



The Webinar Gazette

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JANUARY 2020

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What's your resolution for the new year? As we enter the second decade of the second millennium, it feels like an appropriate time to reflect on what has been, and what is yet to come. The Webinar Vet has gone from strength to strength since its inception ten years ago, pioneering a new way to do CPD that is more affordable, more convenient, and generally just more pleasurable. Our membership base grows daily, and we continue to be the preeminent provider of veterinary online learning.

Now, in just a few short weeks, we will be unveiling our flagship event, Virtual Congress 2020. Bringing together many of the world's best speakers in one place, covering a wide spectrum of topics, there is no better way to get your professional development started for the year ahead. Plus, we have three special guest speakers for you: Ben Fogle, Kenton Cool, and Rob Pope. Ten years ago, online CPD for veterinary professionals was barely

existent. When we began, our main concern was simply navigating the technological challenges to bring you the best quality presentations. But time moves on, and we don't intent to stand still. We're innovating, trying new things, new ways to keep you interested and providing you with something more than a few simple lectures. So that's our New Year's resolution; to keep evolving, bringing you the best quality CPD, and the highest value for your money.



VIRTUAL CONGRESS 2020

If you haven't got your ticket to Virtual Congress yet, you are rapidly running out of time to do so. [Just click here to buy your ticket now](#), and start your 2020 CPD calendar the right way.



A new decade has dawned and our own virtual congress, VC2020 is less than a month away. 20:20 is also about vision and clarity. How can we make 2020 a super year for us? Certainly goal setting is a big part of this and I'm very excited to have Jenny Guyat from Vet Harmony presenting a webinar for us. [This is a free webinar taking place on 7th January](#) 2020 at 8pm and is free to attend thanks to Jenny's generosity.

Jenny will be holding a course in January which you may want to consider so she can mentor you and help you reach your goals (more information to follow). One of my goals is to raise the profile of rabies amongst the profession in 2020. To do this we will be holding a symposium in English, Spanish and Portuguese as part of VC2020 which takes place over the weekend 31st January-1st February. I know we do not have rabies in the UK but there is a high incidence of rabies in other parts of the world with tragic consequences. Over 50,000 people die every year from this terrible disease, many of them children. It was great to see our CVO talk about more intervention from our government to help developing countries. Whether this will survive as our government turns more inward is a more moot point.

Sarah Cleaveland and Sergio Recuenco are two of the world's top experts on rabies and they will be presenting very much from a OneHealth perspective. Please, please share this with friends and colleagues in the veterinary and medical field. It is so important that we as vets and doctors and nurses understand this disease and can contribute intelligently and keep it high on political agendas.

I really would greatly appreciate



To your 20:20 Vision & Clarity
Anthony

your help in this! Please spread the news. This symposium is free thanks to the very kind sponsorship of MSD Animal Health who are doing amazing work in this area by donating one rabies vaccine to developing nations for everyone they sell. Over 3 million doses have already been donated! To register, please click here:

<https://www.thewebinarvet.com/pages/register-now-virtual-congress-2020-rabies-event/>

As well as the rabies symposium, we have a brilliant programme of webinars including some motivational keynotes from Kenton Cool, Ben Fogle and Rob Pope. VC2020 is also part of our anniversary celebrations. We are ten years old this year and we have made it even more special. I got the idea for Webinar Vet after attending a Mark Anastasi internet conference and meeting my good friend, Steven Essa, who was and is an expert on webinars and with whom I co-authored the book, Webinar Revolution!

Our first webinar was held on March 3rd 2010. It was all about pruritus. It's a bit dated but [here is the link if you want a nose](#). Nobody knew what a webinar was 10 years ago. They do now! It's one of the top ways vets and nurses learn.

We will be celebrating throughout 2020 and I'd love to receive videos of how webinars have changed your life over the last 10 years. Feel free to whatsapp me at 07493173273 with your videos.

As we end the Christmas season on 6th January with the feast of the Epiphany, I pray that our leaders around the world will be people of integrity and wisdom and we end up in a better world at the end of 2020.



HOT NEWS

Stories you may have missed this month:

Pet costs revealed

American families spent around \$75 billion on pets in 2019, when factoring in basic care such as food and vet bills, as well as toys, treats, grooming, sitters, walkers and training. There are also the “unforeseen” expenses, such as when your dog chews up your new shoes or your cat claws your expensive furniture. The average pet owner spends \$1,100 to \$2,000 within the first year of owning a new pet. The numbers may not be entirely surprising to vets, but there is concern that this figure comes as a shock to new pet owners who haven’t thought through – or simply weren’t aware of – the financial implications of acquiring a companion animal. There is, as they say, a distinction between stupidity and ignorance. Many new pet owners are simply very uninformed about the cost of owning an animal. Cost of pet maintenance is cited as the fourth most common reason for giving up a pet, and arguably the only one that people could have easily had foresight of. With Christmas having just passed, now is a notorious time of year for people surrendering pets that were given as ill-considered gifts. Perhaps it is necessary for more high profile public information campaigns warning people exactly how expensive some pets are to keep, and to not get a cat or dog if you can’t (or won’t) pay the bills.

No more monkey business?

Question: Which of these exotic animals are you legally allowed to own as a pet in the UK?

- Capybaras
- Bengal cats
- Kinkajous (might need to Google that one)
- Primates including squirrel monkeys, lemurs, marmosets, tamarins and capuchins.

If you said, ‘trick question, you can keep all of them’, then you get a gold star. It is indeed legal to keep any of these animals as pets. But should it be? Back in October, the British Government announced an inquiry into the ethics of keeping primates as pets, and whether it should be banned outright.

The Born Free foundation estimates about 5,000 primates are being kept as pets, and the RSPCA receives on average one call a week about captive monkeys. Last year 2,213 primates were imported into the UK to be kept as pets. How many more were bred domestically is unknown. It is legal to sell small monkeys in pet shops, and there is no data on how many do so across the country. The basic fact, though, is that the number of pet monkeys is a lot higher than many people think. Many of these monkeys are sold at very young ages, kept in unsuitable conditions, and owners are often uninformed about their welfare needs, which causes unnecessary suffering. It is common for pet monkeys to suffer from metabolic bone disease due to malnutrition.

The government announced its plans to compile a report on the topic, and requested feedback from experts. Many people have backed the plan, but Dr Ben Garrod, a primatologist who is presenting two new science-based shows for the BBC, has a dissenting opinion. While he agrees that keeping small monkeys as pets is unethical, he is concerned by the practical ramifications, the unforeseen consequences. Speaking on the issue, he said:

“We think there are 4,500 privately owned primates in the UK. Even if we banned it tomorrow, what do you do with these 4,500 animals that can live decades?”

His point is valid, because housing that many monkeys will not be an easy task. There are not enough zoos and animal sanctuaries to home them, so what happens to the monkeys

then? Well, the answer is that either they will be euthanised, or have to be sold to pet owners overseas, making the whole exercise pointless. Perhaps even more worryingly, it is still common to use small primates in animal medical testing, which is where many of these monkeys may end up instead, a very serious case of out of the frying pan and into the fire. The ownership of pet monkeys needs to be dealt with, but it seems that an outright ban may be the wrong way to go.

Emotional support bees.

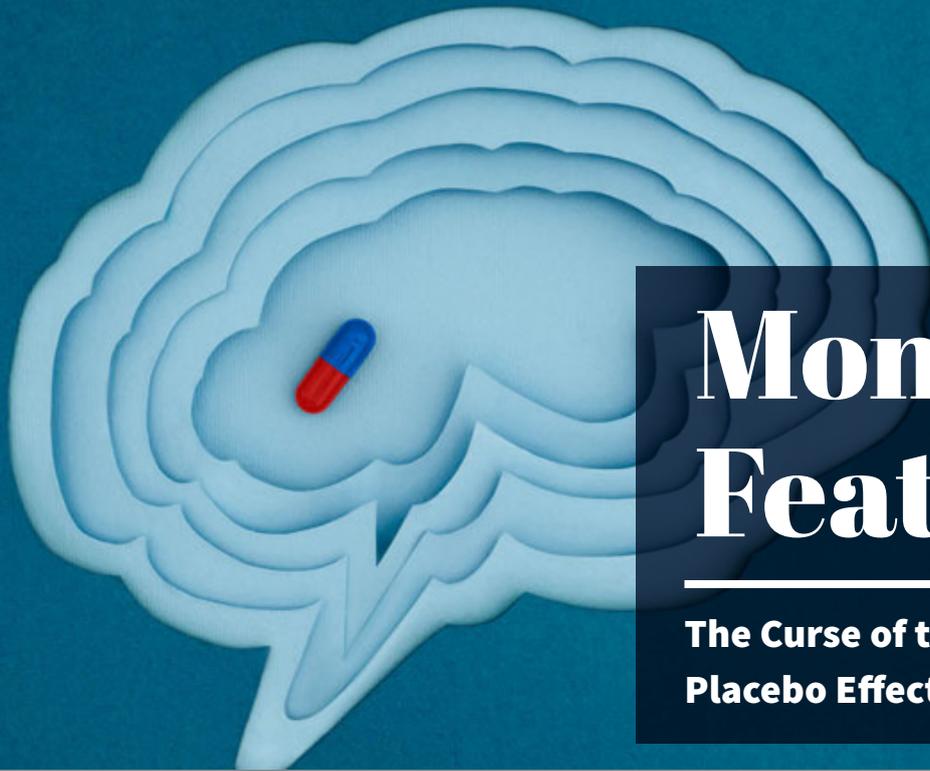
Last month, we wrote about the ease with which people can abuse systems put in place to register emotional support animals. You can [read about that here](#), but the gist of it is that lax regulations are allowing people to register any animal as an official “emotional support animal”, which means they can take their pets into places that would normally ban anything except service animals such as guide dogs. Recently, a man in Arizona decided to make a point of this by registering a swarm of bees as his emotional support animals.

David Keller was irritated after seeing somebody with a service dog that was visibly untrained. “I could very easily tell that it was not a service animal because it was pulling the owner to the parking lot,”

he said. “I was thinking that it’s just too easy to get these animals to be service animals.” He pulled the stunt with the intention of proving that the official verification cards are so easy to attain that they are essentially worthless. This is not an irrelevant issue; there has been a rising number of cases of animals being brought into places they are not comfortable in, most notably the passenger deck of commercial aircraft, under the guise of being service animals. Airlines have seen a huge surge in the number of animals brought onto planes, and then panicking and causing a ruckus. In October, a passenger with two French bulldogs in pink tutus was made to disembark a plane in Gatwick airport after the dogs became agitated. This made the plane over an hour late. Worse still, some so-called service animals have actually bitten people. This seems to be a symptom of the growing trend to anthropomorphise our pets, which isn’t inherently harmful, but some people seemingly don’t know where to draw the line. Perhaps, if they can’t be trusted to behave with common sense, there needs to be stricter rules about how pets become registered as emotional support animals.



I recently started a boat building company in my attic, and it’s going really well. Sails have gone through the roof.



Monthly Feature

The Curse of the Placebo Effect

The placebo effect is a curious one. By all standards of medical science, it shouldn't work. We are sick, we take a pill which we are told will cure us, and we get better. But then the twist – there was no actual medicine in that pill! Somehow, you were cured without doing anything except believing that you are being treated.

It sounds like something that belongs in the realm of quackery and discredited folk remedies, but numerous studies have shown that the placebo effect really does work. The most logical reason is that the belief in the treatment tricks the body into feeling better, and the ailment is then healed through natural progression. A more controversial suggestion is that focusing the mind on curing a certain illness actually can directly help recovery. But either way, one thing that must be the case is the awareness of the treatment is crucial to the efficacy.

So, surely, the placebo effect would never work in veterinary medicine. If animals don't know they're being treated, they can't think they're feeling better. Can they?

Well, the answer is less clear than you may expect. Not much research has been done into the placebo effect on animals, but the studies which have been conducted have produced surprising results. For example, animals receiving insulin injections will continue to experience blood-sugar changes for some time if they are instead injected with saline solution. It's a fascinating circumstance that is probably caused by classical conditioning – the body responds to the injection and changes the blood sugar levels even though it was a placebo.

More bizarrely, the placebo effect has been observed in medical trials – dogs on placebo drugs for epilepsy have been shown to have reduced seizures. This cannot be due to classical conditioning. So how can this be the case? How does the placebo effect work on animals?

Well, the most likely answer is that it's not – it's working on us. Yes, the placebo effect may also work by proxy, when the symptoms are reported through owners. In the epilepsy study, many owners said their dogs were getting better, but the gait analysis suggested this wasn't happening. The placebo effect is often a form of denial – human asthma sufferers routinely report feeling better with placebo inhalers, yet there is no measurable improvement in lung function. If a person can convince themselves that they feel better, it is completely plausible that they might believe a separate entity is getting better, when they're not. Pet owners can be so desperate to believe their beloved animal is getting better that they retreat into self-delusion. Many vets have seen owners who blithely dismiss the obvious signs that their pet is in serious pain, not through callousness, but through a mental block that stops them from being upset by their pet's illness.

Of course, vets and nurses are human too, and not above this unconscious bias. When you really want to believe an animal is getting better, it can be easy to convince yourself they are. When you do that, you are unknowingly experiencing the placebo effect by proxy. This is why it's crucial to always use scientific parameters, and not fall back on your own willingness to believe your own brain, because your brain may be deceiving you.

NEWS FROM OUR COMMUNITY

Some of our diligent members at Wear Referrals, Stockton-on-Tees, made the news this week after saving the life of a six-year-old West Highland white terrier/schnauzer crossbreed left critically ill after eating rat poison.

The “wauzer”, called Lola, had eaten an entire block of poison, which caused her temperature to plummet and left her breathless and lifeless. With Lola’s life hanging in the balance, investigations revealed she required a blood transfusion and needed to have half a litre of blood drained from her lungs.

The planned treatment was complicated by Lola’s weak heart rate and her owner had been warned of the chance her pet wouldn’t survive the procedure. But survive she did – thanks to internal medicine clinician Chiara Giannasi, who embarked on a rare life-saving technique.

Lola received oxygen and a plasma transfusion at the same time. Dr Giannasi said: “Lola was in shock and dangerously close to dying; her chest was full of blood, meaning her lungs could not expand and take in air.

“We drained the blood from her chest and then used an emergency technique to quickly filter it through and back into her circulation to help keep her alive.”

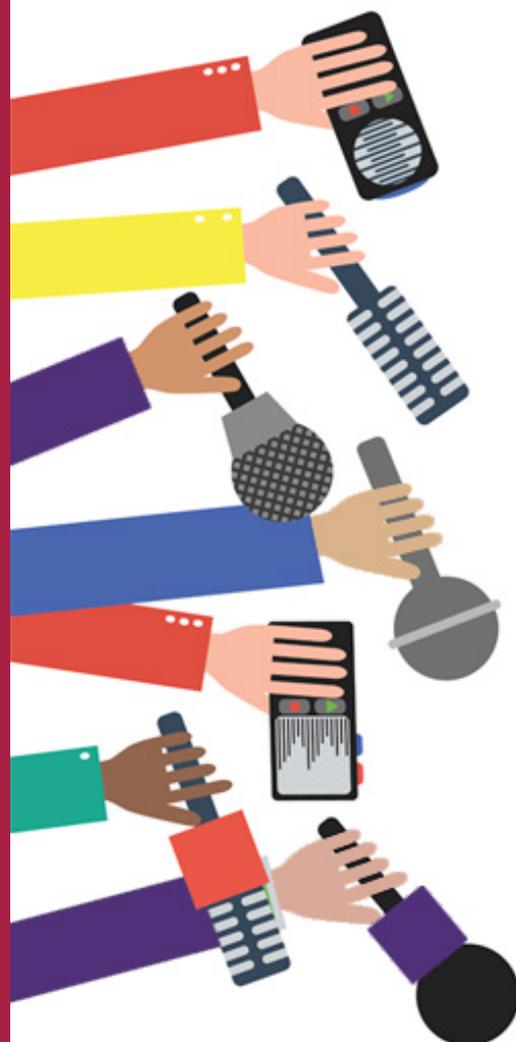
He added: “We also gave her vitamin K and a plasma transfusion to prevent her losing any more blood. It was touch and go at the time, but thankfully Lola has made a fantastic recovery and is bouncing around as normal.”



CPD'er of the month

Congratulations to Helen Lee, who is our CPDer of the Month for January!

Our top CPDer this month is Helen Lee from Walton Lodge Vets, who did a remarkable 54 hours of webinars in December! Well done to Helen, who wins our coveted CPDer certificate and a £100 bonus. If you’d like to steal Helen’s crown, start watching more webinars and you may be getting a sweet £100 deposited in your bank account. Just what the doctor ordered after the costly festive period.



A brief history of inhaled medication delivery

The first known reference to therapeutic aerosol delivery dates back to 1554 BC when patients struggling to breathe inhaled the vapour from heated black henbane (*Hyocyamus niger*) plants. The therapeutic inhalation of vapours produced by heating organic material has been continuously documented throughout the ages, but it is only within the last two hundred and fifty years that attention was turned to the delivery mechanism itself.



In 1778 English doctor John Mudge developed an inhaler device for generating and delivering steam-based aerosols. It consisted of a pewter tankard with an adapter that could be coupled to a 5- or 6-inch-long flexible tube through which the patient inhaled (fig 1)

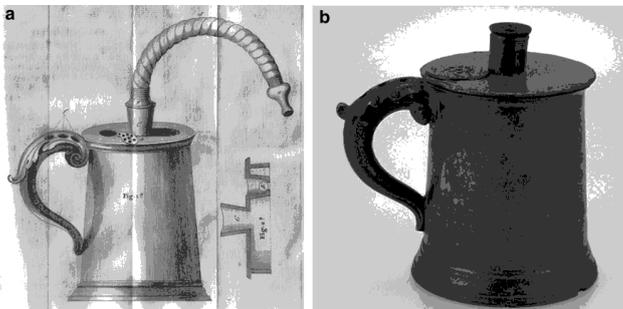


Fig 1. Drawing (a) and photograph (b) of the Mudge inhaler.

Atomisers and nebulisers were developed in the mid 1800s in France. Initially these were simple devices which sprayed a high-pressure jet of liquid at an impact plate to produce a fine spray. An early version, the pulverisateur, developed by Jean Sales-Girons in 1858 is depicted in figure 2.



Fig 2. The Sales-Girons "pulverisateur"

German doctor Bergson developed an air jet nebuliser by applying a principle first described by Daniel Bernoulli in 1738 and later utilised by Giovanni Battista Venturi. This device used a high-velocity air flow generated by a rubber squeeze bulb over a tube of liquid to atomize a medicated solution. The dawn of the industrial revolution in the early 20th century led to further refinement of this concept producing "portable" glass nebulisers and later compressed gas nebulisers.

A major breakthrough came in 1950 with the Wright nebuliser. New plastic moulding techniques allowed for improved precision of the venturi orifice producing much finer sprays which allowed for delivery of medication into the deeper small airways. Until relatively recently jet nebulisation was still the standard method of delivering aerosolised medications to the respiratory tract.

Nebulisers can utilise a much greater variety of medications but have been traditionally shunned in the domestic environment and primarily reserved for use in the hospital setting. Both jet (Fig 3.) and ultrasonic nebulisers are noisy, inefficient and difficult to clean between treatments or patients.



Fig 3. A human jet nebuliser

An alternative to the early nebulisation systems was invented in 1852 in Boston by Ira Warren MD (Fig 4). The dry powder inhaler (DPI) was invented in an effort to make inhalation therapy more practical. In his patent, Warren states that the powder inhaler is designed for the purpose of inhaling medicine into the throat and lungs and, at the same time, to prevent any of the said medicine from lodging in the mouth.

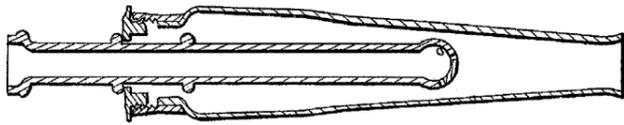


Fig 4. A drawing of the first DPI invented by Ira Warren in 1852.

The first widely available commercial DPI was the Aerohalor DPI (Fig 5.) from Abbott Laboratories in 1949. The device contained a mouthpiece or nasal adapter depending on the desired route of delivery. The device was a breakthrough in terms of commercial viability of a DPI device in spite of the fact that it was relatively inefficient in terms of dispersing the powder into a respirable aerosol.

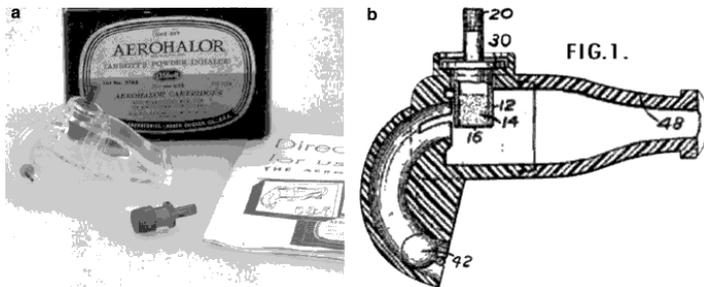


Fig 5. A picture and schematic drawing of the Abbott Aerohalor.

It wasn't until 1955 that American doctor George Maisson developed the pressurised metered dose inhaler (MDI) to help treat his daughter Susie with asthma. This was then commercially marketed in 1956 by Riker Laboratories Inc. The MDI was the first inhaler device that achieved effective lung delivery in a truly convenient and portable device and rapidly became the primary delivery system for treatment of asthma.

One of the primary limitations of the MDI is the challenge that some patients have coordinating their actuation of the device with inhalation. In a paper published by Freedman in 1956 (Freedman T., 1956) he indicated that the primary cause of poor response with an MDI was the failure of physicians to stress to the patient the importance of synchronization of inspiration with the administration of the dose. This resulted in a significant portion of the delivered aerosol deposited in the mouth and throat of the patient. Franklin et al. in 1958 (Franklin et al., 1958) demonstrated that this undesirable early deposition could be significantly reduced by using add-on spacers.

Spacers have some clear clinical advantages. Their use reduces the oropharyngeal deposition and local side-effects of inhaled corticosteroids. Spacers have been associated with improved clinical response, although this may be dependent on patients' preexisting level

of coordination. While spacers are likely to be of value in patients with poor inhalation technique, they are considered essential in infants and very young children, who inhale aerosol in tidal breaths (National Asthma Council Australia: Asthma Management Handbook 2006. Melbourne, 2006). Domestic animals also inhale aerosolised medication in tidal breaths.

Their ease of use, portability, practicality and demonstrable increase in efficacy led to rapid widespread adoption of spacing chambers. Early spacing chambers were quite rudimentary but refinements such as low resistance one-way valves and anti-static chamber coatings have led to the high efficiency valved holding chambers (VHCs) that are commonplace now.

In the early 1990s, aerosol delivery to infants and young children received increasing attention. The first infant VHC, a modified standard VHC with attached facemask, was patented in 1986 by Trudell (*Aerochamber*® with mask (Fig 6.), Trudell Medical, London, Ontario, Canada).



Fig 6. The Aerochamber® Plus from Trudell Medical International.

The VHC was equipped with a modified paediatric tracheostomy facemask; the most important feature of the adaptation was considered to be the presence of a seal attached to the mask to assure a tight fit between the mask and the infant's face. A good seal, which is easier to achieve with a calm child, is vital for effective drug delivery via a facemask. Coaching caregivers about the importance of a seal is likely to be of value, while facemasks that have flexible rim geometry and require minimal pressure should minimize distress and leakage. The effectiveness of the seal leading to increased compliance can be recognised through such a device as the *Flow-Vu*® indicator (Fig 7.) developed by Trudell Medical International. The device also had a lower dead space, and very low resistance valve, compared with the other available adult VHCs.



Fig 7. Flow-Vu indicator

In a 1993 study by O'Callaghan *et al.*, the observed reduction in sodium cromoglycate delivery following an inhalation delay was attenuated by use of a device that had been pre-treated to reduce static charge. An internal efficacy comparison (personal communication, data on file) by Trudell Medical International, Canada, showed a marked difference in total emitted medication between an antistatic chamber and a conventional non-antistatic chamber. With the antistatic chamber five seconds after MDI actuation over 60% of the medication was still available in the chamber ready for inhalation compared with <5% for the non-coated chamber. This distinction is important for domestic animals who may exhibit anxiety induced breath holding when the medication is delivered into the VHC.

As previously mentioned, the ease of use, portability, practicality have led to rapid widespread adoption of spacing chambers. However, the therapeutic value of spacing chambers is limited to treating inflammatory airway disease and acute bronchospasm as currently only corticosteroids and bronchodilators are available in an MDI formulation.

In summary metered dose inhalers (MDIs) provide a practical way of delivering corticosteroids and bronchodilators directly into the respiratory tract. The use of a high efficiency valved holding chamber (VHC) with an anti-static coating plus optimum mask fit overcomes many of the challenges with infants and non-compliant patients who inhale their medication through tidal breaths.

Nebulisation, whilst not necessarily providing a better outcome for uncomplicated cases of inflammatory airway disease (Dolovich, MB et al., 2005), allows for a much greater range of medications to be delivered to the respiratory tract. Additionally, the use of commercially available liquid formulations of drugs such as corticosteroids, has tremendous cost benefits compared to MDI preparations when used to treat larger mammals such as equids.

More recently vibrating mesh technology (VMT) has revolutionised the use of nebulisation leading to much greater acceptance. A piezo electric membrane vibrates at over 80kHz which draws the solution through thousands of small nozzles contained in the mesh. Vibrating mesh nebulisers tend to have the advantages of faster dosing times, less formulation retained in residual volumes of the system, and smaller device size than air jet or ultrasonic nebulizers. As they are essentially silent in use, they have gained widespread adoption in veterinary medicine with such devices as the *Flexineb*® equine and companion animal nebulisers (Fig 8). Unlike VHCs (valved holding chambers) nebulisers do not need a tight seal between the face mask and the patient and so may be of use in scenarios where the mask contact is poorly tolerated by the patient.

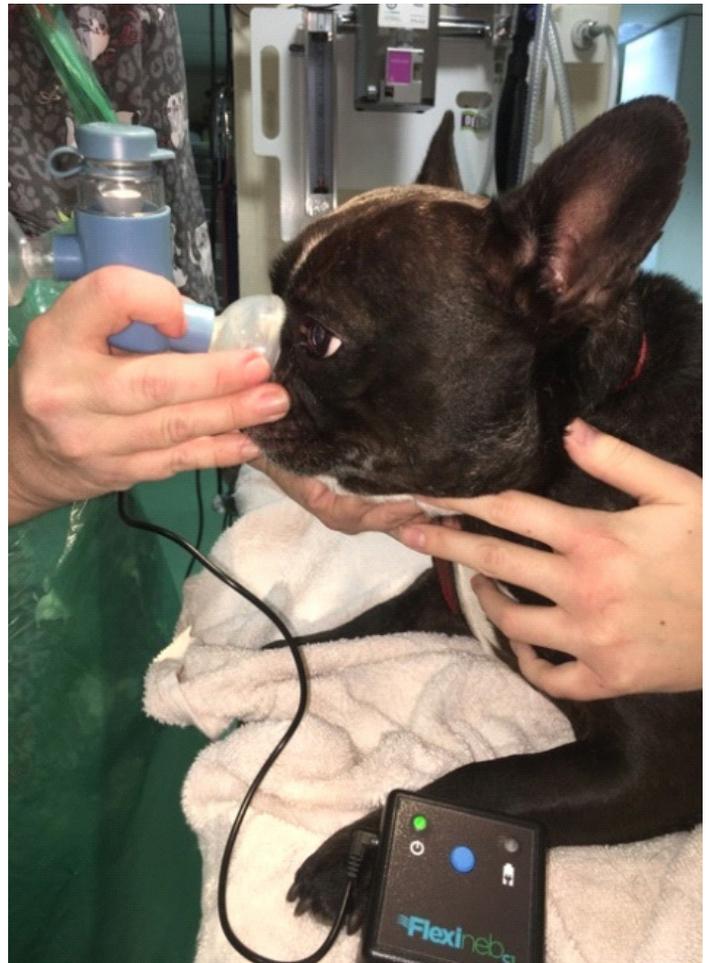


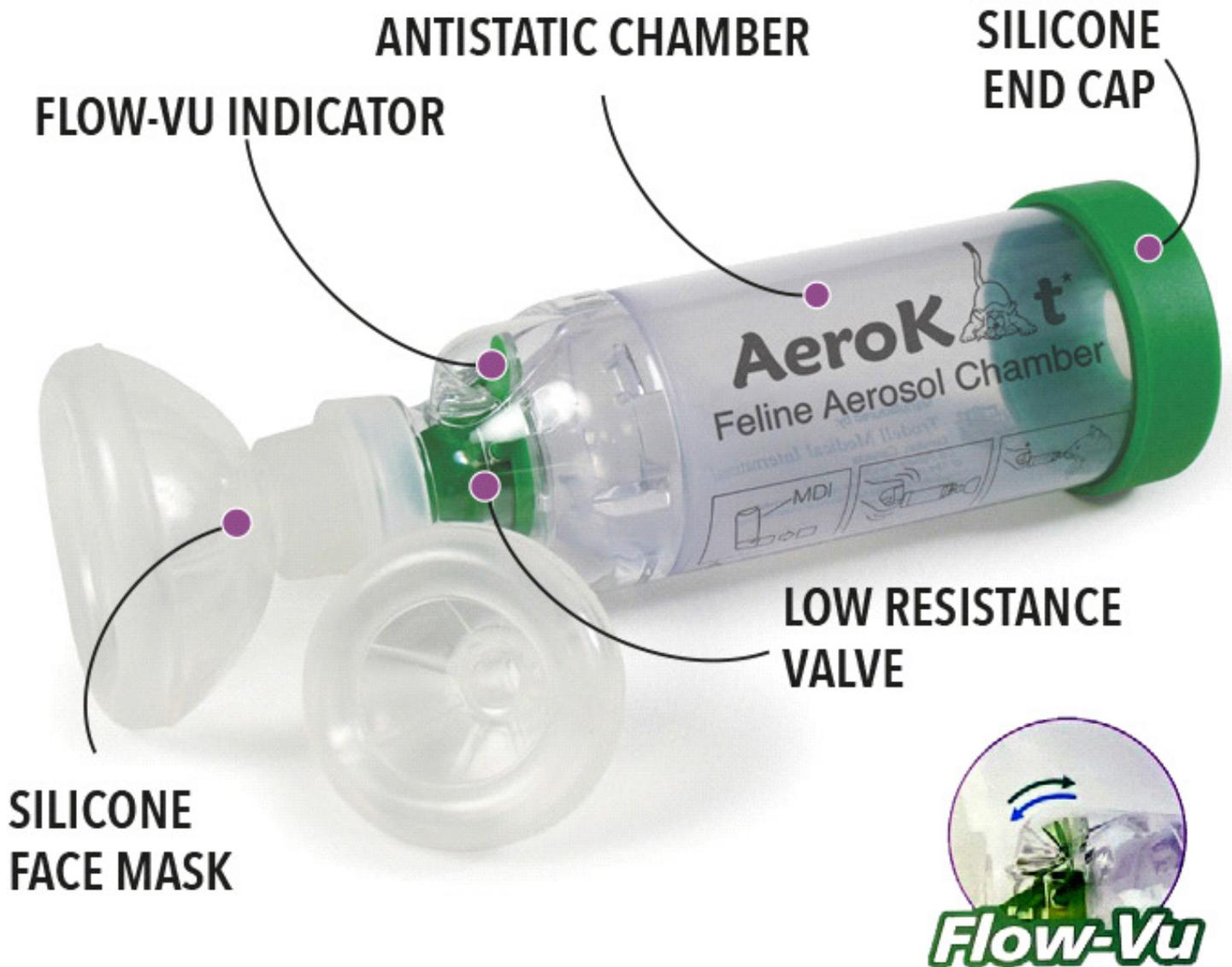
Fig 8. The Flexineb C1 companion animal nebuliser

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Speaker of the month

Lizz Jones

As our Speaker of the Month, all of Lizz Jones' webinars are half price this month. Click here to shop now:

<https://www.thewebinarvet.com/shop/product-category/speaker-of-the-month-january-2020/>



Tell us a bit about yourself.

I am a Consultant and Coach, and I help businesses and organisations to improve performance simply by looking at the way they engage with their people. I specialise in leadership and management behaviours; organisation culture and values; and I am involved in a lot of coaching. I mainly work with Universities, and I spend most of my time with teams within Faculties; Schools and Departments helping them to find better ways of working together. I run workshops; training events and seminars as well as more traditional one to one coaching sessions. I have been running my own business for nearly 20 years, and I absolutely love what I do. I am passionate about understanding what makes people tick, and how I can help them to get the best for themselves and for the people they work alongside.

I think of myself as being on the "right" side of 50 – in fairness, I've never had any hang-ups about my age! I have two grown-up children: my son is currently doing his Masters in Music, and my daughter is having a gap year before she embarks on her own University pursuits. My partner and I spend as many weekends as we can away in our touring caravan, which has helped us to explore so many different parts of the UK. We particularly love walking in the hills, so the Lake District and North Wales are popular destinations for us.

What's your favourite holiday destination?

Anywhere in the caravan! We also love doing European City Breaks, and recent trips have included Paris, Berlin and Rome.

What's your favourite thing to do a weekend?

If we are not away in the caravan, I like to use our time to make sure we catch up with friends and family, or take a weekend trip somewhere new. I must admit that my days of late nights and partying have reduced somewhat, so staying in with a nice meal, decent bottle of wine and a good film is becoming more and more attractive these days!

What area do you specialise in? (think I've covered this above)

Why did you choose this career path?

Running my own business has given me the luxury of being in control of my own development and direction. I am in the fortunate position of being able to make a living doing what I am passionate about, and where I feel my skills are put to best use. I like a sense of challenge, and always creating something new, so my developing career has shaped the business over the years.

What do you enjoy most about your job?

I genuinely believe that what I do helps people to flourish, both as an individual and as a member of a wider team. Having a sense of purpose in my job helps to keep me grounded and adds a sense of responsibility to what I am doing. For me the reward comes when I get feedback from people about the impact it has had for them. It's lovely keeping in touch with clients and developing strong bonds and relationships with them. I don't think I could ever do a job that didn't involve working with other people. I also love public speaking, and speak regularly at conferences and events.

What are some everyday challenges you face in your profession?

I do get frustrated with paperwork and the more administrative aspects of running a business. I am also not a "natural" salesperson, so it is a challenge for me to do some of the business generating activities like networking or chasing new business

If you weren't doing this career, what do you think you would be doing instead?

When I was a child, I always wanted to be either an actor or a stunt-double (I've always been a bit of a daredevil!). I love public speaking, so I guess that some of this comes from my unfulfilled desire to be an actor! In truth, I honestly cannot think of anything I would rather be doing right now, and I don't see myself retiring any time soon!

Are you on social media and happy for people to connect with you? If so, what are your contact details?

Absolutely – people can find me on LinkedIn and I'm always happy to connect there.



The Stethoscope

Having spent several weeks watching the classic 1990's series 'ER' with my husband, we feel we both know all there is to know about human CPR. The words 'start chest compressions', 'IV adrenaline push' and 'bag him' seem very familiar terms. But can we translate what happens in the human field over to veterinary medicine and has advice on how to effectively perform CPR changed over the years. Obviously deciphering the most up to date CPR policy based on 'ER' is not to be recommended. We have however learnt from the medical profession that formulating evidence based CPR guidelines is the best way to maximise your chances of a successful outcome. The RECOVER guidelines have been spearheaded by a team of veterinary emergency and critical care specialists and are the first evidence based veterinary CPR guidelines to be compiled. It is these guidelines along with some recent updates to human CPR which Professor Derek Flaherty BVMS, DVA, DipECVIM, MRCA, FHEA, FRCVS discussed within last weeks webinar offering a practical insight into how the whole veterinary team can respond effectively to a patient in cardiopulmonary arrest.

When to commence CPR seems like a sensible place to start with Professor Flaherty discussing how to assess a patient for cardiopulmonary arrest (CPA). Non responsiveness, apnoea, the absence of heart sounds and the absence of a palpable pulse are all signs consistent with a CPA. However it has been shown in the human field that even with experienced clinicians less than 2% can detect a pulse within 10 seconds. It has also been shown that in around 35 % of patients clinicians will think there is a pulse when in fact there isn't one. For this reason, Professor Flaherty advises, if a patient is unresponsive and apnoeic, chest compressions should be started straight away (this has shown only to have deleterious effects in 2% of people). Another assumption which could be drawn from watching one too many

medical dramas is that the presence of fixed dilated pupils means the continuation of CPR is pointless. It has however been shown in monkeys that pupils can remain dilated for several hours post return of circulation indicating full resuscitation attempts should continue despite the presence of fixed dilated pupils.

Basic life support (BLS) should always be instigated when a CPA is suspected by implementing the A-B-C (airway, breathing, circulation) sequence. The order of this has however now changed to C-A-B in the human field as intubation in humans can be more challenging than animals and chest compressions will also result in compression of the lungs. It must also be remembered that CPA in humans usually results from cardiovascular disease which will be addressed to a certain degree with chest compressions. Cardiovascular disease is not a common cause of CPA in animals who are also usually much simpler to intubate compared to humans. For this reason Professor Flaherty advises still prioritising the establishment of a patent airway in animals alongside initiating chest compressions. The patient should be given 100% oxygen if possible at a rate of 10 breaths per minute regardless of its size. The position of chest compressions however will vary according to the size of the animal with hands being placed directly over the heart for patients less than 15kgs and compressions being performed at the widest part of the chest in animals larger than 15kgs (unless they are narrow chested animals such as sight hounds). Most animals are fine in left or right lateral recumbancy but barrel chested animals are really better being given sternal compressions in dorsal recumbancy. Compressions should be delivered at a rate of 120 compressions per minute whilst aiming to compress the chest by 30-50% allowing full recoil between each compression. This can be very tiring and compressors should be changed every two minutes.

Professor Flaherty went on to discuss the initiation of

advanced life support (ALS) after implementing basic life support. This comes in the form of drugs for treating arrhythmias as well as electrical defibrillation. The presence of a specific arrhythmia needs to be assessed using an ECG and Professor Flaherty gave examples which included ventricular asystolie, pulseless electrical activity (PEA), pulseless ventricular tachycardia and ventricular fibrillation. PEA and asystolie are the most common arrhythmias in animals with ventricular fibrillation being the most common arrhythmia in people which has, unfortunately for the animal, but fortunately for the human, the best prognosis. Defibrillation is the treatment of choice for ventricular fibrillation and is why defibrillators are commonly used in humans and rarely useful in animals.

The use of drugs and fluid therapy was also integral to Professor Flaherty's discussion. Intravenous fluid's have been shown to be detrimental in euvoalaemic animals as it has been shown to worsen the neurological outcome by increasing cerebral oedema and also decreases the blood pressure to the myocardium. For this reason intravenous fluid's should only be given in cases of confirmed hypovolaemia. Due to its ability to maintain vasoconstriction and maximise blood flow to the brain and heart, Epinephrine is obviously a drug high on the list for use in patients with CPA. It is however very short acting and should be given very 3-5 minutes with

Professor Flaherty suggesting administering epinephrine at every second compressor change. Doses for epinephrine were discussed in greater detail within the webinar. Atropine is another drug commonly used but Professor Flaherty stated that it has now been removed from the human guidelines for use in asystolie. However Professor Flaherty explained its use in animals is unlikely to be detrimental and may be of use in bradycardic animals prior to arrest and in bradycardic animals after the return of electrical activity. The use of vasopressin and sodium bicarbonate were also discussed within this webinar.

Professor Flaherty went on to discuss how we measure successful outcomes in CPR and how to maintain these patients once they have been resuscitated. The changes in human guidelines discussed by Professor Flaherty such as the avoidance of hyperoxaemia and the process of active cooling to reduce tissue oxygen demand make for fascinating listening and will hopefully transfer over to the veterinary sectors once more evidence becomes available. It is hoped that the RECOVER guidelines which were formulated in 2012 will be updated in 2020 and will make for yet another invaluable resource. This webinar also makes for an invaluable resource and it really is a watch I would highly recommend. It was even worth the sacrifice of an hour away from the talented Mr Clooney in 'ER'. [Watch this webinar now](#)

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Pippa Talks



Pippa Elliott BVMS MRCVS

Pippa Elliott graduated from the University of Glasgow back in 1987 and appreciates the vital role of CPD, as a compliment to practical skills developed over the years. Pippa works in companion animal practice in Hertfordshire, along with pursuing OV export inspection work and freelance veterinary copywriting. Pippa's motto is "If you want something done, ask a busy person."



Confused about CBD? You're Not Alone

How confident do you feel about holding an informed discussion with a client about CBD products?

A Guilty Secret

I find CBD oil is one of those topics, like raw feeding or coconut oil that clients only admit to using when asked a direct question. It's like their guilty secret, as if they don't want to 'confess' because they assume their vet will disapprove.

Thinking of CBD specifically, this response is interesting on a number of levels. To me it hints that that clients aren't happy with their pet's therapy, they feel the animal could do better, and don't lose sleep over a lack of scientific evidence of efficacy.

A Double Irony

Of course, as vets we need evidence, and need positive proof of benefit before recommending a product. But therein lays a double irony for CBD because firstly we need to know if it actually does any good, and secondly not all CBD oil products are the same in terms of 'efficacy'. So even if we get proof of benefits, we still need a proven veterinary product with a guaranteed composition in order to recommend it.

A Thought-Provoking Experience

Until a few months ago, I thought of CBD oil much like coconut oil or turmeric, as a fad. But now I'm inclined to be more cautious. My concern is it has the potential to do harm, rather than a placebo.

The case involved a Belgian Shepherd dog with seizures due to an intra-cranial cyst. This dog has intermittent seizures that were moderately well-controlled with phenobarbitone. At a routine meds check, when reviewing the dosage, I found

the owner had reduced the dose. However, the seizures had lessened. Only when directly asked if they were giving any supplements, the owner revealed they had added CBD oil to the dog's therapy.

We decided to check serum phenobarb levels. Guess what? Despite the reduced dose the levels had shot up to almost toxic proportions. OK, there is no direct proof this was down to CBD oil, but it was the only change. Could it be that somehow CBD oil reduced the phenobarb breakdown or somehow potentiated its effect?

Obviously, this could be a huge oversimplification and there could be other explanations, but it's a thought. If CBD oil does work, might it not also cause harm?

I needed to know more.

The Search for Evidence

Let's turn to RCVS Knowledge. A quick search for 'Hemp' turns up an article about intestinal parasites in UK tortoises. That's it. Search "CBD", "Cannibidiols" etc. and nothing. OK, this isn't a surprise because of the lack of veterinary scientific papers.

So what evidence is there?

Search PubMed and there's a return of 330 papers...but all in the human field. Do the same search adding on "Canine" and there are just six

papers.

Most promising is the [Cornell CBD Study](#) which looks at pharmacokinetics, and suggests a dose of 2mg/kg bid for dogs may be beneficial for arthritic pain in dogs. Indeed, Colorado State University are recruiting for canine patients for a study looking at the [Efficacy for CBD for Treatment of Epilepsy in Dogs](#). To quote Dr. Stephanie McGrath, a neurologist on the study: "Overall, what we found seems very promising". But as yet none of this is a great help when discussing CBD, cannibidiols, or hemp oil with clients.

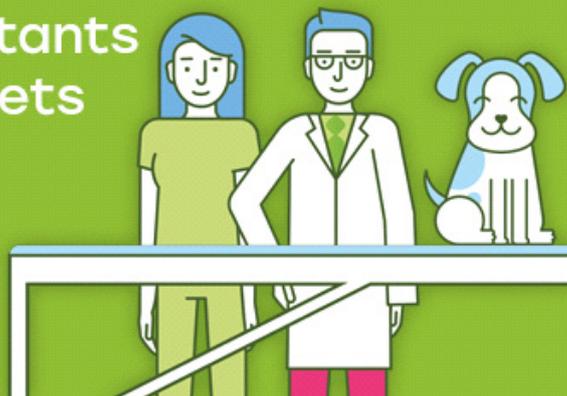
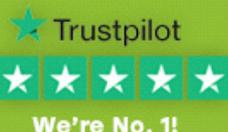
The Marijuana Minefield

To make matters even more complicated, there's the question of where the CBD originated from.

Bear in mind the CBD can be derived from marijuana (illegal) or hemp (legal) based products. So even when we have the evidence, vets need to be very careful about exactly which product they recommend.

So if you're anything like me and don't feel well-enough informed when holding those CBD conversations with clients then Joseph Wakshlag's webinar on "[Hemp extracts in veterinary medicine: What do we know and where is all this going?](#)" (January 28th 2020) is timely indeed! See you there.

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FIND OUT MORE

Rabies elimination what will it take?

Director, International Veterinary Health

Global Animal Welfare Lead

Merck Animal Health

It's difficult to know just how many people die from rabies every year. Numbers such as 60,000 or 70,000 are often quoted. But we know this is an underestimation. We know a significant number of those affected don't make it out of their villages, never see a hospital, are never counted. We know that this disease impacts the poorest people in the world, and that a high proportion of those are children. A disease that is as horrifying and cruel as any. What makes this even more frustrating is that we know how to stop it. The answer is, in many ways, remarkably simple. Vaccinate dogs. That's all it takes. Just to vaccinate dogs.

Of course, "vaccinate dogs" is not quite as simple as it sounds. How do you establish how many dogs there are to vaccinate? How do you encourage people to get their dogs vaccinated? Are you best establishing vaccination centres so people can bring their dogs to you, or going door to door to find the dogs? And so on. There are a lot of questions.

There are tools to make this simpler. Over the last five years organisations such as the CDC (Center for Disease Control) have done an amazing job building modelling programmes so that governments and NGOs can see how best to utilize the resources that they have. But even with these, it is necessary to spend time and effort in order to understand how to use the tools.

What is needed then to make this work? It rests on a true One Health approach, teamwork, partnership, and education.

I personally think education is the most important. By educating people, and especially school children, not only on rabies but also how to live harmoniously with dogs, we make a change that will last. That's why we have invested in school-based programs in Haiti and Africa. I firmly believe that children change the behavior of adults, at least I know my



own daughter manages to change my behavior and understanding of the world. And projects in Africa have previously shown that giving schools a chance to teach proper husbandry of chickens leads to improved husbandry at home. We can replicate those successes to improve the human:dog interface, leading to less bites, less fear, and more positive interactions.



Partnership is also essential. Every year, with the World Rabies Day Awards, we try to recognize some of the people who make a real difference, and I see just how limited their resources are. I am always amazed when I read through the nominations to see just how much these heroes sacrifice for something they believe in, in order to save both human and animal lives. By working together, with the goal to eliminate dog mediated rabies by 2030, then we can make the most of the resources we do have. Partnership, and teamwork, will lead to greater efficiencies in our control of this disease.

There is a strong and committed global community that is determined to make rabies a disease of the past. It's not going to be easy, only two diseases have been eradicated from the world (small pox and rinderpest), but it is achievable. Together we will eliminate rabies.

What do you do?

Ahhh, that lovely question we get faced with when we meet new people. January is supposed to be a month of trying to remain cheerful and maintain a happy face in a depressingly long month. Yet when we do meet new people, rather like the script of 'Blind Date' we go through these 'standard info' questions when meeting someone new. I'll share some of my top tips to avoid the inevitable...

'What's your name?' – perfectly fine to give a false name...

'Where do you come from?' – tough one sometimes as this could mean 'where do you live?' Or 'where were you born?' So a little more complex, but still one word answers are socially acceptable.

'What do you do?' and here we go.

Society expects

Ah the joy that question conjures in all of us in the veterinary industry. Because while there are the standard 'getting to know you questions' there are also the standard replies...

If I reply truthfully and say 'I'm a vet nurse' then the options for responses tend to be equal between:

Option 1

'Oh, I wanted to be a vet growing up but...'

OR the more quizzical

Option 2

'Sooo, you're training to be a vet?'

I've got my set bland smile response

for Option 1 as over the years I've had to sit through such reasons for not becoming a vet as:

- Because I got 100% in my biology GCSE but got marked down 5% for bad handwriting so I stopped sitting exams
- I wouldn't want to put animals to sleep
- I couldn't do the 7 years training – that's longer than a doctor – isn't it – Isn't it??

I take the opportunity to relate what they know about being a vet to highlight the role of the vet nurse and sometimes it works, but sometimes they are really stuck on the 7 years thing... so you need to know when to pick your battles to educate new people about the vet nurse role.

For Option 2 I have my Ted Talk 'a short description of the vet nurse role'. Yet I'm also in the quandary of not being in a clinic full time so when the inevitable 'where do you work' question comes up I'd then have to explain locum work too and that is sometimes an explanation of my life too far, too soon, when meeting new people.

Niceties

There is a level of small talk and niceties that exist at social gatherings and it seems to me that I need to engage but do I need to be honest about my job role all the time? Sometimes there are better ways to promote how wonderful and clever we are as vet nurses than answering standard questions. Yet there is still the hurdle of 'what do you do?' to get over...



Jane's Blog

Alternative ways to meet social niceties

Sometimes the standard Q&A just doesn't cut it with a slightly hidden role like ours. It may be useful to align your role to something more well known – human nursing, physio, and anaesthesia all work for clinical roles and for people like me in diversified roles then you can be as creative as you please!

Sometimes I am introduced by others as a writer, or a lecturer and then I add in vet nurse as some relevant info – sometimes I just go with being a creative type – but you can define yourself however you want to and this January you don't need to stick to the Blind Date script if it doesn't suit you! Tell everyone what you do on your own terms!



JHP Recruitment Job Board

Deputy Clinical Director – Lancashire – Ref 10575

<https://www.jhprecruitment-veterinary.com/job/deputy-clinical-director-lancashire-ref-10575-2/>

My clients are currently looking for an experienced Veterinary Surgeon to join their friendly, enthusiastic team as a Deputy Clinical Director.

They pride themselves on excellent patient care and welfare, along with amazing and supportive staff. The well-equipped facilities include an in-house lab, digital x-ray, endoscopy, ultrasonography, hydrotherapy, chemotherapy and visiting MRI scanner.

It is essential that you are a confident clinician with a willingness to continue to promote to a high standard of clinical work and client/patient care. You would enjoy empowering and working with your team. Management experience is not essential as they can provide full management and HR support but any management experience would be an advantage.

Working a 4 day week, 1 night a week on-call 1 and a half weekend in 5. Car and accommodation can be provided.

Mixed Veterinary Surgeon – Aberdeenshire – Ref 12544

<https://www.jhprecruitment-veterinary.com/job/mixed-veterinary-surgeon-aberdeenshire-ref-12544/>

My clients are currently looking for an experienced Mixed Vet Surgeon for a well-established three-branch practice in Aberdeenshire. You'll join a team of 11 full time vets, one part time vet and experienced support staff. The full time post is 50:50 small animal to large animal.

Rota consists of Monday to Friday 8am until 5:30. 1 in 4 weekends. 3 weekdays off over an 8 week period. Minimal weeknight on-call. There is a structured rota, which is shared equally.

The position offers sufficient time off to enjoy the abundance of countryside and coastline.

You'll receive a generous CPD allowance of £1200 per annum, 5 days paid CPD leave, generous annual leave entitlement, pension, wellbeing benefits and access to their vet development programmes.

Small Animal Vet – Northumberland – Ref 12535

<https://www.jhprecruitment-veterinary.com/job/small-animal-vet-northumberland-ref-12535/>

My clients are currently looking for a Small Animal Vet to join their busy, mixed practice in Northumberland. Purpose built main hospital, staffed 24 hours. Supportive team of vets and nurses with all usual equipment.

4 day week with OOH duties. Individual development supported. CPD is encouraged and funded. They offer a competitive salary, exclusive company discounts, reward schemes and career development.

Senior Veterinary Surgeon – Derbyshire – Ref 11902

<https://www.jhprecruitment-veterinary.com/job/senior-veterinary-surgeon-derbyshire-ref-11902/>

My clients currently have an exciting opportunity for an Experienced/ Senior Small Animal Vet to join their team. You will need to be confident with all first opinion routine surgeries and consultations as well as being able to work sole charge. They are a close knit team that all support each other! They believe in case continuity and seeing cases through, so they ensure that you have time in your day to follow up!

The role:

- Full and Part time applications considered
- Days and shifts can be flexible
- No OOH'S
- They very occasionally have in-patient checks.

My clients offer an attractive bonus package including:

- Generous salary
- Generous £1,200 CPD allowance (pro rata)
- CPD is actively encouraged - including Certificates
- Birthday leave
- Various discounts including retail & gym memberships
- Discounted Veterinary fees
- Cycle to work scheme

Clinical Director – Norfolk – Ref 13178

<https://www.jhprecruitment-veterinary.com/job/clinical-director-norfolk-ref-13178/>

My clients are currently looking for an additional Clinical Director. The ideal candidate will be a confident small animal clinician who is passionate about first opinion veterinary medicine with good communication skills and a drive to move the practice forward.

As Clinical Director, you will be responsible for the management of the clinic & team. You will also be responsible for any clinical issues on a day to day basis, helping train new graduates and offering clinical support whenever needed. You will have a real input into the practices running and future!

As one of the top employers in the UK, they offer candidates an excellent package with the opportunity to enjoy a superb work/life balance.

In return my clients can offer you:

- Health care scheme
- Pension scheme
- Free flu jabs
- £1500 CPD allowance
- Extra days holiday for your birthday
- Bonus scheme
- Cycle to work scheme
- Discount veterinary fees



WEBINAR

WEBINAR: 0.5MM IS ALL YOU GET!

ICAL TREATMENT OF CORNEAL ULCERS

RON OFRI

KORET SCHOOL OF VETERINARY MEDICINE

HEBREW UNIVERSITY OF JERUSALEM ISRAEL

David's Review

It is considered essential to treat secondary uveitis and the means to do this is well described. Remember to place an Elizabethan collar and consider corneal support with a soft bandaging contact lens.

What if the ulcer is not healing? Another quote from Prof Maggs: -

If an ulcer does not heal in 10 days don't change treatment change your diagnosis

Further investigation would be warranted in the above scenario and we are introduced to bacterial culture and sensitivity and mycological investigations. To facilitate these investigations there are descriptions of deep corneal scrapings and superficial swabbing.

This is a brilliantly illustrated webinar and is highly recommended

This is another veterinary ophthalmological webinar from highly regarded world expert Ron Ofri, with its complementary one on surgical therapy to follow. Ron begins with information on the normal cornea and its response to injury-oedema, pigmentation, dystrophy and scarring (as part of the healing process). Throughout, the webinar is packed full of world-class images-many of which are to be found in the standard text co-authored by Ron.

Vascularisation, a good sign, is illustrated enabling you to instantly recognise superficial conjunctival vascularisation from deep, which emanates from the uvea. Further responses, cellular infiltration and anterior uveitis are illustrated and explained.

Corneal ulcers can be classified according to depth and by their cause. In a discussion of depth we are led through all possibilities from epithelial defects, superficial stroma, deep stroma, descemetocele and finally corneal perforation with iris prolapse. Very clearly explained throughout with images, the problem of melting ulcers is considered with rapid deterioration to descemetocele. Many images demonstrate that the centre of the descemetocele does not take up fluorescein but the walls of the ulcer do. Iris prolapse can result in endophthalmitis.

Corneal ulcer classification according to cause covers mechanical problems such as eyelid abnormalities-entropion and ectropion, plus eyelash problems-distichia,

ectopic cilia and foreign body. Failing to look behind the third eyelid can easily miss foreign bodies. There is an amazing picture of an injured eye due to a cat claw (visibly present in the eye.) This session moves on to dry eye, infections, and neurogenic causes. Whatever the cause there is a quote from Professor Maggs, a co-author of the standard textbook: -

With proper diagnosis and treatment an ulcer should heal in 10 days

Treatment begins with the reminder not to use steroids as this can potentially lead to a melting cornea. The initial phase should determine and treat primary causes and advice is given on suitable first line treatments. Drops rather than ointments are favoured since the latter impede healing. Drugs that aim to inhibit proteinase activity are listed and tetracycline products have been making a comeback as discussed.

An interesting therapy that I do not remember using is autogenous serum. It is not usually taken from the patient but prepared from other patients (even of a different species) and can be frozen and kept for eight days. Autogenous serum has many advantages: -

- No contra-indications
- Impossible to overdose and therefore be administered until melting stops
- Cheap
- Available

WEBINAR

LINFOMA CANINO

ISABEL AMORES-FUSTER



Isabel graduated from the University of Zaragoza veterinary school in 2006. After 2 years in a referral hospital in Madrid she moved to the UK, first as an intern in Cambridge University and then as a resident in the Liverpool school enabling her to study for the European Diploma in Veterinary Oncology. She is now on staff in Liverpool as a member of the oncology service.

NB The webinar is in Spanish- and is therefore of interest to our Spanish colleagues here in the UK and also to the wider Spanish speaking profession in Spain and Latin America. Anyone with a smattering of Spanish and armed with a dictionary will also find lots to interest, as it is a very good summary of current thinking. Isabel speaks clearly (and rapidly!) but the word slides contain all the relevant information and you will be amazed of how similar the medical language is.

The webinar covers aetiology of canine lymphoma, clinical presentation, diagnosis, evaluation, treatment and prognosis.

The introduction states that lymphomas arise from lymphoid tissue predominantly (although practically any tissue may be involved). Both B and T lymphocytes can be incriminated and in general lymphomas represent between 7 and 24% of all canine tumours.

Following a discussion on various possible causes the clinical presentation is described. Most (80%) are multicentric, with

smaller numbers of mediastinal, gastrointestinal, cutaneous, and tumours involving the nervous system, bladder or kidneys. Each of these is described with illustrations. For those of you who don't think you have much knowledge of Spanish, here is one word slide demonstrating the huge similarities of medical terminology. This is what Isabel has to say about cutaneous lymphoma

LINFOMA CUTÁNEO

(micosis fungoides)

Epiteliotrópico y no-epiteliotrópico

Epiteliotrópico

Linfocitos T

Solitario o generalizado

No –epiteliotrópico

Normalmente linfocitos B

Normalmente generalizado

Apariencia diferente. Las lesiones suelen (usually) progresar a papulas inflamadas y ulcerados. Prurito variable

No suelen responder a la quimioterapia

Following very clear descriptions of the clinical features there is a short description of paraneoplastic syndrome with a picture of an extremely emaciated dog.

Cytology and histopathology are

the fundamentals of a diagnosis but other specific tests, perhaps more suited to a research referral set up are outlined along with pros and cons.

The histopathological classification is listed and this may be of use in determining the likely prognosis in individual cases. Similarly there is a clinical staging system (estadificación clínica) from 1 to 5, and in order to stage the tumour possible procedures could include haematology, biochemistry, cytology, histopathology, chest radiography and bone marrow biopsy-depending on individual cases.

As you might expect there is a considerable, and very useful section on treatment. But first we are told that the outlook without treatment is very poor, amounting to 4-6 weeks. Treatment just with prednisolone is little better (2 months) and if given for more than a few weeks ensures future resistance to chemotherapy, a point that is advisable to explain to the client from the beginning.

Not surprisingly then, in the Liverpool school there has been a lot of research allied to clinical findings with chemotherapy. As a general rule the survival times depend on the protocol and an individual's response. Doses of cytotoxic drugs are lower and times between treatments are longer than with people. As a result there are fewer side effects in dogs.

Chemotherapy is rarely curative but in about 20% of cases prolonged remissions are possible.

Detail on the high dose COP regime is now given in graph form and worth downloading. The vocabulary is virtually identical in English except in the graphs sem 1 and sem 2 etc. refer to week one week two (week in Spanish is semana). 60-80% of patients respond

Other regimes involving intermittent drug administration are described in the same way. There is a brief description of the use of radiotherapy and surgery, generally forming a part of the treatment plan and not as a substitute for chemotherapy. Similarly there are brief discussions on the specific treatment of nervous system lymphomas and cutaneous lymphomas.

Two rescue protocols are listed

together with the duration of effect that we might hope for.

The two rescue protocols are:

DMAC (Dexamethasone, melphalan, actinomycin and cytarabine) and

LPP (Iomustine, procarbazine and prednisolone) and advice is given on follow up protocols

In her summary Isabel states:

- Lymphoma is a set of illnesses
- The clinical presentation is very variable
- The preferred treatment is chemotherapy and it is possible to get long lasting responses that increase the survival of the patient
- Many treatments can be

done in a primary care setting provided that the patient is regularly checked. Also there will be a need to take decisions during the treatment

- Refer complicated cases or those needing rescue protocols

Isabel has an impressive CV and it shows in this excellent webinar. It will be valuable to native Spanish speakers but also to anyone learning the language and interested in this rapidly evolving discipline with much better outcomes that were possible in recent times.

WEBINAR

AN OVERVIEW OF CRYPTOSPORIDIOSIS

FRANK KRATZER AND SARAH GIBBS

SPONSORED BY HUVEPHARMA



Huvepharma generously sponsored this veterinary webinar, and the first six slides cover some basic information about the company. It may surprise some that the company is privately owned and based in Sofia, Bulgaria. Since its inception it has gone from strength to strength and is now a global partner in animal health with a world portfolio in pharmaceuticals, enzymes, coccidiostats, probiotics and nutrition, dietetics and hygiene products.

Frank Kratzer begins the scientific part of the webinar. He is a molecular parasitologist working on protozoan parasites at the Moredun Research Institute in Edinburgh as well as being an associate editor of *Parasites and Vectors* and *Veterinary Research*. He introduces *Cryptosporidium* as a major source of neonatal calf diarrhoea. There are 40 recognised species of this parasite and he lists the main species infectious to human as *C. hominis* and *C. parvum* and there is some

information on the incidence. It is the second biggest cause of diarrhoeal disease and death of infants in Africa and Asia and in the UK there are between 400 to 800 cases in Scotland and 4-7 thousand in England and Wales each year.

In cattle 4 species are commonly found. *C. parvum* causes disease in calves under 6 weeks of age and scour, loss of appetite, weight loss and reduced weight gain, abdominal pain, mild fever and death are all possible. It is a major cause of enteritis in the UK, with some beef farms reporting calf losses of around 10% in Scotland and an estimated cost in vet bills of £44 per sick calf. In addition to the signs mentioned above in calves, inapparent infection can occur with different species in older calves and reduced weight gain and milk yields in adults. A very graphic video demonstrates just how bad the scouring can be. Fortunately we can't smell its apparently characteristic pungent smell.

The various ways the organism can infect calves are explained and the effects in beef calves demonstrated by reference to research carried out at the Moredun Institute. It remains a big problem because the oocysts are environmentally very stable, resistant to common disinfectants and able to survive for long periods in cool, moist environments. Furthermore, just 10 oocysts can induce disease, with infected animals able to shed billions of oocysts, ensuring rapid infection throughout the farm and groups.

There are only two licensed products for treatment- Halocur and Parafor Crypto. Both are used for 7 days consecutively and there is a lot more detail on this later in the webinar.

Diagnosis can be made by microscopic analysis of faeces, from a dip-test to detect antigen in faecal samples, from DNA tests and from post mortem examination of gut epithelium.

Some general principles of disease management are outlined along with descriptions of effective disinfectants. Other causes of scour are listed including bacteria, (*E. coli*, *Salmonella*) viruses (rotavirus, coronavirus) and another protozoon, *Eimeria*.

The webinar continues now with a contribution from Hrvoje Starcevic, Global Product Manager (Ruminants) for Huvepharma. He begins by listing the check kits that the company supplies, Huvecheck 4, Huvecheck 5 and Huvecheck Crypto. These have a practical use in diagnosis with results available in ten minutes.

He continues with detailed technical information on Parafor Crypto described as the "Golden Standard" in the treatment of calf diarrhoea. He is followed by the last speaker, Sarah Gibbs, whose contribution is entitled

Control of Cryptosporidiosis and experience using Parafor' CRYPTO .

Sarah Gibbs qualified from the RVC in 2015 and currently works at LLM Farm Vets as a clinician. She has been at LLM since qualification with a special interest in

heifer rearing, providing calf consultancy work and running discussion groups. Take a look at the LLM Farm Vets website-it is a huge practice with lots of young vets. It looks like a fabulous place to work and some of its undoubted enthusiasm comes across in Sarah's contribution.

She begins with reference to a 2015 study of Welsh dairy farms indicating that a surprisingly high percentage (25%) of calves had been treated for scour. She continues with an overview of dairy calf rearing in the UK with the resultant challenges that occur: -

- All round calving is normal with limited time to rest pens and some calves are born in poor weather conditions
- Older housing systems and non-concrete floors=poor disinfection
- True 'snatch calving' is uncommon=exposure to oocysts at birth

A practical control of Cryptococcosis is suggested. This entails making a diagnosis, identifying the risk factors and ensuring adequate colostrum. Excellent hygiene is essential and there are lots of practical tips on suitable questions to ask of the farmer. For example transport of calves is frequently with a wheelbarrow, often apparently forgotten about in cleaning up, thus the calf may be exposed to oocysts.

Sarah finishes her part of the webinar by outlining how to use Parafor CRYPTO. It should be given at the onset of scours and to direct in-contacts also. There is a lot of information about the varying times outbreaks occur on individual farms enabling preventative dosing to be made at appropriate stages, (the highest risk period expected) when dealing with an outbreak.

Feedback has been uniformly positive from farmers some of whom have stated that they rarely see treated calves scour now.

This is a thoroughly informative webinar covering everything you would want to know, for all colleagues treating calves of course but also for final year students.



From the Literature – January'20

If you have seen lipomas growing in between muscles, particularly in the hind limbs of dogs, you will probably have managed to remove them without too much difficulty. Information on whether this simplistic approach was the correct one and if the patients remained cured has been hard to come by. I don't recall regrowth occurring in the dogs I operated on-but can't justify the statement with hard statistics. I read with interest therefore an article in the latest edition of the Australian Veterinary journal.

Computed tomographic findings, surgical management and postoperative outcomes of large intermuscular lipomas in the hind limb of 11 dogs

Crowley JD, Hosgood G and others

Australian Veterinary Journal 02 December 2019



Lipomas are benign adipose tissue tumours of mesenchymal origin that can originate in various locations. Those originating in the thigh can cause substantial hind limb expansion in the dog. The article describes computed tomography findings, surgical management and outcomes in 11 dogs with large intermuscular lipomas of the hind limb.

The tumour was not infrequent in my time at the Harmsworth hospital but appeared to be relatively rare at the Animal Hospital at Murdoch University as the case series of 11 dogs was accumulated over a ten-year period. This possibly suggests that these cases are not routinely referred. All dogs had CT scanning that revealed the well-defined smooth minimally vascular lipoma, familiar grossly to most of us. The mass was often in close proximity to the

femoral artery and vein and some were intimately associated with the sciatic nerve. Some showed infiltration or attachment to a neighboring muscle, which required excision of a part of the muscle or on block. Most of the lipomas occurred between the semimembranosus and semitendinosus muscles, a site previously reported as being similar to previous explosions.

The authors concluded that in the study of 11 dogs preoperative CT allowed a presumptive diagnosis of intermuscular lipoma based on characteristic features. The CT findings also facilitated surgical planning for excision of the mass. Although one dog had a recurrence of infiltrating lipoma 22 months later (successfully managed) the remaining dogs had no recurrence.

Therefore large, intermuscular, lipomas of the hind limb can be safely excised with minimal short-term complications, a good long-term functional outcome and low risk of recurrence.

In the latest volume of Veterinary Dermatology there is the usual mix of high science and practical clinical dermatology-this really is an excellent journal and a very good reason to join the ESVD, as apart from getting the journal you save on courses and on the annual dermatology congress. Just as a reminder about that the next congress is in Sydney, a world congress from 20-24th 2020. This could be the excuse for a round the world trip! Failing that the next ESVD congress will be in Porto, Portugal from the 16-18th. September 2021.

In this latest (December 2019) edition of Veterinary journal I picked out an interesting contribution

from Claude Favrot and four others, a collaboration between Switzerland and the USA.

Whenever I did food trials for the investigation of food allergy I always combined this with prednisolone initially for several reasons. Mainly it was to reduce pruritus and lesions but also I reasoned that if the steroids made the dog hungrier this would lead to a higher acceptance of the diet. After a few weeks I would rely on the diet alone for a further 2 weeks before challenge. This was a purely anecdotal approach and I didn't write it up in any article. This is because I knew that it needed clinical trials, and therefore a sufficient number of cases and solid evidence of benefit.

This is exactly what Claude Favrot and colleagues set out to do resulting in the following article: -

The usefulness of short-course prednisolone during the initial phase of an elimination diet trial in dogs with food induced atopic dermatitis

Claude Favrot, Petra Bisikova, Nina Fischer Ana Rostaher and Thierry Olivry | Vet Dermatol (2019) 30 498-502

In the abstract the authors state that food allergy is a possible cause of atopic dermatitis (AD) in dogs. It is typically diagnosed following an eight-week elimination diet trial (EDT) and a provocation with the original diet. This lengthy procedure is difficult for owners and its interpretation may be unclear. My italics –*this is the latest of a series of articles that have abandoned the idea that you need to go to 12 weeks to be sure of your diagnosis. This was a concept first introduced by Ed Rosser some years ago. You would need his undoubted communication skills to achieve this with the average owner.*

The objective of this study was to see if it were possible to perform a food allergy trial in less than 8 weeks. It was a very simple study and 53 dogs with AD were included.

Ten dogs (19%) were confirmed with food allergy following no relapse two weeks after stopping the prednisolone and a recurrence within a week once challenged with the original diet. The remaining dogs did not respond to the diet and after 8 weeks they were

considered non-food allergic.

In the authors' words - 'this study demonstrates that a shorter EDT is possible if the allergic pruritus and inflammation are initially controlled with a short course of glucocorticoids. This shortened trial is likely to improve owner adherence and facilitate the diagnosis of food allergy.' My italics – *the other feature of this article is that they have also appeared to abandon mention of the so-called 'gold standard' home cooked diet. My view is that it isn't because you are more likely to get good compliance with a commercial extensively hydrolysed protein based commercial pet food as used in this study.*

The other feature of this particular edition of Veterinary Dermatology is the publication of all the abstracts from the recent very successful and enjoyable ESVD congress in Liverpool. There are many and I have picked a couple that caught my attention.

A team of Italian colleagues successfully treated 7 cats for generalised

demodicosis with fluralaner spot on. A Canadian team found that medical honey for the treatment of nasal intertrigo was no better than placebo. Claude Favrot (busy man!) and colleagues showed that both subcutaneous and sublingual administration of allergens were effective for the immunotherapy of atopic dermatitis but the best results were obtained with intralymphatic administration. This group have lots more to say in this edition.

Finally a group of Mexican colleagues published their findings on an exotic topic. What they established is that oral afoxolaner is very effective for the treatment of lice in zoo birds. The birds selected were 36 pheasants, 14 peacocks and 3 chachalacas (never heard of them? Me neither!) I looked them up for you. They are galliform birds from the genus *Ortalis*, phylum Chordata, Order Landfowl. They are found in wooded habitats in the far southern USA such as Texas, Mexico, Central and South America. It's a lovely word too!