Motivators and barriers for dog and cat owners and veterinary surgeons in the United Kingdom to use preventative medicines

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Abstract

Routine use of preventative medicines is advocated as part of responsible dog and cat ownership. However, it has been suggested that the number of owners in the United Kingdom (UK) using preventative medicines to protect their pets is in decline. The aim of this novel study was to use a qualitative methodology to explore the attitudes of pet owners and veterinary surgeons in the UK to using preventative medicine products in dogs and cats. Preventative medicine was defined as “a drug or any other preparation used to prevent disease, illness or injury.” Semi-structured interviews were conducted by telephone with owners and veterinary surgeons who had recently participated in a preventative healthcare consultation. Thematic analysis of transcribed recordings of these interviews identified four themes. This paper reports the theme related to motivators and barriers.
to using preventative medicines. Owners’ understanding varied widely about the importance of preventative medicines for pets, as did their confidence in the safety of prescription products. A good relationship with their veterinary surgeon or practice, seeing adverts on the television about specific diseases, advice from a breeder and having personally seen infected animals appeared to be motivators for owners to use preventative medicines. Concern about adverse events and uncertainty about the necessity of using preventative medicines were barriers. Owners who trusted their veterinary surgeons to advise them on preventative medicine products described little use of alternative information sources when making preventative medicine choices. However, owners who preferred to do their own research described reading online opinions, particular in relation to the safety of preventative medicines, which they found confusing. In contrast, veterinary surgeons described broad confidence in the safety and efficacy of prescription preventative medicines, and described protection of pet health as a strong motivator for their use. Several expressed some concern about being seen to “sell” products, which may present a barrier to their advocacy. Veterinary surgeons were unsure about owners’ level of understanding of the necessity of preventative medicines, particularly in relation to vaccinations, and few recalled instigating conversations with owners about product safety. Owner uncertainties about preventative medicine products may not be adequately addressed in the consulting room. This first qualitative study to investigate dog and cat preventative medicines globally suggests strategies are needed to increase discussion between pet owners and veterinary surgeons in the UK about the necessity, safety, efficacy and cost of preventative medicines.

Keywords: preventative healthcare; dog; cat; veterinary; consultation; vaccination.

Introduction
Use of vaccines, ecto- and endoparasiticides are widely advocated as part of responsible pet ownership. However, a recent survey conducted on behalf of The People’s Dispensary for Sick Animals (PDSA; 2017) reported use of preventative medicines in the United Kingdom (UK) pet population to be in decline. Concerns about owner adherence to veterinary surgeons’ recommendations on preventative healthcare are not new (Abood, 2007) and criticism has been levelled at veterinary surgeons for not doing enough to promote small animal preventative healthcare (DeHaven, 2014). Strategies proposed to increase awareness and uptake of preventative medicines include educational interventions (Aitken, 2014; DeHaven, 2014) and enhanced reminders for owners and veterinary surgeons (Lefebvre, 2012). More recently pet healthcare plans, which financially package vaccines, parasiticides, free consultations and free reminder alerts for owners, have been proposed as a solution to boost adherence (Ravetz, 2017). The magnitude of the problem suggests the existence of a complex range of motivators and barriers to the use of preventative medicines which have yet to be fully explored.

Research in human healthcare demonstrates that making decisions about medications on behalf of another family member can be challenging and is prone to a wide range of unconscious biases (Greenhalgh, 2017). For example, risk aversion is heightened as individuals may have an increased awareness of the need to justify the acceptability of their decision to others, and emotive stories about adverse events are particularly easy to recall (Greenhalgh et al., 2004). The potential for harm associated with vaccines has been widely discussed in both print and online media in recent years (Betsch et al., 2010), and public concern about vaccination safety remains high in relation to human vaccines (Ames et al., 2017). Similarly, Day (2017) refers to “vaccinophobia” amongst pet owners, which he suggests has also been driven by vocal anti-vaccine groups, particularly on the internet. Primary research to confirm this has yet to be published (Townsend, 2013). However, a growing body of evidence describing the motivators and barriers to use of veterinary preventative medicine products for disease control in farm animal species suggests how risks are perceived can influence
decisions about their use (Garforth et al., 2013; Alarcon et al., 2014; Richens et al., 2015; Brennan et al., 2016; Nijsse et al., 2016; Manyweathers et al., 2017).

Other factors have been suggested. Research from the PSDA (The People’s Dispensary for Sick Animals, 2017) suggests owners grossly underestimate the lifetime costs of dog and cat ownership, and socioeconomic factors have been linked with the disease clusters of parvovirus in Australia (Brady et al., 2012). The effort required to administer treatment of different types may impact how willing owners are to comply with recommendations (Murphy et al., 2013), as might their bond with their pet and their understanding of the need for preventative medicines (Esch et al., 2012). Owners’ understanding of population immunity and the impact of this on their decisions is not known.

Veterinary surgeons should be well placed both to understand, and to teach owners, the importance of preventative medicines and population-level disease control. Whilst small animal vaccination guidelines have recently been updated (Day et al., 2016; Day, 2017), it is not reported how widely these are adopted in the UK or whether they are used as an evidence-base with which to educate owners. The impact of factors such as perceived or known local disease prevalence, and personal experience, on veterinary surgeons’ advocacy for preventative medicine use are also unclear.

The aim of this hypothesis-generating study was to explore the attitudes of dog and cat owners and veterinary surgeons in the United Kingdom to using preventative medicine products in pets. The objective was to perform qualitative interviews with owners and veterinary surgeons to capture a wide range of opinions about preventative medicine use in dogs and cats in the United Kingdom.

**Materials and methods**

During July and August 2016, telephone interviews were conducted with dog and/or cat owners and veterinary surgeons as part of a larger study exploring canine and feline preventative healthcare consultations in the United Kingdom (UK). Ethical approval for this work was granted by the ethics committee at the School of Veterinary Medicine and Science, University of Nottingham. Reporting
follows the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist (Tong et al., 2007).

**Owner recruitment**

Criteria for inclusion of owner interviewees were: a) ownership of one or more cats and/or dogs that, during the preceding three months, had attended a veterinary consultation in the UK for any form of preventative healthcare. Eligible consultation types were: routine vaccination; antibody titre testing; parasite prevention; routine health check; or prevention of season in female dogs; AND b) willingness to be interviewed by telephone about that consultation during the study period.

Recruitment was based on a purposive sampling frame designed by the authors (available on request) which included practice, client and pet variables with the intent of capturing the maximum variation of experience. Recruitment was conducted using: convenience sampling of eligible participants known to the authors; social media posts including on online owner forums asking eligible owners to contact author NR; recruitment of eligible clients by veterinary surgeons in a multi-branch veterinary practice in Scotland; and snowball sampling whereby eligible participants recruit others (Bryman, 2012).

**Veterinary surgeon recruitment**

Inclusion criteria for veterinary surgeon interviewees were: a) veterinary surgeons currently working in primary care practice in the UK; AND b) who currently performed canine and/or feline preventative healthcare consultations; AND c) were available for interview by telephone during the study period. Recruitment was again based on a purposive sampling frame designed by the authors which included veterinary surgeon and practice variables to capture the maximum variation of experience. Recruitment of veterinary surgeons that met inclusion and sampling frame criteria was conducted using: social media posts asking eligible practitioners to contact author NR; directly contacting veterinary practices who had expressed an interest in collaborating with the Centre for
Evidence-based Veterinary Medicine in practice based research; direct email to practices listed in the Royal College of Veterinary Surgeons' list of practices; and snowball sampling.

**Interview procedure**

Owners and veterinary surgeons who expressed an interest in participating were emailed information about the study, and a copy of the consent form. Those willing to be interviewed were asked to supply information relevant to the sampling frame before a date was arranged for the telephone interview. No incentives to participate were provided and repeat interviews were not performed. All interviews were conducted by NR, a veterinary surgeon with qualitative research methods training and extensive research experience in small animal preventative healthcare consultations. At the start of each interview, NR confirmed that the consent form had been read in full and asked whether there were any queries before verbal consent to proceed was granted.

Separate semi-structured interview guides (piloted before use and available in Belshaw et al., 2018) were used for owner and veterinary surgeon interviews. All eligible pets taken for a preventative healthcare consultation during the preceding 3 months were discussed with the owners, and preventative healthcare consultations in general were discussed with veterinary surgeons. Pertinent to this study, owners were asked about why they booked their most recent preventative healthcare consultation, what they thought about preventative medicines and what informed those opinions. Veterinary surgeons were asked why preventative healthcare was important, and why owners might book a preventative healthcare consultation. The number of interviewees recruited was initially estimated, but data saturation, as defined below, was used to define the point at which no additional interviewees were needed.

**Data analysis**

Interviews were recorded using a Dictaphone with a telephone adapter; recordings were professionally transcribed verbatim. Data analysis was performed by ZB, a veterinary surgeon with training and experience in qualitative research methods. Transcripts were read and checked for
accuracy in tandem with the audio recording. Thematic analysis was performed following the six-step plan described by Braun and Clarke (2006). In brief, this involves reading the transcripts, and iteratively coding and analysing the data to identify and report patterns, or themes. Further details of this process are described in Belshaw et al., (2018c). Transcripts were coded using the organisational support of nVivo (nVivo v11, QSR). Themes were identified using both inductive and deductive approaches. Data saturation was defined as the point at which no new themes could be identified when analysing additional transcripts. Statistical analysis was not performed, as is standard for qualitative methodologies (Ziebland and McPherson, 2006; Clarke and Braun, 2013).

Results

Thirty-one interviews were arranged, but two owners were unable to participate due to unforeseen circumstances on the day of the interview. Twenty-nine telephone interviews were completed, 14 with veterinary surgeons and 15 with owners, at which point data saturation had been reached so additional interviewees were not recruited. Full demographic details are described in Belshaw et al. (2018a). The ten female and four male veterinary surgeons had all graduated within the preceding 20 years, were from 12 practices, and ranged widely in seniority. Practice types included both corporate and independent, small animal only and mixed, with single and multiple branches, and were located in multiple geographic areas in England, Scotland and Wales. The 15 female pet owners between them owned 19 dogs and three cats which were between six months and 11 years old. The dogs included pets, agility dogs and working gun dogs; the cats lived both indoors and outdoors. Interviews ranged from 15 to 59 minutes in length (median 28 minutes; interquartile range 21–40.5 minutes). Almost all owners described a vaccination consultation as their most recent preventative healthcare experience. Thematic analysis deductively identified four key themes, each of which has been reported separately. These described: expectations of owners and veterinary surgeons about what would happen during preventative healthcare consultations (Belshaw et al., 2018a); the role of veterinary nurses and receptionists in preventative healthcare (Belshaw et al., 2018b); and the
importance of the length of preventative healthcare consultations (Belshaw et al., 2018c). Here, we report the theme “motivators and barriers to using preventative medicines”. Exemplary quotations are included to illustrate this theme.

Owners

Owners described different justifications for using, or not using, preventative medicine products. The focus for most decisions was their individual pet; very few discussed preventative medicines in the context of either human health or at a population level. The majority of owners reported using preventative medicine products as advised by their veterinary surgeon; some directly linked this with being a responsible owner. Several discussed the convenience of the pet healthcare plan on which they were enrolled, particularly in relation to text message reminders they received. A good relationship with their veterinary surgeon or practice, seeing adverts on the television about specific diseases, advice from a breeder and having personally seen infected animals appeared to be motivators to use preventative medicine products.

It is important to us. I want to make sure that he has everything he needs to have. Make sure that he doesn’t develop anything that will be painful or uncomfortable for him. [Owner 2]

We’ve got to take them ‘cos we’ve had another cat in the village with cat flu so obviously I make sure they get their injections.... [Owner 9]

Most owners who trusted their veterinary surgeon’s advice on preventative medicines described little personal involvement in the decision-making process about their pet’s treatment schedule. Typically, these owners described trusting professional advice as the best way to keep their pet safe and healthy; some acknowledged that they did not personally have the knowledge to make
preventative medicine decisions on behalf of their pet. Perhaps as a consequence of this level of trust, the awareness of many about what preventative medicine products did, why their pet might need them, or which alternatives were available, was poor. Owners who described having some medical or pet health training were the exception to this.

I've just taken it that when a vet’s advised me to vaccinate my cat, then that’s the way forward. They didn’t actually detail what the vaccinations were for. And I realised after seeing your email, actually I haven’t... I don’t even know what my cat's been injected with, or what it's for. Yes, you just take it that they just say, yes, your cat needs vaccination, then you just do it, don’t you? [Owner 4]

I've studied dog care I do know all the different treatments. I keep up to date because I know I should keep up to date but I have seen what the diseases can do so I probably am a bit more aware than others why they vaccinate their dogs. [Owner 14]

Interestingly, another group of owners perceived that doing their own research into preventative medicine products was important, with some describing this as responsible ownership. Broadly, these owners appeared to be somewhat less trusting of the mainstream veterinary profession. Some conflated veterinary surgeons’ promotion of preventative medicine products with a financial motivation and several expressed concerns that veterinary surgeons were advocating unnecessary treatments. One reported seeking a veterinary surgeon who they felt identified with their concerns about the safety of veterinary prescription medications; others continued to visit the same veterinary surgeon but expressed uncertainty about the validity of the information they had received.
And I've had an argument with vets, but the vet that we’re with now, she’s a homeopathic vet as well. And there’s a lot of alternatives and stuff, so that’s how we got into titre testing... [Owner 3]

It all comes down to... there’s two things that I think it comes down to. One is the healthcare of the dog. Are you causing any harm by doing this vaccination when you don’t need to? Erm, secondly, how much money are people making from it? You know. Does it actually cost thirty, forty pound or is there a two hundred per cent profit made on vaccinations? [Owner 7]

The majority of owners who described using alternative information sources appeared concerned that the preventative treatment might pose a threat to their pets’ health. Several cited Facebook forums as their main source of information about product necessity, efficacy and safety. However, almost all found it difficult to obtain online information about preventative medicine products that they thought to be reliable, and expressed confusion at the contrasting viewpoints they encountered. Rarely, concerns were expressed in relation to a specific product or to individual pet-specific factors, but more commonly owners talked broadly about the overuse of “chemicals” or drug safety in general. Very few discussed any aspect of the likelihood of their pet becoming infected, or the consequences of infection, when discussing decisions about whether or not to use preventative medicine products.

There’s a lot of things that I’m hearing at the moment about Frontline. You know that Frontline’s no longer working. Some people are, you know, okay with it. And it’s more Advocate or it’s another one or it’s another one... And I don’t know what to believe or what not to believe. [Owner 7]
If you read... you can read up scare stories on the internet all the time. So you can hear all the benefits, or you can read about all the benefits of getting them vaccinated, and then there's the other side where they argue about why you shouldn't get him vaccinated. [Owner 2]

Rarely, owners’ level of concern about the risk of harm was sufficient to prevent them from ever using either specific products or whole categories of preventative medicines. Only one described routinely antibody titre testing rather than vaccinating; a few were unsure what this involved. More commonly, they described adopting strategies that they felt would minimise the risk of treatments about which they had safety concerns, such as reducing the frequency of worming or flea treatment or asking their veterinary surgeon to change the injection site of a vaccine. The source recommending these actions was not clear, but strategies described were similar between owners. Occasionally, owners’ concerns were over-ridden by a necessity to access services such as kennels or dog sitters which required proof of vaccination.

And I don’t actually flea treat them, like they say, every month or so because to me it’s just the least amount of chemicals and stuff that you’re putting into them the better. [Owner 15]

I don’t like adding a lot of chemicals to them. You know, er, they go to kennels now and again so they’ve got to be vaccinated because of that. So that’s why I do it.... I think I would...erm, I mean, I’ve considered titre testing but kennels don’t tend to accept that as reasonable or don’t seem to so that’s another reason....” [Owner 8]

Few owners discussed concerns about product efficacy. Again the internet appeared to be the main source of this information, though a few cited personal experience with perceived poorly effective products. Some described confusion arising from reading conflicting opinions online. Interestingly, very few owners said they had discussed any of their concerns with a veterinary surgeon, though
several thought it might be useful. Barriers to asking the veterinary surgeon for more information were not specifically explored but those volunteered included time pressures and not wanting to sound stupid.

I had kennel cough given to my dogs once and two weeks later we were at a show and all the dogs got kennel coughs and my dogs got kennel cough even thought they’d just been vaccinated. The vet said ‘Oh, you’ve found a different strain’ I said ‘Well, there’s no point in getting it then. There’s no point in me paying money when there’s so many strains out there they’ll just end up getting it anyway’. So I would never do kennel cough again. [Owner 14]

Because people aren’t as confident and a lot of people will go away and think ‘Ah, I should have asked that question but it sounds really silly’ and just having that kind of anxiety and thinking I’ll look stupid if I ask this. [Owner 12]

Veterinary surgeons

Veterinary surgeons who gave specific justifications for promoting preventative medicines described protecting pets from disease as a strong personal motivator. Like the owners, necessity was typically discussed at the individual patient rather than a population health level. Very rarely, veterinary surgeons identified protecting owners from infection to be their main motivation for recommending vaccination. Fleas, ticks, lungworm, parvovirus and leptospirosis were the preventable diseases which most veterinary surgeons recalled having treated during their time in practice; this direct experience appeared to be important in their justification to recommend products to prevent these diseases. Benefits of preventing diseases such as distemper, which most veterinary surgeons had never seen, were perhaps less clear and so harder to justify.

Five years ago we had dogs dying left right and centre from lungworm so we’re massively pro-Advocate, pro-Milbemax and I always try and mention it. [Veterinary surgeon 3]
Plenty of people know about parvovirus, they know about distemper, you know it’s almost been 30 years and I have never seen one. It’s on the way back apparently, but it’s extremely rare. Leptospirosis is of course the iceberg disease, to a large extent. [Veterinary surgeon 8]

In contrast to the owners, none of the veterinary surgeons expressed any strong personal concern about the safety of preventative medicine products that they sold, though one alluded to a concern about over-vaccination. Several identified that the flea, worm and tick treatments they stocked were safer than products available from other retailers of these types of products. Most also appeared confident that their products were effective, and that this efficacy was greater than that of competitor products sold by non-veterinary outlets.

They know there are arguments about whether they need boosting and I am glad that we’ve changed to the WSAVA guidelines where you do less, you know the smaller vaccinations yearly, not smaller but different ones. I love that new protocol because you know that you are not overdoing it. [Veterinary surgeon 14]

We see so many flea infestations and worm problems from animals that have had all their wormers from a pet shop and we try and encourage them to get something that is actually maybe a wee bit more expensive but actually will work and that we seem to have better success with. [Veterinary surgeon 12]

Veterinary surgeons were unsure about owners’ level of understanding of the necessity of preventative medicines, particularly in relation to vaccinations. Several considered that the switch to less frequent core vaccination was positive for some owners. Reminders, habit, trust in veterinary surgeons, drug company adverts, a sense of responsibility and the need to put pets into boarding
facilities were thought by the veterinary surgeons to be more powerful motivators for owners to use preventative medicine products than any clear understanding of their necessity to the pet's health.

It’s really difficult to say isn’t it? I think a lot of them do it because they know it’s what they should do but they don’t necessarily understand why because we also do a rotational vaccine system with adults. They don’t get everything every year but nobody really asks specifically about it, what are they getting this year? I think they just bring them in because that’s what they do. [Veterinary surgeon 1]

I usually know when Bayer has done some sort of scare campaign about whatever parasite because they are coming in in a panic whether they knew…. They’re like ‘I saw about this, do I have to care?’ [Veterinary surgeon 9]

Interestingly, most veterinary surgeons reflected that they did not instigate discussion with owners about the necessity of preventative medicines after the initial puppy or kitten vaccinations or once they were on a pet healthcare plan. Time pressure, and a tacit assumption that owners would recall explanations about necessity provided many years previously, were reasons given not to go into more detail. None described proactively discussing safety other than the risk of immediate short-term adverse events such as sleepiness or a cutaneous swelling after vaccination. However, there was a general consensus that questions from owners about the safety and necessity of vaccination were increasing, particularly amongst owners of older dogs, and that the source of these questions was usually information read on the internet.

I give them their vaccination and say they might be a bit quiet for 24 to 48 hours afterwards, you may feel probably a lump but that’s all perfectly normal but if you have got any concerns, contact the clinic. [Veterinary surgeon 10]
I’ve had a few people recently kind of bringing up... obviously there has been a lot of stuff on Facebook, and other sort of social media sites and in the news about vaccinations and the whole kind of lepto, you know, lepto things. People do bring up that. [Veterinary surgeon 6]

The relationship between preventative healthcare and profit was a barrier to some veterinary surgeons actively promoting preventative medicines. Whilst a few identified preventative medicines as a legitimate and important source of practice revenue, not all were comfortable with this, particularly if they were not completely sure themselves of their benefits to that owner’s pet.

Several expressed concern that owners associated “selling” preventative medicines with a profit-making agenda, and felt that these owners might trust them less in general if they spent a long time on a sales pitch. Pet healthcare plans appeared to be a major advantage to these veterinary surgeons as they needed to “sell” the plan, not the products, and to do that only once.

We really don’t push, we are not a selling practice, and we don’t do the hard sell, do you know what I mean, in any of these consults. I don’t think any of our clients are that sceptical in that way. I think some of my friends who are encouraged to hard sell worm and flea treatments, then I think they find their clients can be a wee bit more sceptical about the whole thing if you know what I mean.... [Veterinary surgeon 12]

So we don’t have any “You must sell so much wormer”, but it’s making a recommendation really and the client can choose to take it or leave it but most of our clients, I think something like 85 or 90 per cent of our active clients are members of the scheme so most of the time it’s just checking they’ve got enough. [Veterinary surgeon 5]

Discussion

This study suggests that owners’ knowledge about the safety and necessity of using preventative medicine products may be poor, and that their trust in, and reliance on, veterinary surgeons to
advise them may vary widely. Veterinary surgeons may be unaware of some owners’ degree of
concern about product safety, and appear not to routinely discuss the importance of preventative
medicine products during consultations, perhaps due to concerns about being seen to be profiting
from sales. This mismatch between owners and veterinary surgeons may have a detrimental impact
on delivery of preventative medicines, and the importance of good two-way communication is
evident. Poor communication may mean that the internet becomes a significant, yet perhaps
unhelpful, information source about preventative medicine products for some owners. Whilst pet
healthcare plans may be promoting preventative medicine product uptake, strategies to increase
discussion between owners and veterinary surgeons about the necessity, safety, efficacy and cost of
preventative medicines may be needed to assuage the fears of some owners about their use.

Both these interviews and those by Christiansen et al. (2016) with owners of ill dogs, identified that
some owners want to be told what to do by a veterinary surgeon, whilst others prefer to take the
lead themselves. Whether the owner trusted the veterinary surgeons’ advice about preventative
medicines appeared particularly important, as it is to mothers of young children making vaccination
decisions (Benin et al., 2006). Given that in both situations people are making decisions on behalf of
others, this should not be surprising but suggests much could be learnt from the medical literature
on surrogate decision makers. Few studies have looked into the basis of trust in medical decision
making and little consideration has been given to the nature of trust in owner-veterinary surgeon
relationships. Cohn (2015) drawing on ethnographic studies of diabetic patients suggests that trust
may be dependent on the specific situation, rather than being associated with an individual clinician.
This was not explored in the current study but provides a fascinating hypothesis for future research.

Risk aversion appeared to be important to these owners, reflecting societal concerns about the
safety of medications (Freer and Godlee, 2017), particularly vaccines (Hobson-West, 2007; Day,
2017). This has been described as the “acceptability risk” heuristic (Greenhalgh et al., 2004) whereby
risks associated with vaccines are less societally acceptable than risks arising from other situations or
behaviours such as injury from horse riding or lung cancer from smoking. Our study adds to a
growing body of evidence that parents of young children (Ames et al., 2017) and owners of dogs
(Belshaw et al., 2016), horses (Goyen et al., 2017; Manyweathers et al., 2017), pigs (Alarcon et al.,
2014) and cattle (Richens et al., 2015) desire more information than is currently being provided by
healthcare professionals about the risks associated with prescription medications. Since these
interviews were reliant on recall, it is not possible to know how much information had been
provided during the consultation. However, the veterinary surgeons interviewed suggested any
discussion about risk during preventative healthcare consultations was brief, perhaps because they
were unaware of the importance of this to owners.

Both owners and veterinary surgeons suggested a link between internet-based information sources
and lack of confidence in the safety of preventative medicines, though a causal relationship cannot
be inferred from these data. Reading the personal experiences of other patients can be helpful to
patients making healthcare decision, but the information shared may not always reflect medical
advice (Entwistle et al., 2011). The impact of peer opinions on the “cultural cognition” of risk
perception in behavioural research (Kahan, 2013) and the strength of emotive stories in human
healthcare (Greenhalgh, 2017) suggest websites, particularly owner forums, could be powerful in
shaping opinions. Interventions appear to be needed to promote discussion in the consulting room
about the risks and benefits of preventative medicines. However, the discrepancy between
veterinary surgeons’ and some owners’ understandings of the risks associated with preventative
medicines was apparently large. Betsch and Sachse (2013) identified that messages saying vaccines
carried “no risk” enhanced rather than reduced fears about their safety, so specifically designed
decision making tools may need to be created (Gorini and Pravettoni, 2011; Stacey et al., 2014).
One in three consultations in UK small animal practice includes preventative healthcare (Robinson et al., 2015) and preventative medicines are reported to be the main source of revenue in UK small animal practice (Ravetz, 2017). Importantly, the current study suggests that aversion to “selling” these products may be an important barrier to these veterinary surgeons promoting their use. The significant impact of clinicians’ beliefs about the value of preventative healthcare interventions on their desire to promote them has been described in human healthcare (Rubio-Valera et al., 2014), and these interviews suggest that veterinary surgeons may struggle to justify the value for money of small animal preventative medicines. This agrees with the findings of Coe et al. (2009) who found Canadian veterinary surgeons were also reluctant to discuss money with clients during appointments. The People’s Dispensary for Sick Animals PAW report (2017) cited cost as a factor in 20% of dog and cat owners not vaccinating their pet, and cost was a significant barrier to Australian horse owners using the Hendra vaccine (Manyweathers et al., 2017). Few owners directly discussed the cost of preventative medicines as a barrier in this study. It is possible that owners did not feel comfortable discussing money during these interviews, or that this is evidence of a positive impact of pet healthcare plans adding value to the cost of preventative medicines. However, it is equally possible that the lack of trust in veterinary surgeons’ advice on preventative medicines described by some owners was directly or indirectly associated with the perception that they derive significant profit from their sales. This warrants further investigation considering the frequency with which preventative healthcare is discussed in consultations.

Both veterinary surgeons and owners suggested a potential relationship between perceived prevalence of disease in their local region and attitudes to using relevant preventative medicines. Population-level data about the prevalence and incidence of dog and cat infectious diseases in the UK are still in short supply, but methods including sentinel practice networks (Radford et al., 2011;
Tulloch et al., 2017) and postal surveys (Kirk et al., 2014) are starting to fill the gaps. In the future, these data could be used to explore the accuracy of peoples’ perceptions of disease prevalence, and whether this correlates with their attitudes to preventative medicines.

Attitudes to small animal preventative medicine products have not previously been explored using a qualitative methodology. Whilst these data should not be seen as representative of all opinions, they provide rich first-step insights into how and why preventative healthcare decisions were made on which future qualitative and quantitative research can be built. Owners and veterinary surgeons who elected to be interviewed may have had particularly strong opinions about preventative healthcare, and owner recruitment through social media may have introduced an element of bias towards the internet as an information source. However, interviewees from a wide range of backgrounds were included, and the opinions gathered were diverse. Despite our best efforts, male owners and cat owners were particularly challenging to recruit. Perhaps as an explanation for this, The Peoples’ Dispensary for Sick Animals PAW report (2017) suggests owners of dogs and cats are more likely to be female, and that cats are substantially less likely to receive preventative medicine products than dogs. It would be interesting future work to compare the attitudes to preventative medicines in owners of dogs, cats and both. In addition, only owners whose pets had recently visited a veterinary practice for a preventative healthcare consultation were eligible for inclusion; different motivators and barriers may exist amongst those who do not regularly visit a veterinary surgery for this purpose. Veterinary surgeons interviewed in this study were from a wide range of UK regions, but owners were predominantly from the north of England. The diversity of pet owner attitudes in different regions of the UK towards any veterinary topic have not been reported so the impact on this study of this geographical clustering is unknown. Whilst we are confident that data saturation was reached with the interviewees recruited, as with any qualitative research, additional interviewees may have expressed alternative views (Ziebland and McPherson, 2006). All researchers
involved in this study were veterinary surgeons which may have led to a degree of bias in the data analysis; researchers from other backgrounds may have identified different themes.

This study highlights the importance of trust in a veterinary surgeons’ advice as a motivator for dog and cat owners to use preventative medicine products, and identifies that risk aversion amongst owners and fear of being seen to make profit amongst veterinary surgeons may be significant barriers to their uptake. These findings have implications for all those involved in the promotion of preventative healthcare. The importance, safety and efficacy of preventative medicines should be proactively discussed in the consulting room in a way directly relevant to each pet-owner combination whenever these treatments are advocated. The possible benefits of novel decision making tools should be investigated. New communication strategies to build trust and to engage with owners about information they have heard from other sources appear necessary. These novel qualitative data can be used to inform such strategies. The impact of pet healthcare plans to promote the value, and value for money, of preventative medicine products should be studied further, particularly in relation to how they affect trust in the veterinary profession.

Conflict of interest

None.

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