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Providing an Information Prescription Veterinary Medical Clinics: A Pilot Study

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Providing an information prescription in veterinary medical clinics: a pilot study

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INTRODUCTION

The number of veterinary visits in the United States has been declining, a trend that began well before recent recession. Despite substantial growth in the US pet population, the decline in annual dog and cat visits to veterinarians in 2011 (190,900), compared with 2001 (194,000), raises numerous concerns about the health care of US pets as well as the economic state of the veterinary profession [1]. One reason suggested for this decline is the increased use of the Internet by pet owners for pet health-related information. A 2011 study by Bayer found that 15% of pet owners reported relying less on their veterinarians with use of the Internet and that 66% of veterinarians agreed with the statement that due to the Internet, sick or injured pets are often brought in 2 or 3 days later than they used to be [1].

While the field of online health for humans has been well researched in recent years, very few other studies to date have investigated pet owners’ use of the Internet for veterinary health information [2–4]. A study by Hofmeister et al. (2008) found veterinary clients ranked the Internet as the third most commonly consulted source of information about pet health, behind general practitioners and veterinary specialists, but ahead of family or friends and other media sources [4]. Another study found that a majority of veterinary clients used the Internet for pet health information, viewing it most often as adding to traditional veterinary care and facilitating positive interactions with their veterinarians. In that study, Kogan found that regardless of age, gender, or education level, most veterinary clients were receptive to several potential online services from a veterinarian, including recommendations for specific websites [2]. Accurate online information is seen as beneficial by many veterinarians. A recent poll of veterinarians found that 67% reported that their clients frequently brought Internet information to their visits, and 39% reported that the availability of online information had improved animal care [5].

Offering recommendations for specific websites provides an opportunity for veterinarians to take a more active role in meeting clients’ information needs by guiding them toward valid, accurate online information rather than reacting to poor or incorrect information that their clients have accessed.

One way to help guide clients to accurate, appropriate pet health information is through information prescriptions. Information prescriptions were first introduced as a means for health care providers to guide patients to reliable, understandable, up-to-date information about a particular disease or condition. Often, an information prescription includes a written referral by a health care provider to a consumer health information resource [6]. Another term for information prescription is information therapy. Both have been used to encourage patients to access evidence-based health information to help with their specific needs and support better informed decision-making.
processes [7]. The practice of guiding veterinary clients to Internet sites is still relatively rare in veterinary medicine. Kogan reported, for example, that nearly half (47.0%) of veterinarians either rarely or never suggest specific websites [8]. These numbers were supported by client reports that indicated only 20.6% received suggestions at least “sometimes,” while 39.2% reported never receiving website suggestions.

Given their training as researchers and educators, librarians are in a unique position to offer veterinarians help in assisting clients with use of the Internet to locate information [2]. This alliance between veterinarians and librarians is a natural extension of the relationship that currently exists between librarians and medical providers for humans. The challenge of incorporating programs like information prescriptions into health care environments includes the need for collaboration among librarians, educators, and health care providers [6]. This is equally true for the field of veterinary medicine. The present study was designed to assess the impact on veterinary clients’ behaviors of receiving an information prescription as part of their veterinary office visits. An all-encompassing veterinary health website was used as the information prescription for the initial research reported here, and clients were surveyed on their reactions to the prescription. A subsequent study will assess specific health information prescriptions, similar to the more traditional definition used in human medicine.

METHODS

Clients of participating veterinary clinics received a letter describing the informed consent process and an information prescription as part of their visits. They were then subsequently surveyed on their reactions and responses to the information prescription.

Participating clinics

Participants were drawn from a random sample of veterinary clinics from a Western US metropolitan area and surrounding cities. A random sample of clinics was created by selecting every fifth small, mixed, or exotic animal practice listed in the local telephone directory. Most small animal veterinarians have at least one staff member (i.e., receptionist) who checks clients in and out and oversees the completion of paperwork. These individuals distributed the consent forms in the current study. Large animal and ambulatory veterinarians often do not have additional support personnel present, and therefore, participating in this study would have created additional effort on their part not directly related to their delivery of veterinary medicine. For this reason, this study focused on small animal veterinarians with the intention of broadening the sample to include large and ambulatory veterinarians in future studies.

All of the target veterinary clinics were asked to participate in this study for 3 months. The total number of clinics contacted for participation was 32, of which 17 agreed to participate. Of these, 2 clinics were subsequently eliminated from the study because they did not actually distribute the information to their clients. Each clinic was asked to distribute 300 cover letters and consent forms to all clients until the forms were depleted (for a total of 4,500 letters and consent forms). Each clinic was contacted monthly to check in, send more forms if needed, and address any problems with the study. Clinics varied greatly in how regularly they distributed the forms. Many clinics did not remember to regularly distribute the forms. Therefore, it was not possible to track the exact percentage of clients who were asked to participate but chose to decline.

All clients visiting participating veterinary clinics were given a cover letter with a consent form explaining that the clinic was assessing several types of services offered to clients and inviting clients to complete a follow-up survey asking them to report on their experiences during their veterinary visits. The consent form asked for the clients’ contact information and their preferences for survey access (mail or email). The clinics mailed all completed consent forms to the researchers every thirty days, at which time the researchers sent out surveys to the participants.

Information prescription

All clients received an information prescription consisting of a handout that included the uniform resource locator (URL) to a general veterinary medicine website <http://www.veterinarypartner.com>, as well as several pointers to help clients make informed choices about where to seek pet health information online (Appendix A, online only). VeterinaryPartner.com is a free website supported by the members of the Veterinary Information Network (VIN). VIN is a membership-only community of veterinarians that does not accept advertising, giving VIN a degree of independence unusual in veterinary medicine. VeterinaryPartner.com is curated by Wendy C. Brooks, educational director of VeterinaryPartner.com. It is the closest thing that veterinary medicine has to MedlinePlus. All articles in VeterinaryPartner.com have an identified author with credentials, a date published, and a date reviewed or revised. Many articles also have photos or illustrations, and links to support groups or more information, either on VeterinaryPartner.com or other trusted sources of information.

Internet tips were also provided to clients as part of the prescription. Tips included paying attention to who wrote the information they were accessing, where it came from, and how current it was. The document also informed clients that health-related websites published by the US government (.gov), nonprofit organizations (.org), or colleges or universities (.edu) are often the most reliable sources of health information because they are usually not supported by for-profit companies, such as drug or insurance companies. Websites with .com addresses usually represent companies that use the web to sell
products or services. VeterinaryPartner.com is an exception because it is sponsored by a nonprofit organization.

Assessment survey

Individuals who completed consent forms received an assessment survey that was created by the authors with input from community veterinarians, pet owners, and veterinary clinicians at Colorado State University. After implementing initial feedback, soliciting further comments, and making additional changes, a finalized version of the survey was constructed for the current study. The survey consisted of demographic questions including: age, education, gender, race or ethnicity, frequency of Internet or web use, and frequency of Internet use for pet health information. Questions pertaining to the animal species and reason for the visit were included, as well as questions on clients’ general experiences with their veterinary visits (i.e., attitudes of staff members and veterinarian, overall rating of experience). The questions pertaining to clients’ general experience at their clinic were added to the survey to provide a tangible benefit to participating clinics and were not intended to be included in the analysis. Questions pertaining to use of the information prescription included the number of times the client had visited the website referral, how helpful they found the site, what their plans were for utilizing the information they found online, and what their feelings were about the information they accessed (Appendix B, online only).

Survey administration

All clients who frequented the participating clinics were asked to participate; no criteria for exclusion from the study were determined; and all those willing to participate in the study were eligible. All clients were offered customary veterinary services with the only addition or change being the distribution of the information prescription. To make this process as easy as possible for participating clinics, the researchers instructed the clinics to distribute the information prescription to all clients, regardless of whether the client agreed to complete the study. Follow-up surveys were only sent to clients who consented to participate in the study. In this way, clinics did not have to track who completed the consent forms, ensuring maximum compliance from participating veterinary clinics.

Clients who agreed to participate in the study (n=781) were mailed a hard copy of the survey (with a self-addressed return envelope) or emailed a link to the online survey (created with SurveyMonkey). Follow up with participants was scheduled to be completed within 4–8 weeks of their veterinary visits. This time window was based on the monthly return of consent forms from each clinic. Upon receiving the consent forms, contact with participants was initiated within 7 days.

This study was approved by the Research Integrity & Compliance Review Office at Colorado State University. Descriptive statistics, chi-square, factor analysis, and a binary general linear model were utilized for data analysis. SPSS, version 20, was used for data analysis, and statistical significance level was set at \( P<0.05 \).

RESULTS

A total of 367 clients returned the surveys, for a return rate of 47.0%. The return rate of electronic surveys was 44.8% (280/625) and 55.8% (87/156) for the paper version of the survey. Clients were asked how long ago they agreed to participate in the study. Options included within the past 2 weeks, within the past month, within the past 2 months, or over 2 months ago. Most clients reported agreeing to participate within the past month (196), followed by within past 2 months (90), within the past 2 weeks (64), and over 2 months ago (11). There was no statistically significant relationship between the amount of time since they agreed to participate and how many times they had accessed the recommended website (\( F=0.310, P=0.818 \)). Therefore, all participants were analyzed together. Questions relating to their veterinary visits that did not pertain to the information prescription (not reported here) were compiled and sent to each individual veterinary clinic as an incentive for participating in the study.

Clients were asked how many times they had accessed the recommended website since their veterinary visits. Although clinics were asked to distribute the information prescription to all clients, as noted earlier, some clinics were inconsistent in distributing the prescription, making it impossible to differentiate between clients who did not remember receiving the information prescription and those who did not actually receive it. Therefore, analysis was conducted only on those clients who reported receiving the information prescription (255 out of 367, 69.5% of total respondents). More than a third of clients (102) who reported receiving (or remembering they received) the information prescription indicated they had accessed the website (at least once (73, 28.6%), twice (11, 4.3%), 3–5 times (7, 2.7%), more than 5 times (1, 0.4%), and at least once but did not recall how many (10, 3.9%)). The remainder (149, 58.4%) reported not visiting the website or did not respond to the question (4, 1.6%). There was no significant difference in the number of times clients reported accessing the website based on gender (\( P=0.75 \)), age (\( P=0.78 \)), or education level (\( P=0.88 \)) or how often they accessed the Internet at home or work (\( P=0.82 \)).

Of the clients who reported accessing the suggested website, 88 (86.3%) reported finding it “very helpful” or “somewhat helpful,” 13 (12.7%) neutral, and only 1 (1.0%) stated it was unhelpful. When asked to indicate how they used or planned to use the information, the clients’ most common response was “improve my understanding of an illness or health condition” (42, 41.2%), followed by “plan to look for more pet health
information” (38 out of 104, 37.3%); “influence future health decisions” (31, 30.4%); “discuss with veterinarian” (26, 25.5%); and “discuss with friends or family” (18, 17.6%).

Client feedback pertaining to the website was positive. Client trust was high: 56.6% strongly agreed and 33.3% somewhat agreed that they trusted the information on the recommended site because it was suggested by their veterinarians. Nearly all clients (87.9%) reported feeling that the information on the site helped them make better decisions for their pets, helped them talk to their veterinarians (89.9%), and added to what their veterinarians had told them (83.5%). The vast majority (92.8%) of clients reporting feeling that receiving a web page recommendation (information prescription) was a good idea, and 87.8% reported they planned to visit the website again in the future (Table 1). Comments from the current survey included individual responses that praised veterinarians for helping clients navigate an often challenging landscape of online pet health information. Examples include: “I am glad to have a trusted site for information in the future”; “I really appreciate a website with info I can trust for veterinary health questions”; “I work as a public librarian. I have used this helpful website, since learning about it, to help others. Thanks!”; and “This is a valuable asset in my dedicated care to both my in-home animals and in my work with feral cats.”

Table 1
Client perceptions of recommended website

<table>
<thead>
<tr>
<th>Information Available</th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neither agree or disagree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I trust the information on the recommended site because my veterinarian recommended it</td>
<td>56 (56.6%)</td>
<td>33 (33.3%)</td>
<td>10 (10.1%)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>A high-quality source of pet health information helps me talk to my veterinarian</td>
<td>65 (65.7%)</td>
<td>24 (24.2%)</td>
<td>10 (10.1%)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>The pet health information I find on the recommended site will help me make better health decisions for my pet</td>
<td>51 (51.5%)</td>
<td>36 (36.4%)</td>
<td>11 (11.1%)</td>
<td>1 (1.0%)</td>
<td>—</td>
</tr>
<tr>
<td>The information I received on the recommended website added to what the veterinarian told me about my pet's condition</td>
<td>43 (44.3%)</td>
<td>38 (39.2%)</td>
<td>16 (16.5%)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>I think receiving a web page recommendation from my veterinarian is a good idea</td>
<td>63 (64.9%)</td>
<td>27 (27.8%)</td>
<td>7 (7.2%)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>I plan to visit this website again in the future</td>
<td>51 (52.0%)</td>
<td>35 (35.7%)</td>
<td>11 (11.2%)</td>
<td>1 (1.0%)</td>
<td>—</td>
</tr>
</tbody>
</table>

The clients who did not access the website were asked to indicate all reasons for their decision. The most common reasons given included desiring to talk to their veterinarian (53, 20.8%), forgetting (49, 19.2%), and not having time (40, 15.7%) (Table 2).

DISCUSSION

The current study investigated the reactions of veterinary clients to receiving an information prescription in addition to the typical services provided by their veterinarians. Results indicated that nearly 40% of veterinary clients who received an information prescription visited the recommended site at least once. Clients’ gender, age, or education level or how often they accessed the Internet at home or work did not impact this behavior. The feedback from clients who accessed the site was overwhelmingly positive, for both the site and their perceptions of their veterinarians for making the recommendation. Most clients found the site helpful and planned to use it to improve their understanding of their pets’ health conditions. Clients felt the site helped them make better health care decisions for their pets and facilitated better communication with their veterinarians. Nearly all the clients reported that they felt a website recommendation by their veterinarians was a good idea and that they planned to revisit the site in the future. When the minority of clients who did not

Table 2
Reasons given for not accessing the recommended website (n=149)

<table>
<thead>
<tr>
<th>Reason</th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would rather talk to my veterinarian</td>
<td>53</td>
<td>(35.6%)</td>
</tr>
<tr>
<td>I forgot</td>
<td>49</td>
<td>(32.9%)</td>
</tr>
<tr>
<td>I have not had time</td>
<td>40</td>
<td>(26.8%)</td>
</tr>
<tr>
<td>It is just not my nature to read about pet medical issues</td>
<td>16</td>
<td>(10.7%)</td>
</tr>
<tr>
<td>I already know enough about the medical aspects of my pet</td>
<td>11</td>
<td>(7.4%)</td>
</tr>
<tr>
<td>I do not have access to a computer and/or the Internet</td>
<td>8</td>
<td>(5.4%)</td>
</tr>
<tr>
<td>No confidence in the Internet as source of health care information</td>
<td>4</td>
<td>(2.7%)</td>
</tr>
<tr>
<td>It is difficult for me, at times, to understand written health information</td>
<td>1</td>
<td>(0.7%)</td>
</tr>
<tr>
<td>I prefer another Internet source for health information</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>I do not use the Internet because it is too complicated</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>It is upsetting to read about an illness that affects my pet</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Note: Clients were allowed to choose more than one reason.
access the site indicated their reasons, the most common reason was the desire to talk to their veterinarian instead, followed by a lack of time or the fact that they did not remember.

These results clearly illustrate the positive reactions reported by pet owners when given an information prescription and validate earlier research indicating that veterinary clients would like to receive guidance in their online searches for pet health information websites.

In addition to information prescriptions, it is likely that veterinary clients will increasingly request online services from their veterinarians. Kogan’s 2010 study found that many veterinary clients if given the opportunity would likely use email to ask their veterinarians short questions (80.8%) or to have more extensive contact with their veterinarians (79.3%). Additionally, the majority of clients (63.0%) reported that they would use the Internet to make appointments online if the service was available [8]. The veterinarians who can respond to these changing needs will be those who succeed in the future. The field of veterinary medicine is experiencing numerous strains, including a decline in office visits and growing financial concerns. In this environment, it is imperative that veterinary medicine be proactive in offering services requested by clients.

As the field of veterinary medicine moves toward client-centered interactions, it is important that veterinarians acknowledge clients’ searches for information and discuss the information offered by their clients as well as guide them to reliable and accurate health websites. To adequately prepare veterinarians to be able to do this, others have recommended that courses on subjects such as health informatics or client informatics be integrated into the veterinary curriculum [9]. Many schools have a general course in practice management or communication in which this topic would be timely and relevant.

The value placed on reliable Internet information by veterinary clients suggests several opportunities for librarians to become more proactive as well. Veterinary librarians, as well as community librarians, can play a supportive and “indirect” role by providing evidence-based, accurate, up-to-date, referenced information to veterinarians and directly to veterinary clients [10]. Community librarians who are willing to partner with veterinarians can be employed in a variety of locations, including public libraries, medical centers, or universities. Reviewing the information and summarizing it for the client is a service that medical or veterinary librarians can present in the context of information therapy. Simplifying information to make it understandable for patients who have different levels of understanding and literacy is another value-added service that librarians can perform in rendering, encouraging, and supporting information therapy as well as improving health literacy. Information therapy or prescriptions are predicted to play an increasingly important role in the future of veterinary medicine. Partnering with librarians, veterinarians can choose to take a proactive role in developing this exemplary tool to help their clients [10].

Limitations to the current study include the fact that only a small number of veterinary clinics participated, and many clinics were not consistent in distributing the information prescriptions; however, given the positive results, a follow-up study, in which clinics follow a more consistent protocol regarding information prescriptions, appears to be warranted. Obtaining a larger and more diverse sample of veterinary clinics, including large and ambulatory clinics, as well as assessing topic-specific information prescriptions are possible next steps in exploring this topic. The results of this study indicate that most veterinary clients view an information prescription favorably, which can lead to positive impacts on veterinarian–client relationships and pet owners’ comfort and knowledge level. Partnering with librarians, veterinarians can become proactive guides, helping their clients navigate the often unsafe regions of online health information for their pets.

CONCLUSION

The ever-growing demand for easily accessible, accurate online health information is changing the fields of both human and veterinary medicine. People are accessing the Internet and using their smart phones in increasingly creative ways to improve their knowledge level and overall health for themselves and their loved ones. Feedback from veterinary clients has made it clear that they welcome support and guidance in these efforts. One such technique is that of an information prescription, providing supportive and accurate, evidence-based medical information to assist people in understanding either their own or another’s illnesses. This results in an increased ability to make educated medical decisions and behavioral changes to improve their health or the health of others [10].

Although it has been feared by some that online information might replace health care providers, it has been suggested by others that clients do not usually view the Internet as a replacement for health care professionals [9]. Instead, it has been suggested that the public’s views of health care providers as their preferred source of health information remains high and has actually increased. This would indicate that accessing health information online does not appear to reduce trust in physicians, and in fact, trust may actually be increasing as consumers rely on their physicians to interpret the often confusing nature of online information [11].

Certainly the Internet has become a major source of health information and is viewed as having the potential to offer many benefits. It can improve patients’ understanding of their medical conditions and, thereby, their self-efficacy. It can empower them to make better health decisions and to speak more openly to their physicians or veterinarians, resulting in a more patient-centered interaction between patient or client and health professional. It has also been
suggested that increased online information is playing a key role in the recently witnessed shift in the role of patients and clients from passive recipients to more active health care consumers [9]. Yet, for this to happen, people need to have access to reliable, trustworthy information and be able to share it with their health care providers [10, 12].

REFERENCES


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