

Factors that influence small animal veterinarians' opinions and actions regarding cost of care and effects of economic limitations on patient care and outcome and professional career satisfaction and burnout

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OBJECTIVE

To determine small animal veterinarians' opinions and actions regarding costs of care, obstacles to client education about veterinary care costs, and effects of economic limitations on patient care and outcome and professional career satisfaction and burnout.

DESIGN

Cross-sectional survey.

SAMPLE

1,122 small animal practitioners in the United States and Canada.

PROCEDURES

An online survey was sent to 37,036 veterinarians. Respondents provided information regarding perceived effects of client awareness of costs and pet health insurance coverage on various aspects of practice, the influence of client economic limitations on professional satisfaction and burnout, and proposals for addressing those effects.

RESULTS

The majority (620/1,088 [57%]) of respondents indicated that client economic limitations affected their ability to provide the desired care for their patients on a daily basis. Approximately half (527/1,071 [49%]) of respondents reported a moderate-to-substantial level of burnout, and many cited client economic limitations as an important contributing factor to burnout. Only 31% and 23% of respondents routinely discussed veterinary costs and pet insurance, respectively, with clients before pets became ill, and lack of time was cited as a reason for forgoing those discussions. Most respondents felt improved client awareness of veterinary costs and pet health insurance would positively affect patient care and client and veterinarian satisfaction.

CONCLUSIONS AND CLINICAL RELEVANCE

Results suggested most small animal practitioners believe the veterinary profession needs to take action at educational and organizational levels to inform pet owners and educate and train veterinary students and veterinarians about the costs of veterinary care. (*J Am Vet Med Assoc* 2017;250:785–794)

Veterinarians are often faced with a conflict between a desire to improve animal welfare and relieve suffering and clients' inability to meet the increasing costs of veterinary care. The cost of care is frequently a limiting factor in the quality of medicine a veterinarian can provide, and some reports¹⁻³ suggest that decisions to end an animal's life on the basis of economic factors (ie, economic euthanasia) are becoming increasingly frequent. Consequences of economic limitations may include a decrease in

the number of veterinary visits,^{1,4} decline in quality of patient care, economic euthanasia,^{3,5} moral stress for veterinarians and pet owners,^{6,7} professional income limitations, and reduced career fulfillment for veterinarians.

In a study⁸ of pet owners' perceptions regarding the costs of veterinary care, pet owners indicated that veterinary medicine should not be a profession in which concern about the cost of care takes precedence over concern about the well-being of animals. However, results of that study⁸ indicate that pet owners expect veterinarians to discuss cost of care early during a visit, which suggests that most pet owners are uninformed about veterinary care costs. That supposition is supported by the results of the 2010 Bayer veterinary care usage study,⁹ in which 1,160 of 2,188 (53%) dog and cat owners completely or somewhat

ABBREVIATIONS

CI	Confidence interval
GP	General practitioners and nonspecialists
POR	Prevalence OR
VIN	Veterinary Information Network

agreed with the statement that veterinary costs are much higher than expected. In a 2014 follow-up survey⁴ to the Bayer veterinary care usage study, 649 of 1,100 (59%) dog and cat owners agreed with the statement that costs of routine veterinary visits are higher than expected.

Results of another survey⁸ indicate that pet owners are generally not satisfied with the extent of discussions regarding costs provided by small animal veterinarians, and many stated that they received little or no information about pet health insurance from veterinarians. Results of yet another study¹⁰ indicate that only 58 of 200 (29%) companion animal veterinary visits included a discussion of actual costs, and it was the client who initiated that discussion in 19 (33%) of those 58 visits. Moreover, costs were discussed in only 35 of 84 (42%) visits during which diagnostic testing was recommended.¹⁰

Pet owners' expectations that animal care considerations should come before cost considerations, combined with data that suggest provision of cost information is often lacking or not discussed early during a visit, create a paradox for veterinarians when confronting the topic of costs of care. If too much emphasis is placed on costs and compensation, the veterinarian may be accused of being mercenary (ie, "in it for the money"), which may impair the veterinarian-client relationship. Conversely, if too little information regarding costs and compensation is provided, clients may feel unprepared, uninformed, and vulnerable, which can result in detrimental consequences for animal care and veterinarian well-being. Results of a survey⁷ of 200 veterinary hospitals indicate that discussing and disputing fees is considered the third most common source of stress among veterinarians.

The purpose of the small animal practitioner survey reported here was to assess the frequency with which veterinarians, pet owners, and pets are affected by economic limitations; identify the most commonly used resources to address economic limitations and their effect on pet care; evaluate the extent to which veterinarians inform and educate pet owners regarding costs of care and payment options before patient illness occurs; identify the obstacles to veterinarians educating clients about veterinary care costs; assess veterinarians' opinions regarding the value of addressing veterinary care costs with pet owners; determine how veterinary care costs affect professional medical recommendations and professional burnout or career dissatisfaction; and evaluate differences among veterinarians in terms of addressing veterinary care costs and pet health insurance with pet owners prior to patient illness on the basis of years of practice experience, practice role (owner vs nonowner), veterinarian gender, and practice type (GPs vs specialists). Our hypotheses were that small animal practitioners frequently encounter economic limitations in providing patient care; small animal practitioners seldom broach the topic of costs of care with clients prior to patient illness but

frequently discuss costs associated with preventive health care, such as vaccinations and gonadectomy; small animal practitioners modify their medical advice to clients on the basis of prior declinations of care by those clients because of costs; small animal practitioners with > 15 years of experience discuss care costs with clients more frequently than do less experienced practitioners; the frequency with which veterinary care costs are discussed with clients by small animal practitioners does not differ on the basis of practitioner gender; small animal practitioners who are practice owners are more likely to discuss veterinary care costs with clients than practitioners who are not practice owners; economic limitations to patient care are an important cause of professional dissatisfaction or burnout (which was defined as an emotional state that includes disillusionment with one's career, depression, diminished professional motivation, an increase in resentment toward clients, or a decrease in veterinary-related interests and activities); experienced practitioners have a higher degree of burnout than less experienced practitioners; small animal practitioners believe that client awareness of pet health insurance and veterinary care costs will improve animal care and professional career satisfaction; and specialists' career satisfaction is affected by client economic limitations to a greater extent than that of GPs.

Materials and Methods

Survey design

A survey was developed and administered to a select group of 17 GPs who were VIN members and volunteered to test surveys hosted by VIN. Those practitioners evaluated the survey for grammar, clarity, and completeness, and the survey was revised and refined on the basis of their feedback regarding question validity, choices provided, and typographical errors. This group also provided information regarding survey integrity (ie, whether the survey captured the desired data). The final survey (**Supplemental Appendix S1**, available at <http://avmajournals.avma.org/doi/suppl/10.2460/javma.250.7.785>) consisted of 4 sections and 38 questions and took approximately 20 minutes to complete.

The first section focused on the frequency with which practitioners discuss elective vaccinations, gonadectomy, pet health insurance, and other costs of care with pet owners; the most common and primary reasons that vaccinations, gonadectomy, pet health insurance, and veterinary care costs are not discussed with all pet owners; the frequency with which economic limitations affect quality of patient care; the extent to which practitioners offer ideal treatment options to all clients; and the most common and primary reasons why ideal treatment options are not offered. The second section contained questions regarding the prevalence of professional burnout or career dissatisfaction, the extent to which economic

limitations contribute to professional burnout, the types of policies and most common resources used to deal with economic constraints, the frequency with which pet owners accept those options, and how those options affect the quality of patient care. The third section contained questions regarding the effect of pet owner awareness of veterinary care costs on economic euthanasia, patient care, veterinarian-client relationship, practitioner professional satisfaction, and support for proposals to increase client awareness of veterinary care costs. The final section focused on pet health insurance and contained questions designed to determine the prevalence of clients who have invested in pet health insurance; the effect of pet health insurance on patient care, veterinarian-client relationship, and veterinarian professional satisfaction; and support for various methods to increase pet health insurance coverage.

Survey distribution

The survey was constructed with a proprietary online survey system developed by VIN, and an email containing an invitation to participate in the survey and a link to the survey was distributed to 33,703 VIN members and 3,333 veterinarians who were members of the Humane Society Veterinary Medical Association. Veterinary students and veterinarians who work in industry were excluded from survey distribution. The survey was conducted from September 15, 2014, to October 3, 2014, and participation in the survey was voluntary and anonymous.

Data analysis

Responses to survey questions were tabulated and descriptive statistics (number, percentage, and 95% CI for the percentage) were generated. Responses were compared on the basis of years of experience (< 15 years and ≥ 15 years; the 15-year cutoff was selected because it represents the approximate halfway point in a veterinarian's career), practice role (owner vs nonowner), respondent gender, year of graduation from veterinary school (used to calculate the number of years in practice, which was treated as a continuous variable so trends could be assessed), type of practice (GP or specialist), and extent of self-reported professional burnout. The Wilcoxon-Mann-Whitney test was used for comparisons in which the independent variable was ordinal, and the Spearman correlation coefficient (r_s) was used to quantify the magnitude of the relationship between ordinal variables. Responses such as "no opinion," "I don't know," and "prefer not to answer" (ie, responses that have no ordinal interpretation) were treated as missing data. The POR (95% CI) was used to quantify the magnitude of univariate associations, and χ^2 tests were used to assess the null hypothesis that POR = 1 (ie, odds did not differ between the 2 groups being compared). All analyses were performed with statistical software,^{a,b} and values of $P < 0.05$ were considered significant.

Results

Study participants

Responses were received from 1,267 veterinarians in the United States and Canada. A survey was considered complete if the respondent answered at least 50% of the questions. One hundred forty-five respondents failed to answer at least 50% of the survey questions, and those surveys were excluded from the analysis. Thus, responses from 1,122 veterinarians were evaluated. Not all respondents answered every question; therefore, the number of responses varied among questions. The majority (901/1,122 [80%]) of the respondents reported working in a small animal or mixed practice (**Table 1**). Of the 1,122 respondents, 518 (46%) identified themselves as practice owners and 604 (54%) identified themselves as associate or relief veterinarians (ie, nonowners), and 769 (68.5%) were female and 353 (31.5%) were male. The median number of years in practice for the respondents was 15 (range, 1 to 55 years). Sixty-nine (6%) of the 1,122 respondents reported that they were not responsible for discussing general health care issues such as vaccinations, gonadectomy, veterinary care costs, and payment options with clients, whereas the remaining 1,053 (94%) respondents did discuss those issues with clients, and it was only those respondents that were asked to complete the questions regarding the frequency and nature of those discussions.

Veterinary care costs

The percentages of clients with whom veterinarians discussed the topics of vaccinations (excluding rabies), elective gonadectomy, veterinary care costs for pets prior to illness (potential future veterinary care costs), and pet health insurance were summarized (**Table 2**). In general, veterinarians tended to discuss vaccinations and elective gonadectomy with clients more frequently than potential future veterinary care costs and pet health insurance.

Eight hundred thirty-seven respondents provided reasons for not discussing potential future veterinary care costs with clients, and each respondent could provide more than 1 reason. The most common reasons respondents provided for not discussing poten-

Table 1—Summary of the type of practice for 1,122 veterinarians who responded to a survey of factors that influence small animal veterinarians' opinions and actions regarding cost of care and effects of economic limitations on patient care and outcomes and professional career satisfaction and burnout.

Type of practice	No. of respondents	Percentage (95% CI) of respondents
Small animal or mixed	901	80.3 (77.9–82.6)
Emergency	71	6.3 (5.0–7.9)
Specialist	59	5.3 (4.1–6.7)
Relief	32	2.9 (2.0–4.0)
Feline only	32	2.9 (2.0–4.0)
Mobile	14	1.2 (0.71–2.0)
Shelter medicine	13	1.2 (0.65–1.9)

Table 2—Percentages of clients with whom the veterinarians of Table 1 discussed vaccinations, gonadectomy, costs of care for pets prior to illness (potential future veterinary care costs), and pet health insurance.

Percentage of clients	Vaccinations		Gonadectomy		Potential future veterinary care costs		Pet health insurance	
	No.	Percentage (95% CI)	No.	Percentage (95% CI)	No.	Percentage (95% CI)	No.	Percentage (95% CI)
0	6	0.57 (0.23–1.2)	4	0.38 (0.12–0.91)	84	8.0 (6.5–9.8)	77	7.4 (6.0–9.2)
> 0 to 10	43	4.1 (3.0–5.4)	33	3.1 (2.2–4.3)	326	31.0 (28.3–33.9)	373	36.1 (33.2–39.0)
> 10 to 25	28	2.7 (1.8–3.8)	21	2.0 (1.3–3.0)	190	18.1 (15.8–20.5)	179	17.3 (15.1–19.7)
> 25 to 50	44	4.2 (3.1–5.5)	29	2.8 (1.9–3.9)	122	11.6 (9.8–13.7)	163	15.8 (13.6–18.1)
> 50 to 75	83	7.9 (6.4–9.6)	53	5.0 (3.8–6.5)	94	8.9 (7.3–10.8)	82	7.9 (6.4–9.7)
> 75 to 95	255	24.4 (21.7–26.9)	132	12.5 (10.6–14.6)	71	6.8 (5.4–8.4)	77	7.4 (6.0–9.2)
> 95	594	56.4 (53.4–59.4)	781	74.2 (71.5–76.8)	164	15.6 (13.5–17.9)	83	8.0 (6.5–9.8)

The number of responses varied among questions.
See Table 1 for remainder of key.

tial future veterinary care costs were lack of time (366/837 [43.7%; 95% CI, 40.4% to 47.1%]), belief that the discussion would not change client's behavior or economic preparation (361/837 [43.1%; 95% CI, 39.8% to 46.5%]), and other (265/837 [31.7%; 95% CI, 28.6% to 34.9%]). The most commonly provided reasons within the other category included other ($n = 163$), not relevant to the visit on that day or pet was not ill (36), not my responsibility (22), I forgot or did not consider (16), did not want to pressure client (14), was not asked (13), and limited time with client (8). The comments provided by respondents to the other category reflected the wide nature of important topics for which practitioners feel they must allot time, the ambivalence practitioners have toward the discussion of economic matters, and their lack of confidence that discussion of costs of care for specific diseases will modify client behavior.

The median percentage of clients with whom potential future veterinary care costs were discussed did not differ between practitioners with < 15 years of experience (18%) and practitioners with ≥ 15 years of experience (18%; $P = 0.808$), between practice owners (18%) and nonowners (26%; $P = 0.736$), between male (18%) and female (18%; $P = 0.267$) respondents, or on the basis of number of years since graduation ($r_s = 0.006$; $P = 0.836$).

Pet health insurance

Pet health insurance was discussed at least once with the majority (> 50%) of clients by 242 of 1,034 (23%) respondents, whereas 450 (44%) respondents indicated that they discussed pet health insurance with $\leq 10\%$ of their clients (Table 2). The median percentage of veterinarians who discussed pet health insurance with their clients did not differ significantly between practitioners with < 15 years of experience (18%) and practitioners with ≥ 15 years of experience (18%; $P = 0.354$), between practice owners (18%) and nonowners (26%; $P = 0.736$), or between male (18%) and female (18%; $P = 0.257$) respondents. The most common reason provided for not discussing

pet health insurance with clients was lack of time (210/913 [23%]).

Effect of economic limitations on quality of patient care

Six hundred twenty of 1,088 (57%) respondents reported that owner-divulged economic limitations (by choice or necessity) affected their ability to provide the quality of care they would like for patients in their practice at least once or multiple times per day. Only 8 (0.7%) respondents reported that economic limitations did not affect the quality of care they were able to provide for their patients. The median frequency with which financial limitations affected patient care for specialists (multiple times/d) was significantly ($P = 0.039$) greater than that for GPs (once daily).

Discussion of ideal treatment options

Ideal treatment was defined as "everything you feel is necessary or warranted for the best likely patient outcome." Seven hundred twenty-five of 1,082 (67%) respondents reported that they included the ideal treatment as part of the list of alternatives to all clients, whereas 7 (0.6%) respondents reported that they did not offer ideal treatments to any clients. The percentage of specialists (88%) who provided the ideal treatment option to all clients was significantly ($P < 0.001$) greater than that for GPs (63%; POR, 4.31; 95% CI, 2.022 to 10.350). The most common reason cited by respondents for not offering clients the ideal treatment option was prior experience with expressed refusals or limitations of treatments by that particular client ($n = 304$), followed by ideal treatment option not readily available (ie, equipment or specialist necessary for treatment is too far away [131]), prior experience with expressed refusals or limitations of treatments by other clients (131), and perception or intuitive judgment of a particular client's willingness to accept the ideal treatment (125).

Professional burnout

The perception of professional burnout among small animal practitioners in private practice was

characterized as moderate to substantial by 981 of 1,080 (91%) respondents, and only 6 (0.55%) respondents reported that they did not perceive any professional burnout among their small animal colleagues. Five hundred twenty-seven of 1,071 (49%) respondents characterized their own level of professional burnout as moderate to substantial, whereas only 119 (11%) reported that they did not have any professional burnout. There was a significant ($P < 0.001$) positive correlation ($r_s = 0.475$) between a respondent's characterization of his or her own level of professional burnout and his or her assessment of professional burnout in others. Level of professional burnout was not significantly ($P = 0.391$) correlated ($r_s = 0.026$) with the number of years of practice experience. The number of GPs with moderate to substantial professional burnout relative to the number of GPs with no to minimal professional burnout did not differ significantly ($P = 0.100$) from the corresponding proportion for specialists (POR, 1.58; 95% CI, 0.886 to 2.865).

Seven hundred thirty-eight of 962 (77%) respondents reported that the economic limitations of clients (regardless of whether those limitations were by choice or necessity) were either a moderate or primary contributor to their level of professional burnout, and only 28 (3%) respondents reported that the economic limitations of clients did not contribute to their level of professional burnout. There was a significant ($P < 0.001$) positive correlation ($r_s = 0.230$) between a respondent's reported level of professional burnout and the extent to which he or she perceived that economic limitations of clients contributed to that burnout. Of the 152 respondents who characterized the extent of their professional burnout as substantial, 56 (37%) reported that economic limitations of clients was one of the primary causes of that burnout, whereas only 68 of 425 (16%) respondents who characterized the extent of their professional burnout as minimal cited economic limitations of clients as a contributor to that burnout. The median response for GPs regarding the role of client economic limitations on professional burnout was "one of many equal potential causes of professional burnout," and did not differ significantly ($P = 0.222$) from the corresponding median response for specialists, which was "moderate contribution, but several other things impact burnout more."

Policies used to address client economic limitations

Eight hundred eighty-six of 1,080 (82%) respondents indicated that their hospitals had policies in place to address economic limitations of clients, whereas 194 (18%) indicated that their hospitals did not have any policies in place to address economic limitations of clients. The policies most frequently offered to clients with economic limitations included credit services outside the hospital (556/839 [66.3%; 95% CI, 63.0% to 69.4%]), hospital-based payment plans (148/841 [17.6%; 95% CI, 15.2% to 20.3%]), acceptance of postdated checks (91/835 [10.9%; 95% CI,

8.9% to 13.1%]), and pro bono or discounted services (42/857 [4.9%; 95% CI, 3.6% to 6.5%]); 104 respondents cited other options. Four hundred one of 891 (45%) respondents reported that > 50% of their clients who were offered economic assistance accepted it, whereas 249 of 874 (28.5%) respondents reported that < 25% of their clients who were offered financial assistance accepted it.

Six hundred fifty of 878 (74%) respondents indicated that financial assistance options improved their ability to provide medical care to their patients, whereas 187 of 890 (21%) respondents indicated that they felt financial assistance options had no effect on or reduced their ability to provide medical care to their patients. The median response regarding the role of financial assistance on ability to provide patient care was "increased" for both GPs and specialists ($P = 0.210$).

Perception of the effect of client awareness and adoption of pet health insurance on patient care

Of 1,020 respondents, 771 (76%) estimated that < 5% of their clients had pet health insurance and 50 (5%) estimated that > 10% of their clients had pet health insurance. Most respondents felt that increased adoption of pet health insurance by clients would have at least some positive effect on preventive health care, overall medical care excluding preventive health care, financial stress for clients, economic euthanasia, the veterinarian-client relationship, and their ability to provide the desired medical care for their patients, overall stress level, and overall job satisfaction (**Table 3**). Eight hundred fifty-seven (84%) of 1,024 respondents felt that there should be an increase in efforts to improve client awareness and adoption of pet health insurance. The median proportion of respondents who were supportive of increased client adoption of pet health insurance did not differ significantly ($P = 0.069$) between GPs (83%) and specialists (93%; POR, 2.52; 95% CI, 0.908 to 9.752).

Respondents' opinions regarding various measures intended to increase the number of pets covered by pet health insurance were summarized (**Table 4**). Most respondents supported modifications in veterinary school curricula that include specific training for students on how to educate clients about pet health insurance and professional organizational promotion or endorsement of pet health insurance. The proportion of GPs who opposed legislative mandates for client acquisition of pet health insurance (79%) was significantly ($P = 0.009$) greater than the proportion of specialists who opposed legislative mandates for client acquisition of pet health insurance (63%; POR, 2.21; 95% CI, 1.13 to 4.19).

Perception of the effect of client awareness of veterinary care costs on patient care

Most respondents felt that increased client awareness of potential future veterinary care costs would

Table 3—Perceptions of 1,008 respondents from Table 1 regarding the effect of increased client adoption of pet health insurance on various aspects of small animal practice.

Variable	Extremely positive		Moderately positive		Minimally positive		None		Negative		No opinion	
	No.	% (95% CI)	No.	% (95% CI)	No.	% (95% CI)	No.	% (95% CI)	No.	% (95% CI)	No.	% (95% CI)
Preventive health care	213	21.2 (18.8–23.9)	335	33.3 (30.4–36.2)	286	28.4 (25.7–31.3)	138	13.7 (11.7–15.9)	8	0.79 (0.37–1.50)	27	2.7 (1.8–3.8)
Overall medical care excluding preventive health care	342	33.9 (31.1–36.9)	465	46.1 (43.1–49.3)	149	14.8 (12.7–17.1)	35	3.5 (2.5–4.8)	3	0.30 (0.076–0.800)	14	1.4 (0.79–2.3)
Financial stress for clients	277	27.5 (24.8–34.3)	445	44.1 (41.1–47.3)	180	17.8 (15.6–20.3)	51	5.1 (3.8–6.6)	31	3.1 (2.1–4.3)	25	2.5 (1.7–3.6)
Economic euthanasia	292	29.0 (26.3–31.9)	341	33.9 (31.0–36.8)	187	18.6 (16.3–21.1)	81	8.0 (6.5–9.8)	75	7.5 (6.0–9.2)	31	3.1 (2.10–4.23)
Ability to provide desired medical care	375	37.1 (34.3–40.3)	438	43.4 (40.5–46.6)	136	13.5 (11.5–15.7)	45	4.5 (3.3–5.9)	2	0.20 (0.033–0.655)	14	1.4 (0.79–2.30)
Veterinarian-client relationship	213	21.1 (18.7–23.8)	375	37.2 (34.3–40.3)	200	19.8 (17.5–22.4)	183	18.2 (15.9–20.7)	18	1.8 (1.1–2.8)	20	2.0 (1.3–3.0)
Overall stress for veterinarian	174	17.3 (15.0–19.7)	342	34.0 (31.1–36.9)	232	23.0 (20.5–25.7)	185	18.4 (16.1–20.9)	50	5.0 (3.8–6.4)	24	2.4 (1.6–3.5)
Overall job satisfaction for veterinarian	185	18.4 (16.1–20.9)	334	33.2 (30.3–36.1)	242	24.1 (21.5–26.7)	200	19.9 (17.5–22.4)	19	1.9 (1.2–2.9)	26	2.6 (1.7–3.7)

See Tables 1 and 2 for key.

Table 4—Opinions of respondents from Table 1 regarding various proposals to increase the number of pets covered by health insurance.

Proposal	Support		Neutral		Oppose	
	No.	% (95% CI)	No.	% (95% CI)	No.	% (95% CI)
Modifications in veterinary school curricula that include specific training for students on how to educate clients about pet health insurance	524	62.1 (58.8–65.3)	232	27.5 (24.6–30.6)	88	10.4 (8.5–12.6)
Legislation mandating acquisition of pet health insurance by pet owners	72	8.6 (6.8–10.6)	111	13.2 (11.0–15.6)	658	78.2 (75.4–80.9)
Legislation mandating either acquisition of pet health insurance or the financial means to provide veterinary care as a necessary condition for pet ownership	193	22.9 (20.2–25.9)	121	14.4 (12.1–16.9)	528	62.7 (59.4–65.9)
Professional organizational promotion or endorsement of pet health insurance	611	72.6 (69.5–75.5)	151	17.9 (15.5–20.6)	80	9.5 (7.7–11.6)

See Tables 1 and 2 for key.

have at least some positive effect on preventive health care, overall medical care excluding preventive health care, financial stress for clients, money-saving behavior of clients, the veterinarian-client relationship, and practitioner ability to provide the desired medical care, overall stress level, and overall job satisfaction (Table 5). When “no opinion” responses were excluded from the analysis, the proportion of specialists who felt that client awareness of potential future veterinary care costs would have a positive effect on the money-saving behavior of clients (71%) was significantly ($P = 0.023$) greater than that for GPs (54%; POR, 2.06; 95% CI, 1.06 to 4.22).

Modifications in veterinary school curricula to include specific training for students on how to educate clients about potential future veterinary care costs were supported by 733 of 1,020 (72%) respondents and opposed by 54 (5%) respondents. Development of general guidelines for veterinarians on how to discuss future veterinary care costs with clients during initial wellness visits was supported by 730 of 1,016 (72%) respondents and opposed by 54 (5%) respondents. Five hundred forty-seven of 975 (56%) respondents provided other options for increasing client awareness of potential future veterinary care

costs, the most common of which included the development and implementation of public information campaigns to educate people about veterinary care costs by veterinary organizations ($n = 58$ [11%]), and making it the responsibility of animal shelters, pet stores, breeders, and adoption centers to inform prospective pet owners about veterinary care costs prior to pet acquisition ($n = 42$ [8%]).

Perception of the effect of client awareness of veterinary care costs on economic euthanasia

Of 1,022 respondents, 705 (69%) felt that an increase in client awareness of veterinary care costs would have either no or unknown effect on the frequency of economic euthanasia, whereas 173 (17%) felt that an increase in client awareness of veterinary care costs would decrease the frequency of economic euthanasia. The proportion of specialists who felt that an increase in client awareness of veterinary care costs would decrease the frequency of economic euthanasia (30%) was significantly ($P = 0.007$) greater than the proportion of GPs who felt that an increase in client awareness of veterinary care costs would decrease the frequency of economic euthanasia (16%;

Table 5—Perceptions of 1,020 respondents from Table 1 regarding the effect of increased client awareness of potential future veterinary care costs on various aspects of small animal practice.

Variable	Extremely positive		Moderately positive		Minimally positive		None		Negative		No opinion	
	No.	% (95% CI)	No.	% (95% CI)	No.	% (95% CI)	No.	% (95% CI)	No.	% (95% CI)	No.	% (95% CI)
Preventive health care	179	17.4 (15.2–19.8)	385	37.5 (34.6–40.5)	264	25.7 (23.1–28.5)	130	12.7 (10.7–14.8)	36	3.5 (2.5–4.8)	33	3.2 (2.3–4.4)
Overall medical care excluding preventive health care	111	10.9 (9.1–12.9)	320	31.3 (28.5–34.2)	345	33.8 (30.9–36.7)	152	14.9 (12.8–17.2)	59	5.8 (4.5–7.3)	35	3.4 (2.4–4.7)
Financial stress for clients	78	7.7 (6.1–9.4)	222	21.8 (19.3–24.4)	261	25.6 (23.0–28.4)	185	18.2 (15.9–20.6)	207	20.3 (17.9–22.9)	66	6.5 (5.1–8.1)
Money-saving behavior of clients	61	6.0 (4.6–7.6)	140	13.7 (11.7–15.9)	324	31.8 (29.0–34.7)	400	39.2 (36.3–42.2)	31	3.0 (2.1–4.2)	64	6.3 (4.9–7.9)
Ability to provide desired medical care	122	12.0 (10.1–14.1)	264	25.9 (23.3–28.7)	365	35.9 (33.0–38.8)	187	18.4 (16.1–20.8)	45	4.4 (3.3–5.8)	35	3.4 (2.4–4.7)
Veterinarian-client relationship	122	11.9 (10.1–14.0)	264	25.8 (23.2–28.6)	291	28.5 (25.8–31.3)	223	21.8 (19.4–24.4)	82	8.0 (6.5–9.8)	40	3.9 (2.8–5.2)
Overall stress for veterinarian	85	8.3 (6.8–10.2)	274	26.9 (24.2–29.7)	286	28.0 (25.4–30.9)	240	23.5 (21.0–26.2)	91	8.9 (7.3–10.8)	44	4.3 (3.2–5.7)
Overall job satisfaction for veterinarian	89	8.8 (7.2–10.6)	268	26.4 (23.8–29.2)	286	28.2 (25.5–31.0)	262	25.8 (23.2–28.6)	66	6.5 (5.1–8.2)	43	4.2 (3.1–5.6)

See Tables 1 and 2 for key.

POR, 2.26; 95% CI, 1.14 to 4.28). Conversely, 49% of GPs and 26% of specialists felt that an increase in client awareness of veterinary care costs would have no effect on the frequency of economic euthanasia.

Discussion

Most of the small animal practitioners that responded to the present survey felt that economic limitations of clients (regardless of whether those limitations were by choice or necessity) adversely affected their ability to provide the quality of patient care they would like either on a daily basis or multiple times per day. That finding supported our hypothesis that practitioners frequently encounter economic limitations when treating patients. Additionally, the perception of professional burnout among small animal practitioners in private practice was characterized as moderate to substantial by the majority (981/1,080 [91%]) of survey respondents, and approximately half (527/1,071 [49%]) of the respondents characterized the extent of their own professional burnout as moderate to substantial. Many respondents perceived that the economic limitations of clients were a moderate or primary contributor to professional burnout, and there was a significant positive correlation between a respondent's characterization of his or her own level of professional burnout and the extent to which he or she perceived economic limitations of clients contributing to that burnout. That finding supported our premise that economic limitations of clients are an important cause of professional career dissatisfaction and burnout for veterinarians. Contrary to our hypothesis that veterinary specialists' career satisfaction would be affected by client economic limitations to a greater extent than that of GPs, the results of the present survey indicated that the extent to which career satisfaction was affected by client economic limitations did not differ significantly between specialists and GPs. Also, the extent of professional burnout was not associated with years of practice experience. That was an unexpected finding because we

hypothesized that experienced practitioners were more likely than less experienced practitioners to report career dissatisfaction and professional burnout resulting from the collective constraints associated with client economic limitations. This suggested that small animal practitioners are quickly and frequently frustrated by economic limitations of clients.

In the present survey, 932 of 1,053 (89%) and 966 of 1,053 (92%) respondents routinely discussed vaccinations and gonadectomy, respectively, with over half of their clients, whereas only 329 of 1,051 (31%) and 242 of 1,034 (23%) respondents discussed potential future veterinary care costs and pet health insurance, respectively, with over half of their clients. Similar to human physicians, veterinarians have an ethical and legal duty to provide informed consent to their clients, which includes discussing the risks, benefits, anticipated outcomes, and costs of recommended tests or treatments.¹¹ However, many human physicians do not include cost of care in the decision-making process.¹² Authors of a 2013 article¹³ in the *New England Journal of Medicine* advocate that physicians should incorporate discussions of out-of-pocket costs with patients because financial burdens of medical care can cause more stress than that caused by the adverse effects of many drugs (which are routinely discussed with patients), and that information will allow patients to make a more informed decision about whether to pursue specific interventions and treatments.

Reasons most frequently cited for not discussing potential future veterinary care costs with clients by the respondents of the present survey were lack of time (366/837 [43.7%]) and the belief that it would not change client behavior or financial preparation (361/837 [43.1%]). Interestingly, the proportion of practitioners who routinely discussed future veterinary care costs and pet health insurance with their clients was not associated with years of practice experience. Prior to the survey, we presumed that, compared with novice practitioners, experienced practitioners would be more efficient during time-allotted visits

and thus have more time to discuss nonmedical topics with clients and perhaps be more apt to recognize the benefits that client financial preparation can have on patient outcome. The proportion of practitioners that routinely discussed potential future veterinary care costs and pet health insurance with clients also did not differ significantly on the basis of gender or between practice owners and nonowners. The latter finding was surprising because we expected that, compared with nonowners, practice owners would spend more time discussing costs with clients owing to the fact that they have more at risk financially and have the autonomy to negotiate fees and provide discounts.

Many practitioners who participated in the present survey manifested a rather pessimistic view that educating clients about potential future veterinary care costs was unlikely to modify their economic preparation for such costs. Lack of time was the most commonly cited reason respondents provided for not discussing both economic matters and pet health insurance with clients. Human physicians increasingly cite insufficient time for patients despite a mean appointment duration of 18 to 21 minutes.¹⁴ The mean appointment duration was 17 minutes for 200 companion animal veterinary appointments.¹⁰ In the United Kingdom, the median appointment duration was 10 minutes for first-opinion small animal practice consults, and that duration did not vary between preventive (wellness) and problem visits.¹⁵ Given that the time allotted for each appointment is likely similar for both practice owners and nonowners regardless of level of experience, results of the present survey suggested that discussion of veterinary care costs cannot be accomplished in the time allotted, especially in light of our presumptions that experienced practitioners and practice owners would be more motivated to discuss veterinary care costs with clients and cognizant of the benefits of such discussions, compared with nonowners and novice practitioners. This raises the question of whether all parties (practitioners, clients, and pets) involved in the practice of veterinary medicine would be better served by extending the time allotted for select appointments to ensure that the important issue of veterinary care costs can be properly addressed. That may increase care costs in the short term, but those costs might be offset by the long-term benefits.

Approximately a third of the respondents to the present survey indicated that they do not offer ideal diagnostic or treatment options in the list of alternatives provided to all clients, which supported our hypothesis that small animal practitioners modify their medical advice on the basis of the perceived economic limitations of a particular client. That finding suggested small animal practitioners feel they must occasionally compromise patient treatment when dealing with clients from diverse economic circumstances. This was supported by the fact that the most frequent reason cited by respondents for not providing ideal diagnostic or treatment options to a particular

client was prior experience with expressed refusals or limitations of treatments by that client. Practitioners may find it awkward to offer a particular client services that are routinely declined and might stop offering that client ideal options assuming that his or her economic commitment to pet care will remain static over time.

Respondents to the present survey indicated that credit services separate from the hospital were the most commonly used method to address client economic limitations followed by hospital-based financing or payment plans. Those programs are generally implemented after a patient is ill and have an important role in subsidizing patient care. In fact, 650 of 878 (74%) respondents indicated that financial assistance options improved their ability to provide the medical care they desired for their patients. Given that finding, we were surprised that 194 of 1,080 (18%) respondents indicated that their workplaces had no options available to assist clients with financial limitations. In 2011, the CDC estimated that approximately a third of US families were either struggling to pay medical bills or defaulting on their payments,¹³ and that estimate may be comparable or higher in regard to veterinary bills. Thus, the veterinary profession appears to have an incentive to increase the number of hospitals that offer financial assistance to their clients.

In the present survey, 771 of 1,020 (76%) respondents estimated that < 5% of their clients had pet health insurance, yet most respondents indicated that they felt increased adoption of pet health insurance by clients would be more beneficial to pet health care than increased education of clients about potential future veterinary care costs. Additionally, a large proportion of respondents indicated that an increase in the number of patients with pet health insurance would decrease the frequency of economic euthanasia and have a positive effect on both preventive and nonpreventive patient care, the financial stress of clients, the veterinarian-client relationship, and their ability to provide the desired medical care for their patients, overall stress level, and overall job satisfaction (Table 3).

The majority (857/1,024 [84%]) of respondents to the present survey supported efforts to increase client awareness and adoption of pet health insurance. Most respondents indicated that they would support modifications to veterinary school curricula that include specific training for students on how to educate clients about pet health insurance and the promotion or endorsement of pet health insurance by professional veterinary organizations. Some ethicists suggest that pet ownership should be regulated by licensing to mitigate the negative effect that a lack of economic resources has on the welfare of dogs and cats.^{16,17} Such licensing regulations could mandate the acquisition of pet insurance or proof of economic means as a prerequisite for pet ownership. The majority (528/842 [63%]) of respondents indicated they opposed such regulations.

Approximately three-quarters of respondents to the present survey indicated that they believed an increase in client awareness of potential future veterinary care costs would have a positive effect on both preventive and nonpreventive patient care and their ability to provide the medical care they feel is in the best interest of their patients (Table 5). Seven hundred thirty-three of 1,020 (72%) respondents supported modifications in veterinary school curricula to include specific training for students on how to educate clients about potential future veterinary care costs, and 730 of 1,016 (72%) respondents supported the development of general guidelines for veterinarians on how to discuss future veterinary care costs with clients during initial wellness visits. Collectively, these findings supported our hypotheses that small animal veterinarians believe an increase in client awareness of pet health insurance and potential future veterinary care costs will improve patient care and professional satisfaction. Of 975 respondents, 58 (6%) indicated that leading veterinary organizations should develop and implement public information campaigns that educate people regarding the costs of veterinary medicine, and 42 (4%) expressed that shelters, pet stores, breeders, and adoption centers should educate prospective pet owners about the costs of veterinary care before the acquisition of a pet. One respondent wrote, "It's hard to plan for the unknown" in reference to the difficulty of preparing a client for future veterinary costs.

The proportion of specialists (30%) who felt that an increase in client awareness of potential future veterinary care costs would decrease the frequency of economic euthanasia was significantly greater than the corresponding proportion for GPs (16%). This finding was not particularly surprising given that, in general, the costs of specialist care are greater than the costs of primary care, and the inability of a client to afford specialty care might frequently lead to a decision for economic euthanasia. The proportion of specialists who reported offering ideal medical options to all clients (88%) was significantly greater than the corresponding proportion of GPs (63%). It is possible that clients who seek specialist care are more proactive and inquisitive than the clientele of GPs. Another possibility is that specialists often do not have any prior experience with their clients. Therefore, they have no knowledge regarding a particular client's ability to pay for diagnostic testing and treatment, so they may routinely provide an unbiased and inclusive set of options to all clients. Alternatively, the time allotted for an appointment in general practice is generally shorter than that in specialty practice, which may limit the opportunity for GPs to provide clients with all treatment options.

Although the proportion of specialists who reported that client financial limitations adversely affected their ability to provide patient care was significantly greater than the corresponding proportion for GPs, the proportion of respondents who report-

ed that client financial limitations was a primary contributor to self-reported burnout did not differ significantly between the 2 groups. The majority (981/1,080 [91%]) of respondents (both specialists and GPs) characterized the extent of professional burnout within private small animal practice as moderate to substantial; however, only 527 of 1,071 (49%) respondents characterized their own level of professional burnout as moderate to substantial. The reason for this finding is unclear. It is possible some respondents were aware of a colleague with substantial professional burnout and generalized that to the profession as a whole. The recent increase in coverage of compassion fatigue and burnout among veterinarians in the veterinary-related press may have biased respondents to overestimate burnout within the profession. Alternatively, some respondents may have been unable to recognize or were reluctant to report the exact extent of professional burnout they felt. For veterinarians, professional burnout is likely the result of many factors such as long work hours, frequent exposure to patient death, conflicts between the desires of the client and needs of the patient, high debt-to-income ratios, and the emotional toll of counseling clients through grief. However, we suggest veterinarians have an innate desire and capacity to heal their patients, and to have that desire and capability repeatedly denied on a daily basis because of the economic limitations of clients has to be a primary contributor to professional burnout. Bernard Rollin defines moral stress as a condition in which there is "a sense of discord and tension between what one is, in fact, doing, and one's reason for choosing that field, between what one feels ought to be and what one feels oneself to be, between ideal and reality."¹⁸ For caring practitioners, the moral stress incurred by economic euthanasia may have debilitating consequences such as career disenchantment and premature transition out of clinical practice, demoralization (particularly for idealistic new veterinarians), inurement or desensitization to the plight of patients as an adaptive strategy, and a negative perception of prioritizing economics above patient care.¹⁹ Concerted efforts to educate veterinary students, veterinarians, and pet owners about veterinary care costs are warranted and may help to mitigate the detrimental consequences of the pervasive problem of moral stress.

The present survey was not without limitations. The respondents may not have been representative of all small animal practitioners, particularly given the small number ($n = 59$) of specialists who responded. Also, because the survey was voluntary, respondents might have been biased and overly sensitive to the issues of client economic limitations and veterinary care costs. Respondents were provided with lists of choices that we (the authors) selected on the basis of our own collective knowledge of small animal practice. It is possible that those choices contributed to misclassification bias because they might not have accurately reflected the respondents' preferred an-

swers. In an effort to minimize misclassification bias, we provided an “other” option for many questions, which was open ended and allowed respondents to provide a specific response when they desired. In hindsight, we realized that the questions regarding the reasons why practitioners did not discuss vaccinations or gonadectomy with all clients were designed with the assumption that pets were otherwise healthy and sexually intact, but we failed to make that explicitly clear to respondents. Consequently, “not applicable” was the most common response to those questions, and respondents frequently stated that discussions regarding vaccination and gonadectomy did not apply to sick or neutered animals. Despite describing in detail what we meant by “cost of care discussions before illness occurs,” numerous respondents stated that they were unsure what the question was referring to, and some may have confused that question with providing an estimate for care about to be performed for a sick pet. Sending the survey to only 2 subsets (members of VIN and the Humane Society Veterinary Medical Association) of veterinary professionals might have introduced bias. Also, we did not ask about the frequency with which respondents discussed non-insurance economic policies with clients prior to pet illness. Questions about insurance were treated separately from questions about payment policies, which might have hindered our ability to assess the collective effect of all those policies. Responses to the question regarding the proportion of clients with pet health insurance were based on the respondents’ perceptions rather than an objective measure and might have been inaccurate. The large number of joint categories such as practice experience, gender, and year of graduation precluded subgroup analyses for many of the dependent variables. As more refined hypotheses than those evaluated in the present survey are proposed, future studies can be designed to provide sufficient sample sizes and statistical power to properly investigate them.

Results of the present study confirmed that small animal practitioners are frequently faced with client economic limitations, and those limitations have serious and profound consequences for veterinarians as well as pet owners and patients. It was difficult to reconcile the potential benefits associated with improved client education regarding potential future veterinary care costs and pet health insurance documented here with the small proportion of respondents who reported that they routinely discussed those topics with their clients. It seems reasonable to assume that efforts to alleviate client economic limitations will also be financially beneficial to veterinarians. On the basis of the results of this study, it appears small animal practitioners believe that the veterinary profession needs to take action at both the educational and organizational levels to inform pet owners and educate and train veterinary students and veterinarians about the costs of veterinary care.

Acknowledgments

The authors declare that there were no conflicts of interest.

Footnotes

- a. StatXact, version 10, Cytel Software Corp, Cambridge, Mass.
- b. Stata IC, version 13.1, StataCorp LP, College Station, Tex.

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