CPD article

COVID-19: implications of self-isolation and social distancing for the emotional and behavioural health of equines, parrots and small prey pets

As the COVID-19 pandemic brings together health professionals from across the world to address the difficulties in controlling and reducing its spread, experts in human health are also considering the cost of control measures on human psychological welfare. This article concludes a short series of three pieces, considering the immediate consequences to our companion animals of reduced access to environmental and social stimulation outside the home while these animals experience increased exposure to social stimuli within the home. Some long-term emotional and behavioural effects are also considered. This article focuses on the welfare changes to equines, parrots and small prey animals as COVID-19 restrictions continue.

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Currently, COVID-19 regulations dictate that the human population is restricted to a single outdoor exercise period per day, during which social distancing must apply. This inevitably limits the time spent with, and range of activities undertaken with, equines. Although parrots and small prey animals are unlikely to spend time outside the home and garden, the COVID-19 regulations can also affect the time spent with, and the nature of interaction with humans and other animals, as families are forced to remain within the confines of home and garden. It is inevitable that these restrictions are going to affect the companion animal population that are used to a routine associated with exercise opportunities, care and/or social exposure to the wider human family.

Animals such as horses, ponies and donkeys, that may be assumed to be benefiting from increased opportunities for their owners to spend time in their care, are affected by social distancing advice that is resulting in many equine owners sharing and rotating care with other yard users (British Horse Society, 2020). For many equines this will involve an unavoidable alteration to both the routine and nature of their care. In addition, although furloughing and other COVID-19 related alterations to human working routines have left many equine owners with increased time to spend on equine-related activities, these activities have actually drastically declined as owners follow advice such as that provided by *Horse and Hound* (Murray, 2020) that suggests that equine owners think carefully about the implications for the NHS should hospital beds be taken up as a result of riding-related accidents.

It is the opinion of this author that it is likely that the alterations to human patterns of behaviour associated with COVID-19 regulations will have profound implications for the current, and possibly long-term, emotional and behavioural health of many equines, parrots and small prey animals.

Should our companion animals be subject to exercise and handling restrictions intended for humans?

The answer to that question lies in whether animals such as equines, parrots and small prey species can act as vectors for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (the virus which causes COVID-19). Viruses from the coronavirus family are known to infect a range of mammals and birds, but to be specific to individual species types and little is known of their activity in parrots or small prey animals. Horses are in a

slightly different category as equine species, particularly foals, are recognised as being susceptible to equine coronavirus, spread via the faeces of infected horses, the infection being ingested during grazing. Although two thirds of infected horses show no clinical signs, they may continue to shed the virus for a prolonged time (Dhama et al, 2014; Bryan et al, 2018). However, as this form of coronavirus is specific to equines, it is highly unlikely to be passed from horse to handler (American Association of Equine Practitioners, 2017).

The World Small Animal Veterinary Association (2020) has suggested that as SARS-CoV-2 appears to be able to survive for short periods on the fur of animals that have come into contact with infected humans, that owners and handlers should restrict contact with pets and other animals while they are ill with COVID-19, just as they would around other people. Although there have not been reports of pets or other animals living in domestic situations becoming ill with COVID-19, it is recommended that people who are unwell with COVID-19 try to limit the amount of contact that they have with their pets. When possible, another member of the household should care for the animals while the owner is ill. If owners are ill with COVID-19, they should limit the amount of direct contact that they have with their companion animal as much as possible, including petting and eating in their vicinity. Hence, if owners need to care for their pet or be around animals while they are ill, they should ensure that they continue to maintain good hygiene practices, such as washing hands before and after interacting with pets and, while they are ill, they should wear a facemask.

Until more is known about SARS-CoV-2, it should be assumed that the virus may be transferrable via animals to humans because of a degree of risk associated with handling the hair of an infected animal or an animal that has been in contact with an infected human, as SARS-CoV-2 appears to be able to live on the fur of an animal for several days after being handled by an infected person (in a similar way to the manner in which SARS-CoV-2 may be transferred through touching any other surface, e.g. a table or shopping trolley, that has been touched by an infected person).

Are the social distancing and self-isolation regulations likely to pose immediate or future problems to the emotional and behavioural welfare of companion animals?

The short and longer-term emotional and behavioural effects of COVID-19 restrictions on companion animals are likely to be highly dependent on:

- An individual animal's ethology (particularly whether or not the animal belongs to an innately social species)
- An individual's genetic capacity for sociability and general social and environmental resilience
- The animal's early and subsequent learning opportunities (McGreevy, 2004; Bradley Bays et al, 2006; Fox, 2006)
- The animal's current state of health
- The individual animals' expectation of access to the outdoor environment.

All of these parameters will influence whether an individual animal will benefit from increased access to human companions and whether their wellbeing will be impaired by restricted opportunities to engage with the outdoor environment. In addition, the emotional advantages of increased social contact with owners will be determined by whether an individual animal has options for choice regarding avoidance of, or access to, the social environment and the availability of alternative, species-appropriate, mental stimulation.

The effects of restricting human access to outdoor exercise

Exercise and environmental enrichment (through access to a diverse and stimulating environment) is a basic health requirement for all animals, but the amount of exercise and the level of stimulation required will vary markedly between individuals.

Equines

Equines are social obligates, forming close social relationships with both conspecifics and humans (McGreevy, 2004). The majority of equine owners are trying to follow the advice given by the British Horse Society (2020) regarding both limiting equine sporting activity to reduce the likelihood of human injury and enhancing human social distancing by sharing the care of equines on livery yards between owners. An immediate effect of this is that many equines are seeing less of their owners, are being turned out (often with other equines) for longer periods of the day, are being ridden out less and are experiencing a disruption to their expectations, resulting in the potential initiation of behaviour change (*Table 1*).

Although increased turn-out has been encouraged during the COVID-19 pandemic, this is not an option for the many horses, ponies and donkeys stabled within the UK's cities. Increased unpredictability within their daily handling and care routine, in addition to reduced opportunities for exercise, will have an inevitable, deleterious effect on their emotional welfare. Although it is the author's opinion that it is unlikely that other groups of equines will be more likely to develop compulsive behavioural disorders during the COVID-19 restrictions, it is this group of equines, with severely reduced opportunities for mental stimulation, that may be most at risk from developing coping strategies that become compulsive and possibly deleterious to long-term welfare (*Figure 1*). Owners of such equines should be encouraged to ensure that grazing activity is imitated through an almost continuous source of low-calorie roughage that requires problem solving to enable access (British Horse Society, 2018).

Parrots, guinea pigs and rabbits

At this time of year, many owners of parrots, guinea pigs and rabbits will be starting to allow their pets to have access to safe, enclosed areas of gardens. However, if these gardens are also being increasingly used by family members it is important for these animals to have opportunities to choose to avoid the noise and activity created by the family, hence offering choice regarding their environmental selections will be important to their welfare (*Figure 2*). A less obvious cause of distress for these animals may be the increased presence of predators within the environment (e.g. gulls, raptors or rats) attracted by the combination of reduced pedestrian and road traffic and increased refuse in urban and suburban areas.

Table 1. Potential COVID-19 related problems in equines and suggested preventative actions or first aid advice

Potential problem	Potential reason for behavioural change	Likely presentation	Advice for owners
Dishabituation to environmental stimuli	Exclusion from a complex and varied environment — the condition will be heightened if concurrent to other stress-inducing situations, e.g. unpredictable care or unsympathetic handling by a stranger	Increased sensitivity to the environment, resulting in shying or spooking at previously familiar stimuli	With other yard owners, identify routines and try to ensure all owners maintain this Identify potential problem stimuli (e.g. a piece of fabric rustling in a bush) and arrange them around the yard (regularly altering their position) so that all equines pass these daily. Reward the equine's ability to relax as it encounters and passes these items when possible
Anxiety regarding handling	Equines thrive in a predictable environment and with a consistent daily routine. Sharing of care exposes equines to unfamiliar humans working in a different way to the owner	Increased sensitivity to human carers, attempted avoidance and, particularly if avoidance is not possible, aggression	Discuss and agree a calm, planned routine for how each horse on the yard is handled, even if what is being requested is not the technique that the handler would normally use with their own horse
Separation and bonding problems	When predictability is lost from an environment, anxious animals may increasingly rely on consistently available social companions. Currently this may enhance bonding with conspecifics met while grazing	Loss of competence for time spent out of the direct presence or sight of conspecifics. Hence, reticence to leave the equine social group when required to exit from the field or yard, resulting in constant attempts to pull towards conspecifics and possible aggression to social stimuli preventing this	Daily periods of stimulating and positive interactions, away from conspecifics and with humans, e.g. clicker training, target stick training or simply grooming (including mutual grooming activity)

It is this author's experience that the distress associated with an inability to control access to a safe hiding place results in parrots and small prey animals experiencing frustration that may result in repetitive behaviours (e.g. the plucking of feathers or fur — in small prey animals the fur is sometimes used to enhance the volume of bedding material that may enable 'hiding'). These behaviours may remain in the animal's behavioural repertoire after the resolution of the actual exposure to the stress-inducing stimulus.

Increased social pressure within homes

The immediate impact on companion animals of enhanced exposure to family members, and the range of activities that they engage in, will be highly dependent on the innate sociability of the species and the individual's previous experience of social exposure to the family.

Parrots

Parrots are also highly social animals (Seibert, 2006), but there is an assumption that their social needs are identical (Bradley Bays et al, 2006). Yet some parrot species will only socialise with members of their own species and such parrots may experience considerable difficulty in (and may be incapable of) forming relationships with other parrot species or species of any other type, including humans other than their primary care-giver. Hence there is a wide variety of levels of social flexibility exhibited by parrots. However, even if only bonded to their primary care-giver, the opportunity to spend increased

Figure 1. It is essential that equines are receiving plenty of mental stimulation. If turn-out with conspecifics is impossible, then enrichment feeding techniques should be immediately implemented to help avoid the development of repetitive, displacement behaviours.

amounts of time with that person during the current COVID-19 lockdown will inevitably both strengthen the social bond and the expectation of availability of the attention of the bonded person. This provides the initiating circumstances for potential future separation difficulties initiating anxiety and frustration (possibly motivating aggressions) when the primary care-giver is not present. If the parrot lives within a family home, the period of school closure, working from home and furloughing provides excellent opportunities for other family members to learn about the species and how to appropriately interact with it. It may also be possible to teach the parrot new skills and design species-suitable and mentally stimulating activities that enable the parrot to enjoy short periods of both social activity with the wider family and solitary time in problem-solving activities and rest.

Like other companion animals, parrots also need an opportunity to engage in choice and this applies to social engagement. Hence this may be a suitable period for reflection regarding the type of housing provided for the parrot, to ensure that it is able to apply a level of choice to its exposure to family activity, enabling it to manage its exposure to stressors.

It will be particularly important that parrots are able to maintain a regular daily pattern to their activity that closely resembles their pre- and post- COVID-19 arrangements. This should include the parrot's periods of rest, particularly their night-time arrangements. While it is widely believed that parrots should be removed to a completely darkened and silent area of the home at night, their natural environments are not completely free from night-time noise. Hence it is this author's opinion that although parrots should have a darkened, quieter sleeping area, it should not be completely devoid of the background family noises that allow the parrot to be aware that social companions are within the environment, and hence to retain its concept of safety.

Rabbits and other small prey animals

Although these species rely heavily on social living for their concept of safety, their social flexibility is largely reliant on the company of conspecifics (Bradley Bays et al, 2006). Hence any alteration to their daily pattern of engagement with family members is likely to initiate distress. Consequently, rather than increasing the level of activity to which these animals are exposed, families should shield these species from change and they should ensure that they have readily available and constant access to opportunities to select to avoid the sight and sound of family activity. Instead of increasing engagement with children, family members could engage with these pets through researching their needs and ensuring that an environment is provided that meets the welfare requirements of the species (*Figure 3*).

However, if there are children within the household, it will be inevitable that activity and sound levels will increase and that rabbits and other small prey animals will experience increased levels of anxiety and fear. This will have an unavoidable, diminishing effect on the animal's capacity to cope and hence families should ensure that children are engaging with these species through the provision of species-appropriate environmental enrichment, rather than through attempts to handle and hold these animals, as the animal's increased anxiety is likely to initiate defensive aggression.

There are considerable welfare problems associated with small prey animals experiencing a lack of choice to avoid stressors such as children, as although their initial emotion may be anxiety or fear, the continued lack of availability, or lack of success, of normal coping mechanisms to resolve the perceived problem rapidly results in frustration (Mills et al, 2013). In small prey animals and parrots, this emotion often results in the development of displacement behaviours that can become repetitive and long-

Figure 2. Small prey animals are often, inadvertently, left without a sense of protection from ground level and overhead threats to their safety.

Figure 3. Now is an excellent time for parents to be educating children regarding the welfare needs of their pets, preventing inappropriate welfare scenarios being used to amuse future generations of children.

term (e.g. destructive behaviours, such as digging at or tearing items or self-mutilation via fur or feather plucking). Sadly, owners may perceive such behaviours to be wilfully destructive, resulting in punitive responses that further the animal's distress. The learning associated with punishment (verbal or physical) from humans is likely to have a permanent, negative effect on the animal's perception of exposure to humans (Bradley Bays et al, 2006).

Increasing mental stimulation as an aid to coping with social and environmental changes

All companion animal species, including horses (British Horse Society, 2018), will benefit at this time from increased opportunities for mental stimulation through the provision of simple problem-solving activities that involve a mix of:

1. Human interaction — involving increased training and enrichment opportunities, inside and outside home
2. Without excessive human intervention, encouraging independent activity and reduced reliance on humans for the provision of mental stimulation and emotional support

Increased mental stimulation can be realised through maintaining a varied supply of specifically designed, problem-solving, toys and puzzle feeders (Bradley Bays et al, 2006). Games like the 'muffin tin game' that is shown on the YouTube videos (mentioned in *Useful contacts and resources*) can be easily altered to entertain other species such as parrots and rabbits, for example using an egg box and ping-pong balls. Other ideas for rabbits and small prey animals may be found on websites such as the Rabbit Welfare Association (see *Useful contacts and resources*).

Longer term veterinary first aid response to COVID-19 related emotional and behavioural welfare problems

As with other animal species, when clients contact the practice with medical queries, staff may wish to try to initiate a short conversation about how the client's family and pet have coped with the restrictions associated with COVID-19. If the behaviour of the pet is mentioned, such conversations could be triaged towards the practice behaviour advisor. *The Veterinary Nurse* has recently printed a series of articles on first aid behavioural advice for a range of companion animal species and useful behavioural first aid advice may be found in the articles in *The Veterinary Nurse* — Nellist (2019) for equines and Valvona (2020) for rabbits. In addition, if practices do not have a designated behaviour specialist on their staff, clients should never be left with the feeling that help and support is not available, but should be referred on to the nearest Animal Behaviour and Training Council-registered clinical animal behaviourist.

Conclusions

Currently, there is a great deal of worry and concern among the owners of companion animals regarding how owners should interact with their pets. Having a companion animal in the home or accessible during the limitations of COVID-19 regulated social contact and exercise periods, is bringing companionship and mental health benefits to many people; yet the emotional health issues associated with companion animals coping with their altered social situation is underdiscussed. In addition, it is a sad but underdiscussed fact that when circumstances arise that increase the likelihood of domestic disruption and abuse, companion animals often also share the brunt of such abuse. Increased social pressures on families will have been a hot-bed for emotions and the potential for the psychological and physical abuse of family members and family pets should not be swept under the carpet. Veterinary staff will need to remain vigilant for signs of such abuse following such intense family tensions. As the period of social isolation continues, there is likely to be an

Useful contacts and resources

- **Animal Behaviour and Training Council** http://abtcouncil.org.uk/
- **Association for the Study of Animal Behaviour Register of Certificated Practitioners** https://www.asab.org/ccab-register
- **Fellowship of Animal Behaviour Clinicians** https://fabclinicians.org/covid-19
- **People's Dispensary for Sick Animals** https://www.pdsa.org.uk/what-we-do/blog/vet-qa-coronavirus-covid-19-advice-for-self-isolating-pet-owners
- **Rabbit Welfare Association** https://rabbitwelfare.co.uk/rabbit-health/disease/covid-19-advice-and-faq/
- **RSPCA** https://www.rspca.org.uk/whatwedo/latest/blogs/details/-/articleName/how-to-care-for-your-pets-if-you-re-ill-or-have-to-self-isolate-due-to-coronavirus
- **World Small Animal Veterinary Association** https://wsava.org/news/highlighted-news/the-new-coronavirus-and-companion-animals-advice-for-wsava-members
- **Boredom Busters from Karen Wild** https://www.youtube.com/playlist?list=PLwZbsct-laGvmWwdSMDTDZsa0r47Mrzbn
- **Boredom Busters from Susan McKeon** https://happyhoundstraining.co.uk/boredom-busters/

KEY POINTS

- Animals thrive in a consistent and predictable environment — the current COVID-19 restrictions have removed that essential welfare element.
- Although the majority of companion animals will be bonded to their human carers, increased social activity is likely to cause at least occasional distress to pets.
- Companion animals cope with the stressors within a domestic environment through the use of choice — to engage or not to engage with ongoing activity. Current restrictions are reducing the companion animals' options of choice.
- Without the choice to avoid stressors, animals are likely to engage in a range of frustration-related behaviours that may include aggression to other social stimuli or self-harming repetitive activities.
- Animals belonging to social species, such as parrots and horses, may be predisposed to increased dependency on companionship during COVID-19 restrictions — this may lead to future separation-related problems when restrictions on social movement are lifted.

inevitable rise in pet relinquishment, either because families can no longer continue to afford pet care or because of their inability to cope with their pet's behaviour (Bonner, 2020). A knock-on effect of relinquishment will be an increase in a need for animal adopters with the empathy and time to rehabilitate the animals in their care and veterinary staff should be preparing to play their part in helping families and their companion animals to return to a post COVID-19 normality. CA

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Acknowledgment

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