

Equine Veterinary Care in St. Lawrence County

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Research and Theory IT635

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Abstract

A shortage of equine veterinarians can lead to serious implications for horse and stable owners, particularly in rural areas such as St. Lawrence County. The purpose of our research was to discover the availability, quality, and economic impact of equine veterinarian care in St. Lawrence County. A paper survey consisting of 20 questions that were both closed and open ended was distributed throughout the county in a door-to-door fashion and by stocking local feed stores with the survey to be handed out to horse owning customers. Sixty-one respondents showed that there is a shortage of equine veterinarians in St. Lawrence County and that most of the respondents are satisfied with the care they receive if they can get a veterinarian to visit their farm and if the services are routine (vaccinations, sutures, etc.). However, specialty care in the areas of lameness issues, dental care, and eye injury/disease is lacking. Also, regarding economic impact, most horse owners are bringing some if not all of their business outside of the county to receive specialty services and many are choosing not to grow their equine related business because of a lack of veterinary care. The research, therefore, concludes that horse owners and stable managers in St. Lawrence County are experiencing adverse implications to their horses and businesses due to a shortage of equine veterinary care.

Introduction

The horse population is growing in New York State and, specifically, it is growing in St. Lawrence County. As of 2005, the New York State horse population was at 197,000, up from 168,000 in 2000 (United States Department of Agriculture, 2005). In St. Lawrence

County, there has been an increase of 500 horses from 2000-2005 bringing the most recent count to 3400 horses in the county (United States Department of Agriculture, 2005).

As the population of horses grows, so does the need for equine veterinarians. The goal of responsible horse owners, or individuals in charge of caring for this particular stock animal, is to keep them healthy, especially for those whose livelihood depends on their stock in horses (American Association of Equine Practitioners, 2012). With the “baby boomer” generation of veterinarians retiring, and students choosing to work with small animals within a single hospital rather than commuting to farms, about 15,000 counties in the United States are without large-animal veterinarians. According to the American Veterinary Medical Association (AVMA) 2010 market research statistics, only six percent of veterinarians specialize in equine veterinary medicine in the United States (Roy, 2012). If a vet is not available within 50 or 100 miles of a farm where a horse is in need of critical care, complications could become fatal (Carswell, 2012, p.1).

Using the 2005 statistics from the USDA, St. Lawrence County’s 3400 horses make it the 25th most populated horse county out of 58 in New York State (United States Department of Agriculture, 2005). Yet even with this very formidable horse population, St. Lawrence County is home to only two vets in the county who are members of the American Association of Equine Practitioners (American Association of Equine Practitioners, 2012). But only one of these vets is currently practicing (See Appendix A). Wayne County, though, ranked just above New York in terms of horse population

by a mere 100 horses, has four vets listed as members of the American Association of Equine Practitioners (American Association of Equine Practitioners, 2012).

It was from these state and local trends that show an increase in horses with the presence of only one veterinarian that is a member of the AAEP that our research hypothesis was formed; there is a shortage of equine veterinarians in St. Lawrence County.

Literature Review

Everyone, not just those directly involved in the horse industry, should care about the quality and availability of equine veterinarian care across the country and in St. Lawrence County. There are many reasons good veterinarian care is both a national and local issue, but three reasons stand out above the rest. These are: availability, quality of care, and economics.

Availability

Veterinarians have a unique skill set that allows them to address public health issues and to help meet public health needs. In fact, their oath makes clear reference to the promotion of public health and the advancement of medical knowledge (Mainzer, 2007). In essence, the work of veterinarians brings together the fields of human, animal, and environmental health (Mainzer, 2007). As such, they are our frontline of defense against potentially deadly disease outbreaks (Association of American Veterinary Medical Colleges, 2010).

“Within the next five years, the nation is expected to be 15,000 veterinarians short of the number needed”, states Ralph Richardson, dean of the College of Veterinary Medicine at Kansas State University (Shildeler, 2012). The crisis was “a long time in the making” as the United States shifted from a rural to urban population (Lenz, 2010). Farm numbers have decreased, resulting in fewer people raised with an agricultural background and less children who once might have grown up to become rural veterinarians (Lenz, 2010). A survey performed by AVMA found that less than four percent of veterinary practitioners intend to work with large animals (Hillard, 2010). Reasons for high attrition rates include long hours, too much emergency work, and limited time for personal life as large-animal practitioners spend most of their time on call (Medicine et. al., 2012). Large-animal practitioners average 51 hours per week with 8 hours of emergency work, whereas companion-animal practitioners average 42 hours per week (Committee to Assess the Current and Future Workforce Needs in Veterinary Medicine et al., 2012). The median starting salary of large-animal veterinarians is about \$60,500, which is \$11,000 less than that of small-animal veterinarians as of 2007 (Belluck, 2007). It also takes time for young equine clinicians to gain respect of prospective horse owners, especially in the racing and performance horse industries (Medicine et al., 2012). Anecdotal evidence from practitioners suggests that a high percentage of new graduates leave equine practice within 5 to 10 years due to a difficult time retaining clients (AAEP, 20012). Additionally, the Bureau of Labor Statistics has predicted that the national demand for veterinarians will increase 35% from 2006 to 2016 (Lenz, 2010). Not surprising then, is the fact that there is only one practicing vet in

the in St. Lawrence County who is a member of the American Association of Equine Practitioners (AAEP, 2012).

Quality of Current Veterinarian Care

In 2008, the Academy of Rural Veterinarians (ARV) undertook a veterinary training survey to assess the educational experiences of practicing veterinarians, and current veterinary school students, in relation to practice situation and overall preparation for serving in a rural setting. The survey was sent to two groups, ARV members and mentors, and ARV student members. It was distributed through *The Rural Vet* and through member e-communications. Hard copy and online versions of the survey were also available (Lenz, 2010).

The veterinary students' survey asked them to rate their confidence in dealing with situations that they may encounter after graduation if employed in a rural mixed animal practice. Students were provided with 15 procedures/situations and rated confidence on a scale of 1 (no confidence) to 5 (very confident). The results are as follows (Lenz, 2010):

Table 2. Comparison of Veterinarian & Veterinary Students Ratings of Confidence Levels Based on Experience/Preparation

Procedure/Situation	Practicing Veterinarian rating own experience as a New Graduate	Practicing Rural Veterinarian rating New Graduates	Current Student rating own experience/readiness to handle
Dystocia in large animal	3.6	2.6	3.3
Dystocia in small animal	2.8	2.3	2.5
Equine rectal palpation	2.4	2.2	3.2
Bovine rectal palpation	4.0	2.3	3.5
Equine colic	3.4	2.9	3.0
Acute, life threatening blood loss any specie	3.2	3.0	2.9
Acute abdominal crisis, other than equine	3.0	2.5	2.6
Fluid therapy, any specie	3.9	3.7	3.5
Sudden death in a herd or group of animals	3.0	2.5	2.9
Lameness in any specie	3.3	2.8	3.3
Communicating effectively with clients	3.5	2.9	4.0
Ability to handle and restrain large animals safely	2.9	3.4	3.6
Ability to handle and restrain small animals safely	2.9	3.4	4.2
Expertise in business management	2.2	1.8	2.5
Familiarity with rural culture	4.1	2.9	3.5
OVERALL CONFIDENCE LEVEL	3.3	2.7	3.2

Scale: 1 = No Confidence, 3 = Average, 5 = Very Confident

Veterinarians' major concerns about preparation and curriculum improvement focused on three major categories: more hands-on/practical experiences needed; more business management training needed in school; and denoted of specific skills or techniques that respondents believed veterinary students should receive prior to graduation. Students were asked to identify practical skills or a specific area they felt were lacking in their training. The results are as follows (Lenz, 2010):

- Animal behavior
- More exposure to rural practices with basic ambulatory cases such as simple colics, lacerations, restraint, and sick large animals.
- Familiarity with large animal side issues that may not be seen very often, i.e.
- rectal prolapse in a feedlot steer, vaginal prolapse in a cow, suturing up a corneal
- ulcer in a calf, or pulling wolf teeth in a colt.
- Rectal palpation either in bovine or equine species
- Equine dentistry
- Not knowing antibiotics and other therapies for large animals.
- Handle nighttime emergency cases on own
- Drive standard transmission trucks
- Perform large animal ophthalmology

Economics

At the state level, the New York horse industry produces goods and services valued at \$1.4 billion and has a total employment impact of 35,200 full time equivalent jobs. There are over 202,000 horses in New York, with over 70% of these horses involved in showing and recreation (American Horse Council, 2012). Although the impact of the equine industry on St. Lawrence County is not readily available, an educated estimation is plausible if you take the horse population and multiply it by the average cost of keeping each horse per year. With the average cost of ownership at roughly \$1,800 per horse per year, the impact is easily over \$6.1 million (Blocksdorf, 2012).

Literature Review Conclusion

According to Brent Buchanan, Animal Science Educator at Cornell Cooperative Extension, little research to date has been done on the availability and level of equine veterinary care in St. Lawrence County from the perspective of the horse or stable owner (Buchanan, 2012). The lack of local research combined with the national trends of a decrease in large animal vets and the state increase in horse population certainly warrants further research.

Research Questions

To eliminate possible confusion while describing our research, horse owners and stable owners will simply be referred to as “horse owners” throughout the rest of our report.

Our research questions were constructed based on three main qualities horse owners search for in equine veterinary care; availability, quality and economics. The purpose of this study is to determine if there is a need for more equine veterinarians in the area, if current horse owners are satisfied with the quality of care they are receiving, and how the situation can be improved. Our research questions are:

1. Is there a shortage of equine veterinary care in Saint Lawrence county?
2. Are horse owners receiving veterinary care in Saint Lawrence county satisfied with the quality of care they are receiving?
3. How do the economics of veterinary care affect horse and stable owners?

Methods

A pretest group, consisting of one veterinarian and five horse owners, was asked to critique and revise the survey so that its answers would adequately address our

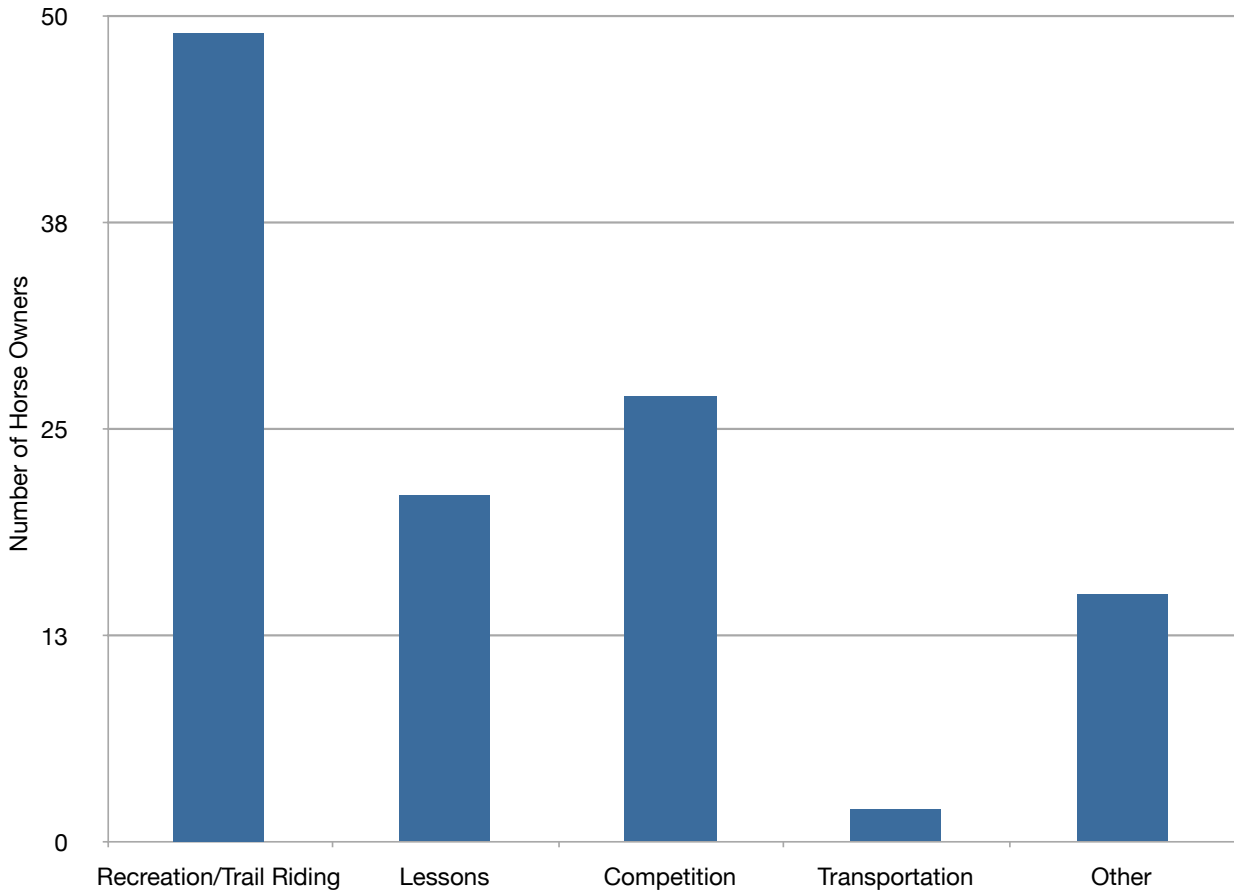
research questions, and so that the data will best reflect horse owners' interests. Once the survey's revisions were complete, it was distributed to horse and stable owners in St. Lawrence County between October 24th and November 14th. Surveys were delivered door-to-door and left at local feed stores for horse owners to pick up. Completed surveys were mailed to Doctor Tony Betrus' office by November 14th, and the data was entered into spreadsheets.

Results

The population of respondents who participated in our research consisted of amateur, professional and Amish horse or stable owners who were over the age of 18 and located in St. Lawrence County. Horse owners who took our survey owned five horses on average and used them for recreation or trail riding, lessons, competition,

transportation, or for other interests that can be seen in Figure 1.

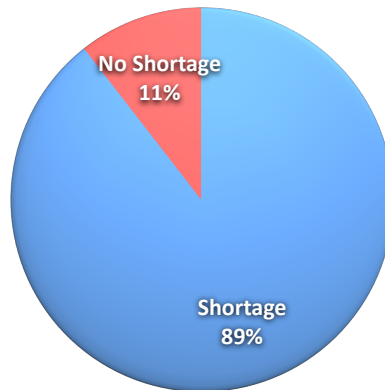
Figure 1; Horse Uses



Availability

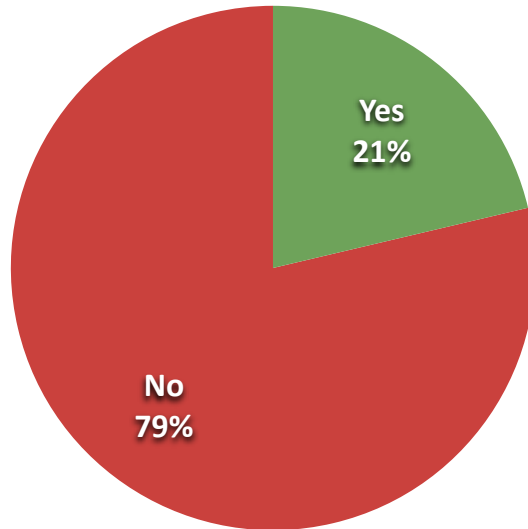
Question #12 directly asked respondents if they felt there is a shortage of equine veterinarians in St. Lawrence County. An overwhelming 89% of the respondents feel there is a shortage of veterinarians in St. Lawrence County. Only 11% felt there was no shortage. See Figure 2.

Figure 3; Horse owner's views of equine veterinary availability in SLC

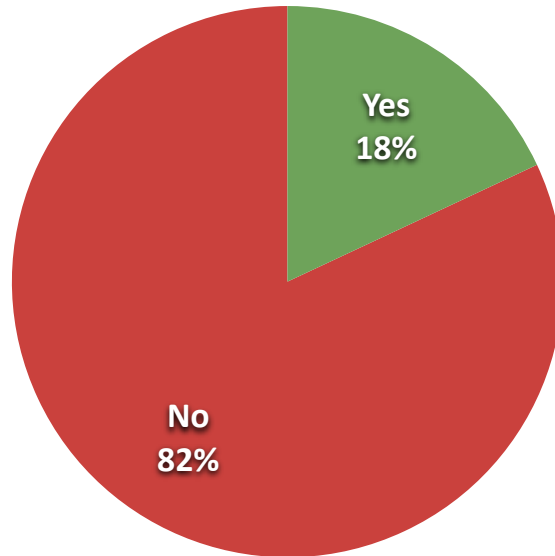


Also in regard to availability, we asked horse owners if they had ever had a horse suffer further damage because a veterinarian could not be reached in a necessary time frame in relation to the injury. We also went a step further and asked horse owners if they had ever had a horse die that might have been saved because a vet couldn't be reached in a necessary time frame. An unfortunate 21% and 18%, respectively, responded yes to these questions. See Figures 3 and 4.

Horse Owners Whose Horses Have Suffered Further Damage Due to Veterinarian Unavailability

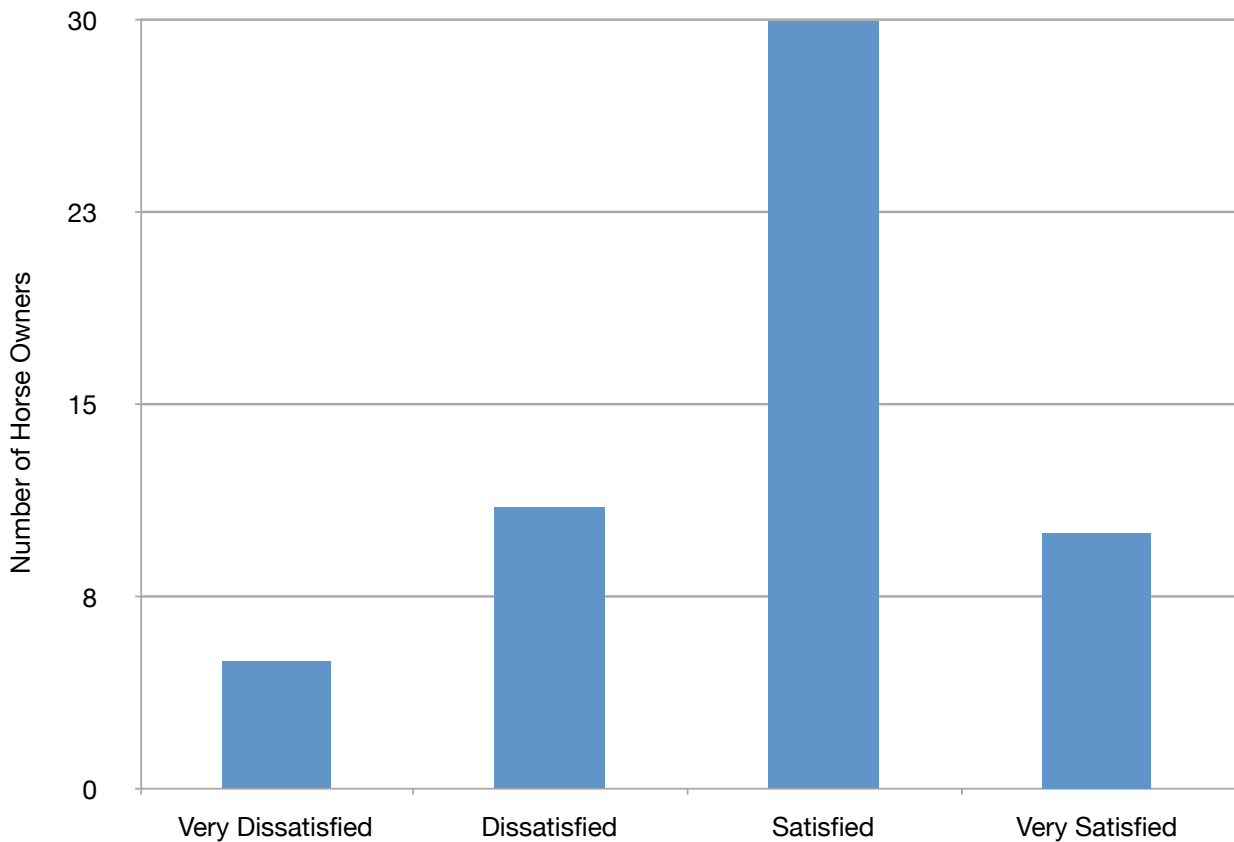


Owners that have had Horses Die due to Veterinarian Response Time



Relating to both availability and quality, and not surprising because of the data in the previous figures, a combined 26% of horse owners are either very dissatisfied or dissatisfied with veterinarian response time. Certainly the geography of St. Lawrence County plays a role in these responses (towns are spread far apart), but the data also supports the conclusion that the low number of vets serving the county is also contributing to response time. See Figure 5.

Figure 4; Satisfied with response time?



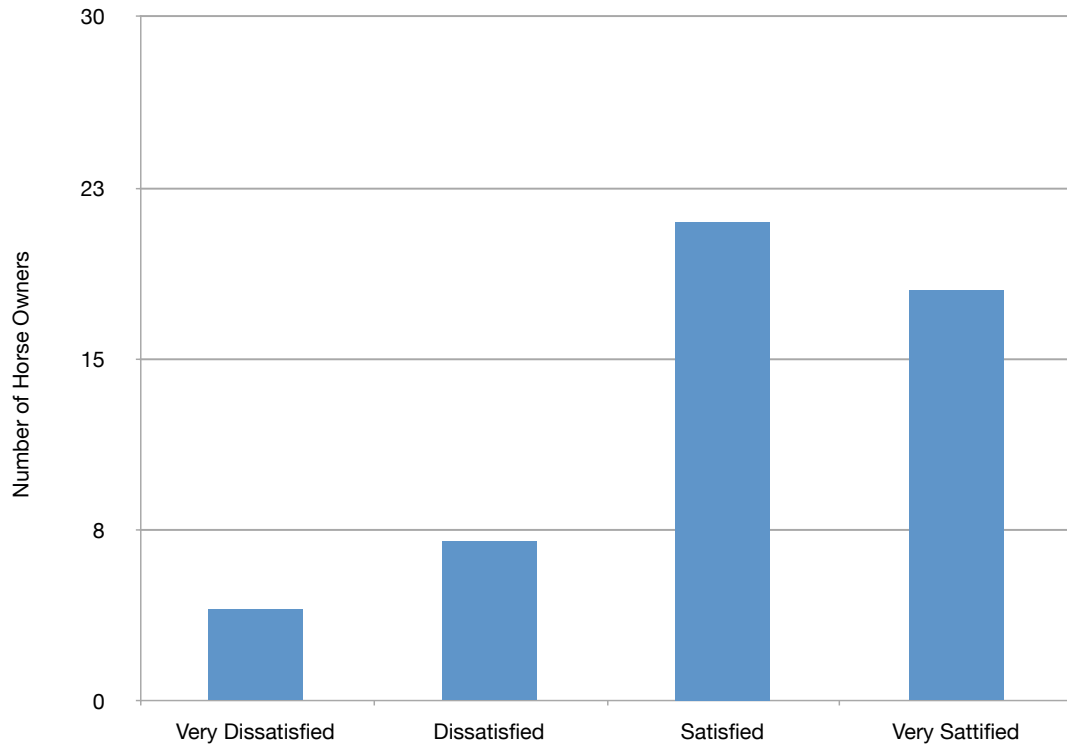
Overall, 64% of horse owners were generally satisfied with the quality of current veterinary care compared to 18% that were generally dissatisfied. See Figure 6.

Economics

Even though the responses in Figure 6 show a large number of respondents being satisfied with their veterinarian care, most of them are forced to travel outside of the county in order to receive specialty care. In fact, data shows 31% of respondents having to travel outside St. Lawrence County to have access to certain treatments that simply were not available in this area. See Figure 7. This is a major loss of revenue for local

veterinarians.

Figure 5; Horse Owners' Satisfaction with Current Quality of Equine Vet Care

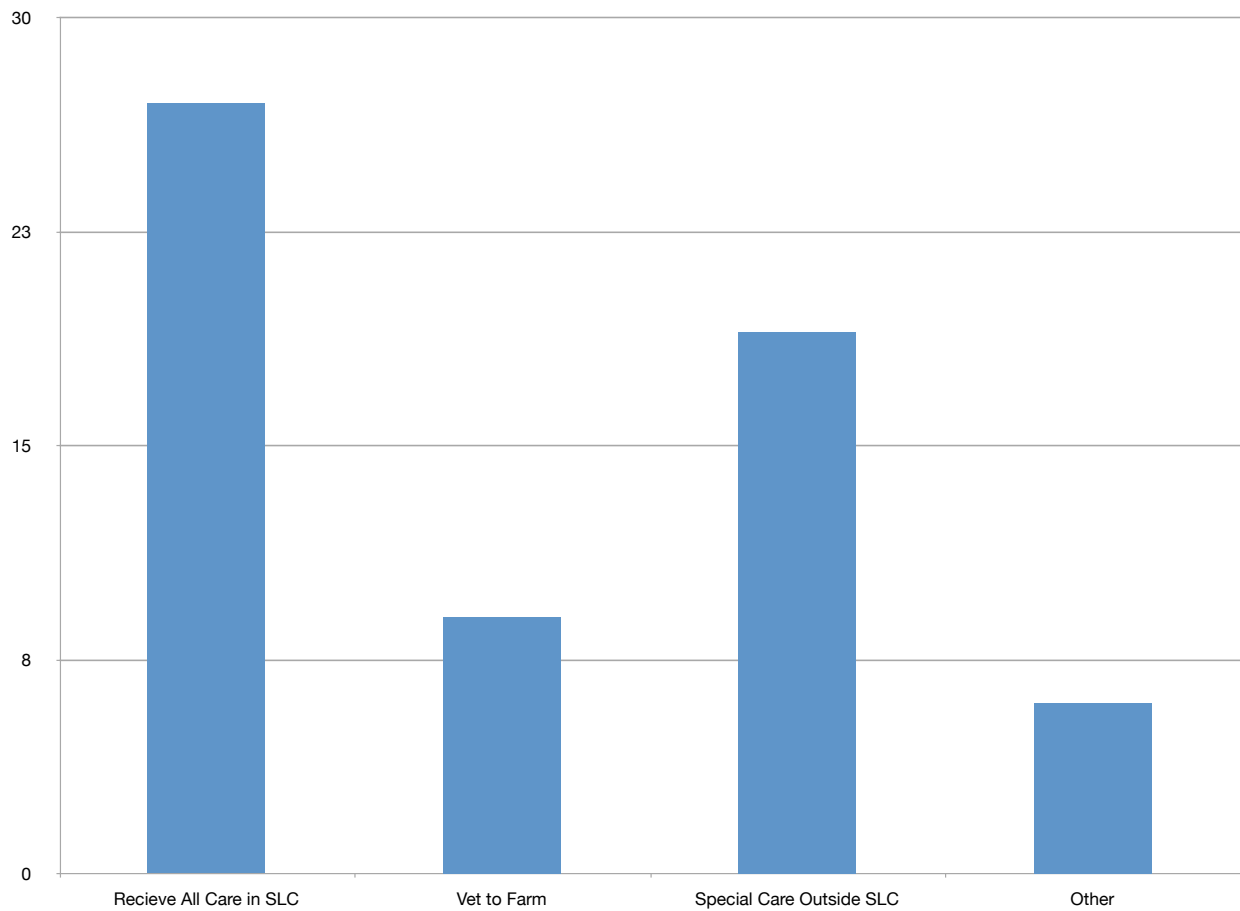


In addition to local veterinarians losing potential revenue, horse owners are also feeling the economic pinch of a vet shortage. A quarter of our surveyed horse owners feel the growth of their equine related business is hindered because of the local equine vet shortage. See Figure 8.

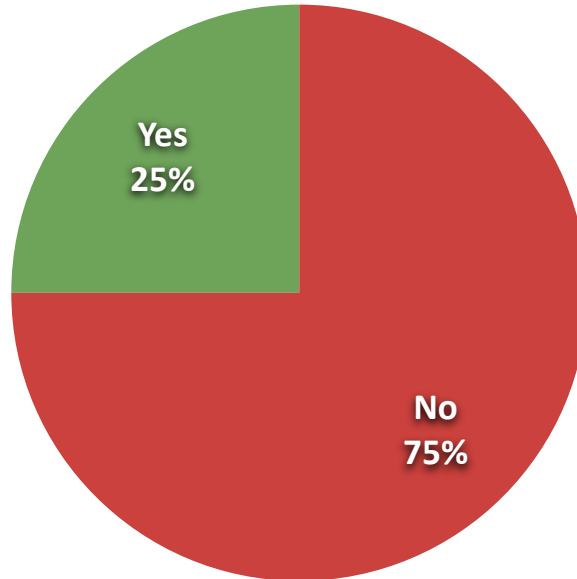
Further, we took a cross section of our respondents to include our owners with more than 10 horses. This way we could report on the data from the perspective of our biggest horse owners in the county. Horses owned in this cross section ranged from 14-37 and included 5 different owners. 80% of them go outside the county for some service, need additional service dealing with lameness issues, had a horse suffer further

injury, and had a horse die because of the current state of equine veterinary care. 100% of this cross section said there is a shortage of equine veterinarians in St. Lawrence County.

Figure 2; Where Horse/Stable Owners go to Receive Equine Veterinary Care



Horse Owners whose Business Growth is Hindered Based on Equine Availability



Conclusion

As we look back to our research questions, we can say without hesitation that we have answered each of them. There is a shortage of equine veterinary care in St. Lawrence County; horses have suffered and some have died due to response times that are consequence of geography. Horse owners are satisfied with the quality of care they are receiving within the county, however they are forced to travel to neighboring counties or states to receive care for lameness, dental work and eye injuries. We can tell veterinarians with confidence that if they purchase equipment to deal with these three specialty services, they would keep business in the county and receive more money. This also goes with the economics of our study; twenty-five percent of horse owners

state that their business would grow with increased availability of equine veterinarians in the area. Our research infers that with an increase of equine veterinarians as well as having additional specialty care equipment, the horse economy would increase and even result in less horse deaths.

Limitations

Our research team encountered several limitations while conducting this study. The simplicity of online surveys was not the ideal way of distributing surveys due to our respondent selection. Most horse and stable owners in St. Lawrence County reside in rural areas, and many do not have access to electronic media. Therefore, using paper surveys was the most practical way of receiving data for our research. The research team printed over one hundred surveys and distributed them by hand to various farms throughout the county. The team was also limited by the time it takes to receive the surveys in the mail.

Another limitation that the research team ran into was respondents not properly answering survey questions. This either forced us to average data, or not include it.

Suggested Next Steps

We have several recommendations. First, large animal vets in St. Lawrence County should be briefly questioned to ask what services they offer horse owners/managers. Appendix A offers some very basic information, but more details would be ideal. This information, if made easily accessible to horse owners/managers (perhaps through Cornell Cooperative Extension), would vastly improve communication between

veterinarians and horse owners. Additionally, we recommend that the county track horse owners unable to obtain veterinary services. Both of these simple forms of communication, a list of practicing vet services and a list of horse owners in need of services, would move the county away from perceived shortages or overages to actual shortages or overages. To reach beyond horse owners, a report can be released in a local newspaper.

Next, we recommend a county wide meeting to bring veterinarians and horse owners a chance to communicate with each other face to face. This would be a great teaching moment for veterinarians to teach owners what they can do to make their jobs easier. And horse owners could voice their concerns about services currently available to them.

Finally, we recommend further research. Since this was the first of its kind done in the county, there is a lot more information to be discovered. Questions could get more specific regarding specialty care needs and economic impact. Also, a longer time frame allowing for the collection of more data would be ideal. I also think the addition of more anecdotal information would be very powerful. The stories shared during survey dissemination are unfortunately going undocumented.

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Appendix A

Current Large Animal Veterinary Practices in St. Lawrence County

Brasher Falls Veterinary Services

315.389.5330

Member of the American Association of Equine Practitioners
(accepting new clients depending on location of horse/stable)

Canton Animal Clinic

315.386.2754

(accepting new clients depending on location of horse/stable)

Town and Country Veterinary Clinic

315.393.7338

(accepting new clients depending on location of horse/stable)

*Dr. Mary Loomis is a member of the American Association of Equine Practitioners but is not currently practicing.

Appendix B

Survey

A Study of Equine Veterinary Care in St. Lawrence County

You are invited to be in a research study of equine veterinary care in Saint Lawrence County being conducted by principle investigator Anthony Betrus, PhD of SUNY Potsdam. You were selected as a possible participant because you own or manage horses in St. Lawrence County. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

Background Information

The purpose of this study is to evaluate the quality, availability and economics of equine care in St. Lawrence County in order to inform Cornell Cooperative Extension, veterinarians and horse owners of our findings.

Procedures:

If you agree to be in this study, please answer all of the questions you feel comfortable answering. It will take approximately 5-7 minutes to complete. Please return the survey to team members.

Risks and Benefits of being in the Study

The study has minimal risks. The benefits of participation include a chance to have your equine veterinary care needs assessed. It will also give a chance for input in the direction of future equine veterinary services and possible improvements in current equine veterinary services. Additionally, the survey will allow for the exchange of information between horse owners and equine veterinary service providers.

Compensation:

You will receive no compensation for your participation.

Confidentiality:

The records of this study will be kept private. Any published reports will not include any information that will make it possible to identify a participant. Data will be stored on secure Helios server space at SUNY Potsdam managed by Instructional Technology Services at SUNY Potsdam to which only Dr. Betrus will have access.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with SUNY Potsdam. If you decide to participate, you are free to skip any question or to withdraw at any time without affecting those relationships.

Contacts and Questions:

You are encouraged to contact the principal investigator, student researchers, or Chair of the SUNY Potsdam Institution Review Board (IRB) with any questions you have regarding the survey.

Dr. Anthony Betrus: (315)-267-2670, Fax: (315)-267-3207 Melissa Evans, Student Researcher (518)-495-7669
Bryan O'connor, Student Researcher (315)-244-5494 Mary Simon, Student Researcher (518)-810-4037
Maureen McCarthy, Chair of the SUNY Potsdam IRB (315)-267-2919 or SUNY Potsdam, 44 Pierrepont Ave,
Potsdam, NY 13676

Approval by the Provost of SUNY Potsdam and the Institutional Review Board attests only that appropriate safeguards have been included in the research design to protect human participants. This approval does not imply that the College endorses the content of the research or the conclusions drawn from the results of the research.

You may keep this page for your records.

Statement of Consent:

Signature is not required; by participating and filling out this survey, you have agreed to the above information.

1. I am 18 years of age or older (circle one).

Yes No (If no, do not complete this survey).

2. I own or manage the care for at least one horse who resides in St. Lawrence County (SLC) (circle one).

Yes No (If no, do not complete this survey).

3. Which statement describes your situation most accurately:

My horse(s) receive all of their veterinary care from veterinarians whose practices reside in SLC.

My horse(s) receive all of their veterinary care from veterinarians traveling to me from neighboring counties or states.

My horse(s) receive routine care from veterinarians in SLC, but specialty care from veterinarians traveling to me from neighboring counties or states.

My horse(s) receive routine care from veterinarians in neighboring counties or states, but specialty care from veterinarians in SLC.

Other _____

4. If a veterinarian travels to you from neighboring counties or states for routine or specialty work, approximately how far is the vet traveling to your horse(s)?

_____ miles

5. Do call charges affect your treatment plan for your horse(s)? (Circle one).

Yes

No

N/A

Optional: If yes, how do call charges affect your treatment plan?

6. Overall, how satisfied are you with the **quality** of vet care given to your horses provided by SLC veterinarians? (Circle one).

1

2

3

4

Very Dissatisfied

Dissatisfied

Satisfied

Very Satisfied

7. If you do receive services from SLC vets, how satisfied are you with the following (put an X in the appropriate box):

Service/ Situation	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	I don't receive this service in SLC.	I go outside of SLC for this service.
Vaccinations						
Lacerations/ Sutures						
Coggins Testing/ Purchase Exams						
Reproductive Care						
Life- Threatening Illness (colic)						
Dystocia (foaling complications)						
Lameness Issues						
Dental Work						
Eye injuries/ disease						

8. Have you ever had a horse suffer further damage from an injury because a veterinarian could not be reached in a necessary time frame in relation to the injury? (Circle one).

Yes

No

9. Have you ever had a horse under your care die that you think could have been saved because you could not reach a veterinarian in a necessary time frame? (Circle one).

Yes

No

10. Approximately, how much are you willing to spend on average for specialty care for a horse that is important to you personally, your business, or both?

Service/ Situation	Approximate Cost
Vaccinations	\$
Sutures	\$
Colic	\$
Reproductive Care	\$
Life-Threatening Illness (colic)	\$
Dystocia (foaling complications)	\$
Lameness Issues	\$
Dental Work	\$
Eye injuries/ disease	\$
Ability to handle large animals	\$

17. On average, about how many emergency calls do you make to a veterinarian for the horses you own or manage per year?

18. Approximately how many vets are members of the American Association of Equine Practitioners in SLC?

19. How many horses do you own?

20. What are your horses used for? Check all that apply.

Recreation/Trail Riding

Lessons

Competition

Transportation

Other _____