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# 5 Discussing Brachycephalic Health with Current and Prospective Dog Owners

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In 2018, the French Bulldog topped the list as The UK Kennel Club's most registered breed for the first time (The Kennel Club 2018). Bulldogs, Pugs, Cavalier King Charles Spaniels, Chihuahuas, Boxers, Shih Tzus and Boston Terriers also featured in the top 20 most registered breeds, suggesting a shift in popularity towards dogs with brachycephalism. This change towards shorter and smaller breeds has also been recognised in other regions including Australia (Teng et al. 2016), Scandinavia (Nordic Kennel Union 2017) and America (American Kennel Club 2018). Brachycephaly is championed and selected for by breed interest groups, and brachycephalic dogs have featured in many advertising campaigns, television programmes and celebrity social media accounts internationally, with little recognition of their inherent health and welfare problems. This can make for challenging conversations in the consulting room between owners and veterinarians, with owners who may be very positive about brachycephalic breeds and unaware of the health and welfare challenges these dogs can face.

The health of brachycephalic dogs can be improved by reducing the negative impacts of brachycephaly on the current generation and by breeding healthier dogs for future generations. This chapter will cover veterinary communications relating to both, as well as the responsibility of veterinary professionals (veterinary surgeons and veterinary nurses) to have these discussions. We also look at why owners may be drawn to brachycephalic dogs in the first place. Where specific relevant research is available, we have made reference to it. Where none exists, we have drawn from other fields or provided opinions based on our experience from veterinary practice, policy development and research.

## WHY DO PEOPLE BUY BRACHYCEPHALIC DOGS?

Recent research has started to explore owners' reasons for buying brachycephalic breeds. This information is useful in understanding the motivation of people who consider purchasing a brachycephalic dog and may subsequently present them for veterinary treatment.

In 2015, Packer and colleagues (Packer et al. 2017) surveyed owners of breeds that were then in The Kennel Club's top ten most registered breeds. The study identified that owners of French Bulldogs, Pugs and Bulldogs were younger in age and more likely to be owning a dog of that breed for the first time, compared to owners of non-brachycephalic breeds. Owners of all breeds (both brachycephalic and non-brachycephalic) ranked the importance of 'being a good companion' as the top reason for choosing a specific breed, but owners of brachycephalic dogs were more likely to rate the breeds' appearance, their suitability to spend time with children and their size as important additional influences. In contrast, they were less likely to rate good breed health or longevity as important influences, compared with the owners of non-brachycephalic breeds. Perhaps surprisingly, given speculation that celebrity ownership may be driving the rise in brachycephalic popularity, celebrity endorsement and recommendations from friends were not given as important factors by owners in their choice of breed.

A 2017 survey of French Bulldog, Pug and Bulldog owners conducted via social media (Packer et al. 2019) identified that almost 20% of the 2168 dogs involved had already undergone conformation-altering surgery, and many had suffered other illnesses common in brachycephalic breeds. While many of the owners recognised that their dog had one or more ongoing problems associated with brachycephaly such as heat intolerance, breathing, sleeping and eating difficulties, the majority felt their dog was either in the best health possible or in very good health. Similarly, most owners agreed that their dog was healthier than the average dog of their breed. The authors concluded that owners involved in this survey had perceptual errors in their beliefs about the health of their dogs compared to reality. In general, owners reported being very emotionally close to their dogs, with owners of Pugs rating this most highly. They may have deliberately chosen their breed based on their size, appearance and their personality, but may not have had a dog of that breed before. They may recognise that their dog has health problems and that they may face challenges associated with heat, sleeping and eating, but may not perceive them to be as bad as those of other dogs of the same breed. Further analysis of the same dataset (Packer et al. 2020) revealed that despite acknowledging their inherent health problems, high cost of ownership and negative behavioural attributes, over 90% of current owners stated they would acquire another dog of the same breed again. Reasons included their positive behavioural attributes for a companion dog, their sedentary nature and their compatibility with children. Understanding these perspectives that lead to breed loyalty is key to working alongside owners of brachycephalic dogs, to maintain or improve the welfare of their pets and to spread the message about the problems inherent in these breeds.

## VETERINARY RESPONSIBILITY TO DISCUSS BRACHYCEPHALIC HEALTH

The veterinary and veterinary nursing professions are *animal welfare-focused*, providing leadership on animal welfare in society (BVA 2016). Being animal welfare-focused (prioritising the best interests of animals in our decision-making and advocacy) is distinct from being *client-focused*

(prioritising our clients' interests, even when they do not align with improving animal welfare; for example, withholding advice on health problems linked to brachycephaly because it could cause client offence) or *vet-focused* (prioritising our own interests or those of our employer; for example, recommending surgery for a brachycephalic animal because it would be professionally interesting to perform or would generate more revenue than a conservative approach) (Yeates 2013). The interests of each group are important, but working with our clients and being economically viable are enablers for veterinary professionals to improve our primary goal of improving animal welfare. Overall, the veterinary professions have a dual animal welfare responsibility – to treat animals presented to us, while concurrently advocating for solutions to known root causes of common problems (BVA and RCVS 2015). Our responses to brachycephaly-related problems give a good example. Performing indicated airway surgery on a brachycephalic dog with Brachycephalic Obstructive Airway Syndrome (BOAS) is in that animal's best interests, but we have an additional responsibility to speak up about the selective breeding that causes a high incidence of BOAS within brachycephalic breeds, to stimulate and facilitate societal change.

Our opportunities to advocate for the best interests of animals exist at the levels of individuals (e.g. through our consultations with animal owners), communities (e.g. veterinary practices undertaking educational and outreach activities), nationally (e.g. veterinary associations and charities stimulating and contributing to public and political debate) and internationally (e.g. partnerships between national and international veterinary associations, and other international bodies and institutions) (BVA 2016, AVMA/FVE/CVMA 2020).

The UK Brachycephalic Working Group has described the veterinary professions' roles at these levels, with examples of actions that can be taken at each. At the national level in the UK, the British Veterinary Association (BVA) has run a high profile awareness-raising campaign, under the hashtag #BreedToBreathe (BVA 2018). This has included lobbying large companies to discontinue use of brachycephalic breeds in their marketing, resulting in positive commitments from brands including Costa Coffee, Heinz and HSBC Bank. Similarly, internationally, the Australian Veterinary Association and RSPCA Australia have run a 'Love is Blind' campaign since 2016 (AVA 2016), the New Zealand Veterinary Association made brachycephaly a priority issue in 2017 (NZVA 2017) and two new policy positions on breeding for brachycephaly were published in 2018, by the Humane Society Veterinary Medical Association in the US (HSVMA 2018) and in Europe jointly by the Federation of European Companion Animal Veterinary Associations and Federation of Veterinarians of Europe (FECAVA 2018). These veterinary campaigns have all served to raise the profile of brachycephalic breed health and provided supporting resources for veterinary practice teams.

## IMPROVING THE HEALTH AND WELL-BEING OF FUTURE GENERATIONS OF DOGS

Position statements and campaigning by veterinary associations can reassure individual veterinary surgeons and veterinary nurses that it is appropriate and necessary to initiate what can be challenging conversations with prospective or current owners of brachycephalic dogs. This can drive action at the individual and community levels.

Community-level advocacy can be driven by the outreach activities of veterinary practices, engaging, for example, with local media, politicians, schools and through their in-practice displays and materials. In general, the practice management and culture should support the improvement of animal welfare in the local area, addressing the root causes of common welfare problems such as those linked to brachycephaly, beyond the bounds of animals under their direct care. Employees should be supported to have honest animal welfare-focused conversations with clients. Approached sensitively, such interactions should not normally lead to clients complaining, but support for clinicians by management staff is important if they do. Support for new and recent graduates in this respect may be particularly important, to help ensure they are not dissuaded from future advocacy by a negative reaction.

A specific ethical and practical challenge for effective community-level advocacy may be the existence of veterinary practices marketing themselves as ‘brachy-friendly’. While we are unaware of a definition of such a practice, anecdotally they have a high caseload of brachycephalic dogs and are favoured by breeders for their welcoming, unquestioning approach to brachycephalic patients. While such practices may acquire a high level of expertise in treating conditions linked to brachycephaly, they may hamper efforts to tackle root causes of these conditions. Employees of such practices who are motivated to advocate brachycephalic health may feel disempowered, particularly if they weren’t aware of the ‘brachy-friendly’ ethos when they joined, and the advocacy efforts of other local practices may be undermined if a single practice is taking a neutral or welcoming stance.

A list of advocacy activities that practices can undertake is given in the BVA #BreedToBreathe ten-point plan for veterinary practices (Table 5.1). It can be particularly effective when practices allocate a staff member as a dedicated ‘champion’ to lead on practical animal welfare activities like these, to take ownership and to motivate and assist their colleagues. Depending on the size of the practice or practice group, this can be coupled with an overarching ‘task force’, made up of staff members from various job roles, with a collective remit to regularly consider and audit how the practice can further advance animal welfare and ethics (Wensley et al. 2020).

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**TABLE 5.1**

**British Veterinary Association (BVA) #BreedToBreathe Ten-Point Plan for Veterinary Practices (Reproduced with Permission)**

1. Offer pre-purchase consultations	You can use the PDSA ‘Which pet?’ consultation framework, with prospective dog owners. The potential health problems of brachycephalic conformation can be clearly outlined in these consultations
2. Strongly advise against breeding	If a dog is suffering from BOAS or requires conformation altering surgery – consider neutering (where best practice allows) to prevent further litters with extremes of conformation that negatively impact on their health and welfare
3. Promote the Puppy Contract	The Puppy Contract (comprising the Puppy Information Pack and contract for sale) can be promoted through the practice communication channels, e.g. website, social media, waiting room displays, newsletters, and in local print and broadcast media
4. Promote and actively participate in available health schemes	These can include the BVA/KC Health Schemes but also those for brachycephalic breeds that currently exist among Bulldog, French bulldog and Pug breed clubs
5. Carry out exercise tolerance test (ETT) and functional grading	ETT and functional grading can be conducted for brachycephalic breeds as part of their annual health assessment
6. Enrol the practice in clinical surveillance programmes	So as to contribute to data gathering and evidence generation. Examples include VetCompass and SAVSNET
7. Develop a practice communication strategy	Make sure to repeatedly, clearly and consistently communicate the health problems experienced by dogs with brachycephalic conformation through the practice communication channels
8. Maintain discipline in your practice communication strategy	Develop practice policy to ensure that practice communication channels (particularly social media and advertising materials) do not portray dogs with brachycephalic conformation as cute, humorous or appealing
9. Ensure practice policy supports staff	Everyone needs to appropriately convey evidence-based information and advice to owners of dogs with brachycephalic conformation
10. Support local breed clubs and representatives	Primarily in the development and implementation of plans to improve the health of dogs with brachycephalic conformation

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## PRE-PURCHASE CONSULTATIONS

One approach to improving the welfare of future generations of dogs, highlighted in the BVA #BreedToBreathe ten-point plan for veterinary practices, is to offer pre-purchase consultations, such as the People's Dispensary for Sick Animals (PDSA)'s 'Which Pet?' consultation framework (PDSA 2020a). These consultations with prospective pet owners can be an opportunity to outline the health problems linked to brachycephaly and to discuss ownership of healthier breeds.

Pre-purchase veterinary consultations are in their relative infancy. In 2019, 7% of current pet owners took advice from a veterinary professional before getting their pet, up from 5% in 2018 (PDSA 2018a, PDSA 2019). In 2018, 13% of veterinary practices offered free, dedicated pre-purchase clinics and 2% offered paid-for dedicated pre-purchase clinics (PDSA 2018a).

Effective marketing will be required to change cultural perceptions of what a veterinary practice can offer. Anecdotally, some prospective pet owners had not thought about visiting their local veterinary practice for pre-purchase advice, some thought there may have been a charge that they didn't wish to pay and some thought veterinary practices were too busy caring for sick animals. Practice marketing should aim to counter perceptions such as these, making it clear that prospective owners would be very welcome. Pre-purchase consultations may offer benefits to practices - of those currently offering free pre-purchase clinics, veterinary surgeons and veterinary nurses estimated that 71% of potential pet owners who were not existing clients of the practice go on to join the practice after receiving the consultation (BVA and BVNA 2018). At least one large veterinary practice group in the UK has introduced free pre-purchase consultations across its practices.

Frameworks help structure the available time in a consultation. PDSA's 'Which Pet?' consultation framework structures pre-purchase conversations around three areas. First, relevant aspects of the prospective owner's lifestyle and circumstances are discussed using the 'PETS' acronym:

Place – how suitable for a pet is the place where you live?

Exercise – how much exercise are you willing and able to do with a pet?

Time – how much time do you have for care activities like walking, training and cleaning?

Spend – are you aware of, and able to afford, the realistic costs of pet ownership?

This narrows the list of potentially suitable species and breeds. Then, the Five Welfare Needs (as set out in the UK Animal Welfare Acts; Table 5.2) are discussed for species and breeds of interest – what they are and how they would be provided for. The Health need offers a natural prompt to discuss the problems linked to brachycephaly.

Finally, responsible sourcing is discussed; for example, by promoting the Puppy Contract and Puppy Information Pack – a freely downloadable toolkit that guides puppy buyers through the questions they should ask a breeder before purchasing a puppy (Puppy Contract 2020). A practice can

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### TABLE 5.2

#### The Five Welfare Needs

The passing of the Animal Welfare Act (2006), the Animal Health and Welfare (Scotland) Act (2006) and the Welfare of Animals Act (Northern Ireland) (2011) updated animal protection legislation in the UK. These Acts retain an offence of causing unnecessary suffering but also introduced a legal duty of care based around an animal's welfare needs. A person responsible for an animal's welfare must ensure that the following needs are met:

1. **Environment** – a suitable environment
  2. **Diet** – a suitable diet
  3. **Behaviour** – to be able to exhibit normal behaviour patterns
  4. **Companionship** – to be housed with, or apart from, other animals
  5. **Health** – to be protected from pain, suffering, injury and disease
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recommend local, reputable rescue and rehoming organisations, as well as reputable local breeders who are members of The Kennel Club Assured Breeders Scheme. A puppy should always be seen interacting with their mother, to reduce the risk of inadvertently purchasing a puppy from a puppy farm.

If during a pre-purchase consultation, an owner is insistent on acquiring a brachycephalic dog breed, providing specific information on how to source the healthiest possible individual from these high-risk breeds is important in helping to guide their purchasing process. You can help them to identify appropriate breeders, and the healthiest puppies available. Recent efforts have been made to provide advice to the public on this topic. In 2018, the UK Brachycephalic Working Group worked with the producers of a Disney movie, *Patrick the Pug*, to help mitigate risks of the film further increasing the popularity of brachycephalic dogs. A cinema flyer was produced to accompany the film, and included the following additional sourcing advice (agreed by all members of the Group), for those committed to buying a brachycephalic breed:

- Look for a puppy with a relatively long muzzle and nice wide open nostrils and parents with similar attributes.
- Check that the puppy's nose and eyes are not obscured by a large over-the-nose skin wrinkle.
- Ask if the parents have been health-tested<sup>1</sup> and ask to see the Health Certificate. Being health tested isn't a guarantee that a dog won't develop health problems but shows that breeders are trying to address some breed-related problems.

When first introducing pre-purchase consultations at a practice, it is recommended they should be piloted, followed by reflection and any improvements made before a full launch. It is important that all members of the practice team that are involved with marketing and delivering them should be fully briefed and trained on their purpose and delivery. Online marketing may be particularly effective in driving uptake, as over a third of dog owners looked online before they chose their pet (PDSA 2018a). A free online PDSA 'Which Pet?' toolkit includes an e-learning module, practice posters, a guide for the veterinary team and a client booklet, endorsed by BVA (PDSA 2020a). Each has space for a practice's logo and details to be added.

## IMPROVING THE HEALTH AND WELL-BEING OF THE CURRENT GENERATION OF BRACHYCEPHALIC DOGS

### GENERAL PRINCIPLES OF COMMUNICATING WITH EXISTING OWNERS ABOUT BRACHYCEPHALY

Until pre-purchase consultations have been further mainstreamed, the first interaction many of us will have with owners of brachycephalic dogs is after their purchase.

It is imperative that you form a good relationship with owners, whatever you may think personally about their choice of breed. While it can be tempting to blame them for making a bad choice, it is too late and will be counterproductive. At best, you are likely to make them feel guilty; at worst, they will feel patronised and judged, and may never set foot in your practice again. Some owners will have rescued their pet, and the presenting problems may pre-date their ownership, so it pays to be sensitive.

You could reel off a list of depressing health statistics to owners, but we suggest you don't. The evidence from fields such as climate change and vaccine denialism suggests reciting facts is likely to be ineffective, if not counterproductive (Trevors et al. 2016). It can harden existing attitudes

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<sup>1</sup> Health testing could include Respiratory Function Grading, run by the Kennel Club and University of Cambridge Veterinary School. This scheme assesses Bulldogs, French Bulldogs and Pugs for BOAS, advises owners if their dog is affected by BOAS and gives guidance to breeders on how to lower the risk of producing affected puppies.

and make owners think you don't understand their perspectives. In addition, owners' beliefs about their freedom to choose a brachycephalic breed, or a distrust in you as an expert, could be aligned to those of their friends, their social group and their political or ideological beliefs. This phenomenon of 'motivated cognition' has been identified in studies exploring a wide range of other beliefs (Kahan 2016), but has yet to be tested among dog owners.

Instead, the evidence suggests that we need to frame messages positively, and we should strive to educate owners about practical steps they can take to keep their pet as well as they can. We could try to start the conversation by asking owners whether they are aware of the health problems their breed might be prone to. This open question allows them to tell you what they already know. Some may be unexpectedly expert, some may have no idea and others may be confident, but wrong. Hopefully, this will allow you to introduce the topic sensitively and without creating hostility.

If problems related to brachycephaly are not the reason they booked to see you, check that it is a good time to talk to them about these issues – they may be distracted by needing to get to work or make the school run, or they may not be the key decision-maker for that dog (Belshaw et al. 2018, Brunet 2020). If now doesn't work for them, tell them what you'd like to talk about and why it matters and book them yourself for another consultation at a more convenient time. Include in clinical records what you planned to say in case you don't see them next time, although continuity of care is likely to be very beneficial here.

Terms such as 'brachycephaly', 'stenotic nares', 'soft palate' and 'BOAS' will be incomprehensible to many owners. Describing the dog as 'flat faced' and explaining what you mean is likely to be more user-friendly. Use pictures, and point to relevant features on the dog in front of you whenever possible. Ensure that owners can see what you mean and understand what you're talking about by regularly stopping to ask if they have questions. Pausing for a few seconds after they have finished speaking to ensure they have nothing further to add and summarising back to them what they have said are good habits (Fawcett 2013). Always discuss the potential impact on the quality of life of the dog, and the prognosis – owners may be terrified that a minor ailment will be life-threatening or may be inappropriately unconcerned.

Empathy, compassion and time are keys to successful communication (Fawcett 2013). It's likely that your client, their wider family and friendship group, are very attached to this dog, and they may be worried or feel guilty about what you are telling them. This may come across as them being defensive. Try to find common ground – for example, you both want the best thing for the dog, and it would be awful if they started to suffer. Tell them that you want to work with them to prevent that. Research in other fields suggests that it is useful to remove any sense of guilt. Phrasing such as the following may help: *It's ok – you didn't know any of this before you came in, and it can be hard to find this information when you're doing your research, but now you do know. I can help, and we can work together to do all we can to prevent future problems.....* While this may feel like you are letting owners off the hook, it can be a more successful way to get them on board than blaming them. It may be worth asking your reception team to book longer first consultation appointments with brachycephalic breeds. Dedicated 'Brachycephalic Health Assessments' have also been suggested, where discussing the dogs' recognised health problems and quality of life provides the context for the visit, helping to make these topics less thorny and unexpected. Such assessments could be particularly useful for practices with high numbers of brachycephalic dogs registered.

Printed or online resources can be gathered together to help you and other practice staff explain your key messages to clients. One of the UK's largest veterinary practice groups has produced its own 'Guide to Brachycephalic Breeds' for educating owners about health issues and supplied these to its 800-plus practices (IVC 2019).

Websites from veterinary charities such as PDSA and Blue Cross, providing information for owners of brachycephalic dogs, (Blue Cross 2018, PDSA 2018b) can be useful in backing up what you have said and providing a reliable resource that owners can access later, in their own time. There's evidence that owners will look at a specific website if you write the link down for them – this is termed giving an 'information prescription' (Kogan et al. 2014). There may be a whole range

of friends, relatives and dog walkers who are involved in looking after the dog and may be contributing to any problems – takeaway literature and web links will be helpful for them too.

It's important not to expect every owner to be on board with your advice. Anything you can do to educate the owner, keep the dog slim, get them insured or treat their problems will represent a positive benefit to that dog. Don't be too hard on yourself when dealing with these cases, and don't take this as a personal failure. Praise any small improvement, even if the dog has kept their weight stable or lost 0.5 kg when they need to lose 8 kg. Ask owners what, if anything, they are finding hard with any instructions you've given them if you don't see any changes, and work with them to find practical, bespoke solutions that work for them. In order to make any change, owners need to have the capability, opportunity and motivation to be able to do it (Michie et al. 2011).

## TALKING ABOUT BRACHYCEPHALY DURING THE PUPPY VACCINE CONSULT

Many of us will first meet new brachycephalic dogs when presented for their initial course of vaccinations or for a new dog check. Our experience is that many owners of new brachycephalic breed puppies have little or no idea that their breed is associated with health problems. They may be horrified to learn that the cute puppy that may have cost them thousands of pounds, and who a breeder may have sold as being in excellent health, could be less than perfect. Using the general communication principles described above, this is a good time to start teaching owners about problems to look for and things they can prevent.

Some owners may think the vaccination consultation is just for giving a vaccine and nothing else (Belshaw et al. 2018), so introduce the idea at the outset that you're going to check the puppy over and chat with them about how to keep him or her healthy. Advise owners that you want to tell them about a few common things that can happen to this breed because catching problems early can make sure they don't get too serious, and some of them are preventable. Tell them you don't want to scare them, but in your experience, these are things that you see quite regularly. By doing this, you are positioning yourself as working alongside them as part of their team.

After your general clinical examination and after you've answered any questions the owner might have, go through some of the common health problems, demonstrating on the dog where the problem might arise, what signs they would spot if they occurred, and giving them reassuring information about how those problems might be fixable. Suggested common problems to cover include the following.

### RESPIRATORY

Advise that noisy breathing sounds such as snorting, snuffling and snoring can be signs of obstructed breathing and shouldn't be considered 'normal for the breed', particularly if exhibited during the day (Packer et al. 2012). Show them their puppy's nostrils, and if they look stenotic, talk about why that can be a problem and what options might be available to help. Teach them what it means if their dog starts to snore, the risks of progressive problems if this is left and what could be done surgically if that happens.

### WEIGHT

Emphasise the benefits and importance of keeping their dog a healthy weight; there is good evidence that obesity contributes significantly to BOAS (Liu et al. 2017) and was the most prevalent disorder in Pugs recorded by UK veterinary surgeons working in primary care during 2013 (O'Neill et al. 2016). Use Puppy Growth Curves to monitor healthy weight gain and demonstrate Body Condition Scoring; a body condition score chart specifically designed for Pugs is free to download from the Cambridge Veterinary School website (Cambridge BOAS Research Group 2017).

## EXERCISE AND THERMOREGULATION

Advise on healthy levels of exercise, including the need to avoid over-exercise, especially in hot weather. Teach the importance of keeping these breeds cool in warmer weather and being especially vigilant when they are in cars. Recent research suggests flat-faced dogs are at increased risk of heat stroke even from apparently innocuous activities such as sitting outside in hot weather (Hall et al. 2020).

## EYES

Show them where cherry eyes can pop up and what they can do if they see that happening. Teach them how to check the eyes for ulcers and the importance of taking their dog to see a veterinary surgeon promptly if they show clinical signs of an ulcer, as well as emphasising the potential risks of using eye drops purchased from non-veterinary websites.

## SKIN

Teach owners how to check their dog's ears for signs of infection or inflammation, and to encourage owners to positively train puppies to accept examination of their ears from a young age (see, e.g., Blue Cross 2020 and PDSA 2020b as useful resources for owners on reward-based training). If the dog has multiple skin folds, show them how they can inspect those and what products are available for reducing the risk of infections. Emphasise the importance of this regular home checking and, where necessary, cleaning.

## VETERINARY CHECKS

Advise regular checking by a veterinary surgeon. Explain that a veterinary surgeon may recommend treatment such as weight loss or specialist surgery to help them if breathing is obstructed.

## INSURANCE

Discuss the benefits of insuring these breeds, given the unfortunate chance that one or more of these problems may develop. Remember that not every brachycephalic dog will suffer from any or all of these problems and emphasise the message of 'better safe than sorry'.

## NEUTERING

Some owners may ask at this point whether or when they should neuter their dog. This is a useful time to discuss why you would advocate not breeding from brachycephalic dogs, particularly those with conformation-related disease. If they don't introduce the topic, you could signpost that you'll discuss it when they return for their second or third vaccination. This may prompt the owner to think about it in the interim, and the conversation should not be a surprise when it occurs.

Advise owners to read the handouts and websites you have given them, after their first vaccination consultation, and that you can answer any questions or queries in their second vaccination consultation.

Hopefully, these owners will now be on board with what they need to look for and do. Ensure they know that they can always come in with any questions or worries, even if they think it's something insignificant. Some owners may be reassured by having 6 monthly checks to help ensure they aren't missing anything; others will be happy to take matters into their own hands. As with any of these conversations, you won't convert everyone and some people won't be interested, but if even a few owners pick up some useful tips, then you will have helped improve the welfare of their dogs.

## TALKING TO OWNERS OF BRACHYCEPHALIC DOGS WITH EXISTING PROBLEMS

Existing health problems can broadly be grouped into two types:

1. ‘Presenting problems’ are problems that the owner has noticed and that led them to book the appointment. Typically, these presenting problems create clinical signs that are easy for the owner to detect and have been recognised by the owner as something abnormal or bothersome to them and/or the dog.
2. ‘Non-presenting problems’ are ones that you pick up during the course of your clinical examination or that the owner mentions in the consulting room when the dog has been booked in for a different reason. Vaccination consultations can be a classic time for this to happen.

Relatively, these latter consultations can be a lot more difficult; you may need to raise an issue about which the owner is unaware or may consider to be normal. In our experience, facial and soft palate conformation problems, and obesity, can often fall into this category, with owners thinking that snoring or excessive panting is normal for their breed. Similar unexpected surprises for owners may arise when discussing the anaesthetic risks associated with brachycephaly as an adjunct to routine surgery, or when explaining reasons that their dog has recurrent corneal ulceration.

Where minor issues related to brachycephaly are not the reason for presentation, it can be tempting to ignore them, or leave them for someone else to deal with during a subsequent consultation. Concerns about how the conversation will go, and the very real-time pressures faced during veterinary consultations make this an understandable standpoint. In some instances, booking a future consultation to discuss the issue may be the best thing to do. However, our responsibility is to the welfare of the animal in front of us and should not be limited to telling owners what they wish to hear (Fawcett 2017, Fawcett et al. 2018). Fawcett (2017) proposes that a ‘virtue ethics’ approach can help with honest conversations with clients, structured around five focal virtues important for medical professionals.

There is a risk of seeming to be complicit in poor welfare if we do not speak up, and owners may ask why we said nothing, at a later date. As a minimum, we think emphasising the importance of keeping the dog within a normal body condition score, avoiding excessive heat and advising owners of common problems to watch for should be mentioned whenever possible.

Conversations about more severe problems related to brachycephalic conformations, particularly those about which the owner appears unaware, can be very challenging. Hughes et al. (2018) identified that owners of a range of species valued veterinary surgeons who “cared for their animals, knew their stuff, and took them seriously”. Thinking about these key attributes of a good veterinary surgeon may form a useful way to have a conversation about an issue such as BOAS, in combination with our behavioural change attributes of capability, opportunity and motivation. Start by framing the conversation in terms of the animal’s welfare – there is something that you’ve seen/heard/felt that you are worried about. Then, involve the owner by soliciting their viewpoint – is this something they were aware of, and were they concerned by it? This allows you to see where they stand on the issue, and it may help you to identify a reason that they could be motivated to do something about it. For example, owners of a dog with a loud snore may find it annoying or may even be having disturbed sleep as a result of it (Packer et al. 2020). You can then go on to describe what concerns you have and why, what the implications might be for the welfare of their dog and what might be done about it. Again, frame this as being a discussion you want to have because it’s in the best interests of their pet. Introduce the fact that it is related to the dog’s conformation, sensitively – they may have had no idea when they acquired the dog that they were prone to these problems, and blaming them for their bad decision will not help. As we described earlier, reassure owners that it was ok that they didn’t know before, but now that they do, you can both do something about it – provide them with

that clear opportunity. Not every owner will be capable of affording major surgery for their dog's airway, but they may well be capable of helping them to lose weight or be able to pay for their nares to be widened if these are relevant contributory factors. Discuss the options and find one that is practical for them. The key to any of these discussions is to tread carefully and sensitively. Ensure that you read the owner's level of engagement and their emotions on the day, and if you don't think it's the right time, then leave it as long as the dog's welfare permits, but write a note to discuss it next time.

It is possible that even with your best attempts, the owner may become upset or angry. Fawcett (2013) describes three broad reasons for this: it is not the outcome owners expected; expectations are misaligned; or one of the parties is behaving inflexibly. These may be underpinned by a wide range of reasons from feeling that their concern has not been addressed (they were worried about their dog's umbilical hernia, but you are talking about the dog's weight, for example), that they don't feel their perspectives have been taken into account and that they are worried about the costs of what you are discussing, or things outside your control such as they are having a bad day for other reasons. If you can sense rising emotions, stop and ask them what they think about what you are saying, allowing them the space to fully explain.

Again, not every owner will be on board, and this may leave you with a dilemma as to when to respect client autonomy versus intervene. The UK Animal Welfare Acts enshrine in law owners' legal duty to meet their pet's Five Welfare Needs (see the 'Pre-purchase Consultations' section), including the animal's need to be protected from pain, suffering, injury and disease. It is likely that many owners will be unaware of these legal duties (a quarter of UK dog, cat and rabbit owners have still never heard of the Animal Welfare Acts (Wensley et al. (2021))), so even advising them there is legislation to protect the welfare of their pet may be useful to all parties, but should not be used as a veiled threat. This legislation is enforced by the Royal Society for the Prevention of Cruelty to Animals (RSPCA), Scottish Society for the Prevention of Cruelty to Animals (SSPCA) and Animal Welfare Officers in Northern Ireland. Veterinary professionals have a responsibility to identify suspected instances of abuse, including neglect, and report this to the appropriate bodies. This will sometimes require us to break client confidentiality; in the UK, guidance on doing so, to act on animal welfare concerns, is laid out in the Royal College of Veterinary Surgeons (RCVS) Code of Professional Conduct and Supporting Guidance.

One specific situation where client confidentiality can be breached is in the reporting by veterinary surgeons to The Kennel Club of a caesarean section performed on a Kennel Club-registered dog. The Kennel Club registration specifically permits this, and veterinary surgeons should undertake such reporting to provide population data to The Kennel Club, to inform future health strategies. While a client's permission is not required to submit this information, it is nevertheless usually recommended to inform the client as part of good professional relations.

Breeders have additional legal responsibilities to protect animal welfare. Under the Animal Welfare (Licensing of Activities Involving Animals) (England), Regulations 2018, Schedule six states that "No dog may be kept for breeding if it can reasonably be expected, on the basis of its genotype, phenotype, or state of health that breeding from it could have detrimental effect on its health or welfare or the health and welfare of its offspring". This legislation could be a valuable additional tool for tackling the welfare problems associated with breeding for brachycephaly, but there has not been a test case at the time of writing.

## CONCLUSIONS

Some owners of brachycephalic dogs will be naïve to their wide range of health problems, while others may be aware but still retain strong breed loyalty. Understanding owners' motivations to acquire these dogs is important in working alongside them. There are multiple time-points where you can sensitively discuss brachycephalic health and welfare, from the pre-purchase consultation to the routine consultation for another reason. Rather than making assumptions, ascertain what

owners already know and how they feel about any current or potential issues and aim to educate and motivate, rather than blame them. Trying to improve brachycephalic health and encourage owners to consider alternative breeds can feel like an uphill challenge at times. Remember, you have multiple opportunities to make a difference – from your direct interactions with owners, to influencing your practice’s marketing policies, to joining and supporting your professional bodies and their public awareness campaigns. Don’t be disheartened – even if it takes a long time, you are likely to have a positive impact.

## REFERENCES

- American Kennel Club. 2018. Most Popular Dog Breeds–Full Ranking List 2018. <https://www.akc.org/expert-advice/news/most-popular-dog-breeds-full-ranking-list/>. (accessed September 2, 2020)
- Australian Veterinary Association (AVA). 2016. Love is Blind resources <https://www.ava.com.au/love-is-blind/>. (accessed September 21, 2020)
- American Veterinary Medical Association (AVMA), Federation of Veterinarians of Europe (FVE), Canadian Veterinary Medical Association (CVMA). 2020. Joint AVMA-FVE-CVMA statement on the roles of veterinarians in promoting animal welfare. <https://www.fve.org/cms/wp-content/uploads/FVE-AVMA-CVMA-position-statement-on-animal-welfare-Clean-Version.docx.pdf>. (accessed September 23, 2020).
- Belshaw Z., Robinson N.J., Dean R.S., and Brennan M.L. 2018. Owners and veterinary surgeons in the United Kingdom disagree about what should happen during a small animal vaccination consultation. *Veterinary Sciences* 5, 7. doi:10.3390/vetsci5010007.
- Blue Cross. 2018. Things to think about before buying a flat-faced (brachycephalic) dog <https://www.bluecross.org.uk/pet-advice/things-think-about-buying-flat-faced-dog>. (accessed September 2, 2020)
- Blue Cross. 2020. Your puppy’s first vet visit: introducing your puppy to vet handling training. <https://www.bluecross.org.uk/pet-advice/your-puppies-first-vet-visit>. (accessed September 2, 2020).
- British Veterinary Association (BVA). 2018. All animals should be bred for health over looks. [www.bva.co.uk/take-action/breed-to-breathe-campaign/](http://www.bva.co.uk/take-action/breed-to-breathe-campaign/). (accessed September 21, 2020).
- British Veterinary Association (BVA). 2016. Vets Speaking Up for Animal Welfare – BVA Animal Welfare Strategy
- British Veterinary Association (BVA) and Royal College of Veterinary Surgeons (RCVS). 2015. Vet Futures: A Vision for the Veterinary Profession for 2030
- Brunet M. 2020. Chapter 8: Tending the garden. In: *The GP Consultation Reimagined: A Tale of Two Houses*, 65–77. Banbury: Scion Publishing Ltd.
- BVA and BVNA. 2018. Voice of the Profession survey, reported in PDSA Animal Wellbeing (PAW) Report 2018. [www.pdsa.org.uk/pawreport](http://www.pdsa.org.uk/pawreport). (Accessed March 16, 2020)
- Cambridge BOAS Research Group. 2017. Body condition score (BCS) in pugs. [https://www.vet.cam.ac.uk/boas/about-boas/Pug\\_health\\_scheme\\_BCS\\_v2.jpg](https://www.vet.cam.ac.uk/boas/about-boas/Pug_health_scheme_BCS_v2.jpg). (accessed September 2, 2020).
- Fawcett A. 2013. Dealing with difficult clinical encounters. *In Practice*. doi:10.1136/inp.f5574.
- Fawcett A. 2017. Brachycephalic dogs and honesty with clients. *In Practice*. doi:10.1136/inp.i6329.
- Fawcett A., Barrs V., Awad M., Child G., Brunel L., Mooney E., Martinez Taboada F., McDonald B., and McGreevy P. 2018. Consequences and management of canine brachycephaly in veterinary practice: Perspectives from Australian veterinarians and veterinary specialists. *Animals*, 9(3), 1–25. doi:10.3390/ani9010003.
- Federation of European Companion Animal Veterinary Associations (FECAVA). 2018. Brachycephalic issues: shared resources. <https://www.fecava.org/policies-actions/healthy-breeding-3/>. (accessed September 21, 2020)
- Hall E.J., Carter A.J., and O’Neill D.G. 2020. Dogs don’t die just in hot cars—exertional heat-related illness (heatstroke) is a greater threat to UK dogs. *Animals*, 10(8), 1324. doi:10.3390/ani10081324.
- Humane Society Veterinary Medical Association (HSVMA). 2018. Policy statement on brachycephalic dogs. [https://www.hsvma.org/policy\\_statements#brachycephalicdogs](https://www.hsvma.org/policy_statements#brachycephalicdogs). (accessed September 21, 2020)
- Hughes K., et al. 2018. ‘Care about my animal, know your stuff and take me seriously’: United Kingdom and Australian clients’ views on the capabilities most important in their veterinarians. *Vet Record*. doi:10.1136/vr.10498.
- Independent Vetcare (IVC) My Family Pet. 2019. A guide to brachycephalic breeds. [https://issuu.com/ivcevidensiadigital/docs/brachy\\_breed\\_guide](https://issuu.com/ivcevidensiadigital/docs/brachy_breed_guide). (accessed September 21, 2020).
- Kahan D. 2016. The expressive rationality of inaccurate perceptions. *Behavioral and Brain Sciences*, 40. doi:10.1017/S0140525x15002332.

- Kogan L. et al. 2014. Information prescriptions: A tool for veterinary practices. *Open Veterinary Journal*, 4(2), 90–95.
- Liu N.-C., Troconis E.L., Kalmar L., Price D.J., Wright H.E., Adams V.J., Sargan D.R., and Ladlow J.F. 2017. Conformational risk factors of brachycephalic obstructive airway syndrome (BOAS) in pugs, French bulldogs, and bulldogs. *PLoS One*. doi:10.1371/journal.pone.0181928.
- Michie S., van Stralen M.M., and West R. 2011. The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science* 6, 42.
- Nordic Kennel Union. 2017. Statements and proposals regarding respiratory health in brachycephalic dogs. <https://www.skk.se/globalassets/nku-en/documents/brachyreport.pdf>. (accessed September 2, 2020).
- New Zealand Veterinary Association (NZVA). 2017. When Beauty is Pain. <https://www.nzva.org.nz/news/347325/When-Beauty-is-Pain.htm>. (accessed September 21, 2020).
- O'Neill D.G., Darwent E.C., Church D.B., and Brodbelt D.C. 2016. Demography and health of Pugs under primary veterinary care in England. *Canine Genetics and Epidemiology* 3, 5.
- Packer R.M.A., Hendricks A., and Burn C.C. 2012. Do dog owners perceive the clinical signs related to conformational inherited disorders as 'normal' for the breed? A potential constraint to improving canine welfare. *Animal Welfare*, 21(S1), 81–93.
- Packer R.M.A., Murphy D., and Farnworth M.J. 2017. Purchasing popular purebreds: Investigating the influence of breed-type on the pre-purchase attitudes and behaviour of dog owners. *Animal Welfare*, 26, 191–201.
- Packer R.M.A., O'Neill D.G., Fletcher F., and Farnworth M.J. 2019. Great expectations, inconvenient truths, and the paradoxes of the dog-owner relationship for owners of brachycephalic dogs. *PLoS One*, 14(7), e0219918.
- Packer R.M.A., O'Neill D.G., Fletcher F., Farnworth M.J. 2020. Come for the looks, stay for the personality? A mixed methods investigation of reacquisition and owner recommendation of Bulldogs, French Bulldogs and Pugs. *PLoS One*, 15(8), e0237276.
- PDSA. 2018a. PDSA Animal Wellbeing (PAW) Report 2018. [www.pdsa.org.uk/pawreport](http://www.pdsa.org.uk/pawreport). (accessed 16 March 2020).
- PDSA. 2018b. Flat faced dogs: Advice for owners. <https://www.pdsa.org.uk/taking-care-of-your-pet/looking-after-your-pet/puppies-dogs/flat-faced-dogs-advice-for-owners>. (accessed September 2, 2020).
- PDSA. 2019. PDSA Animal Wellbeing (PAW) Report 2019. [www.pdsa.org.uk/pawreport](http://www.pdsa.org.uk/pawreport). (accessed 16 March 2020).
- PDSA. 2020a. Running your own 'Which Pet' consultations. <https://www.pdsa.org.uk/whichpet>. (accessed March 16, 2020).
- PDSA. 2020b. Reward-based training. <https://www.pdsa.org.uk/taking-care-of-your-pet/looking-after-your-pet/puppies-dogs/reward-based-training>. (accessed September 22, 2020).
- Puppy Contract. 2020. [www.puppycontract.org.uk](http://www.puppycontract.org.uk). (accessed March 16, 2020).
- Teng K.T., McGreevy P.D., Torbio J.-A.L.M.L., and Dhand N.K. 2016. Trends in popularity of some morphological traits of purebred dogs in Australia. *Canine Genetics and Epidemiology*, 3(2). doi:10.1186/s40575-016-0032-2.
- The Kennel Club. 2018. French Bulldogs overtake Labradors as UK's most popular dog breed. <https://www.thekennelclub.org.uk/press-releases/2018/june/french-bulldogs-overtake-labradors-as-uks-most-popular-dog-breed/>. (accessed September 2, 2020)
- Trevors G., Muis K., Pekrun R., Sinatra G., and Winne P. 2016. Identity and epistemic emotions during knowledge revision: a potential account for the backfire effect. *Discourse Processes*. doi:10.1080/0163853X.2015.1136507.
- Wensley S., Betton V., Martin N., and Tipton E. 2020. Advancing animal welfare and ethics in veterinary practice through a Pet Wellbeing Task Force, practice-based Champions and clinical audit. *Vet Record*. doi:10.1136/vr.105484.
- Wensley S., Betton V., Gosschalk K., Hooker R., Main D.C.J., and Tipton E. 2021. Driving evidence-based improvements for the UK's "Stressed. Lonely. Overweight. Bored. Aggressive. Misunderstood...but loved" companion animals. *Vet Record*. doi:10.1002/vetr.7
- Yeates J. 2013. *Animal Welfare in Veterinary Practice*. Wiley-Blackwell, Hoboken, NJ.