

Pet worming protocols: how to ensure owner compliance

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ABSTRACT

Pet owners do not always follow a prescribed course of treatment. This mismatch between what is instructed and what owners do is commonly referred to as “non-compliance” or “non-adherence”.

Failure of pet owners to comply with prescribed worming protocols is one of the main reasons for failing to achieve optimal worm control, with adverse consequences on animal health and welfare. It is these consequences that can potentially compromise the relationship between veterinary professionals and their clients.

Interventions, as they stand, do not effectively enhance compliance because they focus only on encouraging pet owners to follow the prescribed treatment recommendations, indicating other models should be worth considering.

VNs can play a more important role in providing a broader approach to compliance via understanding of the needs, attitudes and social contexts of pet owners, as well as the barriers to complying with worming protocols. Suggestions for enhancing compliance include proper handling of the practice visit, providing ongoing education, providing written instructions and reminders, reviewing of compliance and establishing a relationship with clients that inspires trust.

In this article, the author discusses the reasons for poor compliance and proposes innovative solutions for improving it.

The burden of parasitic helminths (commonly known as worms) has adverse consequences on animal health and welfare, as well as economic implications.

Also, multi-parasitism (the co-existence of more than one parasitic infection – for example, worms,

fleas and ticks) in one animal occurs frequently and represents a challenge to existing models of parasite control. Additionally, some worms can cause significant public health risks. For example, clinical cases of ocular and visceral larval migrans, caused by infection of the canine roundworm *Toxocara canis*, have been reported in humans. Also, *Toxocara* infection has been linked to compromised lung function and cognitive impairments – especially in children (Ellis et al, 1986).

Surely, these facts indicate inadequate worming due to non-adherence can result in poor clinical outcome, lower quality of life, increased treatment costs and potential public health impact. Therefore, it is essential to ensure owners understand how worms cause disease in pets and humans and the need to control them with appropriate anthelmintic products. Owners also need to know failure to complete courses of treatment is a major cause of the increase in drug-resistant parasites.

A different approach

However, it is unfair to interpret non-compliance as a problem located in irrational pet owner beliefs, lack of knowledge or inadequate understanding. Therefore, it should not always be assumed any deviation from the intended worming plan is the pet owner's problem.



An integrated approach to enhance pet owner compliance and the tangible impact of compliance on nurses, clients, the veterinary practice and, ultimately, animal care.

Compliance-related factors are complex and multifaceted – the system of health care at home, the providers of this, animal-related factors, the nature of parasitic infection and the worming regimen can all influence pet owner compliance.

What is needed, therefore, is a paradigm shift in the approach to compliance to get owners informed of what they need to do to ensure their pets' health and welfare. However, client education alone is not the answer – a corresponding attitudinal change of pet owners and veterinary professionals to worming models needs to happen.

Barriers to compliance

Even though most pet owners know their dogs and cats should be dewormed, they still don't do it

– intentionally or unintentionally. Various factors can lead to non-compliance, such as:

- communication issues
- language barriers
- limited understanding
- forgetting
- misbeliefs about the medication's benefits due to the potential to cause adverse effects or lack of efficacy
- cost of the medication and consultation fee

Understanding the reasons for non-compliance is the base for devising new strategies to achieve positive change in the attitude of pet owners towards compliance with worm control.

Nurses can help enhance pet owner compliance

VNs who advise pet owners as they visit the practice can be influential in encouraging them to follow prescribed treatment. Many VNs have trusting relationships with their clients; building on this can promote communication and confidence of pet owners in the recommendations provided to them. Therefore, VNs are ideally placed to proactively convince owners of the importance of compliance to achieve an optimal treatment outcome.

Describing to pet owners the different types of worms pets are at risk from and the harm they can cause will certainly help VNs explain why buying a dewormer is money well spent.

When choosing appropriate worming treatments, meanwhile, a risk-benefit analysis based on the interactions between the pet, the parasite, the owner, the environment pets are living in, and each individual animal, should be taken into account. This analysis will determine the best choice of anthelmintic product, spectrum of anthelmintic activity and frequency of administration.

Other factors should also be considered when devising a worming programme, including:

- animal's age
- health status
- lifestyle
- nutrition
- reproductive status
- travel history (domestic and international)

In the following sections, the author discusses some approaches that could prove helpful in enhancing clients' compliance if integrated into practices' worming framework.

Client education

Because information provided to pet owners can have a significant impact on the success of treatment, VNs are perfectly placed to promote good worming practice to pet owners. They can, with proper training, provide a good, informative service and, ultimately, become the initial port of call for worming advice.

VNs should impress on pet owners the risk of leaving worms untreated. Reinforcing the importance of worming can be done using relevant facts to help explain the key points and ensure pet owners recognise the importance of following a worming regime.

For example, VNs could ask owners something like: “Did you know soil contamination with *Toxocara* eggs can exceed 31 eggs/100g of sand?” (Uga et al, 1993), or share statements such as: “*Toxocara* eggs have been found in 12% of faecal samples, 14% of public sandpits and 2% of the sandpits of kindergartens” (Vanhee et al, 2016).

VNs normally avoid upsetting clients, but this should not be done at the expense of warning them of the potentially zoonotic risk of some worms. It can be useful to involve more than one family member in this discussion when possible.

There has long been debate about whether there is a need to deworm all dogs and cats as they shed *Toxocara* eggs intermittently most of their life, while dogs and cats engaging in hunting behaviour of scavenging prey items have an even higher risk of shedding. Thus, these pets need worming monthly to reduce egg shedding as much as possible. Reduction in *Toxocara* egg production in dogs dewormed four times a year has been reported (Nijssse et al, 2015), so this could be a minimum recommendation for all other dogs and cats.

Worming alone is not enough, however. There also needs to be good personal hygiene – especially for children in contact with pets. People should be advised to wash hands after handling pets, avoid face licking and keep nails short. Also, children’s play areas should be well fenced off and sand pits covered.

Better pet owner communication

Good communication is the foundation of any successful relationship with pet owners (Gower, 2014). Various communication channels can be established to:

- emphasise the importance of worming
- convey key information
- offer a tailored worming protocol that suits the needs of the pet and its owners
- help clients remember appointments and medication

Oral messages should be reinforced with written (for example, printed instructions with illustrations) or other methods of communication, such as emails, telephone calls, texts or apps (Gerrard et al,

2012; 2013). These methods can significantly improve communication between VNs and pet owners.

Text messaging, meanwhile, is a cost-effective way to deliver short, succinct information or reminders to pet owners (for example, “the worming time”) and, because it is automated, requires no extra effort from the VN.

Developing pet owner partnerships

The likelihood of clients complying with your recommendation is high when the client is properly educated and well-informed. Equally important, however, is pet owner satisfaction will increase if he or she feels veterinary professionals value his or her opinions.

I cannot overemphasise the importance of engaging owners in the decision-making process about the health of their pets. Yes, not all pet owners will be interested in doing so, but the VN should at least gauge the extent to which clients are willing to take part in decisions related to worming of their pets.

Pet owner interactions should not be viewed simply as opportunities to reinforce instructions around treatment – it should be seen as an opportunity where the opinion of the owner and the nurse can be combined to arrive at a mutually agreed worm management programme.

Adopting a pet owner-centred approach

Ensuring a practice worming protocol is successful requires innovation and perseverance. A change is needed where VNs are encouraged to adopt a pet owner-centred approach, and this involves transferring power and authority away from veterinary professionals and towards owners, implying an advocacy role for nurses.

This model requires VNs listen to owners and accept them as experts in the lives of their pets, meaning, as pet owner advocates, VNs need to abandon complete monopoly over the knowledge base and acknowledge the importance of pet owner self-knowledge and experience. Working with pet owners this way allows them greater participation and leads to a more favourable impression of the nurse as someone they can trust to work with.

Know your clients’ concerns, beliefs and social context

Being able to read a client is key to deploying an effective worming programme. Owners rely on vets to provide optimum health care for their pets and advise on the prevention of transmission of zoonotic disease agents from pets to family members.

However, some practitioners may be reluctant to mention the human health risk of some worms, fearing this may raise some client concerns and possibly affect the owner-pet bond. Although these concerns are relevant, this does not seem to be the case because pet ownership is escalating (American Pet Products Association, 2012; The European Pet Food Industry Federation, 2014).

With practice, VNs will be able to gauge their clients' perception of zoonotic diseases and communicate accordingly. For example, VNs should ensure pet owners understand the recommended instructions and be able to repeat them in their own words. This is even more important for pet owners with low literacy skills, elderly pet owners or pet owners with special needs (having hearing difficulties, visual impairments or mobility problems).

Also, VNs and pet owners come from various cultural backgrounds and have their own perceptions of animal care, which, along with the language barrier, may influence their interactions and compliance to worming protocols.

Because of the increasing ethnic diversity among pet owners, cultural competency should be an essential skill for nurses and more efforts should be directed toward introducing more culturally relevant animal health care to enrich the veterinary nurse-pet owner relationship, improving client adherence and, subsequently, treatment outcomes.

Measuring compliance rate



VNs who advise pet owners as they visit the practice can be influential in encouraging them to follow prescribed treatment.

Compliance can be measured by non-objective methods, such as asking pet owners if they have administered the prescribed medication to their pet or by assessing treatment outcome. However, these methods are fraught with problems, as owners might not admit non-compliance, forget whether they have complied, or give the correct medication, but on the wrong schedule.

Not all clients will willingly impart details of when they last wormed their pets, either, and some clients may be embarrassed to admit they have lapsed with treatments. This is where clever

questioning techniques can be useful, allowing the VN to establish a dialogue. For instance: “Good to see you today, Mr John. When was the last time you dewormed Buddy?” Based on the response, the VN can use relevant information to support the argument for the importance of worming.

Delivering an evidence-based service

For VNs to speak knowledgeably and in lay terminology to clients about strategic worming programmes, they must first have knowledge of:

- worm life cycles
- mode of infection
- how to decrease exposure
- diagnostic testing
- consequences of infection
- potential human health risk

VNs need to be empowered with regular updates on the latest developments in strategic worming guidelines. By offering a comprehensive training programme for VNs – including formal teaching – they will gain confidence dealing with clients, allowing them to easily address questions raised by clients about worming.

If worming advice is based on scientific evidence it will benefit the pet, it is sensible to assume pet owners will follow this advice. Therefore, we need to have evidence-based practice and to have this we need evidence – VNs can harness their hands-on experience and knowledge from research to inform this.

Something else needed is research into reasons for worming non-compliance and to use the generated knowledge to build a solid evidence base to devise better interventions to enhance pet owners’ understanding of, and attitudes towards, compliance.

Conclusion

Non-adherence to medication should not be always considered the pet owner’s problem and veterinary professionals should move away from simply labelling pet owners as “non-compliant”. Instead, they should explore the mechanisms by which owners can be encouraged to become compliant and continue to focus on better interventions to promote compliance and good worming practice.

The shift proposed in this article is for a pet owner-centred approach, in which communication between VNs and pet owners needs to change to offer greater importance to the owner’s point of view, along with good communication and better education.

Taking a more proactive and active role in clients' education can lead to increased success in treating worm infection.

VNs can draw on their hands-on experience, but may also wish to develop academic knowledge about effective communication to achieve better standards in compliance, which will, ultimately, increase job satisfaction, aid client compliance and loyalty, and, in turn, increase wormer sales and profits.

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Further Reading

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