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Staff Paper

**Equine Referring Veterinarian Satisfaction
With the Veterinary Teaching Hospital,
Michigan State University -
July 1, 1999 through June 30, 2000**

James Lloyd, Debra Donovan, Youssouf Camara,
Delta Leeper, Renee Gross

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Department of Agricultural Economics
MICHIGAN STATE UNIVERSITY
East Lansing, Michigan 48824

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lloydj@cvm.msu.edu

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Introduction

Understanding clients' wants and needs is vital to the sustained success of any service business, and veterinary medicine offers no exception. The Veterinary Teaching Hospital (VTH) at the Michigan State University College of Veterinary Medicine (MSU-CVM) has successfully maintained a position at the forefront of the veterinary profession throughout most of its history. The staff has consistently been composed of clinicians who have been chosen because of their excellence and expertise. However, the assumption that emphasis on clinical excellence will, by itself, provide the foundation for sustained success in the client flow and business at the hospital has been unchallenged to date. Additionally, there are many areas in veterinary medicine that are becoming increasingly popular (e.g. oncology). Addition of, or attention to, these services is crucial in retaining our leadership role within the veterinary community.

The results of a previous study¹ indicated that 75.4% of equine clients chose MSU-VTH because they were referred by their primary veterinarian. One of the objectives of this study was to determine which factors influenced referring veterinarians in determining whether they refer their patients to MSU-VTH. Additionally, this study was designed to identify areas for possible expansion/contraction of our current service offerings in order to better serve the needs of our clients and referring veterinarians. The results of this study can be used as an outline for the development of a plan to maintain and improve referring veterinarian satisfaction and, ultimately, to sustain the teaching caseload and business of the hospital. In addition, this endeavor will serve to set a good example for our students by modeling the best management practices and establishing a critical blend of quality medicine/surgery and customer service.

¹ Lloyd, James, *et al*, Equine Client Satisfaction at the Veterinary Teaching Hospital, Michigan State University – July 1, 1999 through June 30, 2000, Department of Agricultural Economics, Staff Paper 2001-34, MSU, East Lansing, August, 2001.

Methods

Survey Development

Three focus group meetings were held during 1998 and 1999 to determine key issues pertaining to client satisfaction for consideration by the equine clinic. The first meeting involved officers and members of the board of directors of the Michigan Veterinary Medical Association (MVMA). The second focus group was composed of equine practitioners who were among the top users of the VTH services. In addition, several leading practitioners outside this group were included who offered good insight into wants and needs of the veterinary profession. The third meeting involved the CVM alumni council.

Information obtained from the focus group meetings was used to identify a list of important survey topics. Based on this list, the equine referral questionnaire was developed in June 2000 by CVM staff (see Appendix A).

Sample Selection

One hundred seventy-four (174) equine practitioners were mailed questionnaires on September 18, 2000. These comprised the entire population, as represented by all equine and mixed animal veterinary practices, listed with the MVMA. Three questionnaires were undeliverable, resulting in a survey population of 171 veterinarians. To follow up, survey recipients were mailed post cards as reminders two weeks after the initial survey was sent.

Data

Data entry was completed for the returned surveys. Tables and graphs were constructed to display these results (see results section). Descriptive statistics were performed on all questions/responses and comparative statistics were completed for selected topics.

Results

Response Rates

Responses were received from 108 of the 171 equine referral veterinarians surveyed, however 13 of those were from veterinarians who were no longer involved in equine practice. Those 13 responses were dropped from the sample, leaving us with 95 usable responses for a response rate of 55.6%.

Referring Veterinarian Information

Of the 90 respondents who provided information on their gender, 28.9% were female and 71.1% were male.

The referring veterinarians had their practices located throughout Michigan, including the upper peninsula. Veterinarians practicing in Washtenaw, Kent, and Livingston counties were the most frequent respondents. Table 1 presents the distribution of respondents by county.

Table 1. Distribution of referring veterinarians* by county in which they practice.

County	Frequency	Percent	County	Frequency	Percent
Washtenaw	6	6.3	Cass	1	1.1
Kent	5	5.3	Charlevoix	1	1.1
Livingston	5	5.3	Cheboygan	1	1.1
Eaton	4	4.2	Clinton	1	1.1
Ingham	4	4.2	Delta	1	1.1
Isabella	4	4.2	Genesee	1	1.1
Lapeer	4	4.2	Ionia	1	1.1
Macomb	4	4.2	Iosco	1	1.1
Lenawee	4	4.2	Luce	1	1.1
Ottawa	4	4.2	Manistee	1	1.1
Allegan	3	3.2	Marquette	1	1.1
Jackson	3	3.2	Mason	1	1.1
Oakland	3	3.2	Monroe	1	1.1
Saginaw	3	3.2	Montmorency	1	1.1
Alpena	2	2.1	Newaygo	1	1.1
Hillsdale	2	2.1	Ogemaw	1	1.1
Mecosta	2	2.1	Ontonagon	1	1.1
Sanilac	2	2.1	Presque Isle	1	1.1
Van Buren	2	2.1	Schoolcraft	1	1.1
Alcona	1	1.1	Shiawassee	1	1.1
Arenac	1	1.1	St. Clair	1	1.1
Bay	1	1.1	St. Joseph	1	1.1
Benzie	1	1.1	Wayne	1	1.1
Berrien	1	1.1	Wexford/Missaukee	1	1.1

* n = 95 respondents; 1 respondent reported working in more than one county.

The majority (85.3%) of referring veterinarians practicing in Michigan obtained their Doctor of Veterinary Medicine degrees from Michigan State University. These referring veterinarians graduated over six decades spanning 1942 – 1999. Table 2 summarizes these data.

Table 2. Graduation year of referring veterinarians* practicing in Michigan.

Year	Frequency	Percent	Year	Frequency	Percent
1942-1965	5	5.4	1981-1985	10	10.8
1966-1970	13	14.0	1986-1990	16	17.2
1971-1975	10	10.8	1991-1995	14	15.1
1976-1980	16	17.2	1996-1999	9	10.0

* n = 93 respondents

Veterinarians were asked to indicate all species for which their practice provides services. Horses ranked first (100%) followed by dogs (90.5%) and cats (89.5%). Additionally, 67.4%

of those surveyed provided services for food animals, almost half (47.4%) provided services for exotics, and 40.0% provided services for wildlife. The results are summarized in Table 3.

Table 3. Species for which practices provide service.

Species	Frequency	Percent
Horses	95	100
Dogs	86	90.5
Cats	85	89.5
Food Animals	64	67.4
Exotics	45	47.4
Wildlife	38	40.0

While the majority (86.3%) of veterinarians reported their practice was computerized, only 65.3% indicated they had Internet capability.

Table 4 displays the number of full time equivalent (FTE) veterinarians working in equine practice. The mean was 1.62 FTE veterinarians per practice (median = 1.0); 81.1% of practices had two or fewer FTE veterinarians, while 7.4% had five or more.

Table 4. Number of Full Time Equivalent (FTE) veterinarians in practices* surveyed.

# of FTE vets	# of practices	% of practices
Less than 1	29	30.5
1 to 1.9	37	38.9
2 to 2.9	11	11.6
3 to 3.9	7	7.4
4 to 4.9	3	3.2
5 or more	7	7.4

*n = 95

Descriptive Statistics

Figure 1 depicts the number of equine cases that veterinarians have referred to the MSU-VTH within the last year. Note that 17.6% of veterinarians had not referred any cases to MSU-VTH. The remaining 82.4% of veterinarians had referred between 1 and 50 cases to MSU-VTH. The mean number of cases referred was 7.8 (median =5). Only 15.3% of veterinarians surveyed referred more than 10 cases to the MSU-VTH.

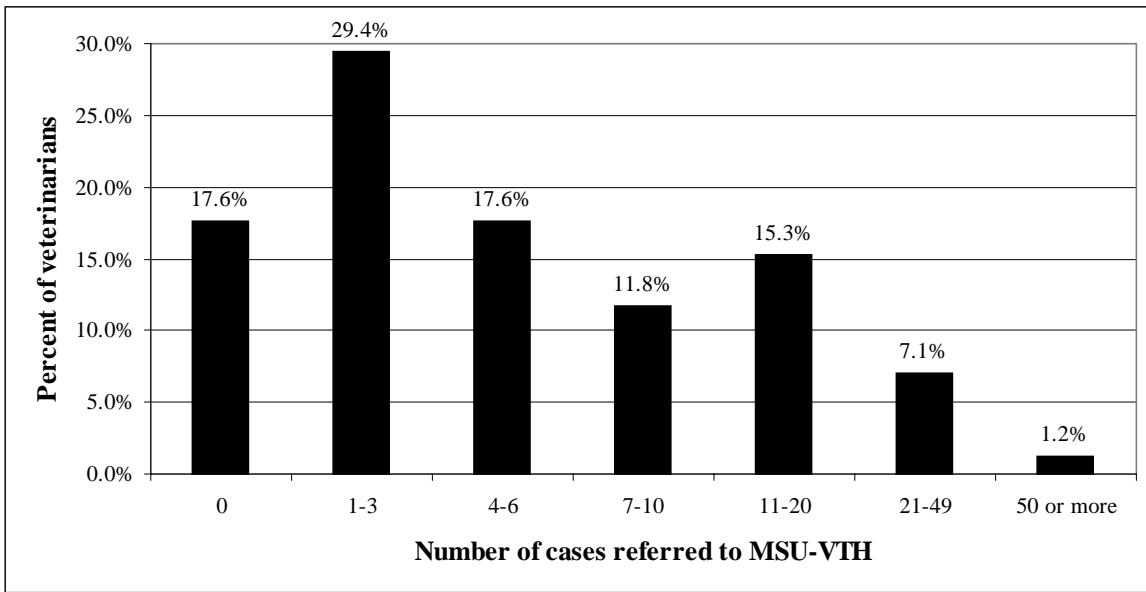


Figure 1. Number of cases equine veterinarians have referred to the MSU-VTH during the past year. n = 85 veterinarians.

Overall, 20.0% of veterinarians reported they had difficulty getting equine cases scheduled with the MSU-VTH in the past five years. Some respondents indicated more than one area of scheduling difficulty. The areas that posed the greatest scheduling difficulty included ophthalmology, lameness, and emergency. Table 5 summarizes these data.

Table 5. Scheduling difficulty by service according to referring veterinarians.

Service	# of scheduling problems	Percent*
Ophthalmology	13	13.7
Lameness	7	7.4
Emergency	5	5.3
Reproductive	3	3.2
Surgery	3	3.2
Internal Medicine	3	3.2

* n = 95

Veterinarians were asked to choose and rank the top three service areas that they had used for equine cases at the MSU-VTH during the last five years. Emergency was the most frequently used service, followed by surgery, then lameness. Table 6 displays these results.

Table 6. Services used by referring veterinarians in the last five years

Service	% of veterinarians* who ranked it in their top 3	% of veterinarians* who ranked it as #1
Emergency	51.6	31.6
Surgery**	49.5	22.1
Lameness**	32.6	6.3
Internal Medicine	32.6	5.3
Ophthalmology	18.0	3.2
Reproductive	5.3	0

*Based on 95 surveys returned. Some respondents did not rank the service areas, but simply placed an “x” next to those they had used. These responses were not included.

**Generally speaking, surgery and lameness comprise a single service at MSU-VTH. As such, the surgery/lameness service would clearly rate as the most commonly used service according to the “top 3” ranking method.

Veterinarians were asked to rate on a scale from 1 to 5 (1 = poor, 5 = excellent) their overall experience with the top three service areas they had chosen (above). The results are presented in Table 7. Surgery and internal medicine were tied for the highest mean score (4.3), followed by ophthalmology (4.2) and reproductive (4.2).

Table 7. How referring veterinarians scored the five services they used most frequently at the MSU-VTH. (1 = poor, 5 = excellent)

Service	Number of Respondents	Number of respondents who rated service as					Mean Score
		1	2	3	4	5	
Surgery	51	0	1	5	25	20	4.3
Internal Medicine	32	0	2	1	16	13	4.3
Ophthalmology	18	0	0	3	8	7	4.2
Reproductive	5	0	0	1	2	2	4.2
Emergency	54	0	0	9	29	16	4.1
Lameness	35	0	3	6	13	13	4.0

Additional comments written in by respondents about the above listed service areas are as follows²:

- Good communication with referring veterinarian: (10.5%)
- Poor communication and follow up (8.4%)
- Whether the experience is good depends on the clinician seen (5.3%)

- Difficult to schedule an ophthalmology appointment (4.2%)
- Costs are too high (2.1%)
- Inadequate patient evaluation/exam not thorough (2.1%)

The following services were specifically mentioned as providing great service: surgery, internal medicine, emergency and ophthalmology. Dr. Marteniuk and Dr. Schott were specifically mentioned as providing exceptional service to clients and referring veterinarians.

Veterinarians were asked an open-ended question regarding which new equine service areas they would like to see become available at the MSU-VTH in the future. Alternative medicine (acupuncture, chiropractic care, and herbal medicine) was the most frequent choice, cited by 5.3% of veterinarians. Nutritional analysis and performance medicine were tied for second place at 2.1%. Other service areas cited by 1% of respondents included: more reproductive help, force plates for lameness evaluation, thermography, nuclear diagnostic imaging (bone scan), rehabilitation, and reinstating field service.

When asked how they saw their need for MSU-VTH services changing in the coming five years (based on volume of referral cases), 45% saw their need for MSU-VTH services increasing. These respondents referred a mean 8.9 cases to the MSU-VTH within the last year. Twenty-eight percent (28%) of respondents thought that the number of cases they referred to MSU-VTH would stay the same, while 12% saw their need decreasing. Those who thought their need would stay the same referred a mean 9.4 cases during the past year, compared to those with a decreasing need for services who referred a mean 3.0 cases. Fifteen percent (15%) of veterinarians surveyed did not give a specific response to the question.

Respondents made the following comments in reference to their need for MSU-VTH service areas changing in the coming five years:

² Percentages following an item are based on 95 surveys returned.

Increased use of MSU-VTH services due to:

- More reproductive and/or lameness problems being recognized (2.1%)
- Equine population is increasing/veterinarian's caseload is increasing (2.1%)

Same use of MSU-VTH services due to:

- Use MSU-VTH for intestinal surgeries only (1.1%)
- Some clients prefer to be referred elsewhere due to bad past experience at MSU (1.1%)

Decreased use of MSU-VTH services due to:

- Started referring cases elsewhere (1.1%)
- Referring veterinarian is leaving equine veterinary medicine (1.1%)
- Expanding clinic to do surgeries in-house (1.1%)

Veterinarians were asked if they currently perform any of the following services on sport horses in their practice: wellness programs, pre-purchase exams, lameness diagnosis, rehabilitation services, chiropractic services, acupuncture services, nutraceutical programs, and holistic/herbal services. Three-fourths (77%) of respondents performed pre-purchase exams, 68% performed lameness diagnosis, and 66% had wellness programs. Chiropractic services were the least frequently offered, with only 4.2% of respondents providing this service. Table 8 summarizes these data.

Table 8. Services performed by referring veterinarians on sport horses in their practice.

Service Offered	%* of veterinarians performing service	Additional comments made by respondents
Pre-purchase exams	76.8	• 3 indicated that they only do a limited number
Lameness diagnosis	68.4	No comments were made by respondents
Wellness programs	66.3	• 2 use the Pfizer Preventicare Program • 3 indicated that this includes vaccines, scheduled dewormings, and dental care
Nutriceutical programs	28.4	• 1 uses joint supplements • 1 rarely offers this as a non-proven therapeutic option to clients
Rehabilitation services	18.9	• 1 indicated this service was too expensive and labor intensive to provide • 1 noted it was a good service to refer out • 1 provides physiotherapy with help from a certified sports massage therapist
Acupuncture services	11.6	• 2 plan to take classes with IVAS in 2000-2001 • 2 perform acupuncture to a limited degree • 1 works with others who perform this service • 1 doesn't offer this service due to too much competition and no proven efficacy
Holistic/herbal medicine	6.3	• 1 respondent indicated only to a limited degree
Chiropractic services	4.2	• 1 works with others who perform this service • 1 doesn't offer this service due to too much competition and no proven efficacy

*percent is based on 95 surveys returned

Veterinarians were asked where they currently refer sport horses to receive each of the services listed in Table 8 (if they did not perform the service themselves). Percentages listed are based on 95 surveys returned.

- | | |
|-------------------------|--|
| Rehabilitation services | <ul style="list-style-type: none"> • 11.6% to MSU • 4.2% to other private practitioners • 2.1% other Universities |
| Chiropractic services | <ul style="list-style-type: none"> • 32.6% to other private practitioners • 4.2% to MSU |
| Acupuncture services | <ul style="list-style-type: none"> • 14.7% to other private practitioners • 4.2% to MSU |

- Pre-purchase exams
 - 13.7% to MSU
 - 10.5% to other private practitioners
 - 2.1% to other universities

- Nutriceutical programs
 - 4.2% to MSU
 - 2.1% to other private practitioners

- Holistic/herbal services
 - 4.2% to MSU
 - 5.3% to other private practitioners

- Wellness programs
 - 6.3% to MSU
 - 5.3% to other private practitioners
 - 0.9% to other universities

Veterinarians were asked to rate the likelihood on a scale of one to five (1 = not likely, 5 = very likely) that they would refer sport horses to the Mary Anne McPhail Equine Performance Center if we offered any of the services listed in Table 8 above. Their responses are summarized in Table 9. Lameness diagnosis services were the most likely to be used with an mean score of 3.7, followed by rehabilitation services with an mean score of 3.3. Wellness programs were least likely to be used with an mean score of 1.8.

Table 9. Likelihood that referring veterinarians would use various services if MSU-VTH made them available, where 1 = not likely, 5 = very likely.

Service	Number of respondents	Number of respondents who rated likelihood as					Mean value
		1	2	3	4	5	
Lameness diagnosis	77	9	2	19	23	24	3.7
Rehabilitation services	72	12	8	15	24	13	3.3
Chiropractic services	74	28	5	10	21	10	2.7
Acupuncture services	71	24	8	13	15	11	2.7
Pre-purchase exams	72	31	13	15	6	7	2.2
Nutriceutical programs	70	38	6	13	8	5	2.1
Holistic/herbal services	69	36	6	12	11	4	2.1
Wellness programs	68	43	11	5	5	4	1.8

Referring veterinarians were asked to rate the quality and timeliness of telephone consultations, referral progress reports/updates and referral discharge information received from

MSU-VTH professional staff. Table 10 summarizes the results. A five point scale was used with 1 = poor and 5 = excellent.

Table 10. Quality and timeliness of telephone consultations, referral progress reports and referral discharge information received from MSU-VTH professional staff; 1 = poor and 5 = excellent.

Quality of information	Number of Respondents	Number of respondents who rated it as					Mean Value
		1	2	3	4	5	
Telephone consults	71	3	5	11	28	24	3.9
Referral progress reports	72	13	9	17	26	7	3.1
Referral discharge information	72	9	6	21	27	9	3.3
Timeliness of information							
Telephone consults	71	2	4	23	24	18	3.7
Referral progress reports	71	15	10	21	17	8	2.9
Referral discharge information	71	11	8	26	21	5	3.0

More than 15% of the responding veterinarians rated the following areas as excellent:

- ★ quality of telephone consults (25.3%)
- ★ timeliness of telephone consults (18.9%)

More than 10% of the responding veterinarians rated the following areas as poor:

- quality of referral progress reports (13.7%)
- timeliness of referral progress reports (15.8%)
- timeliness of referral discharge information (11.6%)

Almost 10% of referring veterinarians considered 6-8 hours to be a reasonable response time for telephone consultations, while 43% considered 24 hours to be reasonable. Figure 2 shows the distribution of responses.

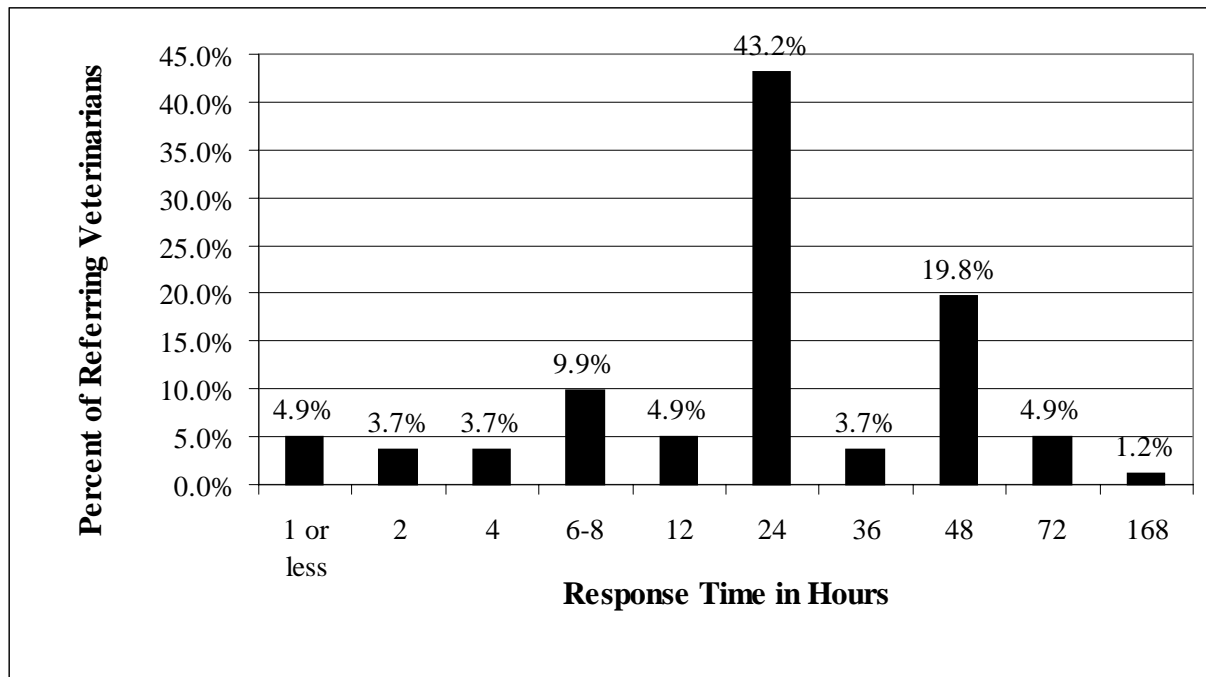


Figure 2. Reasonable response times for telephone consultations, according to referring veterinarians. n = 81

When a case has been referred to MSU-VTH that requires hospitalization, 24% of referring veterinarians prefer to receive updates on the patient’s condition within 24 hours. Twenty-one percent (21%) preferred an update in 48 hours and 10.5% wanted an update within 72 hours. Roughly 5% of veterinarians wanted an update once or twice during the hospital stay, but did not specify a time frame. Six percent (6%) only wanted an update when the case was discharged and 20% of respondents did not answer this question. When asked if it would be acceptable to have senior veterinary students provide updates on their referral cases, 72.6% said “yes,” 14.7% said “no,” and 11.6% did not respond to this question.

Veterinarians were asked what they considered to be a reasonable response time for receiving discharge information on cases they have referred to the MSU-VTH. Almost 37% of respondents reported that five days was a reasonable response time for receiving discharge information on a referred case; 20% reported two days as reasonable, 14% wanted the information within one day, and 14% wanted the information at discharge. Additionally, 5%

indicated that they wanted the information before the referring veterinarian was supposed to follow up, but did not give a specific time frame. Figure 3 displays the distribution of responses.

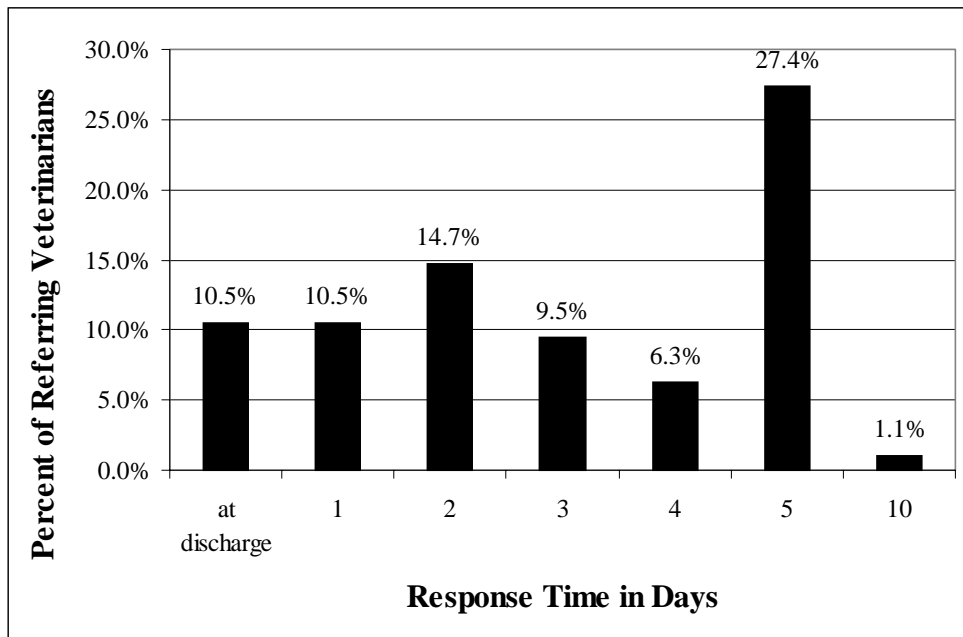


Figure 3. Reasonable response times for receiving discharge information on cases referred to the MSU-VTH, according to the referring veterinarians. n = 71

In an effort to improve communication between the MSU-VTH and referring veterinary practices, respondents were asked to rate the following on a scale from one to five with 1 = not helpful and 5 = very helpful: case update via the Internet, an e-mail newsletter, clinician biographies available on the Internet, and a website for general information. Table 11 provides a summary of responses received.

Table 11. Referring veterinarians rate the helpfulness of MSU-VTH providing additional information to them via the Internet. (1 = not helpful, 5 = very helpful)

Area of Additional Information	Number of Respondents	Number of respondents who rated it as					Mean Value
		1	2	3	4	5	
Electronic case update (via Internet)	72	21	4	12	16	19	3.1
E-mail newsletter	73	23	6	14	16	14	2.9
Faculty/clinician biographies (via Internet)	70	31	11	15	9	4	2.2
Website for general information	71	24	8	13	18	8	2.7

Twenty percent (20%) of veterinarians reported that they thought an electronic case update via the Internet would be very helpful in improving the exchange of information between MSU-VTH and their practice. Additionally, 15% reported that an e-mail newsletter would be very helpful, 8% thought a website for general information would be very helpful, and 4% thought that having clinician biographies available on the Internet would be very helpful.

Respondents were asked to write in any additional comments regarding communication between the MSU-VTH and private practitioners. While 4.2% of respondents had good communication with the VTH, 8.4% stated that oral and/or written communication with the VTH was poor. Five respondents (5.3%) indicated that they were treated unprofessionally by clinicians at MSU-VTH.

Additionally, referring veterinarians made the following specific suggestions for improving communication³:

- Use the fax machine (4.2%)
- VTH clinicians needs to initiate communication, instead of waiting for the referring veterinarian to call. (3.2%)

Veterinarians were asked to compare their impression of MSU-VTH fees with the fees charged in their practice, as well as fees charged in other practices. For similar services, 71.2% of the veterinarians said that MSU-VTH fees are, in general, higher than fees in their practice. Fifteen percent (15.2%) felt that MSU-VTH fees were lower and 13.6% thought that fees were the same. Compared to fees charged in other practices, 64.3% reported that MSU-VTH fees are higher, 12.5% thought the fees were lower and 23.2% thought that fees were the same.

³ Percentages following a statement are based on 95 surveys returned.

When asked if MSU-VTH fees should be higher, lower, or the same as fees in private practices: 59.7% of respondents said they should be higher, 32.5% thought they should be the same and 7.8% felt they should be lower. Forty-six (46) respondents who felt fees should be higher at the MSU-VTH cited the following reasons:

- Staff experience/specialists at MSU-VTH (28.3%)
- MSU-VTH has larger overhead costs (10.9%)
- Helps referring veterinarian to raise their prices (8.7%)
- Referrals should be more expensive (8.7%)
- Keeps client returning to referring veterinarian (6.5%)
- Resources and technology (6.5%)
- Board certified veterinarians at MSU-VTH (4.3%)
- High level of care (4.3%)

Some respondents gave more than one reason, while almost 22% of respondents who felt fees should be higher did not specify a reason.

The 25 respondents who felt that fees should be the same at the MSU-VTH gave the following explanations:

- Similar services should have similar prices (16.0%)
- MSU-VTH has experts (12.0%)

Almost three-fourths (72.0%) of those who felt fees should be the same as in private practice did not specify a reason.

The 6 respondents who felt that fees should be lower at the MSU-VTH gave the following reasons:

- MSU-VTH is a teaching hospital/students working on cases (33.3%)

- Cost greatly influences referrals (33.3%)

Some respondents gave more than one reason, while 50% of respondents who felt fees should be lower did not specify any reason.

Referring veterinarians were asked to rate the overall value of MSU-VTH equine services to their practice with 1 = low value and 5 = high value. Greater than 25% of respondents rated the MSU-VTH equine services as “high value” versus 2.1% that reported “low value”. The mean score overall was 4.0. Figure 4 shows the distribution of responses.

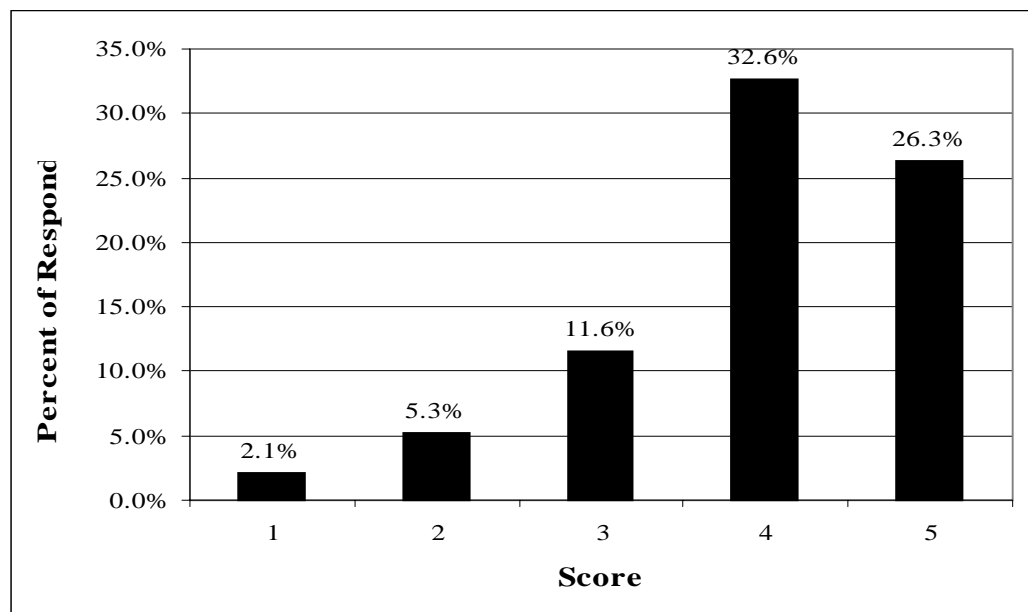


Figure 4. Overall value of the MSU-VTH equine services to referring veterinary practices. 1 = low value, 5 = high value

When asked an open-ended question about which one thing they would change about the MSU-VTH, 16.8% of referring veterinarians reported that they would “improve communication.” “Respect referring veterinarians” and “difficult to get through after hours/need person to answer phone, not machine” were each reported by 6.3% of the respondents. Table 12 summarizes these responses.

Table 12. Areas that referring equine veterinarians would change about the MSU-VTH.

Change	Freq.	%*	Change	Freq.	%*
Improve communication	16	16.8	Need easier appt scheduling	3	3.2
Respect referring vets	6	6.3	Shorten waiting time at clinic	2	2.1
Difficult to get through after hours / need person to answer phone, not machine	6	6.3	Should have continuing education for graduates	2	2.1
Move closer	5	5.3	Residents should have more clinical experience	2	2.1

*based on 95 surveys returned

Veterinarians were asked an open-ended question regarding why they did or did not refer equine cases to the MSU-VTH. The most frequent reasons reported for referring cases to MSU-VTH included⁴:

- ✓ Quality of care (24 hour) and services (14.7%)
- ✓ Case is beyond the referring veterinarian's capabilities (9.5%)
- ✓ Diagnostics and technology available at MSU-VTH (8.4%)
- ✓ Specialists/expertise available at MSU (7.4%)
- ✓ Emergency/surgery capabilities (7.4%)
- ✓ Owner/client preference (5.3%)
- ✓ To support school and students (3.2%)
- ✓ Great patient care (2.1%)
- ✓ 2nd opinion (2.1%)
- ✓ Convenience (2.1%)

The reasons reported for not referring cases to MSU-VTH included:

- Cost (14.7%)
- Distance (11.6%)
- Referring veterinarian can perform the work themselves (5.3%)

- Bad past experiences at MSU-VTH (3.2%)
- Attitude of clinicians at MSU-VTH (3.2%)

Veterinarians were asked an open-ended question about the most important factors in determining where they refer equine cases. The various responses are summarized in Table 13. The most frequent factors included: distance/location (15.8%), quality of service/care (14.7%), cost (14.7%), and client preference (10.5%). Kudos to Drs. Stick, Nickels, Derksen, and Schott who were specifically mentioned.

Table 13. The most important factors in determining where veterinarians refer equine cases.

Factor	Freq.	%*	Factor	Freq.	%*
Distance/location	15	15.8	Professionalism	4	4.2
Quality of service/care	14	14.7	Follow up with veterinarian	4	4.2
Price/cost	14	14.7	Confidence in treatment	3	3.2
Client preference	10	10.5	Severity of case	3	3.2
Client satisfaction/treatment	9	9.5	Emergency/surgery skills	3	3.2
Ability of Drs. & staff	7	7.4	Exceeds referring veterinarian's capabilities	3	3.2
Time (to get appt. & spent at clinic)	6	6.3	24 hour care	2	2.1
Technical capabilities/support services	6	6.3	MSU never questions treatment up until the referral	2	2.1
Communication with client/veterinarian	6	6.3	Accessibility	2	2.1

*based on 95 surveys returned

Other than MSU-VTH, the largest percentage of veterinarians refer cases to other private practices (80%); in total, 21 private practices were identified. Some respondents simply indicated “local practices.” Other universities provided a referral option for 12.6% of respondents, and an out-of-state specialty practice was listed by another 6.3%. These numbers clearly depict the referral options being utilized by Michigan equine practitioners, but do not necessarily reflect referral volumes or the caseload distribution between alternative referral options.

⁴ Percentages following each item are based on 95 surveys returned.

Discussion

More than one-half of all surveys mailed were completed and returned for an overall response rate of 55.6%. Due to the fact that all respondents did not respond to all questions on the survey, the response rate for specific questions varied. The geographic distribution of respondents roughly matches that of the equine population in the State. Considering both the response rate and the demographics of respondents, it appears that a representative sample of equine veterinarians from across Michigan was obtained.

Slightly more than 50% of veterinarians obtained their doctor of veterinary medicine (D.V.M.) degree within the past 20 years; 85.3% of those surveyed obtained their D.V.M. from MSU. These crucial alumni will be practicing and, therefore, likely referring equine cases somewhere for at least the next 20 years. This is something to bear in mind while interpreting the survey results and suggestions, because alternatives to MSU-VTH are already being used by at least 80% of the equine practitioners in Michigan.

More than 86% of veterinarians worked in a computerized practice and 65% claimed they were Internet capable. There were a mean 1.62 full time equivalent (FTE) veterinarians per practice, with over 80% of practices employing two or fewer FTE veterinarians. Considering this size distribution of equine practices in Michigan, it should be kept in mind that referral patterns may change in the future if strong trends toward practice consolidation develop. In fact, the need for reliable referral services may actually drive practices toward consolidation so that added expertise can be achieved in-house. When equine practitioners do need to refer their cases, the relationship between the clinician and the referring veterinarian, as well as client satisfaction, will help determine where they refer their equine patients.

Almost 18% of veterinarians had not referred any cases to MSU-VTH within the last year, while 47% had referred between one and six cases. Only 15.3% of veterinarians had referred more than 10 cases to MSU-VTH last year. The most frequent reasons given for referring a case to MSU-VTH included quality of care and services, the case was beyond the referring veterinarian's capabilities, and the diagnostics and technology available at MSU. Seventeen respondents (18%) who referred at least 1 case to MSU-VTH last year did not give a reason for their referrals.

Of the 16% that had not referred any cases to the MSU-VTH in the last year, 15% stated that it was due to cost and 12% that it was due to distance. In light of this, the VTH should be sensitive to price issues whenever considering fee increases for equine services. Other reasons given for not referring equine cases to MSU-VTH included: the veterinarian said they could do the work themselves, bad past experiences at MSU-VTH, and the attitude of clinicians at MSU-VTH. Almost 16% of those who did not refer any cases to the MSU-VTH did not provide an explanation as to why.

Almost 20% of veterinarians reported that they had a problem scheduling appointments with one or more equine services at the MSU-VTH during the last five years. Ophthalmology posed the greatest difficulty, with 13.7% of respondents indicating difficulty in this area. This may be due to the fact that ophthalmologists cover both small and large animals, so the volume of cases or scheduling logistics may be an issue. Note that this was an area where small animal referring veterinarians also reported scheduling difficulty⁵. At least 5% of respondents had difficulty obtaining an appointment in the lameness (7.4%) and emergency (5.3%) services.

⁵ Lloyd, James, *et al*, Small Animal Referring Veterinarian Satisfaction at the Veterinary Teaching Hospital, Michigan State University – July 1, 1999 through June 30, 2000, Department of Agricultural Economics, Staff Paper 2001-36, MSU, East Lansing, August, 2001.

Approximately 3% of respondents reported difficulty obtaining an appointment in the following areas: reproductive, surgery, and internal medicine.

The surgery and internal medicine services had the highest mean satisfaction score (4.3 out of 5.0). This may be related to the fact that these are also the most heavily staffed equine services. Note that only 3% of referring veterinarians reported difficulty in obtaining an appointment in these areas. Ophthalmology scored quite high (4.2) in spite of the fact that obtaining an appointment in this area was difficult. When interpreting these scores, keep in mind that overall satisfaction with a particular service may be related to its frequency of use. High levels of satisfaction might logically lead to higher levels of use for a given level of demand. Low levels of satisfaction may limit caseload.

Alternative medicine (acupuncture, chiropractic care, and herbal medicine) was the most frequent area that referring veterinarians wanted MSU-VTH to make available to them in the future; however, interest in this area was only moderate. Nutritional analysis and performance medicine were tied for second place.

Almost one-half (45%) of the veterinarians expected an increased need for the MSU-VTH equine services over the next five years. Driving factors included: more reproductive and/or lameness problems being recognized and an increasing equine population leading to an increase in the veterinarian's caseload. Twenty-eight percent (28%) of respondents thought that the number of referrals would stay approximately the same, while 12% thought that their referrals to MSU-VTH would decrease. Reasons included: the referring veterinarian is leaving equine veterinary medicine, expanding their clinic to do surgeries in-house, and the veterinarian is starting to refer cases elsewhere.

Among those who thought their need for MSU-VTH services would increase, the mean number of cases referred to MSU last year was 8.9. For those who expected their need to stay the same, the mean number of cases was 9.4 and for those who thought their need would decrease, the mean number of cases referred was 3.0. Based on this context, it is likely that MSU-VTH will be receiving an increased number of requests to handle equine referral cases over the next five years.

Veterinarians were asked about the services they currently perform on sport horses in their practice. Seventy-seven percent (77%) of respondents performed pre-purchase exams, 68% performed lameness diagnosis, and 66% had wellness programs. Only 4.2 % of respondents provided chiropractic services. If practitioners did not provide a particular service, they referred the client to a variety of places including MSU, other private practitioners, and other universities. Interestingly, 4.2% of respondents stated they already refer chiropractic, acupuncture and holistic/herbal services to MSU.

Referring veterinarians were asked to rate the likelihood (1 = poor, 5 = excellent) that they would refer a sport horse to the Mary Anne McPhail Equine Performance Center for each of the sport horse services listed in Table 9 (see Results section). Lameness diagnosis had the highest mean value at 3.7, followed by rehabilitation services (3.3), chiropractic services (2.7) and acupuncture services (2.7). Wellness programs were the least likely to be used, with a mean value of 1.8.

With regard to receiving case information from MSU, more than 18% of the responding veterinarians rated the quality and timeliness of telephone consultations as excellent. Twenty-four hours was considered a reasonable response time by 43% of respondents; 10% wanted a telephone consultation within six to eight hours.

Roughly 8% of responding veterinarians rated both the quality and timeliness of referral progress reports as excellent. However, greater than 10% rated the quality and timeliness of referral progress reports as poor. Within six to eight hours, 10% of respondents would like a progress report on their patient. By 24 hours, 43% of referring veterinarians wanted to receive a progress report; 20% indicated that 48 hours for a progress report was acceptable and 5% were willing to wait 72 hours. The majority of referring veterinarians had no problem with a senior veterinary student providing updates on their referral cases. This may be an opportunity for senior veterinary students to gain additional experience in the clinic while also improving communication between referring veterinarians and the MSU-VTH.

While 9.5% of referring veterinarians rated the quality of referral discharge information as excellent, only 5.3% rated the timeliness as excellent. Almost 10% rated the quality of referral discharge information as poor and 11.6% indicated that the timeliness was poor. Approximately 37% of respondents indicated that five days was a reasonable response time for receiving discharge information on a case they had referred. Forty-five percent (45%) wanted the information in three days or less.

In order to meet or exceed the expectations of most equine referring veterinarians, the following guidelines for timeliness of communication should be considered:

- less than or equal to 8 hours for a telephone consultation
- less than or equal to 24 hours for referral progress reports
- less than or equal to one or two days for discharge reports

Again, senior veterinary students may be an underutilized resource in these areas.

Twenty percent (20%) of veterinarians surveyed thought that an electronic case update via the Internet would be very helpful in improving the exchange of information between MSU-

VTH and their practice. Additionally, 15% reported that an e-mail newsletter would be very helpful. Recall that 65% of equine practices were Internet capable; MSU-VTH may want to examine these avenues further as an opportunity to enhance communication between referring veterinarians and the MSU-VTH. This may also provide an additional opportunity for senior veterinary students, as 87.5% of respondents stated that it would be acceptable to have senior veterinary students provide updates on their referral cases.

Written comments by respondents regarding communication with MSU-VTH ran the spectrum from poor to good, with twice as many poor communication comments as good communication comments. Five respondents (5.3%) indicated that clinicians at MSU-VTH had treated them unprofessionally.

Almost 50% of referring veterinarians thought that MSU-VTH fees were higher than fees in their practice. Additionally, 38% reported that MSU-VTH fees were higher than fees in other practices. Slightly more than 6% of surveyed veterinarians stated that MSU-VTH fees were lower than fees in their practice and 26.3% thought that fees were comparable. Over 48% of the veterinarians surveyed felt that MSU-VTH fees should be higher - based on the experience and expertise of the staff and the fact that MSU has larger overhead costs. Over 26% thought fees should be the same and 6.3% felt they should be lower because MSU-VTH is a teaching hospital and student vets are slower due to lack of experience.

Most referring veterinarians felt that the MSU-VTH equine service was valuable to their practice. Looking at Figure 4 (see Results section), 26.3% of the respondents rated the value as high, while only 2.1% reported the value as low. Almost 12% of respondents indicated that MSU-VTH was of intermediate value to their practice (score = 3) and one-third rated the value as being between intermediate and high (score = 4). Respondents, however, would make the

following improvements to the MSU-VTH: improve communication, respect referring veterinarians and provide a person to answer the phone after hours.

When choosing a hospital to refer equine cases to, respondents reported that distance/location, the quality of services, cost, and client preference were the most important factors. Because we cannot change our location, we need to focus our efforts on maintaining the quality of our services, including communication between clinicians and referring veterinarians and making sure that clients are seen in a timely manner. All of these need to be done while maintaining affordability of services for the client.

Other than MSU-VTH, Michigan veterinarians refer their equine cases to other private practices, other universities, and other specialty clinics. These all appear to be viable alternatives to MSU-VTH when location or availability becomes an issue.

Summary

While expertise and quality of care are considerations in making a referral, equally important are client satisfaction, appointment availability and communication/relationship with the clinician. In order to maintain customer satisfaction, this study indicates that MSU-VTH need to emphasize both clinical expertise and customer service. Currently, our strongest areas include:

- ★ Providing quality care / services to our patients
- ★ Expertise of our clinicians
- ★ Most current technology and treatment is available at MSU

The factors referring veterinarians deemed as being most important to them when choosing an equine referral hospital also offer us our greatest opportunities to excel in the customer service area:

- ★ increase the quality of customer service provided, including telephone consultations and progress reports, remembering that quality of service includes both medical outcome and the client's/referring veterinarian's experience at the clinic.
- ★ decrease the time it takes to obtain an appointment, especially in the ophthalmology, lameness, and emergency services.
- ★ improve communication between clinicians and referring veterinarians

Additionally, MSU-VTH may want to consider expanding the equine services we offer in order to meet the needs of clients/veterinarians and maintain our leadership role in the veterinary community. Referring veterinarians identified alternative medicine (acupuncture, chiropractic care, and herbal medicine), nutritional analysis, and performance medicine as services they would like MSU-VTH to offer in the future.

Appendix A

September 18, 2000

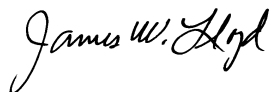
Dear Dr.

The Michigan State University College of Veterinary Medicine is conducting a survey of private veterinary practitioners regarding their experiences with the MSU Veterinary Teaching Hospital. The objectives of the survey are to gauge the level of satisfaction of referring equine veterinarians, and to identify areas that need expansion or improvement.

Your input is essential as we begin to outline future goals and objectives for the Veterinary Teaching Hospital. It should take approximately 10 or 15 minutes to complete the enclosed questionnaire, and all responses will be held in strictest confidence. Please return the questionnaire in the stamped, self-addressed envelope provided by Monday, October 2.

Thank you in advance for your assistance.

Sincerely,

A handwritten signature in cursive script that reads "James W. Lloyd".

James W. Lloyd, DVM, PhD
Assistant to the Dean for Practice Management
517/353-9559

Enclosure

Appendix A
Michigan State University Veterinary Teaching Hospital (MSU-VTH)
Equine Referral Survey

1. In which Michigan County is your practice located? _____

2. What year did you graduate from veterinary school? _____ What school? _____

3. What is your gender? Female Male (optional)

4. For which species does your veterinary practice provide services? Please check all that apply:

- | | | |
|-------------------------------|---------------------------------------|-----------------------------------|
| <input type="checkbox"/> Cats | <input type="checkbox"/> Exotics | <input type="checkbox"/> Horses |
| <input type="checkbox"/> Dogs | <input type="checkbox"/> Food Animals | <input type="checkbox"/> Wildlife |

5. Is your practice computerized? Yes No Are you Internet capable? Yes No

6. How many full-time-equivalent (FTE) veterinarians work in your equine practice? _____

(One FTE is equivalent to one veterinarian working full-time exclusively in equine, or a combination of veterinarians that add up to one full-time. For example, 3 veterinarians, each working half time in equine, equals 1.5 FTEs in equine. ***If you have no veterinarians engaged in equine practice, please stop here and return the survey in the enclosed envelope. Thank you.***)

7. Approximately how many equine cases have you personally referred to the MSU-VTH within the last year?
(***If none, please skip to question #11.***) _____

8. Have you had difficulty getting equine cases scheduled with the MSU-VTH in the past five years?

Yes No If Yes, what service areas were involved?

- | | |
|--|--|
| <input type="checkbox"/> Ophthalmology | <input type="checkbox"/> Internal Medicine |
| <input type="checkbox"/> Surgery | <input type="checkbox"/> Lameness |
| <input type="checkbox"/> Emergency | <input type="checkbox"/> Reproductive |

9. What are the top three service areas you have used for equine cases at the MSU-VTH during the last five years? (Please number 1 as the most used service and 2 for next most used service, and so on)

- | | |
|-------------------|-----------------------|
| ___ Ophthalmology | ___ Internal Medicine |
| ___ Surgery | ___ Lameness |
| ___ Emergency | ___ Reproductive |

10. How would you rate your overall experience with the top three service areas from question #9.

Appendix A

<u>Specific Service Area</u>	<u>Poor</u>				<u>Excellent</u>
	1	2	3	4	5
1. _____	1	2	3	4	5
2. _____	1	2	3	4	5
3. _____	1	2	3	4	5

Additional comments on above service areas:

1. _____
2. _____
3. _____

11. What new equine service area(s) would you like to see become available at the MSU-VTH in the future? (If more than one, please prioritize.)

12. How do you see your need for MSU-VTH equine service areas changing in the coming five years?

Volume of referral cases: Decreasing Increasing Same

Other comments:

13. Do you currently perform any of the below listed services on sport horses in your practice?

<u>Service</u>	<u>Performed?</u>	<u>Comments</u>
Wellness programs	<input type="checkbox"/>	_____
Pre-purchase exams	<input type="checkbox"/>	_____
Lameness diagnosis	<input type="checkbox"/>	_____
Rehabilitation services	<input type="checkbox"/>	_____
Chiropractic services	<input type="checkbox"/>	_____
Acupuncture services	<input type="checkbox"/>	_____
Nutriceutical programs	<input type="checkbox"/>	_____
Holistic/herbal services	<input type="checkbox"/>	_____

Appendix A

14. If the MSU-VTH offered any of the following equine services at the Mary Anne McPhail Equine Performance Center, what is the likelihood that you would refer cases?

	<u>Not Likely</u>					<u>Very Likely</u>
Wellness programs	1	2	3	4	5	5
Pre-purchase exams	1	2	3	4	5	5
Lameness diagnosis	1	2	3	4	5	5
Rehabilitation services	1	2	3	4	5	5
Chiropractic services	1	2	3	4	5	5
Acupuncture services	1	2	3	4	5	5
Nutriceutical programs	1	2	3	4	5	5
Holistic/herbal services	1	2	3	4	5	5

15. Where do you currently refer cases for the sport horse services listed in #14?

Equine wellness programs	
Equine pre-purchase exams	
Equine rehabilitation services	
Equine chiropractic services	
Equine acupuncture services	
Equine nutriceutical programs	
Equine holistic/herbal services	

16. How would you rate the following information you have received from the MSU-VTH professional staff on equine cases?

	<u>Poor</u>					<u>Excellent</u>	<u>Not Applicable</u>
<u>Quality of information</u>							
Telephone consultations	1	2	3	4	5	<input type="checkbox"/>	
Referral progress reports/updates	1	2	3	4	5	<input type="checkbox"/>	
Referral discharge information	1	2	3	4	5	<input type="checkbox"/>	
<u>Timeliness of information</u>							
Telephone consultations	1	2	3	4	5	<input type="checkbox"/>	
Referral progress reports/updates	1	2	3	4	5	<input type="checkbox"/>	
Referral discharge information	1	2	3	4	5	<input type="checkbox"/>	

17. What do you consider to be a reasonable response time for telephone consultations?

18. When an equine case that you have referred to MSU-VTH requires hospitalization, how frequently do you prefer to receive updates on the patient's condition?

19. Would it be acceptable to have senior veterinary students provide updates on your equine referral cases?

Yes No

20. What do you consider to be a reasonable response time for receiving discharge information on equine cases you have referred to MSU-VTH?

21. Would the following improve the exchange of information between MSU-VTH and your practice?

Not Very

Appendix A

	<u>Helpful</u>				<u>Helpful</u>
Electronic case update (via Internet)	1	2	3	4	5
E-mail newsletter	1	2	3	4	5
Faculty/clinician biographies (via Internet)	1	2	3	4	5
Website for general information	1	2	3	4	5

22. Do you have further comments regarding communication between the MSU-VTH and private practitioners?

23. For similar equine services, MSU-VTH fees are, in general:

a. lower the same higher than your practice (choose only one)

b. lower the same higher than other practices (choose only one)

24. For similar services, MSU-VTH fees should be, in general:

lower The same higher than private practices (choose only one)

Please explain why.

25. How would you rate the overall value of MSU-VTH equine services to your practice?

<u>Low Value</u>					<u>High Value</u>	<u>Not Applicable</u>
1	2	3	4	5	<input type="checkbox"/>	

26. If you could change just one thing about the MSU-VTH, what would it be?

27. Why do you or don't you refer equine cases to the MSU Veterinary Teaching Hospital?

28. What are the most important factors in your choice of where you refer equine cases? (Please prioritize)

29. Where else, other than the MSU-VTH, do you refer surgery, general medicine, or emergency cases?

Thank you for taking the time to complete this survey. Your assistance will help us improve the service provided by the MSU Veterinary Teaching Hospital, and enhance our educational programs.

If you have any questions, please contact Dr. James Lloyd at (517) 353-9559 or lloydj@cvm.msu.edu.

Appendix A

September 18, 2000

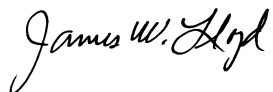
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Thank you in advance for your assistance.

Sincerely,

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James W. Lloyd, DVM, PhD
Assistant to the Dean for Practice Management
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2. What year did you graduate from veterinary school? _____ What school? _____

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4. For which species does your veterinary practice provide services? Please check all that apply:

- | | | |
|-------------------------------|---------------------------------------|-----------------------------------|
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(***If none, please skip to question #11.***) _____

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Yes No If Yes, what service areas were involved?

- | | |
|--|--|
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| <input type="checkbox"/> Emergency | <input type="checkbox"/> Reproductive |

9. What are the top three service areas you have used for equine cases at the MSU-VTH during the last five years? (Please number 1 as the most used service and 2 for next most used service, and so on)

- | | |
|-------------------|-----------------------|
| ___ Ophthalmology | ___ Internal Medicine |
| ___ Surgery | ___ Lameness |
| ___ Emergency | ___ Reproductive |

10. How would you rate your overall experience with the top three service areas from question #9.

Appendix A

<u>Specific Service Area</u>	<u>Poor</u>				<u>Excellent</u>
	1	2	3	4	5
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2. _____	1	2	3	4	5
3. _____	1	2	3	4	5

Additional comments on above service areas:

1. _____
2. _____
3. _____

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Volume of referral cases: Decreasing Increasing Same

Other comments:

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<u>Service</u>	<u>Performed?</u>	<u>Comments</u>
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Rehabilitation services	<input type="checkbox"/>	_____
Chiropractic services	<input type="checkbox"/>	_____
Acupuncture services	<input type="checkbox"/>	_____
Nutriceutical programs	<input type="checkbox"/>	_____
Holistic/herbal services	<input type="checkbox"/>	_____

Appendix A

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Appendix A

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24. For similar services, MSU-VTH fees should be, in general:

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Please explain why.

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1	2	3	4	5	<input type="checkbox"/>	

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