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Veterinarians' role for pet owners facing pet loss

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Meinen geliebten Eltern, meinem Ehemann Christoph und meinem Studienkollegen Peter
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Inhaltsverzeichnis

Inhaltsverzeichnis	3
Zusammenfassung	4
Veterinarians` role for pet owners facing pet loss	5
Abstract	6
Introduction	7
Materials and Methods	9
Results	11
Discussion	16
References	21
Tables	23
Danksagung	
Lebenslauf	

Zusammenfassung

Mittels Fragenbogen wurde die Zufriedenheit von Tierbesitzern mit und die Erwartungshaltung gegenüber ihren Tierärzten im Zusammenhang mit einer Euthanasie untersucht. Spezifisch ermittelt wurden Fragen bezüglich Verbleib des Tierkörpers in Abhängigkeit der betroffenen Tierspezies, Geschlecht, Alter und familiärem Umfeld der Besitzer, Wohngegend und Art der besuchten Tierarztpraxis. Die Fragebögen wurden allen Kunden vorgelegt, welche die für die Studie ausgewählten Praxen für eine Konsultation aufsuchten. Von 2350 ausgelegten Fragebögen konnten 2008 analysiert werden. Die Zufriedenheit der Tierbesitzer mit dem Ablauf der Euthanasie war hoch (92%, 1173/1272). Nach einer Euthanasie hatten 14% (170/1250) die Praxis gewechselt, obwohl 75% dieser 170 Tierbesitzer sich zufrieden mit dem Ablauf geäußert hatten. Die meisten Tierbesitzer (88%) erwarteten, dass der Tierarzt mit ihnen über den Verbleib des Tierkörpers spreche, und 38% erwarteten, dass ein solches Gespräch bereits früh im Leben des Tieres erfolge. Für 81% der Tierbesitzer war der Tierarzt die Hauptinformationsquelle für den Verbleib des Körpers und für 33% war er die Kontaktperson, um über den Verlust zu sprechen. Die Region oder Art der Praxis beeinflussten die Antworten nur marginal. Tierärzte spielen nicht nur eine wichtige Rolle als Informant ihrer Kunden rund um das Thema Euthanasie und den Verbleib des Tierkörpers sondern auch bei der Unterstützung während des Trauerprozesses.

Veterinarians' role for pet owners facing pet loss

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Abstract

Owners` satisfaction with and expectations from their veterinarians around euthanasia including questions on disposal of pet remains subject to animal species, clients` gender, age, family conditions, area of living and type of veterinary clinic visited were evaluated by questionnaire. Questionnaires were to be filled out by clients consecutively visiting the individual practices and hospitals for any kind of consultations. Of 2350 questionnaires distributed 2008 were returned and available for analysis. Owner satisfaction concerning the procedure of euthanasia was high (92%, 1173/1272). After the event of euthanasia 14% (170/1250) had changed their veterinarian, even though 75% of these 170 had been satisfied with the procedure. Most owners (88%) expected veterinarians to talk about their pets` final destination, and 38% expected this to happen early in the pet`s life. For 81% clients the veterinarian was the primary informant about the possibilities concerning the disposal of pet remains, and 33% indicated their veterinarian as the contact person to talk about pet loss. Area of living or veterinary specialization only marginally influenced the answers. Veterinarians play an important role to inform their clients concerning questions around euthanasia and the care of pet remains, and to support them during the process of mourning.

Introduction

The role of companion animals in modern society and the relationship between humans and their pets have markedly changed in the last century. As examples, the natural function of dogs for protection and cats for prevention of mouse population overgrowth are no longer the most important reasons for having a pet. Today the pet animal acts, in about 85% of cases, as a fully accepted family member, social partner or sibling and has an important influence on the health of the owner (Brown and Silverman 1999). These animals receive the owners' attention and care and so they fulfil a need of human beings similar to the need of caring for a child (Stephens and Hill 1993). The pet animal has a special role for older, single persons without social contacts in their daily routine. The pet gives their day a structure, may initiate meeting with other pet owners and often helps people coping with a personal loss (Hancock and Yates 1989). Yet another important effect of caring for a pet animal is the health benefit for pet owners. As early as 1980, decreased mortality in pet owners one year after discharge from a coronary care unit were found (Friedman and others 1980). From a multitude of more recent studies in this area one found that people that owned pets for five years or more experienced significantly fewer doctor visits than people without pets (Heady and Grabka 2004, Barker and Wolen 2008).

Together with this greater importance of companion animals, their owners' expectations have grown in respect to the obtained veterinary care. They demand a high technical standard and that every effort should be made for their animal to remain healthy as long as possible (Main 2006). Consequently, one of the most difficult moments for veterinarians today is the time, when a pet's life can no longer be prolonged with an acceptable quality of life. The veterinarians' knowledge and experience in medicine, as well as in animal behaviour, are not only crucial for keeping animals alive but also for making a decision concerning euthanasia, as owners are usually not capable of assessing the quality of life of their pets or to interpret the different signs of pain or depression that the animal may exhibit (Wojciechowska and Hewson 2005). The veterinarian then has the difficult function to explain the animal's poor condition and finally to perform euthanasia which is, for both the owner and the veterinarian, an emotionally difficult situation. Around 50 % of pet owners feel guilty about their decision to choose euthanasia and need the empathic advice and support from their veterinarian (Adams and others 2000). For the acceptance of euthanasia, veterinarians must at the same time be able to communicate as both scientists and supporters of animal welfare (Manette 2004). In fact, the veterinarian has to fulfil in sequence the very different roles of first attempting to save the ill animal, to then convince the client of euthanasia when a severely ill

animal cannot be cured, and thereafter to provide support to the client. Indeed, some owners of a lost pet had commented on this lack of role differentiation as confusing or contradictory (Adams and others 1999).

In view of the strength of bonding between the pet and the owner during life time, death also creates new demands concerning disposal of pet remains . The spectrum of choice today is enormous. Whereas, until recently, simple disposal in a cadaver deposit was the only and usual way, today some owners have more extreme wishes and would consider taxidermy, cryopreservation or preservation of tissue for future cloning. Possibilities in between these extremes are a funeral in a special graveyard or cremation. When choosing cremation, ashes may be left or taken home in an urn. Thus, end-of life communication does not only include the delivery of bad news and euthanasia decision making, but also the discussion of options for the disposal of pet remains (Shaw and Lagoni 2007).

One of the co-authors (ES) of the present study had many contacts with pet owners on a telephone help line in the context of euthanasia, cremation of animals and mourning. These interactions revealed many uncertainties and questions around euthanasia and the remains of the animal's corpse. With this background, the goal of the present study was to evaluate first, how many owners who had experienced a pet loss by euthanasia had been satisfied with the act of euthanasia, what constituted reasons for dissatisfaction and what were the consequences for the client-veterinarian relationship, and second, to evaluate the owners' needs and expectations towards the veterinarian associated with their pet loss as well as end of life assistance. Particularly it was hypothesized that there were differences between rural versus urban clients, clients of specialized hospitals versus generalists' practices, influences of client age and gender, the type of pet animal and the daily time interacting with the animal on the clients' needs and expectations towards the veterinarian associated with euthanasia.

Materials and Methods

Questionnaire and distribution to veterinary clinics

This study was conducted as a questionnaire to be filled out by pet owners during their visit to a veterinary clinic. The complete questionnaire is shown in box 1. The parameters in the questionnaire were chosen based on previous questionnaires on this topic (Martin and others 2004), and on the authors' interaction with clients in clinical practice (PF) or during telephone counselling (ES) of pet owners that had lost a pet. Consecutive clients visiting their veterinarian from April to June 2009 for any kind of consultation were individually asked to participate. Questionnaires were filled out in the waiting room before the scheduled visit and deposited in a closed box to guarantee anonymity.

In total, 2350 questionnaires were produced in order to provide 50 questionnaires per veterinary clinic. The clinics were chosen in the following way. First, a list of all veterinarians registered in the Swiss Veterinary Medical Association was produced. From this list, the 2 university hospitals in Zurich and Berne were directly asked to participate, and, as an exception, to the University of Berne 100 questionnaires were provided, 50 for the German and 50 for the French speaking clients. Then in different geographic areas larger small animal hospitals were identified, and one of these was chosen per area (n=10). Hospitals were defined as veterinary clinics with ≥ 4 veterinarians and 24 hours availability. For distribution of the remaining questionnaires, for each geographic region small animal (n = 24) and mixed veterinarians (n = 10) were chosen from a list in order to have representative numbers of veterinarians in urban, suburban and rural practice areas. Thus, 150 questionnaires were provided to university hospitals, 500 to large private hospitals, 1200 to small animal veterinary practices and 500 to mixed large and small animal practices. Urban was defined as culturally important cities, i.e. state capitals. Suburban was defined as town within 20 miles of a state capital. Rural was defined as small town outside this radius. The target population was every companion animal client visiting one of the clinics in the defined time period, i.e. clients in the individual clinics were not randomly but consecutively chosen (quota sampling). All veterinary clinics were asked about their offering home visits in general or home visits for euthanasia only.

Instructions for the questionnaire

At each veterinary clinic, the questionnaire was provided by the receptionist, and none of the staff members and veterinarians should interact with the clients on that day before the questionnaire had been completed in order not to exert any influence. Furthermore, in order

not hurt any feelings and out of respect for clients who may be in an acute stage of grief, clients that were known to have lost a pet most recently, i.e. within the last 2 weeks, were explicitly not asked to participate. Despite this 2-week window, information about a more recent pet loss was considered important, because answers were expected to be affected by the process of mourning. The surveys were handed out to clients until all 50 surveys were administered.

Statistical analysis

All univariate statistical calculations were performed using non-parametric tests and a commercial program (SPSS^R). The dependent variables were client satisfaction (question, q, 6), wishes around euthanasia (q7), contact persons including the veterinarian in case of pet loss (q8), change of veterinarian after pet loss by euthanasia (q9), thoughts on pet remains during its lifetime (q10), source of information for final destination of pet remains (q11), expectation towards veterinarian in respect to talking about pet remains (q12), and specific questions about pet remains (q13).

Influence of gender, age, personal life situation, species of kept animal, time since pet died, and kind of visited veterinarian, all factors hypothesized to influence thoughts around death and the pet remains, were analyzed with a Chi-Squared-test. For univariable analyses differences were considered statistically significant if p was < 0.05 . Only statistically significant results are reported. In the multivariable analysis a standard forwards search was conducted using logistic regression models (Venables and Ripley 1994). At each stage in this search every independent variable was considered for inclusion or exclusion. The goodness of fit metric used was the usual Akaike Information Criterion (AIC) due to the known issues of multiple-comparison when performing multi-model selection using null hypothesis testing – p values (Burnham and Anderson 2002).

Results

Questionnaire return rate, area of living and clinic type

Of the 2350 questionnaires produced, 2008 (85%) were returned. There was a fairly even distribution in the three demographic areas with 590 clients (29%) visiting a veterinarian in an urban area, 635 clients (32%) in a suburban area, and 783 clients (39%) in a rural area. Of these, 145 persons (7%) visited a university hospital, 437 persons (22%) a small animal hospital, 1040 persons (52%) a small animal practice and 386 persons (19%) a mixed practice. Ten clinics indicated to offer home visits and 25 clinics to offer home visits only for euthanasia.

Questionnaire, Demographic data

From the 2008 persons 1606 were female (80%) and 378 male (19%), 24 persons (1%) did not provide their gender. The age was < 30 years in 313 persons (16%), 30-50 in 917 persons (46%), 50-70 in 664 persons (33%), and >70 in 102 persons (5%); 12 persons (1%) did not answer the question. In respect to family network, 1454 persons (72%) had a partner / spouse, 428 persons (21%) were single, and 91 persons (5%) were widows; 35 persons (2%) did not answer the question. In respect to the number of children, 1181 persons (59%) had none, 613 persons (31%) had 1-2 children, 154 persons (8%) had 3-5 children, and 6 persons (0.3%) had > 5 children; 54 persons (3%) did not answer the question).

Owner-pet-relationship

The dog owners comprised 1286 persons (64%), cat owners were 1117 persons (56%) and 439 persons (22%) owned other domestic animals; 843 (42%) owned more than one species. The daily time investment with their pet was <30 minutes in 117 pet owners (6%), 30 minutes to 1 hour in 302 owners (15%), 1-2 hours in 521 owners (26%), and >2 hours in 1012 owners (50%).

1790 persons (90%) had lost a pet in the past. The most recent pet loss was in the last 2-4 weeks in 76 people (4%), in the last 1-6 months in 176 people (10%), between 6 months and a year in 191 people (11%) and more than a year ago in 1342 people (75%). This question was not answered by 5 participants.

Euthanasia was the way of pet loss in 1272 persons (71%), 471 persons (26%) had lost their pet in another way and 47 persons (3%) did not answer the question.

Owner satisfaction, needs and expectations around euthanasia.

Of 1272 that had lost an animal by euthanasia, 1173 (92%) were completely satisfied with the procedure of the euthanasia. Reasons for dissatisfaction were: inability to be present during euthanasia (n = 28), too cold and quick treatment (n = 22), insufficient information about the procedure (n = 21), inappropriate treatment by staff (n = 8), too detailed explanations (n = 3). Personal wishes in relation to euthanasia were the following: 659 persons (33%) wished that their companion animal could die at home, 663 owners (33%) wanted to personally choose the time of euthanasia, 1403 persons (70%) wanted to be together with their pet during euthanasia, 563 persons (28%) did not want to wait in the waiting room before euthanasia, 309 persons (15%) did not want to pay the bill immediately, 94 persons (5%) wanted to have the possibility to talk to the veterinarian some time after euthanasia.

For the process of mourning, the pet owners indicated the following network: 1567 (88%) could talk about their pet loss inside their family, 1199 (67%) could talk to friends, 610 (34%) had the possibility to talk to their veterinarian, 259 (15%) to the veterinary technician, and 30 (2%) had nobody to talk to.

Thoughts and information on the pet's remains

1356 owners (68%) had experienced some thoughts about disposal of pet remains during the animal's lifetime, 608 persons (30%) had not thought about it during the pet's lifetime and 44 persons (2%) did not answer. Information about the possibilities of the final destination of the pet remains was received from their veterinarian by 1635 persons (81%), from friends by 464 persons (23%), and 551 persons from public media like radio, television, internet, newspaper (20%).

Most owners expected their veterinarian to talk about the final destination of the pet's remains; 755 (38%) expected this already early during its lifetime, 1004 (50%) when the pet is old and/or ill, 159 persons (8%) did not wish to talk about it, and 90 (4%) did not answer the question.

Information on the following issues was important for the owners: 782 (39%) wanted to know exactly what happens with the pet's remains in the official rendering plant, 847 persons (42%) wanted to know how exactly an animal is put to sleep, 248 (12%) were interested on how to manage their own grieving about the pet loss, and 676 (34%) wanted to know, if in case of cremation, they really received the ashes of their own pet.

Influence of owner characteristics

Geographical location

In general, neither living in an urban, suburban or rural area, nor living in the German versus French speaking part had an influence on the answers. However, there were some exceptions. The wish for euthanasia at home significantly increased from living in rural towards urban areas ($p < 0.001$; 216/783=28% rural, 221/635=35% suburban, 222/590=38% urban). Similarly, it became progressively more important to have the opportunity to talk to the veterinarian after euthanasia ($p < 0.001$; 16/783=2% rural, 30/635=5% suburban, 48/590=8% urban). The reluctance to pay the bill immediately increased in the same direction ($p < 0.001$; 90/783=12% rural, 108/635=17% suburban, 111/590=19% urban).

Age of owner

People aged < 30 years more often owned several species of animals (39%) and people > 70 years more often owned a dog only (57%, $p < 0.001$). Basic thoughts on the pet's remains during its lifetime became more important with increasing age groups ($p = 0.002$; age group 1, 63%; 2, 68%; 3, 75%; 4, 67%). Also with increasing age groups, the veterinarian became not only more important as informant about the destination of the pet's remains ($p = 0.007$; 1, 80%; 2, 82%; 3, 87%; 4, 89%) but also as contact person to talk about the pet loss ($p < 0.001$; 1, 26%; 2, 32%; 3, 41%; 4, 43%). For younger clients < 30 years it was more important not to have to wait before euthanasia ($p = 0.005$), to be present during euthanasia ($p = 0.048$), and not to have to pay the bill immediately after euthanasia ($p < 0.001$).

Gender of owner

Whereas male owners preferred to own a dog ($p = 0.006$), female owners had dogs and cats equally frequently. Several wishes concerning the procedure of euthanasia were more important for females. Female owners more often wished for euthanasia to be carried out at home ($p = 0.001$), to be present during euthanasia ($p < 0.001$), no waiting time ($p = 0.011$), and not to pay the bill immediately ($p = 0.038$). Also thoughts about the pet's remains during its lifetime were more important for female owners ($p = 0.002$), however, there was no difference regarding the source of information on the pet's final destination or the role of the veterinarian.

During the process of mourning, female owners more often talked to friends ($p < 0.001$), to the veterinary technician ($p = 0.004$) and with family members ($p = 0.025$) about the pet loss. Females more often expected to be informed early by the veterinarian about the final destination (40% versus 34%) and males more often did not wish to talk about it (15% versus

7%) ($p < 0.001$). Finally, females more often asked about how to manage their grief ($p < 0.001$).

Animal Species

There were some differences depending on the species of animal kept. Dog owners more often visited a university or small animal hospital ($p = 0.014$), they more often wished euthanasia at home ($p = 0.002$), to be present during euthanasia ($p = 0.007$), and they more frequently had thoughts about the pet's remains during its lifetime ($p = 0.001$).

Daily time interaction with animal as marker of owner-pet-relationship

The daily time interacting with a pet, our surrogate marker of human-animal bond, correlated with all specific wishes around the process of euthanasia except the possibility to talk to the veterinarian after euthanasia. Furthermore, the amount of daily interaction correlated with the frequency of questions on how to manage grieving and certainty to receive the ashes of the personal pet, as well as thoughts about the pet's remains during its lifetime (Table 2). Owners spending more time with their pet, more often had changed the veterinarian after euthanasia (Table 1).

Children

The presence of children in the household had significant effects on the results. In a household with 0-2 children the preferred animal was a dog or a cat only, whereas with ≥ 3 children, several species lived together with the family ($p < 0.001$). For pet owners with 0-2 children euthanasia at home and presence during euthanasia was significantly more important than for families with ≥ 3 children. Owners without children had more often thoughts about the pet's remains during its life time, and more often expected the veterinarian to talk to them early on or if the animal was ill / old about the possibilities of the final destination of the pet remains (Table 2).

Type of clinic visited

There were only a few differences in owners' needs and wishes in relation to the type of veterinary clinic. Clients of university or small animal hospitals more often expected information and had thoughts about the final destination of the pet's remains during its lifetime ($p = 0.001$) and had the wish not to pay the bill immediately after euthanasia ($p = 0.005$).

Change of veterinarian after euthanasia

After euthanasia of a pet, 170 of 1250 clients (14%) that had answered this question had changed their veterinarian. Clients that had changed the veterinarian after euthanasia had been significantly less pleased with the process of euthanasia than those who had not ($p < 0.001$). However, despite this statistical difference 128 of these 170 (75%) that had changed the veterinarian actually had indicated satisfaction with the process of euthanasia. On the other hand, 54 of 1080 clients (5%) had not changed veterinarians despite indicating dissatisfaction with the process of euthanasia. Changing veterinarians after the experience of euthanasia did not correlate with client's gender, age, family condition, area of living or veterinary specialization, but with the time owners had spent with their pet ($p = 0.023$).

Time since most recent loss of a pet

None of the answers on satisfaction, change of veterinarian, thoughts on pet remains and final destination were affected by the time span that had elapsed between the moment of euthanasia and completing the questionnaire.

Multivariable analyses

According to AIC the following variables were statistically supported as associated with "satisfaction with euthanasia" ~ no change of clinic + information on final destination by veterinarian + client age 50-70 years + talk about pet loss with veterinarian + how to manage grieving + information on final destination by newspaper (Table 3). Of these only a few gave useful information for veterinary-client-interaction, i.e. clients that received information on final destination by their veterinarian, clients that indicated to have the possibility to talk about their pet loss with their veterinarian, and maybe client age.

According to AIC the following variables were statistically supported as associated with "expect veterinarian to talk about final destination" ~ to be present at euthanasia + thoughts on pet remains during its life + question on what happens with pet remains + talk about pet loss to family members + information on final destination by veterinarian + question, whether really received ashes or original pet after cremation + question on how is an animal put to sleep + number of children in family + how to manage own grieving + female gender + unwilling to pay bill immediately + talk about pet loss to friends (Table 4). Of these, it is self-explanatory that clients with specific questions around euthanasia like to receive information from the veterinarians on their pet's final destination. Clients with many children and males have got lower expectations in this regard.

Discussion

One declared goal of the present study was to learn more about the needs and expectations of owners around the death of their animal, questions on the pet remains, and the role of the veterinarian in this scenario. Of particular interest were demographic differences and differences between rural, suburban and urban clients as well as the type of veterinary clinic visited in order to obtain data for better, i.e. individually guided veterinarian-client-interaction. Indeed, from a statistical point of view there were differences between various groups of clients. However, regarding the clinical relevance these differences were mostly not important respectively do not provide an applicable tool for interacting with the individual client, because there were large overlaps in clients going to clinics of different specialisation, rural versus urban clients, as well as in client gender, age and family conditions. Or in other words, needs and expectations were found to be very similar in the large majority of participants irrespective of the subgroups.

In our study most owners were female, middle aged (30 to 50 years old), and living in a partnership without children. The clients with the highest need of information were female over 70 years of age, which was similar to what Quackenbush and Glickman had described in 1984. Dog owners without children, living in an urban environment more often had special wishes for euthanasia, including euthanasia to be performed at home, and older people visiting more specialized veterinarians were the clients with the highest need of information by the veterinarian.

The finding that close to 60% of all pet owners did not have children was a surprise. Studies in the past had shown that families with children, particularly elementary-school children, were more likely to own pets than those without children, and it was argued that families with (only) children may purchase a dog to compensate as companion (Brown and Silverman 1999). Our finding may indicate that the importance of a pet has shifted from a companion for an (only) child to a companion for adults. This is supported by the statement that the contemporary era is seeing an increase in families who choose not to have children and in individuals who instead embrace deep relationships with the animals they care for (Clements and others 2003). Additional support for the pet's value, respectively our surrogate marker of human-animal bond, was the amount of time pet owners spend every day with their animals, i.e. more than 1 hour by 76% and more than 2 hours by 50%. Overall, there were minimal differences in the answers of clients living in urban versus rural areas, indicating that pets play an equally important role for most pet owners visiting a veterinarian. Also in an earlier

study gender, age and social standing had no influence on the expectations of owners towards the veterinarian (Winius and Endenburg 1996).

Regarding the act of euthanasia, it was interesting to note that most owners, i.e. 92%, were actually pleased with the act. Most important factors for client satisfaction as perceived by clients as well as veterinarians have been reported to be “compassionate and caring attitude of hospital employees”, “option for client to be present during the euthanasia”, “client being informed and prepared” and “privacy” (Martin and others 2004). Similarly, in an interview based study, clients appreciated when veterinarians recognized the significance of the death and validated feelings, concerns and questions. A central issue for clients was the veterinarian’s time: time to discuss death issues, the decision of euthanasia and aftercare options, i.e. to have the possibility to make informed decisions (Adams and others 1999). Likewise, in our survey only 1.7% of the clients complained about cold and quick attitude, 2.8% about not being present during the euthanasia, and 1.5% felt insufficiently informed, indicating that in most instances veterinarians showed appropriate empathy in relation to their specific clientele and were well aware of the importance of this act, which is known to influence the relationship and loyalty to the veterinarian (Harris 2000). In this respect, Tait (2003) had stated that the first consultation, which is usually the first vaccination, and the last consultation in a pet’s life are the most important for keeping a tight bond between veterinarians and clients (Tait 2003). Likewise, only 14% of clients in this study had changed the veterinarian after euthanasia of a pet. Interestingly, dissatisfaction was not the cause of changing the veterinarian in 75% of these. The association of satisfaction and changing the veterinarian seemed particularly contradictory from the point of view tightness of human-animal bond. Even though owners who had spent more times with their pets had more often indicated satisfaction with the process of euthanasia, they more often had changed their veterinarian. Some reasons for change may be that after pet loss, clients did not purchase a new animal or did move houses. However, a potential important reason may be the painful association of the pet loss with a specific place unassociated with the actual satisfying act of euthanasia at this place. The only way to avoid this particular effect would be to conduct the euthanasia at home, which is the second most common wish. Therefore, proactively offering home visits for euthanasia should be a rewarding marketing step in clinics where this is not done.

Another unexpectedly high number was the percentage (68%) of clients that thought about pet loss during the animal’s life. Furthermore nearly 90% expected their veterinarian to talk about the final destination, and 38% actually expected this not only to happen at the end of the pet’s

life, more often females. To anticipate this wish in a client seems very difficult; it certainly seems awkward to talk about death without actual reason. Solutions for this problem may be information material in the waiting room as suggested by the AVMA (2005) with the invitation for interested clients to seek additional advice if so wished, or the episodic organization of client events in the clinic to provide an environment to ask questions and talk about needs.

The study discloses the high importance of veterinarians for the clients also in other aspects of pet loss. Whereas for the process of mourning, expectedly, family and friends were of primary importance, still one third declared the veterinarian as important partner. In comparison, another study identified veterinarians as being the best people to provide support to clients grieving the death of their pet. However, a remarkable variability concerning grief between different pet owners was recognized (Adams and others 1999). The difficulty again is how to recognize which client needs additional support. Besides standardizing procedures around euthanasia, flexibility in approach must be maintained to address the variation across clients, and veterinarians must use their interpersonal skill to uncover each individual client's specific needs and concerns (Adams and others 1999).

Furthermore, to receive information on the possibilities of the pet's final destination, the veterinarians were by far the most important source, and more so for clients of specialist hospitals with few or no children. The veterinarian has to be aware of his important role and has to be able to offer all variations with empathy and profound knowledge.

Study limitations

When interpreting the data of this survey, data should be interpreted in view of some study limitations

- Randomization

Participants were not chosen in a random fashion. Rather, all clients that visited their clinic in a defined time period were asked to fill out the questionnaire. Furthermore, if one client would not have wanted to fill out the questionnaire, this questionnaire would not have dropped out but handed to the next client. This is clearly the explanation for the high return rate (85%).

- Survey on-site before the consultation

Questionnaires were handed out by the personnel of the respective clinics and filled out on-site. If questionnaires had been provided in a neutral environment by a neutral person, this may have resulted in different answers. Specifically, with our approach clients may be more

biased towards a more positive attitude particularly affecting the answers on the satisfaction with the veterinarians around euthanasia, and the importance of veterinarians and technicians for the interactions after euthanasia or as a source of information. However, this would probably not apply to clients who had changed the veterinarian after euthanasia.

A bias may have arisen, because the survey was administered before the consultation, and the type of consultation (simple vaccination, routine wellness visit, geriatric pet, very sick patient) had not been recorded. Administering the survey before the consultation may have met a more benevolent client in most cases, because it may have occupied them during the waiting time, as opposed to prolong the visit if applied afterwards. Moreover, the clients may not have been comfortable to comment about the care they had received in the past when due to have a consultation with potentially the same veterinarian.

The type of consultation may be a bias, because clients with very sick animals may be more stressed which may affect their focus as well as their attitude. As in small animal and mixed animal practices most visits are routine cases as opposed to the usually more sick patients in referral institutions, the kind of consultation may in part explain the different results at the different clinic levels.

- No evaluation of the veterinarians' attitude

The study evolved from the perception that veterinarians are not aware of the clients' expectations around euthanasia and thoughts on final destination of their pet and their specific needs. The study did not interview veterinarians, however, and therefore cannot explore a discrepancy between owner attitude and its perception by the veterinarians. Lastly, it would have been interesting but was omitted to evaluate the acceptance of killing companion animals (Dürr and others 2011, Yeates and Main 2011), and the so-called compassion fatigue, i.e. the stress of dispensing compassion around the euthanasia of a pet (Walsh 2011). The frequent performance of euthanasia had been found to be a primary cause of burnout within small animal practice (Hart and others 1990).

In summary, a high percentage of small animal clients of both gender and all ages, irrespective of veterinary clinic visited have thoughts about death and final destination of their pets long before their pets become old and sick. Veterinarians play a key role in informing and advising clients, as well as accompanying them at the time of euthanasia. By investing some time in these clients the veterinarian has a chance to improve their relationship and enhance loyalty (Harris 2000). When the time comes to make difficult or complex decisions, taking time to explore the emotional terrain surrounding these issues facilitates partnership

and informed decision making (Adams and Frankel 2007). Death, final destination and grief are sensitive topics, and the challenge is to recognize which clients need more and earlier information. At the same time the veterinarians' investments of time, energy and emotions have to be realistic. Veterinarians have to take into account business as well as personal well-being interests in order to cope with the considerable demands of the job and to maintain high quality care over the long term.

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Box 1

1. What species of companion animal do you own? (multiple answers possible) <input type="checkbox"/> dog <input type="checkbox"/> cat <input type="checkbox"/> other (rabbit, guinea pig, hamster, birds, turtle, rat, else)
2. What is your daily time investment for the relationship with your pet? (walking, feeding, playing, caressing) <input type="checkbox"/> < 30 minutes <input type="checkbox"/> 30-60 minutes <input type="checkbox"/> 1-2 hours <input type="checkbox"/> > 2 hours
3. Did you ever lose a pet by death? <input type="checkbox"/> yes <input type="checkbox"/> no
4. If yes in question 3, how long ago? <input type="checkbox"/> < 4 weeks <input type="checkbox"/> last 1-6 months <input type="checkbox"/> last 6-12 month <input type="checkbox"/> > 1 year
5. How did your pet die? Euthanasia <input type="checkbox"/> yes <input type="checkbox"/> no
6. If yes, was the whole procedure performed to your satisfaction? <input type="checkbox"/> yes, I was satisfied with the procedure <input type="checkbox"/> no, I was dissatisfied with the procedure If no, which of the following caused your dissatisfaction? (multiple answers possible) <input type="checkbox"/> I did not feel well informed about the procedure <input type="checkbox"/> The veterinarian's explanations were too detailed <input type="checkbox"/> I couldn't stay with my pet during euthanasia <input type="checkbox"/> I felt treated coldly and quickly by the veterinarian <input type="checkbox"/> I felt inappropriately treated by the staff team <input type="checkbox"/> Other causes:
7. What are your personal wishes around euthanasia? (multiple answers possible) <input type="checkbox"/> It's important for me, that my pet can die in his home environment <input type="checkbox"/> I want to choose the time of euthanasia <input type="checkbox"/> I want to be present at the moment of euthanasia <input type="checkbox"/> I do not want to have to wait in the waiting room <input type="checkbox"/> I do not want to pay the bill immediately <input type="checkbox"/> I want to have the possibility to speak with my veterinarian some time after euthanasia <input type="checkbox"/> Other wishes:
8. With whom can you talk about your pet loss? (multiple answers possible) <input type="checkbox"/> family members <input type="checkbox"/> friends <input type="checkbox"/> veterinarian <input type="checkbox"/> veterinary technician <input type="checkbox"/> nobody <input type="checkbox"/> other:.....
9. Did you ever change your veterinary clinic after euthanasia? <input type="checkbox"/> yes <input type="checkbox"/> no
10. During your pet's lifetime did you ever think about what will happen to its remains after its death? <input type="checkbox"/> yes <input type="checkbox"/> no
11. Who provides the necessary information on the subject of the final destination of your

<p>pet's body? (multiple answers possible)</p> <p><input type="checkbox"/> veterinarian <input type="checkbox"/> friends <input type="checkbox"/> magazine/newspaper <input type="checkbox"/> television/radio <input type="checkbox"/> internet <input type="checkbox"/> other:...</p>
<p>12. Do you expect your veterinarian to talk with you about the possibilities of the final destination of your pet's body?</p> <p><input type="checkbox"/> yes, and it is important for me to receive information early in my pet's life</p> <p><input type="checkbox"/> yes, but only when my pet is old and/or sick</p> <p><input type="checkbox"/> no</p>
<p>13. The following questions I want to be informed about: (multiple answers possible)</p> <p><input type="checkbox"/> What exactly is happening with the pet's remains in the public rendering plant?</p> <p><input type="checkbox"/> How is an animal put to sleep?</p> <p><input type="checkbox"/> How can I manage my own grieving about my lost pet?</p> <p><input type="checkbox"/> Do I really get the original remains of my pet, if I decide for cremation?</p> <p><input type="checkbox"/> Other questions:</p>
<p>14. Are you: <input type="checkbox"/> male <input type="checkbox"/> female</p>
<p>15. Which of the following describes best your life style?</p> <p><input type="checkbox"/> I live in a partnership / marriage <input type="checkbox"/> I am single <input type="checkbox"/> I am widow</p>
<p>16. How many children live in your home?</p> <p><input type="checkbox"/> none <input type="checkbox"/> 1-2 <input type="checkbox"/> 3-5 <input type="checkbox"/> >5</p>
<p>17. What is your age?</p> <p><input type="checkbox"/> <30 <input type="checkbox"/> 30-50 <input type="checkbox"/> 50-70 <input type="checkbox"/> >70</p>

Table 1: Effect of time spent with animal on wishes and concerns around euthanasia, and thoughts on pet remains (N = 1952)

	<½ h °	½-1 h °	1-2 h °	>2 h °	p-value
Euthanasia at home (Q7 ₁)	25/117 =21%	70/302 =23%	155/521 =30%	391/1012 =33%	<0.001
Choose time of euthanasia (Q7 ₂)	29/117 =25%	87/302 =29%	190/521 =37%	337/1012 =33%	0.031
To be present at euthanasia (Q7 ₃)	64/117 =55%	183/302 =61%	343/521 =66%	777/1012 =77%	<0.001
No waiting time (Q7 ₄)	21/117 =18%	71/302 =24%	140/521 =27%	313/1012 =31%	0.004
Not pay at once (Q7 ₅)	9/117 =8%	40/302 =13%	80/521 =15%	170/1012 =17%	0.047
Thoughts on pet remains (Q10)	58/114 =51%	161/292 =55%	344/511 =67%	760/995 =76%	<0.001
How to manage grief (Q13 ₃)	5/117 =4%	27/302 =9%	58/521 =11%	244/1012 =13%	<0.001
Return of ashes of pet (Q13 ₄)	26/117 =22%	71/302 =24%	155/521 =30%	407/1012 =40%	<0.001

°number of participants in each group answering “yes”

Q7, Q10, Q13 refer to question number in box 1

Table 2 Influence of number of children on wishes around euthanasia, thoughts on pet remains and expectations towards veterinarian to talk about final destination (N = 1952)

N of children	0 *	1-2 *	3-5 *	p-value
Euthanasia at home (Q7 ₁)	425/1181 =36%	176/613 =29%	35/154 =6%	<0.001
Present at euthanasia (Q7 ₃)	872/1181 =74%	398/613 =65%	92/154 =60%	<0.001
No waiting time (Q7 ₄)	362/1181 =31%	146/613 =24%	381/154 =25%	0.009
Thoughts on pet remains (Q10)	795/1110 =72%	370/581 =64%	93/143 =65%	0.002
Talk about final destination (Q12)	467/1110 =42%	209/581 =36%	47/143 =35%	<0.001

* number of participants in each group answering “yes”

Q7, Q10, Q12 refer to question number in box 1

Table 3: Multivariable model for “satisfaction with euthanasia”

	estimated mean log odds ratio	p-value
Q9, no change of clinic	1.6302	<0.001
Q11,1, information on final destination by veterinarian	1.2861	<0.001
Q17, age 30-50 years	-0.2889	0.41
Q17, age 50-70 years	0.7857	0.056
Q17, age >70 years	0.1349	0.833
Q8,3, talk about pet loss with veterinarian	0.6640	0.027
Q13,3, how to manage grieving	-0.8480	0.005
Q11,3, information on final destination by newspaper	1.0116	0.044

Q8, Q9, Q11, Q13, Q17 refer to question number in box 1

Table 4: Multivariable model for “owner expecting veterinarian to talk about final destination”

	estimated mean log odds ratio	p-value
Q7,3, to be present at euthanasia	1.01559	<0.001
Q10, no thoughts on pet remains during its life	-1.09101	<0.001
Q13,1 what happens with pet remains	1.15650	<0.001
Q8,1, talk about pet loss to family members	1.15244	<0.001
Q11,1, veterinarian for information about pet remains	0.85881	<0.001
Q13,4, receipt of own pet remains	0.92816	0.0018
Q13,2, how is pet put to sleep	0.80162	0.002
Q16, 1-2 kids	-0.23081	0.34
Q16, 3-5 kids	-1.12383	<0.001
Q16, >5 kids	-0.97643	0.52
Q13,3, how to manage grief	0.99788	0.021
Q14, male	-0.53273	0,027
Q7,5, not pay immediately	-0.88846	0.005
Q8,2, talk to friends	0.53845	0.18

Q7, Q8, Q10, Q13, Q16 refer to question number in box 1

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Lebenslauf

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