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RVN study identifies catheter concerns



A new nurse-led study has indicated complications occur in more than a quarter of all cases where peripheral IV catheters (PIVCs) are used in small animal practice.

Researchers have described the findings of the RVC-led project as “concerning”, but have also expressed hope they will encourage further analysis of the topic.

A total of 382 placements were observed, across 19 centres in the study, the findings of which have now been published in the *Journal of Small Animal Practice*. Most of the data was collected by veterinary nurses, including placement techniques and tracking of the complications that arose.

The analysis found 26.7 per cent of cases experienced complications – a figure that the paper said aligns with other analysis in both the human and veterinary spheres.

But it added that it was “nonetheless concerning that this extensively used device causes problems in so many patients”.

The most commonly identified complication was limb swelling and phlebitis – an inflammation that can cause blood clots, which was recorded in 11.5 per cent of all the cases. Dislodgement or patient interference was the second-most common complication, occurring in 7.9 per cent of the cases observed.

Lead author Eleanor Haskey, of the RVC's Queen Mother Hospital for Animals, said: “I look forward to continuing this area of research, and believe veterinary nurses are best placed to undertake this work as it is part of our daily working lives.”

BVNA reacts to nurses number growth forecast

New forecasts for the number of UK registered veterinary professionals do not properly account for how the RVN's role might evolve in the coming years, the BVNA has warned.

Modelling compiled for the RCVS has predicted a 78 per cent rise in the number of UK practising RVNs over the next decade.

The analysis also projects that the supply of nurses will exceed overall professional demand this year, with an oversupply eventually reaching 22 per cent by 2035.

But, while shortages are expected to persist in several specific areas, BVNA president Lyndsay Hughes said the group was “concerned” by the overall supply prediction.

She said: “We feel this type of modelling alone does not present a complete picture. We encourage the veterinary profession to look at the wider context of how veterinary nurses currently work – and could work in future – in conjunction with this data.”

The report, compiled by the Institute for Employment Studies, predicted the total number of UK registered RVNs would climb from 23,000 in 2023 to more than 41,000

by 2035, with the proportion of professionals in their 40s and 50s doubling and trebling respectively over that period.

However, while the proportion of nurses working in areas including government service, industry and research was expected to fall, the paper predicted continuing growth in the profession's total supply of staff.

It said: “Overall, the supply of vet nurses equated to 96 per cent of total demand in 2023, and will exceed total demand by 2025, reaching a surplus of 22 per cent over total demand by 2035.”

RCVS chief executive Lizzie Lockett acknowledged the supply issue as an area of particularly acute potential concern arising from the report published on 13 December.

But she added: “While we stand by the robustness of the data, demography is not destiny.

“With the planned enhancement of the veterinary nurse role, and the likelihood of suppressed demand due to prior shortages, it is likely that the number of veterinary nursing roles will expand to encompass the number of veterinary nurses available to work in it.”

Mrs Hughes argued the report's forecast of a continuing shortage of vets – despite an anticipated increase in registered numbers of more than 50 per cent by 2035 – strengthened the case for nurses' roles to be expanded, both before and after any legislative reform.

She said: “We feel the projections do provide further support for the need to enable RVNs to contribute as fully as possible to the veterinary team.”

The forecasts were also published just a day after the BVNA released its own document setting out how the role of the RVN could be maximised, even without the sector's long-running campaign for legislative reform being fulfilled.

The paper argued there remained “insufficient guidance” from the college about how its revised “under care” guidance applied to RVNs.

It also listed 12 separate tasks that it believes RVNs could perform under Schedule 3 of the current Veterinary Surgeons' Act, including taking blood samples, placing both IV and urinary catheters, administering medications and administering local anaesthesia nerve blocks.

DNA control scheme to protect UK dogs



Image: luminosity-images / Adobe Stock

The Kennel Club (KC) has brought in an import control scheme to protect breeds from DNA mutations being reintroduced through imports.

While the KC said it wanted to continue use of overseas dogs in breeding, it wanted to ensure mutations that had been bred out in the UK population were not reintroduced in imported animals.

Certain breeds imported and registered with the KC from 6 January will need to be DNA tested clear or carrier, or have a proven hereditary status for the pertinent mutation from one of its approved laboratories.

The breeds and restrictions are: Italian spinone (pictured) – cerebellar ataxia; large Munsterlander – hyperuricosuria; poodle (standard) – progressive retinal atrophy; poodle (standard) – progressive retinal atrophy; and saluki – neuronal ceroid lipofuscinosis.

Goats at capacity

Buttercups Sanctuary in Kent said it was at capacity after being inundated with goats unwanted by their owners.

The shelter has had 30 goats in the past few weeks, pushing it to its 130 capacity and leaving it desperately looking for new homes so it can free up more space.

It said people were finding them difficult to look after or had lost interest in them.

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vntimes ISSN 1471-1044

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Veterinary Business Development Ltd, Olympus House, Werrington Centre, Peterborough PE4 6NA

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13,181 Average net circulation Jan-Dec 2023

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Dental congress aiming to bring veterinary professionals together

The British Veterinary Dental Association (BVDA) has announced details for its 2025 congress.

Due to be held at the Royal Institute of British Architects in central London, BVDA Congress will be held over two days from 4 to 5 April.

Following the success of last year's event, organisers of the 2025 congress have promised a dynamic two-day conference that brings together vets and nurses from across the industry to explore the latest advancements in veterinary dentistry.

This year, the congress will feature two dedicated lecture streams tailored to different audiences:

- The Incisor Stream: focused on veterinary nurses and primary care veterinary surgeons, will provide practical

insights into everyday dental care.

- The Carnassial Stream: is aimed at more experienced veterinary dentists and specialists. This advanced programme will explore cutting-edge techniques and research in veterinary dentistry and oromaxillofacial surgery.

Expert speakers

With expert speakers from across Europe, delegates can expect to gain valuable knowledge on the latest developments in veterinary dentistry, including the most recent innovations in surgery, diagnostics and treatment.

Alix Freeman, president of the BVDA, said: "We're delighted to host the 2025 congress in such a prestigious venue. With an expanded programme and new networking opportunities, we're



excited to bring the veterinary dental community together for an inspiring and enriching experience."

Prior to congress, Pet Dental Health Month will take place during February.

The annual event is organised to promote the importance of dental health in companion animals and to encourage veterinary professionals to engage with clients on the subject.

Study highlights need for workplace injury reforms

A vet and academic has warned of a "drastic need" for reform to the sector's attitude towards workplace injuries amid fears some harms are being downplayed as "everyday norms".

A newly published study has urged practice leaders to be highly cautious about their own injury statistics because of a "wide-ranging perception of risk" around the issue.

CVS, which funded the analysis, has now outlined plans for a new project that it hopes will ultimately make practices safer.

But research leader John Tulloch, a veterinary public health lecturer at the University of Liverpool, described the findings of the latest paper, published in the journal *Occupational Medicine*, as both "startling and complex".

He added: "They highlight a profession in drastic need of change in culture and personal attitudes, with respect to injury prevention and mitigation."

The warning is based on a survey that ran from December 2022 until March last year, in which 740 participants submitted complete responses across a range of practice roles.

Although overall 38 per cent said there were no injuries they would not report to an employer, the figures for specific role groups ranged from just 19 per cent among both equine and production animal vets to 64 per cent for workers in administrative roles.

However, more than one-quarter of all vets (26 per cent), compared to 18 per cent of all participants, said they would not report injuries they considered to be minor – a figure that rose to 31 per cent among production animal vets and 43 per cent for equine clinicians.

'Complex and nuanced'

Researchers said the results showed veterinary work-related injury was a "complex and nuanced concept" based on varying cultures of risk and injury expectation within different areas of practice work.

They particularly highlighted a tendency for needlestick injuries to go unreported because they were perceived as minor, self-attributed and not a cause of lasting pain as "concerning".

The paper added: "Fostering a work culture that supports 'ownership' of an injury at a local level is most likely to be successful in creating meaningful change in attitude and behaviour."

The research was funded through a grant of nearly £75,000 from the CVS Group's Clinical Research Awards programme, with the survey distributed to UK staff.

The group plans to use the results to develop a range of educational tools, which it expects to be ready by next summer, intended to help facilitate behavioural change through an increased focus on injury awareness and prevention.

Current RCVS day one competences include a requirement for vets to know both their own and their employer's responsibilities in areas including health and safety legislation.

The BVA's policy position on good veterinary workplaces also encourages practices to "promote a culture of active engagement with health and safety matters, support good practice and challenge unsafe practices".

Pub row

Animal rights group People for the Ethical Treatment of Animals (PETA) has been criticised for undermining real issues after asking a pub to change its name because it was offensive to foxes. PETA wrote to owners of The Sly Old Fox in Birmingham to say the name was "derogatory", and sly should be swapped for clever. But according to BBC News, social media commentators said the request trivialised animal rights issues.

DogFriendly win

Online pet behaviour clinic Behavet won the Vets and Well-being category at the DogFriendly Awards after earning the backing of more than 600 of its clients. The awards recognise dog friendly places and pet businesses that "go the extra mile", and Behavet, founded by Devon-based vet Tom Mitchell, has proven a hit with clients worldwide.

Amur leopards

Two rare Amur leopards have been born at Colchester Zoo. The species normally live in temperate forests in Russia and China and the Essex zoo estimates around 70 are left in the wild. The birth of the cubs was "a great achievement for the conservation of this beautiful but rare species," the zoo said on its website.

Kin Vet

Kin Vet Community has acquired two practices in the south-east of England. The company said Willett House Veterinary Surgeons in south-west London and Reed Veterinary Practice in Royston, Hertfordshire, reinforced its commitment to "delivering exceptional veterinary care and enhancing services" in local communities.

Feline fine

A 20-year-old cat called Billie had radioactive iodine treatment for overactive thyroid glands. Billie was treated at Anderson Moores Veterinary Specialists in Hampshire and is said to have made a remarkable recovery from a disorder that is common in middle aged and older cats.

KRKA UK names its vet reception hero winners

KRKA UK has announced the first winners of its Veterinary Reception Team Hero Awards.

Folly Veterinary Centre in Pontypool was named Veterinary Reception Team of the Year, while Heidi Bodily (pictured, right, receiving her award) of Mounts Bay Veterinary Centre, described as "always willing to go the extra mile", was Veterinary Receptionist of the Year.



Nursing hepatic patients

– management and treatment

Kerry Brundell Cert VN ECC, RVN, discusses liver function and clinical signs of this disease, as well as diagnosis, treatment and the care veterinary nurses can provide

The liver has many important roles, so a disease of this organ can present in a variety of forms, cause a wide array of clinical signs, call for many different treatments and require a variety of nursing needs.

Nursing these patients can be time consuming, but provides great job satisfaction.

Liver functions

The liver is the largest gland in the body and has numerous functions (**Figure 1**).

These include:

- Filtration of the blood from the gastrointestinal tract for detoxification.
- Storage of vitamins, minerals, triglycerides and glucose.
- Metabolism of carbohydrates, proteins and lipids.
- Synthesis of albumin, hormones, bile and coagulation factors (Jones, 2020; Warland, 2019).

Clinical signs

Diseases of the liver are many and diverse (**Panel 1**). Many patients will present with vague clinical signs such as weight loss, anorexia, lethargy, vomiting, diarrhoea, polyuria and polydipsia. More specific clinical signs include ascites, oedema, jaundice, coagulopathies, neurological signs and

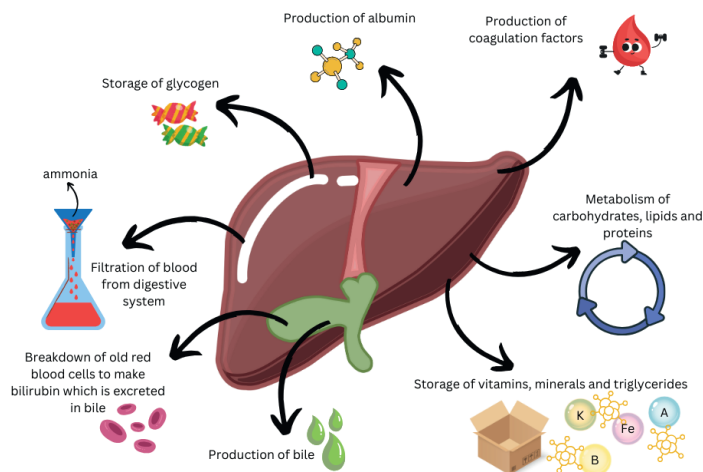


Figure 1. A schematic diagram of the liver with its various functions (adapted from Warland, 2019).

hypoglycaemia (Warland, 2019; Buckley and Rozanski, 2018).

As the liver has such a large reserve capacity, many signs of liver disease are not seen until more than 70 per cent of liver function is lost (McCallum, 2024).

Jaundice occurs when excess amounts of bilirubin are in the blood (hyperbilirubinaemia). This can be seen most easily seen on non-pigmented areas of the inner pinna, abdomen and sclera. This does not necessarily indicate liver disease, so should be assessed along with other clinical signs (Arbach, 2023).

In particularly high levels, it is possible for bilirubin to cross the blood-brain barrier, which can induce bilirubin encephalopathy (Gow, 2024).

Ascites (**Figure 2**) occurs when fluid builds up in the abdomen, because fluid leaks from the splanchnic vasculature faster than the rate at which the lymphatic system can drain it (Gow, 2024). This can be caused by portal hypertension or reduced colloid oncotic pressure from hypoalbuminaemia.

Hepatic encephalopathy is the manifestation of neurological signs due to increased levels of toxins usually metabolised in the liver, with ammonia (NH₃) being the most significant (Warland, 2019). These signs include ataxia, lethargy, head pressing, ptialism, seizures and stupor (Smith, 2018).

Diagnostics

Bloodwork in hepatic patients may show increased liver enzymes, yet this does not tell us about the function of the liver (**Table 1**).

Other blood abnormalities that may

be seen are low urea, albumin, glucose and cholesterol; prolonged prothrombin time (PT) and activated partial PT; anaemia; and increased bile acids, ammonia and bilirubin (Warland, 2019; Arbach, 2023; eClinpath, 2024).

X-rays may show an enlarged liver, hepatic masses and ascites.

Ultrasound gives more information on the vasculature and parenchyma, and allows us to examine the biliary tract and gall bladder, and identify the presence of any free fluid. Abdominocentesis can then be performed. Large volume drainage is controversial, but may be required in rare cases if the patient is very uncomfortable and dyspnoeic (Gow, 2024).

Ultrasound-guided fine-needle aspirates of the liver may be undiagnostic (Warland, 2019). Surgical biopsies may be needed, but coagulation times must be measured before this to assess the risks of bleeding during the procedure (Jones, 2020).

Serial blood samples can help to assess trends and tailor treatment plans. A central line is advantageous in taking serial blood samples, as it is less stressful than multiple venepuncture (Gray, 2019).

Schumacher (2016) pointed out that it is still important to remember not to take a volume that exceeds 10 per cent of the patient's total blood volume per week.

Treatments

Panel 2 shows the numerous treatments that may be prescribed in the hepatic patient.

Panel 1. Causes of liver disease

Environmental

Xylitol
Blue-green algae
Heavy metals
Amantia mushrooms
Alfatoxins

Drug-induced liver injury

Paracetamol
NSAIDs
Anti-epileptics
Steroids
Benzodiazepines
Antibiotics
Antifungals
Chemotherapy drugs

Infectious

Hepatitis
Leptospirosis
Feline infectious peritonitis

Other

Trauma
Heatstroke
Neoplasia
Copper storage disease
Portosystemic shunt
Hepatic lipidosis

(McCallum, 2024; Jones, 2020; Buckley and Rozanski, 2018).

Table 1. Liver enzymes		
Hepatocellular enzymes leaked from damaged hepatocytes	Increased aspartate aminotransferase	Also found in muscle, so is beneficial to run a creatinine kinase to check for muscular injury
	Increased alanine aminotransferase	May also be elevated in young, growing patients or in bone metastases
Cholestatic enzymes	Increased alkaline phosphatase (ALP)	Also seen in patients with hyperadrenocorticism, or patients receiving glucocorticoids or anticonvulsant medications. A raised ALP in cats is always significant, as this has a short half-life.
	Increased gamma-glutamyl transferase	
(Warland, 2019; eClinpath, 2024).		

Nursing care

It is important that animals receive good-quality nursing care to alleviate pain, stress and anxiety. Veterinary nurses can do this by providing comfortable housing, dimmed lighting, places to retreat or hide, playing calming music or audiobooks, pheromone therapy, and grouping treatments and walks so the patient has time to rest (Lloyd, 2017).

The hepatic patient may have various lines in place such as feeding tubes, wound drains and central or peripheral IV lines. Gray (2019) suggests all lines should be labelled to avoid any confusion with administering medications and feeds (**Figure 3**). A patient should be reverse barrier nursed if it has any kind of wound drain (Gray, 2019).

Various nursing care plans are used in veterinary practice to tailor nursing care to the individual. Nelson (2015) suggests a client interview on admission to gain an insight into the patient's normal behaviours, so stress and anxiety can be better managed.

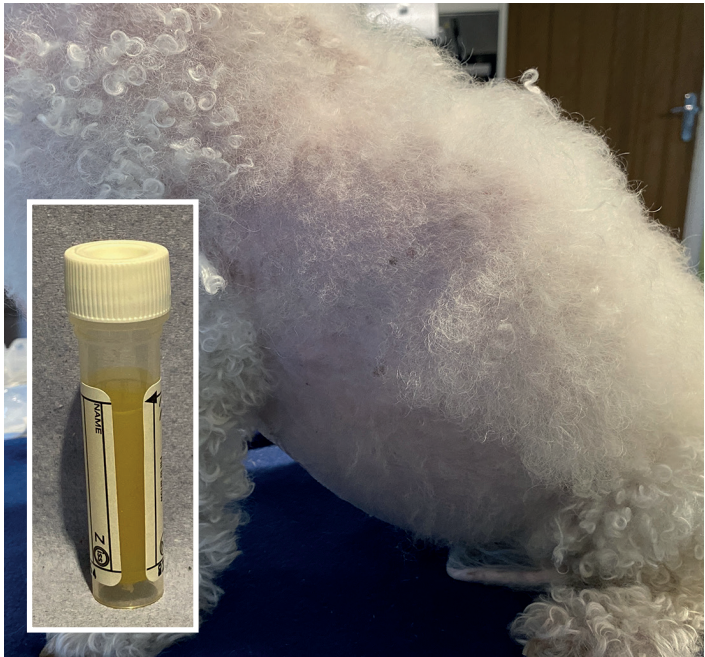


Figure 2. A dog with ascites and (inset) a plain tube of the fluid taken for diagnosis.

General monitoring of these patients is extremely important to detect any deterioration. Using Kirby's rule of 20 can help nurses to think about what nursing care to provide and what signs to watch out for (**Panel 3**).

Patients should frequently be offered water and walks or easy access to a litter tray, as polyuria and polydipsia are common signs. Good hygiene should be applied to the patient to avoid urine scalding. Patients should be turned every four hours to prevent atelectasis, pressure sores and muscle stiffness, and promote circulation (Monteiro et al, 2022).

Pain relief

Providing pain relief for any patient is vital. Pain assessment can be challenging due to the sensory and emotional components of pain. Validated composite pain scales should be used to help with this. This has been shown to decrease variability and observer bias. Grimace scales have also been shown to be reliable in cats (Gruen et al, 2022).



Figure 3. A cat with a labelled oesophagostomy tube in place.

Abdominal visceral pain can be diffuse and hard to localise, and may be referred to surrounding musculature. Signs of abdominal pain in dogs can include behavioural changes (hiding, aggression, reluctance to move, and disinterest), postural changes (praying position and stretching limbs), vocalisation and anorexia.

Pain relief options for abdominal pain include opioids, ketamine, lidocaine (continuous rate infusions provide a more constant level of analgesia rather than intermittent injections) and intraperitoneal blocks (Monteiro et al, 2022).

Adjunctive non-pharmacological therapies such as acupuncture, massage, anti-emetics and cold or warm compresses are encouraged (Monteiro et al, 2022).

Positive interactions with the patient such as grooming, walking and alleviating fear can also reduce pain.

Nutrition

It is important to measure the resting energy requirement (RER) of any patient with the following calculation:

$$70 \times \text{bodyweight in kilograms}^{0.75}$$

If a patient has been anorexic for a period of time, this daily RER should be gradually built up over a period of four to seven days to prevent re-feeding syndrome (Biorge, 2024).

Debate exists over current feeding guidelines for patients with liver disease. Protein should be reduced to prevent

amino acid breakdown to ammonia, but minimal intakes of 2.1g/kg/day and 4g/kg/day for dogs and cats, respectively, should be provided to prevent muscle protein catabolism, which would then lead to further increases in NH³ (Smith, 2018).

Prescription liver diets contain high fat levels and limited copper, but also limited protein, which may not meet the daily requirements (Biorge, 2024). Extra protein such as chicken or cottage cheese can be added.

It is recommended to divide the daily RER into three or more meals throughout the day to enable the remaining healthy hepatocytes to cope with their usual jobs of gluconeogenesis, and glycogen storage (Biorge, 2024).

If a patient consistently eats less than 85 per cent of their daily RER, a feeding tube should be placed (Arbach, 2023).

Supplements

Potassium supplementation may be required, as vomiting, diarrhoea and polyuria will all lower the amount of potassium in the body.

Zinc supplementation may be beneficial in patients with copper storage disease (**Figure 4**), as it reduces absorption of copper. Vitamins B, C and K can all be depleted in the liver patient, so are worth supplementing (Biorge, 2024).

Glutathione is an antioxidant that helps to regulate reactive oxygen species from causing damage to cells.

continued on page 6



Figure 4. The Bedlington terrier is a breed pre-disposed to have copper storage disease.

Nursing hepatic patients –

continued from page 5

In liver disease, these levels can be depleted, so antioxidants such as S-adenosylmethionine, N-acetylcysteine and silymarin (a milk thistle derivative) help to increase these levels (Nixon, 2017).

Conclusion

Nursing the hepatic patient is complex. Many clients will struggle to understand these conditions, so veterinary nurses

can play an invaluable role in helping to provide support and education to clients.

• Use of some of the drugs mentioned in this article is under the veterinary medicine cascade.

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Panel 3. Monitoring the hepatic patient using Kirby's rule of 20 (parameters and nursing considerations)

Fluid balance

Hydration status, calculate ins and outs.

Albumin

Presence of oedema.

Glucose

Weakness, seizures.

Electrolytes and acid/base

Serial blood samples.

Ventilation

Respiratory rate and effort. Pleural effusion could develop from low oncotic pressure. Atelectasis could be present in recumbent patients.

Mentation

Use Modified Glasgow Coma Scale to assess. Seizure watch.

Blood pressure

Low oncotic pressure may show signs of shock and multiple organ dysfunction syndrome.

Heart rate

Monitor for arrhythmias.

Temperature

Development of systemic inflammatory response syndrome or shock.

Coagulation

Melena, petechiae, ecchymoses, epistaxis. Also paralysis of hindlimbs and dyspnoea.

Red blood cells/haematology

Mucous membranes colour and bloodwork.

Renal function

Urination, urine specific gravity.

Infectious

Barrier nursing if required.

Gastrointestinal

Melena.

Drug doses and metabolism

Prolonged recoveries. Doses should be adjusted and dosed for ideal bodyweight.

Nutrition

Hepatic diets ideally, but must eat any food to avoid protein catabolism, assisted feeding if required.

Pain

Pain assessments using validated pain scales.

Nursing

Turn four-hourly, eye care, oral care, grooming and physiotherapy.

Wounds

Aseptic handling, signs of infection.

TLC

Consolidate treatments, cover kennel if distressed by noise.

(Adapted from Kirby, 2017; Jones, 2020; Gow, 2024).

Panel 2. Treatments for liver disease and why they are given

Saline crystalloid fluid therapy

Correct dehydration, support circulation. Hartmann's contains lactate, which a dysfunctioning liver may not be able to metabolise. Avoid overload, as this may increase portal pressures.

Lactulose and warm water enemas 3:7 instilled in the colon and held in place by inflated Foley catheter for 20 minutes every 4 to 6 hours

In cases of hepatic encephalopathy. This traps ammonia in a non-absorbable form and expels it from the body.

Spironolactone and frusemide (diuretics)

To reduce ascites and oedema. Care should be taken that the patients lose no more than 0.5 per cent to 1 per cent bodyweight/day.

Ursodeoxycholic acid

Converts the more toxic bile acids to hydrophilic ones and increases their flow.

Antibiotics

To fight infectious causes. Also to decrease the level of intestinal bacteria and, therefore, the level of ammonia produced.

Copper chelating agents (penicillamine)

Increases the synthesis of copper-binding proteins that store copper in a non-toxic form.

(McCallum, 2024; Gow, 2024; Center, 2023; Buckley and Rozanski, 2018; Walker and Siaz, 2016; Vite and Galban, 2018; Schermerhorn, 2020).

Oral glucose syrups: 50 per cent dextrose intravenously 0.5g/kg to 1g/kg, 5 per cent glucose continuous rate infusion (CRI), glucagon CRI

In cases of hypoglycaemia. Fifty per cent dextrose should be diluted to 1:4 to avoid phlebitis. A CRI is preferred, as bolus injections may stimulate insulin release, initiating continuous hypoglycaemia.

Mannitol 0.5g/kg/IV to 1.5g/kg/IV over 20 minutes

Decrease cerebral oedema and improve mentation.

Anti-epileptics, such as levitacetan. Propofol CRI of 0.1mg/kg/min to 0.2mg/kg/min may be needed

In seizing patients. Diazepam should be avoided, as this is metabolised by the liver.

Induction of emesis and activated charcoal administration

In some toxicities if the patient is alert, responsive and able to swallow.

Fresh frozen plasma transfusions

Replace deficient clotting factors and albumin.

Vitamin K

Synthesise coagulation factors if the patient is in a hypo-coagulable state.

'World-first' fox brain surgery success for Hazel

Vets at a Surrey-based referral practice have performed what is thought to be a world-first brain operation on a fox.

Clinicians at North Downs Specialist Referrals treated Hazel the fox for hydrocephalus, which had affected her behaviour and sight.

Her case, identified after she began suffering seizures, was raised by the Kent Wildlife Rescue Service charity, which found her by a roadside

following a collision that killed her mother.

Vet and RCVS neurology specialist Veronica Mortera said the procedure to fit a ventriculoperitoneal shunt to drain fluid was particularly complicated in Hazel's case.

Kent Wildlife Rescue Service founder Lorraine St John said Hazel was "doing brilliantly" since the operation and had not experienced any seizures following the surgery.



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KERRY BRUNDELL

Kerry works at Debenham Veterinary Practice in Suffolk as a multidisciplinary nurse, having previously worked in two large referral centres in the UK. She qualified as an RVN in 2008 and achieved a Certificate of Veterinary Nursing in Emergency and Critical Care in 2021. Kerry is passionate about providing nursing care to my patients.



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One health: unique critical care approach for nursing

Laura Edwards BA, RVN, TQFE, AFHEA, CertVNECC and **Karin Gerber** RN, BSc, MSc in Advancing Practice, explain this cross-professional strategy which addresses global issues

The one health approach is a collaborative strategy that considers the health of people, animals and the environment to be interdependent, and aims to improve global health (WHO, 2017).

It can be applied in both veterinary and human health care to help us address global health issues that affect patients, family members and the planet. The COVID-19 pandemic highlighted the need for a global framework for improved surveillance and a more holistic, integrated system. Gaps in one health knowledge, prevention and an integrated approach were seen as key drivers of the pandemic.

By addressing these gaps between human, animal and our overall environmental health, one health is seen as a transformative approach.

Why?

One of the first questions we want to address is, why? Why should animal-centred and human-centred

nurses collaborate? Looking at these images, our daily working lives are not so different. Which of these are veterinary centred and which are human centred?

The aim is to do more than talk; the dream is integrated health and welfare research. Why work together? What are the benefits?

Pet owners have high expectations of survival rates in their pets: Corr et al (2024) found that nearly 60 per cent of pet owners believed that their pets should have access to the same diagnostic tests as their owners.

It could also be further argued that due to the astounding work being done in human medicine, pet owners' personal experiences of treatments are informing their choices of treatments of their pets.

Or, is the drive towards more complex veterinary treatments more closely aligned to the increasingly reliant relationship pet owners have with their animals and the decrease in availability of human-centred community social

care? We can see from the Care Quality Commission (2023) data that the increase in demand between 2023 and 2024 for mental health services in England rose by 21 per cent, but the number of interactions with the service only rose 9 per cent. The statistics are worse in children and young people.

The PDSA Animal Wellbeing (PAW) Report (2024) reported that 51 per cent of the UK population own a pet, including 10.6 million pet dogs, 10.8 million pet cats and 800,000 rabbits. If we are to look at the population of humans, that means roughly one in every three humans in the UK owns a pet.

These numbers did not even look at the many other animals that humans decide to share their lives with. Ninety-one per cent of pet owners felt that their pet improved their life, with 88 per cent reporting the pet makes them mentally healthier, and 69 per cent of owners stated their pet improves their physical health. Martins et al (2023) suggested that pet owners may have higher levels of social support, life satisfaction, happiness and mood with lower levels of loneliness than non-pet owners.

What?

From as far back as the 1970s, research has long pointed towards the positive health benefits of owning a pet (Mencke, 2024). Animal-assisted interventions (AAI) are increasingly used as a complementary therapy in clinical settings. The International Association of Human-Animal Organisations define AAI as "a goal oriented and structured intervention that intentionally includes or incorporates animals in health, education and human services (for example, social work) for the purpose of therapeutic gains in humans" (Jegatheesan et al, 2018).

Westgarth et al (2019) found that people who own dogs are four times more likely to meet current physical activity guidelines than those non-dog owners, and in a study of adults older than 50 years with mildly elevated blood pressure, the presence of a pet dog or cat had a significant impact on blood pressure, with cat ownership being associated with lower diastolic and systolic blood pressure (Surma et al, 2022).



In a study exploring if AAI improves pain perception in polymedicated geriatric patients with chronic joint pain (Rodrigo-Claverol et al, 2019), patients reported reduced pain, discomfort, and stress; additionally, stress among nursing staff was found to decrease significantly following AAT sessions. Pets were found to contribute to a stronger sense of identity in owners with mental health conditions, including reducing negative perceptions of a condition or diagnosis.

Pets provide a sense of security and routine in the relationship, which reinforces stable cognition (Martins et al, 2023). Dogs and cats play an integral part in the rehabilitation and mobilisation of humans; more than 7,000 people rely on an assistance dog for a range of conditions (Assistance Dogs UK).

The question is: "How can human nursing embrace the health benefits of pet ownership to drive recovery, rehabilitation and, ultimately, reduce the numbers of people being admitted to hospital, and what can veterinary staff do to lead the conversation?"

Part of that answer must include the two disciplines talking to each other, exploring different avenues of collaboration that might include getting help understanding the dynamic between your patient and their pet at home. How can you use that relationship



to a positive end? Understanding the connection between unhealthy lifestyles and the survival outcomes of pets (Plante et al, 2023).

The human-animal bond between a person and their pet can be so strong that those experiencing homelessness may often forego services and/or food for themselves to provide for their

beloved pet. One health clinics are a unique interdisciplinary way to provide health care to both the human and their companion pet as one family unit. Health care is provided to each individual alongside examining the intersectionality, which can include zoonotic diseases, nutritional and mental health to name a few.

The gold standard of care for a true one health clinic is to be a fully integrated clinic where both people and pets have access to primary health care at one place and at one time, where both the human and veterinary health care providers create a joint health care

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One health

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plan (Sweeney et al, 2018). The bond we share with our pets is important for many; unfortunately, this is often exploited in violent and or abusive relationships, where it is used to gain power and control over the person and or family members. This can range from threatening to harm the pet, to stopping someone being able to care for their companion pet in the way they want to. Staff in human-centred hospitals and veterinary practices should both be able to signpost cases of domestic abuse to charities that will help with their pets at home. Studies have confirmed that in households with companion animals experiencing domestic violence and abuse, a high probability of animal abuse exists.

The National Link Coalition is an organisation working to increase awareness of the connection between animal cruelties and domestic and community violence, and they have highlighted that:

- 70 per cent of people who have committed animal abuse also had criminal records that included crimes of violence, property, drugs, or disorderly behaviour (Arluke and Luke, 1997).
- 71 per cent of women who experienced domestic abuse said their partners had harmed, killed or threatened pets (Ascione et al, 1997).
- 60 per cent of families where child abuse took place were also found guilty of animal abuse (DeViney et al, 1983).
- 63 per cent of “aggressive” criminals were found to have deliberately harmed animals in childhood (Schiff et al, 1999).
- 70 per cent of people charged with cruelty to animals were also known by police for other kinds of violent behaviour (Boat and Knight, 2000).

A significant challenge is that it is often difficult for those leaving violent situations to keep their pets with them, resulting in them delaying fleeing the situation due to concerns regarding the safety of their companion animal; Tiplady et al (2012) reported that nearly 35 per cent of women delaying seeking refuge for this reason.

Those in these circumstances are often unaware of the various programmes available to assist

families with companion animals by providing pet care when an individual needs to escape quickly. Many animal welfare agencies provide emergency accommodation. Many refuges can in certain circumstances accommodate the animal, but these needs expanding. Children especially often rely on their pet to provide stability, security and companionship.

Can we work together to ensure families, and their pets stay together at a time of need? The human-animal bond is a mutually beneficial relationship between human and animal. The key is the word “mutual”, which means we must have the animals’ needs considered alongside the humans. Veterinary practice does not just treat animals. We have a unique window into the human-animal bond in action. We counsel, listen and work with humans, taking into consideration medical needs and barriers, finances and well-being. It is impossible to just treat the pet.

We manage expectation and hope, and consider the unique role the pets play in the owners’ life, as well as dealing with the owners’ own personal experience with health care. These are just a few of the considerations we must put forward when deciding on treatments. With the increase in pet ownership and the reliance on pets for companionship, healthy lifestyles and a myriad of other reasons, the conversation between human and veterinary medical care has never been more critical.

A particular discipline of veterinary and human care that shares many treatments and research is critical care. Human and veterinary emergency and critical care share attitudes and values, and provide a multitude of opportunities for the development of both professions.

Emergency and critical care management of cats and dogs is similar to that of humans. Veterinary critical care teams have access to advanced diagnostics and imaging, capnography and invasive haemodynamic monitoring. Critically ill animals can require ventilation, interventional radiology, haemodynamic support, transfusions, renal replacement and complex interventional cardiology similar to human patients. Therefore, we believe cooperation between human and veterinary critical care nurses can provide a bidirectional, synergetic pathway that can benefit both.

Now what?

The BVNA and the British Association of Critical Care Nursing (BACCN) has decided to join forces and create a working group. Our remit is to continue to explore the possibilities of working together for the health and well-being benefits of all our patients.



We aim to discover new ways of working. Learning from the years of expertise and practice from both sides. Veterinary medicine is at the forefront of research looking at how as a planet we can live more harmoniously with animals; how can we avoid the next pandemic; and how can we help humans and pets lead a healthier life?

Helen Ballantyne presented on this unique one health collaboration while delivering a keynote session at the first ever joint BACCN and Irish Association of Critical Care Nursing conference in Belfast in 2022.

She later reflected on this and said: “The vision of (this joint work) is to provide a unique collaborative learning experience: the opportunity for VNs to learn from experienced intensive care nurses, who have novel technology at their fingertips, access to advanced, contemporary clinical research and, like their veterinary counterparts, a genuine passion to the do the very best for their patients.

“There (are) plans in place to encourage and provide funding support for critical care VN research, promote evidence-based practice, and design exchange programmes so that ITU nurses might see how a veterinary ITU works, and vice versa. While it is only natural to suggest that most of the

learning benefit will be towards the younger, greener veterinary nursing profession, clear benefits exist for human-centred nursing and patient care, too.”

She added: “Consideration of the human-animal bond may make human-centred nurses’ lives a little easier, and maybe even prevent ITU admissions through supportive health promotion. Collaboration could support antibiotic stewardship, and clinical research may offer novel treatment options across the species.” (Ballantyne, 2023).

Alongside Helen’s session, other veterinary critical care nurses delivered both oral and poster presentations covering subjects such as tracheostomy and nasogastric tube feeding safety, as well as a session on veterinary euthanasia. Since then, we worked on a mutual exchange programme enabling observational visits to both a human and veterinary critical care unit, respectively.

We are looking for nurses who would be interested in finding novel ideas and conversations around this topic. Or, if you would just like to find out more with no obligations, contact the Veterinary Critical Care Nursing team via baccn.vccn@gmail.com or visit www.baccn.org/regions/Veterinary-Critical-Care-Nurses



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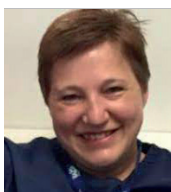
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LAURA EDWARDS

Laura is a critical care veterinary nurse who has worked for The Royal (Dick) School of Veterinary Studies in Edinburgh for 12 years. In 2019, Laura became a lecturer in veterinary nursing at Scotland's Rural College and continues to develop new learning opportunities for both SVNs and veterinary alumni who wish to expand their knowledge and study after qualification. Laura's interest turned to one health after attending a British Association of Critical Care Nursing (BACCN) conference in 2019. As a result, she started a collaboration with BACCN and in 2021 was asked to create a veterinary nursing committee within the organisation – the first within a human nursing organisation. This allowed for fantastic learning opportunities and the creation of a working group with the BVNA. Laura has spoken annually at both the BACCN conferences and BVNA, highlighting this collaborative work since 2021.



KARIN GERBER

Karin joined the British Association of Critical Care Nursing (BACCN) National Board in 2013, taking on the role of regional advisor and took over the role of conference director in 2017. Karin brings 30 years of clinical critical care nursing experience to the team, having trained and worked in South Africa and the UK. She works clinically in a busy district general hospital (DGH) in the South of England. She has attended and presented at several local, national and international critical care conferences, and has organised many educational events for both the BACCN and the DGH where she works. Karin is passionate about all things critical care nursing related and is an active social media participant/advocate, taking the lead on the BACCN's social media activity to explore current critical care issues with practitioners from across the world.

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VN Voice



Vintage vet nurses: the passion is still present

Isobel Dorr BSc(Hons), RVN, ISFM DipFM and AdvCertFB, explains how she has kept her love for the job by learning something daily

About 14 years ago, a colleague asked me: "where are all the older veterinary nurses?"

As I was about to turn 40 within a few months at the time, I'd never really thought about either being old or wondering whether there was a fabled place for the worn out RVN to go to, a bit like the legend of the graveyard for elderly elephants.

We were both "nurses" who had been working in practice before the requirement to be qualified and go on to the register. She had completed her training two years prior, and I was about to embark on my level 3 diploma and go back to college at 39.

Here started my passion for learning again, some 20 years after graduating with a degree in biochemistry. I really enjoyed the exchange of knowledge and case discussions in class, filling all the gaps in my nursing.

Fast forward

Fast forward 11 years on, and that desire to learn and my passion for nursing is still present. I've not found any complacency in thinking I do not need to bother with further study, or that I've done it all now and got the T-shirt.

My career has taken me from working as an RVN in general practice, to a practice manager and back to an RVN again, but this time in two places: in a specialist referral practice

and in an emergency and critical care hospital at weekends.

What motivates you

Finding out what it is that motivates you and where you think your skill set is suited is key to keeping you in this profession.

I feel I am constantly learning every day, and there is always something new to take away from each shift. It is important to find CPD to keep you motivated and engaged.

I enjoy working with SVNs, as they have all the latest tips from college to bring into practice, while us older RVNs provide a solid reassuring presence, helping with their training.

Knowledge grown

I've enjoyed getting to work in different teams and feel my knowledge has grown enormously in ophthalmology and emergency and critical care – two areas I'd not really considered working in prior to taking the leap of leaving my previous practice of 17 years.

Life takes you in lots of different directions, but find what you want to do and do it, recognising that unless you try, you'll never know. I'm certainly not ready to hang up that stethoscope just yet.





Urine scalding in rabbits

– causes and treatment methods

Jade Mayes RVN, APVN(Small Mammal), CCMN, outlines how to approach this condition in the species, including a case study example

Urine scalding is a complaint seen in rabbits. Their alkaline urine is allowed to soak through the fur, which can lead to alopecia, inflammation and ulceration of the dermis.

Urine scalding is usually seen secondary to underlying disease; however, in cases of poor husbandry this may not be the case. Early intervention will reduce the likelihood of developing chronic conditions such as dysuria, pain, pododermatitis, severe ulceration and myiasis.

These conditions could lead to a poor or even grave prognosis. This condition will be painful and treating the primary cause will aid in an overall better outcome.

Causes

Several primary conditions can cause urine scalding. These include the following.

OA

OA is a chronic progressive and sometimes debilitating condition causing mobility issues. OA mainly affects rabbits older than six years of age; however, rabbits as young as two years of age may be affected – especially in giant breeds². Rabbits may be less inclined to move from soiled

areas due to pain, therefore increasing the risk of urine scalding.

It should also be noted that if they are unable to angle their pelvis correctly to pass urine, they may soil themselves². This may be seen in cases with pelvic, lumbar and stifle OA. It is important to have easy access litter trays and appropriate substrate to allow for wicking of urine away from the fur and skin.

Good pain management is another important factor. Multimodal analgesia with the use of NSAIDs alongside gabapentin or tramadol may be indicated. Paracetamol may also be used. The use of nutraceuticals with glucosamine, chondroitin and *Boswellia* may also be beneficial. These products are suggested to optimise joint health and aid with natural inflammatory processes.

It should be noted that no trials investigating the anti-inflammatory properties of *Boswellia serrata* in rabbits specifically has currently been undertaken, but other beneficial properties have been noted³. However, these anti-inflammatory properties have been noted in clinical trials on other species.

The use of treatments such as acupuncture may also be considered. A case in 2020 (published in 2024)

Abstract

It is now estimated that 53 per cent of adults own a pet, with 2 per cent of this figure made up of rabbit owners and an estimated 1.1 million pet rabbits in the UK¹. The popularity of rabbits as pet means it is important to understand common conditions and educate owners on preventive measures to reduce the likelihood of disease and increase the incidences of early diagnosis of medical conditions.

Urine scalding can indicate mobility issues and underlying disease. If left untreated this can lead to a worsening condition, pain and in some cases, development of myiasis and pododermatitis.

discusses a large breed rabbit receiving acupuncture for chronic OA of the pelvis and stifles.

The rabbit had urine scalding from limited movement and the author reports they saw great improvement after several weeks of treatment, regaining the ability to hop⁴. The use of pain management and good husbandry should be used in the prevention of urine scalding in the OA patient.

Obesity

Obesity can contribute to multiple secondary conditions in the rabbit. These include cardiovascular disease, hepatic disease, pododermatitis, OA, urinary conditions such as bladder sludge and urine scalding⁵. Dental disease may also be a risk if the diet is poor.

Obesity will make eating caecotrophs more difficult, in turn they will accumulate around the rear end, also increasing the risk of inflammation in

the urogenital region. This will increase the risk of developing myiasis. Not dissimilar to OA cases, the patient may find mobilisation difficult and may sit for extended periods in soiled areas. This can also lead to urine scalding.

It is important to body score patients as part of a health check. The clinician may also use this time to educate owners on appropriate diet and husbandry. It is advisable to remove barley rings and other treats including human food, such as biscuits, from the diet, and only allow fruit as an occasional treat⁶.

Varying suggestions exist for the amount of pellets to feed rabbits; however, the Rabbit Welfare Association suggest one tablespoon per kg (of the patient's ideal bodyweight, not their current weight). This may be fed alongside ad-lib hay and a portion of fresh vegetables⁶.

Although it is common to see more rabbit-savvy owners in the clinic, it is

still important to make sure they are feeding pellets rather than muesli, to reduce the risk of selective feeding.

Making sure the rabbit has access to appropriate exercise is also important as some rabbits may still spend much of their time in a hutch. It is important to make sure their run or free roam access is increased and runs allow room for adequate mobilisation.

Poor diet

Poor diet can lead to dental disease and obesity. These factors can contribute to difficulty eating caecotrophs and make mobilisation harder for the rabbit. It is important that a good amount of fibre is available in the diet.

A lack of calcium and vitamin D₃ in the diet can lead to dental disease, and while owner education regarding diet is important, it should also be noted a large proportion of dental disease is acquired due to malocclusion. This can especially be seen in brachycephalic breeds such as lop-eared breeds, Netherlands dwarfs and lionheads.

It is important to monitor for clinical signs of dental disease – these can include anorexia, weight loss, bruxism and gastrointestinal stasis.

Diets too high in calcium can lead to an increase in urinary sludge. Green vegetables are often high in calcium; however, up to 90 per cent of these are made of water, therefore the water content is probably going to have a positive impact, rather than the potential negative effect of the mineral content⁷. Some vegetables including broccoli, beets and dandelion may cause a red orange tinge to urine, which is normal.

Encephalitozoon cuniculi

Up to 52 per cent of clinically well rabbits tested posited for *Encephalitozoon cuniculi*, with spores being shed via the kidneys for up to six weeks⁸.

Symptoms include anorexia, lethargy, cataracts, urine scalding and torticollis; it should be noted *E cuniculi* is zoonotic and can be transmitted to immunosuppressed individuals⁸. Treatment consists of a 28-day course of fenbendazole. Owners should take care when cleaning areas contaminated with urine due to the risk of zoonosis.

Renal disease

Renal disease can be both acute and chronic. Contributing factors include uroliths, neoplasia, toxicity *E cuniculi*, urinary obstruction, hydronephrosis and severe stress⁹.

Biochemistry analysis will show marked elevation in urea, creatinine and phosphorus. Elevated calcium levels will also be seen alongside marked anaemia⁸. It should be noted blood urea nitrogen in rabbits can be affected by protein intake and liver function; caecal flora, stress and hydration status may also affect these levels⁹.

In total, 65 per cent to 75 per cent of renal nephrons need to be damaged

before an increase in serum creatinine is noted⁹. It may be beneficial to use more sensitive testing such as enzymuria and gamma-glutamyl transferase in some cases⁹.

Radiology and ultrasonography may also be indicated – especially if obstruction is suspected. Urine culture and sensitivity may be used if infection is suspected to select the most appropriate antimicrobials to help prevent antimicrobial resistance. However, the clinician will suggest diagnostics based on clinical assessment and presentation of the patient. A holistic approach should be used and owner circumstances discussed.

Urogenital/genital deformities

Deformities may cause dysuria. Juvenile male rabbits may fight causing trauma to the genital region. This can lead to deformities. Early neutering is indicated in male pairings.

Treponema cuniculi commonly known as rabbit syphilis is spread via breeding and may lead to facial lesions, due to the rabbits cleaning infected areas other symptoms include inflammation of the vulva and prepuce, leading to necrosis and atrophy of the seminiferous tubules⁹. In deformity cases management of the condition is indicated ensuring quality of life is not affected.

Case

Morse is a two-year-old male, neutered mini lop. He was neutered at four months old due to persistently mounting his companion; this ceased shortly after neutering. They were not separated due to his companion (who is also his brother) becoming incredibly stressed without his presence.

This was considered and his brother was neutered first; they were then put in recovery together to reduce stress. No surgical complications were seen; however, trauma to the penis was noted and as scabs and discharge were present, enrofloxacin (10mg/kg) and meloxicam (1mg/kg) were prescribed postoperatively.

Improvement was seen over several days and no complications were noted. Several months later, Morse was presented to the surgery with a small patch of urine scalding in the urogenital region and a small lesion on his ventral caudal abdomen; a minor deformity to the penis was also noted. As body score was 3/5 and no other clinical signs were indicated, it was assumed the abnormality and change in husbandry was the likely cause.

The skin was cleaned with dilute chlorhexidine, care was taken to not make contact with mucous membranes, and enrofloxacin and meloxicam were prescribed for five days alongside probiotics. However, culture and sensitivity may have been beneficial.

The owner continued cleaning and applying barrier cream at home. Both rabbits were litter trained and the owner reported changing the substrate several



Morse and his companion in the garden.

days prior to a larger woodchip shaving with less absorbency and had also been feeding a new dandelion forage mix.

The shavings were changed to the brand previously used, initially with straw on top to aid in wicking of urine away from the patient and an improvement was seen.

Several days later the owner changed the dandelion mix to a herb and hay-based forage, and clinical signs were completely resolved within several days. The owner continues to check his urogenital region daily to look for signs of urine scalding.

Both rabbits have garden access, so it is important to check for any signs of myiasis (**Figure 1**).

The owner has noted on the odd occasion there is urine on his fur, which is cleaned (**Figure 2**). He had one other flare of urine scalding when the dandelion mix was fed again. This has now been removed from his diet. This was resolved with cleaning and the application of a barrier cream (Filtabac with manuka honey). He is currently managed via maintaining consistency in his husbandry and diet.

Treatment

It is important to find the primary cause of urine scalding for the most effective treatment outcomes, and to reduce the likelihood of exasperation of clinical signs. Diagnostics may be indicated depending on clinical signs and the clinical examination.

It is important to take a comprehensive clinical history. If infection is suspected, culture and sensitivity may be indicated to allow for the prescribing of the most appropriate antimicrobials.

It is important to assess husbandry and make sure an appropriate absorbent and cushioned substrate is used. Although shavings may stick to lesions, they also offer absorbency. A layer of straw over the top may increase the urine's ability to wick away from the skin, and potentially reduce the amount of shavings becoming stuck to the skin lesions. Towels or absorbent puppy pads and vet bedding may be used; however, monitoring of the patient to prevent them eating this foreign material may be indicated.

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Cat chat



A physical examination allows us to gain important information about a cat's health.

The following points are some dos and don'ts to ensure cat welfare remains paramount.

Do

- Have everything you need ready.
- Ensure the room you are in is safe, quiet and clean.
- Use synthetic feline pheromone diffusers and sprays.
- Allow cats to acclimatise to the room before physical contact is made.

physical contact is made.

- Provide choice via features such as places to hide and perch.
- Allow cats to explore; for

example, let them jump to the floor or sit on shelves/windowsills.

- Examine the cat where it is most comfortable.
- Allow cats to remain in their carriers. Encourage the use of carriers where the top can easily (and quietly) be removed, allowing the cat to remain in the base.
- Ask yourself: "is this cat in pain?" If so, provide analgesia.
- Approach the cat in a gentle, calm manner. Don't make direct eye contact, and always move slowly and deliberately. Hold out a soft hand; the cat can then choose to sniff it and interact further.
- Start at the least invasive/painful part; for example, respiratory rate, which can be done from a distance.
- Use treats as a distraction for confident cats that become frustrated.
- Use towels for restraint, if appropriate. Towels can be gently wrapped around the cat for extra control when needed.
- Take breaks. Regular pauses give the cat a break and choice on what to do next.

- End on a positive note.

- Make notes. Record what worked and what didn't to help avoid protective behavioural responses, and escalation at future visits.

Don't

- Be noisy. Speak in a calm, quiet voice and make sure no loud noises are present.
- Rush. Try to make all appointments at least 15 minutes long.
- Use surgical spirit or water to reduce purring when auscultating the thorax. Instead, distract the cat by altering the lighting, providing access to a window or using toys.
- Use restraint equipment such as cat bags, gauntlets and muzzles.
- Scruff cats. This is intimidating and leaves the cat no room for manoeuvre except for defensive aggression.
- Ramp up the restraint. Using heavy restraint leads to distress in the cat and injury to yourself. The cat will also remember the experience and show the same repelling behaviours (and more) at the next visit. Remember, no bad cats exist, just scared ones.

Image: Gstudio Group/Fotolia



Urine scalding in rabbits –

continued from page 13

The area should be clipped if appropriate and cleaned. Owners may soak the rear in lukewarm water with a rabbit-friendly shampoo or appropriate cleaning agent, drying the area well and applying a barrier cream afterwards. It is important that wetting of the rabbit's fur is kept to a minimum in non-affected areas.

Discussions with the owner to make

sure the rabbit can mobilise in their enclosure adequately to prevent them from having extended ambulatory periods sat in urine. They should also have soiled bedding removed frequently.

Patients may receive antimicrobials and anti-inflammatory drugs; owner understand of administration and common side effects should be assessed. The use of pain scoring will assist in effective pain management, however the use of grimace scales and pain scoring should be used as objectively as possible. Checking for pain indicators such as bruxism, abdominal pressing, anorexia, gut stasis,

lethargy and reduced movement should also be considered. Multimodal pain management may be indicated.

The use of products such as cyromazine and other rabbit-safe insect repellents will reduce the likelihood of myiasis, along with frequently checking of the patient.

Conclusion

Various conditions can lead to secondary urine scalding. It is essential to gain a comprehensive history to aid in the diagnosis of the primary condition. Treatment may take time and reoccurrence of clinical signs may occur, so owner compliance and good husbandry, alongside resilient management, will help in a more positive outcome.

This condition can be painful and good pain management is indicated.

Pet health checks to discuss weight, pain management for senior rabbits, and keeping clients up to date on husbandry will potentially allow for a better prognosis and prevention of urine scalding. It will also highlight any other medical conditions earlier. Working with the owner will allow for better compliance and early detection leading to better outcomes.

- Some drugs mentioned in this article are used under the cascade.

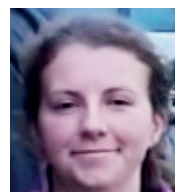
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The owner has noted on the odd occasion that urine on Morse's fur is present, which is cleaned.



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Jade graduated in 2014 and has worked in both mixed and first opinion small animal practices since 2010. She has completed a certificate in nursing of small mammals and canine mobility nursing.

10

measurable benefits to improving anaesthesia workflow

Victoria Plimmer BSc(Hons), VPAC, RVN, NCert(Anaesth), explains the importance of knowledge, teamwork and communication to ensure a successful outcome in this area

Anaesthesia workflow is synonymous with teamwork. In general practice, the nurse's knowledge of anaesthesia and the operational prep room is fundamental to workflow success.

Multiple studies have concluded that teamwork and communication failures are the strongest predictors of surgical error – it's exciting to see how nurses can have such a positive impact on this area and how the utilisation of every member of the team can create a valued and positive anaesthesia environment with streamlined anaesthesia processes.

It's worth remembering that the approach to workflow is individual – while some fundamentals exist, teams need to understand what good workflow looks like for them and adapt accordingly to their situation.

Visualising the "ideal" allows groups to work towards setting goals, consider any inefficiencies and shift them to opportunities. In that manner, we are naturally looking for a solution, which can be a process rather than a "quick fix".

The focus is on finding ways to lighten the anaesthesia workload, all while enhancing the efficiency of task flow. At a minimum, surgical flow disruptions can extend surgeries and increase costs. More importantly, surgical flow disruptions can lay the foundation for errors that may impact patient safety.

Here are 10 measurable benefits to improving anaesthesia workflow:

1 Patient and client care. An increased focus on each patient and client. A reduction in patient anaesthetic journey times. Consistent patient safety and high-quality care.

2 Teamwork. Gaining that "magical time" – freeing up vets for their roles and owning your role with confidence. Reducing the workload/burden of individuals.

3 Communication. Accurate, direct and efficient. Reduction in inefficient communication.

4 Team morale. Reduced staff stresses and a happy workplace environment. Effective coping mechanisms for unexpected challenges.

5 Productivity. Reduced anaesthesia workload and improved task efficiency. Minimised "wastes".

6 Case management. Having the optimal caseload with calm and organised surroundings. Avoidance of last-minute cancellations. Standardised approaches to aid in performance expectations of staff and improvements to patient safety.

7 Disruptions. Reduction in disruptive activities. The ability for teams to focus on their task at hand.

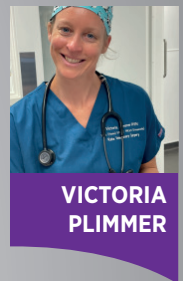
8 Environment. Reducing anaesthetic durations, managing volatile agents, and oxygen consumption with tailored patient care and enhanced safety checks for anaesthetic equipment. Reduction in practice carbon footprint.

9 Team education. Having pre-planned solutions. Understanding the knowledge/systems gap. Fostering positive change and having the skills to improvise for the unexpected.

10 Cost effectiveness. Better profitability. Revealing "unnecessaries" and optimising necessities.

Intraoperative patient care is intricate and requires extensive multi-tasking. While veterinary teams excel at juggling tasks, could we ease the load on individuals by defining specific roles in anaesthesia and optimising our workflow?

Now is the time to initiate this important discussion in your practice.



VICTORIA PLIMMER

Victoria is an RVN of 17 years' experience, having graduated with a BSc(Hons)

Veterinary Nursing degree and a veterinary practice administration certificate from the University of Bristol in 2007. She has a diverse range of experience, working as a locum in first opinion, referral work, and abroad in animal shelters and practices. Victoria has held a head nurse position in a first opinion practice and was an associate lecturer for five years. Her current position is as a peripatetic referral RVN and business relationship manager at Rata Veterinary Surgery. Her passion lies in anaesthesia and analgesia. She is the founder and director of Victoria Plimmer Consultancy, a service to aid in anaesthesia processes, workflow and efficiency in general practice. Victoria loves sharing knowledge, learning from teams as she works with them and empowering vet nurses in all that they do.



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