Cooperative care for companion dogs: emotional health and wellness

Traditionally, humans treated their companion dogs with absolute authority. Furthermore, much of human behaviour towards dogs is cloaked in myths and driven by human-centric labels such as 'good,' 'bad,' 'stubborn' or 'friendly' to describe behaviours, emotions, traits or personalities. This has meant that companion dogs have little, if any, autonomy or choice in what happens to them, and this can be traumatic and emotionally damaging. However, providing dogs with the opportunity to make choices when and where it is safe and appropriate to do so may improve their optimism and is part of a clear two-way system of communication between humans and dogs. This translates to reduced stress and enhanced positive welfare that includes their emotional wellness. Cooperative care is a training protocol that provides some measure of predictability and clarity. It removes ambiguity and thus reduces stress from handling. Because it allows the animal to choose to participate or not, it builds trust and grants for some degree of bodily autonomy. The practical applications have additional effects on overall wellness and also reduce the chances of aggressive behaviours that may lead to human injury and veterinary care can be improved, with benefits to the dog, staff and clients.

Erin Jones PhD, MSc, CDBC, IAABC-ADT, CPDT-KA, CANZ-ABC/ATI. Email: erin@meritdogtraining.com

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ooperative care is about teaching dogs to have and make choices when it comes to participating in their own care, and to provide them with the information they need to make informed decisions (Howell and Feyrecilde, 2018). It is a protocol founded on trust and a clear reciprocal communicative system that aims to reduce fear or stress during handling. This protocol challenges traditional beliefs conflated with forceful methods of handling that are woven into the fabric of our human-centric society, often propagated further by the misinformation and misconceptions that are freely accessible to anyone. Change can be challenging but is necessary for human interactions with other animals to become more ethical and compassionate and to evolve into a more sophisticated approach for the enhancement of their wellbeing. The key elements of why and how this is important in a veterinary setting, for both humans and dogs, are highlighted throughout this paper.

The focus of this article is on companion dogs; the primary case study is Juno. Juno is a female, 4-year-old mixed breed dog, that is fearful and/or anxious in novel environments, around new people or dogs and has various noise sensitivities. This makes veterinary care and handling particularly challenging, but provides a great case study to highlight the benefit of cooperative care. However, despite the focus on dogs, cooperative care practices originated in captive environments, primarily with large exotic animals in zoos. Indeed, cooperative care is for everyone.

Dogs in society

Dogs are important members of a unique interspecies relationship that involves a care and concern that permeates species boundaries. However, the various interactions that humans have with companion animals do not always reflect this. In fact, human society is not always sympathetic to dogs' needs or perspectives. They are often treated in ways that devalue their choices and offers little, if any, agency. Often humans' expectations or needs eclipse what is best for the dog's emotional wellbeing. Sometimes this is understandably out of concern for other aspects of their health and wellness (for example, illness or safety). However, sometimes it is out of convenience to humans or is influenced by the way dogs are framed as 'pets,' claiming ownership and dominion; breeding them specifically to be perpetually dependent.

Teaching companion animals to cooperate in their own care offers one way to increase positive welfare outcomes, accounting for their emotional as well as their physical experiences. Cooperative care provides some measure of predictability and clarity, removing ambiguity and thus reducing stress. Because it allows the animal to choose to participate or not, it builds trust and grants some degree of bodily autonomy. Providing the opportunity to make choices when and where it is safe and appropriate may improve morale and optimism (Lagisz et al, 2020) and is inherently rewarding for dogs (Friedman, 2020).

Traditionally, dogs have been treated with absolute authority. Much of human behaviour towards dogs is cloaked in myths and driven by human-centric labels such as 'good', 'bad', 'stubborn' or 'friendly' to describe certain behaviours, emotions, traits or personalities (Jones, unpublished data). These are shaped partly through the projection of humans' own social interactions and experiences. The way in which dogs have been socially constructed impacts how they are treated by human society, and 'cultural constructs determine the fate of animals' (Atwood Lawrence, 1994). For companion dogs, this might translate into how humans manage, dominate, control, train, love and interact with them.

According to Stibbe (2001), 'ideologies embedded and disseminated through discourse influence the individual mental representations of members of a society, which in turn influence their actions.' Ideologies are normatively imbued ideas and concepts of a society, including particular representations of power relations, and are conflated by social constructions and discourse. These make up what we think of as assumptions about 'common sense' (Stibbe, 2001). The language we use facilitates constructed ideologies about dogs, and disempowers them in many ways. Cooperative care is just one of the ways we can instead empower dogs. Empowering dogs means allowing them to feel in control of what happens to them, to assent to various interactions (in most situations which allow for it) and build trust within the dog-human relationship. This is not only important for keeping people safea dog who feels threatened or scared is much more likely to bite (Reisner, 2003)-but also reflects the ethical interactions we have with (not over) another being.

What is cooperative care?

Cooperative care is not about unquestionable compliance, but it can lead to an animal who is willing to participate and eliminates the use of coercion or force. The main goal of cooperative care is to allow the animal to choose to actively contribute to their own care and to give them control over what happens to them. The foundation skills learned in cooperative care should go beyond an animal who chooses to comply, but also honouring when they choose to walk away. That means the animal knows that it is not only okay to say no, but to trust that their decision will be respected.

Cooperative care first involves teaching the animal a consentbased behaviour using positive reinforcement. For example, a chin rest is a common consent behaviour where resting the chin signals the start of handling and lifting the chin at any point stops the handling (*Figure 1*). Other consent behaviours might include a sustained nose to object target, a particular position (example, lateral recumbency as a consent position for a lateral saphenous blood draw), or stationing on a low platform or mat. Once these behaviours are learned and performed with duration in absence of handling, the animal can then be taught about various handling protocols that might take place using conditioning and desensitisation techniques while providing them with predictive cues cues to specifically inform the animal about what handling is to follow.

Conditioning and desensitisation protocols are used to slowly shape the consent behaviour as new procedures are introduced. This will involve slowly increasing the duration of the consent behaviour and adding in, ideally, verbal cues that will correlate with what actions will follow. Once a consent behaviour is learned, it is easy and quick to transfer to new handling protocols. For example, the author might teach a sustained chin rest as the consent behaviour where the dog fully understands that the chin rest is a green light and lifting the chin is a red light signal to the handler. With the addition of learned predictive cues, the author can trim nails, apply ear treatment, take the animal's temperature or give vaccines, provided these handling protocols have been conditioned separately. The following is an example of the steps used to teach a vaccine protocol using a chin rest consent behaviour:

Example: teaching vaccine injection using a chin rest behaviour

- Teach a chin rest behaviour. End each behaviour by marking (using a clicker or the word 'yes') following immediately with a reward to reinforce the behaviour. The marker indicates the end of the correct behaviour and indicates that reinforcement is to follow.
- Begin to add duration to the chin rest slowly and move at a pace that your learner is comfortable with.
- Once the chin rest behaviour is clear to your learner and they are successfully able to sustain it for at least 10–20 seconds, begin to use instrumental conditioning to teach the various vaccine protocol steps of that will take place while sustaining a chin rest. These suggested steps will only move as quickly as your learner can comfortably and confidently manage. Alternative options should be provided (such as toys, a bed, water) and sessions should remain short (~2–3 minutes) and positive for the learner:
 - Add hand movements and work your way toward their neck. Work towards being able to place you hand onto their neck while they sustain a chin rest behaviour.
 - As you pat your dog's neck, pair the action with the verbal predictive cue 'pet.' This will teach the dog the meaning of the predictive cue. Once the cue is learned it should be precede touching.
 - Once the 'pet' action and the subsequent predictive cue are solid, follow the action with pinching the skin gently and pairing the verbal predictive cue 'pinch'
 - Once the 'pet' and 'pinch' actions are solid, use a finger to poke, mimicking an injection and pair with the verbal cue 'poke.'
 - From here, you can begin to use an empty syringe, no needle, followed by a needle with cap and then a blunt needle. Remember that the predictive cue should precede each action and it should be the same sequence every time: 'pet,' 'pinch,' 'poke.'
 - Follow the preceding steps, you can repeat with the vaccine in the syringe without injecting it. Remember that a dog's olfactory senses are much more acute than our own and this should be considered during this conditioning and

desensitisation process.

 Repeat these steps in the environment that you will be giving the vaccines and with the person who will be administering them. When starting in a new environment, I start at an easy stage (example, just 'pet') and work my way up to the full sequence. This allows you to gauge your dog's body language and not push them beyond their level of tolerance.

When ready, you can give the full vaccine. It is advisable to use a numbing cream on the area so this may need to be conditioned separately in advance.

Considerations during practice sessions

During these practice sessions, the following need to be considered:

Stress assessment

If at any point during any of these steps the dog lifts their head out of the chin rest position, all handing must stop. Assess the dog's emotional state and if they are stressed it may be best to end the session and try again at an easier stage in the future. During these practice sessions, the dog is learning the impact of their chin rest/ chin lift (or chosen consent behaviour) and having control of what is happening to them is self-reinforcing. It is important that staff in the veterinary clinic are taught to understand the various stressrelated signals and other communicative gestures such as displacement behaviours and calming signals so that they do not push the dog beyond their capabilities in that moment.

Reinforcement contingencies

The dog should feel safe enough to opt out at any stage, even from the very beginning. Only reinforcing for opting in (giving a chin rest behaviour but not for the chin lift, for example) might lead to conflict. The reinforcer might be equal (food or toy) or the inherent reinforcement that occurs when the handling stops might be enough for most dogs. If the dog was feeling stressed while being handled and chooses to lift their chin (opt out), then the stress is removed (this would be negative reinforcement). However, additionally, the power of having control over what happens to them in that moment of stress is also positively reinforcing—Friedman (2020) suggests that choice is in fact a primary reinforcer that will serve to strengthen a behaviour over time.

However, if the dog is relaxed but simply struggling with chin rest duration, it may be advisable to return to adding duration to the chin rest in absence of any cooperative care handling. The aim of cooperative care is about predictability and clarity, and if the criteria is muddled then this may cause an extra layer of stress or frustration. To reduce any potential stress and to increase clarity of criteria, it is important to move at the pace the learner sets and to remain constantly vigilant to their emotional state.

Options

Have toys and water located within range so the dog has the option to engage with something else if they are not comfortable with handling.

Frequent check-ins

It is important to check in with the dog frequently to see if they are

still willingly engaging in the session. To test this, toss treats away to reset their position. If the dog returns and offer their chin rest you may continue. If not, that is a good indication that a break is needed.

Only ask if you can accept 'no' for an answer

If the procedure is life altering and is time sensitive or if the procedure is something we have not yet taught her, I don't ask. The goal is about maintaining the trust. If there is a risk she will say no and I then restrain her and do it anyway, I have put her (and myself) in an unreasonable position. It is better to take the least intrusive and least stressful approach, which often will be sedation. This does not happen often as most procedures are well learned and in most cases we can postpone if needed.

Importance of cooperation: emotional wellness

Routine health care is important for a dog's welfare, although studies have shown that veterinary care may have a significant emotional impact on many dogs, manifesting in fear-related behaviours (*Figure 2*).

The responses to a perceived threat may vary depending on the individual and circumstances. Fight are often aggressive behaviours used to threaten including snarling, snapping and biting. Flight refers to the avoidance of the threat by moving away, hiding, cowering, tucking tail or lowering their body to the ground. In Figure 2 freezing, fawning and fidget all contain a question mark by them because the expansion to include other various responses to stress (which include sometimes displacement behaviours, stress signals, and/or calming signals) may vary and is not fully known. This has led to many researchers to call the set of responses 'acute stress response' (Bracha, 2004).

For example, Stanford (1981) found that 60% of dogs exhibit



Figure 1. Juno demonstrating her chin rest behaviour while practicing vaccination protocol with an empty syringe and blunt needle.

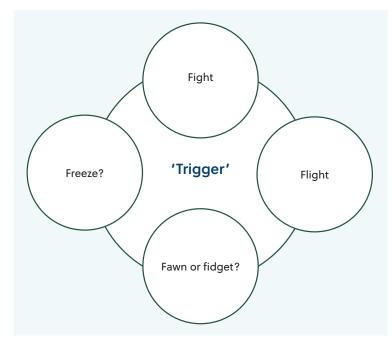


Figure 2. The responses to a perceived threat may vary depending on the individual and circumstances. Many researchers call the set of responses the 'acute stress response.' (Bracha, 2004).

Stress-related communicative signals	Threats (overtly 'no')
 Sniffing the ground or surrounding areas Lip flick Yawn Lifting and holding up their front paw Turning head away from person or averting their gaze Lowered body position or rounded through their back (making themselves appear small and unassuming) Lowered/tucked tail Stiff body or freeze (even momentarily) Trembling Shaking off (as they might do if wet) Ears flattened and/or pushed back Whites of the eye showing, also known as whale eye Trying to escape/leave (sometimes this is a very slow and deliberate walk away from the person) Tightly closed mouth (pursed lips) Exposing the belly (particularly with one leg lifted and tail wagging with short, quick strokes or tucked) Learned 'no' or opt out behaviours (taught during cooperative care) 	 Lifting the lips to expose teeth Hard stare Growling or snarling Barking or lunging at the person (functioning to create space) Air snapping in the person's direction Nipping (contact without breaking skin) Biting (contact and/or bruising and/or breaking skin). Bites may rage in duration and severity

trepidation and submissive signals when visiting the vet, and 18% had a bite history. A study by Mariti et al (2015) identified fearrelated behaviours in 53% of dogs who entered the waiting room. Furthermore, Döring et al (2009) found that 50% of dogs were disinclined to even walk into the examination room. In fact, fearrelated behaviours can be observed across the different stages of a visit to the veterinary clinic, but are particularly evident during examination processes that involved physical manipulation (Stellato et al, 2020).

Table 1 shows signs of stress, uncertainty or fear. In dog language, these signals mean stop. These are also the signals that humans most often miss or misinterpret. It is advised to watch their entire body as many of these behaviours are seen in conjunction with others in this list. For example, a dog may stiffen, tuck her tail, lift her front paw, flick her tongue, and avert her gaze simultaneously. Others may show a different combination of behaviours. Some dogs have learned that their subtle, conflict avoidance behaviours are repeatedly ignored and feel they must resort to more overt behaviours immediately.

As medical professionals, there is an obvious concern for the physical wellbeing of patients. In fact, the first step in Friedman's (2008) humane hierarchy is wellness because health needs to be assessed in order for the best laid behaviour plans to be effective and for the basic needs of any animal to be met. This is also true because there are strong correlations between physical health and behaviour. For example, Mills et al (2020) found that approximately one third of referred behaviour cases (and up to 80%) involve some form of pain-related condition. These include musculoskeletal, gastrointestinal and dermatological conditions, which are commonly identified as significant to an animal's behavioural issues.

However, putting the emotional wellbeing at the forefront of medical care is essential for improving positive welfare. Behaviourist and psychologist Susan Friedman (2020) suggests that behaviour is an 'evolved tool to achieve functional outcomes to realizing that control over outcomes matters in the lives of all animals.' Plenty of multi-species and multidisciplinary evidence exists recognising a direct correlation between control and animal welfare (for example, Friedman, 2005; Leotti et al, 2010).

Control (over environment and over self) has been added as a pillar of positive animal welfare according to Mellor's (2015) five domains model. Initially, animal welfare focused on reducing or eliminating negative impacts on welfare until Mellor's more recent refurbishment of welfare standards. This addition of positive welfare, which includes 'a sense of control,' is part of that focus. To further address the necessity of having a sense of control, Friedman (2020) also suggests that control can be considered a primary reinforcer—something that is inherently valuable and rewarding that strengthens a behaviour over time. Controlling our outcomes is the adaptive function of behaviour; we need to control outcomes to not only survive but to flourish. Therefore, undue control over our dogs is something worthy of deeper consideration and refocussing on less intrusive methods are essential.

As mentioned at the start of this article, cooperative care can empower individuals to contribute to a reciprocal dialogue that ultimately affects their emotional wellness and right to choose. But it is more than just empowerment. It is also about feelings of safety for both the human handler as well as the animal patient. It does not just provide the dog a choice to cooperate, it delivers predictability and transparency on which they can base their decision to agree to handling or not. When we remove force, or the threat of force, we eliminate the associated fear and anxiety-fear of the unknown (what is about to happen to their bodies) but also fear of the known (what happened in similar instances). It also inspires trust; the foundation of any successful relationship. Distress can manifest in many ways for the animal. Some of these pose a risk to the veterinary team, others may not. Often fear-based behaviours manifest as a part of the dog's defensive mechanism (example, a bite), which occur more often and more quickly when an animal is under distress. When there is no opportunity to flee, whether this is because of restraint or confinement, including things like leashes, closed doors, small spaces and lack of escape routes, self preservation may lead to a fight response. But just because aggressive behaviours may be more damaging to humans, other fear responses should be taken just as seriously. For example, the lack of behaviour does not mean that the internal state of an animal is any different than that of animal who behaves defensively. Freezing may equally indicate internal distress in an animal and this is frequently mistaken for an animal who is compliant or 'obedient.' There is an array of responses that we may see from a dog who is anxious or fearful, some of these are addressed in Figure 2.

Use in clinical practice

Cooperative care has been used in a variety of captive animal settings long before it was considered important for companion animals, and this is primarily because many exotic animals are increasingly dangerous to handle. Allowing a tiger to cooperate in her own blood draw or an alligator to cooperate in wound treatment is not only an admirable achievement, but also a key component to both emotional and physical health and safety. Incorporating cooperative care into domestic animal practice clearly reduces stress on the animal, but also reduces stress for the human client, as well as veterinary staff. When done correctly, it can save time, reduces the risk of injury, but most importantly, it is an animalfocused modern approach to care that considers the patient's mental wellbeing.

It may require some adjustments and changes to staff requirements, training and set-ups. It might also involve a joint effort between the client and trained staff to teach the necessary skills and put them into practice. Programmes such as Low Stress Handling and Fear Free have created certification programmes for individuals and practices to create a more behaviour-focussed atmosphere using special techniques such as minimal or no-restraint handling and is a great place to start. Then the ultimate goal is to create time and space to work with clients on teaching consent-based behaviours, such as a chin rest. This might mean devising a procedure that will work for the clinic staff as well as each individual client and is especially recommended for animals who struggle in the clinic environment, fear of handling, and/or fear of strangers.

One way to begin to better use cooperative care in clinic is to have a dedicated trained expert on staff to work specifically on teaching cooperative care on an individual basis to clients and their pets. This might be several short sessions based in-clinic and providing clients the techniques they need to practice these steps at home. Another option is to work with trainers, behaviourists or behaviour consultants in the area to allow practice sessions to take place in your clinic.

Example: incorporating cooperative care in vet visits with Juno The clinic Juno attends does not practice cooperative care. However, I wanted to use cooperative care with Juno regardless. Here are a few ways I was able to create a less stressful experience and incorporate cooperative care with Juno's veterinarian:

- We scheduled appointments at the end of day. This way, day patients have been discharged and no one is coming into the clinic after us.
- Pre-visit antianxiety medication was given 2 hours before our arrival.
- I wait in the car with Juno until her veterinarian is ready for us.
- I spray Adaptil on a bandana.
- I scheduled monthly 'practice' visits. This allowed Juno to practice cooperative handling protocols in the clinic environment and allowed her vet to also learn what to do. We always visit the same veterinarian, so they are able to build a relationship with each other.
- My predictive cues were also a cue for Juno's vet to know when it was safe to touch her. For example, if we were examining ears, she would give a chin rest and I would give the cue 'ears' signaling to Juno what was about to happen and signaling to her vet when to begin.
- We practiced in the same room every time and start with some fun games or play.
- We book a regular consultation, but practice sessions were kept short, easy and positive. Generally, our practice visits are ~5 minutes.
- When we needed to do a procedure for which we had not taught in advance, we use oral sedation in the car before doing an intramuscular injection for full sedation. The injection is administered outside which is a less stressful and more open space. There is no point in trying something new in the moment and failing. If I ask Juno to cooperate and she chooses not to and we then restrain her and do it anyway, we risk damaging the trust we have worked diligently to build.

Conclusions

When we know better, we do better. That means, changing our own expectations about how we interact with dogs and putting their emotional needs first. The choices that cooperative care provides dogs is empowering and can be easily implemented into vet-

KEY POINTS

- Cooperative care provides choice, clarity, and predictability.
- Dogs benefit from learning how to opt in and out of handling.
- Cooperative care provides positive welfare outcomes that encompass both physical and mental wellness.
- Eliminating force reduces the risk of trauma for dogs and bites for veterinary staff.

erinary practice as well as the way people handle care at home.

Conflicts of interest The author has no conflicts of interest to declare.

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