west coast

VETERINARIAN

September 2011
Issue N°4

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CVMA-SBCV Chapter

INSPIRATION COMES IN MANY FORMS

Sharron Brownlee
Editor in Chief

When I am searching for inspiration I often find myself heading to the nearest trail with my bike, iPod and trusty dog Daisy. I am lucky to live in the Georgian Bay area of Ontario and beautiful beaches, forest and water surround my home. The things or moments that inspire me are not always obvious to me at the time. I am often left with feelings of impact or things that I can't put my finger on that I recognize later were inspirational moments.

I had one of those moments recently when I was out on one of those typical Sunday mornings, except I was at the Tiny Marsh otherwise known as Heaven, located a mere 20 minutes from my door. I was riding along as my dog was in and out of the water paddling away when I hit a huge rock in the path and bailed off my bike in a punishing lack of grace and style. I lay there waiting for that much anticipated feeling of air racing back into my lungs and was eventually granted the gift of breath again. My dog had come running to my rescue; well she had come to see what's going on and to shed her heavy coat of water by shaking it all over me. As the cold water hit me, I looked up into the sky and overhead a huge Trumpeter Swan was flying very low over my sprawled body. I painfully sat up to see this amazing spectacle.

The male swan was flying in great circles over the marsh and calling out to his mate located on the other side of the dyke I had been riding on. It seemed he was searching for a good feeding area and was calling out his findings to her about each potential spot. She occasionally answered back as if she was telling him what to do and agreeing or disagreeing with his choices. He finally settled on a spot a few minutes later and he landed ever so gracefully on to the rippled wind-blown water and called out to her.

Much to the swan's surprise he had landed extremely close to a Fisher, a vicious weasel-like predator weighing in at a whopping 5kg and he was grabbed from behind. I looked over my left shoulder behind me at the female who to this point had been relatively bored and swiftly noted a change in her behavior once she heard the frantic calls of her mate. She immediately tried lifting off but ended up half swimming and half running on the water directly towards his location.

I had no idea that for a period of time, Trumpeter Swans are flightless after they raise their young. The male was flapping wildly and there was no doubt that the fisher was causing injury with every moment he remained attached to the giant bird. The female ran across the dyke completely ignoring my large dog and descended upon the scene at an aggressive speed and started attacking the fisher. I was overwhelmed with fear for the swan, but low and behold the fisher let go. The male managed to pull loose and flew right over me to the safe side of the dyke. The female followed him by ground and thereby walked right past me, still sitting bewildered on the ground and my dog that was desperate to finish what the fisher had started.

I remained still and watched for the next few minutes as the female performed her duties of an anxious partner and helped the male regain his composure. I am sure below the surface of the water there was a nasty wound that I hoped would heal. I got up and continued on my way, thankful that he had survived and that I had been lucky enough to witness such an exhibition of nature.

It wasn't until much later that I thought about the similarities we as a species have with each other and the lengths we will go to protect the ones we love. I felt inspired by the female swan's devotion and courage to her mate and even though she was at her most vulnerable, by being flightless, she took the situation on anyway.

What I witnessed reminded me of the lengths that we also go to for other species in our lives. It doesn't matter where you garner you inspiration from or how profound it is, it only matters that you are still capable of and open to being inspired. I witnessed a lot of that in putting together this magazine. It came from the rescue team at the Vancouver Aquarium and "little miss RainorShine", Dr. Doreen Houston's faithful companion. It came from Dr. Teresa Hall and how she fondly refers to her patients as kitties and it comes from my co-workers who every day, force me to face my own lack of inspiration at times and join in on their enthusiasm. Whatever it is or however it comes, embrace it and revel in the simplicity in which you may find it.

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CVMA ACMV CHAPTER SBCV
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WCV west coast VETERINARIAN MAGAZINE

If for some crazy reason you decide not to keep this publication, please recycle it!

Jim BERRY, MSc. DVM

Born in St. Catharines, Ontario, Dr. Berry earned a Masters of Science in Parasitology from the University of Guelph and a Veterinary Degree from OVC in 1990. Dr. Berry is now the co-owner of Douglas Animal Hospital, a small animal practice in Fredericton New Brunswick. Dr. Berry is a past president of the New Brunswick VMA and was a board member of the Fredericton SPCA. Today, Dr. Berry is an executive member of the CVMA and a subcommittee member of the CVMA's Animal Welfare Committee.

Teresa HALL, DVM

Dr. Teresa Hall graduated with honors from WCVM in 1996. After completing an anesthesia internship at WCVM she returned to Vancouver to work at the Vancouver Animal Emergency Clinic, a place she had worked as a student for many years. In 1999, she joined Northwest Nuclear Medicine for Animals. As cases of hyperthyroid cats increased, she devoted herself full-time to NWNMA. She truly enjoys working with cats and the ability to cure this disease.

Roey KESTELMAN, DVM

Originally from Israel, Dr. Roey Kestelman has called North Vancouver home since 2008. He was a paramedic before his veterinary training. In 1999 accompanied by a 3 year old Boxer "Keanu" and a backpack, he flew to Budapest, Hungary to attend the 5 year international vet school. While school was as busy and challenging as they come, Roey maintained his certificates and kept working as a paramedic in between semesters. A visit to BC upon graduation became a life changing experience, and it only took few user-friendly exams to start practicing in the land of endless beauty. Dr. Kestelman gives locum services in BC.

Kathryn WELSMAN, DVM

Dr. Kathryn Welsman graduated from OVC in 2007. Shortly after graduation she moved to Langley and worked full time at the local emergency clinic where she learned to love emergency medicine but decided for a change after a few years and moved to regular practice in South Surrey. Most recently she has relocated due to her husband's job as an RCMP officer, to Clinton. The connection to the RCMP is how she became quite passionate about working dog medicine. She is also currently completing a Masters in Veterinary Public Health.

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FROM THE DIRECTORS

A FEW LITTLE WORDS...

I HAD THE CHANCE A FEW WEEKS AGO TO EXPERIENCE MEDICINE FROM THE OTHER "HUMAN" SIDE. I HAD LACERATED MY UPPER LIP IN A MINOR BIKING ACCIDENT AND NEEDED A FEW SUTURES.

Dr. Sarah Armstrong, DVM
WCV Chair, CVMA-SBCV Chapter Board of Directors

It was strange to have to sit in the waiting room amongst other fellow sick Vancouverites and to have my vitals done by one of the nurses. I'm sure our patients and their owners experience a similar strangeness.

There were a few differences between the animal and human ER experience. One was that the human ER had a fleet of security guards equipped with a minor arsenal and there were surveillance videos around the building. Wouldn't it be nice to have that team handy to "sick em" on our belligerent and disruptive clients?

As a patient I felt the all too familiar lack of empathy often talked of in the human ER. I understand where this comes from due to the high volume of patients seen, similar to a busy night at an animal ER. Throughout the evening at the human emergency room I never really knew what was going on, or when I was going to be seen. When the doctor finally did emerge he barely introduced himself let alone explain the process of what he was about to do (suture my lip) or recognize my discomfort with the situation (I am a big baby when it comes to my own health!). Our clients are usually involved in most of our decision-making processes and as such are directly involved in the medical process. Additionally, our patients are lucky enough to get sedated for many of our procedures.... I got to hold my friend's hand when I was getting my local anesthesia.

On a brighter note it was nice to not have to deal with the financial side of things throughout my trip to the ER. There was no discussion of an estimated cost of suturing up my lip, or different options such as waiting to see my family GP in the morning which often is the case with our animal patients.

In the end my lip was sutured up, edges apposed nicely and I have to say a few weeks later I barely have a scar! Overall it was an OK experience as the standards of care were excellent. However, the human healthcare team could definitely learn a few things from veterinarians when it comes to bedside manner and patient comfort. We are truly a special profession and I am proud to be a part of it as I'm sure you are as well.

This issue is our fourth, and I hope you will agree it is getting better and better each issue. We are starting to have more article submissions by you, the BC veterinarians. I continue to encourage you all to submit ideas and articles in order to diversify and represent veterinary issues across the province for our magazine.

You can submit via the email address:
westcoastvetinfo@gmail.com

SBCU VIEW FROM THE CHAIR

OUR ORGANIZATION IS GOVERNED BY VOLUNTEERS AND WITHOUT THEM WE COULD NOT EXIST

Dr. Marco Veenis, DVM
CVMA-SBCV Chapter Chair

A small group of dedicated people have been instrumental in building our Society from zero members to more than 400 in one year. In our last West Coast Veterinarian issue our Elections Chair Dr.George Guernsey published a call for nominees to join the current Directors. As a result four people have responded and have been appointed by acclamation: Michael Hannigan, Kathryn Welsman, Al Longair, and Richard Stanley. I would like to thank these members for their willingness to donate their time and expertise and welcome them to our Board of Directors. We would have liked to see members take an active role and hope that as we move forward this will happen. Let us not forget that our organization depends on those willing to donate their time to benefit the greater good.

I attended the CVMA Annual General Meeting in Halifax where we finalized the last details of our agreement with the CVMA and are now looking forward to a long and fruitful cooperation with our National partner. The benefits of this cooperation are clear: our members will have access to all of the programs the CVMA has to offer plus those that we offer at the Provincial level.

Our website has been revamped and is now hosted by the CVMA. It boasts BC classifieds, our own discussion forum (members only) and a copy of all the back issues of our WCV magazine.

This fall we will have the 40th Equine Seminar in Delta on Oct 31st -Nov 1st and our fall CE conference in Surrey on Nov 19th - 20th. These meetings offer quality CE at an affordable price close to home. The meeting in Surrey will also house a Table Top Tradeshow showcasing the latest products available to the veterinary market. We will hold our first AGM at the fall conference and I look forward to greeting our members there in person. These meetings are open to all interested parties, but our members will enjoy a special rate. Membership comes with privileges!

I would like to extend my congratulations to the CVBC's newly elected Council and trust we can build a good working relation with our regulatory body while remaining vigilant that we maintain our role as advocates for the veterinary profession in British Columbia.

SEPT 2011 NEWS

SOCIETY OF BC VETERINARIANS ELECTION UPDATE

Our Society was established by a small number of fellow practitioners in an attempt to fulfill the professional needs, which could no longer be provided for by the new "College of Veterinarians". These needs can best be expressed by our Societies' mission statement:

The mission of the Society of British Columbia Veterinarians is to create a strong practice community that promotes collegiality among veterinarians, enlightens and directs public opinion, cultivates and advances the art and science of veterinary medicine and surgery, and maintains the honour and dignity of the veterinary profession.

You, the membership, voted to be affiliated with the CVMA late last year. It is to that end, that the Directors have been working to establish that relationship in to a working model while maintaining our BC provincial independence.

In May of this year, all members received a letter asking for nominations for the upcoming elections. I am pleased to say that four people have come forward to volunteer their time and assistance in a Directorship role. Thanks to Michael Hannigan, Kathryn Welsman, Al Longair, and Richard Stanley for "stepping up to the plate" at a time when we really need the bodies. They have been acting in a temporary role through the summer, joining Sarah Armstrong, Marco Veenis, Rob Ashburner and myself.

Our bylaws dictate that nominations must be received 90 days before our AGM, which is to be held in conjunction with our November CE November 19-20th, and that there is an allowance for up to 13 Directors. Since we are well under the allowable number, those that have come forward will be elected by acclimation (negating the need for a membership vote).

I began this journey with Dr. Diane McKelvey, co chairing the BCVMA Task Force on investigating the division of Member Services from the Regulatory component (now the "College") in 2007. We have the beginnings of a dynamic professional organization. It is my strong feeling that now that the seed has germinated we need to grow and bear fruit. The Society should be guided by those who will benefit in the future. I remind everyone, the objectives and priorities of this Society are:

1. Advocate for the veterinary profession within

SEPTEMBER 2011

CVMA-SBCV UPDATE

With close to 450 BC veterinarians joining the CVMA-SBCV Chapter in 2011, our exciting new Chapter is off to a great start in its first year. Your membership in our new CVMA-SBCV Chapter gives you access to important national and provincial services that meet your needs and programs, benefits and discounts that directly support you professionally and personally.

In late October, you can expect to receive a membership offer in the mail to join or renew your membership in the CVMA and the CVMA-SBCV Chapter for 2012.

AT THE NATIONAL LEVEL, HERE ARE JUST A FEW ISSUES THE CVMA HAS BEEN WORKING ON FOR YOU LATELY:

→ In partnership with the Sir James Dunn Animal Welfare Centre at the Atlantic Veterinary College, the CVMA Animal Welfare Committee has updated the popular "Examples of Anaesthetic and Pain Management Protocols for Healthy Cats and Dogs" poster. The updated version will be delivered to CVMA members as an insert in the Canadian Veterinary Journal in fall 2011.

→ CVMA is thrilled to introduce its newest member benefit -- hotel discounts around the world, provided exclusively for members of the Canadian Veterinary Medical Association and the CVMA-SBCV Chapter. Through this new program, members have online access to a worldwide inventory of hotels at unbeatable rates. Whether you are travelling for business or pleasure, you can save as much as 50% and take advantage of below-market rates averaging between 5 to 20% better than other popular online hotel booking services. To take advantage of the CVMA's new hotel discount program, go to the CVMA website (www.canadianveterinarians.net) and click on Hotel Discount Program in the Quick Links section to start your search. As this is an exclusive benefit of membership, you'll be required to log-in using your personal ID and password.

→ As an exclusive benefit of your membership, you should have received your personal copy of the 2011-2012 CVMA Source Guide. Copies were mailed out at the end of August. Use your Source Guide to keep in touch with your national association, your peers, classmates and colleagues, veterinary specialty groups, and Canadian and international organizations of interest. The 2011-2012 edition contains an alphabetical listing of veterinarians in Canada, CVMA membership services at a glance, information about awards and honours that recognize your colleagues' achievements, detailed listings for CVMA boards, committees and representatives and a complete list of CVMA animal welfare and general position statements.

→ In October, Canadian veterinarians will be represented at the International Summit for Urban Animal Strategies in Montebello, Quebec. Dr. Julie de Moissac, past president of the CVMA and the Canadian Chair on the Vet 2011 Committee, has been invited to provide an overview of the history of veterinary medicine and illustrate the far reaching impact of veterinary science around the world. As your national president, I have also been invited to attend to inform participants of the CVMA's pivotal role in veterinary medicine and help them better understand Canada's national veterinary organization.

Your feedback is extremely valuable to us. If you have an inquiry or a comment to share, please contact the CVMA office at admin@cvma-acmv.org or 1-800-567-2862. Our Member Services Department will gladly assist you.

Lloyd Keddie, DVM is a mixed-practice veterinarian from Fairview, Alberta and is currently the President of the CVMA.

British Columbia by providing public and media relations, government lobbying, and interaction with other stakeholders in the animal health care profession such as the CVBC, CVMA, BC SPCA, AHT of BC, and industry.

2. Provide services to members of the Society, including continuing education, communications through a web site, member magazine and member directory, classified ads, fee guide, business services, career assistance for new graduates and international graduates, and members' counseling including legal services.

3. Promote human and animal welfare. This could potentially include a foundation for providing financial assistance for persons in need, position statements and advocacy on animal welfare issues, education of the public on animal health issues, and environmental initiatives.

That leaves eight people who will need your help if we are to be successful. It is possible that together we can create a vibrant professional society. Please consider volunteering your time in some capacity should you feel you would like to give something back to your profession. The success of your Society will depend on it..

Dr. George Guernsey, DVM
SBCV Board of Directors

Elanco Seeking Sales Reps August 1st, 2011

Elanco® Companion Animal Health is looking for additional sales representatives to assist with the launch of an expanding portfolio of products within the coming months. The launch phase of our business has identified core areas for business growth within new and existing accounts. We are seeking highly motivated sales professionals with a keen entrepreneurial spirit to join our team. Our start-up size caters to small business style thinking, agility, and flexibility – allowing all team members direct influence within marketing and business strategy, shaping our future within the Canadian market.

Qualifications: The successful candidate should have recent experience in pharmaceutical or animal health sales and/or they will possess 3 to 5 years of recent experience in the companion animal pharmaceutical industry.

Regions; Territories will be determined based on current customer base, location, and level of account experience of the applicant.

Current territory options are;
MONTREAL-QUEBEC CITY, GUELPH-KW-HAMILTON, VANCOUVER – VANCOUVER ISLAND

For more information on this role, please contact:
Dr. Garth Graham, Business Manager for Elanco Companion Animal Health at grahamga@elanco.com, or 1-800-265-5475, Ext 7004.

SEPTEMBER 2011

CANADA'S PET WELLNESS REPORT

CVMA partners with Hill's Pet Nutrition to create Canada's Pet Wellness Report

The Canadian Veterinary Medical Association (CVMA) with support from Hill's Pet Nutrition Canada Inc., makers of Science Diet®, Prescription Diet® and Healthy Advantage® brand pet foods, has just released Canada's Pet Wellness Report. The report provides a 360° snapshot of the current state of pet health in Canada, including exercise, nutrition, veterinary care, life stage (age)-related needs and overall health status.

This report is based on findings from market research surveys of 1,043 Canadian pet owners and 103 veterinarians (members of the CVMA) conducted by Ipsos Reid.

Findings of the Report suggest significant opportunities to enhance the length and quality of the lives of pets in Canada, by improving pet owner understanding of pet nutrition and health.

More specifically, the report reveals that, while Canadians love their pets, they do not always make the best choices when it comes to nutrition, physical exercise and regular veterinary care.

"Overall, the research suggests that addressing the exercise, nutritional and dental care needs of pets is key to enhancing pet health and wellness in the country," says veterinarian and member of the CVMA Executive, Dr. Jim Berry.

KEY HIGHLIGHTS OF THE RESEARCH INCLUDE:

→ One of the most compelling findings from the study is that pet owners might be missing the obvious signs of health issues in their pets. Obesity and dental disease are the two most commonly diagnosed health problems dog and cat owners are surprised to learn about during veterinary exams.

→ 51% of dog owners and 58% of cat owners in Canada claim their pet(s) have no health issues or seem to be in perfect health.

→ According to veterinarians, overfeeding is the most common mistake pet owners make in feeding their dogs or cats.

→ Overall pet owners (44.5%) are most likely to feed their pets by "making food available to their pet(s) at all times", which is more common among cat owners (57%) than dog owners (32%).

→ Pet owners admit that they are nearly twice as likely to buy a pet food based on what their pet likes to eat vs. what will actually meet their health needs.

→ On an average weekday, pet owners spend nearly twice as much time surfing the Internet (48 minutes) and three times as much time watching TV (79 minutes) as they do playing with/exercising their pets (25 minutes).

→ Veterinarians believe that the majority of dogs (55%) and cats (70%) they see do not receive an adequate amount of exercise to maintain good health.

→ Veterinarians say dental disease is the most commonly diagnosed health problem that pet owners are surprised to hear about.

The CVMA's partnership with Hill's Pet Nutrition Canada is based on a mutual commitment to improving pets' lives, including promoting the importance of veterinary care, building awareness of health issues and helping veterinarians enhance pet wellness.

The full report is available as a free download from:

www.canadianveterinarians.net
www.hillspet.ca
www.facebook.com/ScienceDietCanada

ADVANCED CARDIO-VASCULAR LIFE SUPPORT

ADAPTING TO THE CANINE PATIENT, COULD OUR PATIENTS BENEFIT FROM THE HUMAN APPROACH TO CARDIOVASCULAR EMERGENCIES?

Words by Dr. Roey Kestelman, DVM

It was in the dark of night in March of 2008 when Keanu, my own dog, a twelve-year-old Boxer, collapsed on the grass of the central city park in Tel Aviv, Israel. The fact that he had had a splenectomy two years earlier left me with one less differential in an otherwise long list from which I had to work with while carrying his forty kilograms back to the car.

Becoming a veterinarian was not my first career, prior to this I'd been certified as an advanced life-support paramedic since 1992. At around that time, the American Heart Association published the 3rd edition of their Advanced Cardiovascular Life Support (ACLS) guidelines, a set of protocols to act as a quick reference for ACLS providers such as paramedics, doctors and ICU nurses. The guidelines for medical, pharmaco-resusciative treatments and several "aggressive" interventions were almost solely based on the answer to one question: "What's on the ECG?" The resulting methodical approach allowed the providers to "diagnose" and treat their patients with speed and accuracy, without the process of a full diagnostic work up. Paramedics and specialists alike followed the same protocols. In fact, whoever followed the ACLS had unified training, leading to a unified evidence-based-medicine-derived approach.

Keanu was tachypneic and tachycardic on auscultation, with barely palpable femoral pulses. I had no doubt as to where I should be heading on that unforgettable night…. I needed ECG monitoring and a defibrillator. Fifteen minutes later, I had him wired up with ECG electrodes, oxygen, pulse oximeter, mini doppler, IV line and had two teams from the nearest ALS-paramedic unit all ready to go.

Treatment of choice was defibrillation or rather cardioversion. I gave him 0.2mg/kg of Midazolam IV and thirty seconds later, having been through more than a thousand advanced CPR events on human patients I'm holding the well-gelled paddles, pressing them on both sides of his huge rib cage, loading to 100J, making sure the device is synchronizing itself with Keanu's rhythm…. "Safe to shock? Clear, clear, clear!"

Keanu's heart converted on the third attempt (360J). The ECG showed a sinus rhythm, and his blood pressure was well within normal range. Minutes later he felt good enough to jump out of the car and excuse himself on a nearby tree!

The ACLS interpretation technique for the initial approach consists of few simple steps. At first, the provider must obtain a good and clear reading of the ECG trace in at least one lead (preferably L2, but not necessarily). The speed should be 25mm/sec. Heart rate must be evaluated with an absolute versus relative assessment of "too fast" (tachycardia) or "too slow" (bradycardia) for a given scenario. The mainstay would be that at a heart rate not faster than 120bpm at rest or slower than 60bpm , for the average person, the presenting complaint probably doesn't derive from a tachy or bradyarrhythmia, even if the rhythm is not defined as a normal sinus rhythm (NSR).

THE ACLS METHOD WAS APPLIED:

How fast? 240bpm

Is there a P wave? NO

QRS complex width? WIDE

Interpretation: VENTRICULAR TACHYCARDIA (VT)

Patient's level of consciousness? RESPONSIVE TO PAIN ONLY (CONSIDERED LOW, SINCE HE WAS NEITHER ALERT NOR RESPONSIVE TO VOICE)

Blood pressure? N/A

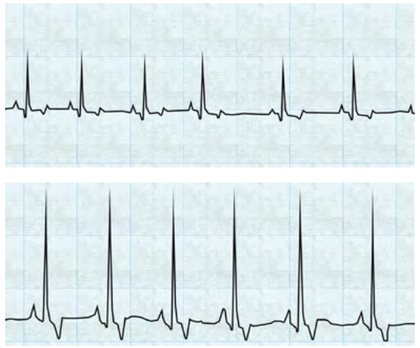
Signs of left congestive heart failure (L-CHF)? NO

>>>

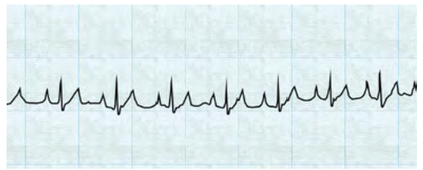
INTERPRETING TRACES

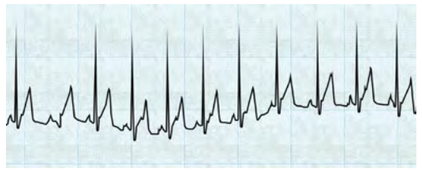
A graphical breakdown of ECG differences

1 NORMAL SINUS RHYTHMS



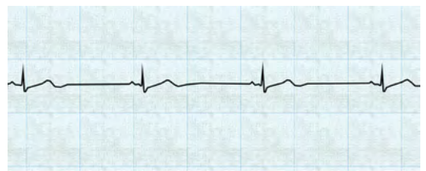
2 SINUS TACHYCARDIA





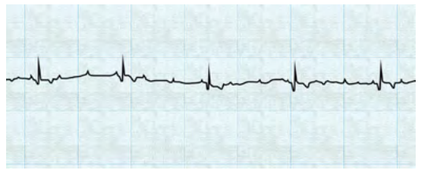
If the rate is faster than 120bpm or slower than 60bpm then two main ECG patterns are possible, depending on whether a P-wave can be demonstrated. If the answer is yes, then we can consider the fast rate to be a sinus tachycardia, with no medical intervention required.

3 SINUS BRADYCARDIA



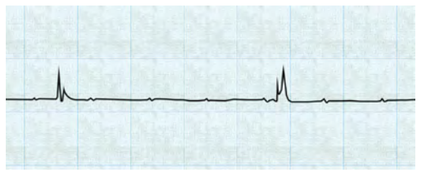
If a P-wave is demonstrated on a heart rate below sixty, the next step would be to determine the relationship between the P-wave and the QRS complex. If every P-wave is followed by a QRS and every QRS is preceded by a P-wave, for most instances we are dealing with an innocent sinus bradycardia.

4 2ND DEGREE A-V BLOCK (MOBITZ TYPE 2)



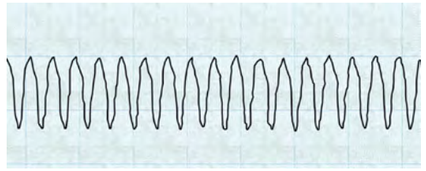
P-QRS intervals that are too long and/or irregular would fall under the definition of "atrial - ventricular block," with classifications of 1st or 2nd degree (the latter has a couple of sub classifications).

5 COMPLETE A-V BLOCK



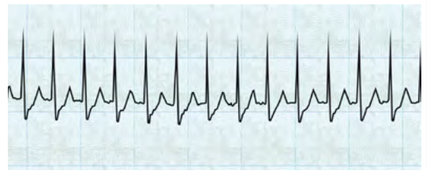
A complete dissociation between the P and the QRS is a clear case: a 3rd degree, or complete A-V block.

6 VENTICULAR TACHYCARDIA



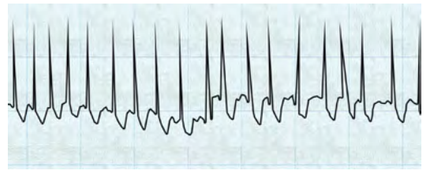
Where the heart rate is over 120bpm, and no P-wave can be demonstrated, the most practical next step is to determine the QRS-complex width. A wide complex (more than 2mm) can be regarded as a ventricular tachycardia (VT).

7 PAROXYMAL SUPRAVENTRICULAR TACHYCARDIA



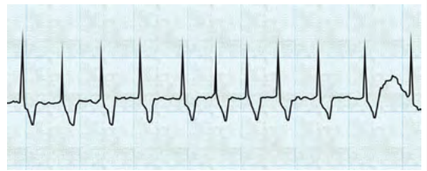
A narrow complex, on the other hand, would depend on whether the rate is regular or irregular. A regular rate would indicate a paroxysmal supraventricular tachycardia, or PSVT.

8 ATRIAL FIBRILLATION



An irregular rate, on the other hand, indicates atrial fibrillation.

9 POST TREATMENT



Post treatment to aterial fibrillation

Although this might seem to be an oversimplified approach, the ACLS allows providers to proceed towards medical treatment or electrical intervention without further investigating the ECG.

IN CONCLUSION vvv

The next stage is critical. By asking the right questions, the provider can establish a short set of clinical criteria immediately:

1 WHAT IS THE PATIENT'S LEVEL OF CONSCIOUSNESS?

2 WHAT IS THE PATIENT'S BLOOD PRESSURE?

3 IS THERE EVIDENCE OF L-CHF (PULMONARY EDEMA)? DYSPNEA OF OTHER ORIGIN (THROMBOEMBOLIC EVENT)?

4 IS THERE A PREVIOUS HISTORY OF MYOCARDIAL INFARCTION? (A SYNDROME WE MIGHT NEVER HAVE TO ENCOUNTER WITH VETERINARY PATIENTS.)

5 AND, ABOVE ALL, THE "LEADING DETAIL," IS THE PATIENT SUFFERING FROM CHEST PAIN?

Striving to reach a "true" diagnosis, at this point, has been proven counterproductive. The "evidence based" approach saves lives.

A summary of the treatments for the above tachyarrhythmias would include the following. In the hemodynamically unstable patient, treatment would be sedation (Midazolam IV), and synchronized cardioversion. Antiarrhythmic medications like Lidocaine, Amiodarone etc., would be administered. For the unstable patients with bradyarrhythmias, an external pacemaker would be attached. Atropine, Dopamine and so on might be added. Any type and group of antiarrythmic drugs were no longer considered safer than a synchronized cardioversion or an external pace maker.

Applying a system of protocols created for human patients, based on hundreds of thousands of well-documented cases and years of research, "on the go" is not something we, as veterinarians, should necessarily believe is in the best interest of our patients. An anecdotal event cannot serve as a guideline. But in an era when technology and education are reaching new standards, a few tips from our fellow human counterparts cannot be overlooked. How these professionals efficiently manage cardiovascular emergencies, just might help us shed a different and potentially helpful light on cases that can otherwise be extremely challenging.

As for Keanu, he went without any further events and remained happy on his cardiac medications, supplements and diet. Sadly, about four months later he was diagnosed with liver cancer, and eventually succumbed to his illness. Reflecting on the event, I am happy I didn't pursue a "true" diagnosis that night.

Further reading: If you would like to learn more about ACLS guidelines visit: www.heart.org

TREATING THE HYPERTHYROID CAT

CATERING TO EACH CAT'S UNIQUE NEEDS

WCV TALKS WITH DR. TERESA HALL ABOUT THE TREATMENT PROCEDURES TAKEN IN TREATING HYPERTHYROID CATS AT NORTHWEST NUCLEAR MEDICINE FOR ANIMALS

Words by Dr. Teresa Hall, DVM
Photos by William Jans (www.wrjphoto.com)

***T4**

Thyroid hormones have an important role in controlling the body's metabolic rate and thus the general activity level, so cats with hyperthyroidism tend to burn up energy too rapidly and typically suffer weight loss despite having an increased appetite and increased food intake.

WE ASKED DR. HALL AT NORTHWEST NUCLEAR MEDICINE FOR ANIMALS TO GIVE US A RUNDOWN OF WHAT A TREATMENT CYCLE IS LIKE FOR A HYPERTHYROID CAT AT HER PRACTICE. SHE HAPPILY OBLIGED WITH A DETAILED BIOGRAPHY TAKING US THROUGH THE TREATMENT PROCESS.

^^^
Dr. Seantry Dean really enjoys working with cats.

At North West Nuclear Medicine for Animals (NWNMA), we love cats, it helps when you have 8 hyperthyroid kitties in hospital at any one time.
We think of our week beginning on Wednesdays, when we admit the patients for treatment. We are located within the Vancouver Animal Emergency Clinic and many owners take advantage of the emergency clinic hours to drop their cats off before work. After they are admitted, we perform examinations, give them any needed treatment and then snuggle them up in one of the kennels in our room. Timid cats tend to love our igloo beds whereas the outgoing cats like the faux sheepskin blankets at the front where they can look out and survey their new digs. Their owners are called to give them an update as to what we found on physical exam and as to how their feline friend is settling in.

We admit the rest of the patients with appointments throughout the morning and early afternoon. Some patients have never been on methimazole as the owners elected to go straight to radioiodine I-131 (RAI) therapy. For cats that have been on methimazole, in general, we will ask that methimazole be withdrawn a week prior to treatment. Withdrawal of methimazole causes the T4 levels to rise dramatically. These rising T4 levels trigger the body's natural feedback loops to cause suppression of normal thyroid tissue so it isn't likely to uptake any RAI. Withdrawal may also cause a rebound effect where tumour tissue uptakes more RAI than it would without withdrawal. These factors may contribute to the high success rate (98% of cats cure with one treatment) and low incidence of hypothyroidism (2.5% clinical hypothyroidism). In some cases, such as in cats that have been hyperthyroid long term, we will wean them off methimazole more slowly. In other instances, such as in cats with heart disease, or those who seizure or storm when hyperthyroid, we may not withdraw methimazole at all, and only discontinue it the day of therapy. This means that we see some pretty hyperthyroid kitties.

* *SEE TREATMENTS*

The following days begin with caring for the cats that we have admitted for treatment. When we enter the room where the cats are housed, we call out a welcome to the cats that are now "ours" for the week. We are often greeted by the cats singing about how their night was, asking "where is my food", and once in a while, grumbles of annoyance from the more crotchety of the group.
After we clean, feed and assess everybody, we call each owner to give them an update. Cats that haven't eaten are often given appetite stimulants and/or anti-nausea medications depending on the reason they haven't eaten. After breakfast, we will let one of the outgoing cats out for some time to explore the room, play in the toy box, or bask in the sun. The cats have a large frosted window to look out of, and the bamboo growing outside throws interesting shadows on the glass. After an hour or so, we will put that cat back in their kennel and let another one out. We don't force any cat to come out if they prefer not to; the timid ones may wish to come out later in the week as they become more confident. We try to ensure the arthritic cats do get some exercise at least once a day. There are also catnip parties, squirts of Feliway to top up the diffuser and treats throughout each day.

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* TREATMENTS...

Some common treatments we administer include beta-blockers for cats that are tachycardic, SQ fluids, B Vitamins and potassium to cats that are debilitated by their hyperthyroidism. We may also use sedation or anti-anxiety medications to the fractious or anxious cats, anti-nausea medications to those that are vomiting or not eating well, and appetite stimulants to the apathetic or fractious ones that we might not be able to handle again after sedation wears off. Often, with the help of their family veterinarian, these cats have already been on any or all of these needed medications prior to admission. The cats that are on meds tend to be in much better shape for this treatment.

After all the cats are admitted, we administer a dose of RAI individually tailored for each cat. We base the dose of RAI on T4 level, size of thyroid nodule and underlying disease states. We check on the cats numerous times throughout the day. The RAI itself does not have any side effects, but some cats will have a burst of thyroid hormone, which makes it harder for them to settle in. We do all we can both environmentally and with medication, to block the effects of the thyroid hormone to help these cats feel better. Late in the day we freshen up food, recheck heart rates, rearrange kennels to better suit each cat's personality. After we are sure they all are doing well, we turn off the radio and lights and say goodnight.

^^^ Dr. Teresa Hall is excited by being able to cure this disease. She understands the concerns of pet owners perfectly since her own cat went through RAI therapy.

Here is a typical patient hanging out in its cozy 'Igloo' house during its time at NWNMA.

Dr. Shiela Rusticus has been with NWNMA since 2003. She is an avid cat lover with a special love for older cats: she says "like fine wine, they get better with age".

IN BETWEEN CARING FOR CATS...

we respond to referrals, assess potential future patients, answer questions from veterinarians and owners, and book cats for the next treatment group. We review the post RAI one and three month T4 rechecks, performed by the family vets, (98% which are just as they should be) and make plans for cats with T4 levels which are still a little high (2%) or low (2.5%). Occasionally (1%) we will get a call about a cat that we treated years ago that has re-developed hyperthyroidism. Most owners are eager to have RAI treatment again if their cat is a candidate. By the weekend, most cats have settled in well and we can already see signs that their thyroid levels are declining. Restless cats are more settled, polyphagic cats are not as ravenous, and cats that needed beta-blockers, no longer need them. It's nice to see them sleeping so soundly, perhaps for the first time in months. Tuesday is discharge day and we reunite our feline guests with their owners. It's lovely to see how happy the cats are to see their families and to listen to the loud purrs of bliss. After all the cats have gone home, the room is scrubbed clean, checked for traces of radiation, and set up to welcome a whole new group of cats arriving the next day.

And so our week ends and begins again.

Visit www.iodinecafe.com for more information on North West Nuclear Medicine for Animals You will also find a variety of abstracts available for further reading.

RETIRE-MENT

A WELL EARNED LIFESTYLE ENHANCEMENT

THIS PAST JULY, DR. DOREEN HOUSTON RETIRED AS DIRECTOR OF CLINICAL RESEARCH FOR MEDI-CAL®/ ROYAL CANIN VETERINARY DIETS. WCV EDITOR IN CHIEF SHARRON BROWNLEE HAD THE OPPOURTUNITY TO SIT DOWN WITH DOREEN AT HER HOME AND TALK ABOUT THE FUTURE

Words by Sharron Brownlee, WCV Editor in Chief

Doreen and "Rayner" in her serene japanese garden. Rayner may have no lower jaw due to a recent bout with cancer, but she lives in a dog's paradise and along with Doreen, they enjoy it to the fullest.

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I have always had a great admiration for Doreen and her capacity to connect to every person she meets. She has an incredible ability to captivate a room and has such an honest and almost transparent personality, her genuine character shines through her. You can't help but be in awe of her resume and her position within the veterinary community, but for some reason, she is genuinely unassuming and purely unaware of her stature as one of our most treasured professionals.

Doreen and I scheduled our meeting at her home, where her faithful dog "Rain or Shine My All Weather Friend Houston van Berkel 1st" (Rayner) welcomed me with great exuberance, I had no doubt there would be pets! There were many things I wanted to know about Doreen not the least of which was, is she seriously retiring? The answer was a resounding yes. "You want to retire when you are still totally in love with what you are doing", she proclaimed "and retirement is the ability to have the gift of freedom", something I am sure her busy career has dominated. At the age of 57 she now has the liberty to focus on some of the things on her bucket list; learning to play piano, spending time with her first grandchild, maintaining excellent health, perhaps writing a book, and doing lots of travelling. This does not mean that she is going to be leaving the profession behind her, not by a long shot. She already has a number of speaking engagements planned and is still providing some contract work to Medi-Cal/ Royal Canin Veterinary Diets (MC/RC).

What really intrigued me was her journey to where she is today and whether or not she felt fulfilled by her career path. It garnered a discussion on how she ended up arriving at MC/RC in the first place. Doreen met Dr. Jim Patterson; one of the founders of Medi-Cal when she was a student at OVC and Jim was a faculty member there. At that point she had no idea how many times their paths would cross, or that he was to become her number one mentor and lifelong friend. After graduation in 1980, with the assistance of Jim, Doreen secured a job in Thunder Bay. For four years, Doreen enjoyed a terrific job with tremendous people and looks back quite fondly on her time there. But a severe allergy to cats forced her to reconsider her lifelong commitment to practice. After too many visits to the emergency room and a lecture from her physician, she reached the conclusion that general practice was not going to be particularly good for her health.

Her determination to remain in the veterinary field she had so arduously pursued drove her to investigate an internship at OVC. She had not decided upon a specialty at that point, but had particular interests in surgery and medicine. Once again, Jim was there for her, along with her excellent academic standing, he wrote one of the reference letters for her and she was accepted back into school.

Even though Doreen really felt like she was destined to be in private practice, she took on her new pursuit with vigor and immersed herself in the internship program. During her time there, with her experience and undiscovered love of teaching, she was awarded the "Graduating Class Teaching Award". Doreen had no idea she was actually teaching since sharing came so naturally to her, she was just having fun contributing to the experience. She had a decision to make, what now? She took one of four positions in the relatively newly designed DVSc Program and entered into the specialty of small animal medicine.

Upon completion of the DVSc and receiving her ACVIM distinction, once again she was faced with, what now? Doreen accepted a faculty position at WCVM. It had all felt like a natural progression and moving to Saskatoon was what felt obvious. Doreen excelled in this role and had the admiration of her peers and the students she was charged with. During her time there, she received the very prestigious Carl J. Norden Distinguished Teaching Award, which is presented to an outstanding teacher who advances the veterinary profession by inspiring students to their highest levels of achievement and professionalism. The recognition is highly respected because veterinary students select the recipient. But the tides were about to change again when, in 1995, Doreen found herself face to face with Dr. Jim Patterson as he tried to convince her once again to join Medi-Cal. This time, she agreed and in 1996, was back in Guelph, Ontario.

One of the appealing aspects of the job for Doreen was not only working with Jim, John Hilton, Brent Matthew and Heather Lowe, but that she was given the liberty to create a job within the very successful Medi-Cal company which appealed to her teaching nature. The job was literally created from the ground up by Doreen and her drive was to fulfill the philosophy of helping clinic teams to help their client's pets. It was simple, but absolutely something that Doreen could whole-heartedly believe in and work to achieve. That was 1996 and here we are in 2011, 15 years later and there are too many moments of career accolades and achievements to list.

So what is she most proud of during her career at MC/RC? Doreen seems very proud overall of her time with the company, but there are a couple of standouts. One of them is the development of the Feline Gastrointestinal Fibre Response diet that she truly believes saves lives of otherwise helpless cats with constipation, obstipation and mega-colon. She pushed to have this diet trialed in real clinical cases in client owned cats being treated by regular veterinarians in Canada, and it was done. Ultimately the diet proved very successful and in many cases, these cats are living medicine-free lives which is great for them and great for cat owners. Doreen can even recall specific cases by name, of pets whose lives were impacted by the development of this diet. "Slink" is one cat owned by a veterinary technician who was a potential euthanasia candidate that now lives free of meds and has good quality of life on this diet.

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Another outstanding development was the opening of the Canadian Veterinary Urolith Centre at the University of Guelph. Dr. Brent Matthew, another founder of Medi-Cal, embraced the opportunity. Doreen was instrumental in the writing of protocols and being actively involved in the development of the Centre to what it is today. In the first year of creating this facility, it was predicted that there would likely be 500 submissions; there were 5000. It has now grown to be an internationally recognized facility and they receive submissions from places as far away as Denmark, Hong Kong, Australia and the Middle East. They have now published on over 50,000 stone submissions and they are considered to be experts in this field.

Although a very tough time for pets, owners, clinic staff and everyone within MC/RC, Doreen is also very proud of the way the company responded during the pet food recall-everyone was available 24 hours a day, seven days a week to do whatever needed to be done for each and every pet affected by this crisis.

Doreen cannot ever remember a time when she didn't want to be a vet. She always wanted to have a retirement home for senior pets. It's funny now that she not only walked in the footsteps of her mentor Dr. Jim Patterson and the path he took in his career, but the senior pet aspect is coming in to play as well. Recently, "Rayner" underwent a hemi mandibulectomy and removal of the lymph nodes in her neck due to the presence of oral malignant amelanotic melanoma. She is under treatment using the Merial Melanoma Vaccine Oncept. Other than struggling with prehension, she is managing well with the help of her loving owner who hand feeds her wherever she feels like eating. She is worth it, "Rayner" is a sweet 12-year-old Border Collie mix; well to be exact ¾ Border Collie, ¼ Springer Spaniel/Other since she has had her DNA tested. She exudes adoration for Doreen and I can understand the need to keep her around as long as possible.

So what fills her days now that she isn't travelling all over Canada for MC/RC? Doreen is adjusting to retirement. She makes frequent visits to the nursing home where her 90 yr. old mom resides and she wiles away the mornings playing scrabble and helping keep other lonely seniors company. Her hopes are to travel to the many countries still left to explore with her retired husband Kees and occasionally with the kids, Erin and Ryan and their significant others. Doreen has been to over 40 countries on all 7 continents. She and Kees have been married for 7 years and are very keen to pursue their shared love of travel. But there is this little bundle of joy on the horizon, which will likely occupy a great deal of her time.

It was a treat to spend time with Doreen in her urban retreat and I was honoured that she allowed me the time to profile her in our magazine. Her sincere down to earth personality was terrific to be around and was truly inspiring. I couldn't be happier that she still wants so much to be a part of the veterinary community and I can look forward to being around her vitality and liveliness for years to come. MCV

Doreen is planning one of her many trips with her husband Kees. This time it will likely be to India. Her travels have so far taken her to incredibly exotic places like Antarctica and Africa. Although she has been on every continent, there is still so much to explore!

Sitting at the piano in her sun room that overlooks a green space that brings wildlife of all varieties. A perfect spot to try and garner inspiration for mastering a brand new pasttime.

DOREEN CANNOT EVER REMEMBER A TIME WHEN SHE DIDN'T WANT TO BE A VET. SHE ALWAYS WANTED TO HAVE A RETIREMENT HOME FOR SENIOR PETS.

THE GREAT RESCUE AND THE SURGICAL FOLLOW UP

Excitement is in no short supply at the Vancouver Aquarium. Beyond the facade of being a stop on the tourist path in Vancouver, the Aquarium caters to the wildlife of BC through a tremendous rescue and rehabilitation program. The story of a California Sea Lion "Flash Gordon".

Intro by Sharron Brownlee, WCV Editor in Chief
Words by Dr. Martin Haulena
Rescue photos courtesy of the Vancouver Aquarium

For over 40 years, the Vancouver Aquarium's Marine Mammal Rescue Centre has rescued, rehabilitated and released stranded animals found along B.C.'s vast coastline. In its time, the Aquarium's Rescue Centre has never had the opportunity to rescue a California sea lion mainly due to the challenging logistics of their reported locations. The successful rescue of Flash Gordon, a California sea lion, on August 23, 2011, marked a significant milestone and may be positive news for future sea lions needing immediate veterinary care.

On that day, Dr. Martin Haulena, the Aquarium's Rescue Centre's staff, along with veterinary students and officers from Fisheries and Oceans Canada, travelled to Ucluelet on Vancouver Island to assist the young adult male California sea lion. He had been spotted by locals with a foot-long fishing flasher dangling from the left side of his mouth.

Rescuing adult sea lions entangled in fishing gear or other debris is a very difficult process that involves careful planning and coordination of a large group of individuals. The rescue involves coordinating trucks and boats and transporting equipment, developing a capture plan, travelling long distances, and waiting for the right opportunity for an animal that has a high probability of staying in the same place long enough for the team to arrive.

For many years, the Aquarium's Rescue Centre has been actively involved in developing methods to safely capture large sea lions that can easily escape into the water. In recent years, the team has been successful at immobilizing animals with a safe, reversible combination of medetomidine-midazolam-butorphanol that can be delivered over fairly long distances via dart rifle. Flash had been seen reliably over several days at the same approximate location and so it was determined that there would be a good chance everything could be put in place for a successful rescue.

After arriving on site, it was obvious to the Aquarium's Rescue Centre staff that he was in very poor body condition. "The sea lion was emaciated, in significant discomfort, very weak, and had a number of deep secondary external wounds," explains Dr. Haulena. Based on the position of the salmon flasher, it was determined that the trailing hook was likely embedded in the distal esophagus or proximal stomach. The fishing line was very tight and was wearing down into the soft tissue and bone of the left mandible. The position of the hook also interfered with the animal's ability to move and it was very unlikely that he could

Rescue workers transport an immobilized California Sea Lion back to the Aquatic Rescue Centre for evaluation and treatment.

VVV

THE STORY

eat with the fishing gear in place let alone forage. Although immobilizing a free-swimming marine mammal is a very high-risk procedure, it was not likely that Flash would survive without being rescued and brought to the Aquarium's hospital facility.

With the assistance of Fisheries and Oceans Canada, the Vancouver Aquarium team successfully darted and immobilized the animal in a convenient location close to shore. The 200-kilogram animal was transferred to the beach, immediately loaded into an Aquarium rescue vehicle and carefully transported from the Island, arriving at the Aquarium's Rescue Centre on Vancouver's waterfront later that evening.

Initial therapy included stabilization and placing the sea lion into a fresh water pool to facilitate rehydration. He was also given a subcutaneous injection of Exede. He was immobilized on August 25 for endoscopy, radiographs, and blood work. The hook was identified in the distal esophagus at the level of the heart and was successfully removed endoscopically. Some necrotic esophageal tissue was attached to the hook after it was removed but there were no signs that the hook perforated the thoracic cavity. The sea lion has been treated with maropitant, penicillin, clindamycin, ciprofloxacin, metronidazole and carprofen at various times since his admission. He started eating approximately 24 hours after the fish hook was removed.

From what started as a very bleak outlook for Flash, his condition has steadily improved and he is currently eating very well and gaining weight after his surgery. His various wounds, including the damaged mandible, are also healing well.

While the odds turned around for this particular sea lion, that is certainly not the case for all marine mammals that are impacted by human activities on the water. For the Vancouver Aquarium, this was a unique opportunity to not only save an individual animal and advance the science of marine mammal rehabilitation, but also to connect people to the natural world and their need for responsible sharing of our waterways through a compelling story.

Fortunately, the Vancouver Aquarium Marine Mammal Rescue Centre has another success story. Flash Gordon, the California sea lion, is recovering well and is expected to be released back into the wild soon.

For the Vancouver Aquarium, this was a unique opportunity to not only save an individual animal and advance the science of marine mammal rehabilitation, but also to connect people to the natural world and their need for responsible sharing of our waterways through a compelling story.

The Vancouver Aquarium's Marine Mammal Rescue Centre is one of Canada's leading animal rescue centres. The Rescue Centre admits and cares for over 150 animals each year. The majority of the rescued animals are rehabilitated and successfully returned to their natural habitats. For a very small number that would not survive on their own in the wild, the Aquarium provides homes and long-term care. From September 23 to November 6, 2011, the Aquarium is sharing some of the amazing and touching stories of rescue and survival from its family of rescued animals through a new temporary exhibit. For more information, visit vanaqua.org.

If you see a stranded animal, please call Vancouver Aquarium's Marine Mammal Rescue Centre at 604-258-SEAL (7325) for immediate assistance.

"THE SEA LION WAS EMACIATED, IN SIGNIFICANT DISCOMFORT, VERY WEAK, AND HAD A NUMBER OF DEEP SECONDARY EXTERNAL WOUNDS..."

ANIMAL CLASSIFICATION

Zalophus californianus

Description

California sea lions are known for their intelligence, playfulness, and noisy barking. Their color ranges from chocolate brown in males to a lighter, golden brown in females. Males reach 850 pounds (390 kg) and seven feet (2.1 m) in length. Females grow to 220 pounds (110 kg) and up to six feet (1.8 m) in length. They have a "dog-like" face, and at around five years of age, males develop a bony bump on top of their skull called a sagittal crest. The top of a male's head often gets lighter in color with age. These members of the otariid or walking seal family have external ear flaps and large flippers that they use to "walk" on land. The trained "seals" in zoos and aquariums are usually California sea lions.

Range/Habitat

California sea lions are found from Vancouver Island, British Columbia to the southern tip of Baja California in Mexico. They breed mainly on offshore islands, ranging from southern California's Channel Islands south to Mexico, although a few pups have been born on Año Nuevo and the Farallon Islands in central California. There is a distinct population of California sea lions at the Galapagos Islands. A third population in the Sea of Japan became extinct, probably during World War II.

Mating/Breeding

Most pups are born in June or July and weigh 13 to 20 pounds (6 to 9 kg). They nurse for at least five to six months and sometimes over a year. Mothers recognize pups on crowded rookeries through smell and vocalizations. Pups also learn to recognize the smell and vocalizations of their mothers. Breeding takes place a few weeks after birth. Males patrol territories and bark almost continuously during the breeding season.

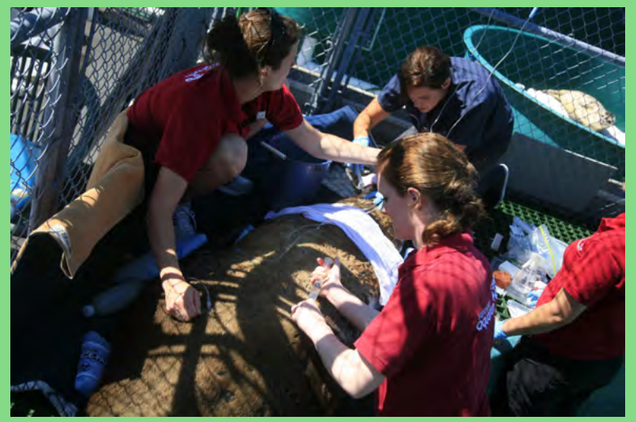
Behavior

California sea lions are very social animals, and groups often rest closely packed together at favored haul-out sites on land or float together on the ocean's surface in "rafts." They are sometimes seen "porpoising," or jumping out of the water, presumably to speed up their swimming. Sea lions have also been seen "surfing" breaking waves. California sea lions are opportunistic eaters, feeding on squid, octopus, herring, rockfish, mackerel, and small sharks. In turn, sea lions are preyed upon by Orcas (killer whales) and great white sharks.

Status

Their population is growing steadily, and California sea lions can be seen in many coastal spots such as the Monterey Coast Guard jetty and PIER 39 in San Francisco. The current population is approximately 238,000.

From the Marine Mammal Centre in Sausalito, CA



It took an entire team of professionals to manage the recovery process. The Sea Lion would likely not have survived without the intervention of the Aquarium Team.

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The team is seen here as they arrive back at the Aquarium Rescue Centre in Vancouver

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BEHIND THE SCENES

WHAT EXACTLY DOES THE MARINE MAMMAL RESCUE CENTRE DO?

The Vancouver Aquarium has been involved in the rescue and rehabilitation of marine mammals for over forty years. In that time, the Marine Mammal Rescue Centre has grown from admitting one or two animals in a season, to admitting nearly 100 in some years.

The program currently admits over 100 distressed marine mammals per year. Each of these animals requires our expert veterinary treatment and supportive care to recuperate before they are released back into the ocean.

The Marine Mammal Rescue Centre is run without governmental operational support.

SPECIES AND RANGE

The program is available to assist distressed marine mammals from the length of the British Columbia coastline.

Elephant seals, sea otters, Steller sea lions, harbour porpoises, sea turtles, common dolphins, and killer whales have all been the subjects of our efforts, but neonate (newborn) harbour seals are the most commonly admitted patients to the Marine Mammal Rescue Centre.

The current facilities of the Marine Mammal Centre allow for on-site rehabilitation of seals, sea lions, sea otters, and small cetaceans such as harbour porpoises. The rescue of larger marine mammals would involve the use of ocean pens or other secondary facilities.

GOALS

The primary goal of the Marine Mammal Rescue Centre is to provide housing and care for ill, injured, or abandoned marine mammals and to rehabilitate them for release back into their natural habitat. Additional program goals include:

Establishing written protocols for the rehabilitation of different marine mammal species in order to serve as a resource in the event of natural or man-made disasters that impact upon marine mammals

Monitoring the status of wild populations through the scientific study of ill or orphaned marine mammals treated by the Aquarium

Performing a public service to offer assistance to marine mammals that may be in peril due to habitat destruction and environmental damage caused by humans

Educating the public on how to properly respond to apparently stranded or diseased marine mammals

FACILITY

The Marine Mammal Rescue Centre is a hospital for sick, injured, or orphaned marine mammals.Throughout an animal's stay at the centre, a healthy, low-stress environment is essential to their rehabilitation. It is important that our patients do not become our "pets", but stay true to their wild nature. Unlike domestic animals, spending too much time with a wildlife patient can create a high level of stress, and this can negatively affect their healing process. To maximize chances of a successful rehabilitation and release, we do not "play" or interact, except where necessary for treatment or husbandry, with the marine mammals in our care.

The Rescue Centre consists of indoor and outdoor spaces, all designed for efficient and effective marine mammal care.

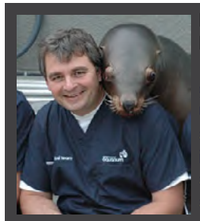
The indoor space includes food preparation areas, a laboratory and pharmacy, an examination room, and recovery areas for debilitated animals.

Outdoor facilities consist of a variety of holding pools and tubs. These are of varying sizes and designs, to suit different sizes and kinds of marine mammals. The site is organized so that new arrivals, and/or sick animals, are separated from any healthy marine mammals. This reinforces the principles of quarantine that are so important in wildlife rehabilitation.

RESCUE CREW

The Marine Mammal Rescue team includes a staff veterinarian (as well as several consulting veterinarians), animal health technicians, animal care and rehabilitation specialists, and many dedicated volunteers.

All members of the team are highly trained to provide qualified and experienced veterinary care to our animal patients



Dr Martin Haulena DVM, MSc, Dipl. ACZM

Dr. Martin Haulena graduated from the Ontario Veterinary College at the University of Guelph in 1993. He completed a clinical internship in aquatic animal medicine at Mystic Aquarium in 1996 and a Master's degree in pathobiology from the University of Guelph in 1999. He became a Diplomate of the American College of Zoological Medicine in 2007. Dr. Haulena was the Staff Veterinarian at The Marine Mammal Center in Sausalito, CA for nine years and is currently Staff Veterinarian at the Vancouver Aquarium.

His special interests are in the medical management of aquatic animals, particularly marine mammals, with emphasis on innovative diagnostic methods such as MRIs, endoscopy and sonography, developing safe anaesthetic protocols, and improving surgical techniques. He has authored over 30 scientific journal articles and book chapters.

ER MEDICINE

REVERED, REVILED OR REJECTED

A 3 PART SERIES

DR. SUANN HOSIE IS A MONUMENTAL FIGURE IN VETERINARY EMERGENCY MEDICINE IN BRITISH COLUMBIA. SHE HAS OWNED AND OPERATED THE VANCOUVER ANIMAL EMERGENCY CLINIC (VAEC) FOR 33 YEARS.

Interview by: Sharron Brownlee, WCV Editor in Chief

PART 1: A HISTORY LESSON

Lets face it, this challenging tributary of veterinary medicine is either liked or loathed, depending on your experiences and thoughts on the partnership, or lack thereof, that you have with your local emergency practice. Nevertheless, it is a necessary service and without it, who knows what the quality of life would be for a lot of you. In this excerpt, I asked Dr. Hosie about where it all began and where the road has led so far. In upcoming issues we will touch on highlights, lowlights, cases and people worth remembering, how better to bridge the gap between the ER and GP and what the future holds for the VAEC.

Q ***Northern Peninsula VEC (NPVEC) – you founded one of the first emergency practices in North America. What was it like being a founder of a new arm of veterinary practice?***

A I was lucky to be active in the Peninsula Veterinary Medical Association (PVMA) and enjoyed the collegiality of the veterinary community there, even though they wondered why I left Canada – (it was the era of "peaceniks" that objected to the Vietnam War and left the US for Canada). As an aside, when I returned to Canada to start VAEC, my colleagues here wondered why I left sunny California! There are still practitioners who brand me as an American – maybe because I acquired the accent!

The idea to get together with other veterinarians from the San Francisco Peninsula to start a facility, which would be open for after-hours emergencies, came from the ineffectiveness and stress of a shared on-call arrangement for emergency calls. When a pet owner had an emergency, they called their family veterinarian. The call was picked up after hours by an answering service. The person taking the call had no triage skills. She had to take the message, call the veterinarian at home (who may not have been the family veterinarian) and relay the message. If the on-call vet was in the car, didn't have a spouse or was in the shower, the message wasn't received immediately. In those days, there were no cell phones and pagers were rare in the small animal veterinary world.

When the vet called the client back, it was usually a case of trying to avoid seeing the pet until the next morning. In a dire emergency, the client had to drive to the hospital and act as the veterinarian's assistant. The poor vet had to be the anaesthetist and surgeon during emergency operations such as a caesarean. And there was no one to monitor the patient in the hospital while the vet went home at 3 am to get a few hours of sleep before showing up the next morning. I remember my boss getting on the phone at 8 am to tell a client that their pet had died…. at 8am. If there had been a statistical analysis and graph of the time of death of hospitalized pets, there would be a huge spike at 8 am. I hated those calls and longed for the time when we could console the owner at the actual time of death. (Now, that is one of the difficult things we do but we do get such grateful feedback from owners – that we were there and were doing our best to help their pet).

Well, I was a vocal advocate for change. I was appointed co-chair of a committee to raise money from area veterinarians by making them shareholders. 33 of us pitched in to buy shares at $5000 each (or was it $1000?) Anyway, it was enough to lease and renovate a shopping center space next to an existing practice in San Mateo, just off the freeway.

We designed the space with a large treatment area/ICU. In those days, we still assumed there would be a need for wards and runs "in the back". That was a big mistake. Yes, there was a need for runs, but only for stray, mostly healthy dogs that the Peninsula Humane Society brought to us. I quickly adopted the attitude, "If the patient is serious enough to be hospitalized, it deserves to be monitored by sight at all times", otherwise, "send them home" and let the owner do the monitoring of a stable patient. This is of course after being triaged/examined/treated at the ER and of course the patient is not on I.V.). Sad to say, in the distant past, the entry, "found dead in cage" was put on medical records – that phrase implies a casual attitude and a lack of constant attention. I could never write that phrase, even at 8:00 in the morning at the general practice when it was the truth. "Fluffy has died" is enough.

I remember a meeting of the committee shortly before we were due to open. We had the challenge of finding a veterinarian to work from 6 pm to 8 am the next morning and from 12 noon on Saturdays to 8 am Monday. The other veterinarians suggested we pay him; yes, "him", a base salary plus 50% of the surgeries he did after midnight. This suggestion matched what most practice owners offered their junior associates for taking night calls. I said, "You don't want a person who will talk the owner out of coming right down at 10 pm with a bitch with dystocia just because if he delays it until 12 midnight he will get paid more!" "You want someone who will practice the same degree of medicine and surgery whether it is 6 o'clock in the evening or 3 o'clock in the wee small hours!" Rod, my co-chair, said, "Suann, you wouldn't be volunteering for the job, would you?" The rest is history.

Q ***Was the concept well received in the early 70's?***

A In short, yes. But some practices (as they still do now) prefer to take their own emergency calls. In the 70's, there were not many emergency clinics so distance was a factor – most veterinarians stuck with the old way of shared night calls. There were not as many practices open late as there are now. I do feel that the trend towards referring after hours calls out (even if you have extended hours for routine visits) has grown with the profession's recognition of the importance of offering optimum patient care. The Peninsula veterinarians of course received the concept very well. The NPVEC operated in the black and returned better-than-market dividends. It took many years for some of the referring veterinarians to accept the concept of "whatever is an emergency to the client is an emergency to the ER clinician". An example is the case of a cat abscess. For the longest time, we would get angry calls: "You should have told them to wait until tomorrow and bring it in to me". The referring veterinarians must have thought we coerced the owner to bring in these "non-emergencies". Sad – hey, we were not being paid a commission! We did love to get a chance to educate the client and send them home a non-smelly pet in the morning. Yes, we often told them how to treat the abscess at home in the future until they could see their family veterinarian and if the cat was not neutered, we stressed the need to get it done as soon as possible – perhaps as soon as the drain removal at the referring veterinarian!

Q ***How has emergency medicine evolved?***

A One of the reasons I left to practice in California was the progressive nature of the profession there. I had worked two summers in Southern California before graduation, once for a small animal vet, and once for an equine practitioner (I was going to be an equine vet and only switched after attending the AAEP meeting in Miami in December of 1965 –they shoot horses, don't they?
I am passionate about CE and as the program chair of the PVMA; I brought some excellent speakers to our local meetings. After "signing up" for ER clinician at NPVEC, I sought out the best CE available. Other ER types did too, and soon the Association of Veterinary Emergency Clinicians was founded at an AAHA meeting. That evolved into the Veterinary Emergency and Critical Care Society. Two Canadians (OVC grads) were key in that group: Ira Zazlow and Bill Whittick. They inspired me greatly. (Check out veccs.org) If you follow the VECCS history, that will give you an idea of the evolution of emergency medicine. Board certification in emergency and critical care became a reality in the early 90's.

I am amazed at the knowledge and skills that veterinary ER teams possess today. The annual CE meeting of VECCS is world class (see website). At VAEC, each year we spend money we sometimes don't have to send as many of our staff as we can to IVECCS. They always come back with terrific ideas and their brains overloaded with things to share.

Q ***As a longtime and well-respected practitioner of emergency and critical care medicine in Vancouver, what makes a good ER doctor?***

A An empathy for people; a real desire to listen and to communicate; a talent for defining the main concern of the client as well as for the patient; a resistance to the paralysis of too much adrenalin coursing through your veins and making you stupid; good leadership skills – it is important to lead your team of VTs, VOAs and VTAs to make the ER function well even at the busiest times; and I just have to add: spelling, grammar, keyboard skills and the ability to quickly organize a medical record which will be valuable to the referring veterinarian.

Q ***After 33 years of serving as an emergency practice veterinarian, what have been the highlights or what are you most proud of?***

A Going to 24 hours despite the non-profitability of fully staffing the place during the weekdays. The example I gave of the graph showing that deaths peak at 8 am went away as soon as the NPVEC opened; going 24 hours obliterated the graph which plotted the time that the patient was "stable for transfer to their family veterinarian" – again that ridiculous graph would show a peak at 8 a.m. What about the patient on oxygen? Or the large dog with a fractured pelvis whose owners have to squish him into their Honda Civic for the 7 K ride to the family veterinary hospital? Or the diabetic ketoacidotic cat on I.V. who arrives at the rDVM (and whose owner has had to take time off work) before the veterinarian is in? But most of all, I am proud to have attracted and kept such a dedicated bunch of team members. They may be as crazy as I am, choosing this demanding area of veterinary medicine, knowing their lives will be shortened by the shift work, knowing their social life is negatively impacted, but they are the best bunch in the world.

To be continued...

...SOME PRACTICES (AS THEY STILL DO NOW) PREFER TO TAKE THEIR OWN EMERGENCY CALLS. IN THE 70'S, THERE WERE NOT MANY EMERGENCY CLINICS SO DISTANCE WAS A FACTOR...

Dr. Suann Hosie founded VAEC at its current leased premises in 1978. She is the sole shareholder of Vancouver Animal Emergency Clinic, Ltd. At first, the practice operated during the hours when family practices were closed. Suann took on most of the shifts initially (14 hours on weeknights, 22 hour shifts on the weekend) but soon recruited other veterinarians and support staff who shared her Philosophy of Practice and were dedicated to emergency care.

In 1985, AnimalER "went 24 hours". It was always Suann's goal to serve those patients who needed round-the-clock veterinary care. There will always be times when a seriously ill pet will benefit from a higher degree of monitoring and treatment during the day as well as overnight. Being open 24 hours enabled the family veterinarians to transfer these pets to VAEC during the day.

Suann was born and raised in Saskatoon; she graduated from Ontario Veterinary College, University of Guelph, in 1966. After doing locum work in England that summer, she passed the Board examinations in California and practiced there from the fall of 1966 until the summer of 1978 when she returned to Canada to establish VAEC. During her years in California, she became interested in emergency practice while she and 32 other veterinarians in the San Francisco Bay area started one of the first emergency clinics in North America, Northern Peninsula Veterinary Emergency Clinic. She was the Chief Veterinarian and Administrator there from 1972 to 1978.

In her role as Hospital Director, and now as Hospital President, Suann continues to interact with all of the AnimalER team members, but it is her team of approximately 28 hard-working individuals that ensures the practice runs smoothly on a day-to-day basis.

In addition to emergency medicine and surgery, Suann's areas of professional interest are ultrasound and radiographic imaging, and cat and dog behaviour. She has served various professional organizations as a committee member as well as holding office. She is a Past President of the British Columbia Veterinary Medical Association.

Listeners of CBC Radio One may catch Suann on the noon program "Almanac" when she visits as the resident veterinarian, answering callers who pose a wide range of questions about their pets.

Suann has lived in a townhouse in West Vancouver since 1978. Her current menagerie consists of her thirteen year-old indoor cat Sid, and two smooth fox terriers: 11 year-old Piton and 8 year-old Emmy. All of her pets were adopted.

Suann is an active birder. She keeps fit by running with her dogs in Lighthouse Park, powerlifting and workouts. Suann travels frequently, both to see birds and also to chase total eclipses of the sun, following her motto: "To live long and explore the natural world".

TAKING CARE OF BUSINESS

RCMP & VANCOUVER POLICE DEPARTMENT CANINE UNITS SHINE AMIDST THE EMBARRASSING STANLEY CUP RIOTS, SWIFTLY AND EFFECTIVELY

Words by Kathryn Welsman, DVM, CVMA-SBCV
Chapter Board of Directors

CALL TO ACTION...

If like me, you watched in a shocked daze as the events unfolded during the Stanley Cup Riots, you likely saw crowds of people, looting and throwing objects amid burning vehicles, shattered glass, and debris. You might also remember seeing countless police officers amid the chaos, helping to restore order.

These police officers included members of the Vancouver Police Department (VPD), other regional police services, and the RCMP. While glued to my seat, my eyes were constantly drawn to a select few of these police officers. These individuals were striking in their alertness, their instincts, their ability to follow orders and their willingness to jump into action when needed and do their jobs. I watched in awe as rioters attempted to antagonize them and lose, and watched as they dispersed crowds with a few menacing looks and barks. Of course, I'm referring to the police dogs that were out in full force that night to assist.

Despite my admiration and utmost respect for these animals and their handlers, the veterinarian in me started to become worried about the safety of the dogs. I was imagining cut pads from the broken glass, blunt force and projectile traumas from thrown objects, smoke inhalation and burns from the many fires, mouth injuries from the bites, and eye and airway irritation from the gas. While these dangers are unavoidable in this kind of police work, I soon found out that they are well prepared in their training by some of the best handlers in the country.

A CALL TO ACTION

Since then I've had the opportunity to speak to several of the handlers present during the riots and watch them work. Constable Reg Forster and his partner "Ace", a 10-year-old male neutered German Shepherd dog (GSD) were among the VPD teams present. The VPD currently has 18 dog and handler teams and almost all of them were out that night. Those not already on duty were quick to rush into work to assist. "Ace" and Cst Forster were in the thick of things during the riots and he showed me where they were deployed and related to me some of what the evening held for them. As is common in this day and age, YouTube video is available for all to see, and Cst Forster was able to provide commentary on the recording of both himself and "Ace" at work: "The video filmed from high up will show you the power of a police dog to clear a lane. The riot squad was moving up Seymour Street, by The Bay, which was being looted and cars were on fire…as we moved up the street, people tucked into the south lane of Dunsmuir to avoid us. It was my job to clear out the lane to make sure these people didn't filter in behind our backs. Unfortunately, at the end of the video you will see what happens when someone gets too close to the dog and ignores repeated requests to back up". The video shows a large crowd quickly retreating from "Ace" as he moves forward and sets up a constant bark. As Cst Forster aptly pointed out, oftentimes a single police dog can instill a greater fear than ten police officers.

TAKING A BEATING

Another VPD handler, Constable Matt Mageau, recounted that his dog, "Justice", was pelted with objects from the crowd during the riot. "Justice" sustained a facial laceration from the trauma - but it didn't deter the dog from doing his job in keeping the crowds from advancing on the police line that was barricading a road. Amazingly, no other major injuries were reported other than some minor cut pads. This is impressive, considering the dogs do not have the protection afforded to their human counterparts.

PROTECTIVE GEAR

When questioned about protective gear for the dogs, the handlers noted that they do have protective ballistic vests and footwear available. However, they are heavy and tire the dogs out very quickly, making their job much more difficult. Cst Mageau says "Justice" was already very hot from the constant work and had no access to water for many hours. He was worried that any further strain caused by the vests might precipitate some heat related problems. Both handlers did say that depending on their risk assessment, they would use the vests if attending a call where firearms are involved. All in all, the dogs are extremely resilient and are monitored closely by their handlers for problems. All of the handlers receive canine first aid training and many of them have extensive first aid kits in case of an emergency when veterinary care is not easily accessible. The RCMP has also provided canine emergency medical training to their human medics.

Here is Cst Forster and ACE during the Cup riots ^^^

Versatility: RCMP Officer, Daniel Hayduk shows how the dogs need to be able to work in all environments. vvv

SELECTION PROCESS

Preparation for an effective police dog starts with proper dog selection. These dogs are handpicked from specific breeding facilities as puppies and are raised by current handlers or those hoping to become handlers. Only a small percentage of purpose-bred dogs will actually make the grade as a police dog. The RCMP says that "in addition to being in perfect physical condition, they must have particular personality traits which make them suitable for police work: even temperament, hunting instinct and sound character are essential". I met several of their prospective puppies and Cst Forster says the ones that make it have high drive and are very focused on objects like a ball. It isn't however just the puppy that must have desirable traits, the police officers also have to show certain qualities. It takes years of dedication to the dog units and intense competition to be granted one of the coveted spots on the teams. These police officers are true dog lovers. Every handler I've spoken to in the VPD and the RCMP all have the same thing to say bout their job- that it is the best in the world… because of the dogs. Cst Forster says "I still love my job and I look forward to coming into work every day", which is impressive after 20 years on the police force. >>>

FUNCTIONALITY

Universal purpose and funtionality...

PUBLIC ORDER ENFORCEMENT DOG

The traditional image of a police dog is one used to enforce public order by chasing and holding suspects, or detaining suspects by the threat of being released, either by direct apprehension or a method known as Bark and Hold. German Shepherd Dogs and Belgian Malinois are most commonly used because of their availability; however other dog breeds have also contributed, such as Dutch Shepherds, Rottweilers, Boxers, Doberman Pinschers, Giant Schnauzers, American Pit Bull Terriers, and American Staffordshire Terriers

SEARCH AND RESCUE (SAR) DOG

This dog is used to locate suspects or find missing people or objects. Bloodhounds are often used for this task.

DETECTION DOG

Some dogs are used to detect illicit substances such as drugs or explosives which may be carried on a person or in their effects. In many countries, Beagles are used in airports to sniff the baggage for items that are not permitted; due to their friendly nature and appearance, the Beagle does not worry most passengers.

CADAVER DOG

Some dogs are trained in detecting the odor of decomposing bodies. Dogs' noses are so sensitive that they are even capable of detecting bodies that are under running water Pioneering work was done by Dr. Debra Komar (University of Alberta) in Association with the RCMP Civilian Search Dog Association in this area. The result was the development of training techniques that resulted in near 100% accuracy rates. Her research has been published in the Journal of Forensic Anthropology.

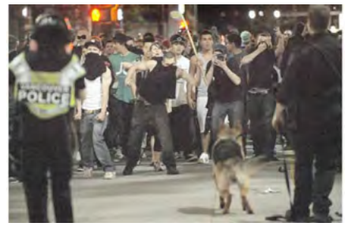
Some facts vvv

A police dog, often referred to as a "K-9 dog" in some areas, is a dog that is trained specifically to assist police and other law-enforcement personnel in their work. One commonly used breed is the German Shepherd, although now Belgian Malinois are popular dogs to use. In many jurisdictions the intentional injuring or killing of a police dog is a felony, subjecting the perpetrator to harsher penalties than those in the statutes embodied in local animal cruelty laws, just as an assault on a human police officer is often a more serious offense than the same assault on a non-officer. A growing number of law-enforcement organizations outfit dogs with ballistic vests, and some make the dogs sworn officers, with their own police badges and IDs.

TRAINING

Once chosen, the dog and handler are trained by the VPD during a 15-week course prior to starting work on the road, where they then undergo weekly training and yearly re-certifications. The RCMP dogs and handlers are trained at their national facility in Alberta where the dogs are also bred. These teams also undergo yearly re-certification and fitness testing.

Luckily, both the VPD and RCMP have specific dogs that are designated as 'public order' dogs, and they practice regularly with the public order units so that they are familiar with the tactics of those units. These skills were put to the test on the night of the riot, and by all accounts the dog teams succeeded in their objectives. However, crowd control is only one aspect of a police dog's duties. The list of tasks that they perform includes tracking and searching (for lost persons, criminals and evidence), apprehension of fleeing suspects, and depending on their training, searching for narcotics or explosives and weapons. Dog teams may also assist the Emergency Response Teams (ERT) in various situations such as hostage situations or barricaded individuals. The role of the dog may be determined by current needs of the police force and where the dog excels. For example Cst Forster says "Ace" is a phenomenal tracker but he doesn't do well in situations where he has to be quiet, as he loves to bark!



IN THIS SHOT A VPD CANINE AND HIS HANDLER KEEP CROWDS AT BAY DURING THE STANLEY CUP RIOTS. DOGS OFTEN RECIEVE VARIOUS INJURIES WHEN PERFORMING UNDER THESE STRESSFUL CONDITIONS, WHILE EQUIPED WITH PROTECTIVE BOOTS FROM BROKEN GLASS AND BALLISTITIC VEST- DOGS OFTEN ARE INJURED ON THE JOB BY ASSAILANTS.

EMERGENCY VISITS & ROUTINE CHECK UPS

As a veterinary community we should be aware of these impressive dogs that not only work in the lower mainland but all over British Columbia. Given there are nearly 80 RCMP teams in the province, and the high-risk activities they engage in, any member of the veterinary community may be presented with one of these animals either for routine visits or more likely, on an emergency basis. Having treated many police dogs, my guiding principle is that although they are animals like the rest of my patients, they should also be dealt with quickly and efficiently so they can return to work assisting with public safety as soon as possible. Another important factor when treating these dogs is the consideration of their financial and emotional value. It has been estimated by both the RCMP and VPD that it costs over $60,000 to train just one police dog. A police dog that becomes permanently injured or dies is a substantial financial cost to its organization, reduces the safety of officers by his or her absence, and may take a huge emotional toll on the handler. The emotional value is hard to quantify as it is for all of our client's pets. However, even though I dearly love my black lab, I realize that the bond I have with him is probably nothing compared to what a handler has with his or her dog, for the simple reason that their lives depend on each other. Cst Forster agrees, explaining that he thinks he knows his dog better than his family, since he spends more time with "Ace" due to the long hours on the job. For these logistical and emotional reasons, veterinary professionals should make every effort to see these animals quickly and act immediately on any treatment necessary, putting them at the forefront of their triaging whenever possible.

GSD'S

Most, if not all, of these dogs are GSD's and will be afflicted with the common GSD issues. However, Dr. Cynthia Otto, of the University of Pennsylvania Working Dog Center, has found differences between pets and working GSD's presenting to the U Penn's emergency service. She explained that the most common reasons for visits of pet GSD's are gastro-intestinal issues such as vomiting, diarrhea and GDV, whereas working GSD's are more likely to present for orthopedic issues such as lameness and back problems. In conversation with Dr Otto, she also stated that although the numbers weren't high, dental trauma is observed in police GSD's, but not with pet GSD's.

Other areas of concern for veterinarians examining working GSD's may include blunt trauma or lacerations as the dogs often encounter significant obstacles during their tracking. I had the opportunity to witness "Ace" in action, searching a building, where he maneuvered through small spaces, balanced along narrow walkways, jumped up and down over objects, and then watched as Cst Forster lifted "Ace" up and over a fence, handing him off to Cst Mageau to bring him down an eight foot drop without incident. This was an easy track for this dog and they encounter much worse on a regular basis.

COMMON INJURIES

Another type of presenting complaint might include physical abuse sustained during an arrest. Cst Forster explains that "Ace" was beaten up quite badly during one arrest that caused significant soft tissue damage to his shoulder, and in another incident was aggressively peppered sprayed in the mouth. Pepper spray doesn't affect dogs like it does humans but it nonetheless can be irritating especially in the oral cavity. Despite the pepper spray, "Ace" was able to continue his track and assist in apprehending the suspect. In my own experience, I've had working dogs presented after being slashed by a knife during a pursuit and yet another that came in with major dog bite wounds after the suspects' dog attacked him.

ANIMAL CRUELTY LEGISLATION

Luckily with the new animal cruelty legislation that has just passed there will be stronger charges and fines against those that would hurt an animal. In a press release by the BC government it states that "the legislation will also make it a provincial offense to harm or attempt to harm a law enforcement animal". Constable Jason Whittaker of the Saanich Police Department was quoted in that press release as saying "up until now law enforcement animals have often been taken for granted. These animals are out working to protect British Columbians day and night", to which I wholeheartedly agree. The increased penalties for such abuse as witnessed the night of the riots or described by Cst Forster would incur fines up to $75,000 and up to two years in jail.

Often these dogs go unnoticed but during the riots they showcased what they can do and why they are vitally important to policing in British Columbia. The handlers are lucky to be working with such fine animals but likewise the dogs work side by side with some of the most dedicated police officers in the country. As veterinarians we have an important role to play in helping the handlers keep these dogs fit for duty and on the road.

Everyone at the SBCV and the staff of WCV Magazine would like to express our sincere thanks to the men, women and dogs of the VPD for their dedication to keeping our city safe and secure.

Images Courtesy of RCMP Website - (Dog on Car – Daniel Hayduk)
The Vancouver Sun (the pic labeled Ace with Constable Forster)

DEVELOP IN MANY OF THE DISEASED EYES.

? *Golden Retriever Uveitis (GRU) refers to a suspected inherited immune-mediated ocular disease in the Golden Retriever.*

etiology

The cause of GRU is poorly understood but genetic factors have been proposed based on apparent breed predilection and an absence of demonstrable systemic diseases, and infectious or neoplastic causes. An immune-mediated mechanism is believed to be part of the pathogenesis of GRU as evidenced by response to anti-inflammatory agents and occasional positive antinuclear antibody titers. Any age of dog can be affected but in a previous retrospective study involving 75 Golden Retriever dogs diagnosed with GRU, dogs ranged in age from between 4.5 to 14.5 years with a mean of 8.6 ± 2.1 years. The clinical signs can be seen in one eye or both eyes, but typically GRU affects both eyes in time.

clinical signs

In the early stages, the only clinical signs may be seen as intermittent conjunctival hyperemia, intermittent tearing, or increased pigmentation of the iris or pigment dusting on the anterior lens surface [PHOTO 1]. Some of these early signs may be confused for conjunctivitis. When the disease progresses, persistent conjunctival and scleral hyperemia, photophobia, and low intraocular pressure are frequently observed. These signs are all typically associated with non-specific uveitis.

To differentiate GRU from any other uveitis the pigmentary changes inside the eye must be identified. The most typical sign of GRU is the pigment dispersion with deposition on the surface of the lens. The pigment has the appearance of a light dusting of the anterior lens capsule radiating from the center to the periphery. This can often only be detected with the help of magnification. Pigment changes can also be seen in the irises. Both irises can become mottled in appearance due to areas of hyperpigmentation and normal light brown pigmentation. In some affected dogs one iris may become darkly pigmented while the other one remains the original color until it is also affected by the disease. It is therefore very important to monitor the iris color of both eyes and compare them in the Golden Retriever.

Iridociliary cysts have long been reported to occur frequently in the Golden Retriever without much significance to the ocular health [PHOTO 2]. The same type of cysts can be seen in eyes diagnosed with GRU [2]. They can be one of the first clinical signs or develop later in the disease. In some patients they are filled with blood, in others, they rupture and adhere to the anterior lens capsule, the corneal endothelium or the iridocorneal angle.

When uncontrolled, GRU can lead to the development of cataracts, web-like strands and accumulation of opaque proteinaceous material, possibly fibrin or collagen, in the anterior chamber, adhesions between the iris and the anterior lens capsule as well as between the iris and the peripheral corneal endothelium (synechia), iris bombé, severe pigment deposition, preiridal fibrovascular membranes, glaucoma, pain and blindness in the affected eyes [PHOTO 3]. In one study, as many as 46% of dogs with GRU developed glaucoma and subsequently became blind [1]. Histopathological examination of enucleated globes that had received medical therapy showed strikingly little evidence of inflammation .

therapy

While treatments of GRU vary depending on the severity of clinical signs present, early treatment is recommended and is aimed at reducing inflammation and subsequent scarring. Early detection is best accomplished by monitoring for pigmentation of the iris or pigment on the anterior lens capsule, conjunctival hyperemia, blepharospasm or photophobia, tearing, and low intraocular pressure (IOP). Intraocular pressure measurement is a valuable method for detecting inflammation in the eye that is not yet apparent to the naked eye, however, it is important to know that IOP decreases with age and that many older patients naturally have low IOP (6-10 mmHg). It is therefore imperative to base the diagnosis of GRU not solely on IOP. Similarly, later in the disease process, serial IOP measurements can detect early trends towards glaucoma.

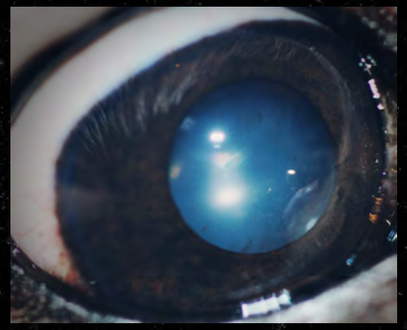
Following diagnosis, topical therapy is indicated even in the very early stages of the disease. The treatment protocols consist of at least twice daily topical applications of anti-inflammatory drugs. Eyes with few clinical signs may at first be treated with topical NSAIDs while eyes with advanced disease receive topical corticosteroids like Prednisolone or Dexamethasone. The more advanced the disease, the more intense the therapy with more frequent applications. The response to therapy is assessed by performing repeated ocular examinations and measurements of the IOP. If the disease is well controlled the patients may be monitored every 3 to 6 months. If active disease is observed it is very important to watch for any changes including the decrease or increase in IOP with greater frequency, because of the high risk of glaucoma in the more chronically affected eye. Generally the therapy includes life-long anti-inflammatory medications and eventually medications to prevent or control glaucoma if indicated. Blind eyes afflicted with painful glaucoma should be enucleated or eviscerated.

prognosis

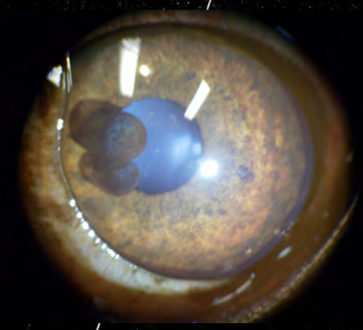
The prognosis for GRU is guarded. Many dogs are presented initially with advanced changes in one eye. With early detection, frequent monitoring, and continuous therapy, dogs with GRU can be expected to have long-term vision in the second eye. When not treated, dogs with advanced GRU invariably lose their vision because of glaucoma, a very painful complication of this disease. In one study, the average age at enucleation was 9.1 years (range 6.2 to 11.8 years). [2] It is therefore recommended to have the eyes examined regularly starting at the age of 3 years. GRU often develops in dogs after the early reproductive years and for this reason, prevention of the spread of GRU in breeding programs is difficult. Breeding affected dogs is not recommended as GRU is suspected to be inherited.

[1] Sapienza JS, Simó FJ, Prades-Sapienza, A. Golden Retriever uveitis: 75 cases (1994-1999). Veterinary Ophthalmology 2000; 3:241-246.

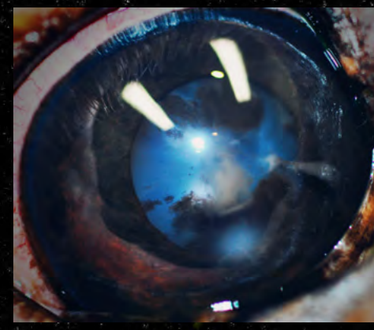
[2] Essen, D, Armour,M, Mundy, P, Schobert, CS, Dubielzig, RR. The histopathological and immunohistochemical characteristics of pigmentary and cystic glaucoma in the Golden Retriever. Veterinary Ophthalmology 2009; 6:361-368.



{PHOTO 1} Very early pigment dusting on the lens and iris hyperpigmentation. A cataract is seen ventral medially.



{PHOTO 2} Iridociliary cyst in anterior chamber.



{PHOTO 3} Advanced pigment on the anterior lens capsule and iris hyperpigmentation. A cataract is present axially. Opaque material (fibrin?) is seen in the anterior chamber.

Recent updates on Genetic Eye Diseases in Golden Retrievers:

Golden Retriever Club of America (GRCA)

It appears that some breeders have been under the impression that PU is a generally manageable disease that may not progress providing treatment is begun early, but that is clearly not the case. Pigmentary uveitis is a serious disease that usually results in significantly diminished quality of life, and because of that it ranks among the most important heritable diseases in Golden Retrievers.

Another study that GRCA members and other dedicated Golden owners have supported by providing blood samples from affected dogs was conducted by Dr Wendy Townsend, previously at Michigan State University and now at Purdue. As confirmed in the above study, there has been a long-known association between PU and iris cysts, and Dr Townsend's work also strengthened that association. The question has been raised as to whether a finding of iris cysts alone may represent a mild form of PU in some dogs. Since other breeds also get iris cysts, this would not apply to all Goldens with iris cysts, and at this time there is no way to determine in which dogs the cysts are associated with PU. Dr Townsend is continuing to investigate this, but the warning to breeders is to be very cautious about breeding a dog with iris cysts, even though he/she may have a CERF number. Goldens with iris cysts should be followed every six months by an ophthalmologist, and suspicions should be heightened if the dog is closely related to a Golden with PU.

Some very good news for the breed is that Dr Townsend is also beginning work to identify the gene responsible for PU, so that a DNA test can be developed. She continues to need blood samples and pedigrees from affected dogs and their close relatives. Although it would be a very unfortunate accidental breeding, she mostly needs samples from families in which both parents have been subsequently diagnosed with PU. While many breeders do not talk openly about this disease, the scary reality is that the breed incidence of PU now appears to be high enough that some of these accidental breedings are in fact occurring.

A number of careful and highly respected breeding programs have been hit extremely hard by pigmentary uveitis, and with an often very late age of onset, literally all lines are at risk. Anyone who thinks they are safe in this regard is simply mistaken. But while no one asks for this, many breeders are still not responding appropriately to this threat to our breed. Over recent years the Health & Genetics Committee has strongly urged that breeders continue to do eye exams and to CERF those results for the lifetime of any dog that has been bred. Yet some owners still do not submit eye examination results for CERF certification, while many dogs that were previously CERF'd simply disappear from current CERF status after a period of time. These practices leave the breed extremely vulnerable to late onset eye disease because breeders cannot make good decisions about diseases like pigmentary uveitis without access to large amounts of data that spans the dogs' lifetime. This cannot be accomplished by circulating copies of eye exams from person to person, and only public databases can provide permanent and broad access to information that current breeders need and future generations will depend on. It cannot be overemphasized that lifelong CERFing is a breeder's ethical duty, and it's time for everyone to step up and do the right thing.

Reprinted from the Golden Retriever Club of America website:
http://www.grca.org/health/uveitis.html
A BREEDER'S PERSPECTIVE ON THE DISEASE
Ann F. Hubbs DVM, PhD

PET INSURANCE REVIVAL

IMAGINE PRACTICING VETERINARY MEDICINE WITH FEW FINANCIAL CONSTRAINTS

Words by Sharron Brownlee, WCV Editor in Chief

It has long escaped me as to why veterinarians in Canada never adopted pet insurance as a viable business enhancement. I have met a few veterinarians that whole-heartedly promote pet insurance and encourage their clients to get their pets enrolled, but they are few and far between.

Having worked in the UK where between 30 and 40% of pets are insured, I have seen firsthand the freedom that insurance can provide to the practicing veterinarian. I understand that it takes a certain amount of sales confidence to be able to position pet insurance comfortably to your clients. But looking at it in a different light might remove the discomfort you feel in pitching this almost necessary service.

I don't know a single veterinarian that went to school to learn how to treat a sick pet in the cheapest way possible. I also don't know many pet owners that have deep enough pockets that money is no object when it comes to their pets. Those premium clients do exist, I agree, but they are not the norm. The average pet owner would not only benefit from pet insurance, it is becoming a must. Costs at veterinary practices are increasing, opportunities to treat without limits are diminishing and it is time for another look at ways to practice the kind of medicine you went to school to learn.

IS THERE ANYTHING WRONG WITH HAVING AN OPEN AND HONEST CONVERSATION WITH YOUR CLIENTS?

When clients come in to your practice, they expect a number of things, one of which is your solid recommendation on what to do with their newest member of the family. I firmly believe that pet insurance needs to be discussed in a premium position and not just a brochure in the puppy or kitten pack. Afterall, it's for adult pets as well.

Veterinarians can explain that at their practice, they strive to provide the best possible medicine to the family pet. It is in the best interest of the client, the pet and the veterinarian that finances don't become the barrier between the life and death decisions we are faced with daily at our veterinary practices. It should be positioned as a partnership between all three of you, the client the veterinarian and the insurance company of choice for your practice.

Have a member of your team do some work to find out which policies provide the best coverage for your practice needs. Meet with the insurance company reps if they are available to find out what programs they may have for automatically enrolling your new patients. There are many ways to position pet insurance that doesn't come off as just trying to sell something. It needs to be repositioned in your own heads first as a necessity in progressing your practice. Then the conversation with your client becomes easier to digest if you truly believe that this option could improve the way you practice medicine.

There are a number of insurance companies that you can partner with, including President's Choice and The Hudson's Bay Company, never mind the veterinary branded companies. The market is opening up for insurance companies to provide services to your clients, but unless veterinarians embrace this as a business tool, we will remain behind the times and pets may never see the true benefit of carefree medical care.

Further Information can be found at:
www.trupanion.com
www.petsecure.com
www.petcareinsurance.com
www.pcfinancial.ca
www.petinsurancehbc.com

IT IS IN THE BEST INTEREST OF THE CLIENT, THE PET AND THE VETERINARIAN THAT FINANCES DON'T BECOME THE BARRIER BETWEEN THE LIFE AND DEATH DECISIONS WE ARE FACED WITH DAILY IN THE VETERINARY PRACTICE.

PET INSURANCE COMPANIES ARE GROWING AT AN ANNUAL RATE OF APPROXIMATELY 25 PER CENT, MOSTLY BECAUSE THE DEMAND FOR ENHANCED AND MORE SOPHISTICATED CARE FOR CATS AND DOGS IS CONTINUING TO GROW DESPITE A STRUGGLING ECONOMY. PET INSURANCE IS IMPORTANT FOR BOTH PET OWNERS AND VETERINARIANS. THE FOLLOWING LISTS THE KEY BENEFITS FOR EACH GROUP.

1 MANAGING THE FINANCIAL BURDEN

The cost of routine care such as wellness exams, heartworm prevention and dental cleanings can be anticipated, but emergency care and chronic illness are next to impossible for a pet owner to predict. This is where pet insurance is of great value.

2 PROVIDES FOR THE BEST CARE POSSIBLE

When the cost of quality care exceeds the pet owner's financial means, one of the options is to incur a large amount of debt or to deplete savings. With pet insurance, the pet owner won't be faced with the impossible choice of either declining treatment or opting for a less effective therapy. In the most dire of circumstances, pet owners may even choose to euthanize their pet because they cannot afford the medical care they need. With insurance, you get to put the welfare of the animal first!

3 PROTECTS AGAINST THE INEVITABLE

The fact is that one in two pets will face a major healthcare crisis during its lifetime. These major healthcare issues always seem to come at unexpected times. Owners are especially vulnerable in a down economy and are often not prepared for the cost. Pet insurance can give pet owners the peace of mind that if the unexpected occurs, they are covered.

Author: Howard Rubin is the Chief Operating Officer and Chief Financial Officer for Trupanion Pet Insurance Inc.
Reprinted from the OVMA – Focus July/Aug 2011

DEALING WITH UPSET CLIENTS

HAVE YOU EVER HAD THAT CLASSIC EXPERIENCE OF DEALING WITH A CUSTOMER 'SERVICE' REPRESENTATIVE THAT LEFT YOU FEELING FRUSTRATED, POWERLESS AND DETERMINED NEVER TO DEAL WITH THAT COMPANY AGAIN?
I HAVE.

From the initial call I felt devalued, stupid and increasingly incensed. The ironic thing is that they were right. I had misunderstood the details of my contract. Nonetheless, I will never do business with that company again and since then I have told multiple acquaintances about my experience. Mistakes, disappointments and frustrations are a common aspect of client service. We can respond as the company above did or we can use the interaction as an opportunity to improve service and build customer loyalty. Research shows that only 20% of customer dissatisfaction is caused by employee actions, 40% by faulty products or processes and 40% by customer mistakes or incorrect expectations. According to John Goodman, co-founder of TARP Worldwide and author of Strategic Customer Service "every customer complaint represents a chance to correct a flawed process, educate a customer, and strengthen loyalty." {1}

HOW TO IMPROVE CUSTOMER LOYALTY

Words by, Lorna Wyllsun

Let me describe an interaction I observed a few years ago that demonstrates how this can be done. {2} The client, who had two Weimaraners, was complaining about the amount of his recent bill. The reception staff warned the clinician that this was a 'difficult client'.

After giving the client the opportunity to vent, the following is a synopsis of the conversation.

CLINICIAN: I'm sorry that you were inconvenienced. Could you tell me what happened?

CLIENT: I was quoted $45 for the lab test and when I received the bill it was for $90.

CLINICIAN: I would be frustrated too if I received a bill for two times the amount I was anticipating. What can we do to correct the problem?

CLIENT: I want to make sure this never happens to anyone else.

CLINICIAN: I will speak to the supervising clinician and make sure that we modify our protocol for quoting costs so that it is completely clear. Would you like me to give you a call and let you know how it is working?

CLIENT: No thanks. I trust that you will do what you say.

CLINICIAN: Okay. Again, I apologize for the confusion and thank you very much for sharing your concerns with me today. It will help us improve our service.
This encounter demonstrates the following three simple steps that you and your staff can utilize to shift those difficult clients into loyal and satisfied clients.

STEP 1: ACKNOWLEDGE THE CLIENT'S EXPERIENCE AND APOLOGIZE.

Until recently, veterinarians were counseled against apologizing; fearing it was an admission of guilt. Current research and experience is clearly demonstrating the benefits of a sincere and timely apology. Most of us have learned that it is important to speak calmly in response to client's frustrations and complaints. As an alternative, I invite you to start where the client is and respond by matching the tone and energy of their statements and then leading the pace and tone to a calmer place as they are ready. This non verbal communication indicates to the client that you 'get' where they are coming from. You are demonstrating that you are shocked and dismayed on their behalf and that they can view you as an ally.

STEP 2: ASK OPEN-ENDED QUESTIONS, LISTEN ACTIVELY AND EMPATHIZE.

An essential part of service recovery is rebuilding the relationship by taking care of the client's feelings as well as their problem. Since people cannot be upset and logical at the same time, it is critical to deal with their emotions first and then solve the problem. Try listening without interrupting, then summarize the problem using the customer's key words and empathize with their experience.

WHAT IF THE CLIENT ASKS FOR SOMETHING THAT WE CAN'T GIVE THEM? WON'T THAT MAKE THEM EVEN ANGRIER?

"I want to be sure I understand what is happening. You are concerned because you've been treating Mopsy for two weeks and she doesn't seem to be improving. Can you tell me what's been happening"

STEP 3: FIND A MUTUALLY AGREEABLE SOLUTION AND FIX THE PROBLEM QUICKLY.

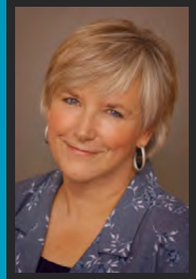
There are many sources that let us know that individuals have diverse wants, needs, expectations and values {3}. As a result, the 'one size fits all' cure for client complaints will often be unsuccessful. Understanding client expectations is vital. Clinicians are often reluctant to ask the clients for their suggestions for a variety of reasons. What if the client asks for something that we can't give them? Won't that make them even angrier? Initially it may, but it also gives you a starting place for negotiating. Reaching a mutually agreeable solution presupposes that you know what both parties want. Keep the focus on what you can do for the client and minimize reference to what you can't do.

"WHILE I CAN'T DO X, I CAN DO Y." {4}

Sometimes the resolution is not fixing the problem so much as educating the client and providing the rationale for why something was done the way it was. This is not excuse making and is only welcome after the client feels that their concerns have been heard and acknowledged.

"From what you are telling me I am sure I know how we can help Mopsy. I apologize for not explaining clearly how to give her the medication. You can squirt it in the side of her mouth with the syringe. If you like we can do it together right now."

Although this is a simple guideline, implementing it may not be easy. As non verbal communication delivers a very powerful message your thoughts need to be congruent with your actions. If you consider upset clients who complain as a resource for your practice, it will be reflected in your nonverbal behaviour. Too often dissatisfied clients just leave. Handling upset clients skillfully will enhance customer loyalty and keep them with you.



Lorna joined the Ontario Veterinary College in 1980. During part of that time she was a Nurse Manager in the Large and Small Animal Clinics. From 2001 to 2009 she was the Community Medicine Coordinator. This position included being the Instructor for the final year Primary Healthcare and Clinical Communication Skills Rotation. She was an advisor for the Pet Loss Support Hotline and the Petsafe programs. She lectured on clinical communication, conflict management and coaching strategies for the Art of Veterinary Medicine curriculum. For the AVM Communication Labs she recruited and trained Simulated Clients and Veterinary Coaches for the program. Among other things, Lorna is a Master Practitioner of Neurolinguistic Programming, a Coach and Trainer for Words that Change Minds©, a trained Mediator, a Facilitator for True Colors and Personality Dimensions. She is a Faculty in Bayer Animal Health Communication Project and a graduate of the AVMA Veterinary Leadership Experience.
She left OVC for health reasons and started Communication Works to assist highly skilled professionals enhance the specialized communication skills that contribute to successful leadership and client relations.

Other useful references:
LeBoeuf, Michael. How to Win Customers & Keep Them for Life. Berkley. 2000
Performance Research Associates. Delivering Knock Your Socks Off Service. American Management Association. 2003

{1} Goodman, John. "Manage Complaints to Enhance Loyalty." Quality Progress, February 2006
{2} Wellness Clinic at the Ontario Veterinary College utilizes one way mirrors for observing client interactions.
{3} Alessandra, Tony. The Platinum Rule. Warner Business Book. 1996
{4} Shelle Rose Charvet's The Customer is Bothering Me. E-book, 2009

5 COMMON EMERGENCIES OF EXOTIC ANIMALS

THERE ARE A VARIETY OF ILLNESSES OR CONDITIONS THAT AFFECT OUR EXOTIC SPECIES. IT IS IMPORTANT TO REALIZE IF THESE ILLNESSES ARE EMERGENCIES THAT REQUIRE IMMEDIATE STABILIZATION AND SUPPORTIVE CARE.

Words by Dr. Cindy Chow, DVM

FIVE COMMON PRESENTATIONS ARE:

GASTROINTESTINAL STASIS IN RABBITS
EGG BINDING IN BIRDS
BROKEN BLOOD FEATHER(S)
INSULINOMA IN FERRETS
URINARY OBSTRUCTION IN FERRETS

1 GASTROINTESTINAL STASIS IN RABBITS

GI stasis is common in rabbits. The typical presentation is anorexia, decreased stool production, dehydration, and ingesta-filled large stomach. GI stasis may be caused by many factors such as low fibre foods, stress, decreased exercise, or secondary to oral malocclusion. The change in the gastric motility results in absorption of fluid from the stomach as well as the rest of the intestinal tract. This prevents the dehydrated mass within the stomach from passing. A good history and physical examination is key in helping diagnose GI stasis. Radiographs that show gas distension of the intestinal loops as well as a large gas-filled or ingesta filled stomach highly support the diagnosis.

Since hepatic lipidosis can develop quickly if these rabbits are maintained at a negative energy balance, immediate medical treatment is recommended. This includes hospitalization, rehydration, and stimulation of gastric motility. Rabbits have a higher daily fluid requirement (100mL/kg/day) when compared to other mammals. Subcutaneous route of administration is preferred over oral hydration in most cases. If rabbits have developed hepatic lipidosis or are ketotic, an intravenous or intraosseous catheter should be placed for fluid administration. Force feeding fluids as well as high fibre foods can help in stimulating gastrointestinal motility. There are commercial diets for this purpose (Critical Care for herbivores, Oxbow Pet Products, Murdock, NE). Force feeding will help ensure that they receive enough fluids and return them to a positive energy balance. Administration of medications such as metoclopramide (0.5mg/kg SC/PO q12hr) or cisapride (0.5mg/kg PO) has been used to stimulate gastrointestinal motility. More recently, trimebutine, a GI motility enhancer, has been used with good success. However, this drug has limited availability. In most cases, these medications are not started immediately; but, if rabbits do not typically start eating within 24-48 hours, motility stimulants may be warranted. Increasing activity may also help in stimulating GI motility. Analgesia is also important in managing GI stasis. In most of these cases, there is a degree of discomfort due to the gas distension in the stomach as well as the intestinal tract. Providing pain relief may encourage the rabbits to eat. Analgesics such as butorphanol (0.4mg/kg SC q4hr) or even buprenorphine (0.01-0.05mg/kg SC q8hr) if very painful have been used with success. Along with medical management, there is a need to address the underlying cause of the GI stasis to prevent future episodes. Rabbits are strict herbivores and their digestive tracts are adapted for high fibre diets. Intestinal motility is stimulated by the presence of indigestible fibre. Hay is a very important component of the diet. Grass hays such as Timothy hay are recommended over alfalfa based hays. Hay should be available at all times. Pelleted diets can be offered, however, most experts recommend limiting the amount of pellets fed on a daily basis. Ideally, rabbits should be allowed outdoors for exercise as well as to graze on fresh grass. Offering a variety of fresh greens is also recommended. Chewing on hay and grasses also help with preventing dental malocclusions.

2 DYSTOCIA IN BIRDS

Egg binding or dystocia is the most common reproductive condition in birds. Possible causes of dystocia include hypocalcemia, large or misshapened eggs, soft shelled eggs, muscle (uterine or vaginal) dysfunction, age of the hen, infection, excessive egg production, and obesity. Dystocic birds present with coelomic distention, are fluffed in appearance, lethargic, inappetant or anorexic, and may be straining to pass droppings, have watery droppings, or have large droppings infrequently. A good physical examination and radiographs can support the diagnosis of dystocia.
Egg extraction is rarely indicated immediately; rather stabilization and supportive care for the first 12-24 hours is preferred, unless obstructed and unable to pass feces or there is a prolapse. Stabilization includes fluid therapy, calcium supplementation, nutritional support, warmth, humidity and oxygen. Analgesics may also be considered. Subcutaneous fluids are appropriate for most birds unless they are >10% dehydrated or extremely debilitated. In severely compromised birds, IV/IO fluids are needed. The recommend daily fluid maintenance for adult species is 100mL/kg/day. Intramuscular injections of calcium should be initiated which can be repeated and then followed by oral calcium. Nutritional support is indicated if the bird is inappetant or anorexic. There are commercially available diets that can be crop fed to "weakened" birds. It is recommended to feed 10mL/100g when the crop is empty. Providing environmental support will also help in the success of the case. Increasing the temperature, providing the appropriate humidity, and providing oxygen will help in reducing the overall stress for the bird.

Once stable, removal of the egg should be considered. This can either be done by helping the bird expel it herself or by manual removal. Lubrication of the cloaca following calcium supplementation may help with expulsion of the egg. Medications such as prostaglandin E2 (0.1mL/100g) can be applied directly to the cloaca on the dorsal aspect to relax the uterovaginal sphincter. PGE2 may stimulate expulsion of the egg as quickly as within 15 minutes. Oxytocin is inferior to PGE2 as it does not relax the uterovaginal sphincter and requires calcium to be effective. Ovocentesis or aspiration of the egg content is required if the egg does not expel on its own. The egg must be visible in the caudal 1/3 of the oviduct for ovocentesis to be performed safely. The area is surgically cleaned. An 18G needle with a 3cc or 6cc syringe attached is used. The egg is physically held ventrally and caudally to prevent compression of the kidneys. As the contents are removed, the egg will implode. The remnants may expel without interference after several hours or can be gently helped by using forceps. Leuprolide acetate (0.375mg/100g IM) can be given to effectively delay egg laying for 3-4 weeks and help prevent further episodes of egg binding. Ensuring that the birds are on a calcium-rich diet may also help in preventing dystocia.

3 BROKEN BLOOD FEATHERS

Broken blood feathers in birds can also present as an emergency. Broken blood feathers can occur in every species of birds; however, it is most commonly seen in cockatiels. Cockatiels have episodes of "night fright" in which they will thrash in the cage and cause damage to blood feathers. These blood feathers are more vulnerable than the other "mature" feathers. Trauma can cause these new feathers to break anywhere along the shaft of the feather, resulting in bleeding. Forceps or hemostats can be used to remove the remnants of the affected feather to avoid further bleeding. An analgesic can be given prior to the removal of the feather.
Supportive care is vital for blood loss. In cases where there is minimal blood loss, replacement via subcutaneous fluids is appropriate. However, where there is significant blood loss (hypovolemic shock), 7.2% - 7.5% hypertonic saline (3ml/kg IV/IO, slow bolus over 10 minutes) can be used, followed by Hetastarch (3ml/kg IV/IO over 10 minutes) to maintain oncotic support. In cases where there is continued blood loss and/or the PCV drops below 12%, a whole blood transfusion is indicated. Whole blood can be administered at 10-12mL/kg IV/IO by slow infusion. In cases of massive hemorrhage, administer the blood transfusion more rapidly, within minutes. Similar to cats and dogs, administration of the blood transfusion should be within 4 hours of collection to prevent bacterial growth. Donors can be homologous or heterologous species; although it has been shown that the lifespan of RBC's is greater in transfusions between homologous species (up to twice the lifespan). After the transfusion, maintenance fluids (100mL/kg/day) are initiated to replace ongoing losses until the bird is eating and drinking on its own.

4 INSULINOMA IN FERRETS

Pancreatic islet cell tumours are common in middle to older-aged ferrets. The most common islet cell tumours are beta cell tumours (insulinoma). These produce excessive amounts of insulin which results in hypoglycemia. Clinical signs of hypoglycemia correspond to the severity and rapidity of the decline in blood glucose and are categorized into either neurological or adrenergic signs or a combination of the two. When the cells in the nervous system are deprived of glucose, mental dullness, lethargy, ataxia, seizures and coma can result. Adrenergic signs occur when rapid decline in blood glucose causes a release in cathecholamines that in turn produces an increase in sympathetic tone. The result is tachycardia, hypothermia, tremors, and muscle fasciculations.
The history varies from an acute onset to a chronic manifestation of clinical signs. Most emergency cases consist of an acute hypoglycemic episode in which the ferret has collapsed, was depressed/minimally responsive and recumbent. The owner may have also noticed the ferret pawing at the mouth or drooling. Based on the history, clinical signs,

and physical examination, a presumptive diagnosis of insulinoma can be made. Obtaining a blood glucose can help support the diagnosis. For a definitive diagnosis, a blood sample to measure blood glucose and insulin levels is needed. A high insulin level with low blood glucose confirms the diagnosis of insulinoma.

Mild hypoglycemic episodes can usually be managed by the owner. Oral sugar solutions (taro syrup, corn syrup, or honey) can be given by a syringe. Once the hypoglycemic episode passes, a high quality, high protein, low carbohydrate kitten or ferret food can be offered. In moderate or severe cases or where oral sugar solutions are not effective, hospitalization and stabilization is required. Intravenous access is obtained and a slow bolus of dextrose 50% (0.25-2mL) is given until a clinical response is seen. The bolus given should always be slow, as too rapid an injection can cause an increase in the insulin levels resulting in worsening of the hypoglycemia and clinical signs. Therefore, the goal is to correct the clinical signs, not the hypoglycemia. Once more alert, enteral feeding can be started. In cases where there has been seizuring or the ferret remains moribund, a constant rate infusion of 5% dextrose is warranted.

Once the ferret is stable, medical management or surgical therapy can be discussed. Medical management involves corticosteroid therapy. Corticosteroids will help control the clinical signs but does not stop the progression of the tumour. Prednisolone and diazoxide can be used separately or in combination. Prednisolone increases blood glucose by inhibiting glucose uptake by peripheral tissues and increasing hepatic gluconeogenesis. Ferrets with mild to moderate signs can usually be managed by prednisolone (1-2mg/kg q12h PO) alone. The prednisolone dose can be increased as needed. If the clinical signs cannot be controlled with prednisolone alone, diazoxide (5-10mg/kg q12h PO) can be added. Diazoxide inhibits insulin release from the pancreas, promotes glycogenolysis and gluconeogenesis by the liver, and decreases cellular uptake of glucose. When diazoxide is added to the protocol, prednisolone can be decreased. Surgical therapy is the treatment of choice for younger ferrets. This is not curative but may help in slowing or stopping the progression of the insulinoma. Nodulectomy or partial pancreatectomy or both can be performed with rare complications to the pancreas. Blood glucose levels should be monitored closely for several hours post operatively. In some cases, a transient hyperglycemia may be noted. This typically resolves after several weeks. Follow up blood glucose and insulin levels should be performed every 3 months.

5

URINARY OBSTRUCTION AS A SEQUELAE TO ADRENAL DISEASE

A common presenting problem in male ferrets is stranguria or dysuria. This is typically a result of prostatomegaly with secondary partial or complete urethral obstruction. The prostatomegaly is due to increased androgens produced with adrenal disease. Squamous metaplasia occurs and multiple, thick-walled cysts develop. As a result, narrowing of the urethra occurs. This narrowing can make passing a urinary catheter very difficult. A 3.5Fr red rubber feeding tube or a 3.0Fr ferret urinary catheter can be used. Once passed, the catheter is secured in place by placing butterfly tape strips around the catheter just as it enters the urethra and sutured to the skin. Radiographs and a urinalysis should be performed to rule out other underlying disease processes (other than adrenal disease - rare).

On physical examination, other signs of adrenal disease such as pruritis, symmetrical hair loss, and possibly enlarged adrenals may be apparent. The owner may also notice an increase in sex drive of the ferret. Diagnostics to help confirm adrenal disease include measurement of sex hormone levels (estradiol, androstenedione, and 17-hydroxyprogesterone) and ultrasonography. This hormone panel is available through the University of Tennessee. An abdominal ultrasound is useful for detecting enlarged adrenal glands. The size or extent of enlargement, the side affected, as well as the architecture can be determined.

Treatment modalities include medical management or surgical therapy. Medical management involves GnRH analogs such as leuprolide acetate (Lupron). Lupron decreases gonadotropin release and down regulates the receptors. In most cases, the use of leuprolide acetate is chosen as the primary course of treatment for adrenal disease. Other medications such as androgen receptor blockers can also be used. These medications also help in reversing the signs of adrenal disease but do not inhibit the growth of the gland itself. Use of androgen receptor blockers may be cost prohibitive. Surgical intervention is the recommended treatment for adrenal disease, especially in cases where prostatomegaly occur. In most cases, removal of the diseased adrenal mass and draining the prostatic cysts resolves the urinary blockage within 1-2 days. If only one adrenal gland is diseased, the affected is removed. However, if both adrenal glands are affected, then removal of one and partial removal of the other are performed. Bilateral removal of the adrenal glands is rarely done. Post surgery, replacement therapy is seldom indicated.

Listed are the most common emergency presentations that I have come across in recent years. It is important to recognize these as emergencies and to act quickly to stabilize and provide supportive care. Once stable, the patient can be reassessed, diagnostics can be performed, and treatment can be initiated.

Dr. Cindy Chow completed her DVM degree at the Ontario Veterinary College in 2005, and her exotics internship at the Western College of Veterinary Medicine in 2009. She currently works as a locum veterinarian throughout Vancouver.

READY FOR A WILD RIDE?

WALK INTO WILDLIFE RESCUE'S CARE CENTRE ON BURNABY LAKE, AND YOU WILL BE ASTOUNDED BY THE VARIATION IN TASKS OCCURRING AT ANY GIVEN TIME. ANESTHESIA FOR MINOR SURGICAL PROCEDURES OR ADMISSION EXAMINATIONS ON ANIMALS FROM ACROSS THE LOWER MAINLAND (SOMETIMES 30-50 IN ONE DAY).

Words by: **Lani Sheldon, BSc.**
Team Leader of Wildlife Rehabilitation
Wildlife Rescue Association of BC
www.wildliferescue.ca

Wildlife Rescue Association (WRA) provides leadership in rehabilitating wildlife and in promoting the welfare of wild animals in an urban environment. With the aid of ten full-time staff, a consulting veterinarian and 200 volunteers, WRA admits an annual average of 3,000 patients representing over 140 species of birds and mammals from B.C. We also teach people how to co-exist with wildlife, and have become one of the primary response groups for wildlife impacted by oil spills and pollution damage.

WRA's Care Centre has transitioned from a single building (now the Burnaby Lake Nature House) in 1979, to a comprehensive facility encompassing examination and isolation suites, two indoor warm water hospital pools and extensive outdoor pre-release conditioning cages designed for a variety of species including migratory songbirds, waterfowl, mammals and birds of prey. Fall 2011 will host a landmark moment for WRA with the installation of a digital radiology suite, enhancing WRA's on-site diagnostic capabilities.

Working with wildlife is eternally challenging. Wildlife rehabilitators and their veterinarians have to be cognizant of emerging diseases and work closely with regulatory and monitoring agencies (e.g. Environment Canada, Canadian Wildlife Service, Ministry of Environment, Department of Fisheries and Oceans, BC Centre for Disease Control) to keep abreast of the latest research and ensure care protocols that support both patient welfare and personnel & public safety. For example, the emergence and ongoing monitoring of West Nile Virus (WNV) in BC has promoted our development of a WNV protocol for WRA encompassing standards for personnel safety, admission screening, euthanasia and reporting in collaboration with the BCCDC. White Nose Syndrome, Avian Influenza, rodenticide, lead and pesticide poisoning, and oiled wildlife incidents are just some of the current issues that wildlife rehabilitation facilities such as WRA must be proactively aware of.

Consulting veterinarians provide a crucial role in the clinical management of wild patients admitted to wildlife rehabilitation facilities. WRA's experienced consulting veterinarian has provided invaluable expertise and oversight for our wild patients for over 20 years; and having worked directly within the context of the wildlife rehabilitation environment has been able to develop a program tailored to the needs, challenges and realities of working with wildlife. Certain injuries and diseases, which may be treatable in domestic animals, are not feasible in a wildlife rehabilitation setting where the animal must be fully functioning to be returned to the wild. However, the field of wildlife medicine is continually expanding which provides an unprecedented level of potential for learning about and working with the unique physiologies of species, which are often only seen from afar. From a Brown Pelican with frostbite, to the Common Nighthawk with a fractured coracoid, or a Douglas Squirrel suffering from neurological issues after being struck by a vehicle, the patients admitted to wildlife rehabilitation facilities provide an avenue for provision of professional care as well as opportunities for the advancement of knowledge that can ultimately benefit conservation efforts.

With the ongoing enhancement of on-site veterinary equipment and facilities, WRA will be looking for additional veterinary expertise to expand our existing program. For those interested in becoming involved in regular on-site consulting, preferably with experience in wildlife medicine, contact WRA's Executive Director, Dr. Glenn Boyle, at glenn@wildliferescue.ca.

Go to www.wildliferescue.ca to learn about the many rescue and rehabilitaiton stories on British Columbia's wildlife

CVMA-SOCIETY OF BC VETERINARIANS CHAPTER EVENTS

Top quality veterinary continuing education, close to home....
For full program and registration information on these great CE programs visit the website at www.canadianveterinarians.net/sbcv.aspx

CVMA-SOCIETY OF BC VETERINARIANS CHAPTER FALL CONFERENCE

NOVEMBER 19-20, 2011

Join your colleagues at the first CVMA-SBCV Fall Conference. Our goal is to offer top quality continuing education, close to home and we have put together an excellent program for you including a practice management seminar, a full day of scientific sessions and a Table Top Tradeshow.

You can't afford to miss featured speaker John Tait, DVM, MBA Top 10 Practice Management Mistakes and How to Correct Them. Your practice manager is also welcome to register for this ½ day session.

Location: Sheraton Vancouver Guildford Hotel, Surrey, BC
Early Bird Registration until October 28. All veterinarians welcome.
Contact: cvma-sbcv@cvma-acmv.org or visit the website for the full conference program and registration form.

CVMA-SBCV Chapter Annual General Meeting will be held as part of the conference. Please join us on Saturday, November 19 to hear about plans for 2012 and provide your feedback to the Directors and Committees.

CVMA-SBCV MID-WINTER SKI AND CE AT SILVERSTAR

JANUARY 20 – 22, 2012

We are heading back to Silverstar Mountain in Vernon for a great weekend of skiing, socializing and top quality continuing education. The speaker program for this popular meeting will be announced shortly, but in the meantime, be sure to book the weekend for you and your family to enjoy all that Silverstar has to offer.

For early information on reserving thru the conference room block contact:
cvma-sbcv@cvma-acmv.org

40TH ANNUAL DELTA EQUINE SEMINAR

OCTOBER 31- NOVEMBER 1, 2011

This must attend event for equine practitioners in the Pacific Northwest always provides something new and useful to take home and put into practice.

Speakers :
Dr. Debra Sellon, WSU Equine Infectious Diseases
Dr. Joanne Hardy, Texas A&M Equine Emergency and Critical Care
Location: Delta Town & Country Inn, Delta, BC
Contact: Dr. John Twidale email: horsedoctor@telus.net

OTHER UPCOMING EVENTS...

5 STAR DOG TRAINING and THOMPSON RIVERS' UNIVERSITY ARE PLEASED TO PRESENT:

DR. SOPHIA YIN MARCH 30, 31, APRIL 1, 2012 KAMLOOPS, B.C

Ever since she was a child, Sophia wanted to be a Veterinarian, and in 1993 her dream came true. But once out in private practice, she quickly realized that more pets were euthanized due to behaviour problems than medical ones. She went back to school to study animal behaviour, and earned her Masters in Animal Science in 2001 from UC Davis where she studied vocal communications in dogs and worked on behaviour modification in horses, giraffes, ostriches and chickens. During this time she was also the award- winning pet columnist for the San Francisco Chronicle. Upon receiving her degree focused on animal behaviour. Dr. Yin served for 5 years as a lecturer at the UC Davis Animal Science Department. Through these and an eclectic collection of other animal behaviour experiences, she came to realize the true secret to successful behaviour modification.
For more information contact: 5 STAR DOG TRAINING, www.fivestardogs.ca; **Or visit us on Facebook:** http://www.facebook.com/5stardogs or THOMPSON RIVERS' UNIVERSITY, AHTA OF B.C., **Email Pat at:** patray@shaw.ca or ahtabc@gmail.com
Dr. Yin's website: http://drsophiayin.com

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Prescribe PREVICOX today and see the results for yourself.

"Our 9-year old Rottweiler, Missy, suffers from arthritis caused by partial tears in her ligaments. She used to cry every time she moved, and could barely get out of her doggie door. Now that she's on PREVICOX, the difference is night and day. She's gone from senior citizen to a puppy."

Missy's Owner, Elgin, QC

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[1,2] Data on file at Merial Canada.

www.merial.ca