Critical care for rabbits
The journey from dependence to independence

Plus

EVENTS How will the large animal workforce diversify after Brexit? / ANIMAL WELFARE Improving interactions with therapy dogs / SMALL ANIMAL Treating feline allergic dermatitis LARGE ANIMAL Antibiotic milk failures / PRACTICE MANAGEMENT The benefit of HR audits
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Recent updates have prompted preparations for a no-deal Brexit

Welcome to the October issue of Veterinary Practice magazine. It is now only six months until the UK’s scheduled exit from the EU and recent updates have prompted preparations for a no-deal Brexit. Read more about the provisions being made in the equine and Official Veterinary professions in this month’s BEVA Congress and Official Vet Conference reports. The legal implications Brexit may have on practices are covered in the practice management section and potential issues with medicines availability are the topic of Gareth Cross’s opinion column.

Ophthalmology is the featured topic this month; turn to the "In Focus" section of the magazine for an article on dealing with the painful eye by David Williams, as well as a guide to corneal cross-linking by Ben Blacklock.

In dermatology, David Grant has taken a slightly different approach from his usual clinical guides, this month detailing the best way to work through a dermatology case in small animal practice. There is also the second part of Chiara Noli’s series on feline allergic dermatitis and Tracey West discusses the importance of dietary protein in skin and coat problems.

Two useful articles on rabbits can also be found in the small animal section: Molly Varga offers a guide to critical care for rabbit patients and Iain Cope and Jessica Hawe explain how to minimise stress during an examination.

Some of the most common iceberg diseases in sheep are described in the large animal section and Richard Gard explores antibiotic milk failures. Also in this section, learn about the process of collecting blood from camelids and using the plasma to save newborn crias.

Turn to the equine section for the regular column by Jon Pycock and a handy report from the Vets with Horse-power team on dealing with post-partum complications.

The importance of HR audits, new approaches to leadership in a changing profession and a guide to sources of financial help for UK practices are all covered in expert-written articles in the practice management section.
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Concern over Brexit plans as report says Defra prevented from consulting with vets

A comprehensive report into Defra’s Brexit preparations by the National Audit Office (NAO) claims that Defra has been prevented from consulting with the veterinary profession over the shortage of vets by the Department for Exiting the European Union (DExEU).

The report “Progress in implementing EU Exit” states that Defra is one of the government departments most affected by EU Exit and looks in detail at four of Defra’s main workstreams, including “import of animals and animal products” and “exports of animals and animal products”.

The report notes that in a no-deal scenario there will be a significant increase in certificates needing to be processed by veterinary surgeons. It states: “Without enough vets, consignments of food could be delayed at the border or prevented from leaving the UK. Defra intended to start engaging with the veterinary industry in April 2018, but has not been permitted to do so and now plans to launch an emergency recruitment campaign in October to at least meet minimum levels of vets required. It plans to meet any remaining gaps through the use of non-veterinarians to check records and processes that do not require veterinary judgement.”

The BVA has previously outlined concerns about the potential for diluting veterinary certification. BVA is calling on the government to fully engage with the veterinary profession before making any changes that could impact the UK’s ability to trade animal products safely and in line with high animal welfare standards.

Metacam is the first and only NSAID to be indicated for pain management in guinea pigs

Despite guinea pigs becoming an increasingly popular pet in the UK, until now, there has been no licensed non-steroidal anti-inflammatory drug (NSAID) or clear guidelines regarding appropriate pain relief dosing for this species. Metacam 0.5mg/ml oral suspension for cats, manufactured by Boehringer Ingelheim, is now licensed for the alleviation of mild to moderate post-operative pain associated with soft tissue surgery.

As a prey species, guinea pigs frequently disguise pain, making it a challenge for vets to identify when analgesia is required. The World Small Animal Veterinary Association has stated that “pain associated with surgery is 100 percent predictable and is treatable”, highlighting the importance of peri- and post-operative pain relief.

Boehringer Ingelheim has produced a series of expert short videos, supported and narrated by Zoo and Wildlife Medicine specialist Molly Varga. The video series includes a step-by-step guide to recognising pain in guinea pigs through to dosing regimes, and an owner video for accurately administering Metacam at home. This is in addition to the interactive online “dosing calculator”, which is available on the Boehringer Academy website: boehringer-academy.co.uk.

BVA welcomes plans to create Animal Welfare Commission in Scotland

The BVA has welcomed the Scottish Government’s plans to establish a new Animal Welfare Commission to advise on the welfare of domesticated and wild animals in Scotland and ensure that standards are maintained post-Brexit.

The new commission, announced as part of the Scottish Government’s 2018 to 19 Programme, will work closely with animal welfare organisations and other expert stakeholders across key issues including sentencing for animal cruelty, including attacks on police dogs, breeding legislation and the licensing of animal sanctuaries and rehoming centres.

Melissa Donald, BVA Scottish Branch President, said: “This is a great move which demonstrates the Scottish Government’s continued commitment to animal welfare. It is vitally important to ensure that animal welfare standards are at least maintained and where possible improved post-Brexit, so establishing a specialist group with this remit will help to channel expertise with a clear goal in mind.

“BVA has fed into consultations on sanctuaries and rehoming centres and emphasised the importance of strengthened, clear and considered regulation which prioritises the health and welfare of animals in these environments. We also support strengthened protections for all ‘protected animals’ as defined in the Animal Welfare Act.

“We look forward to seeing proposals in due course for other animal activities, including breeding and pet sales. At a minimum, these should be aligned with the incoming Animal Welfare (Licensing of Activities Involving Animals) (England) Regulations to ensure high standards of animal welfare across the UK and prevent loopholes in licensing legislation between nations.”
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RCVS and AVMA join forces to tackle veterinary mental health issues

Mike Topper, former AVMA President, with Stuart Reid, Chair of the Mind Matters Initiative, agreed on the final joint statement

The RCVS and the American Veterinary Medical Association (AVMA) have joined forces to promote improved mental health and well-being across the veterinary team.

Building on the RCVS Mind Matters Initiative in the UK and the AVMA’s Well-being and Peer Assistance Initiative, the two organisations will work together on joint projects to advocate positive behaviour and support around mental health, collaborate on developing an evidence base and share best practice around interventions.

To this end, they have agreed to a statement which captures the importance that both organisations put on a healthy and sustainable profession.

It states: “We believe that for veterinary professionals to realise their full potential and the global veterinary profession to remain sustainable, maintaining high levels of mental health and well-being for all members of the veterinary team is a priority. Improving veterinary mental health and well-being has a positive impact on individuals, the profession at large and, ultimately, animal health and welfare and public health.”

The Mind Matters Initiative has been running in the UK since 2015 and addresses mental ill-health within the veterinary team by tackling systemic issues that put individuals at risk; protecting those who may be working in suboptimal conditions by providing them with training and tools such as mindfulness and personal well-being solutions; and supporting those who need specific help by funding and promoting independent sources of one-to-one help.

Meanwhile, the AVMA has a programme of activities that seek to address mental health issues including the development of a workplace well-being education programme and ongoing education and outreach in the areas of optimising well-being, creating cultures of well-being in the workplace, boundary setting and conflict transformation.

Vets raise concerns about how migration recommendations would play out in reality

The BVA has responded to the Migration Advisory Committee’s (MAC) report on European Economic Area (EEA) migration, welcoming the evidence-based approach but raising concerns about how some proposals will translate in the real world, especially for vets carrying out vital public health roles.

The report explores current and likely future patterns of EEA migration into the UK and makes a series of recommendations for designing the UK’s post-Brexit system for work-based immigration.

The committee sets out a general principle that policy changes should make it easier for higher-skilled workers to migrate to the UK than lower-skilled workers. It recommends that EU citizens should not necessarily be preferred over non-EU migrants, on the assumption that UK immigration policy will not form part of an agreement with the EU.

The report also recommends that the cap on the number of migrants under Tier 2 should be abolished, with existing salary thresholds maintained.

Responding to the report, John Fishwick, BVA President, said: “We would be concerned about how some of these recommendations would play out in reality given the veterinary profession’s high dependence on the EU for workforce supply. Nearly half of vets registering to work in the UK every year come from the EEA, so it’s critical that any changes to migration policy are designed to maintain capacity and guard against sudden shortages rather than introducing new layers of bureaucracy such as the onerous application for licences to sponsor employees or restrictions on flexible movement between roles.”

For further information, visit: beva.org.uk

New President for BEVA

Renate Weller, a professor of comparative biomechanics and imaging at the RVC in London and the new Director of Veterinary Education at CVS Group, has been appointed as President of BEVA following the BEVA Congress (12 to 15 September 2018).

Renate graduated from the University of Munich and has subsequently studied and worked in the US, Germany and the UK. She was a senior clinical research scholar in large animal diagnostic imaging at the RVC, completed a DrVetMed thesis at the Institute of Veterinary Anatomy in Munich and completed a PhD in the RVC’s Structure and Motion Laboratory.

During her presidency, Renate intends to embrace the fact that equine vets belong to an international profession and are part of an international community, all working for the common cause that is the health of the horse. She is also looking forward to launching BEVA’s new career coaching initiative.
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Vet Wellbeing Awards looking for the happiest practice in the UK

The Society for Practising Veterinary Surgeons (SPVS) and the Mind Matters Initiative (MMI) are looking for the happiest practices in the UK for this year’s Vet Wellbeing Awards. This year, the awards are placing a renewed emphasis on practices that take a holistic approach to well-being, with the award judges looking for evidence that workplaces are devoted to improving well-being across the board.

Lizzie Lockett, RCVS CEO and Director of the Mind Matters Initiative, explains: "What we are particularly keen to showcase with these awards is that well-being isn’t a bolt-on luxury that only practices with lots of money, time and staff can invest in, but that it’s something that practices of all sizes can engage in and that there is a very strong business case for doing so as it improves retention rates, reduces stress and improves team cohesion."

The closing date for entries is Friday 23 November 2018. The prize for each category includes two registrations and banquet tickets for the SPVS/Veterinary Management Group (VMG) Congress 2019. Full details of the awards and how to apply are available on the Vet Wellbeing Awards website at: vetwellbeingawards.org.uk and in a booklet available for download from the MMI website at: vetmindmatters.org/resources

The Donkey Sanctuary launches new quality of life assessment tool

International animal welfare charity The Donkey Sanctuary has launched a new quality of life assessment tool to support donkey owners and professionals.

The tool comes in the form of two separate resources. For owners of donkeys, the resource provides a useful toolkit to monitor the health and well-being of their equine while a comprehensive health pack caters for vets and other professionals working with donkeys.

The resources are the result of the charity’s three year “End of Life” project which was completed in 2017 and provides support for owners and professionals alike in assessing donkeys in their care. The project found that the key influence in owners’ end-of-life decisions was their own assessment of quality of life. Many owners felt they needed more support in this respect, with around half of owners wanting more information.

Both packs include quick reference guides in a durable wipe-clean material that is handy to use in all environments.

The Donkey Sanctuary launches new quality of life assessment tool

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How will the large animal workforce diversify after Brexit?

Paraprofessionals may be further utilised as tuberculin testers and certification support officers, delegates heard at the Official Vet Conference 2018

The Official Vet Conference kicked off on 19 September with a diverse programme of lectures covering small animal, large animal and equine practice. With only six months to go and many questions still unanswered, Brexit was a key theme throughout.

The APHA has been urged by government to prepare for “day 1” of a no-deal Brexit. One major concern is how the profession will fulfil the increase in demand for animal product certification that would be expected should the UK become a “third country”, such as Norway and Switzerland.

The current OV workforce would not be able to cope in a no-deal situation. It is therefore imperative that decisions are made with regards to how paraprofessionals can be better utilised in large animal practice. Simon Hall, APHA Director for EU Exit and Trade, provided delegates at the OV Conference with an update on the situation.

Paraprofessionals currently perform tasks that are outside the scope of the Veterinary Surgeons Act – and they do it well, Simon said. In large animal practice, they are mostly used for the benefit of the government; many of the exemption orders refer to official disease control activity and the same facilities are not available to private practices.

Attention is therefore focused on providing two new paraprofessional roles: certification support officers for animal products and approved tuberculin testers in commercial practices.

To move forward with these propositions, they must be evaluated in relation to EU legislation: though we won’t be in the EU, we intend to carry on exporting to the EU, Simon explained. The legislation includes several important criteria, described below in terms relating to the proposition for introducing certification support officer paraprofessionals.

The paraprofessionals would need to be suitably qualified and competent. This should not be an issue, Simon said, explaining that discussions are underway with Improve International to provide comprehensive training and an accredited qualification for the role.

The officers must be impartial and free from conflict of interests. Certified officers would have to comply with the same standards expected of vets. The APHA is proposing that the expectations of civil servants be translated to the role (including educational requirements, criminal record check, etc) and that they would be subject to regular audit.

EU legislation dictates that “the official certificate shall be signed on the grounds of facts and data relevant for the certification, knowledge of which was ascertained by another person authorised for that purpose by, and acting under the control of, the competent authorities, provided that the certifying officer can verify the accuracy of such facts and data”.

The “competent authority” in this case would be the OV (on behalf of the government). Would it work if the paraprofessional was out of sight of the vet? Defining “acting under the control of the OV” is proving complicated. The relationship would be clear if both the OV and paraprofessional were employed by the same business, Simon said, but how much further could it go? Could a certifying vet in Swindon accept assurances from a certifying support officer at a slaughterhouse in Manchester, who they’ve never met? And importantly, who would be liable should something go wrong?

Questions brought up by OV Conference delegates highlighted several areas of concern. Firstly, could the exporting vet accept certification by a paraprofessional from a different company? Simon reiterated that this is a topic of contention and it would be at the discretion of the OV. Would that result in a few big companies doing all the exporting work? “It is much easier if every link in the chain is under the same management control,” Simon said, but “there will always be information that the certifying OV hasn’t and can’t see with their own eyes”.

It was asked if the movement to hire lay tuberculin testers was cost-driven. Simon answered that it may reduce costs to the government, but it would also ease the workload of large animal vets. This raised more concerns – if vets aren’t TB testing, will there be enough regular skilled surveillance on farms? And in the north of England, where TB testing is minimal, it was noted that the only benefit of lay testers would be in financial form – to the government.

Finally, it was asked whether the concept could be extended to abattoirs, in terms of certification support officers replacing OVs. This, Simon said, is “a massive can of worms”. Paraprofessionals were doing this work before the UK joined the EU, but it would now deviate from EU standards. If dual standards are created, there may be greater need for product traceability, and some may simply not be certifiable, Simon said.
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Addressing the low survival rates of paediatric patients

Younger paediatric dogs and cats presenting to emergency clinics are less likely to survive than their older counterparts, according to a new study.

By comparing survival rates of patients under three months of age with those between three and six months old, “Survival and presenting complaint of canine and feline paediatric emergencies presenting to UK emergency clinics” discovered that younger kittens had a survival rate less than half that of older ones, while the youngest dogs were almost 20 percent less likely to survive than older puppies.

These findings, based on a large study population of over 3,000 patients, could have major implications for how we treat very young animals.

The paediatric knowledge gap

It is unclear whether the correlation between survival rates and age is due to physiological immaturity or our lack of understanding of this younger subset of the population.

In their discussion at the end of the paper, the authors state, “the conclusions of this study are clear: survival of paediatric patients presented to emergency clinics within the UK is low but increases with patient age. The impoverished veterinary literature regarding small animal paediatric medicine may translate into reduced clinician knowledge and familiarity with this population; hence, the low survival rate may therefore also highlight a gap in our understanding of such patients, making their treatment less effective.”

The authors consider the range of difficulties veterinary professionals in emergency and non-emergency settings may encounter when faced with a younger patient, including but not limited to:

- The small size of young animals makes gaining intravenous access, placement of feeding tubes and general management more challenging.
- The difficulty, or perception of difficulty, of gaining intravenous access may deter repeated attempts to gain vascular access.
- Peripheral blood pressure is lower in healthy paediatric patients compared to the adult dog and cat.
- Determining the success of resuscitation is more challenging as the end-points of resuscitation are not as easily identified – differences between paediatric and adult patients may lead to errors in ascertaining the response to a resuscitation effort.
- Micro-perfusion can be difficult to determine as both puppies and kittens are reported to have higher lactate values than their adult counterparts.
- Diagnosing hypoglycaemia can be more difficult as their response to a hypoglycaemic episode differs from adults.
- Determining the level of dehydration is difficult as paediatric patients will continue to have moist mucous membranes while being severely dehydrated.

By far the leading cause of death among all the study’s groups was euthanasia. Although beyond the scope of this research, the authors suggest this may be due to the lack of a firm bond between the owner and the animal, making euthanasia a more viable option on financial grounds.

Whatever the reasons, the propensity to euthanise younger patients potentially poses a longer-term problem: “Euthanasia itself prohibits the development of paediatric veterinary medicine; it limits clinician experience with this age group but also precludes clinical research. As a consequence, anecdotal experience often replaces evidence-based medicine,” say the authors.

The authors stress the need for further research and an evidence-based approach to the treatment of young animals: “Further prospective studies are required to fully elucidate the causes of mortality in neonatal and paediatric patients, as well as to investigate whether clinician experience or the application of an algorithmic approach to these patients might alter survival.

“Such bundles of care have been introduced in both human medicine (the Surviving Sepsis campaign) and in veterinary medicine (the RECOVER guidelines). [This evidence-base] should drive improvements in clinical care.”

Full Knowledge Summary

veterinaryevidence.org/index.php/ve/article/view/174/246

Authors: Bruce Smith and Shailen Jasani
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Getting human-animal interactions down to a science

Therapy dogs are becoming increasingly popular, but how could the interactions be improved for the benefit of the humans and the animals?

Students at Emory University in Atlanta who receive on-campus counselling and psychological services can interact with four-legged counsellors on staff. And patients undergoing treatment at the Mayo Clinic can make their hospital stays more comfortable with the help of the institution’s “Caring Canines”.

Dogs are often known as people’s “best friends”, and these days trained therapy dogs provide support in schools, nursing homes, hospitals and airports. But how do we make the most of our interactions with them? It’s important to understand the safest ways to introduce an animal into an institutional setting, and how to maximise the impact of every encounter.

Now there is some new research that confirms what our human instincts have been telling us, based on three collaborative studies that the Waltham Centre for Pet Nutrition presented at the International Society for Anthrozoology’s 27th International Conference. The findings presented at this multidisciplinary gathering have provided reliable, science-based insights about human-animal interaction that can be put into practice immediately.

First impressions and environment matter

The first 10 minutes of an interaction between a human and a therapy dog can make a tremendous difference, according to a study conducted in conjunction with Washington State University (Kuzara et al., 2018). Dogs’ stress levels were measured when first meeting college students – because when a dog is happy and more relaxed about the initial greeting, there is greater potential for the human to benefit from the interaction, too.

Dogs displayed the calmest behaviour when students greeted them from a seated position, rather than standing, and touched them around the chest rather than the head. These are simple tips that should be easy for institutions to implement.

In a symposium on best practices and standards for animal-assisted intervention, Deb Linder of the Tufts Institute for Human-Animal Interaction and I shared findings on the need for standardised guidelines for structuring the environment where pet therapy occurs (Linder et al., 2018). This includes all things related to safety and logistics such as selecting the most effective space for therapy encounters, coordinating bathroom breaks for the therapy dogs and identifying and addressing potential pet allergy issues before they present an obstacle to the programme.

Future research

As scientists, we are constantly looking for ways to design even better studies that will allow us to learn even more about human-animal interaction.

Traditionally, researchers have found it challenging to design studies that answer three very distinct questions: What are the health effects of pet ownership? What are the health effects of contact with a companion animal? And finally, what are the health effects of animal-assisted interventions, including animal-assisted therapies and activities?

A study (Gee and Friedmann, 2018), conducted in conjunction with the University of Maryland, identified methodological challenges faced by researchers in examining how animals may benefit older adults. Some potential solutions were posed, such as using new technologies like wearables and geographic tracking devices, which can enable us to learn even more about the impact of companion pets on human health and well-being in precise and quantifiable ways.

All of this is good news, for both people and pets. It’s good news for me, too, not just as a researcher but also a dog owner. My dogs are an important part of my life. They make me smile, provide companionship and get me outside and active every day. Am I unique, or do dogs impact the lives of other people as much as they impact my life? The more we learn about the scientific basis behind the benefits of pets, the better we’ll be able to structure our experiences in interacting with pets – and the greater the results we’ll see for pets and humans alike.

References


At Agria, we understand that many practices have found the recent IDD changes to regulation more than a little confusing. That’s why we have developed a new solution that makes free insurance activation quicker and easier for your practice. Better still, it is available outside of regulation, meaning less paperwork for your practice and more time for your clients.

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visit: agriapet.co.uk/VetVP
or call: 03330 30 83 73
Incorporating imagery into meditation

Three useful imagery techniques are discussed in the last of a short series on meditation for beginners

By now, hopefully you are spending half an hour or more each morning being mindful. Then, observing emotions one at a time, giving them a name and thus defusing them to a degree. Defusing troublesome thoughts enables us to realise that they do not hold as much power over us as we thought they did. Formulating a plan to defuse the troublesome thoughts is a very personal thing and the best plans are those that you come up with yourself.

Counsellors rarely advise a patient on what to do. Rather, we facilitate patients in formulating their own plans and making their own decisions. Only then will the plan truly resonate with the patient, giving them strength and teaching them to tackle the many hurdles in life without us, thus gaining more inner strength and improved self-esteem.

The methods you choose to help you gain clarity during meditation, to defuse those disturbing emotions and to become more compassionate are also very personal. Here, I would like to share a few imagery methods which my patients have developed to help themselves with their practice.

The fortress
Sometimes, people hurt us so much that we decide not to engage with them again on an emotional level. One patient of mine came to this decision regarding her siblings, who had spent as long as she could remember attacking her verbally and behind her back. Another member of her extended family had sexually abused her and her sister as children. She wanted to disempower them as regards their ability to hurt her any more. She wanted to be free of the hatred she felt towards them and to be liberated from them being in her thoughts constantly.

She built a fortress in her mind during meditation. The walls were so thick that no snide comment could get through. She could sense that her extended family were bad-mouthing her, but she couldn’t hear anything when within this fortress. The fortress had no roof; sunshine could come in and the skies above were blue and bright.

This was a short-term solution, of course. We cannot live life as an island, and when we gain strength, we can face our problems and unkind people without fear of them hurting us. This gave her space away from her spiteful siblings.

She gained strength through mindfulness. Soon she could rise up to the top of the walls and look down on those who had hurt her so much. By this stage, she was so powerful emotionally that she could even wish them to be well, happy and peaceful. But they would never enter her mind during her meditations again, which meant that they rarely entered her head during the weeks that followed.

The heavy bucket
Take that troublesome nagging thought, that disastrous day you had at work, that wound complication, that failed exam, that parking fine, and put each one into a bucket of its own. Raise your left arm out to your side to shoulder level, holding the bucket with the disastrous day in it. Feel it getting heavy, painful, festering. When you have decided that that entire day is in the bucket and you can feel the discomfort of the weight, drop it into the abyss, put your hand on your lap and concentrate on the relief of letting go of that weight. It is the past. It doesn’t need to be revisited any more. Stay with the feeling of extra space you have in your mind. Repeat with whatever imagery you wish.

Climbing up the branches of a tree
Imagine you are feeling so many overwhelming emotions, you don’t know where to start. As we learnt earlier, clearing your mind to the point of being a blank canvas can be done. Observe one emotion at a time. Triage them.

We can imagine ourselves slowly ascending a tree to the top, which is our nirvana, if you like. Each task on the way can be visualised as a branch on which you can rest and have a beer once you have tackled that challenge. For example, I’m really angry with person X; the first branch is the place I can rest once I have let go of the anger. We discussed methods of defusing anger last month. I am enjoying being free of the anger which was sapping my strength. The next branch is even nicer, with more sunshine and a comfier sunbed. But I must conquer my fear and anxiety associated with person X to reach that branch. We also discussed how to tackle anxiety in the last issue.

It may take a week of meditation to get onto the next branch. But each time you revisit your mindful meditation, you start on the branch where you left off. Other branches can be named “unbreakable”, “unshakeable”, “kind and compassionate to all” and finally “true liberation and happiness”. Make it your own and it will have more meaning for you.

Laura Woodward has been the surgeon at Village Vet Hampstead for over 10 years. Laura is also a qualified therapeutic counsellor and is affiliated with the ACPNL and the ISPC. She runs Laurawoodward.co.uk – a counselling service for vets and nurses.
The IDD, vets and pet insurance

What is the Insurance Distribution Directive and how will it impact veterinary practices?

Well, the GDPR arrived, the sun rose as normal on 25 May and the avalanche of people demanding to be forgotten was more like a light flurry – despite the media hype and despite the “consultant”-fuelled paranoia. And so to the next EU dictate. The Insurance Distribution Directive (IDD) seeks to further harmonise how insurance distribution activities are regulated across the single market.

The changes that came into effect on 1 October 2018 will have implications for the way UK veterinary practices work with pet insurance.

Through various consultation papers, the UK regulator, the Financial Conduct Authority (FCA), has provided guidance that requires some enhancement to the current “in-scope” or regulated Appointed Representative (AR) model embraced by many vets.

They also reveal and clarify additional opportunities for practices wishing to remain non-authorised and work outside the regulatory perimeter.

Agria’s solutions

As an integral part of Agria’s new practice development initiative, Agria life, we have been in discussions with the FCA and working closely with specialist regulatory consultants to embrace IDD and craft a range of innovative “in- and out-of-scope” insurance solutions for vets.

These are designed to make veterinary promotion of lifetime pet insurance as easy and effective as possible, while giving practices the freedom to work with Agria in a way that’s right for their business and their clients.

Out-of-scope/non-regulated activity

Passive introducing means practices can continue to generically talk about insurance and the different types of cover, display posters and other point of sale material, and with Agria, distribute leaflets that include free five-week cover for the owner to activate.

Providing information was previously a regulated activity and is now included in the “provision of information” exclusion, meaning practices can share client and pet data with Agria for Agria to activate a free five-week policy – on the proviso of course that the client has consented to their information being disclosed in line with GDPR requirements. Vets working out of scope still can’t recommend a specific product or provider, however.

In-scope/regulated activity

Despite rumours from some quarters to the contrary, the Appointed Representative status still very much exists for vets under the new regulatory regime and is absolutely available for Agria vets, and those vets who still wish to support their owners in making an informed choice about pet insurance.

The status now includes an annual requirement of 15 hours of CPD for practice staff involved in insurance distribution, which dovetails perfectly with the introduction of Agria life.

Once trained, staff can recommend Agria, discuss specific features of Agria’s products and, importantly, the practice can activate Agria’s free five-week insurance policies for clients.

Misconceptions and possible unsafe assumptions

The Connected Contract exemption is used by Agria when working with dog and cat breeders as they sell the “connected” product – a dog or cat.

Obviously Agria was keen to extend this solution to vets if appropriate; however, on approaching the FCA, it has been confirmed that currently, and under the impending IDD, this exemption is “unlikely to apply for the activity that vets undertake”.

Introducer Appointed Representative is a regulatory status with a more limited remit than AR.

One of the two key regulated activities it facilitates is providing information. With this activity being deregulated under the provision of information exclusion, it is debatable what additional benefit this lesser regulatory status offers vets promoting insurance.

2018 has been peppered with much misinformation about IDD and several false dawns for practices desperate to continue to promote insurance after 1 October. Agria’s options offer every practice a straightforward, practical solution to optimise the promotion of lifetime pet insurance, underpinned with the opportunity to access a free, comprehensive programme of business and individual training and development.

For more information about working with Agria, visit: agriapet.co.uk/veterinary
Can a home-prepared diet be nutritionally complete?

How to make scientifically sound dietary choices for dogs and cats

Cats and dogs are not human, nor are they tigers or wolves. Unfortunately, the latest feeding trends – raw, prey, grain-free and so on – seem to be based on the premise that the cats and dogs we live with are anything but domesticated pets.

Cats and dogs require nutrients, namely: protein, lipids, vitamins and minerals. These nutrients are required in varying, specific quantities which differ between species and at different life stages.

A good analogy when explaining nutrition to pet owners is to think of a delivery van as an ingredient and a package as a nutrient – as long as the package arrives in good condition and it’s what was ordered, one doesn’t usually mind who delivered it!

We can get good, high quality nutrients from a number of different ingredient sources. More importantly, we must remember that most ingredients provide more than one nutrient and that nutrients interact with each other. Consequently, trying to balance a diet without a PhD in animal nutrition is nigh on impossible.

Protein, amino acids and lipids

If we look at nutrient requirements scientifically, we can break it down further; what our pets really need are amino acids: 10 essential for a dog, 11 for a cat (see Table 1). These are vital for many processes, including cognitive function, reproduction, vision and growth. Deficiencies of any of these essential amino acids can have catastrophic consequences. For example, cats can quickly become critically, and even fatally, ill, from eating a diet that is deficient in arginine.

Marketing a pet food using a list of amino acids isn’t very appealing or understandable to most pet owners; using anthropomorphic phrases, such as “packed with fresh chicken” or “delicious human grade meat”, is much more appealing. The fact that human grade meat must be used by law, that fresh chicken is around 75 percent water or that the word “meat” gives no indication of quality, digestibility or amino acid profile is generally not known nor easily understood.

Certain vegetable sources, such as corn, wheat and soy, when processed properly, can be highly digestible protein sources and in combination with by-products from the human food chain, such as offal, can provide palatable, balanced and sustainable foods that provide all the nutrition – including the essential amino acids – that a pet needs.

Lipids are essential for the utilisation of vitamins A, D, E and K but are also an excellent source of energy.

Vitamins and minerals

The potential dangers of over- or under-supplementation of vitamins and minerals is so great that all prepared pet foods (even “natural” ones) must contain synthetic vitamins and minerals, making 100 percent of “natural” foods unnatural. This is done, of course, for sound, scientific safety reasons – one example of serious excesses would be hypervitaminosis A, seen in cats fed excessive quantities of raw liver. Deficiencies can also cause serious health issues, such as cases of nutritional secondary hyperparathyroidism due to calcium deficiency.

Unfortunately, most home-made diets for cats and dogs are not balanced. In fact, studies of almost 300 different recipes found that all but 5 percent were deficient in at least
one nutrient and around 60 percent profoundly deficient in many nutrients (Dilitzer et al., 2011; Stockman et al., 2013).

**Carbohydrates**

Carbohydrate is a broad term covering starches, fibre and sugars. While carbohydrate is not an essential nutrient for a dog or cat, when used strategically, it can be very useful. For example, specific starches improve faecal quality and carbs are a great energy provider, allowing protein to be spared for other biological uses and, practically, it is essential to bind kibble together.

Specific fibre blends can be used to improve gastrointestinal health, encouraging the proliferation of healthy gut microbiota, including in cats, and to provide a satietogenic effect in pets prone to weight gain.

Despite all the proven benefits of carbohydrates, cynicism persists. Around 7,000 years ago, the digestive systems of some wolves evolved to produce amylase in order to digest starch. This was necessary for them to cohabit with us and eat what we ate. A dog’s role would have been guarding livestock, which would primarily have been used for sustainable benefits such as wool and milk, with only occasional meals of meat for both humans and dogs.

The debate around carbohydrates in cats and the definition of “obligate carnivore” rages on. While it is important that cats are not fed vegetarian or vegan diets, it is their dentition that defines their carnivorous status. In the wild, they would eat carbohydrates from the intestines of their prey. An all-meat diet is not healthy for cats, as evidenced by veterinary nutritionist Catherine Lenox in 2015, who treated a five-month-old kitten fed an all-meat diet since weaning, which presented with both retinal degeneration and metabolic bone disease as a result of taurine deficiency.

**Table 2** shows some important differences between the species; it is notable that there is no salivary amylase in cats and dogs. Nevertheless, they are very adept at digesting carbohydrates.

<table>
<thead>
<tr>
<th></th>
<th>HUMAN</th>
<th>CAT</th>
<th>DOG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taste buds</td>
<td>9,000</td>
<td>500</td>
<td>1,700</td>
</tr>
<tr>
<td>Olfactory cells</td>
<td>2 to 10 million</td>
<td>80 to 90 million</td>
<td>80 to 220 million+</td>
</tr>
<tr>
<td>Digestive tract as a % of body weight</td>
<td>11%</td>
<td>2.3%</td>
<td>2.7 to 7%</td>
</tr>
<tr>
<td>Salivary amylase</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

**Choosing a diet**

The three most important questions to consider when choosing what to feed a pet are: Is it safe? Is it nutritious? And is it right for this pet?

Food safety should be the first priority, particularly when feeding raw foods. Recent papers show that the risk to human health, particularly the elderly or immunocompromised, is significant. A discussion about hygiene is vitally important when debating what to feed a pet – traditional, dry, raw, grain-free or otherwise.

Considering whether a diet is completely balanced or complementary is important too – and if it is complementary, it should be considered a treat, make up no more than 10 percent of the diet and be mixed with a fully balanced and complete diet.

Different pets have different needs and certain factors drastically affect nutritional requirements. For instance, neutering reduces energy requirements in both cats and dogs. Adapted levels of protein, calcium and phosphorus are needed in growth and large dog breeds have different nutritional requirements to small breeds.

Finally, indisputable scientific evidence tells us that dogs and cats are living longer (dogs by 4 percent and cats by 10 percent according to a 2013 report by Banfield Hospitals) and although in part this is due to better veterinary care, it must also be due to better nutrition and a better understanding of the complexities of dogs’ and cats’ nutritional needs.

Within a profession which prides itself on making evidence-based decisions, can we afford to ignore the abundance of scientific evidence around companion animal nutrition yet embrace the current fad of home-prepared or raw feeding?

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A full reference list is available on request.
A practical approach to the skin case

How to reach a diagnosis earlier and avoid the frustrating dermatology case in small animal practice

**DAVID GRANT**

David Grant, MBE, BVetMed, CertSAD, FRcvS, graduated from the RVC in 1968 and received his FRcvS in 1978. David was hospital director at RSPCA Harmsworth for 25 years and now writes and lectures internationally, mainly in dermatology.

Skin cases are very common in small animal practice and although many are straightforward, others do not respond to treatment and become chronic cases, usually without a definitive diagnosis. This account of a practical approach to the skin case aims to help first opinion practitioners avoid the frustrating skin case and achieve a diagnosis on most occasions. The complete approach to the diagnosis of skin cases can be summarised as follows:

- Obtain a general and dermatological history
- Perform a physical and dermatological examination
- List and rank, in order of most likely to least likely, differential diagnoses
- Make a diagnostic and therapeutic plan
- Perform initial patient-side tests in virtually all cases and others as suggested by the ranked differential diagnosis list
- Establish a diagnosis
- Institute specific therapy

Allowing adequate time to obtain a comprehensive history is crucially important, especially with the apparently difficult case. Within the time constraints of a 10- to 15-minute consultation, it will not be possible to achieve a useful history in the more difficult case. There are several ways to overcome this problem.

**Utilise the veterinary nursing team**

Given that skin cases are so common, extra training of a nurse, or several nurses, in dermatology will be valuable. A dermatology nurse could take the history, perhaps with the aid of a set protocol, but emphasising listening skills. This information can then be given to the veterinary clinician at the initial consultation. Extra training of the veterinary nurse in patient-side diagnostic tests, which are invariably necessary in the dermatology case, will also be valuable.

Thus, the veterinarian’s time is concentrated on the initial examination and compilation of the differential diagnosis list and the selection of those tests that are initially required.

**Increase consultation length**

An alternative is to allow at least half an hour for the history in any difficult case, and an hour on any case seen as a second opinion (which will usually have had a number of unsuccessful treatments). The involvement of the trained dermatology nurse is still recommended for the diagnostic tests required; the nurse would ideally be present at the consultation to establish a relationship with the owner.

This initial contact will be very useful; a trained dermatology nurse will also be the contact with the owner subsequently, to answer questions, be involved in follow-up consultations and help solve any compliance problems.

If the practice already has a parasite control clinic run by nurses, it makes sense to add dermatology cases. The time suggested above for taking a history is always well spent and appreciated by most owners. They should be advised that the initial consultation might take up to an hour, with the additional involvement of nursing staff.

A thorough history may not need repeating in subsequent consultations, unless there is poor progress. In these cases, it is usually better to go back over the history to make sure nothing has been missed, rather than change treatment. If possible, avoid consultations by different colleagues. It is preferable to have one clinician in charge, ideally assisted by a nurse member of the team. This allows for better communication and a structured problem-solving approach.

Although a written protocol is helpful, a tick box approach does have limitations. Face-to-face consultations with an emphasis on listening is equally important.

**Take a detailed history**

Galen in the first century AD said: “Listen to your patient – he is giving you the diagnosis.” Many physicians have quoted this statement over the centuries and it is just as true now as it was nearly 2,000 years ago.

It is useful to be clear about the objectives in history taking. Ideally, they are to get the owner to describe the onset of the condition and its subsequent progress so that a diagnosis can be suggested.

Although there may be obvious lesions, there will usually be underlying causes that will only be suggested by a thorough history, with appropriate targeted questioning. Initially, many owners want to set their own agenda, concentrating on the problem as they see it. By allowing adequate time, the consultation can proceed in a structured way so that nothing is left out.
General medical history
A medical history before the dermatological history is important. Its objective is simply to establish whether the patient is well or unwell. If unwell, investigations to find the cause will be prioritised. There are also some conditions, such as hypothyroidism or hyperadrenocorticism, that have systemic signs and will be an underlying cause of the skin problem. Other problems, such as cardiac murmurs, need to be identified as subsequent dermatological treatment may cause deterioration.

In a general medical history, questions enquire about the diet and each body system, with abnormal signs such as coughing, sneezing, polydipsia, exercise tolerance, poor or excessive appetite and gastrointestinal signs evaluated.

Dermatological history
The objective is to encourage the owner to describe the initial lesions and what has happened since then. As implied above, it is essential to take charge and try to avoid the owner rambling – which is not always easy. A working knowledge of how dermatological diseases usually behave is important and can obviously be acquired, if necessary, by further study. Making sense of the information from the history, by asking the right questions and interpreting the answers, will be much easier with some additional knowledge.

Ask when the problem started. Young animals are more likely to suffer from parasitic diseases. Atopy usually begins in dogs between one and three years of age and is unlikely before six months or after seven years. Endocrine disease tends to occur from middle age onwards while neoplastic diseases are most frequently seen in old age.

Many conditions are pruritic. But when did this start? Can the owner remember whether the pruritus was prominent from the beginning or was the result of subsequent lesions? Secondary pyoderma will often cause a non-pruritic underlying cause to become pruritic.

It is very useful to assign a pruritus score. A simple method is to suggest that the non-pruritic animal is 0/10 and one that is constantly scratching (at night and in the consulting room), likely with prominent lesions, is 10/10. Where does your patient fit between these two extremes? Uncomplicated atopic dogs are often given a score of 4 or 5/10, for example. The pruritus score is useful because it will help with the differential diagnosis, and because the same question can be asked at subsequent consultations, suggesting deterioration or improvement (even if the owner does not perceive improvement at the time of the repeat consultation).

Is there evidence of contagion both to the owner and/or to other animals? Owners are sometimes reluctant to consider lesions on themselves but one of the advantages of adequate time is that, once relaxed, many will reconsider imparting this confidential information. Contagion from other animals is possible and more likely in those with an outdoor lifestyle. Enquiries can be made about grooming parlours, visits to shows and contact with foxes and, in the case of hunting cats, wild rodents.
Response to treatment
Unfortunately, it is not uncommon for some cases to defy a diagnosis. Many will have had multiple treatments with the involvement of several practices. Referral to a dermatology specialist would be ideal, but this is not always possible. The history in these cases, with a committed owner whose memory is good, can be very satisfying to unravel, and there are two objectives.

First, getting a description of the initial problem and how it evolved, as in the less complicated case. This will suggest in many instances a possible diagnosis.

Second, and an obvious complicating factor, is the assessment of the effect of prior treatment. Investigating this is much more time-consuming and is the reason for the longer consultation time that is always required in second opinion cases.

Some common questions include:

Have antibacterial agents been used?
Were appropriate agents with effectiveness against Staphylococcus pseudintermedius prescribed? Were they used at the correct dose and for an appropriate time?

If improvement was noticed, with subsequent relapse once the treatment was finished, the history is suggesting a diagnosis of pyoderma with an undiagnosed underlying cause. Inadequate treatment is often detected at this time due to one or more problems associated with antibacterial therapy.

Have glucocorticoids been prescribed?
What was the response? If good initially, it may suggest an allergic condition. Failure to respond, or frequent relapse increasing in severity once glucocorticoids cease, is often seen with secondary superficial pyoderma.

Have antiparasitic products been prescribed?
It is important to get the owner to describe how these were used, and whether there were any difficulties. Poor compliance is a major factor in all treatments, not just with antiparasitic drugs, and a careful evaluation is advised, particularly when pruritus escalates and becomes unresponsive to treatment with glucocorticoids. This is a common finding in an untreated scabies case.

If doubt exists on compliance, involvement of the nursing team is very useful in applying treatments or showing owners how to do it, then setting up follow-up appointments in a nurse clinic. In some cases, getting the treatment right is all that is required, even in the seemingly complicated case.

A methodical physical examination, involving all systems, is followed by a nose to tail examination of the skin. From the above, a ranked differential diagnosis list is formulated, suggesting appropriate patient-side diagnostic tests.

The British Veterinary Dermatology Study Group and The European Society of Veterinary Dermatology both host regular conferences and courses for all levels of knowledge. For information, visit: bvsg.org.uk and esvd.org

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3. Murphy, M et al. Laboratory evaluation of the speed of kill of lotilaner (Credelio™) against Aedus notwash ticks on dogs. Parasites and Vectors. 2017; 10:541.

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Therapy for feline allergic dermatitis

The second of a two-part series on feline allergic dermatitis considers therapy options for treating the disease.

Feline allergic dermatitis is a chronic disease. The clinician must make the client understand that unless the offending allergen(s) are identified and removed, a cure is not possible. The keys to the successful management of atopic dermatitis are client education and a combination of aetiologic, symptomatic and antimicrobial therapy.

Aetiological therapy

**Allergen avoidance**

This is useful if the offending allergens have been correctly identified. Fleas and food are allergens easy to avoid, while environmental allergens, such as house dust mites, pollens and moulds, are not. As house dust mite levels are much higher in bedrooms than in the rest of the house, limiting the cat’s access in these rooms may help. Benzyl benzoate spray on bedding, carpets, rugs, etc can kill the mites and degrade their allergenic metabolites.

**ASIT (allergen-specific immunotherapy)**

Allergens are administered by subcutaneous injection at increasing doses and decreasing frequency, until a maintenance regimen is achieved. Good to very good responses are obtained in 50 to 80 percent of cats treated. The mechanism of action of immunotherapy is not fully understood in the feline species; in humans and dogs, it seems that T-regulatory lymphocytes, responsible for dampening the inflammation and normalising the immune system, are stimulated.

Clinical results, as measured by a decrease in symptoms, are seen anywhere from one month to eight months after starting treatment, thus during the initial phase of immunotherapy, symptomatic treatment should be associated to improve quality of life of the patient and its owner. If the treatment is effective, this therapy is given for the rest of the patient’s life. A number of cases will require adjunct symptomatic therapy for at least part of the year.

Symptomatic therapy

Symptomatic therapy, with the aim of relieving pruritus and improving skin lesions, represents a pillar of the treatment strategy of skin allergy in cats as in dogs. Symptomatic therapy is implemented in any case the owner refuses to start a hypoallergenic diet, or to perform allergy testing or ASIT, as well as any time the cat does not accept the hypoallergenic diet, has a negative allergy test or does not respond to ASIT.

Symptomatic antipruritic therapy is also of use during the hypoallergenic diet trial (limited to the first month only, to allow evaluation of pruritus during the second month) and in the first months of ASIT, because improvement can take several months to be evident.

A selection of antipruritic and antiallergic therapeutic interventions for feline allergic disease is presented in Table 1 and described hereunder.
### Antipruritic Drug

<table>
<thead>
<tr>
<th><strong>Antipruritic Drug</strong></th>
<th><strong>Dose</strong></th>
<th><strong>Indication</strong></th>
<th><strong>Critical Points</strong></th>
<th><strong>Side Effects</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Glucocorticoids:</strong> prednisolone methyl(prednisolone)</td>
<td>From 1-2mg/kg q24h to 0.25-0.5mg/kg q48-72h</td>
<td>Rapid relief of pruritus, inflammation and lesions</td>
<td>Side effects, contraindicated in animals with diabetes, renal or hepatic disease, FIV or FeLV positivity</td>
<td>Diabetes, renal damage, skin fragility syndrome, Cushing’s syndrome, immune suppression</td>
</tr>
<tr>
<td><strong>Ciclosporin</strong></td>
<td>7mg/kg q24h for one month, then try to taper to q48-72h</td>
<td>Long term remission of pruritus and manifestations of allergy</td>
<td>Side effects, low palatability, contraindicated in animals with diabetes, FIV and FeLV positivity, risk of fatal toxoplasmosis</td>
<td>Frequent transitory vomiting and/or diarrhoea, rare anorexia, weight loss and hepatic lipidosis</td>
</tr>
<tr>
<td><strong>Ultramicronised palmitoylethanolamide (PEA-um)</strong></td>
<td>10mg/kg q24h</td>
<td>Pruritus and manifestations of allergy</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Antihistamines:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>amitriptyline</td>
<td>5-10mg/cat q12-24h</td>
<td></td>
<td></td>
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<tr>
<td>cetirizine</td>
<td>1mg/kg or 5mg/cat q24h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>chlorpheniramine</td>
<td>2-4mg/cat q8-24h</td>
<td>Allergic pruritus</td>
<td>Efficacy very variable, individual, unpredictable</td>
<td></td>
</tr>
<tr>
<td>clemastine</td>
<td>0.25-0.7mg/cat q12h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>diphenidramine</td>
<td>1-2mg/kg or 2-4mg/cat q12h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hydroxyzine</td>
<td>5-10mg/cat q8-12h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Polyunsaturated fatty acids</strong></td>
<td>0.5-1g/cat q24h</td>
<td>Decrease of pruritus and inflammation, improvement of coat quality</td>
<td>Long lag phase of about 6 weeks before effects are seen</td>
<td>None</td>
</tr>
<tr>
<td><strong>Maropitant</strong></td>
<td>2mg/kg q24h</td>
<td>Pruritus refractory to other treatment options</td>
<td>No safety data are available for long-term use</td>
<td>Not determined for long-term use</td>
</tr>
<tr>
<td><strong>Oclacitinib</strong></td>
<td>1mg/kg q24h</td>
<td>Rapid decrease of pruritus and signs of allergy, rapid development of pruritus upon withdrawal (‘switch effect’). Idiopathic feline neck pruritus</td>
<td>Not licensed in cats, no data on pharmacokinetics, dynamics, bioavailability, safety and toxicity</td>
<td>Mild increase of renal blood values</td>
</tr>
<tr>
<td><strong>Gabapentin</strong></td>
<td>10mg/kg q12h</td>
<td>Idiopathic feline neck pruritus</td>
<td>Not licensed in cats, no data on pharmacokinetics, dynamics, bioavailability, safety and toxicity</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Topiramate</strong></td>
<td>5mg/kg q12h</td>
<td>Idiopathic feline neck pruritus</td>
<td>Not licensed in cats, no data on pharmacokinetics, dynamics, bioavailability, safety and toxicity</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

**TABLE 1** Treatment of feline allergic skin disease using glucocorticoids and alternative therapeutic interventions
The use of methylprednisolone acetate injections should be limited to a few treatments a year and exclusively in intractable subjects.

**Glucocorticoids**

Glucocorticoids are very effective in treating the signs of atopic dermatitis. Prednisolone or methylprednisolone is given at 1 to 2mg/kg daily in cats until remission of pruritus (usually three to five days), then the dose is reduced to every other day and then further reduced to the lowest dose that will control the pruritus (generally 0.25 to 0.5mg/kg every other day).

Alternatively, dexamethasone or triamcinolone at 0.1 to 0.2mg/kg daily, then tapered to every 48 to 72 hours, can be used. Prednisone should not be used in cats, as it is not effectively metabolised to prednisolone.

The use of methylprednisolone acetate injections should be limited to a few treatments a year and exclusively in intractable subjects. Unfortunately, even if cats seem to be more resistant than dogs, corticosteroids may be associated with side effects, such as polydipsia and polyuria, congestive heart failure, increased susceptibility to bladder infections, diabetes and skin fragility syndrome (Figure 1).

Steroids can be a good option for short treatment courses or seasonal pruritus, but alternative treatment options should be sought for long duration therapies or in animals affected with liver or kidney disease or with diabetes.

An alternative to systemic use of corticosteroids could be represented by their use in spray formulation. In a recent study, the efficacy of a 0.0584 percent hydrocortisone aceponate (HCA) spray was evaluated in 10 cats with presumed allergic dermatitis (Schmidt et al., 2012). The patients were treated twice daily for one month, then once a day or every 48 hours thereafter.

Lesional and pruritus scores decreased significantly, and the treatment was well tolerated by most animals. HCA spray appeared to be effective and safe in these cats, although it is not licensed for use in this species.

**Ciclosporin**

Ciclosporin is a calcineurin inhibitor with a variety of immunological effects on the acute and the chronic phase of allergic dermatitis. Ciclosporin has shown the same efficacy as prednisolone in the control of symptoms of feline allergic dermatitis (Wisselink and Willemse, 2009). A lag period of about two to three weeks, in which no response is seen, occurs after ciclosporin treatment is started. Significant reduction in pruritus is expected in 75 to 85 percent of cases within one month of treatment.

To maximise absorption, ciclosporin should be administered two hours before a meal. However, recent data in dogs has suggested that giving ciclosporin with food does not alter clinical outcomes. No information is available for cats.

Side effects reported are transitory vomiting, diarrhoea, reversible gingival hyperplasia and rare weight loss and hepatic lipidosis. The initial daily dose in cats is 7mg/kg for a period of four weeks, then tapered to every other day, then to twice weekly, if results are obtained.

Cats should be FIV and FeLV negative and, due to rare reported cases of fatal acute toxoplasmosis infection, they should not be allowed to eat raw meat, scavenge or hunt.
As of today, there is no antihistamine with proven efficacy in cats for the treatment of allergic skin disease

**Antihistamines**
There is little evidence-based information on the use of antihistamines in cats, as most studies are old and not controlled. In particular, cetirizine has been the object of some open studies that reported a repeatable and sustainable reduction of pruritus in feline allergic cats. Recently, a randomised, double-blind, placebo controlled, cross-over clinical trial was performed to assess the efficacy of cetirizine administered orally at the dosage of 1mg/kg in cats with allergic dermatitis (Wildermuth et al., 2013). This study found no significant difference between treatment and placebo.

As of today, there is no antihistamine with proven efficacy in cats for the treatment of allergic skin disease. Results are variable and unpredictable, and it may be necessary to try several before finding the one that is effective on a particular patient.

**Palmitoylethanolamide**
Palmitoylethanolamide (PEA) is a naturally occurring lipid with anti-inflammatory properties. It down-modulates mast cell degranulation, which proved to be effective in the treatment of cutaneous hypersensitivity disorders in humans and animals.

A preliminary study conducted on 17 allergic cats showed that at the dose of 10mg/kg q24h for 30 days it was able to improve pruritus, erythema, alopecia and lesions of the eosinophilic granuloma complex in two thirds of patients (Scarampella et al., 2001) (Figures 2 and 3).

A large controlled feline field study is currently in the final stage and results will soon be presented. This product, which has just been released to the international market (Redonyl Ultra, Dechra, UK), has the advantage of an excellent tolerability, can be used in mild to moderate cases and can also be used as a steroid sparing agent.

**Omega-3 and omega-6 fatty acid supplementation**
Omega-3 and omega-6 polyunsaturated fatty acids (PUFAs) may contribute to the control of pruritus and improve the epidermal protective lipid barrier, which was shown to be defective in allergic cats as in dogs.

Studies on efficacy of fatty acids are old, not controlled and conducted with unclear inclusion criteria, different formulations and protocols. With all these caveats, PUFAs are safe, can improve coat quality and can improve pruritus and lesions associated with allergy. A lag period of 4 to 12 weeks occurs before any benefits are seen. Like antihistamines and palmitoylethanolamide, PUFAs can be used as steroid sparing agents.

**Maropitant**
There are anecdotal reports of the successful use of maropitant at the dose of 2mg/kg in cases of refractory feline pruritus (Maina, personal communication), alone or in combination with ciclosporin and/or corticosteroids. It is hypothesised that maropitant could inhibit pruritus by blocking the binding of substance P to NK1R at different levels. Interestingly, a human analogue of maropitant, aprepitant, has been reported to be effective in refractory pruritus in humans.

**Oclacitinib**
Oclacitinib has recently been licensed for the treatment of allergic pruritus and atopic dermatitis in dogs. It is a janus kinase inhibitor with a rapid onset of action and can quickly and effectively inhibit pruritus and clinical signs of atopic dermatitis in dogs.

Although not licensed in cats, oclacitinib could represent an option for the treatment of refractory feline allergic patients. A recent open pilot trial in feline allergic dermatitis determined that a dose of 0.4 to 0.6mg/kg could improve lesions of allergy and pruritus in 5 out of 12 cases (Ortalda et al., 2015).

Preliminary, yet unpublished, results of a double-blind, randomised methylprednisolone-controlled trial on the use of oclacitinib at 1mg/kg q12h in 38 cats with allergic dermatitis did not find a significant difference in efficacy if compared with methylprednisolone given at the same dosage (Noli et al., 2017).

However, in this study, 25 and 50 percent of cats experienced an increase above the normal range of creatinine and urea, respectively. Pharmacokinetics, pharmacodynamics and toxicity of oclacitinib in cats are not known, and this drug should be used with caution in the feline species.

In some cats affected with head and neck pruritus, it may be impossible to find an underlying allergic cause, and these cases are thus considered idiopathic. Some cats affected with “feline idiopathic ulcerative dermatosis” open large wounds on their neck by scratching (Figure 4).

For these cases, reports of single cases treated with oclacitinib 1 to 1.5mg/kg once daily, gabapentin 10mg/kg twice daily or topiramate 5 mg/kg twice daily have been published.

**Conclusion**
There are many treatment options for feline allergic dermatitis, from allergen-specific immunotherapy to topical or systemic symptomatic therapy. Although they seem to be more resistant to the side effects of glucocorticoids, these should be avoided for long treatment courses and alternatives, such as ciclosporin, PEA or PUFAs, should be used instead.
Can proteins improve skin and coat condition?

As the main constituents of the skin and coat, proteins should be given prime consideration in dermatology cases.

TRACY WEST
NUTRITION MANAGER, VIRBAC

Tracey West, BSc (Hons), RVN, is Nutrition Manager at Virbac. Tracey holds an honours degree in animal science and qualified as an RVN in 2008. She spent 12 years in small animal practice before joining Virbac’s nutrition team in 2016.

Nutrition has implications in all aspects of skin metabolism including cell renewal, wound healing, immune reactions and combating chronic inflammation. There are a number of ways, therefore, in which nutrition can have an impact on dermatology. Nutrition must not result in undesirable effects through deficiencies, imbalances or allergies. It must contribute to improvements in the quality and appearance of the coat, and nutrition must assist and enhance the skin’s barrier effect providing better prevention against dermatoses and dermatitis.

The importance of proteins

The cutaneous tissue (skin, subcutaneous tissue and coat) forms the largest organ of the body: it represents 12 to 24 percent of the weight of a dog. Moreover, it undergoes an intense renewal process: the epidermis is replaced approximately every 22 days in dogs, and the annual production of hair varies (depending on the breed) between 60 and 180g per kg of weight. These few figures show the intense level of skin and coat requirements, both in terms of their functions and structure.

Proteins represent about 95 percent of the hair structure in cats and dogs. It is reported that 25 to 30 percent of daily protein intake is systemically used solely for skin and coat renewal requirements. Any protein deficit quickly results in obvious effects on the coat: hair diameter and the size of the pilous bulb reduces, hairs become brittle, pilous follicles become dormant and the skin dies.

A protein deficit also affects the skin in the form of keratinisation anomalies: the skin becomes thin and less supple and healing of wounds is adversely affected. Sores and decubitus ulcers are observed as possible consequences of protein deficiencies. The protein deficit is also expressed as immune incompetence and as much greater sensitivity to skin injuries and infections.

The minimum recommended protein intake is 18 percent DM for an adult dog and 25 percent DM for an adult cat. However, the requirement becomes 25 to 30 percent DM for dogs and 30 to 45 percent DM for cats if skin and coat maintenance is of prime importance.

Qualitative requirements

The quantity of protein is not the only factor to be taken into consideration; proteins must also be easily digestible and provide all the essential amino acids required by the cutaneous metabolism. A single limiting amino acid in the diet is all that is needed to disturb protein synthesis and for the dermatological signs described above to appear.

Amino acids and the structure of the skin and coat

Keratin is an essential constituent of the stratum corneum of the epidermis and of hair. It is essentially composed of the sulphur-containing amino acids methionine and cysteine. Sulphur-containing amino acids are most abundant in proteins from an animal source.

Amino acids and coat colour

The quality of the protein intake can affect the colour of the coat. The synthesis of melamins, which are responsible for the colour of the coat (dark eumelanins and yellow and orange pheomelanins), essentially depends upon a sufficient precursor amino acid intake. An insufficient intake of aromatic amino acids (phenylalanine and tyrosine) can adversely affect the synthesis of eumelanin: a black cat or dog can acquire areas of brown lustre and tawny colours become lighter in hue.

Amino acids and cutaneous metabolism

Special attention must also be paid to levels of glutamine and arginine in the diet. Glutamine is the preferred energy-source substrate for rapidly regenerating cells, such as immune cells and fibroblasts. Arginine plays an important role in immunity regulation. It also encourages the synthesis of collagen and acts as a precursor of proline. Finally, the production of nitric acid from arginine stimulates the expression of the vascular endothelial growth factor.

Conclusion

A high level of animal protein in the diet ensures a high intake of sulphur-containing amino acids, essential for proper regeneration of the cells of the skin and of the coat. A high protein intake also helps to reduce the risk of any possible deficit of tyrosine and of amino acids which are necessary for the synthesis of melanin coat pigments.

A full reference list is available on request.
Minimising stress during rabbit examinations

How to tell if a rabbit is agitated and considerations for keeping stress levels as low as possible during visits to the veterinary practice

Rabbits are becoming one of the more common animals seen in practice, and with this comes a rising expectation from owners about the level of care available. Our understanding of the diseases they suffer from is also developing and we have a greater range of differentials than ever before. No longer is it just "snuffles" and "stasis", but more an investigation into these as signs of another problem.

As a result, rabbits are visiting vets more frequently; they are spending longer in veterinary hospitals and undergoing more complex procedures. This can be stressful for a prey species and can worsen an individual's condition. There are, however, ways to reduce stress during examination and hospitalisation of the pet rabbit.

Recognising signs of stress
Rabbits are a prey species, so, by nature, they hide signs of disease well. However, they do show behavioural and physiological traits that allow us to determine their state of mind, with stress and fear manifesting in similar ways.

Behaviour
Stressed rabbits will tend to hide in the back corners of boxes or under things. In some instances, this can turn into aggression with the animals rushing at and biting anyone trying to open the cage or pet them. Often these rabbits will also thump loudly to warn other rabbits and try to dissuade the "predator" from coming at them.

Appearance
The stressed or frightened rabbit will often try to make itself as small as possible, either by "hunching" up or lying flat to the ground, in a non-relaxed posture. The eyes are often wide with lids retracted and pupils dilated. Breathing rate will be elevated, often with short, sharp breaths, and abdominal and leg muscles will be taut.

Improving transport
When preparing rabbits for transport there are several things that can be done to allow acclimatisation and reduce stress. A rabbit can be trained to be less fearful of the carrier by leaving it with them in their enclosure. Putting treats and food inside can encourage them to enter and explore, and they will often start to see it as a "safe shelter".

When the rabbit is inside and ready for transport, a towel can be draped over the carrier to make them feel more secure. However, ventilation must be provided, and weather conditions taken into account so the rabbit does not overheat.

Pet Remedy sprayed onto the towel may help to calm the rabbit during transport and other calming agents such as nutraceuticals, eg Nutracalm, can be given to the rabbit in food in the days leading up to the transport event.

Desensitisation might also be possible through making short "dummy runs" in the car, so that the rabbit is not just put in the box to be transported to a practice. Rewards and treats can be used after such events to help with training.

Reducing stress during examination
Providing rabbit-only clinics or having a quiet seating area in the waiting room away from prospective predators would be considered gold standard. Even if this area is just away from dogs, that is a good start – especially if there is a visual barrier. Rabbit-only clinics can be run in a similar way to those for cats, with set times of the day for rabbit consultations. Providing towels to cover carriers in the waiting area can help make rabbits feel more secure.

In the consultation room, try to keep the environment as calm and quiet as possible. Dimmer lights may help; rabbits see better in light levels equivalent to dawn and dusk, so bright lights can be startling to them.

Tips for handling the rabbit
When handling the rabbit out of the carrier, try to provide support for all sides of the rabbit, as well as from beneath. This may mean having an arm down either side of the rabbit with your hands cupping the hind legs, and the front legs sitting on or near the curve of your elbow.

IAIN COPE
PRACTICE OWNER AND VETERINARY SURGEON, VETS4PETS NEWMARKET

Iain Cope, BSc (VetSci) (Hons), BVM&S, CertAVP(ZM), MRCVS, is an RCVS Recognised Advanced Practitioner in Zoological Medicine. Iain graduated in 2006 from Edinburgh University and gained his certificate in Zoological Medicine in 2011.

JESSICA HAWE
VETERINARY SURGEON, VETS4PETS NEWMARKET

Jessica Hawe, BVSc, MRCVS, graduated from the University of Liverpool in 2016 and worked in small animal practice before completing an internship in wildlife veterinary work and conservation in South Africa. She is studying towards a Master’s in Conservation Science.
Carriers that can be opened from above are the most suitable; with these carriers, the rabbit should not feel as though a predator is approaching it through a small entrance and “dragging” it out.

When picking a rabbit up from above, it is again best to approach gently and let the animal know you are there. Then scoop and cup the rabbit to you with your arm on the outside and your body on the other ([Figure 1](#)). Having the rabbit with its head pointing inwards towards your elbow is usually more reassuring for them, though some individuals do like to look out at where they are going.

The key is gentle, but confident, restraint and working slowly and quietly around the animal. Palpation is best done with the rabbit in a normal sitting position, with its rear end again in towards one of your elbows. The same hand then cups and restrains the rabbit at its front, often by gently holding at the front legs and under the chin/neck. The opposite free hand can then be brought under the rabbit to palpate the abdomen. This can be made easier by slightly raising the cranial end of the rabbit with the restraining hand ([Figure 2](#)).

When examining the head, approach gently from the side, letting the rabbit know you are there. Never come straight towards the mouth and nose – they will react and flinch because they have a blind spot at this location. Also try to avoid stimulating the whiskers; these are very sensitive and touching them can startle the rabbit if this happens via their blind spot.

You may have seen reports in recent literature about scruffing or turning rabbits upside down for examinations. Never scruff to pick up a rabbit. This method is stressful and can result in serious injuries if the rabbit decides to kick and protest.

Secondly, try not to turn a rabbit upside down for examinations if possible; this will induce a significant stress response. It should only be used if no other option is available and if it is in the interests of the rabbit to do so (ie the potentially induced stress is outweighed by the procedure being undertaken, or if by doing it without turning the rabbit, the stress is actually greater than if the rabbit is restrained upside down).

If a patient is particularly difficult to handle, consider other methods of restraint, such as creating a “bunny burrito” using a towel ([Figure 3](#)). If a rabbit is restrained upside down, try to keep this for as short a period as possible and if needed, give breaks in between any procedures.

### Hospitalisation and procedures

As with the consultation room, forethought is necessary to reduce stressful stimuli as much as possible. Ideally, rabbits should be kept in their own ward away from the sights and sounds of predators such as ferrets, dogs, cats and large birds of prey.

The kennels should be equipped to provide a secure and familiar environment, including a suitable drinking receptacle, normal diet and a hiding area, which can be ascertained during admission questioning.

Using a Pet Remedy plug-in diffuser, or other similar calming aids, may help in the wards. Allowing bonded pairs to come in together will certainly provide reassurance and reduce stress. Colleagues should be made aware of any special needs or personality traits the rabbits may have, so these can be considered. Restraint and handling for procedures should follow a pattern similar to that in the consultation room, ideally at a time when predator species are not out in the same area. 

---

**FIGURE (1)** When holding a rabbit in consultation, having the rabbit’s head pointing towards the elbow is usually reassuring for them.

**FIGURE (2)** When restraining a rabbit for a physical examination, it is usually best to hold the rabbit in a normal sitting position.

**FIGURE (3)** An alternative restraint technique, known as the “bunny burrito”, can be used for difficult patients.
Critical care for rabbit patients

An outline of the journey from dependence to independence in critically ill rabbit patients

Critical ill patients are often almost completely dependent on veterinary intervention for survival, and the question “Should care continue?” must be answered satisfactorily early in the process.

As a prey species, rabbits pose certain challenges when considering provision of critical care. In particular, the acute effects of adrenaline release (elevated heart rate and blood pressure, shunting of blood away from non-essential organs such as the gut), as well as the more chronic effects of adrenal stimulation (likely related to cortisol release causing immunosuppression) must be acknowledged and accounted for.

Both acute and chronically stressful situations can confound even the best attempts at care, so the question “Does the likely end outcome justify the means required to achieve this?” is a crucial one.

Regular goals and expected outcomes must be set and critically evaluated in terms of both veterinary and nursing care – the two are completely interlinked – in order to assess the progress of the patient and allow for adjustments in care. Knowledge of the individual animal, the owners and the larger situation will dictate at what point the patient can be discharged from care.

Both acute and chronically stressful situations can confound even the best attempts at care, so the question “Does the likely end outcome justify the means required to achieve this?” is a crucial one.

Planning care

Planning care allows members of the care team to establish realistic outcomes and frame a timeline for specific outcomes. Evaluate the success or otherwise of current interventions and establish goals for each patient; these may be short, medium or long term, and the criteria for judging success must be defined.

Implementing care

Once the plan has been decided and the criteria for success or otherwise defined, care can start to be implemented. Regular monitoring of the effectiveness of care is crucial. Interventions should be on time and carried out promptly in the face of a change in the patient’s condition.

The critical care provision process

1. Assessment of presenting condition(s) in terms of dependence on intervention for survival (what is going on?)
2. Diagnosis of the underlying causes (why are these things happening?)
3. Planning of care (how are we going to correct and treat these conditions?)
4. Implementation of care (when do we need to decide if the treatment is working?)
5. Evaluation of outcomes – a dynamic process (evaluate, adjust and repeat)
### Evaluation of care

Are goals being met? If not, why not?
Are additional issues arising? If so, what can be done to minimise or avoid these?

Care evaluation can be continuous, dependent on the response of the patient, intermittent (possibly because assessment is stressful) or summative – at the end of treatment – being a consideration of the success (or not) of the whole clinical process.

### Assessing pain

Rabbits are very good at hiding pain, and once pain signs are obvious, the condition is generally advanced. The clinical team must all be stringent in their pain assessment of rabbit patients, and if there is any doubt, analgesia should be provided.

Pain assessment needs to be consistent. The use of clinical parameters such as heart rate/respiratory rate and body temperature gives very non-specific information.

Employing the rabbit Grimace Scale can improve pain recognition, although the changes can be subtle. Scoring inactive pain behaviours such as flinching, wincing and belly pressing can also be helpful.

There is no composite method for pain scoring in rabbits that has been validated; however, using a combination of the methods above will improve pain recognition.

### Conclusions

Owner expectations for rabbits are the same as those for cats and dogs; it is up to us to live up to these. Rabbits are prey animals – they hide signs of pain and distress, so you have to go hunting for them. Often, when a rabbit is exhibiting obvious signs of distress, the disease process is more advanced than would be expected in more familiar species.

Supporting these patients on their journey from dependence to independence can be challenging and relies on input from the whole veterinary team.

---

### Common monitoring parameters for rabbits

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart rate</td>
<td>• Trends are more valuable than single assessments</td>
</tr>
<tr>
<td></td>
<td>• Alterations with changes in pain, electrolyte balance, blood volume, cardiac capability</td>
</tr>
<tr>
<td>Pulse rate</td>
<td>• Good indicator that each heart beat is effective</td>
</tr>
<tr>
<td></td>
<td>• Where the pulse can be felt reflects the blood pressure</td>
</tr>
<tr>
<td></td>
<td>• The more peripherally a pulse can be felt, the higher the blood pressure – the central auricular artery, the pedal artery and the femoral artery are all easily accessible in rabbits</td>
</tr>
<tr>
<td>Respiratory rate</td>
<td>• Visual assessment of chest excursion</td>
</tr>
<tr>
<td></td>
<td>• Depth and character of respiration is also important</td>
</tr>
<tr>
<td></td>
<td>• Capnography can be used as a measure of effectiveness of ventilation</td>
</tr>
<tr>
<td>Gut motility</td>
<td>• Blood flow is shunted away from gut in situations where blood volume is reduced or there is an adrenaline response to acute pain or stress</td>
</tr>
<tr>
<td></td>
<td>• Assess by listening to the gut sounds on each side of the abdomen using a stethoscope and monitoring output – normal rabbits will have two to three gut contractions every minute, and will produce 150 or more hard faecal pellets each day</td>
</tr>
<tr>
<td></td>
<td>• Note that altered gut motility is a potential cause of electrolyte and fluid imbalances</td>
</tr>
<tr>
<td>Blood glucose</td>
<td>• Normal blood glucose is approximately 4 to 8mmol/L</td>
</tr>
<tr>
<td></td>
<td>• Elevated blood glucose can be a sign of stress in rabbits (like cats) (15 to 18mmol/L)</td>
</tr>
<tr>
<td></td>
<td>• Very elevated levels (&gt;25mmol/L) can be associated with gut blockage (however, not all rabbits with a blockage have elevated glucose and not all rabbits with elevated glucose are blocked)</td>
</tr>
<tr>
<td></td>
<td>• Generally monitored as a trend over a period of time in association with other parameters and diagnostic modalities</td>
</tr>
<tr>
<td>PCV/total protein</td>
<td>• Used to assess hydration status and effectiveness of fluid therapy</td>
</tr>
<tr>
<td>Lactate</td>
<td>• Lactate metabolism in the rabbit is very different to other species</td>
</tr>
<tr>
<td></td>
<td>• Reference ranges are also wider, and this is probably related to caecotroph production</td>
</tr>
<tr>
<td></td>
<td>• Single measurements are not helpful for either diagnosis or prognosis</td>
</tr>
<tr>
<td></td>
<td>• Serial measurements are better indicators – critically ill rabbits tend to have low plasma lactate levels and an increase with improvement in other diagnostic factors is a positive marker; this is opposite to other species</td>
</tr>
<tr>
<td></td>
<td>• However, a single high lactate level in an anorexic rabbit with metabolic acidosis may indicate metabolic distress</td>
</tr>
</tbody>
</table>

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**TABLE 1** Common monitoring parameters for rabbits
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Organised by: CloserStill
Dealing with the painful eye

Ocular discomfort with different conditions appears to vary between species, but it is best to use the precautionary principle in most cases.

If you have been unlucky enough to experience a corneal ulcer, you will know how excruciatingly painful such a trauma can be. And yet, every week, I see a dog or cat with a strikingly similar ulceration, with a wide-open eye and no apparent pain (Figures 1, 2 and 3). As we’ll see later, this is not universally the case and some animals can have considerable ocular discomfort with an epithelial erosion, but many do not.

One of the problems with primary open angle glaucoma in humans is that the condition is pain-free, and it is not until significant blindness ensues that the problem is made evident. That’s why people with a family history of glaucoma get free eye checks each year to catch a rise in pressure before blindness occurs. Yet, glaucoma in many dogs is an acutely painful condition. How are we to correlate ocular pain in people, where nociceptive signs can be reported verbally, and pain in ocular conditions in animals where such overt reporting of the pain is clearly impossible?

How are we to assess ocular pain in animals and what are the best ways of treating it? Pain is defined as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage”. We can relatively readily determine the sensory part of the painful experience in terms of the anatomy and neurophysiology of the nociceptive response, but evaluating the emotional response is difficult in different humans let alone in companion animals.

Causes and cures for ocular pain

The ocular surface is, it is said, the most highly innervated area of the body, at least in the human. This may not be the case in all dog or cat breeds – we know that brachycephalic animals have a lower number of corneal nerves – and this may explain why corneal ulcers seem less painful in many companion animals than in people.

Having said that, ectopic cilia, where eyelashes grow out from the Meibomian glands of the lid at right angles to the corneal surface, can be exceptionally painful. One of the things that we see in such cases is a miosis, a constriction of the pupil. This seems to occur through an antidromic reflex in the trigeminal nerve which supplies the sensory nerves to the corneal surface. Severe ocular surface trauma leads to a breakdown of the blood aqueous barrier and a

---

**FIGURE (1) AND (2)** This boxer has a corneal ulcer associated with an eyelid papilloma as shown in the close-up image but seems to show no ocular discomfort at all.
The Corneal Focus range encompasses a range of products and services to help optimise corneal health in dogs, cats, horses and exotic pets.

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- **Ocrygel** - Carbomer-based tear replacement gel for hydration and lubrication of the eye
- **Viskyal** - Hyaluronic acid-based tear replacement gel for hydration and lubrication of the eye
- **Twelve** - Hyaluronic acid-based tear replacement gel plus vitamin B12, potassium and magnesium (factors involved in cellular multiplication)
- **Ocryl** - Ocular and periocular cleaner with ingredients to help reduce tear staining
- **Clerapliq** - Innovative RGTA matrix targeting, to help restore and regenerate the corneal extracellular matrix

Ask your TVM Territory Manager or visit www.tvm-uk.com for a clearer view of our Corneal Focus range.

*Use medicines responsibly. www.noah.co.uk/responsible. For further information and to view the full Summary of Product Characteristics, please contact TVM UK, Crown House, Gloucester Road, Redhill RH1 1FH. tvm-uk.com*
spasm of the iris and ciliary body muscles, which itself can lead to substantial ocular pain.

This is without doubt the case in uveitis, intraocular inflammation (Figures 4 and 5), which can be particularly painful. Here and in corneal ulceration with reflex ciliary spasm, topical atropine can be really helpful in reducing ocular pain. The mechanism of ocular surface pain revolves around free nerve endings in the epithelium of the cornea and topical analgesics such as proxymetacaine can be helpful in the short term but may be epitheliotoxic if given over a prolonged period. Topical non-steroidal anti-inflammatories can be useful in such circumstances.

It is not surprising that ocular surface trauma and intraocular inflammation should cause ocular pain, but another serious ocular condition with pain as a frequent, but not universally present, sign is glaucoma or rise in intraocular pressure. The acute rise in intraocular pressure in most canine glaucoma cases results in substantial pain which can be difficult to manage without a reduction in the pressure, but it can be the case, as in people with progressive open angle glaucoma, that animals (dogs or cats) with chronic glaucoma do not appear to be in pain.

In fact, often, when the raised pressure is controlled medically or by enucleation, suddenly owners realise that what they had taken for the animal just getting gradually older is actually a lethargy induced by chronic unremitting pain. This shows us just how important it is to ensure that any ocular condition which could cause pain is as well managed as possible, both by resolving the ocular disease and by providing pain relief either through non-steroids, atropine, classical opiates or tramadol.

**Ocular pain in prey species**

Finally, we should talk about ocular pain in rabbits and guinea pigs: prey species which, when I was a student, were a child’s pet nobody spent much money on or really worried about particularly. Thankfully now things have changed, but even so, our recognition of pain in such animals can be woefully inadequate. The whole raison d’etre of one of these prey animals is to cope with any painful focus in the eye and not let it influence behaviour, for fear of being picked out by a marauding predator and eaten!

So maybe a rabbit with glaucoma or a guinea pig with keratitis is actually in substantial discomfort but just not showing it (Figure 6). And who knows, that may be the case with other pets such as dogs and cats. They may not be blinking and squinting, they may not be rubbing their eyes continually, but if a lesion is present that would stimulate pain receptors in us or a dog or cat, perhaps we should be putting in place the precautionary principle and giving them pain relief even though we have not got hard and fast evidence that they need it. Their welfare must be our top concern.
Potential applications for corneal cross-linking in ophthalmology

Corneal cross-linking has been shown to be a useful tool for arresting corneal melting and stabilising the cornea in companion animals.

Ben Blacklock, BVSc (Hons), DipECVO, MRCVS, graduated from the University of Bristol in 2009. He completed a small animal internship and an EDVO Residency Programme. Ben later joined the Ophthalmology Team at Dick White Referrals and gained his Diploma of the European College of Veterinary Ophthalmology.

Corneal cross-linking (CXL) is an exciting new treatment modality available in veterinary ophthalmology. Studies into the use of CXL started in the late 1990s in human ophthalmology and the technique is now in widespread use in the human field.

The stroma of the normal cornea is comprised predominantly of collagen fibrils arranged in parallel bundles. There is a natural degree of “cross-linking” between adjacent collagen fibrils; these cross-links are covalent bonds that “anchor” the fibrils together, improving the biomechanical stability of the cornea. An increase in corneal cross-linking occurs naturally with age.

The aim of medical CXL is to increase the number of covalent bonds between the collagen fibrils – this is achieved by exposing riboflavin (vitamin B2) soaked collagen to ultraviolet light, thus inducing bonds to form. The riboflavin acts as a photosensitiser when exposed to UV-A light, with a wavelength at the riboflavin absorption peak of 370nm. Free oxygen radicals are generated, resulting in a photopolymerisation process, which introduces the additional cross-links within and between collagen fibres up to a depth of 300μm.

With increasing cross-linking, the treated corneas are stiffer and more resistant to enzymatic digestion (increased biomechanical and biochemical stability). Additionally, there is reactive oxygen species-induced damage to microorganisms in the irradiated area.

The technique is used primarily to treat keratoconus in people. At Moorfields Eye Hospital, for example, many patients have been treated with great success – of 4,620 treatments performed, only two eyes went on to require corneal transplants. Prior to the availability of CXL, 20 percent of patients with keratoconus would eventually require a corneal transplant. However, there has also been some research into the use of CXL as an adjuvant treatment to treat infectious, melting keratitis.

**BEN BLACKLOCK**

**BASIC PROTOCOL FOR CXL USING THE PESCHKE VET SYSTEM:**

1. Sedate or anaesthetise patient.
2. Apply riboflavin to cornea: one drop every two minutes for 15 to 20 minutes (to saturate cornea) (Figure 1).
3. Inspect anterior chamber for yellow discolouration (indicates good saturation of cornea with riboflavin – apply more drops if insufficient saturation).
4. Insert eyelid speculum.
5. Rinse cornea with saline to remove excess riboflavin (to avoid riboflavin shielding).
6. Set UV power – 45mW/cm².
7. Turn on CXL system, focus beam on cornea (45 to 55mm distance between CXL unit and eye) (Figure 2).
8. Adjust beam diameter to irradiate desired area.
9. Illuminate cornea for two minutes (unit will automatically stop) (Figure 3).
10. Continue medical treatment (eg topical chloramphenicol, atropine or serum, as clinically indicated).
11. Monitor carefully while healing takes place.

**FIGURE (1)** The riboflavin is formulated with HPMC to create a viscous eye drop.
It is this later use that is of most interest in veterinary ophthalmology. Several studies have highlighted CXL efficacy at arresting corneal melting in companion animals and, with drug-resistant microorganisms becoming an increasing problem, the antimicrobial effects of CXL may become more important in the future. Several studies in the veterinary literature have shown that CXL is effective at arresting corneal melting and stabilising the cornea.

The mainstay of therapy for deep stromal corneal ulcers has, for many years, been corneal grafting procedures. Conventional wisdom suggests that any ulcer that extends to more than 50 percent of corneal depth should receive a graft of some sort. More recently, however, some veterinary ophthalmologists have advocated medical management for even very deep corneal ulcers, and occasionally small descemetocoeles. While appropriate case selection of which ulcers to treat medically or surgically is crucial (being a combination of science and art), if a cornea is allowed to heal without surgical intervention, the visual outcome (in terms of corneal scarring) is often much better. CXL is proving to be a very useful tool in the management of ulcers.

While the treatment of corneal ulcers via CXL is currently the main usage, there are potential applications for other corneal disease, such as endothelial dystrophy, which results in progressive corneal oedema. Early results using CXL to treat this disease showed only a transitory improvement. However, as our understanding improves and the technique is refined, better results are likely in the future.
A look through the latest literature

Effect of body position on intraocular pressure in healthy cats
Masoud Selk Ghaffari and Ahoora Arman Gherekhloo, Islamic Azad University, Alborz, Iran

Measurements of intraocular pressure (IOP) are an important element of routine ophthalmic examinations and may help identify various conditions such as uveitis and glaucoma. The authors investigated the effect of changes in body position on the results of IOP measurements. During examinations of 16 clinically normal cats, they found that the readings in subjects in dorsal recumbency were significantly higher than those when the same animals were in sternal or right lateral recumbency.


Tear fluid collection in companion animals using ophthalmic sponges
Lionel Sebbag and others, Iowa State University, Ames

Samples of tear fluid can provide useful information in various contexts, such as monitoring drug pharmacokinetics and discovering biomarkers of ocular and systemic disease. Microcapillary tubes and Schirmer strips are the two standard methods for obtaining samples but using the former can scratch the eye and the latter requires processing that may affect tear quality. The authors investigated the performance of an alternative collection method, ophthalmic sponges, comparing one product made of cellulose and another of polyvinyl acetal (PVA). They showed that the technique is well tolerated and provides adequate quantities of material in a short period. They conclude that the PVA product is the more promising option given its greater recovery ratio. The product is also more easily handled and allows more effective release of certain components of the tear fluid, notably cytokines. *Veterinary Ophthalmology, 21*, 249-254.

Acute-onset endophthalmitis in dogs following phacoemulsification
Eric Ledbetter and others, Cornell University, Ithaca, New York

The surgical removal of cataracts by phacoemulsification is a highly successful method for restoring vision in veterinary patients. Potential complications of this procedure in human patients are post-operative bacterial and sterile endophthalmitis but there are no published data on the incidence of these events in animal patients. In 2,630 procedures in dogs, the incidence of infectious endophthalmitis was just 0.1 percent while another 0.11 percent had sterile inflammatory disease. However, all eyes that developed infectious endophthalmitis responded poorly to medical treatment and were enucleated.

*Journal of the American Veterinary Medical Association, 253*, 201-208.

In vitro effects of three blood-derived products on equine corneal cells
James Rushton and others, University of Veterinary Medicine, Vienna, Austria

Blood products such as platelet-rich plasma (PRP) and plasma rich in growth factors (PRGF) have shown promising results in the treatment of non-healing corneal ulcers in human patients but there appear to be no published studies on similar trials in horses. The authors examined the effects of PRP, PRGF and serum derived from healthy horses on the behaviour of equine corneal cells *in vitro*. The cell proliferation rate increased with PRP treatment, remained constant with PRGF treatment and declined on exposure to serum. In addition, their migration capacity was significantly enhanced with PRP treatment, suggesting that further *in vivo* trials may be warranted.


Topical ophthalmic ganciclovir gel in treating ocular canine herpesvirus-1 infection
Eric Ledbetter and others, Cornell University, Ithaca, New York

Canine herpesvirus-1 was originally identified as a cause of infections in foetal and neonatal puppies but has now been shown to be a significant cause of disease in adult dogs, including various ocular conditions. The authors investigated the efficacy of an antiviral gel in managing experimentally induced ocular CHV-1 disease. Their results indicate that topical administration of the 0.15 percent ganciclovir ophthalmic gel was well tolerated and effective in decreasing clinical disease scores, ocular tissue inflammation and the duration of virus shedding.

*American Journal of Veterinary Research, 79*, 762-769.
Vaccines practices and antibiotic milk failures

The MilkSure programme aims to reduce the number of milk samples failing antibiotic tests through vet and farmer collaboration.

At the BCVA Congress, 18 to 20 October 2018, a workshop session will enable veterinary surgeons to discuss what has been achieved to date with the industry-driven MilkSure programme and the lessons learned. Delegates are encouraged to consider how they and their clients have engaged with the training. Owen Atkinson, who developed the veterinary surgeon and farmer manuals, has received formal assessments from participants and direct comments from individuals. His observation is that from slow beginnings, the uptake is “taking off”.

At the heart of the MilkSure initiative is the farmer’s own veterinary practice. Approximately 140 veterinary surgeons, from over 70 practices, have completed the veterinary module, but that is only part of the picture. The farmer client is dependent on their veterinary surgeon to deliver the training through to certification, but the client’s selected vet does not have to have taken part in the MilkSure veterinary training module. The three-hour involvement includes technical essentials, a specific herd risk assessment and a certifying online test. It is up to the farmer to nominate a vet and to pay the vet’s fees – typically £250. By the close of 2018, 1,000 farmers are expected to be certified.

In the past 12 months to June 2018, 1,364 samples failed the antibiotic tests on the content of their bulk tank. Tim Hampton, chairman of the Dairy UK Antibiotics Working Group, advises that 581,873 tanks were tested from a total of some 2.3 million bulk tank collections. Some milk purchasers test daily, others weekly and the smaller buyers test monthly.

An important part of the forthcoming discussion is the source of antibiotic failures and the reality that the tests are becoming more effective, the frequency of testing for many producers is likely to increase and that when the antibiotic is detected, the milk has already entered the food chain.

Approximately 12 percent of herds had one or more failures and one in four herds had repeated failures in the year. It is in the interests of veterinary practices to know which of their farmer clients have antibiotics in their milk because, apart from the heavy penalties for the farmer (including the potential loss of their milk sales contract), the prescribing veterinary practice is likely to appear in a little black book, somewhere.

Involvement of the milk purchaser
The milk purchasers, for example Mueller and Arla, are advising all farmers who have an antibiotic failure to engage with MilkSure, involve their veterinary surgeon and complete the certification within three months. Two other smaller buyers with a total of 100 producers have already had all their producers certified, and another dairy is asking their producers to certify within the coming months. It is expected that all milk producers will be encouraged to engage in due course.

The various buyers are promoting involvement in different ways. For example, Arla has purchased 500 registrations at £65 and local agricultural managers are contacting farmers to encourage involvement. The uptake is widespread with clusters of veterinary practices and farmers participating in the intensive dairying areas, but geographically no locale is dragging its feet. An interactive map showing participating veterinary practices is available at milksure.co.uk. The number of blue ticks is expected to increase throughout 2018.

Course structure and developments
Owen Atkinson is very aware of the need to update the course as participants engage. A point of detail is that the workbook and manual are only printed in batches of 100.
Each batch can therefore be "tweaked" as required for ongoing accuracy and understanding. Technical developments continue and need to be reviewed and incorporated.

The online test has 10 questions, and eight have to be answered correctly. The 10 questions are selected at random from a pool of 40. The farmer can repeat the test but the next batch of questions is likely to be different. It is this test that has received some negative comments; some herdsmen have found some of the questions difficult to understand. Veterinary terminology may not equate to herdsmen and farmer speak. For some people milking cows, English may not be their first language and although they manage perfectly well on the farm, viewing and understanding the on-screen questions presents difficulties. However, the test may be conducted with the farm vet so that any problems can be identified and rectified at the time.

Veterinary surgeons have commented that sitting next to the candidate to complete the test has led to other discussions related to diagnosis and treatment as well as responsible use of medicines. On larger farms, several people involved have worked together with the vet to understand the on-screen questions presents difficulties. However, the test may be conducted with the farm vet so that any problems can be identified and rectified at the time.

Veterinary surgeons have commented that sitting next to the candidate to complete the test has led to other discussions related to diagnosis and treatment as well as responsible use of medicines. On larger farms, several people involved have worked together with the vet to understand the reasons for antibiotic failures and to carry out a risk assessment for the herd that they milk.

Looking through the MilkSure workbook, it is striking just how much detail is contained for the farmer to be aware of and the laying out of responsibilities. For example, "Vets are the people who should always decide the exact treatment regimes. Ideally, these are set out in written protocols. On some farms, there has been a drift towards farmers increasingly devising their own treatment regimes using medicines available to them. Honestly, how does your farm use treatment protocols? Mark where you believe your farm’s culture lies on the scale below. Low to high vet involvement: we devise our own treatments and ask the vet for the medicines we want; we generally follow the vets protocols but these are not always written down and we sometimes use our own discretion; we always only ever follow treatment protocols devised by the vet and written down."

The producer’s certificate of participation is signed by the milk producer who has completed the MilkSure training and their veterinary surgeon. The veterinary declaration states: "I certify that the above named person has completed the MilkSure training workbook to safeguard the production of residue-free milk. A management plan to reduce the risk of residues in milk has been agreed for this farm." The milk industry is looking for an increase in veterinary involvement.

For there to be an effective reduction in the annual bulk tank antibiotic failure rate, it is the farmers who do not routinely engage with veterinary protocols who need to be approached.

The industry local managers are actively contacting the farmers who have bulk tank failures and veterinary surgeons are expected to respond enthusiastically to any enquiries from farmers and herdsmen. Studies have indicated that many failures are due to inadequate animal identification and misuse of products. Recent studies have identified that there is a wide range of medicines in the drug cupboards of dairy farms. Early indications, from the veterinary surgeons and farmers who have engaged with MilkSure to date, are that there is confusion about the use of medicines and that greater control will benefit the farmer, the vet and the industry.

Engaging with the MilkSure programme is not a particularly easy task for many veterinary surgeons. Some of the technical content, including the interpretation of Beta Star, Charm, Idexx, Snap, Delvo SP NT, Charm Cowside, liquid chromatography mass spectrometry, antibiotic loading and combination therapy, may rely on detailed analysis when problems arise, and specific contamination sources need to be identified. Technical help is on hand and engagement with farmers to achieve lower disease levels, less treatment, more consultancy and fewer panics appears worthwhile.

Owen Atkinson will continue to develop the MilkSure manuals for veterinary surgeons and farmers.
Iceberg diseases in sheep

Practical strategies for the diagnosis, management and prevention of insidious infectious conditions seen in sheep

HANNAH KENWAY
Hannah Kenway, BSc (Hons), BVSc, MRCVS, qualified from Bristol University in 1993 and has spent most of her career in farm practice. She recently completed the AHDB Developing Sheep Expertise programme and works as a large animal clinician on the Isle of Wight.

The iceberg phenomenon is a metaphor coined in human medicine to describe a disease in which, for every visibly affected individual, the population will contain numerous others that are sub-clinically infected, carriers or undiagnosed clinical cases. What is seen clinically is a small representation of the overall infection.

In sheep, the term is used to describe chronic infectious conditions that are insidious in onset and/or spread and have a huge and increasing impact on the productivity and welfare of the national flock. They may affect ewe longevity and health as well as impacting lamb viability and growth. Examples in the UK include: ovine pulmonary adenomatosis, ovine Johne’s disease, border disease and maedi visna.

Ovine pulmonary adenomatosis/Jaagsiekte (retrovirus)
- Spread via aerosol, contaminated troughs and water, colostrum and milk
- Can survive for several weeks in the environment
- Infection causes neoplastic proliferation in lungs
- Incubation can be up to three years
- Clinical picture includes weight loss, dyspnoea with sheep tending to remain bright, alert and have good appetite, often frothy nasal discharge and many (but not all) showing positive with the “wheelbarrow test”
- Invariably fatal
- Can be diagnosed with transthoracic ultrasound; with experience, the operator will identify tumours greater than 1 to 2cm in size
- Cull ewe and perform fallen stock post-mortem examination screens

Ovine Johne’s disease (Mycobacterium avium paratuberculosis)
- Spread via oral ingestion from faeces, milk and placenta
- Mostly young animals below six months of age
- Survives in water, slurry and soil for up to 48 months
- Clinical picture shows weight loss and bottle jaw
- Increased susceptibility to gastrointestinal parasites may mask underlying problem
- Generally, clinical signs are seen in animals over two years old
- Can be diagnosed with ELISA Ab serology in clinical cases - but has poor sensitivity as flock screen; PCR for MAP in faeces may be pooled and combined with culture in flock screening

Border disease (pestivirus BDV and BVDV)
- Spread via horizontal transmission from ewe to lamb and via vertical transmission in saliva, milk, semen and by aerosol
- Short lived in the environment, the disease persists in a flock as a result of persistently infected (PI) lambs
- Causes higher than expected barren rates (above 5 percent); hairy shaker lambs (poorly grown, rough hair coat) can become infected with cytopathogenic virus and die between two and four months of age; survivors shed virus and are likely to have poor growth rates
- Diagnosis made via ELISA Ab serology, PCR antigen in rams and in a PI search

Maedi visna (lentivirus)
- Spread can be oro-nasal, respiratory by aerosol or via milk, colostrum and faeces
- Survives for approximately 14 days in environment
- Clinical picture includes weight loss, indurative mastitis, progressive neurological deficits in hind limbs (classic dragging of a hind leg), heavy lungs and dyspnoea. Poor performance in lambs due to loss of ewe condition
- Diagnosis can be made via AGIDT or ELISA – repeated blood sampling is required in animals over 12 months old since antibody production is delayed. SRUC cull ewe testing package is available

Contagious lymphadenitis (Corynebacterium pseudotuberculosis)
- Spread via close contact with an infected wound; bacteria infect lymph nodes which drain, and bacteria shed onto clippers, into dip, via direct contact etc
Potentially viable in the environment for up to eight months

Clinical picture includes abscessed superficial lymph nodes with characteristic thick pus, also present as a visceral form with internal abscessation and associated weight loss

Diagnosis by clinical signs, Ab ELISA on blood and Western blot confirmatory

On-farm monitoring and management

On-farm monitoring is key since clinical cases may not be seen until disease is disseminated throughout the flock. Production data is crucial to give early warning of potential disease incursion, allowing control programmes to be implemented while still financially viable to do so.

Routine testing of thin ewes post weaning is a cost effective way of monitoring, particularly for maedi visna and Johne’s disease. On-farm post-mortems (Figures 1 to 3) as part of a flock health plan are also cost effective for monitoring infectious disease. Many local disease surveillance centres offer subsidised cull ewe post-mortems (Figure 4), which can provide a wealth of information on farm health status.

Regular stock examination is important. Thin ewes should be separated and fed accordingly – and those which don’t gain condition as expected should be culled and investigated.

Health scheme participation is recommended; in pedigree flocks, consider maedi visna, contagious lymphadenitis and Johne’s accreditation (SRUC premium sheep and goat health schemes). Though individual animal testing on a large scale is unlikely to be economically viable, subsidised maedi visna testing is available for commercial monitoring.

The industry is slowly waking up to the potentially devastating impact of these diseases and pressure from farmers buying replacement ewes is likely to mean that in the future, those farms which have invested in testing and management strategies will be at a commercial advantage.

The diagnosis and management of these diseases provides a real challenge to the profession. With little information on production impact in the UK, and little understanding among farmers (and some vets!) regarding how, when and why to test effectively, there is an urgent need for education as well as industry pressure on producers to take greater responsibility for health status.

Fence off water courses and limit lambing in wet areas (Johne’s disease).

Avoid mixing sheep close to tupping or during pregnancy (border disease).

Handle young sheep first at scanning/shearing/vaccination (contagious lymphadenitis).

Be vigilant with regards to fomites; consider trailers, shearing equipment, clothes, feed troughs (contagious lymphadenitis/ovine pulmonary adenomatosis).

Consider fencing – escapee sheep from infected neighbours are a real threat.

Dagging/lambing shed hygiene is important (Johne’s disease).

Take care with regards to pooled colostrum (maedi visna/Johne’s disease/ovine pulmonary adenomatosis) or cow colostrum.

Demand health status of purchased sheep – forge relationships between testing producer flocks and purchasers. Buyers should be willing to pay a premium for high health status sheep.

Avoid buying through markets or dealers mixing sheep from multiple sources.

Run a closed flock where possible once flock health has been established.

Consider running shearlings/ewe lambs as a separate flock. This enables monitoring of older ewes and protecting replacements for as long as possible before mixing.

The lung can have a gross appearance in ovine pulmonary adenomatosis (Figure 1). Jejunal thickening is seen in Johne’s disease (Figure 2). Thickening with corrugation in the jejunum is seen in Johne’s disease (Figure 3). Which of these ewes has maedi visna? This flock recently tested 60 percent positive on a cull ewe screen.
A plasma lifeline for crias

An introduction to collecting blood from camelids and using the plasma to save newborn crias

It is vital that newborn crias ingest enough colostrum soon after birth to fight infection during their first few weeks of life. Failure of passive transfer of maternal immunity can occur in crias when they do not ingest enough colostrum from their mother. In this instance, a plasma transfusion containing immunoglobulins, as well as lipids, electrolytes and other plasma proteins, can provide a lifeline.

With support from Claire Whitehead, RCVS Recognised Specialist in Camelid Health and Production, Pet Blood Bank has been providing a plasma processing service for camelid owners and vets since 2015. As part of this service, vets are provided with everything needed to collect blood from camelids and a courier service to return the blood to Pet Blood Bank where it is then processed into plasma before being returned to the vet for treating their client’s newborn crias.

Collecting blood from camelids
To donate, camelids must meet specific criteria; the ideal donor will be a castrated male or unbred female, aged between 2 and 10 years (it is considered that older animals aged three or more may have better developed levels of immunity), fit and healthy, over 50kg, have a good temperament and not be taking any medication.

Prior vaccination against clostridial disease is prudent, though off licence consent needs to be obtained. In an ideal planned scenario, it is thought that vaccinating camelids 21 days prior to donation may lead to good levels of antibody immunity.

Additionally, it is important that donors are assessed for their ability to be handled and examined with preference given to those who are well-handled and able to donate without chemical restraint.

A full health check should be carried out on each donor before the donation takes place. This should include a mucous membrane colour assessment, a temperature check and listening to the heart rate.

For the donation, the jugular groove area of the neck is clipped and cleaned. A local anaesthetic injection or cream can be used to numb the donation site before the needle is placed. It typically takes less than five minutes to collect a 450ml unit of blood from each camelid. This is done in a closed manner using a quad blood bag collection set. Only blood collected in this way can be processed using the Pet Blood Bank service.

Processing the blood
Following the collection, the blood is placed in a transport box and taken to Pet Blood Bank’s processing centre. Here it is split into plasma and packed red blood cells. The plasma is returned to the veterinary practice where it is stored frozen in protective packaging in a temperature-monitored freezer ready for transfusion.

Plasma for immunoglobulin purposes has a shelf life of five years when kept frozen. Packed red blood cell transfusion is rarely performed in camelids but this product is also available if needed, although only has a shelf life of 21 days. Pet Blood Bank stores the red cells for their shelf life.

Plasma produced in this manner, according to Pet Blood Bank’s VMD licence, is for use strictly in the herd of origin only. Forms that state this are signed by both the farm manager and vet performing the collection.

Due to these limitations and the problems created for smallholdings with only a few breeding animals who may not have suitable donors, the VMD has broadened the guidelines for herd of origin to interpret “herd” to include the next generation (only). Blood could be collected for a new young herd from the same original herd within three years of the new herd being established.

Transfusing plasma to crias
Plasma transfusions to crias should always be given intravenously using a filtered giving set. Plasma is stored frozen so this should be defrosted at room temperature if time allows, or using a warm water bath of no more than 37°C before transfusing. Camelid-specific immunoglobulin levels can be measured pre- and post-transfusion to permit assessment of the effectiveness of the treatment.

Although plasma transfusions can be administered on the farm, it is often worthwhile transporting them to a practice for the treatment. Transfusions are often rapidly effective in providing the cria with the strength to stand and suckle, allowing them to ingest the further colostrum that is vital in developing a robust immunity.

Jenny Walton
Jenny Walton, BVM&S, MRCVS, qualified from R(D)SVS in 1998. She worked in mixed practice before moving into small animal emergency and critical care with Vets Now. Jenny is Veterinary Supervisor for Pet Blood Bank UK and works part-time in general practice.

Pet Blood Bank has a webinar available to guide vets on the collection and transfusion of plasma for crias. This can be accessed on the Pet Blood Bank website: petbloodbankuk.org/cpd

For details or to request the processing service, please visit: petbloodbankuk.org
It’s October and that means the excitement of a new term and new students. I sit them down on their first day and tell them several things. Everyone will be telling them to aim for a first-class degree but that would be gross hypocrisy from me – I only ever got a II-i! There are 38,000 bottles of wine in the cellars at St John’s, but they should remember that they have six years to drink them, while everybody else has only three, so they can afford to drink at half the rate of the other students (though this advice is rarely taken; medics and vets seem to drink at twice that rate!).

They also have six years to learn enough jargon to be able to persuade clients to pay them even when they don’t know the cause of their pet’s disease – idiopathic will be their favourite word. And finally, only 80 percent of what I will tell them will be true. The rest I’ve either got wrong at the beginning, have forgotten or... it’s a joke. But they are Cambridge students, so it’s up to them to work out which belongs in the 80 percent and which in the 20.

After their first week, we’ll go over the new words they’ve learnt in those first seven days: dorsal and ventral, medial and lateral, proximal and caudal in anatomy; hyperglycaemia, polydipsia and ketoacidosis in biochemistry; action potential, depolarisation, voltage-gated sodium channel in physiology – the list goes on and on.... And that’s just in the first week – they’ve got 240 more to go before they graduate!

But saying that 20 percent of what students get taught is wrong is probably a wild underestimate, according to a great book I’m currently reading. The Half Life of Facts by Sab Arbesman (get it for 5p on Amazon “new and used” if you’re fast, but it’s well worth the full 15 quid if you want to buy it new).

When I was a child, we saw dinosaurs as slow lumbering cold blood creatures, all scaly and green. Now they are portrayed as brightly coloured, often with feathers, fast and voracious. When I was a student, cats with kidney failure should be fed cottage cheese and given anabolic steroids. Now look at the plethora of kidney diets available and medical therapies from phosphate binders to amlodipine.


They looked at research papers published from 1945 to 1999 about cirrhosis or hepatitis in adults. In 2000, 285 of 474 conclusions (60 percent) were still considered to be true, 91 (19 percent) were considered to be obsolete, and 98 (21 percent) were considered to be false. The half-life of truth from those research papers was 45 years.

The number of conclusions still considered correct after 20 years – their 20-year survival – was lower in meta-analyses (at 57 plus or minus 10 percent) than that from non-randomised studies (87 plus or minus 2 percent) or from randomised trials (85 plus or minus 3 percent). Interestingly, the survival of conclusions from studies of high methodologic quality was not greater compared with those which were of low quality.

Truth be told, I’m not quite sure what this is telling me and I’m going to have to read some more papers in this area. When I typed “truth survival in clinical research” into Google Scholar, it gave me 146,000 results in 0.09 seconds. I’m afraid it’s going to take a good deal longer than that to work through even the first page’s worth of papers – I’ll let you know how I’ve got on this time next month. ☺
Was the flunixin withdrawal a sensible precaution or knee-jerk reaction?

BEVA has questioned the rationality behind the decision to withdraw flunixin and a potentiated sulphonamide.

Jonathan Pycock is an equine claims consultant for the Veterinary Defence Society and an equine reproduction expert. He is the immediate past president of the British Equine Veterinary Association.

It is difficult to imagine a more important issue to equine veterinarians than medicines availability. Without the availability of such therapeutic substances, there is a serious and genuine risk to animal welfare. Of course, this availability of medicines must be balanced against a range of issues, and human safety has to be at the top of the list.

The equine profession faced such a challenge on 26 July 2018 when the Veterinary Medicines Directorate (VMD) suspended products for food-producing animals that contain the excipient diethanolamine (DEA). This cessation of the sale of all injectable formulations of the medicines was made without warning or consultation with the veterinary profession.

The VMD took the decision to suspend the medicines in light of the scientific opinion of the Committee for Medicinal Products for Veterinary Use, which is part of the European Medicines Agency. The committee was of the opinion that there may be a risk to humans from consuming food from animals treated with products containing DEA. This cessation of the sale of all injectable formulations of the medicines was made without warning or consultation with the veterinary profession.

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BEVA strongly argued that mechanisms already exist within horse passport legislation that would allow the use of products such as flunixin in horses not intended for human consumption. This could certainly be alongside a "caution in use" statement outlining the conditions of use and restricting supply to non-food horses. Due to the strong and swift representations made by BEVA, the suspension of flunixin was lifted in mid-August.
What will Brexit mean for the equine sector?

A session on adapting to changing times at BEVA Congress 2018 highlighted current priorities for the equine veterinary profession

There has been much reflection on issues facing the veterinary profession following the Brexit vote; now with just six months to go, discussions about Brexit and the equine sector generally represent a shared vision. The panel of speakers for the BEVA Congress session on adapting to changing times included representatives from the government, BEVA, RCVS, World Horse Welfare and veterinary education institutions. Though the focus of each talk was different, the overall assessment of challenges and opportunities for the profession was aligned, coupled with a ubiquitous call for equine vets to embrace change and, in the words of David Mountford, “be a Netflix, not a Blockbuster”.

Angela Smith, MP for Penistone and Stockbridge, opened the session with a valuable summary of where the profession stands. If Brexit agreements are settled towards the “hard end”, which would require the resurrection of borders between the UK and EU states, there will be numerous challenges.

Across all 25 of the government’s no-deal technical notices, Angela noted that trade in live animals was given only a courtesy mention, with a pledge “to intensify its engagement and cooperation with the EU to enable the continued exportation of live animals and animal products”.

With a no-deal Brexit, border inspection posts would run a significant risk of increasing journey times for horses. “This is particularly a problem as far as Ireland is involved,” Angela said. “Can we really be comfortable with the knowledge that the resurrection of the border could lead to decisions to transport equine livestock by sea to the European mainland rather than the shorter, easier journey over the UK mainland?”

She listed other areas that may be impacted, such as: equine passports, regulations relating to traceability and standards required for transporting horses across borders, the availability of veterinary medicines and the UK’s veterinary capacity. The demand for vets would be immediate, she said, emphasising that vets would need to be on the shortage occupation list and an increase in funding for UK vet schools would be required.

Brexit may also present opportunities; Angela was keen on the idea of creating a new inspection regime, utilising border checks to increase standards for welfare and biosecurity. The potential to ban the export of live animals for slaughter has also been discussed, but this is a complex issue. “In some cases, the distances travelled [to a slaughterhouse] here at home will be greater than those crossing borders,” Angela explained, stressing that there are no equine slaughterhouses in Northern Ireland.

Graeme Cooke, the UK’s Deputy Chief Veterinary Officer, provided a perspective from Defra, conferring some of the changes that are in the pipeline. The Central Equine Database, launched in March 2018, logs all domesticated horses and allows for improved tracking; this, Graeme said, is the beginnings of a better system, which will be used to track the movement of horses from a disease control point of view.

The intention is to have all horses retrospectively micro-chipped by 2020. Enforcement is being improved, and will incorporate compliance notices, an easier fines system and a better recovery of costs, he said. The EU Animal Health Regulation is coming into force in April 2021 and Defra is planning to use that legislation as we move out of the EU, he confirmed.

Graeme described plans to change the way of thinking and increase the number of enablers in surveillance, incorporating private labs as well as government labs. “We’re binding everything together under the UK surveillance forum... to provide a much more agile, responsive, strategic way of thinking,” he explained.

The aim is to have as streamlined an exit as possible, Graeme said. “We are posing... with the assistance of Ireland and France, the adoption of the OIE [World Organisation for Animal Health] High Performance Principle: horses which have high levels of veterinary supervision are maintained on a database and have certain health requirements which mean that they can move much more quickly within the trade system.”

Angela concluded her talk by voicing some of her main worries, which are shared among others in the profession: “the Brexit process may produce a desperate bid for legislative changes that provide a useful positive veneer to what is rapidly materialising as a very negative set of outcomes. Changes that would run a significant risk of being badly thought through and potentially damaging for equine welfare.”
Dealing with postpartum complications

How to recognise and prevent common postpartum complications seen in mares

Postpartum complications in mares occur in a relatively low percentage of cases. Often these complications are serious, or even lethal. Although assisted parturition is good practice and may prevent some of these complications, often these complications will occur despite human intervention. Assisted parturition has the advantage that these complications are noticed during, or soon after, birth and can therefore be addressed soonest.

The postpartum complications below are the most commonly encountered complications where veterinary input is required.

**Vaginal/cervical trauma**

Vaginal trauma is generally the result of either a foal delivered in an abnormal position, or where the foal is in a normal position but oversized for passage through the pelvic canal. This can lead to intrapelvic peri-vaginal bleeding, resulting in haematoma formation. Large haematomas can be drained two to three days postpartum, after clot formation has occurred.

If haematomas do not regress or do not become progressively firm, abscessation should be suspected

If haematomas do not regress or do not become progressively firm, abscessation should be suspected. Abscesses should be incised and drained as long as they are retroperitoneal. These structures can be easily diagnosed through vaginal ultrasonography. Occasionally, large haematomas can leave permanent lumps of scar tissue that are palpable in the pelvic canal.

In cases of dystocia, severe disruption of the mucosa of the vagina can lead to infection and can often result in the formation of scar tissue. This scar tissue contracts and can lead to deformity and even narrowing of the vaginal cavity. The contraction of the scar tissue can disrupt the normal functioning of the cervix, leading to future conception failures and abortions.

Cervical lacerations are most commonly sustained during parturition. They may be associated with dystocia or induced parturition but can also occur with normal births. Assisted vaginal delivery and inadequate lubrication can increase the risk of a cervical tear.

**Periparturient haemorrhage**

Haemorrhage from the middle uterine, utero-ovarian or external iliac arteries is a significant cause of peripartum colic syndrome and death. This can occur prior to parturition, during parturition or postpartum. It can present as a subtle or profound condition depending on the severity of the blood loss and the location of blood loss (abdominal, broad ligament, into the uterus or uterus wall). The clinical presentation may vary from haemorrhagic shock, abdom-
inal pain and colic symptoms and weakness. Mares are normally depressed with pale mucous membranes and an elevated heart rate of around 80bpm.

**Rectal tears**
Rectal tears as a spontaneous postpartum complication is fortunately not a common condition. These tears are normally as a result of dystocia and assisted parturition. Rectal tears immediately after parturition, without dystocia, are usually Grade IV tears (all the layers of the rectum) and can be associated with prolapse of small colon or small intestine through the tear and the anus. These tears lead to faecal contamination of the abdomen with peritonitis and death.

**Recto-vaginal fistula**
Recto-vaginal fistula is a relatively common injury sustained during parturition. Fistulas most commonly occur secondarily to dystocia and are normally caused by the foal’s nose or foot being forced through the dorsal vaginal wall into the rectum. Spontaneous retraction or manual replacement of the foal’s head or extremity into the correct position limits the injury to a recto-vaginal fistula.

If parturition proceeds before correction, the result is usually a third-degree perineal laceration. These lacerations are corrected surgically once complete healing of the wounds have taken place. Although such a laceration appears serious to the owner, it is not an emergency. Faeces may drop into the vagina during defecation, often leading to a mild vaginitis.

**Uterine prolapse**
Uterine prolapse is an uncommon complication in the postpartum mare but must be considered and dealt with as a life-threatening emergency. During uterine prolapse, tearing of the arteries is possible. Due to the position of the prolapsed uterus and severe oedema, these torn arteries may be clamped with no immediate bleeding. Once the uterus is reduced and replaced, these arteries may start bleeding, either into the broad ligament, or freely into the abdominal cavity. The practitioner should keep in mind that prolapse of the bladder should also be considered with uterine prolapse.

**Retained placenta**
Retained placenta is considered the most common postpartum complication in mares. A placenta is considered retained if it has not been expelled by three hours postpartum. Retained placenta tends to be more associated with abortion, dystocia, stillbirths and twinning.

The most obvious sign of retained placenta is the appearance of tissue protruding from the vulva. It may range from slightly visible to dragging on the ground. Often no placental tissue is visible due to tearing of the placenta with only part of it still retained in the uterus. Placentas protruding from the vulva and touching the hocks should be tied up away from the hocks. This prevents the mare stepping onto the placenta causing it to tear. This will also reduce the risk of the mare kicking at the placenta, and in doing so, possibly injuring the foal.

**Endometritis**
Bacterial endometritis is a significant problem in the mare postpartum. Postpartum endometritis often occurs for the following reasons:

- Unhygienic conditions in which the mare foals down
- Retained placenta
- Uterine bleeding and pooling of blood in the uterus due to delayed involution
- Older mares with poor uterine tone and pooling of fluids after parturition
- Tearing of the vulva during parturition and the aspiration of air and faecal material up the vagina

The practitioner must be aware of these factors which can initiate endometritis. Addressing these factors will prevent postpartum endometritis in the majority of cases.

**Rectal impaction/hind limb paresis**
This is a condition observed occasionally, especially in older mares. During the foaling process, pressure on the lumbar/sacral back region and potential damage to the ischiatic nerves may cause either paralysis or paresis, with rectal impaction.

This is the second article in a three-part series written by veterinarians from the Vets with Horsepower team, in partnership with Norbrook Laboratories. The articles are excerpts from the continuing professional development lectures delivered during a recent charity ride.
Searching for financial help in the UK

How to decide between the funding options available to help grow a practice

With competition in the world of veterinary medicine tough, business can seem very hard when you work on your own or are in the early days of setting up a new venture. So, wouldn’t it be great if your practice could be given a shot in the arm with some free – or at least low cost – help? Those prepared to search will find that there is plenty of help available.

There can be such a thing as “free money”, but it will come with strings and criteria that must be met. This is all achievable – it just requires some extra effort.

The money could come from several sources; much is from the government, but local authorities as well as some private organisations have a role to play. Amounts awarded can range from three figures – say, £500 – to £500,000 or more. Naturally, the larger the amount, the stricter the eligibility conditions. Further, some awards are matched – that is, those applying for the funding need to meet certain fund-raising targets of their own.

Probing the government
Helpfully, the gov.uk website has a simple-to-use online tool, “Finance and support for your business”, where visitors can search nationally according to keyword (eg health or agriculture), type of support (grant, equity, finance, loan, advice), stage of business (not yet trading, start-up, established), industry (again, health or agriculture) and number of employees.

There are pages of programmes that may be of interest – some are regional, and others UK-wide. There are a number of business start-up grant or support schemes, such as that in Mansfield, which offers £1,000 to spend on equipment, office furniture, fittings and marketing, as well as an advice service from Tewkesbury Borough Council that handholds applicants as they navigate the maze of grants.

Enterprise finance is available from a number of sources. Take the Department for Business, Energy and Industrial Strategy’s (BEIS) Enterprise Answers programme for the north of England. Available to businesses with up to 249 employees, it offers “affordable” business loans from £5,000 to £100,000 if the business is based in Cumbria, Northumbria, County Durham or North Lancashire.

For those over 18 wanting to start their own business, the government offers mentoring and a grant via the New Enterprise Allowance. A business plan needs to be in place before applicants receive an allowance of £1,274 spread over 26 weeks; they are also eligible to apply for a loan to cover start-up costs.

For many, being in the digital slow lane is akin to commercial suicide – and the veterinary sector has the same issues as others. If you’re in this situation, you may be able to take advantage of the Gigabit Broadband Voucher Scheme from BEIS. This programme provides up to £3,000 towards the cost of getting not just superfast broadband, but gigabit broadband, which is infinitely faster.

If low carbon and energy efficiency is of interest, there are a number of regional programmes such as that offered by Low Carbon Workspaces in Buckinghamshire, Hertfordshire and the Black Country. This particular programme – backed by the European Regional Development Fund – offers between £1,000 and £5,000 to cover a third of the cost of a project that reduces energy consumption, waste, water and vehicle fuel costs.

Other sources to note
More help can be found by searching generally on the gov.uk site and selecting the relevant organisation.

Vets might find a small van more useful than a car. If so, they can use a government scheme to both go green and save on motoring costs. Set up by the government to push businesses towards electric vehicles used for commercial purposes, the Plug-in Van Grant Scheme offers business owners a 20 percent saving on the purchase price of a van.

For the new business-minded vet, aged 18 to 30, there...
is a low interest loan (and small grants in special circumstances) and mentoring help from the Prince’s Trust. In a similar vein, the trust’s Prince’s Countryside Fund offers more than £1 million each year in grants of up to £50,000 to projects that seek to benefit individuals and their rural communities. If a practice building can help the community, you may be able to get extra help. The funding has closed for 2018 but keep an eye out for the 2019 round from September 2018.

If you decide to take on premises and want to improve its outward appearance, you may be able to get funding and grants from your local authority. Ulverston, for example, offers up to £400 or up to 40 percent of the total costs in their conservation area – and the money can be used for painting, repairs and signage. There are plenty more examples of this type of grant throughout the UK.

Look to the regional governments
As well as looking at the UK government website, vets looking for assistance should check what is available from the Welsh, Scottish and Northern Irish governments; a good deal from any one of these might be enough to lead to relocation. Wales, for example, has more than 1,200 finance programmes on its Business Wales finance locator website, and Northern Ireland lists 162 business schemes on nibusinessinfo.co.uk. Scotland takes a different approach and hot-links to gov.uk while also giving links to Better Business Finance and the Scottish EU Funding Portal.

Examples from Wales include Blaenau Gwent Kick Start Grant, which offers a £1,000 grant to individuals or groups in the Blaenau Gwent area that are in the pre-start-up stage of starting a viable business. The Caerphilly Business Development Grant is similar and is valued at £2,000. And in Northern Ireland, capital grants for non-agricultural micro, small and social enterprises in rural areas of Derry City and Strabane District Council are available via the Rural Business Investment Scheme. This offers 50 percent funding and grants between £500 and £90,000 (depending on activity and size of business), marketing grants from £500 to £10,000, and capital grants with resource funds for marketing and bespoke training.

Vets might find a small van more useful than a car. If so, they can use a government scheme to both go green and save on motoring costs

A different view
Getting money and help without cost is one side of the equation; another is creating interest from investors. Firms looking for equity or a cash injection from business angels can utilise various tax regimes to lower the cost of any investments made by investors.

There are two main programmes worth consideration. The Seed Enterprise Investment Scheme is designed to encourage investment in UK companies; investors can claim eligible investments against their tax bill, significantly reducing capital risk.

In a similar vein is the Enterprise Investment Scheme (EIS). This is a tax relief scheme for investment in more established companies. With EIS, investors can claim up to 30 percent back in tax on investments of up to £1 million. Investors can also defer capital gains tax on investment shares and after holding investments for three years, they become free from capital gains tax.

The detail for both is on HMRC’s website. There are as many sources of grants as there are leaves on a tree and there just simply is not enough space here to note them down. The lesson here is very simple – just search! Remember to broaden your horizons – look beyond government and into the local area and third-party private organisations.

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The benefit of HR audits

One of the best ways any employer can minimise the risk of a claim is to ensure that their internal HR practices are up to scratch.

With the abolition of fees in the employment tribunal, there has been an increase in employees bringing claims against their employers in every sector. Anyone who has faced a claim brought against them by an employee or former employee will understand the management time and expense that goes into defending a claim, taking you away from running your business and looking after your client’s animals.

How does a busy practice identify their risk areas and keep up to date with the ever-changing HR requirements? How can you have confidence that your working practices will protect you should a claim be brought by an employee? One way is to have an HR audit carried out by an expert outside of your practice.

What is an HR audit?
An HR audit is a review of the current policies and processes which identifies the risk and prepares an action plan for improvements over time. The benefits of carrying out a regular HR audit are significant. It helps the practice to minimise risk and comply with professional standards, encourages consistency and gives comfort that the HR side of things is taken care of, leaving the practice to focus on the animals and business development.

What does an HR auditor do?
An auditor comes into the practice, learns about the workings of it, talks to the managers and employees and gets a real feel for how the practice works.

They review all existing contracts of employment, policies and procedures, bonus structures and recruitment processes, and ensure the practice is compliant while recommending any changes needed, both from a compliance viewpoint and a practical viewpoint.

Finally, findings will be reported back. Advice will be given on what could be done to avoid future risk and the urgency or otherwise of remedying a situation: What happens if nothing is done? Is there a financial risk if no change is made?

Are there other matters identified which are more pressing to resolve? An auditor can also help put processes in place to ensure that, going forward, records are kept up to date.

As solicitors, auditors understand what the law requires from employers and the consequences of failing to comply with the obligations.

Does your practice need to have an audit?
There is no legal requirement for any business to have an HR audit performed. However, by doing so, you are ensuring that if a claim is brought against your practice by an employee, you will have the best tools available to defend that claim.

An HR audit report can be tailored to meet the practice’s specific requirements. Examples of the areas that can be covered are:

- Recruitment
- Terms and conditions of employment
- Working time
- Holiday
- Discipline and grievance
- Performance management
- Absence management
- Record keeping

How often an audit should be carried out will depend on the size of the practice and the turnover of staff. Generally, a bi-annual review is recommended to ensure that the practice remains on top of compliance.

As part of the audit, it will be necessary to talk to some employees; it is essential to get a feel for the practice and to understand any concerns of both management and employees. Some may feel that employees would not like the idea of having an external auditor review their practice.

The auditor will take time to explain the process to employees and ensure they understand that by having an audit carried out, you are ensuring that staff are being treated fairly, that you are complying with legal obligations to them as their employer and that it is a positive thing which can only benefit all concerned.

The purpose of an HR audit is to act as a system of checks and balances. In a busy practice, it is easy to overlook changes in law and for matters to drift. Auditors work with existing HR representatives to help them provide the best service they can for the practice and ensure that nothing has been overlooked. As solicitors, they come at this from a different angle, assessing the risk to your practice and minimising it for you. They aim to work as an extension to your existing team.
Leadership in a new world

How will leaders need to adapt to the rapidly changing profession?

The veterinary profession is in the midst of unprecedented change. With corporatisation, Brexit, a retention crisis, gender shift, technology and well-being issues, the profession is a perfect example of a VUCA world.

First coined by the US military, VUCA stands for volatile, uncertain, complex and ambiguous. Used to describe the new world order after the Cold War, it has been adopted by academics and the business community to describe our rapidly changing world. Gordon first came across the concept of VUCA about 10 years ago, when working in financial services. He used the model to help change leaders’ mindsets and develop new skills, to not only remain relevant, but to thrive in the new world.

The veterinary workforce is also undergoing a major shift – the drivers are another example of VUCA. There is a systemic and multi-faceted workforce issue. For example, people are leaving practice in large numbers, as their perceived needs are not being met – whether this is around “hygiene factors” (like working hours, working conditions or pay) or emotional needs (like well-being or the working culture).

The gender shift continues – 80 percent of current vet students in the UK are female. There will be increased pressure on employers for flexible and agile working options – and not just from female employees. This is not unique to the profession and reflects the broader changing attitudes to work; however, the profession has been slower to respond; according to the CIPD (Chartered Institute for Personal Development), in 2016, 54 percent of the UK working population was working flexibly.

Linked to this trend is the move from permanent employment to locum work: the profession’s own version of the “contingent workforce”. Whatever the drivers for vets and nurses to move out of permanent employment, all the research indicates that the “contingent workforce” will be an essential component of the UK economy across all sectors – and is attractive to all age groups, not just millennials.

Brexit is perhaps the best live example of VUCA – with the potential impact being felt across all areas of the profession from medicines to workforce. The effect could be a minor ripple or a tsunami. Given the reliance on EU vets and nurses to move out of permanent employment, all the research indicates that the “contingent workforce” will be an essential component of the UK economy across all sectors – and is attractive to all age groups, not just millennials.

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The professional at a crossroads. We can either choose to ignore the impact of a VUCA world, or choose to embrace it, along with the opportunities available. A fundamental shift in mindset and skills will be required for the profession to thrive. It will be important to:

- **Learn and collaborate** – both inside and outside of the sector to understand the world we operate in.
- **Invest in leadership capability** – whether in a formal leadership role or not. CPD does not just need to be clinical or confined to the veterinary profession. Podcasts, books, TED talks and leadership programmes are available.
- **Learn to flip your perspective** – from seeing everything that the VUCA world brings as problems, to opportunities and trying something different.

In summary, we all need to be prepared to adapt our mindsets and develop new skills, to not only remain relevant, but to thrive in the new world.

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**GORDON DUNN**

Gordon Dunn is People Director at the Pets at Home Vet Group. He has over 30 years of experience in human resources and organisational development. Gordon is particularly interested in recruitment and retention, developing leadership capability and well-being.

**CATRIONA CURTIS**

Cattriona Curtis, BVM&S, MRCVS, is Veterinary Talent Manager at the Pets at Home Vet Group. In 2019, she will become President of SPVS. Cattriona has an active interest in how the profession is adapting to ongoing changes.

VUCA describes how the world is changing at speed:

- **Volatility** is best described as the increased nature, speed, volume and magnitude of change.
- **Uncertainty** highlights the lack of predictability in the new world and the increasing prospect of unexpected events or outcomes.
- **Complexity** focuses on the range of issues we deal with at the same time and a move away from “cause and effect” outcomes.
- **Ambiguity** is about mixed or multiple meanings and the potential to misinterpret people, data or events.
What do the Brexit updates mean for my practice?

Brexit has cast a dark cloud over the veterinary sector, which is highly dependent on EU nationals.

The government has confirmed that free movement will continue until the last date of the post-Brexit transition period (31 December 2020). Additionally, EU citizens who have been residing in the UK for a period of five years by this date will be eligible for “settled status”. EU citizens who have not met this five-year threshold should be eligible for “pre-settled status”, which can be converted to settled status after they do meet the requirement.

Proposals beyond 31 December 2020 are yet to be announced. There is every chance that the recruitment of EU nationals will be governed by the general points-based system for sponsoring migrant workers.

However, there is a monthly allocation limit on the number of certificates of sponsorship available and the huge increase in the number of requests has led to a higher points threshold that needs to be reached before an application can be approved. This means that only prioritised applications, eg those with salaries over £55,000, PhD level roles and those on the shortage occupation list, will be approved. Many veterinary roles will not fit into any of these categories and this will certainly cause difficulty post-Brexit when attempting to recruit EU workers. Calls by the BVA for veterinary roles to be included in the shortage occupation list have fallen on deaf ears.

In summer, there was a glimmer of hope when the government announced that from 6 July 2018, doctors and nurses will be excluded from the annual quota of restricted certificates of sponsorship. Unfortunately, veterinary surgeons and nurses are not covered by this rule change, but they may still benefit from the greater number of restricted certificates of sponsorship that will be available for those roles that sit outside the NHS.

Evidently, the veterinary workforce is likely to suffer significantly post-Brexit. Therefore, it is important that steps are taken now to both retain existing EU staff and recruit EU nationals while we are still able to benefit from free movement.
From proactive to reactive

Advice for spotting and managing stress in your practice

KIRSTY STURMAN
Kirsty Sturman, BSc (Hons), Dip Stress Management and Wellbeing, is a trainer and consultant, with expertise in time management, stress management, communication, resilience, leadership and coaching.

Stress can affect people in many ways. Disengagement, anxiety, inability to focus, appearing not mentally present and lacking self confidence are just some of the many signs, but some may show no outward signs.

Many of us fail to consider what our own signs of stress are. When a team works cohesively and understands colleagues’ behavioural styles, it can be easier for others to observe changes than for individuals to recognise it themselves. How you manage stress in your practice should take priority; some of the reasons for this are discussed below.

Stress is detrimental to our health, teams and businesses. All too often we become gravely aware of its effects when it’s too late. When we are not coping well with the pressures of practice, we can’t perform at our best. You may experience disengaged staff, conflict or the team fire-fighting rather than working in a considered fashion.

Nationally, 10.4 million working days are lost each year to stress, anxiety and depression. This figure would be higher if we were able to include all those days taken off for other given reasons when the true cause is stress.

Practices are often aware of the Health and Safety at Work Act 1974, but all too often, measures are taken to protect the physical well-being of employees while neglecting mental well-being.

Many practices are not sure what they should do or how they should do it to demonstrate that they are making efforts to protect both the physical and mental health of their employees. The management standards provided by the HSE are useful guidelines for helping you to comply with the law.

Every practice must have a stress management policy. For this policy to add value, it must be dynamic and built to reflect the team and individual risks in that specific practice. Openness and honesty can be a challenge in seeking this information. Employees may not want to rock the boat or may fear appearing weak and unable to cope, so trying to establish how each team member is feeling may be handled more effectively with some external intervention.

The simplest way to understand the current situation for the whole practice, teams and individuals is to use the HSE indicator tool. This is a survey which should be completed by every team member. Focus groups then discuss the results (which can be anonymous); the output of the focus groups then builds actions for the stress management policy.

A stress management policy is a tool to identify risks and minimise or remove those risks before they become significant problems. The policy will contribute to the health of the employees and that of the business.

Some common stressors can be minimised with a few actions and behaviour changes from the top down, such as encouraging staff to take breaks, creating and supporting a culture of openness and camaraderie and recognising and rewarding people for their efforts and engagement.

Prevention is better than cure and keeping your finger on the pulse is crucial to identifying situations that are impairing performance and affecting the well-being of your employees. Take action and prioritise this for legal compliance, business performance benefits and moral obligation.

If you would like VDS Training to provide a free well-being audit, please contact us on 01565 743862 or via vds-training.co.uk/contact

Autumn 2018 Seminars and Workshops

Communicating as a Team
- Thursday 20 September 2018  Glasgow
- Wednesday 26 September 2018  Leeds

Managing Difficult Situations
- Tuesday 4 September 2018  Manchester
- Thursday 4 October 2018  Birmingham
- Wednesday 10 October 2018  Cheltenham
- Friday 2 November 2018  Cambridge

Managing Difficult Situations in Equine Practice
- Tuesday 23 October 2018  Worcester

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The readers of this magazine are mainly vets. But we are also a mixed group of, for example, employees of small companies, employees of large companies, business owners, farmers, UK and non-UK nationals, etc. You also will have voted in different ways in the Brexit referendum. However, I can be fairly sure that what unites us is that not a single soul reading this will have voted to be in the mess we now find ourselves in as Brexit draws near. This has culminated in the various departments of state writing documents to prepare us all for what now seems like the inevitable plummet over the cliff edge of a no-deal Brexit.

One of the many aspects that directly affects our profession is that of pharmaceutical supplies, as many are produced in the EU and will need to be imported after Brexit. Like mine, I am sure your ears pricked up when the NHS and pharmaceutical suppliers were reported to be advised by the government to stock up on six weeks’ worth of supplies. Imagine the supply chain blip (if we can call it that) with the entire NHS ordering six weeks’ worth of drugs in a single day.

Matt Hancock MP, Secretary of State for Health and Social Care, has written an open letter to the health service and I will quote a few relevant pieces here:

“... pharmaceutical companies should ensure [that] they have an additional six weeks’ supply of medicines in the UK on top of their own normal stock levels.

"The government recently announced that doctors and nurses are now exempt from the cap on skilled worker visas. This means that there will be no restrictions on the number of doctors and nurses who can be employed through the Tier 2 visa route.

"In the meantime, where appropriate, preparations for a March 2019 ‘no deal’ scenario should be seen in the context of the work you are already doing to update your existing business continuity plans."

To help me translate what this all may mean for veterinary medicine supplies, I have been in touch with two major wholesalers and have been assured, without being given any detail, that they are making plans for Brexit.

To get another perspective, I contacted Ashley Gray, MRCVS and MD of Vetsure Pet Insurance and Buysure for Vets buying group, for some practice level advice. As well as providing pet insurance and the buying group services, Vetsure provides a range of services to their UK-wide membership base and continually seeks proactive solutions to issues for its members before they become full blown crises. Vetsure is in continual contact with practices all over the UK. Ashley responded with a useful summary:

"Manufacturers and wholesalers seem to be offering a cross-section of responses when questioned about their planning for no-deal Brexit. What is clear is that nobody is offering a guarantee of supply maintenance and nor can they. Some don’t believe there will be an issue and are either not taking action or not sharing the details of their plans, whereas others are clearly arranging for substantial stockpiling in the wholesalers – the latter will cause a substantial financial burden which will inevitably mean that wholesalers have to be selective. Some suppliers are planning for the potential need to obtain UK licenses for drugs currently operating on EU centralised licenses – there is universal condemnation of the extra cost that this will entail.

"Our advice to members would be to consider increasing their stocks marginally for key products including ‘peripheral’ drugs such as non-licensed and controlled drugs – the latter may experience particular challenges. But at this time, there is little else that practices can do other than watch this space and leave in the hands of the wholesalers and manufacturers to consider stock-piling where necessary."

Well, however you voted in Brexit, the outlook for a decent deal looks poor. I am reminded of an Irish joke: An Englishman is touring Ireland and stops to ask a farmer directions to the next village. The farmer ponders for a moment and then responds, “Well, to be honest wit’ you, if you are going there, I wouldn’t start from here.”

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Gareth Cross
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