed to empowering you to live your passion.

Our compensation packages, including opportunities for buy in, are designed for people driven by a deep commitment to our clients and the health of their pets.



Great Opportunities for Veterinary Professionals

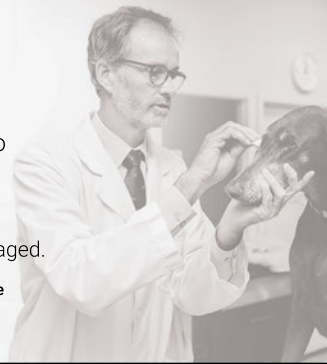
p3vetpartners.com

Ready to Plan Your Legacy?

We offer a variety of exit strategies for practice owners who have lived their passion and want to ensure their local legacy continues.

Our partnership models provide financial security and peace of mind knowing your practice will be well-managed.

Let us ease the stress of letting go and help preserve the legacy you've built for the pets in your community.



neuranix

vet-wave®



distributed by

nuon
WALL-TO-WALL RADIOLOGY
COAST-TO-COAST SERVICE

1.866.455.3050 | nuonimaging.ca



WHY CHOOSE vet-wave® BY neuranix?

Vet-Wave is the first and only screening and diagnostic device for a **painless, quick** and **non-invasive** functional evaluation of the tympanic membrane and the middle ear, in order to complete, support and direct diagnoses and treatment of veterinary ear pathologies.

Vet-Wave uses patented technology, based on a wide range of acoustic frequencies, to generate a digital report that is **easy to use and interpret**, facilitating appropriate **clinical and therapeutic** follow-up care.



WHAT DOES vet-wave® IDENTIFY?

- 01 A normal eardrum
- 02 A ruptured eardrum
- 03 An increased stiffness¹ of the eardrum
- 04 An increased flaccidity² of the eardrum

¹ Combined with clinical information could be sign of Otitis Media, otic polyps, cholesteatoma and other pathologies.
² Combined with clinical information could be sign of ossicular dislocation, monolayer eardrum, cranial nerves disfunctions and other pathologies.

AlphaVet Science™
Just Natural Science™

To learn about the AVS Drop Ship Program & Virtual Dispensary, contact your local AVS Account Manager or call **1.888.299.0318**

Dr. Igor Goloida, MD
Director of Professional Brands
igoloida@alphasciencelabs.com
Head Office: 416-297-6900

Tom Lawless - British Columbia
tlawless@alphasciencelabs.com
Tel: 250-826-7084



Selected products are now available through AVP.



AlphaVetScience.com • 1-888-299-0318 • 795 Pharmacy Ave., Toronto, ON • CANADA • M1L 3K2

BRACHYCEPHALIC BREEDS: THE COST OF CUTE

HOW DENTISTRY CAN PLAY A ROLE IN ADDRESSING BRACHYCEPHALIC BREATHING PROBLEMS

BY ADRIANA REGALADO, MVZ, AVDC

“THE BEST TOOL VETERINARIANS CAN HAVE TO PROTECT THE WELFARE OF BRACHYCEPHALIC PETS IS A DEEP KNOWLEDGE OF THEIR ANATOMICAL FEATURES.”

Owners may be initially attracted by what they perceive as cute, but the reality is different, sometimes far different. Owners should understand the pathologies that their pets have, which are falsely perceived as standard for the breed. They also need to be prepared for the financial commitment involved in caring for a flat-faced pet. The challenge, of course, is that many of the people who own and recommend a brachycephalic breed have already prioritized cuteness without fully understanding the multiple health issues.

Veterinarians play an essential role in creating awareness by educating their clients about the health and welfare concerns that brachycephalic breeds face. The best tool veterinarians can have to protect the welfare of brachycephalic pets is a deep knowledge of their anatomical features.

BOAS

Some owners believe that addressing BOAS (brachycephalic obstructive airway syndrome) is all that their pets will need to have a good quality of life, mistakenly believing that one fix will cure everything. Sadly, this is not so. Many owners are unaware that their pet may suffer in silence due to chronic and painful conditions such as traumatic occlusion, oronasal fistula, periodontal disease, or unerupted teeth.

The goal of this article (and others that will follow) is to provide an in-depth review of the following:

1. Skull anatomy
2. Dental conditions
3. Components of BOAS and any other oropharynx, nasopharynx, and pharynx pathologies
4. General recommendations for anesthesia and common emergencies associated with brachycephalic breeds

BRACHYCEPHALIA

The term *brachycephalic* refers to a type of head shape. The head shape is also known as a *cephalic index*. Based on the cephalic index ratio (calculated as the maximum width of the head divided by the head's maximum length and multiplied by 100), the skulls of the dogs may be classified as brachycephalic, mesocephalic, or dolichocephalic.

A better definition describes brachycephaly as a local chondrodysplasia induced by domestication that manifests as alteration so that the cranial length to skull length ratio is greater than 3.44 or the skull width to length ratio is more than 0.81 (see Figure 1).

Neurocranium shape

- Rounded and protruding forehead
- Brain case relatively large
- Cribriform plate anteriorly displaced
- High incidence of keyhole-shaped foramen magnum
- Brain is rotated with respect to its mediolateral axis
- Muscle attachment sites large, providing increased mechanical advantage
- Angulation between the skull base and hard palate
- Short basicranium with increased skull height
- The angle formed by the cranial base and palate quantify the dorsal rotation of the snout; angles greater than 180 degrees characterize airohynchy
- Up-down-snout or airohynchy in Boxer and French Bulldog
- Cephalic index of more than 60 indicates a short head

Cranial base length

- Disproportionate to overall body size
- Chondrodysplasia
- Two temporal lines instead of a sagittal crest
- Persistent ventral foramen magnum

Zygomatic arches

- Wide and shallow
- Shallow orbits, ocular proptosis, and widely placed orbits
- Widened skull with wide zygomatic arches

Rostrum

- Shortened
- Frontonasal dysplasias
- Face is shorter, smaller, and wider
- Hypoplasia of the bones of the rostrum and retrognathic upper jaw

Palate

- Flat or convex (rather than concave) oral surface of the palate
- Club-shaped
- Short and wide secondary palate (maxilla and palatine)

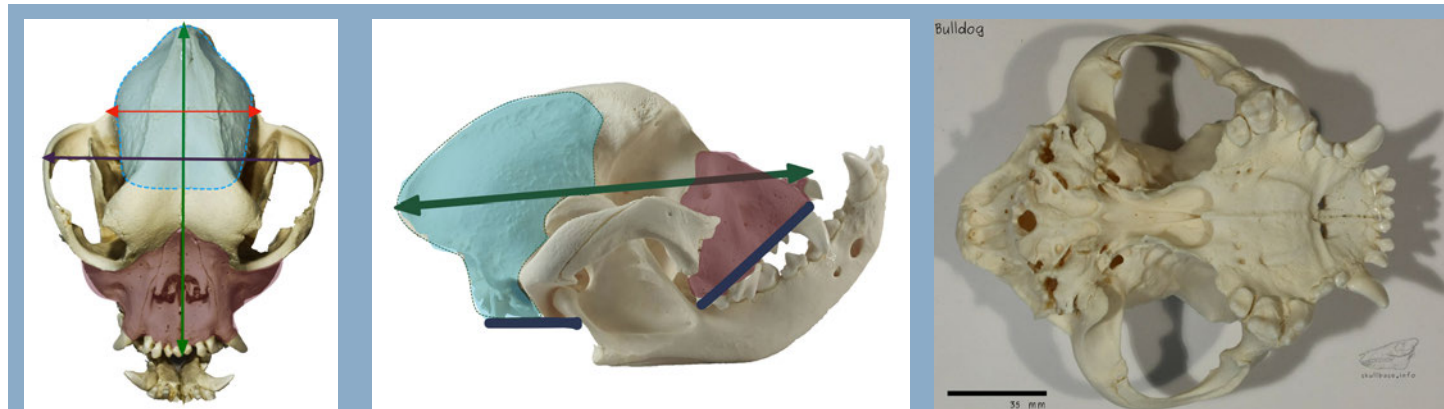


FIGURE 1: Anatomical and morphological characteristics of the brachycephalic skull.

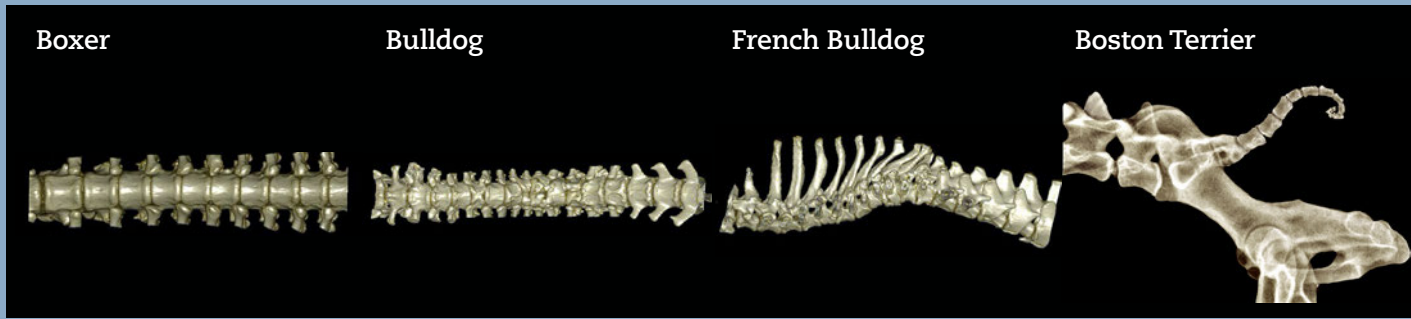


FIGURE 2: Spinal malformations in screw-tailed breeds associated with the *DVL2* gene.

Mandible

- Shorter and wider
- Bowing of mandibular body
- Protruding mandible and prognathic lower jawbone
- Malocclusion class III (underbite)

Disrupted carnassial complex

- Greater variance in carnassial orientation
- Maxilla/palate shape shows medio-lateral widening centre at PM4
- Crowded premolars
- Wide spread of incisors

THE GENETIC COMPONENT OF BRACHYCEPHALIA

Modifications in dog breeds have traditionally been based on breeding for desired phenotypes. However, in just the last couple of decades, we have started to track and identify the specific genes associated with brachycephalism in dogs.

There is new evidence supporting the hypothesis that mutations associated with the skull shape in brachycephalic breeds may be related to a near-homozygous trait (a selective sweep). Also, sequencing the genome of screw-tailed brachycephalic breeds demonstrates a mutation in the WNT pathway gene *DISHEVELLED 2 (DVL2)*. Bulldogs, French Bulldogs, and Boston Terriers may show manifestations of the *DVL2* variant in a recessive, variable, and incomplete penetrance for thoracic and caudal vertebral column malformations (see Figure 2).

Various genes and suggested loci have been associated with the phenotypic characteristics of brachycephalia (see Table 1). On the CFA1 chromosome, the *SOMC2* gene for modular calcium binding is responsible for the most profound facial length variation. On CFA5, *DVL2* is associated with the screw tail phenotype and vertebral abnormalities. On CFA32, *BMP3* (bone morphogenetic protein 3) modulates skull shape. On CFA12, *FGF4* reduces neurocranium size.

Two features of brachycephalic breeds are associated with polyglutamine and polyalanine on the transcription factor of *RUNX2*:

1. Dorsal bending of snout (airorhynch)
2. Midface length

Underdeveloped nasal turbinals

The same genetic mutations responsible for restricting the facial length growth in brachycephalic breeds also affect the development of the turbinals. As the space in the nasal cavity becomes compromised, some of the turbinals develop in abnormal places (aberrant turbinals).

Possible locus (CFA)	Gene	Skull length	Snout length	Mandibular length/height	Zygomatic arch width	Palate length/width	Bone density	Suture closure
1	<i>SOMC2</i>		SL	ML				
5 (no pug)	<i>DVL2</i>		SL					
24	Unknown				Za			
30	Unknown					PL		
32	<i>BMP3</i>	SkL	SL				BD	SC
X		SkL		MD-H	Za	PW		
	<i>FGF4</i>	SL				SL		

TABLE 1: Gene loci for phenotypic characteristics of brachycephalia.

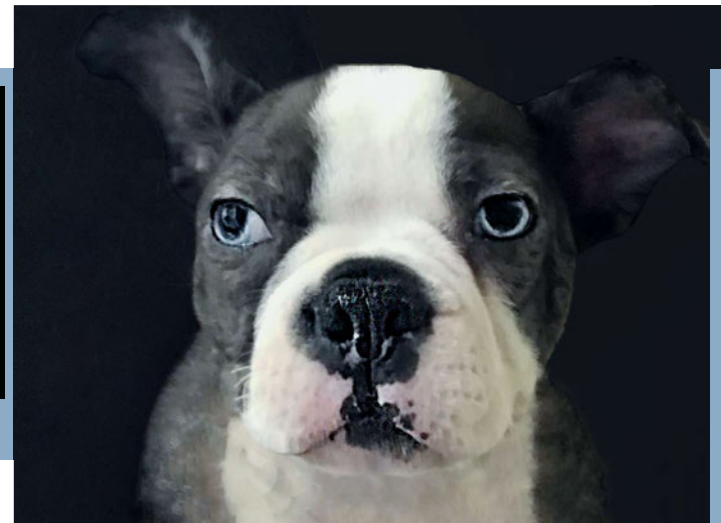


FIGURE 3: Placement of the mandibular canal.

Mandible and mandibular canal

Changes on the mandible are not as profound as the change on the maxilla of brachycephalic dogs, but they do exist. The mandible is shorter and is wider in a medial-lateral direction.

The body of the mandible is shorter and has a bowed shape. This is the result of the carnassial tooth and the rest of the posterior teeth being in a more inferior location than in mesocephalic breeds.

The mental foramen is located in the mandibular body approximately halfway ventral to the alveolar edge, with a mild displacement in the posterior and lateral directions. The mandibular foramen is also displaced in an anterior direction. As a result, the inferior alveolar canal is shorter.

The mandibular canal in brachycephalic dogs (see Figure 3) travels from caudal to rostral in a lingual to vestibular direction. The entrance is the mandibular foramen; then the canal reaches the maxilla deep from the alveolar crest at the level of tooth 309/409. Finally, the canal is slightly displaced in the direction of the alveolar crest to reach and exit through the middle mental foramen.

Another factor that determines the shape of the mandible in brachycephalic dogs is their large and strong masticatory muscles. But those changes are not limited to the mandibular body. Another change is that the coronoid process is large and wider with a deep masseteric fossa and the ramus curved ventrally and laterally.

Cribriform plate shape

The cribriform plate (CP) has a remarkable plasticity that allows it to adapt to extreme breed modifications. This plasticity is due to its late ossification, which happens several months after birth. Therefore, variations of the CP are more profound in domesticated dogs than in wild canids.

An example of this is in short-snouted skulls, where the main axis of the CP is flat. Also, the CP is shifted anteriorly. Pugs showed a CP that is remarkably different than in other dogs. Their CP is flatter and the rostra caudally compressed.

Nasal septal deviation

The prevalence of nasal septal deviation has been underestimated and historically has been associated with nasal pathologies. However, recent studies show that there is no difference in the prevalence of nasal septal deviation between healthy and ill dogs.

An example of this is the brachycephalic breeds that may have developmental distortions of the nasal septum due to their increased facial and skull indices. A study evaluating nasal airflow showed that some English Bulldogs may have had disruption of the nasal air flow due to deviation of their nasal septum.

Changes in the carnassial complex

The reduced size of the maxilla in brachycephalic dogs directly affects the position of the maxillary premolars PM4 in relation to the mandibular M1.

A recent study confirmed that the distance between the MX and PM4 is larger and the MX-to-MD carnassial ratios are wider than in other breeds. Also the PM4 shows malocclusion class I as they are rotated. The changes have disrupted the scissoring and shearing functions of these teeth.

Hard palate

There is a remarkable anterior projection and rotation of the PM4 in the hard palate of brachycephalic dogs. These changes are maladaptive and have been perpetuated by selecting breeding. ^[WCV]

“ANOTHER FACTOR THAT DETERMINES THE SHAPE OF THE MANDIBLE IN BRACHYCEPHALIC DOGS IS THEIR LARGE AND STRONG MASTICATORY MUSCLES. BUT THOSE CHANGES ARE NOT LIMITED TO THE MANDIBULAR BODY.”

PRACTICE INSPECTION

BY JUDY CURRIE, DVM

Practice facilities inspection is all about safety. The CVBC's primary mandate is public protection, a significant part of which is the safety of everyone who enters or works in a veterinary facility.

Included are patients, clients, and staff, because along with the clients, the veterinary staff are also members of the public.

The CVBC inspects practices on a rotating cycle every five years. During the "off" years, each facility is required to do an annual self-assessment and submit a declaration to the registrar's office stating that the practice, whether it be stationary or mobile, is delivering veterinary services at a level equal to the generally accepted accreditation standards, many of which have been recommended by other CVBC registrants.

Each practice has a designated registrant, who is responsible for making sure all the regulations and standards set out in the Veterinarians Act, the CVBC bylaws, and the practice facilities standards are being followed. The designated registrant in most cases will be the practice owner. So why should associate veterinarians pay attention to or care at all about whether their workplace passes inspection?

One reason is that in BC, every veterinarian must practise out of an accredited facility. Each facility is inspected and accredited based on its usual nature and scope of practice, which includes species seen and the disciplines or modalities used within the practice. This means that a companion animal practice need not meet the standards of an equine or dairy practice and vice versa. If a practice offers acupuncture or chiropractic treatments, it must be able to show there are trained staff who are knowledgeable about those modalities. There are, however, certain standards that apply to all facilities. Some of these are important to all staff and particularly to associate veterinarians. There are safety standards that apply to physical, chemical, biological, and legal hazards about which associate veterinarians should be aware.

For example, exterior lighting is covered in Facilities General Section 3.2 (e) of the standards: "Exterior lighting must allow adequate visibility for a safe approach after dusk and dark." Seems like an obvious requirement, doesn't it? Have you ever done an after-hours call or gone in to do treatments late at night? Fumbling around in the dark for your keys or meeting a client you don't know can be disconcerting at best and at times, outright scary. Adequate exterior lighting can contribute significantly to peace of mind at 1 a.m.

What about the animal handling equipment in the practice? Is it in good repair and adequate for the species seen? Is your support staff trained and experienced in the restraint of the critters you need to examine and treat? Physical safety on the job is critical in veterinary medicine for everyone working in the practice. Do you ever or often allow a client to restrain their own animal? Are they trained or experienced with the necessary restraint? Restraint of animals by owners is risky. They are often confident that they know

how to control their horse, large dog, bull, or Bengal cat. Frequently, it turns out not to be the case, largely because most animals are extremely stressed while in the clinic and don't behave in ways their owners expect.

Are there working fire alarms, carbon monoxide detectors, and sprinklers in the building? Is there enough space to allow for confinement or separation of animals? Can you do a physical examination without distraction or the potential for aggressive contact between animals? Are the oxygen tanks properly secured, are there easily accessible sharps disposal containers, and is the business following WorkSafeBC and the Workers Compensation Act and Regulations?

What about chemical hazards? Are the anesthetic machines properly vented? Is there good ventilation in the building, and is it possible to open windows or doors to allow for removal of toxic gases if the anesthetic scavenging system fails?

Are WHMIS and Material Safety Data Sheets accessible for staff to review when needed? Are all staff members familiar with that information? Are you familiar with it?

Does your practice treat cancer patients? If so, is the necessary equipment to allow for safe handling of toxic drugs available to you? Does the support staff have sufficient training to assist you with patient treatment so that everyone involved is safe?

Biological hazards are another safety issue addressed by facilities inspection. Do you know whether the radiology equipment has been calibrated and serviced within the last 24 months, and are the lead aprons, gloves, and thyroid shields in good repair? Are radiation monitors routinely worn by all staff who could be exposed to ionizing radiation? Did you know that no one under the age of 19 is permitted to have occupational exposure to ionizing radiation? Is the high school volunteer in your practice ever present during any potentially dangerous situations?

What about protocols for disinfecting tables, stalls, kennels, and any equipment used for animals with contagious diseases? Is there safe storage for dead animals and other biological waste? Is the staff trained in sanitary procedures? Are there sufficient floor drains placed to allow easy cleanup and sanitation? When doing dental procedures, do you wear eye protection and a mask to prevent contact with aerosols?

Is everyone aware of the potential for transmission of zoonoses? Does the practice have a protocol for handling rabies suspect cases?

Last but certainly not least, are you legally protected while you are working?

Many facilities standards deal with more than one safety concern. For example, section 11.3 of the 2021 Annual Self-Assessment Form addresses storage of expired drugs: "d) A separate storage area must be available for holding expired drugs pending disposal or return to manufacturer."

Clearly, the primary intent with this standard is patient safety. Your legal liability if an expired drug was mistakenly used to treat a patient in a case that went haywire would be unquestioned. Storage of expired drugs separate from current medications is essential not only for patient safety but for your legal protection as well.

Getting back to physical hazards, what is your liability if an animal is injured in the clinic while under your care? Does the space and restraint equipment in the facility prevent animals from attacking each other or people in the area? What if a client is injured while restraining their own animal during your physical examination? What if you are injured when an inexperienced staff member is unable to control that racing quarter horse for your physical examination?

If an animal escapes during your appointment because of poor handling facilities, are you at fault?

Is enough attention paid to informed consent in your practice? Are clients routinely asked to sign consent forms? This can be particularly important if alternate treatment modalities such as homeopathy or acupuncture are suggested by you. Do your clients usually have a clear understanding of your explanations regarding diagnostic workups, the ultimate diagnosis, the recommended treatment, and the related costs? Are you sure your instructions about medication use are clear to your clients, or have you simply assumed you have given clear direction? Does BID written on a prescription label mean the same as q12h to everyone? What if the medication in question is insulin? When used in animals raised for food, clear instructions about medication use and withdrawal times are particularly important. Should a client's animal be condemned at the packing plant because of high antibiotic levels, you need to be able to prove that you gave proper instructions.

What is the scope of practice in your facility? If it is a small animal practice where you regularly see a client's dogs and the client also owns horses, is it okay for you to fill a prescription for the client's horse? If the stated scope of practice for the facility is small animal only, meaning it has been inspected and accredited as a small animal practice, filling a prescription for a horse may very well be legally hazardous not to mention a safety concern for the animal.

Are medical records, the legal documentation of everything that you do, stored securely? Are the computer records backed up regularly? Are there logs kept for all anesthetic and surgical procedures? Are controlled drug logs up to date and complete? The veterinarian who prescribes controlled drugs is responsible for ensuring this is done for every patient under their care.

Everyone practising veterinary medicine in BC must carry malpractice or liability insurance, which means every veterinarian practising must have their name specifically listed in the liability and malpractice insurance, and that all locum veterinarians need their own insurance to be fully protected. Do you pay for your insurance, or does your employer cover it as part of your employment contract? Are you certain it is renewed every year?

Do you bear any responsibility if you reasonably believe the facility out of which you practise is not in compliance with CVBC regulations? Take a look at Part 3: Accreditation and Naming, item 3.5(2) of the CVBC bylaws.

Questions such as these are can be endless; facility inspection is critical to helping you as an associate veterinarian to practise veterinary medicine safely in BC for yourself, your colleagues, your clients, and your patients. Perhaps as an associate veterinarian, you could volunteer to be included in the self-assessment process as a way to better understand the behind-the-scenes requirements of running a veterinary facility. **WCV**

"IS ENOUGH ATTENTION PAID TO INFORMED CONSENT IN YOUR PRACTICE? ARE CLIENTS ROUTINELY ASKED TO SIGN CONSENT FORMS?"

SALMONELLA WHAT?

GETTING TO KNOW SALMONELLA DUBLIN IN BC

BY DORIS LEUNG, BSc, MPH, DVM, CHELSEA HIMSWORTH, PhD, DVM, MVetSc, DACVP, AND ELLEN BOYD, BSc, DVM

Salmonella dublin is an emerging cattle-adapted bacterial pathogen that is on the rise in North America. *S. dublin* has significant adverse impacts on animal health, welfare, and productivity. It has been estimated that *S. dublin* could be costing the dairy industry approximately \$30 million annually. The disease causes abortions and high calf mortality that is often unresponsive to treatment so that once *S. dublin* enters the herd, it is difficult to eliminate. Some animals become lifelong carriers and shed the bacteria in their manure.

S. dublin negatively impacts the health and welfare of cattle of all ages. Sporadic abortion can occur in infected pregnant adult cattle at five to nine months of gestation. Within naive herds, the disease is primarily seen in young calves typically under three months of age. A predominant clinical manifestation in infected young animals is pneumonia and respiratory illness, but other symptoms including acute septicemia, anorexia, hyperthermia, gastrointestinal illness, swollen joints, necrotic tail and ear tips, and sudden death are also noted. Symptoms present more severely with stressed animals in the herd.



FIGURE 2: Gross mortem examination of a calf with *Salmonella dublin*. Note the gall bladder wall edema in the image. This is considered pathognomonic for *S. dublin* in calves.

PHOTO AND DESCRIPTION COURTESY GLENNA MCGREGOR, ANIMAL HEALTH CENTRE LABORATORY

Post-mortem lesions of *S. dublin* include hepatomegaly with rounded liver edges that appear bronze in colour, splenomegaly, gelatinous edema of the gallbladder wall, diffusely red non-collapsed lungs, and dark brown fibrinous clots in the cecum (Figures 1 and 2). Other lesions of the infected calf include polyarthritis, meningitis, or petechial hemorrhages in the kidney or gastrointestinal serosa.

Early detection of *S. dublin* in the herd can allow for improved biosecurity practices and management that could lead to effective control of the infection within the herd. Controlling *S. dublin* in cattle herds can result in health, welfare, and economic benefits to the producer, and can reduce zoonotic disease risk.

Given the impact of *S. dublin* on the dairy industry, many Canadian provinces, including Quebec and Ontario, have established surveillance and control programs. Unfortunately, little is known about *S. dublin* in British Columbia, and there has yet to be an organized province-wide effort to understand, monitor, or mitigate the disease. This is problematic, as based on submissions to the provincial Animal Health Centre laboratory, BC appears to be experiencing a significant and accelerating increase in *S. dublin*-positive dairy cattle.



FIGURE 1: Gross mortem examination of a calf with *Salmonella dublin*. Note the diffuse mild icterus, bright-yellow abdominal fluid, enlarged liver with rounded edges, and multiple pinpoint white foci (necrosis). The lung shown in the image is mildly hyperinflated with numerous small petechiae (small spots of red).

“LITTLE IS KNOWN ABOUT *S. DUBLIN* IN BRITISH COLUMBIA, AND THERE HAS YET TO BE AN ORGANIZED PROVINCE-WIDE EFFORT TO UNDERSTAND, MONITOR, AND MITIGATE THE DISEASE.”

Test	Criteria	Subsidized Rate	Number of Submissions Allowed under Subsidized Rate (per farm)**	Regular Rate
Milk ELISA test	Automated bulk tank milk testing of all participating dairy farms in BC	Free	4 samples (provided by the Pacific Milk Analysis Laboratory)	Free
Blood ELISA test	Samples should be from young stock 4–12 months of age (if possible) for best results. First 10 samples are free.	Free	10 samples	\$10/sample
Post mortem (includes bacteriology)	Whole calves, calf tissues,* or fetuses	\$70/calf \$40/fetus \$55/post-mortem package	5 animals and/or samples (can be any combination of post-mortem or bacterial culture services)	\$140/calf \$80/fetus \$110/post-mortem package
Bacterial culture	Lung/liver samples from deceased animal or feces can be submitted	\$20/sample		\$40/sample

* Examination of tissues from calves/fetuses necropsied on farm is equivalent to the post-mortem package.

** Additional submissions are welcome but will be charged the regular rate.

TABLE 1. Summary of laboratory diagnostics and discounted rates with the *Salmonella dublin* Investigation and Management Program.

NEW PROGRAM LAUNCHED IN BC

The new program, called the *Salmonella dublin* Investigation and Management Program, launched in September 2021. The program is led by the Animal Health Centre and the BC Ministry of Agriculture, Food, and Fisheries, with industry collaboration and consultation. It has received support from the BC Dairy Association’s Dairy Industry Research Education Committee and the Canadian Agricultural Partnership.

The program aims to support industry, dairy farmers, and bovine practitioners of BC by accomplishing the following objectives:

- Understand the distribution of *S. dublin* in the province and identify potential transmission pathways among affected farms
- Identify the risk factors for *S. dublin* introduction into a dairy farm
- Develop resources and materials to strengthen producer and practitioner knowledge on *S. dublin* in BC
- Provide information to producers and practitioners on best practices and management for disease control
- Build and develop strong relationships for an industry-driven *S. dublin* monitoring and mitigation strategy

TESTING FOR SALMONELLA DUBLIN

The program combines a variety of data collection methods to develop a comprehensive understanding of the distribution of *S. dublin* in BC. The most important of these is bulk tank milk testing for *S. dublin* antibodies. Cattle who are infected with *S. dublin* produce specific antibodies that can be detected in milk samples. Testing milk for antibodies to *S. dublin* with an enzyme-linked immunosorbent assay (ELISA) is an efficient, rapid, and cost-effective screening method for identification of *S. dublin*-infected herds.

Bulk tank milk testing is the best way to determine the number and location of farms currently infected with *S. dublin*—both of which are essential for understanding the significance of the disease in BC and for starting to understand and interrupt transmission pathways among farms. It also helps to identify farms that may not know they have infections. This, in turn, allows improved biosecurity practices and management that could lead to better control of the infection within the herd and decrease the probability of spread to other herds.

It is important to emphasize that there are absolutely no regulatory repercussions from a positive test result to the producer. The program will work with both the producer and practitioner to help them interpret bulk tank milk testing results and collaboratively decide on a course of action that works for them and their herd health goals. This may include performing additional testing on the farm (e.g., tissue and fecal culture, blood serology of young stock, and necropsies), which are provided at a discounted rate (see Table 1) through the program for the course of one year. The program committee places a high priority on data confidentiality; findings are reported with aggregated data and all personal identifiers are removed. Results will not be shared with the BC Milk Marketing Board, the BC Dairy Association, or any other individual or agency.

More information on the different diagnostic tests is available on the program website at sdublinbc.ca. If you or your client have questions regarding the program, please connect with our program committee at sdublin@gov.bc.ca.

Due to flooding caused by the recent extreme weather, services routinely offered by the Animal Health Centre laboratory may be affected. We recommend that clients and submitters call ahead before submitting samples. More up-to-date information can be found here: www2.gov.bc.ca/gov/content/industry/agriculture-seafood/animals-and-crops/animal-health/animal-health-centre.

To save space, the additional reading for this article is made available on the Chapter’s website at www.canadianveterinarians.net/documents/west-coast-veterinarian-winter-2021-list-of-references. **WCV**

CAHSS: ANIMAL HEALTH SURVEILLANCE ACROSS CANADA

BY DORIS LEUNG, BSc, MPH, DVM, AND THERESA BURNS, MSc, PhD, DVM

Animal health surveillance brings together the information needed to demonstrate the health of animal populations and to quickly respond to disease events. A coordinated, connected Canadian animal health surveillance system is essential to rapidly detect serious threats to animal and public health such as emerging diseases, understand endemic disease impacts, evaluate the success of interventions to control disease, and protect livelihoods for Canadian farmers and other animal health and food production workers.

WHAT IS THE CANADIAN ANIMAL HEALTH SURVEILLANCE SYSTEM?

The Canadian Animal Health Surveillance System (CAHSS) is a division of the National Farmed Animal Health and Welfare Council. Since 2019, CAHSS has been focused on generating and exchanging data-driven animal health information that ultimately leads to effective, responsive, and integrated animal health surveillance in Canada.

WHO DOES CAHSS WORK WITH?

CAHSS is designed as a network of networks and brings together different stakeholders into networks to discuss animal health, identify surveillance priorities, and plan surveillance activities across Canada. Currently, CAHSS has several species-specific networks, including beef, dairy, equine, finfish, poultry, smallholders, and small ruminant, as well as special topics networks, including antimicrobial use and resistance and vector-borne diseases (see Figure 1). CAHSS's networks include representatives from farmed animal and agrifood industry organizations; federal, provincial, and territorial government; regional animal health surveillance networks; animal health laboratories; public health laboratories; universities; and more. For swine, CAHSS supports the work of the Canadian Swine Health Intelligence Network, one of Canada's first national species-focused animal health networks.

CAHSS AND ITS NETWORK PARTNERS

CAHSS and the Community for Emerging and Zoonotic Diseases (CEZD) have a strong and synergistic collaboration. CEZD members are professionals in animal, public, or environmental health with an interest in emerging and zoonotic diseases. They work in academia, private and public sectors (municipal/provincial/federal), animal industries, and various animal health networks across Canada. CEZD conducts environmental scanning for emerging and zoonotic diseases and produces weekly intelligence reports based upon signal ratings by their members. CEZD reports are shared with CAHSS members at their quarterly network calls to raise awareness of potential threats. To learn more about CEZD, visit their new website at cezd.ca.

Across Canada there are regional animal health surveillance networks such as the Atlantic Canada Animal Health Surveillance Network, Réseau d'alerte et d'information zoonitaire, Ontario Animal Health Network, and the Western Canadian Animal Health Network

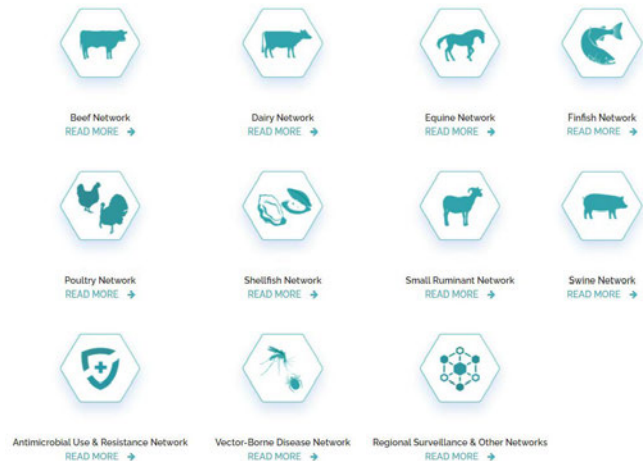


FIGURE 1. Species-specific and special topic networks within the Canadian Animal Health Surveillance System.

(WeCAHN). CAHSS works with each regional network to advance common priorities.

For example, CAHSS works closely with WeCAHN with regular information and resource sharing on WeCAHN's beef, dairy, and poultry network meetings held every quarter. WeCAHN aims to aggregate information and generate animal health surveillance reports, monitor disease trends, and share relevant information with veterinarians, industry, and the public in British Columbia and across other western regions of Canada. More information on WeCAHN can be found on their website at wecahn.ca.

WHAT'S USEFUL FOR VETERINARIANS?

With the launch of the new website (cahss.ca), CAHSS has created a central information hub with several tools that are useful for veterinary practitioners and veterinary epidemiologists. These CAHSS tools, available in English and French, include a resources library, surveillance initiatives library, disease alerts page, and a regulated disease table. In addition, CAHSS produces a podcast series called "Animal Health Insights" that introduce listeners to the partners and organizations that work to support animal health in Canada. The goal of the series is to share insights, information, and the latest updates, as well as to strengthen connections between stakeholders. The themes of the podcasts (see Figure 2) range from imported dogs and foreign animal diseases to the importance of integrating a One Health approach into veterinary and human medicine. Since the podcast launch, there have been over 200 podcast episode downloads by listeners.

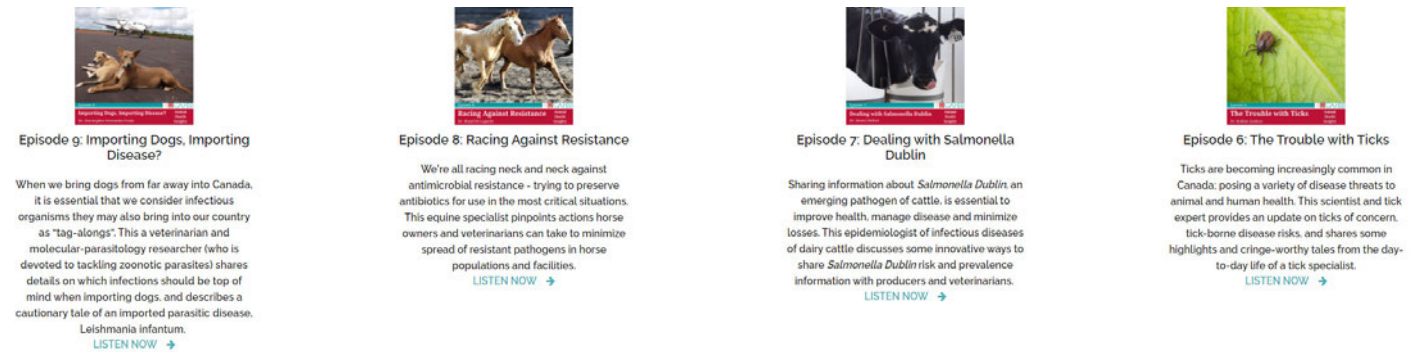


FIGURE 2. Podcast episodes from CAHSS's *Animal Health Insights* series available on the CAHSS website.

CAHSS ACHIEVEMENTS

Antimicrobial use metrics and indicators background and antimicrobial use reporting tool

With dedicated consultation and efforts from the CAHSS antimicrobial use and resistance network, as well as the National Farmed Animal Health and Welfare Council's Antimicrobial Use Working Group, the background and reporting tool were developed to help support antimicrobial use reporting. The documents will help stakeholders effectively communicate antimicrobial use information.

Smallholders resources page

The CAHSS website features animal health surveillance information for smallholders (cahss.ca/cahss-networks/smallholders). The page contains links to manuals, calculators, fact sheets, and other resources produced by organizations across Canada that support small flock and small-scale pig producers in maintaining the health of their animals (see Figure 3).

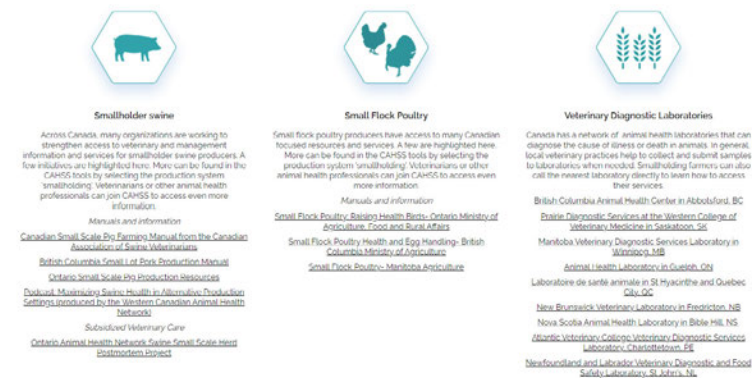


FIGURE 3. Resources available on smallholder swine, small flock poultry, and veterinary diagnostic laboratories that support smallholder production in Canada.

CanSpotASF (African swine fever) surveillance

CAHSS has been continuing to support CanSpotASF (www.ahwcouncil.ca/african-swine-fever) to enhance early detection surveillance for African swine fever in Canada (see Figure 4).

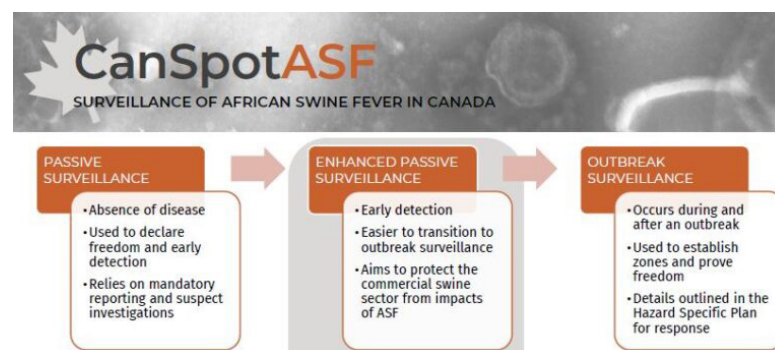


FIGURE 4. Brief overview of CanSpotASF enhanced early detection surveillance for African swine fever (ASF).

WHAT'S NEXT?

RACE approved continuing education courses

CAHSS will be hosting accredited CE courses for veterinarians and veterinary technicians. Registration for these webinars is free. Please email cahssinfo@ahwcouncil.ca if you have questions.

LAUNCH OF THE NATIONAL COMPANION ANIMAL NETWORK GROUP

CAHSS has recently launched a companion animal network group, with the first meeting in October 2021. There were representatives from academia, private practice, private and public laboratories, regional networks, the Canadian Veterinary Medical Association, and the Public Health Agency of Canada.

For more information on current CAHSS initiatives, or to become a member of CAHSS, please visit cahss.ca or email cahssinfo@ahwcouncil.ca. [WCV](https://www.youtube.com/watch?v=VWV)

“GENERATING AND EXCHANGING DATA-DRIVEN ANIMAL HEALTH INFORMATION THAT ULTIMATELY LEADS TO EFFECTIVE, RESPONSIVE, AND INTEGRATED ANIMAL HEALTH SURVEILLANCE IN CANADA.”

VETERINARIANS ASSISTING ANIMALS OF DOMESTIC VIOLENCE

BY LOUISE LATHEY, BLES

It's the middle of the night. Her partner is asleep. Now is the only time she can leave. She doesn't have time to pack, to grab anything; the only thing on her mind is keeping herself and her pet safe. She leaves the house with the clothes on her back and the leash in her hand.

This is quite often the case for women fleeing domestic violence. Finding the strength and the right time to leave is hard enough, let alone having to worry about what to take with them and where to go. As mentioned in previous articles, domestic violence reaches much further than physical harm. It can include psychological, emotional, and financial abuse. Though there are resources available for women, help with pets is few and far between—especially financial assistance for veterinary care.

Amy Morris, Executive Director of the Vancouver Humane Society, says that the Vancouver Humane Society receives “approximately 150 calls a year from women in crisis, such as domestic violence, who need assistance with vet care for their pets.” Each of these calls, Morris says, “though varying in severity, will have someone going through some type of emotional breakdown or stressful time in their life.”

As the SBCV finalizes their new program, Veterinarians Assisting Animals of Domestic Violence (VAADV), organizations like the Vancouver Humane Society look forward to its launch.

VAADV will be matching veterinarians with organizations that help people fleeing domestic violence. Veterinarians involved in this program can provide veterinary care and other services specifically for these animals. Services provided in the VAADV program can include acting as a drop-off or pick-up point, temporary boarding, medication, and dental care among other services.

“With this type of program in place for domestic violence survivors, the Vancouver Humane Society would be able to ensure that veterinarians they are working with would have a trauma-informed mindset,” says Morris. “They would have a more clear understanding of the intricacies of the trauma that survivors face and the effect it can also have on their pets.”

For veterinarians who wish to participate in the Chapter's VAADV program, or for organizations working with those fleeing domestic violence that want to determine how VAADV might assist them, please contact sbcvchapter2@gmail.com with the subject line “VAADV Interest” for more details on the application process. [WCV](#)

“APPROXIMATELY 150 CALLS A YEAR FROM WOMEN IN CRISIS, SUCH AS DOMESTIC VIOLENCE, WHO NEED ASSISTANCE WITH VET CARE FOR THEIR PETS.”

CUT OUT THIS PAGE IF YOU WISH TO SAVE IT.

BY SCOTT NICOLL, BA, MA, LLB

Continuing our focus on the business of professional practices, this column will focus on an employer's human rights obligations to employees, and particularly on the effects that COVID-19 may have on the same.

Unsurprisingly, in British Columbia, the Human Rights Code¹ protects and promotes . . . you guessed it . . . human rights. The Human Rights Code is provincial law, and section three describes its purposes:

- To foster a society in British Columbia in which there are no impediments to a full and free participation in the economic, social, political, and cultural life of British Columbia
- To promote a climate of understanding and mutual respect, where all are equal in dignity and rights
- To prevent discrimination on those grounds prohibited by the Code
- To identify and eliminate persistent patterns of inequality associated with discrimination that is prohibited by the Code
- To provide a means of redress for those persons who are so discriminated against, contrary to the Code

The Human Rights Code prohibits discrimination and harassment in employment on the basis of certain personal characteristics, including race, colour, ancestry, place of origin, religion, family status, marital status, physical disability, mental disability, sex, age, sexual orientation, political belief, and conviction of a criminal or summary conviction offence unrelated to their employment.

Employers have a duty to accommodate employees (up to the point of *undue hardship*) who possess personal characteristics protected under the Human Rights Code. This means that you must take steps to ensure that the employee possessing such characteristics is not put in a position where they are treated less favourably than other employees in the organization because of the presence of this characteristic. The extent to which you must go to so accommodate an employee is defined as to the point just short of creating an undue hardship on you as an employer. More about that later. Employers need to understand their obligations in this regard.

Employees need to understand the extent and limits of the protections afforded to them by the Human Rights Code. The obligations of the Code are not always easy to comprehend, and since the advent of COVID-19, those obligations have only become more complex, for employer and employee alike.

The province continues to grapple with the fourth wave of COVID-19 at the time of writing. Public health orders affecting how people must behave in the workplace persist. The mask and vaccine mandates are among the key measures that public health authorities are relying on to limit transmission of the virus. These measures are not uniformly accepted by all residents of the province as an acceptable limitation on their “rights” and, as a result, the BC Human Rights Tribunal has been overwhelmed with complaints about the same.

Vaccination rates are climbing and as they do, people are more and more eager to return to normal, pre-COVID-19 practices. Employers are developing, modifying, and updating COVID-19 vaccine status policies for their workplaces. In this article I will provide an overview of key human rights considerations when implementing such vaccine status policies and working subject to them.

THE PROVINCIAL VACCINE MANDATE

As of September 13, 2021, we all know that individuals are required to have proof of a COVID-19 vaccination to access many social and recreational events and services. Many employers are also now implementing vaccination policies for their workplaces. Employers who are doing so must consider the protected grounds under the Human Rights Code when implementing such vaccination policies. Employers and employees must understand that the Code requires employers to make exceptions for employees who are unable to comply with the requirement to get vaccinated because of a protected ground.²

THE HUMAN RIGHTS COMMISSIONER'S GUIDANCE

The Human Rights Commissioner of British Columbia issued guidance³ to clarify the human rights considerations for employers when developing workplace rules about vaccination status. The guidance states that employers, “can in some circumstances implement a vaccination status policy such as a proof-of-vaccination requirement—but only if other less intrusive means of preventing COVID-19 transmission are inadequate for the setting and if due consideration is given to the human rights of everyone involved.”³ The guidance recommends that vaccine status policies adhere to six main principles:

- Promotes equitable access, meaning an employer should do all they can to help an employee get vaccinated
- Evidence based, meaning that evidence is required to justify policies that restrict individual rights for the collective purpose of protecting public health or workplace safety
- Time limited, meaning such policies should be used for the shortest possible length of time and they should be regularly updated to reflect up-to-date public health recommendations
- Proportional, meaning such policies should be proportional to the health and safety risks that they seek to address, and rules should be relaxed as risks decrease
- Necessary, meaning such policies should achieve an outcome that no other, less intrusive measures could achieve
- Respectful of privacy, meaning that the collection, use, or disclosure of vaccination status must be authorized by applicable privacy laws

Employers and employees should consider compliance with these six principles as a mandatory litmus test for any reasonable workplace vaccination status policy.

The guidance also states that individuals who cannot be vaccinated because of a protected ground under the Human Rights Code must be accommodated to the point of undue hardship. What does undue hardship mean? There is no single, one-size-fits-all answer to that question. It depends on the circumstances of each case. To begin with, an employer must show that they cannot accommodate the individual other than by experiencing such undue hardship. So if there are options available to the employer that do not rise to an undue hardship, the accommodation is required. An example of when an accommodation would rise to an undue hardship, however, is if accommodating such individuals would cause health and safety risks for others. It would also be an undue hardship if it would be disproportionately costly to accommodate the individual. You can see by these examples that the determination of whether an accommodation rises to the point of undue hardship will be entirely fact-dependent on the particular situation in each case.

It is particularly significant to note, however, that the Human Rights Commissioner has provided some guidance to deal with one of the more nefarious and insidious effects of the pervasive misinformation that plagues so much social media on this topic. The Commissioner has specifically noted that employees cannot rely on any protection afforded by the Human Rights Code to protect them from wilful ignorance regarding the effectiveness or risks associated with taking vaccines. The Commissioner states:

[A] person who chooses not to get vaccinated as a matter of personal preference—especially where that choice is based on misinformation or misunderstandings of scientific information—**does not** have grounds for a human rights complaint against a duty bearer implementing a vaccination status policy.⁴ [emphasis added]

There are some relevant Human Rights Code-protected grounds that may be engaged, however, where a legitimate reason for not being vaccinated arises. Those grounds include religion, family status, and physical or mental disability, among others. Some people may not be able to receive a COVID-19 vaccination because of medical reasons. Children under 12, for instance, are ineligible for a COVID-19 vaccination because of their age. Should this result in their parents being discriminated against, it may trigger the protected ground of family status. As noted above, and it bears repeating: employers must understand the protected grounds and keep such grounds in mind when developing vaccine status policies.

BC HUMAN RIGHTS TRIBUNAL DECISIONS

It is helpful to review a number of relevant decisions of the Human Rights Tribunal at this point to illustrate some examples of how it will approach complaints about this topic. Some of the following decisions deal with fact patterns not specifically related to COVID-19, but their principles are applicable to an employer and vaccine status policies.

A recent case from August 2019⁵ is one example of a COVID-19-related complaint. In this case, the Tribunal issued its first decision regarding a discrimination complaint arising from a mandatory mask policy, in this case implemented by a jewellery store. The Tribunal found that generalized “breathing issues” failed to meet the definition of disability under the Human Rights Code.

The store had implemented a mandatory mask policy as part of its COVID-19 health and safety protocol before a province-wide mask mandate was issued in November, 2020. A customer (the complainant) alleged that she attempted to enter the store without wearing a mask and was told she would have to leave the store if she would not wear a mask. The complainant described the nature of her disability as, “breathing issues and cannot wear a mask.” The store acknowledged that they refused the complainant entry into the store but stated that the complainant did not inform them that she had a disability or required an accommodation. The store applied to have the complaint dismissed pursuant to section 27(1)(b) of the Human Rights Code, which allows a complaint to be dismissed if it does not allege facts that could contravene the Code.

The Tribunal first considered whether the complainant had alleged facts sufficient to show she had a characteristic protected from discrimination, i.e., a disability. The Tribunal referred to its long-standing interpretation of “disability,” which is: “a physiological state that is involuntary, has some degree of permanence, and impairs the person’s ability, in some measure, to carry out the normal functions of life.”⁶ The Tribunal applied this interpretation to the facts alleged by the complainant and found that the complainant failed to allege facts sufficient to show her breathing issue was a disability for the purposes of protection under the Human Rights Code. The reasons for this were that she did not describe the underlying cause of her breathing issues, whether that cause had a degree of permanence or the extent to which it impaired her functionality.

CUT OUT THIS PAGE IF YOU WISH TO SAVE IT. CUT OUT THIS PAGE IF YOU WISH TO SAVE IT.

The Tribunal considered whether the complainant alleged facts adequate to show a connection between her disability and the adverse impact of being denied entry into the store. This part was the Tribunal assuming for the sake of the analysis that the complainant had alleged sufficient facts to establish her disability. The Tribunal referred to prior decisions that establish that a service provider requires knowledge of an individual’s disability in order for a complainant to establish a connection between their disability and the adverse impact. The Tribunal found the complainant failed to establish this connection because she did not allege that she notified the store that she was not wearing a mask due to a disability or medical condition.

The Tribunal recently also dismissed a complaint⁷ aimed at the provincial health officer, Dr. Bonnie Henry, over the provincial COVID-19 vaccine mandate. Normally, screening decisions that determine whether a complaint can be heard are not published by the Tribunal. However, due to the large volume of inquiries and complaints alleging that the vaccine card is discriminatory, it was determined to be in the public interest to publish the decision. The complaint filed against Provincial Health Officer Dr. Bonnie Henry alleged that the proof of vaccination program discriminated against the claimant on the basis of disability. The complainant alleged that when he was a child, he suffered from asthma and a case of pneumonia. However, he failed to establish a connection between having asthma and not being fully vaccinated. The Tribunal considered the evidence related to the safety of the vaccines and in their decision noted that the US-based Allergy and Asthma Network has stated that it is safe for people with asthma to get a COVID-19 vaccination.

These cases demonstrate that the Tribunal will thoroughly evaluate such complaints, and that complainants will be required to show actual discrimination on a ground protected by the Human Rights Code.

FINAL THOUGHTS

While the Human Rights Tribunal will thoroughly address all complaints regarding vaccine status policies, employers should be cautious when developing their own policies. The Human Rights Commissioner’s guidance requires employers to develop such policies in adherence with the six main principles noted above. Employers and employees should keep those principles in mind when considering the reasonableness of any vaccine policy implemented in the workplace. Individuals who choose not to get vaccinated merely because of personal preference, and particularly a preference formed in reliance upon the vast and intentional misinformation serving as clickbait for the insufficiently critical, cannot fall under a Human Rights Code-protected ground. Your COVID-19 vaccine policy should be drafted carefully and applied in such a manner that you extend all possible accommodations to those who legitimately require them. Fortunately, however, willful ignorance is not a protected ground of discrimination in British Columbia. [WCV](#)

¹ Human Rights Code, RSBC 1996, c. 210.

² British Columbia’s Office of the Human Rights Commissioner, “A Human Rights Approach to Proof of Vaccination during the COVID-19 Pandemic, Policy Guidance,” July 2021, online at: https://bchumanrights.ca/wp-content/uploads/BCOHR_C Jul2021_Vaccination-Policy-Guidance_FINAL.pdf.

³ Human Rights Commissioner, “Approach,” 5.

⁴ Guidance at page 10.

⁵ *Rael v. Cartwright Jewellers and another*, 2021 BCHRT 106.

⁶ *Rael v. Cartwright Jewellers and another*, 2021 BCHRT 106 at paragraph 13.

⁷ *Complainant v. Dr. Bonnie Henry*, 2021 BCHRT 119.

“THE TRIBUNAL . . . FOUND THAT THE COMPLAINANT FAILED TO ALLEGE FACTS SUFFICIENT TO SHOW HER BREATHING ISSUE WAS A DISABILITY FOR THE PURPOSES OF PROTECTION UNDER THE HUMAN RIGHTS CODE.”



Scott Nicoll, BA, MA, LLB, is a member of the Law Society of British Columbia and a partner at Panorama Legal LLP. He acts for professionals, including defending professionals who are the subject of complaints to their professional colleges.

WHAT ARE YOU LOOKING FOR IN A FINANCIAL ADVISOR?

TRUST, COMPETENCE,
EXPERIENCE?

WE HAVE WORKED
WITH VETERINARIANS
FOR OVER 25 YEARS.
WHY NOT LET OUR
TEAM WORK FOR YOU?



Tracey McDonald
Portfolio Manager
Private Client Group

Eric Muir
Senior Vice President
Portfolio Manager
Private Client Group

Derek Lacroix
Associate
Financial Advisor

604-451-3100

www.muironmoney.com

MUIR INVESTMENT TEAM

RAYMOND JAMES

Raymond James Ltd., member -
Canadian Investor Protection Fund

ALWAYS EVOLVING



 **PUREVAX**[®]

Same Trusted Vaccines
Now in **0.5 mL**



PureVax[®] is a registered trademark of the Boehringer Ingelheim Group.
© 2021 Boehringer Ingelheim Animal Health Canada Inc.

Boehringer
Ingelheim



**fresh breath.
sweet kisses.**



**Discuss the dental health benefits
of t/d with your clients today**

- 1** Clinically proven triple action fibre matrix technology helps freshen breath, clean & whiten teeth and reduce plaque & tartar buildup
- 2** Clinically shown to reduce the occurrence of gingivitis by up to 36%*
- 3** Vital nutrition for dogs' daily health and immune system support

SCIENCE DID THAT.

*Logan EI, Finney O, Hefferren JJ. Effects of a dental food on plaque accumulation and gingival health in dogs. *J Vet Dent.* 2002;19(1):15-18. ©2021 Hill's Pet Nutrition Canada, Inc.