VetCompass
UK Companion Animal Health Surveillance

VetCompass™ Newsletter December 2022

As we approach the end of 2022, this is our opportunity to thank all those wonderful people and organisations who have contributed to the ever-increasing impact that Big Data projects such as VetCompass are having on improving animal welfare in the UK and worldwide. Special thanks go to the animal owners and the veterinary professional teams at all the veterinary practices that are part of the VetCompass family including, but not limited to, the Medivet Veterinary Partnership, Vets4Pets/Companion Care, Goddard Veterinary Group, CVS Group, IVC Evidensia, Linnaeus Group, Beaumont Sainsbury Animal Hospital, Blue Cross, PDSA, Dogs Trust, Vets Now. Particular thanks also to The Kennel Club, Kennel Club Charitable Trust and Agria Pet Insurance who are key partners in the breed-health related work of VetCompass. Thanks to the many other funders of projects within VetCompass including Dogs Trust, Petplan Charitable Trust, VMD, Battersea, AWF and UFAW. And a huge shout out to all the researchers and collaborators on the many projects underway within VetCompass.

There is growing awareness of the importance of basing decisions on good evidence in order to gain the best possible animal welfare outcomes. With this in mind, VetCompass is very happy to have shared evidence and continue to support a wide range of welfare-focused groups such as The Kennel Club, the UK Brachycephalic Working Group, the International Collaborative on Extreme Conformations in Dogs, the International Partnership for Dogs, the APHA Small Animal Expert Group, RUMA Companion Animal and Equine, APGAW , APDAWG and many others.

This newsletter offers additional detail on some specific projects ongoing within VetCompass that may help to change how veterinary professionals view and interact with their clinical worlds. A few other examples from 2022 include:

1. All VetCompass papers are freely available open access.
2. With 15 new peer-reviewed papers already published during 2022, the evidence base for veterinary teams is growing bigger and better.
3. Most VetCompass papers come with an infographic that is freely available for veterinary practices to download and use.
4. A VetCompass paper and infographic on life expectancy in dogs this year has reshaped how we understand the impact that extreme conformations have on how long our dogs live.
5. Papers this year on the health of English Bulldogs (infographic) and Pugs (infographic) led to international discussions on the welfare issues of these breeds.
6. A paper and infographic on antimicrobial usage in horses has supported wider UK work on antimicrobial stewardship and resistance.

Over the coming year, as a broad collaborative of partners with a shared focus on improving animal welfare, VetCompass will continue lead the way in generating evidence to support veterinary teams, researchers and owners. We sincerely thank you all for your contributions to animal welfare and for being part of VetCompass.

We wish you all a very safe and happy Christmas.
Merry Christmas and a Happy New Year!
Dan O'Neill, Dave Brodbelt, David Church, Noel Kennedy and all the VetCompass Team at the RVC

Ongoing projects:

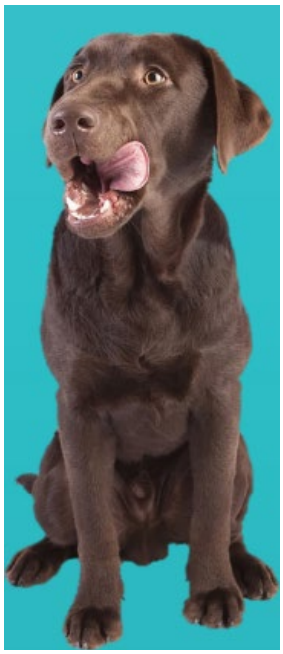
Improved Stewardship to Protect Veterinary Antimicrobial Usage in UK Cats and Dogs

The UK veterinary surveillance networks VetCompass and SAVSNET have shown persistently high prescribing rates of antimicrobials to cats and dogs over the last ten years. Recent efforts assessing the influence of stewardship interventions on changing prescribing behaviours have shown that some change is possible. Still, there remains a need to establish scalable and evidence-based interventions designed around the realities of first-opinion clinical practice.

The VetCompass team is now embarking on a two-year project in collaboration with the Pets at Home Vet Group. With generous funding from the Petplan Charitable Trust, this project will start early 2023. The project aims to identify and promote effective and practical antimicrobial stewardship interventions for widespread adoption in first-opinion veterinary practice.

The study objectives are to:

- Benchmark current antimicrobial usage in dogs and cats.
- Develop and implement a range of antimicrobial stewardship interventions based on a Theoretical Domains Framework.
- Evaluate the impact of these interventions in a randomised, controlled trial.
- Support widespread adoption of the most effective interventions across the UK.



The Team includes Dave Brodbelt, Dan O'Neill, Noel Kennedy and David Church, but also RVC Clinical Microbiology colleague Sian Frosini and will work closely with the Pets at Home group to embed this exciting work into their practice group.

VetCompass eClinical Trials

Camilla Pegram is now in the second year of her PhD titled "VetCompass eClinical Trials (VETs) – Generating Interventional Evidence from Observational Data", funded by Dogs Trust.

Scientists have long been cautious to speak and write about 'causes and effects' and have tried to dodge this bullet for decades by talking about 'associations' or 'links'. But now the new science of causal inference is attempting to shift this attitude towards a bolder approach. Causal inference refers to the process of drawing a conclusion that a specific intervention (e.g. treatment) was the "cause" of the effect (or outcome) that was observed [1].

To date, evidence based medicine that reports the clinical effects of therapy has relied heavily on randomised controlled trials (RCTs) that are invariably complex, slow, expensive and frequently ethically challenging [2]. Observational data such as anonymised veterinary clinical records represent a valuable, and to date underused, source of information to estimate real-world causal effects. Causal inference from large observational databases ("Big Data") can be viewed as an attempt to emulate (i.e. replicate) a randomized experiment - the target trial - that can answer the question of interest [3]. Observational data are subject to biases but advanced statistical approaches exist which aim to address potential biases and make the results akin to those of a randomised controlled trial [4].

This PhD aims to:

1. Adopt causal inference and statistical methods from existing human epidemiological studies for VetCompass eClinical Trials (VETs) to generate evidence comparable to RCT studies.
2. Estimate and compare the clinical effectiveness of real-world interventions in 4 conditions with welfare importance in dogs in the UK.

Over the past year, Camilla has adopted this "target trial" approach to evaluate whether management type for cranial cruciate ligament disease (surgical versus non-surgical) **causes** differential outcomes including duration of pain relief use and lameness in affected dogs. The findings are very interesting and are being prepared for publication, so watch this space! Camilla has since started work on the next target trial, which will evaluate whether antibiotic prescription at first presentation (compared with no antibiotic prescription) for "uncomplicated" acute diarrhoea in dogs **causes** improved clinical resolution.

To find out more about the project visit: https://www.rvc.ac.uk/vetcompass/research-projects-and-opportunities/projects/projects/vetcompass-eclinical-trials

References

1. Frey, B.B., *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation.* 2018.
2. Pfeiffer, D.U., *Veterinary Epidemiology An Introduction*. 2010, West Sussex, UK: John Wiley & Sons Ltd.
3. Hernán, M.A. and J.M. Robins, *Using big data to emulate a target trial when a randomized trial is not available.* American journal of epidemiology, 2016. **183**(8): p. 758-764.
4. Hammerton, G. and M.R. Munafò, *Causal inference with observational data: the need for triangulation of evidence.* Psychological medicine, 2021. **51**(4): p. 563-578.

Online canine-health information sourcing by UK canine caregivers

Michelle Farrow is a MRes student investigating how canine-health information sourcing by caregivers influences their decision making for presenting their dog to a veterinarian.

Dog owners are increasingly reported as defaulting to online searching rather than seeking direct veterinary advice when their dog is unwell. This study explores if/how online health information-sourcing affects the quality of decision-making by UK dog-owners about seeking veterinary care.

An online survey collected owner responses to three randomly presented clinical vignettes representing real-life common acute, chronic or emergency canine conditions that were developed and validated from anonymised VetCompass records. Framed as the dog owner, respondents suggested:

1. what condition the dog is affected by (free-text)
2. their perception of urgency for veterinary care (multiple-choice)
3. the information-sources they used during this process (multiple-choice).

Post-vignette questions explored owners' usual information-sourcing behaviours for their dog(s).

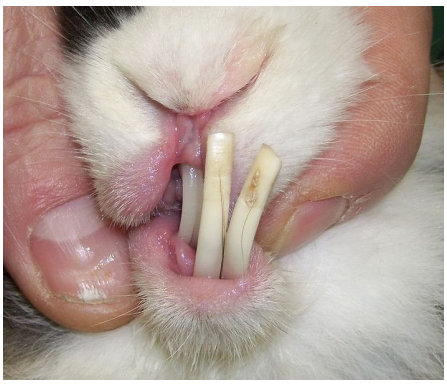
Outcomes modelled includes accuracy of condition assessments and appropriateness of urgency assessments. Analysis using generalised linear mixed modelling will account for repeated measures (n=3 vignette responses per respondent), owner demographics, previous/current dog ownership and usual information-sourcing behaviours.

What are the findings so far?

From n=1772 valid responses, preliminary analyses identified the most frequently used information-sources by dog-owners was their own knowledge (73.7%), their veterinary practice (61.1%) and the internet (49.2%). First-time owners were more likely to use the internet for researching their dog's health than experienced owners (65.2% vs 47.0%, respectively: $p<0.001$) and were less likely to use their own knowledge (59.2% vs 75.7%, $p<0.001$). The vignettes on kennel cough, flea infestation and osteoarthritis were the most accurately identified by respondents (median score 9/9, IQR 9-9) whereas mast cell tumour, glaucoma and gastrointestinal foreign body were least accurately identified (median score 0/9, IQR 0-0). Respondents' perceptions of urgency for veterinary care were less urgent than the urgency assessments made by the validating veterinarians in 28.4% of responses. Further analyses are currently in progress.

These findings will enhance understanding of 21st century dog ownership. Such awareness can help veterinary professionals better support owners' decision-making regarding their dog's health that promote canine welfare.

Is head-shape related to dental disease in pet rabbits?



Maria Jackson has achieved a distinction in a VetCompass MRes, investigating whether lop eared and brachycephalic rabbits are predisposed to dental disease, compared with erect eared and normocephalic rabbits. This study was part-funded by The Universities Federation for Animal Welfare (UFAW). The study included 161,979 rabbits under primary veterinary care in 2019. The analysis included 2,219 randomly selected dental cases and 117,890 non-cases.

The key results were:

- Dental disease affecting any teeth was highly prevalent - one-year period prevalence: 15.4% (95% CI: 14.8-16.0)
- Neither lop ear conformation (OR: 1.12, 95% CI: 0.99-1.26) nor brachycephalic skull conformation (OR: 1.13, 95% CI: 0.97-1.31) showed statistically significant associations with dental disease
- Male rabbits had higher odds of dental disease than females (OR: 1.23, 95% CI: 1.12-1.35)
- As adult bodyweight increased, the odds of dental disease decreased
- As age increased, the odds of dental disease increased
- The most frequently recorded clinical signs across all types of dental disease were:
    - Reduced appetite - 25.1% of cases
    - Reduced faecal output - 10.9% of cases
    - Ocular discharge - 10.6% of cases
- Among dental cases that died during the study, dental disease was recorded as the primary reason for death in 16.8% and as a contributory factor in a further 34.4%

The results indicate that dental disease is a major welfare concern in rabbits indicated by its high prevalence, detrimental clinical signs, and frequent reason for death. It is hoped that this information will be used to encourage earlier recognition of diseased rabbits, paying particular attention to rabbits increasing in age, smaller sized rabbits, or those that are male. Additionally, rabbits with erect ears or normocephalic skull shapes should not be overlooked in practice - these types of rabbits also have a high risk of dental disease.

A publication from this work is currently in preparation. The results were presented for the first time at the 2022 British Veterinary Zoological Society (BVZS) conference. In recognition of this work, Maria has been awarded the 2022 Burgess Excel Veterinary Award for 'Rabbit Student of the year'.

Veterinary Awards+
Burgess Excel

Canine research funding by charitable organisations in the UK: Current status and future opportunities

Which canine health topics attract the most research funding and generate the most research projects? Which organisations fund not-for-profit research into canine health and welfare, and how are their funding decisions made? Does the current funding system for canine research lead to inadvertent overlap between different projects, or leave major gaps in research coverage? Could a better funding system be developed? These are all hugely important questions for the future of canine research in the UK, if the sector is to produce the greatest health and welfare improvements in the most financially efficient way.

A new VetCompass project, jointly funded by four major UK canine charities – Battersea, Dogs Trust, The Kennel Club Charitable Trust and the Waltham Foundation – aims to answer these questions. The lead researcher is Alison Skipper, who has dual training as a vet and a historian and extensive experience of the politics of pedigree dog health. Alison has joined the RVC to work on this project with Dan O'Neill and Rowena Packer. She is currently using her unusual skillset to map not-for-profit UK-funded research in canine health and welfare over the last ten years. This involves identifying funding organisations, types of projects funded and funding levels in each area of research. The next phase of the project will use stakeholder consultation to shape a plan for more collaborative, transparent and strategic approaches to future funding decisions. We hope these novel analyses will lead to the development of a better, more joined-up funding system for researchers and funders alike, which can proactively engage with and respond to present and future problems in canine health.

Heat-related illness in Dogs: Evaluating VetCompass Impact in Clinical Practice

Following the success of the original "**Hot Dogs – investigating the epidemiology of canine heatstroke presenting to UK primary care veterinary practices"** project that was funded by Dogs Trust and led to 4 peer-reviewed publications, a further Dog's Trust Canine Welfare Grant has kindly funded a follow-on project **"Hot Dogs - Validating the VetCompass Clinical Grading Tool for Heat-Related Illness in Dogs"** . The research team includes **Emily Hall**, **Dan O'Neill, Dominic Barfield and Jude Bradbury** from the RVC, **Anne Carter** from Scotland's Rural College (SRUC) and now **Sian Beard** an MRes student at the RVC.

The initial project reviewed heat-related illness in dogs under primary veterinary care in 2016 and identified canine risk factors (including breed type, brachycephalic skull shape, advanced age and being overweight) for heat-related illness. Geographical risk factors for heat-related illness were also analysed, with dogs living in London at greatest risk of developing the condition, and at greatest risk of developing heat-related illness following confinement in a hot building. The average ambient temperature on days when dogs developed heat-related illness was just 16.9°C, highlighting the risk of heat-related illness to UK dogs even at relatively low ambient temperatures. The most severe form of heat-related illness was fatal in 57% of cases, and older dogs, dogs weighing over 10kg, and dogs confined in a hot vehicle were most likely to develop severe disease. Older dogs and brachycephalic dogs with heat-related illness were at greatest risk of a fatal outcome.

A key finding from the early work here is that around three quarters of heat-related illness cases in UK dogs are triggered by exercise in hot weather (predominantly walking). The annual "Dogs Die in Hot Cars" campaign has therefore been updated to include a new message: "Dogs Die on Hot Walks". It is hoped the dual messaging will raise public awareness of the danger to dogs both travelling and exercising in hot conditions.

Publications:

Incidence and risk factors for heat-related illness (heatstroke) in UK dogs under primary veterinary care in 2016 (https://www.nature.com/articles/s41598-020-66015-8)

Dogs Don't Die Just in Hot Cars—Exertional Heat-Related Illness (Heatstroke) Is a Greater Threat to UK Dogs (https://doi.org/10.3390/ani10081324)

Proposing the VetCompass clinical grading tool for heat-related illness in dogs (https://www.nature.com/articles/s41598-021-86235-w)

Risk Factors for Severe and Fatal Heat-Related Illness in UK Dogs—A VetCompass Study (https://doi.org/10.3390/vetsci9050231)

A Veterinary Clinical Podcast summarising the project findings so far can be accessed here:

RVC Clinical Podcast 136: Heat Related Illness with Emily Hall (https://www.rvc.ac.uk/veterinary-services/podcasts/136-heat-related-illness)

Validating the VetCompass Clinical Grading Tool for Heat-related Illness in Dogs

Previous research from the VetCompass/Hot Dogs team has used data from dogs presented to UK primary-care veterinary practices to identify the incidence and canine risk factors for heat-related illness and to develop the VetCompass Clinical Grading Tool for heat-related illness (HRI) in dogs. The grading tool aims to support evidence-based triage of heat-related illness cases and to provide a prediction of clinical outcomes. This project, funded by the Dogs Trust, aims to evaluate and validate the VetCompass Clinical Grading Tool using real-world clinical cases presenting for emergency veterinary care in the UK. The team includes Emily Hall, Dan O'Neill from RVC, Anne Carter from SRUC, Sophie Gilbert from Vets Now and Sian Beard an MRes student at RVC.

Phase One of this project will involve retrospective analysis of HRI cases that presented to Vets Now veterinary clinics across the UK as part of a companywide clinical audit of HRI patient assessment. Vets Now introduced the clinical grading tool in July 2022 as a paper-based tool completed at the time of patient assessment. This project will audit the use and clinical application of the paper-based grading tool. Following this review the paper-based grading tool will be converted into a digital version of the tool that can be completed within the Vets Now practice management system to facilitate a further audit over the summer 2023 period.

Phase Two will audit the use of this digital tool, initially in a pilot study by using a series of vignettes depicting typical clinical scenarios and asking Vets Now clinicians to use the scenarios depicted in the vignettes to complete the digital version of the tool and provide feedback. This feedback will be used to develop the final digital version ready to roll out within the Vets Now practice management system so that it will be available for all clinicians to use from March 2023. Use of the digital grading tool will then be re-audited from autumn 2023 to evaluate the usability, uptake of use, and potential impact on clinical management of HRI cases presenting to Vets Now. A digital version of the tool will also be used within the RVC's Queen Mother Hospital for Animals.

Antibiotic use in farm animal practices

Doaa Elkholly is a third-year PhD student working on antimicrobial use in farm animals using both quantitative and qualitative research approaches, funded by Bloomsbury.

Twenty-three farm animal practices participating in VetCompass were studied for their AM usage. Doaa explored the treatment and clinical records to estimate the antimicrobial usage and evaluate risk factors associated with using the highest priority critically important antibiotics (HP-CIAs).

On the qualitative side, Doaa interviewed vets in two participating practices. This year, she has been interviewing farmers and other stakeholders to investigate the barriers and facilitators behind prescribing antimicrobials in farm practices. The analysis of the farmers' interviews has highlighted a number of key messages, including:

• Supermarket contracts and farm assurance schemes were found to be strong drivers for reducing antibiotic use and HP-CIAs.

• Dairy farmers were found to be influenced by industry guidelines to reduce antibiotic use compared to beef and sheep farmers.

• Participating farmers acknowledged the value of regular communication with veterinarians through farmers' discussion groups and online forums. As farmers have a very busy life, they appreciated accessible communication with their vet when they have questions.

A better understanding of antimicrobial usage in farm animals and the influences behind prescribing will help to provide much-needed baseline data from farm practices.

Pandemic Puppies

The RVC **Pandemic Puppies** project was launched in 2020 as a collaboration with VetCompass in an effort to understand the full depth of changes to UK puppy-buying habits in the wake of the COVID-19 pandemic. The initial study was funded by the BVA's **Animal Welfare Foundation** and led by **Rowena Packer** along with **Dan O'Neill**, **Claire Brand**, **Zoe Belshaw**, **Camilla Pegram, Fiona Dale** and **Kim Stevens**. The study involved an online questionnaire of owners who bought puppies during 2019 or 2020 to compare the 'how's and whys' of Pandemic Puppy purchasing versus 'typical' dog purchasing in the UK.

The response was astounding, with over **7500 responses.**

The first paper explored the behaviour and motivations of owners who bought a puppy during the 2020 COVID-19 pandemic in the UK, whilst the second paper examined the impact of the pandemic on the early lives of puppies purchased during 2020.

In addition, the data was used to explore the behaviour and motivations of owners Purchasing Designer Crossbreeds such as Cockapoo and Cavapoo because we had noticed a significant increase in designer crossbreed ownership during the pandemic, from fewer than 1 in 5 puppies in 2019 being a designer crossbreed (18.8%), to more than 1 in 4 puppies in 2020 (26.1%). This highlighted a dramatic shift in demand towards designer crossbreeds in the UK population.

The study on designer crossbreds was kindly funded by the **Universities Federation for Animal Welfare (UFAW)** and was conducted by a veterinary student from Nottingham University, **Erin Burnett**, on a summer placement with the RVC.

The study found that the main drivers for acquiring a designer crossbreed puppy compared with a purebred puppy were perceptions that designer crossbreeds offered a bodysize suited to their owner's lifestyle (74.8% vs 59.1% for purebred); were generally healthy (62.1% vs 42.3% for purebred); good with children (56.0% vs 42.5% for purebred); easy to train (54.3% vs 36.4% for purebred); and hypoallergenic (47.1% vs. 7.9% for purebred).

What has been happening since?

Pandemic Puppies 2020: A Longitudinal Study

Given the huge success of the Pandemic Puppies project and the ongoing commitment from our wonderful owners of these puppies, we have decided to turn the project into a long-term body of work. In January 2022, we launched a longitudinal study version of the original 2020 Pandemic Puppies cohort to follow the health, behaviour and welfare of these special dogs over time, generously funded by **Battersea Dogs & Cats Home**. This new work will additionally examine aspects of the dog-owner bond along with COVID-19 impacts to better understand any potential relinquishment risks for these dogs. It is hoped that this study will inform canine welfare professionals to better support owners of Pandemic Puppies to minimise any potential deficits the dogs may have experienced in early life.

Owners of Pandemic Puppies who consented to take part in further research (a total of 2345 participants) are now being contacted to fill in further surveys **as their dogs reach 21, 24 and 27 months of age**.

The 21-month time point closed to the last participant on 26th August 2022 (the 24 month time point closed on 26th November 2022, with the 27 month time point closing on 25th February 2023). We are currently analysing the 21 month data and writing three papers on:

- The health of Pandemic Puppies and their owners' access to/use of veterinary care at 21 months
- The behaviour of Pandemic Puppies, including owners use of training approaches and sources of advice for behaviour problems at 21 months
- The dog-owner bond of Pandemic Puppies at 21 months and risk factors for relinquishment

Pandemic Puppies: The Next Generation

In February 2022, we launched a cross-sectional survey of owners who acquired a puppy during 2021, funded by **Research England (UKRI)**. The eligibility criteria for Pandemic Puppies: The Next Generation remained the same as the first survey, bar it only being open to owners who purchased a puppy during 2021. In this study we explored whether the changes to puppy-buying we documented in the 2020 phase of the pandemic had persisted into 2021 or returned to our 2019 baseline.

We are delighted to report that this second survey received over **2800 responses**. The data has been analysed and a paper is due to be submitted imminently.

What is next for the Pandemic Puppies research at RVC?

Pandemic Puppies: The Cost-of-Living Crisis

Given the recent dramatic rising costs of living in the UK and the potential for these to negatively affect the lives of our dogs, we are now aiming for Pandemic Puppies to help us all to understand a bit more about these issues. The focus of this latest study is to better understand and support the needs of dog owners are now dealing with the so-called "cost-of-living-crisis". By taking part in this survey, charities such as Battersea and the veterinary community will have a better understanding of the unique experiences and challenges dog owners face, helping the canine sector shape their efforts to best help dogs and their owners navigating this challenging period.

To this end, we have begun contacting our 2020 Pandemic Puppies owners who generously consented to take part in further research, with a unique survey link as their dogs turn 36 months of age.

In addition, we plan to launch a further survey in early 2023 for those owners who acquired a new puppy in 2022.

Media coverage about Pandemic Puppies

We had considerable coverage in the media about the survey and the initial findings including an interview on ITV news:

https://www.itv.com/news/meridian/2021-10-15/experts-warn-of-pending-crisis-after-pandemic-puppy-purchases

We have recently been approached by the BBC who wish to cover the results of our 21-month survey in a documentary about how the pandemic has affected dog ownership. This documentary will also cover the journeys owners and their pets have been on.

The Kennel Club Charitable Trust – VetCompass Collaboration

A research collaboration has been ongoing for several years between the Kennel Club Charitable Trust (KCCT) and VetCompass. We are very pleased to announce that this collaborative work is now funded to continue for another three years. The project aims to contribute to improved dog welfare in by providing strong evidence on key dog breeds and disorders with a view to supporting meaningful change for current and future dogs. The project is called 'Evidence-based prioritisation of disorders using epidemiological data on dog breeds from VetCompass primary-care veterinary clinical records.

THE KENNEL CLUB CHARITABLE TRUST
Making a difference for dogs

One aim of this work is to support The Kennel Club's (KC) 'Breed Health and Conservation Plan (BHCP)' project. It was recognised several years ago that the efforts to improve breed health were heavily constrained by a paucity of relevant health and demographic data. In efforts to fill these key data gaps, the Kennel Club Charitable Trust (KCCT) collaboration within VetCompass has supported with the publication of 9 papers in 2018, 8 papers in 2019, 10 in 2020 and 14 in 2021. These peer-reviewed sources of strong evidence are now helping the Kennel Club to develop evidence-based breed-specific strategic health plans for key breeds in need of health assistance.

This VetCompass collaboration with KCCT shows the power of charity funding to make a real difference to dog welfare when the focus of the work is firmly linked to applied methods of translating academic research into welfare action.

Other activities:

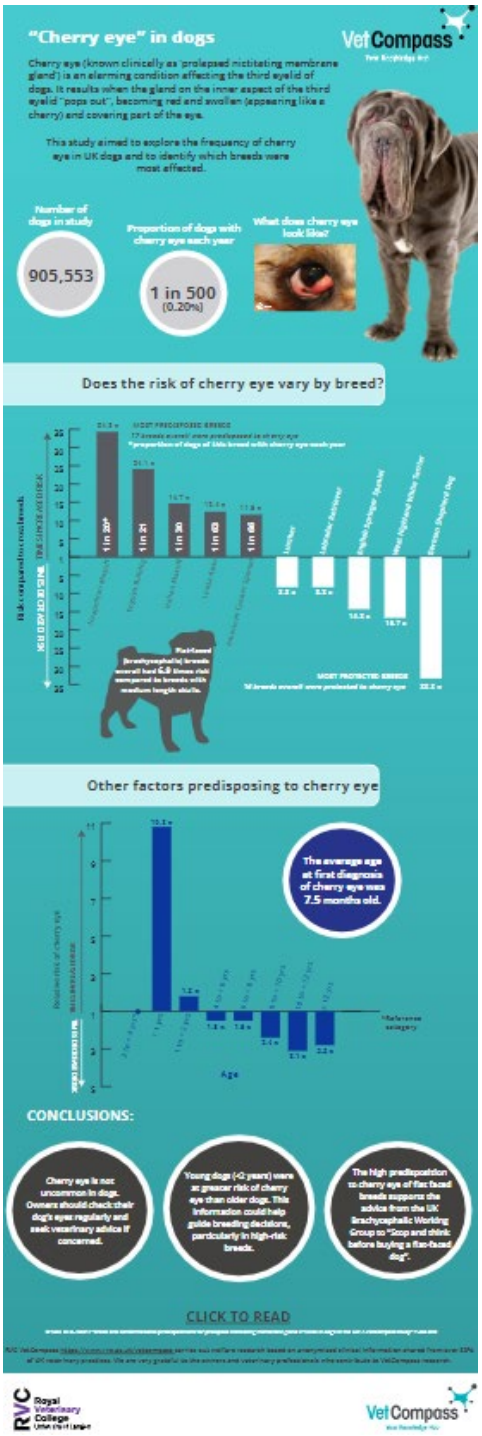
Widening dissemination using infographics

Research on its own cannot change animal welfare; effective dissemination that shares this information with relevant stakeholders and opinion-formers is also critical for success. VetCompass aims to summarise and present the key findings from research papers in digestible and eye-catching presentations and share these widely.

VetCompass has reframed the typical academic model whereby scientific research is mainly shared with just other scientific colleagues. Instead, by presenting cutting-edge science in publicly digestible formats such as infographics and by disseminating these widely, VetCompass is empowering owners, breeders and veterinary professionals to apply the latest evidence to improve their animal's health, and consequently also human health.

Dissemination strategies used to date for these findings and recommendations have included:

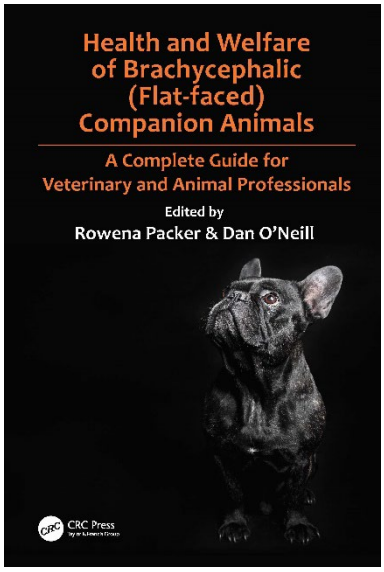
1. General and veterinary-specific press releases
2. Radio and other media interviews
3. Social media posts including Twitter and Facebook
4. Sharing by organisational partners such as the Kennel Club or British Veterinary Association
5. Sharing by veterinary clinical practices
6. Infographics



Each VetCompass infographic summarises and presents the key findings of studies using images, graphical data and links to the full study, along with action points or take home messages for owners and breeders. The infographics can be directly accessed by the general public, or can be used as a resource by veterinarians. For prospective pet owners considering a particular breed, or when a vet has just diagnosed an animal with a specific condition, we are now entering an era where veterinarians can direct owners to the relevant VetCompass infographic as an eye-catching, educational and evidence-based resource that will offer reliable information and advice.

The infographics are freely available to download from the RVC VetCompass website: https://www.rvc.ac.uk/vetcompass/learn-zone/infographics

RVC Brachycephalic Research Team



Over the past decade, the RVC has become a world-leading research centre on brachycephalic health and welfare.

The RVC recognises the brachycephalic issue as a highly complex system and therefore takes a holistic approach to brachycephalic research that covers basic and population science, human social factors as well as clinical and welfare work. RVC academics and researchers are recognised globally as international experts who work collaboratively within multi-disciplinary teams to generate new knowledge that ultimately improves animal welfare.

Within this work, the RVC has a dedicated Brachycephalic Research Team to maximise collaborative focus on the priority issues among the brachycephalic questions. Comprising many experts in their fields, this team works towards providing an ever-stronger evidence-base on which positive reforms can be built.

VetCompass is leading the epidemiology work within this team, bringing an evidence-based approach to the health and welfare issues of brachycephalic breeds. Experts in behavioural science, ophthalmology, neurology, anaesthesiology, ethics, dermatology, internal medicine, emergency and critical care, soft-tissue surgery, orthopaedics and genetics are also involved.

The RVC will never stop caring for existing flat-faced animals and their owners, as shown by our record of research, clinical and teaching activities. However, the RVC is also aware of the many problems that flat-faced animals endure due to the recent large rises in their popularity combined with their intrinsic health issues. With this supportive and caring background in mind, the RVC Brachycephalic Research Team advises anyone thinking of purchasing a flat-faced animal to **'Stop and think before buying a flat-faced dog'**.

Read more at: https://www.rvc.ac.uk/research/focus/brachycephaly

VetCompass Publications 2022

1. Veterinary drug therapies used for undesirable behaviours in UK dogs under primary veterinary care
2. Breed and conformational predispositions for prolapsed nictitating membrane gland (PNMG) in dogs in the UK: A VetCompass study
3. Occurrence and clinical management of urethral obstruction in male cats under primary veterinary care in the United Kingdom in 2016
4. Pandemic Puppies: Demographic Characteristics, Health and Early Life Experiences of Puppies Acquired during the 2020 Phase of the COVID-19 Pandemic in the UK
5. Life tables of annual life expectancy and mortality for companion dogs in the United Kingdom
6. Health of Pug dogs in the UK: disorder predispositions and protections
7. Risk Factors for Severe and Fatal Heat-Related Illness in UK Dogs—A VetCompass Study
8. How much is that doodle in the window? Exploring motivations and behaviours of UK owners acquiring designer crossbreed dogs (2019-2020)
9. English Bulldogs in the UK: a VetCompass study of their disorder predispositions and protections
10. Demography, disorders and mortality of pet hamsters under primary veterinary care in the United Kingdom in 2016
11. Ironing out the wrinkles and folds in the epidemiology of skin fold dermatitis in dog breeds in the UK
12. Leptospirosis vaccination in dogs attending UK primary care practices: vaccine uptake and factors associated with administration
13. Mortality related to general anaesthesia and sedation in dogs under UK primary veterinary care
14. Frequency, breed predispositions and other demographic risk factors for diagnosis of hypothyroidism in dogs under primary veterinary care in the UK
15. Use of antimicrobials licensed for systemic administration in UK equine practice

For further details:

More information on VetCompass projects can be found at **www.rvc.ac.uk/vetcompass**

Alternatively, please contact the VetCompass team (pictured left) by

Email: vetcompass@rvc.ac.uk