



## Module 26

# Companion Animal Welfare

## Lecture Notes

### Slide 1:

This lecture was first developed for World Animal Protection by Dr Siobhan Mullan (University of Bristol) in 2003. It was revised by World Animal Protection scientific advisors in 2012 using updates provided by Dr Caroline Hewson.

This lecture considers and develops some of the points raised in Module 14. In addition, it highlights a number of other companion animal welfare issues.

### Slide 2:

Module 14 outlined some of the welfare problems that you see in companion animals in practice. It then focused on the problem of stray dogs and cats, and how a long-term solution is needed. As vets you can provide important clinical and scientific advice so that the management and control of stray animals can be as humane and effective as possible.

Some of you may work with an animal shelter, either as a volunteer or an employee. Because of this and because pet overpopulation is such a problem worldwide, we will look first at what shelters do to deal with the immediate welfare problems of stray dogs and cats.

### Slide 3:

Animal protection societies know a long-term solution is needed to reduce the numbers of animals they have to deal with. However, their immediate problem is: what should they do with all the dogs and cats that they have? Some shelters want a 'no kill' policy. Others prefer selective culling of the resident animals. In this module we will look at both approaches and then at the importance of policy. We will also look at the main work that shelters do in neutering and re-homing animals.

After that, we will look briefly at several other problems in the welfare of companion animals, as listed on the slide.

### Slide 4:

We begin with what animal shelters do.

## Slide 5:

In general, animal protection societies put most of their effort and resources into saving as many animals as possible, leaving little time and money to develop long-term strategies.

In some developed countries, large, well-organised and relatively rich charities may succeed in performing both functions, i.e. rescuing animals as well as involvement in long-term campaigns and education programmes. However, in poorer countries, many charities and animal protection groups have limited funds and resources. They are overwhelmed by coping with the animals that come to them; therefore, they cannot plan or implement any long-term strategy to tackle the root cause of the problem – the sheer number of strays.

In general, animal protection societies are small and run by a few, highly motivated, volunteers. Their aim is generally to save as many animals as possible and all their resources are spent on trying to take care of the animals. Selective culling is difficult for them to accept, and would generally not be well accepted by their volunteer workers.

There is often little money to pay for veterinary and other professional help. Some local veterinarians may become involved (as volunteers) but there is clearly a limit to the amount of time that professional people can give. This may promote a degree of ill-feeling between animal protection groups and veterinarians.

## Slide 6:

In countries where there is a significant problem with stray overpopulation and also a relatively poor economy, the scope for long-term re-homing is reduced. This limits the financial support these groups have because, normally, a shelter would charge a re-homing fee. The type of dog or cat, such as feral, community or abandoned animal, could also influence his/her potential for re-homing.

## Slide 7:

Before opening an animal shelter, the management should decide on the shelter's policy. As a vet, you can help them to make informed decisions, so that their work will benefit animals and not, ultimately, make their welfare worse. Important questions are:

1. What is the realistic capacity of the shelter? This relates to the physical size; physical construction and protection from the environment; the resources for food, water and medication; the availability of staff; provisions for sanitation and hygiene.
2. If the capacity is 30 dogs (or cats), what happens when number 31 comes along? Is the animal turned away for someone else to deal with? Is the animal killed? Is another animal killed to make room? Is the stray taken into the shelter anyway? (If the latter, what about when numbers 32, 33, 34 ... 60 come along?)
3. Are there criteria for selective culling so that the shelter does not become overcrowded? This can be a very sensitive and difficult issue for management to agree on, and it must be agreed by all staff. This issue of culling relates to the fundamental question: *what is the role of the shelter?*

## Slide 8:

People may have very idealistic views of the role of a shelter. In reality, the three main functions of a shelter are:

1. **Keeping lost pets to be collected by their owners.** It is common that strays are kept for a period of time, which can vary from around three to ten days, to allow time for an owner to come forward. Module 14 discusses the benefit of identification and registration in this regard. More rapid identification of the owner will speed up the process and free up kennel space to allow more animals to be processed through the facility. Charging the owner a realistic fee also provides an income.
2. **Re-homing strays.** This is a major function of many shelters. The long-term aim is to place a well-behaved and socialised dog or cat into a caring and responsible family. Failure to do this will probably lead to future abandonment. If re-homing is the primary aim of the shelter, and yet the practical performance is a relatively low re-homing rate, it might be better to consider keeping fewer animals in a central location and situation more likely to generate interest than large out-of-town compounds.
3. **Neutering.** All dogs entering the shelter should be neutered before re-homing, or before being released in the case of neuter–release programmes which we looked at in Module 14. The kennel facility is often the limiting factor of the number of animals that can be managed.

Other possible aims of a shelter may include:

1. Saving all the dogs or cats in a particular city
2. Keeping animals in a 'protected environment' for the rest of their lives. Many shelters have their own 'long-term inhabitants', which may be good for staff morale and for some of the individual animals. However, this 'no kill' policy should be the exception rather than the rule. If the primary function of the shelter is to successfully re-home animals, the shelter's main efforts should be to this end.

This brings us to the question of how shelters can cope with large numbers of animals. A 'no kill' policy is usually not feasible or humane, but selective culling of animals is also hard for staff to accept. This is a very emotional question for many who work in animal rescue and, as a vet who may be advising the management of a new shelter, it is important that you understand it. So, we will now spend some time on this.

### Slide 9:

Some large charities in certain countries can promote a 'no kill' policy, in which no animals entering their shelters are killed. This is only realistic if there is unlimited space, manpower and money so that the animals can have a good life in the shelter even if they are never re-homed.

In most of the world, however, shelters have limited space, money and workers, so a 'no kill' policy is unrealistic and can result in more suffering for the animals. For example, the picture shows dogs in a shelter in the Ukraine where there is severe overcrowding; if that shelter operates a 'no kill' policy, under those conditions, the dogs may live for a long time, but in very poor conditions that do not satisfy the guidelines of the Five Freedoms.

Even in a very well-run 'no kill' shelters, dogs can still suffer from some form of kennel stress.

### Slide 10:

Consider an animal shelter that has adequate facilities and money to look after 30 dogs. At this capacity, there are sufficient funds to provide a balanced diet and routine medication (such as vaccinations, de-worming and parasite control). The low stocking density allows adequate cleaning and sanitation.

Now consider if the shelter's income is halved, or if the number of dogs is doubled to 60 – or trebled to 90 – or beyond. In either case, the shelter would have less money to spend on maintaining the facility and looking after the dogs.

In many shelters, there have always been limited funds, which has meant that the facilities were poorly constructed at the start. This makes good cleaning and sanitation difficult.

In our example, if funds are reduced, it is likely that prophylactic medication will be the first resource that the shelter cannot provide, and then food. Many groups rely on the donation of waste food from bakeries, etc. which does not provide the animals with an appropriate or balanced diet.

### Slide 11:

We shall now consider the implications of infectious disease to the animals in this shelter. Infectious disease can be caused by a range of agents including bacteria, viruses and parasites. Many of these organisms cause fatal diseases (e.g. parvovirus, canine distemper virus), especially in animals who are already in poor condition because of having been strays.

The infectious organisms can spread via a variety of routes (airborne, orally, bites, etc.). For the sake of this argument we will consider enteric disease caused by a virus. This will cause vomiting and diarrhoea and will be spread when the virus is shed, and then taken in orally by susceptible animals.

The severity of the outbreak will be increased by these factors in a shelter:

1. overcrowding – increases the density of susceptible animals and hence the likelihood of the spread of disease.
2. poor hygiene and sanitation – this is a result of overcrowding. Many shelters house large numbers of dogs and cleaning is achieved by hosing the floor with the dogs in place. This sprays faeces over the coats of the dogs, hence increasing the risk of ingestion. Because viruses can survive for long or short periods in cracks in concrete and in crevices in fencing, poorly constructed facilities are impossible to disinfect adequately. The build-up of the infectious agent will increase the risk of an epidemic.
3. the number of susceptible animals – this can be reduced in some specific cases by prior vaccination. However, costs may make this impractical.
4. poor nutrition and intercurrent disease – animals are weakened by poor nutrition or other diseases they are suffering from, such as parasitism. Those clinical factors depress their immune systems, which makes them more susceptible to infection.

The conditions that can result from trying to ‘save’ too many dogs in a shelter will be the very same conditions that predispose shelters to the outbreak of infectious diseases.

## Slide 12:

Remember, from the previous slides, that we have sufficient resources to adequately look after 30 dogs, and we have only been able to re-home 5 per cent of these. Because we cannot accept a policy of selective culling, the number of dogs has risen to 300 (i.e. 10 times the optimum level). Due to the causes already mentioned, the incidence of disease is high, and several dogs die of starvation and disease on a daily basis.

This shelter does not provide any of the Five Freedoms:

1. the animals are poorly fed.
2. they suffer from injuries and stress from bite wounds as a result of the overcrowding.
3. they suffer from disease.
4. they suffer discomfort as a result of overcrowding.
5. they cannot exhibit their normal behaviour.

How can the situation be improved?

1. Improve the financial support and facilities so that 300 dogs can be kept with good welfare – but what if this then becomes 600 dogs, or the 6,000 mentioned earlier?
2. Accept the practical reality that not all the dogs can be saved and maintained in optimum conditions. To avoid inflicting suffering, should we consider selective culling as part of the programme?

## Slide 13:

The point with these examples of overcrowded shelters is not that 'no kill' is wrong: when there are sufficient resources, the problems we have reviewed in these last few slides would not occur. However, if you do not have sufficient resources — space, money, and so on — a 'no kill' policy is likely to cause suffering. As this kind of suffering could be avoided by selective culling, one might argue that this is 'unnecessary suffering'. In some jurisdictions, a 'no kill' policy would be illegal in the facilities we have seen, because the policy was causing the animals to suffer unnecessarily.

For all these reasons, many shelters are not 'no kill'. Instead, they operate selective culling. In that case, you humanely kill some dogs and cats that have not been re-homed within a given period. The animals should be killed by euthanasia (which means 'good death') (see Module 17).

Euthanasia is performed as an act of mercy, to relieve suffering in the individual animal. For example, the photograph shows a dog that has suffered damage to his spine following a road traffic accident. The X-ray below shows that the damage is severe. Because the dog has minimal chance of making a satisfactory recovery, he is euthanised, as an act of mercy.

In the case of killing dogs and cats at a shelter, to make room for more strays, we kill humanely for the sake of the rest of the population as a whole or the human population. It is therefore a form of culling. However, it is also a mercy killing in that, if we did not kill the animal, eventually the shelter would become too crowded and they could not afford to care for him and each dog would have a poor quality of life.

Many people involved in animal rescue may be troubled by the morality of killing animals to make room for others, i.e. culling them. The main points for debate are therefore:

1. Is euthanasia of an individual justifiable if that particular individual is suffering or has a poor quality of life?
2. Is an animal kept in an overcrowded shelter where the Five Freedoms cannot be met, and so suffering sufficiently to warrant euthanasia?
3. Is it acceptable to selectively cull (by humane means) a healthy animal so that the rest of the population can have a better quality of life?

### Photos:

- Stray dog on the streets of Calcutta, India, who has just been in a road traffic accident (mentioned above)
- X-ray of a dislocation of the thoraco-lumbar spine of the above dog

## Slide 14:

If we accept that euthanasia and selective culling are important in a shelter, in some circumstances, we now need to explore which individual dogs in our hypothetical shelter of 30 dogs might need to be euthanised or culled. Imagine that you are their veterinary advisor, and the shelter is almost at the upper limit of animals it can keep. You have been asked to provide guidelines to the shelter staff on what to do with new animals arriving at the shelter.

To do this, you need to perform a risk analysis; that is, you identify all the potential risk factors that might cause harm to all the different stakeholders (animals, staff, visiting public, etc.). Then you devise a protocol that minimises the potential harm that each risk factor could cause to the different stakeholders.

The degree of potential harm is partly a function of the resources of the shelter; that is, if they do not have the money to prevent or treat an outbreak of disease in the shelter, an incoming animal that might be carrying the disease is likely to cause harm. However, if the shelter has money to vaccinate all its animals, and has an isolation facility and veterinary drugs, the animal might be less of a potential hazard.

The next few slides show one way of classifying incoming animals: in decreasing order of the risk they are likely to bring to the shelter.

## Slide 15:

This slide shows the top three reasons for euthanising animals. At our hypothetical shelter, incoming dogs that fall into any of these three categories should be killed:

- Those dangerous to human health (e.g. suffering from rabies, or extremely aggressive to people): it is likely that such a dog would be humanely killed immediately.
- Those dangerous to the health of the other dogs in the shelter: if there are adequate quarantine facilities and appropriate medication available, perhaps these dogs can be cared for. In reality, however, quarantine may not be available and is a big drain on limited resources – so perhaps this category of dog should also be killed.
- Those with severe injuries or disease that cannot be treated: such animals should probably be considered for euthanasia. If not, it is unlikely that they will be re-homed, so they may remain at the shelter for life. This will be an ongoing cost and may use resources that could be better used to re-home a healthy dog.

## Slide 16:

1. Animals with a severe injury that can be treated at high cost: multiple fractures and injuries can be treated, and it is easy to become emotionally attached to injured animals. If resources are limited, is it better to treat such injuries in one dog or vaccinate the rest of the animals in the shelter?
2. Those with minor injuries or diseases: treatment is still a drain on resources, though most shelters would try to cope with this.
3. Those with behaviour problems: this is a more difficult problem, as many of the 'problems' are the result of poor socialisation in the past. While 'dog psychologists' and behaviourists may give useful advice on adapting and improving behaviour traits, such advisors are not readily available to many shelters in poorer areas. If the aim of the shelter is to successfully re-home animals, this is less likely if the animal has a known behaviour problem. For example, a study of ~4500 owners who adopted dogs in the UK indicated that owners were much more likely to return the dog if the dog showed aggression to someone and the adoptive owner had not sought help or attended dog-training classes. However, owners who attended training classes were less likely to return their dog to the shelter (Diesel et al. 2008).
4. Those who are healthy with no apparent problems: even this category is not without risk because some dogs may be incubating an infectious disease and may develop symptoms later (e.g. parvovirus, rabies). Some diseases may only be diagnosed using laboratory tests that may be impractical in many shelter situations. Similarly, some behaviour problems may not be apparent initially.

The point of this example is not to dictate which animals should be killed and which ones saved. That decision should be made by the management team of the shelter. If they accept that some selective culling is necessary, and considering their particular resources, which categories of animal would they think most appropriate to select? This is not an easy choice, but to ignore the issue may result in unnecessary suffering. As a vet, you can use this framework to advise them.

## Slide 17:

We have now looked at the differences between 'no kill' shelters and those that operate selective culling. We shall now return to the main functions of a shelter:

1. keeping lost pets to be collected by their owners
2. re-homing
3. neutering of all animals (neuter and release of some strays).

We saw in Module 14 how important identification is for distinguishing owned from unowned animals. That is an important part of the work that shelters do, and it is a way that you, as a vet, can promote responsible ownership, by encouraging your clients to have their pets permanently identified, e.g. by a microchip or tattooing. The next slide reviews this.



## Slide 18:

If one of your clients' animals runs away or ends up in a shelter, it is very important that the shelter can return the animal to his/her owner because this avoids unnecessary kennelling. Also, where pets have permanent identification, owners who repeatedly lose their pets can be identified and perhaps penalised.

In the case of dogs and cats in a shelter who are strays and do not have identification, the shelter will want to identify them prior to re-homing. This will allow monitoring of the success of re-homing programmes; the rate of future abandonment, etc.

As we saw in Module 14, tattoos and microchips are the best forms of permanent identification, although neither is perfect. Microchips would be ideal except that the equipment is relatively expensive so many shelters and animal control facilities cannot afford them. As a vet in practice, it is important to be aware of this because, while your practice may be able to afford a scanner, if the other authorities cannot, it is more practical to use tattooing.

## Slide 19:

In addition to the identification and re-homing of animals, the other big task of shelters is neutering, to help curb overpopulation.

Neutering is generally accepted to be an important part of responsible pet ownership because its advantages far outweigh the disadvantages. In addition, un-neutered animals can be more prone to some health problems, such as pyometra (womb infections) and prostate infection or enlargements in dogs, and uterine cancers in rabbits.

However, neutering is not risk-free and it has the potential to cause harm to animals if it is not managed correctly, especially in busy neutering programmes at animal shelters.

This slide shows the main potential problems with neutering. The first point, preventing the animals from showing natural behaviour, is an ethical one. Most people take a consequentialist view of it; that is, it is necessary for animals to lose this natural behaviour, for their own benefit and for the greater good of other animals and people.

If you volunteer with a shelter or are employed by one, as a vet you will play a big role in helping it to provide appropriate peri-operative care and surgery, in its neutering programme.

## Slide 20:

This slide summarises the areas of professional concern for the animals you operate on in a neutering programme.

You will see that your concern is not limited to the surgery. Post-operative care is important to ensure successful rehabilitation. This should include some form of monitoring if the animal is released onto the streets. This is easier where there is community involvement and some degree of responsibility of care. (See Module 14 for the implications of neuter and release programmes.)

Because you will be the surgeon, we will now look more closely at the final three points.

## Slide 21:

There is a critical standard below which routine neutering should not be performed, because the procedure will result in unnecessary suffering for the animal. The main standards are asepsis, analgesia as well as anaesthesia, and good technique. These are essential for the success of any neutering programme.

1. Most infection is introduced at the time of surgery, hence the importance of employing adequate aseptic technique. The photo on the left shows the neutering of a bitch without proper asepsis (e.g. no drapes, no gloves). The photo on the right shows an ideal surgery, with drapes, gloves and surgical gown. Clearly, expensive surgical facilities may not be practical in many situations in which neutering programmes are performed. However, with attention to detail and technique, it is often possible to achieve an acceptable level of asepsis.
2. Note that anaesthesia is not the same as analgesia (pain relief) and many anaesthetic drugs do not provide any pain relief so, once the animal regains consciousness after surgery, he/she will be in pain. The availability of analgesic drugs varies in different countries, and expense may sometimes be a factor. However, it is important that the drugs you use provide adequate anaesthesia *and* analgesia.
3. Looking finally at surgical technique: with some neutering programmes there may be pressure to operate on a high number of animals – the dog or cat becomes a statistic rather than an individual. The surgeon is then judged on performance of the most operations in the shortest time, instead of judging based on patients who recover the quickest without complications. As a veterinarian, you will have knowledge of anaesthesia, complications, asepsis, etc. If you work in population-control programmes, you must be a good surgeon who knows the principles of surgical technique well and then chooses to perform mainly neutering procedures, not a clinician who has been taught how to neuter rapidly but does not know the wider issues of surgery and anaesthesia.

A limited survey carried out in Jaipur in India indicated that minor refinements to surgical technique (which was already of a good standard) improved recovery times such that the dogs were released back on the streets more quickly, allowing an overall increase in the number of dogs operated on (the kennel space was the limiting factor).

## Slide 22:

We have looked at the main roles of animal shelters in trying to control stray dogs and cats and we have seen that, generally, selective culling is preferable to 'no kill' for many reasons.

Next, we will look at the problem of dogs who are aggressive to people and other animals and how misguided legislation can create a problem for shelters trying to re-home certain breeds of dog.

## Slide 23:

Aggression is a category of behaviour. In dogs, it manifests as growling and biting directed towards people or dogs and/or other animals. The context in which a dog shows aggression, and the dog's body language (e.g. position of ears, body posture) can help you to understand the underlying motivation for the dog's aggressive behaviour. The most common motivations are fear and uncertainty which are typically related to how the dog has been socialised and trained.

However, even though aggression is a normal canine response, there is a problem when dogs bite people. In most recorded cases this occurs within a home or when somebody enters a home that is being guarded by a dog. Dogs of any breed may bite and it is a problem around the world — from free-living dogs in Guatemala (Lunney et al., 2011) to pets in the home in the Netherlands (Cornelissen & Hopster, 2010).

However, some breeds have become known as 'dangerous breeds'. These breeds have been bred to be aggressive and have a high pain threshold; they are more likely to be aggressive if they have not been well socialised as puppies: lack of socialisation makes them likely to be aggressive because of fear.

Media pressure has magnified the perception of the problem in Europe and the USA, and has linked it specifically to breeds associated with organised dog fighting. While dog fighting is indeed a welfare issue and in most countries is illegal anyway, the cases of aggressive dogs who receive media attention are often not related to dog-fighting events.

However, the publicity has created pressure on governments to introduce breed-specific legislation to control the problem.

The UK reacted very quickly in 1991 and passed breed-specific legislation which was badly thought out and has created many difficulties. In contrast, Spain passed legislation in 1999 and 2002 that targeted breeds and owners alike (Villalbi et al., 2010).

Some of you may be called upon to advise on laws to control aggressive dogs, so we shall now look at the UK law, because it is an example of poor legislation.

## Slide 24:

In 1991, a series of high-profile dog attacks on children led the UK government to rapidly introduce the Dangerous Dogs Act (1991). This passed the legislative stages in only one day. There were some general provisions, but the main ones related to a number of specific breeds, including American pit bull terriers, Fila Brasileiro, Japanese Tosas and Argentinian Dogos. The future import of dogs of these breeds was to be banned. All existing dogs were to be destroyed unless the owner agreed to meet strict conditions. These included:

- neutering
- identification by microchip and tattoo
- compulsory insurance against injury to a third party
- muzzling in a public place.

Failure to conform would result in the courts ordering the dog to be euthanised. The courts had no powers of discretion in these cases.

Proof of breed: It became extremely difficult to prove if a dog was indeed a pit bull, as covered by the law, or a Staffordshire bull terrier or a cross-breed.

However, it was for the defence to prove that the dog was not a pit bull – this led to many lengthy and costly court cases in which dogs were kept in police kennels for up to three years (a welfare problem in its own right) – at massive cost to the taxpayer.

Definition of a public place: a dog inside a locked car with the windows closed was judged to be in a public place. Therefore those identified without a muzzle (since they were being given a drink after a walk) were automatically destroyed; the court had no powers of discretion. (An amendment has since been passed to give the courts such powers, but the main law remains.) This law is used to show the potential problems of introducing a poorly drafted law. Despite this, similar laws have been considered in other countries.

**Photo:** A pit bull terrier

## Slide 25:

This slide summarises the problems of breed-specific legislation, especially because there are aggressive and non-aggressive dogs in all breeds. For example, when people are bitten within the home, most bites are from breeds such as terriers, which are not listed specifically as a dangerous breed in legislation. A recent study in the Netherlands again confirmed this (Cornelissen & Hopster, 2010).

American pit bull terriers are one of the breeds that has been named as very aggressive. However, the photo in this slide shows a friendly pit bull terrier that had lived with a UK family for 10 years since the 1991 Act. A recent study by the Canadian British Columbia Society for the Prevention of Cruelty to Animals (SPCA) followed up on 40 pit bull terriers and 42 dogs of a similar size that the shelter had re-homed. The researchers interviewed the owners and concluded that “their study provided no evidence of greater aggression or poorer care among adopted pit bulls compared to dogs of other breeds” (MacNeil-Allcock et al., 2011).

Another problem with breed-specific legislation is that it is difficult to identify breeds. As a vet, you may be asked to judge if a dog is, or is not, from one of the breeds termed 'dangerous' in legislation. This is a very difficult task because, often, it is impossible to tell if a dog is a purebred or not. It is also difficult to distinguish breeds such as Staffordshire bull terrier and pit bull terrier, depending on size, etc. Therefore, often, the vet must state that he or she cannot state with certainty the breed of a certain dog.

A further problem with breed-specific legislation is that, unless there are also strong laws making the owner responsible for his/her dog, the penalties are aimed at the dog rather than at the owner of the dog. However, aggression is often the result of fear caused by poor socialisation, lack of training or inappropriate training — all of which are problems caused indirectly by an owner's mismanagement of his/her dog.

### Slide 26:

While legislation is clearly important, the most important solution is for pet owners and the general public to be more familiar with aspects of dog behaviour, and exercise responsible ownership.

As mentioned before, most dog bites happen in the home. The incidents occur not because of 'dangerous breeds' but because we take dogs into our homes without any knowledge of dog behaviour and without teaching them what we want from them, by humane training.

Clearly, some dogs may be aggressive and inherently dangerous. Such cases should be assessed on an individual basis, and truly dangerous dogs should be euthanised if they cannot be controlled by other means.

Behaviour studies indicate that a very important time to encourage socialisation of dogs is between 3 and 13 weeks of age, so that they are not afraid of day to day activities in and around the home and neighbourhood when they are older. If puppies are not socialised properly, they can be very aggressive in some situations when they are adults; this is because they are afraid. As a vet, it is essential that you advise clients who are breeders, and new puppy owners, about the importance of exposing puppies to a whole range of new experiences between 3 and 13 weeks. For a review of this, see Lindsay, S. R. (2000) *Handbook of applied dog behavior and training, vol. 1: Adaptation and learning* (Ames: Blackwell).

Research is also important, as the next slide shows.

#### Photos:

- Pit bull terriers fighting
- A Rottweiler guard dog

### Slide 27:

Data from a recent study in the Netherlands showed the importance of educating dog owners, since they are the people most likely to be bitten — by their own dogs (Cornelissen & Hopster, 2010).

A study from Spain showed a marked drop in hospitalisations caused by dog-bite injuries after changes in the law on dog ownership which included breed-specific regulations but also strong criteria for the owners, who had to prove they would be responsible owners (Villalbi et al., 2010). As the slide shows they had to prove psychological aptitude for dog-owning, as well as that they had no criminal record.

### Slide 28:

We have looked at what animal shelters do, and at the wider problem of aggressive dogs.

We will finish this lecture on the welfare of companion animals by looking briefly at these four areas:

- the pet trade
- breed standards
- sophisticated veterinary treatments
- the consumption of dog meat.

### Slide 29:

There are very wide variations in standards of pet shops and traders worldwide. However, there is relatively little regulation either of the shops or traders themselves, or of the entire supply chain. Whenever there is pressure to reduce costs anywhere along the supply chain, it is likely that the welfare of the animals being sold will be compromised. Consequently, legislation and licensing are needed.

**Photo:** Puppies sold as pets in a street market in Korea

### Slide 30:

Reputable traders do exist within the pet trade. It is important that they work with legislators and animal welfare groups to ensure that regulations protect the animals, and that those traders wishing to have high standards are not financially compromised in comparison to those traders who care more for money than for the animals they sell. This requires adequate policing and enforcement.

Many countries have local regulations for pet shops, including the need for an annual veterinary inspection. As a vet, you may be asked by your local authority to provide a veterinary report on a pet shop.

### Slide 31:

If you inspect a pet shop, you will have no direct knowledge of the conditions throughout the whole chain of supply. This slide gives examples of the problems that may occur commonly in the pet-supply chain.

When inspecting animals in a shop, you may find that their state makes you suspicious about the conditions of the supply chain, e.g. you may find that many of the puppies of a certain breed have entropion (an in-turned eyelid) or heart murmurs, and you may suspect that the supplier may in-breed the dogs.

You may also find animals that have been caught from the wild and are very distressed and diseased as a result, without appropriate food. The modules on wildlife (21 and 22) look more closely at this.

Most countries do not regulate the entire chain of supply, and not all countries regulate pet shops. Full regulation is needed throughout the chain, to ensure the animals' welfare. In addition, public education should stimulate consumer pressure to insist that their pets are supplied from appropriate 'welfare-friendly' sources. If these animals could be sold for more money, this would be a financial incentive for traders to do things correctly.

### Slide 32:

In many countries, the breeding and showing of dogs and cats is very popular. However, because individuals are mainly selected for appearance instead of their function or health, many breeds now contain individuals who are predisposed to health problems (McGreevy & Nicholas, 1999). Recent studies in the UK indicate that the 50 most popular breeds registered with the UK Kennel Club all had hereditary disorders (Asher et al., 2009; Summers et al., 2010).

In addition to the physical disorders that breeders may select for unknowingly, when they selectively breed for cosmetic features, breeders may also have selected for temperaments that are not suitable in a companion animal. For example, they may select for animals that have a low threshold for fear. Fearfulness can make an animal's experience of life very negative, and make them likely to have a difficult relationship with their owner, who may then abandon them.

In addition, the breeding standard may include mutilations such as tail-docking. Historically, this procedure may have been carried out in some breeds to avoid injury to the tail during work. However, it has become a largely aesthetic, human preference.

People may transport their animals over long distances and keep them in restricted conditions for a long time at shows. However, because the animals are worth a lot of money, they are generally likely to be transported in good conditions. The governing body for pedigree animals, such as the Kennel Club in the UK, may set standards for each breed and be willing to adopt ones that are better for the animals' wellbeing.

### Slide 33:

We now look more closely at the problem of hereditary defects. Over the years, breeders have selected dogs and cats with specific traits and this has gradually resulted in the great variety of breeds and types that we see today. To maintain type, strict breed standards have been agreed and these are the yardstick against which show specimens are judged.

However, breeding for specific characteristics may reduce the potential gene pool significantly such that hereditary defects may become apparent in some breeds.

In some cases, potential genetic problems (e.g. hip dysplasia) may be recognised by screening programmes so that one can better select future breeding stock. Research into the canine genome will facilitate control programmes in the future.

It is important to address these issues in cooperation with breeders and kennel clubs. There are several websites that give detailed information about hereditary disorders in a range of pets. One is the Universities Federation for Animal Welfare (UFAW) site, and it is [www.ufaw.org.uk/geneticwelfareproblems.php](http://www.ufaw.org.uk/geneticwelfareproblems.php).

### Slide 34:

The 'breed standards' of some breeds in some countries dictate that certain parts of the body be removed to conform to the agreed standard (e.g. cropping of ears and docking of tails). The attitude to this is variable throughout the world – it is generally accepted in the USA, but frowned upon within Europe. Some breed societies still favour the action, but most international welfare, veterinary and government bodies are supportive of the ban as outlined in the European Convention of Pet Animals.

It has been suggested that failure to dock tails in some working breeds would increase the incidence of tail injuries – this has proved not to be the case in countries where docking has been banned. Tail-docking is illegal in Scotland and parts of Australia, without exception. It is also illegal in countries such as Cyprus, Finland, Germany, Greece, Luxembourg, Norway, Sweden, Switzerland, England and Wales, but some of these countries have exceptions for working dogs.

At this time, there appears to be no convincing scientific evidence to support the docking of tails or the cropping of ears.

### Slide 35:

Surgical alterations that are carried out for cosmetic reasons, such as tail-docking, ear-cropping, debarking, declawing and defanging are unnecessary mutilations.

They should be banned because they are unnecessary and because they can result in other welfare problems for the animal. For example, tail-docking is usually performed on puppies in the first two to four days of life, without analgesia or anaesthesia. Research using an electroencephalogram (EEG) indicates that puppies are incapable of suffering pain in the first days of life because their brains are not neurologically mature enough to allow it (Mellor



et al., 2009). However, research on rat pups and human infants suggests that other parts of the pain pathway are activated by the tissue damage that tail-docking causes, and that this predisposes the pups to oversensitivity to pain in the area later in life, or may lead to a lack of sensitivity to pain there. There is no feasible way of providing analgesia to puppies at the age when their tails are docked (Hewson, 2008).

Public education leaflets about declawing and tail-docking created by the Sir James Dunn Animal Welfare Centre at Atlantic Veterinary College, Canada, are available at [www.upei.ca/awc](http://www.upei.ca/awc).

### Slide 36:

In Western society, as pet owners become aware of improved standards of health care and treatment for themselves, they demand similar treatment for their pets. This is a good thing in some ways because it helps to advance the standard of care we give to our pets. However, increasing the *length* of an animal's life can be at the cost of the *quality* of the animal's life. There is a risk that vets may perform sophisticated and costly procedures out of their own clinical and technical interest, without first assessing whether the animal will experience a better life as a result. An additional problem for the vet is that there is still a lack of data in veterinary medicine on the prognosis for many diseases, given breed and age and a particular treatment. This makes it difficult for vets to advise their clients.

One example is cancer therapy.

Treating a pet with cancer can be difficult and yet very rewarding. In many cases, however, death is an inevitable sequel in a relatively short time – successful treatment may extend a pet's life by only three months, for example. Again, lack of data often makes it difficult to know the best course of action to take.

Clinical points to remember are that many cancer therapies are a mixture of drugs, many of which have to be given at the clinic, and involve hospitalisation and side-effects. This means an animal may have to spend a relatively large part of the three months of the remission that your treatment has given him separated from his owner and taking drugs to counteract the side-effects. As research and personal experience provide more data, vets will be in a better position to help owners decide whether or not a new or sophisticated treatment is in the animal's best interests.

For the last part of this lecture, we shall move away from the problems that dogs may experience as pets, and consider the welfare problems that may arise with dog meat consumption.

### Slide 37:

The consumption of dog meat is most concentrated in Asia where dog meat is thought to have health benefits. There are poor welfare conditions in the markets, with overcrowding of dogs in cages, and inhumane methods of slaughter.

### Slide 38:

Aside from the ethical problem the consumption of dog meat poses for many people, the industry is widely unregulated, which raises many human and animal welfare issues.

There are serious welfare issues at all stages of the industry, including ones linked to overcrowding in large-scale farming, long-distance transportation and slaughter methods.

The large-scale trade and movement of dogs of unknown disease and vaccination status also permits the rapid and wide-ranging dispersal of rabies and other diseases, such as trichinellosis (Liu & Boireau, 2002), and so represents a threat to both animal and human health.

### Slide 39:

This module has touched on many aspects of companion animal welfare. As a vet, you will see or be directly involved in many of them — from helping shelters adopt a policy that protects animal welfare, to advising legislators about why dogs are aggressive and how best to protect the public with new laws. You may also be advising about the pet trade, and you have seen the need for legislation across the entire supply chain.

As clinicians in practice, you will see many of the problems caused by in-breeding, and you may be asked to perform unnecessary mutilations, especially tail-docking. We have seen briefly that docking puppies' tails is not necessary, and that there is scientific evidence that docking the tail may predispose the dog to difficulties with pain regulation later in life.

We have also touched on the importance of considering an animal's overall welfare, not just his/her health, in the case of cancer treatment, and other advanced treatments that you may use as a vet.

Finally, we have seen that eating dogs is part of the culture in some Asian countries and that, apart from any ethical questions raised, there is a need for regulation to keep and slaughter the dogs humanely.

