

Perspectives in Professional Education

Outcomes assessment of an alternative career choice program

Charles C. Farnsworth, PhD, and Leslie A. Fiechtner, MS

Objective—To assess the outcomes of an alternative track program designed to address shortages of veterinarians in nonpractice areas of the veterinary profession.

Design—Telephone survey.

Study Population—Recent veterinary graduates.

Procedures—A telephone survey of recent graduates from the Texas A&M University College of Veterinary Medicine and Biomedical Sciences Alternative Career Choice program was conducted. Respondents were asked to give open-ended responses to a list of 9 interview questions.

Results—Of the 21 alternative career choice students who graduated between the years 2000 and 2005, 17 were interviewed.

Conclusion—Analysis of the data suggested that it may be possible to decrease the total number of weeks allotted to the alternate career choice program without impairing the ability of graduates to find employment in their chosen career fields. (*J Am Vet Med Assoc* 2007;230:1152–1156)

Shortages of veterinarians in academia, public health, and other nonpractice areas of the profession have been a concern for many years, and various strategies have been used to meet the needs of the profession in these career fields.¹⁻³ One of the strategies used by the Texas A&M University College of Veterinary Medicine & Biomedical Sciences to help fill these gaps has been the development of the alternative career choice, or alternative track, for fourth-year veterinary students.

The alternative career choice program was designed for students who have an interest in a nonclinical practice or unique career path. The program gives professional students the flexibility to gain additional experience and training in areas not emphasized in the professional curriculum.

Typically, students planning careers in areas such as research, public health, laboratory animal medicine, pathology, or specialized clinical practice in zoologic or exotic animal medicine are those who choose to pursue the alternative career choice option. This option may involve multiple combinations of on-campus and off-campus experiences, clinical rotations, special assignments, electives, didactic courses in the college of veterinary medicine or the university, and research assignments.

For the most part, the number of students in the alternative career choice program has remained small

(Table 1), but data for recent graduating classes demonstrate the potential for substantial growth in the program. Although this trend increases the potential for reducing shortages of veterinarians in nonpractice careers, it potentially creates problems for the veterinary medical teaching hospital. As more students seek off-campus rotations as part of the 16-week alternative career choice program, fewer students remain to fill the clinical rotations required to provide adequate service to patients at the hospital. Faced with the possibility of

Table 1—Breakdown of graduating classes by career track.

Class	Class size	Career track			
		Large animal	Small animal	Mixed	Alternative
1993	121	8	38	72	3 (2.5%)
1994	110	6	32	67	5 (4.5%)
1995	115	14	47	51	3 (2.6%)
1996	118	17	44	52	5 (4.2%)
1997	118	26	61	29	2 (1.7%)
1998	122	27	71	21	3 (2.5%)
1999	124	32	49	42	1 (0.8%)
2000	118	19	60	35	4 (3.4%)
2001	125	19	71	34	1 (0.8%)
2002	112	16	48	45	3 (2.7%)
2003	119	25	68	24	2 (1.7%)
2004	109	26	50	27	6 (5.5%)
2005	113	24	42	42	5 (4.4%)
2006	125	29	59	27	10 (8.0%)
2007*	127	31	48	40	8 (6.3%)

*Early indication of students' clinical track selections.

From the Department of Educational & Communication Resources (Farnsworth) and the Office of the Dean (Fiechtner), College of Veterinary Medicine & Biomedical Sciences, Texas A&M University, College Station, TX 77843.

Address correspondence to Dr. Farnsworth.

not being able to maintain a critical mass of students for servicing hospital patients, the faculty thought it expedient to evaluate the effectiveness of the alternative career choice in meeting its goals.

Materials and Methods

In the fall of 2005, the Curriculum Committee of the Texas A&M University College of Veterinary Medicine & Biomedical Sciences developed a telephone survey of recent graduates of the college's alternative career choice program (Appendix). The purpose of the survey was to answer the following questions regarding the alternative career choice program:

- Do alternative career choice aspirations tend to have long-term positive effects on students' careers?
- Could positive effects have been gained through other reasonable means?
- Are we allocating the right amount of time in the fourth-year curriculum for the alternative career choice, or could fewer weeks be allotted to the alternative track program without diminishing its effectiveness?
- Does the alternative career choice adequately prepare students for licensing examinations?
- What careers are being pursued by alternative career choice graduates?
- Are responses to interview questions given by respondents employed in alternative careers different than responses given by respondents not employed in an alternative career?

Contact information for the respondents was collected by use of various sources, including, but not limited to, college records and the Texas Veterinary Medical Association and AVMA membership directories. Contact information was not available for each of the 21 alternative track students who had graduated since the year 2000, but all but 1 of the former students who were contacted were able to be interviewed.

During the initial contact, the investigator identified the purpose of the call and asked whether the respondent would prefer to be interviewed immediately or wait to be interviewed at a later time. Most respondents preferred to be interviewed immediately.

Results and Discussion

Of the 21 alternative career choice students who graduated between the years 2000 and 2005, 17 were interviewed. Field notes of the respondent's answers to survey questions were recorded by the investigator. These results were then categorized by employment status and summarized, along with their respective survey questions (Table 2).

The following represents an analysis of responses to survey questions.

Do alternative track career aspirations tend to have long-term positive effects on students' careers?—A high number of respondents (Table 3) became employed in alternative careers, and 13 stated the alternative track program had had a positive effect on their career choice. Of the 5 respondents not employed in alternative careers at

Table 2—Summary of responses to a survey about an alternative career choice program categorized by employment status.

Responses	Employed*	Not employed†	Total
Entry career interest			
Aquatic animals	1	1	2
Exotic animals	1	1	2
Laboratory animal medicine	2	0	2
Mixed animal medicine	0	1	1
Public health	1	1	2
Research	2	0	2
Small animal medicine	2	1	3
Zoo animals	2	1	3
AT selected			
Aquatic animals	0	1	1
Exotic animals	1	1	2
Laboratory animal medicine	2	0	2
Pathology	1	1	2
Poultry medicine	1	0	1
Public health	1	1	2
Regulatory medicine	0	1	1
Research	3	0	3
Zoo animals	2	1	3
Would still select the AT			
Yes	10	5	15
Probably	1	1	2
Changes I would make to the AT			
More clinical rotations	3	1	4
Different venues	2	4	6
More venue selection guidance	1	0	1
No changes	5	1	6
Was 16 weeks too long for the AT?			
Just right	8	4	12
Too long	1	2	3
Too short	2	0	2
AT's effect on licensing examinations			
No effect	9	3	12
Positive effect	1	2	3
Negative effect	1	1	2
AT's effect on present career			
No effect	0	4	4
Positive effect	11	2	13
Still pursuing an AT career?			
Yes	10	5	15
No	1	1	2
If not employed in AT career, why?			
Family or personal reasons	0	3	3
Financial reasons	0	1	1
Preferred other career options	0	1	1
Job market too tight	0	1	1

*Respondents employed in an alternative career at the time of this survey study. †Respondents not employed in an alternative career at the time of this survey study.
AT = Alternative track.

the time of this survey study, all but 1 were continuing to seek employment in the alternative career of their choice.

As far as the long-term effects, it may be of interest to note that 9 of the 13 respondents who entered the veterinary curriculum with alternative career aspirations became employed in an alternative career, whereas only 2 of the 4 respondents who entered the veterinary curriculum with traditional career aspirations were employed in alternative careers. This may indicate that individuals are more likely to be successfully employed in alternative track careers if that aspiration is held at the beginning of their veterinary education.

Table 3—Tracking survey respondents' career interest and effect on career.

Respondent	Early career interest	AT	Present career	Positive effect
1	Aquatics	Aquatics	Small animal	No
2	Exotic animal	Exotic animal	Small animal*	Yes
3	Zoo medicine	Zoo medicine	Zoo medicine	Yes
4	Research	Research	Laboratory animal	Yes
5	Pathology	Pathology	Pathology	Yes
6	Laboratory animal	Laboratory animal	Laboratory animal	Yes
7	Small or mixed animal	Poultry	Poultry	Yes
8	Small animal	Pathology	Small animal	Yes
9	Zoo medicine	Zoo medicine	Zoo medicine	Yes
10	Research	Research	Research	Yes
11	Zoo medicine	Zoo medicine	Small animal*	No
12	Public health	Public health	Not employed*	No
13	Laboratory animal	Laboratory animal	Laboratory animal	Yes
14	Exotic animal	Exotic animal	Exotic animal	Yes
15	Small animal	Research	Research	Yes
16	Public health	Public health	Public health	Yes
17	Mixed animal	Regulatory medicine	Small animal*	Maybe

*Denotes a respondent continuing to seek employment in an alternative career.
See Table 2 for remainder of key.

A possible negative effect of the alternative track may be revealed by careful analysis of respondents' answers to other survey questions. For example, question 4 (Appendix) asked, "What changes would you have made to the 16 weeks spent in the alternative track of your fourth year?" Three of the respondents employed in an alternative career said they wish they had taken more clinical rotations during their fourth year. This result raises the possibility that some alternative careers may require more clinical expertise than previously perceived by the respondents. Also, question 6, referring to a possible effect of the alternative track on licensing examination performance, may be revealing. While 12 of the 17 respondents stated that the alternative track had no effect on their examination performance, 3 of these respondents also stated that they had taken all their clinical rotations immediately prior to sitting for the examination.

Could positive effects have been gained through other reasonable means?—Gathering data to answer this question proved difficult. Asking respondents for a direct response to this question would have been paramount to asking them to forecast what might have been. Instead, the respondents were encouraged to give open-ended responses to questions concerning whether they would still want to pursue the alternative track if they had the choice to make again, what changes they would have made to their alternative career choice, and whether the alternative track has had a substantial impact on their career (Appendix; Table 4). A review of open-ended responses revealed a small set of key factors cited by the respondents in answering questions 3, 4, and 7.

All respondents stated that they would still select the alternative career choice if they were given the opportunity to make the same decision again. Three key factors of experience, opportunity, and knowledge were identified by respondents offering open-ended responses to this question (Table 4). The experience, opportunity, and knowledge factors referred to assertions by the respondents that the alternative career choice gave them opportunities to gain unique educational experiences,

additional opportunities for career advancement, and career-specific knowledge that could not have been gained in any other way.

When responding to question 4 about what changes they would have made to their alternative track experience, change of venue was the response given most often, followed by no desire for change, more time in clinical training, and last, desire to have had more guidance in selecting alternative track venues or more support in reducing the financial burden incurred by the additional expense of traveling to off-campus sites (Table 4).

The key factors identified in responses to question 7 dealt with how open-ended responses related to the respondent's ability to gain employment in their present position. Most responded yes or no to the question about whether their alternative track experience had an impact on their present career track, but others responded that they had been able to interview for an alternative career position recently, that they felt the alternative track experience was essential to obtaining their present employment, or that the alternative track experience was essential to gaining the knowledge needed for their present career.

One respondent mentioned that, besides the alternative track, the only other way to be competitive for the program he had entered was to have an additional year of training beyond graduation. It appears then that one alternative to the alternative track, at least for some students, is to spend an additional year in training beyond graduation. Another respondent volunteered that he was able to successfully compete for his present position because of the breadth of experience he gained in the alternative track. The respondent stated that the faculty in the veterinary medical degree program were able to help him get accepted into programs during his alternative track that he would not have been able to get into on his own and that he believed the only way to get accepted into these programs was through the alternative track.

Table 4—Summary of open-ended responses to survey questions 3, 4, and 7.*

Respondent	AT	Present career	Question 3†	Question 4‡	Question 7§
1	Aquatics	Small animal	Yes	Clinics	No
2	Exotic animal	Small animal II	Yes	Venue	Interview
3	Zoo medicine	Zoo medicine	Yes	None	Yes
4	Research	Laboratory animal	Experience	Venue	Qualified
5	Pathology	Pathology	Experience	None	Yes
6	Laboratory animal	Laboratory animal	Opportunity	Help	Yes
7	Poultry	Poultry	Opportunity	Help	Yes
8	Pathology	Small animal	Knowledge	Venue	Knowledge
9	Zoo medicine	Zoo medicine	Knowledge	None	Qualified
10	Research	Research	Experience	Venue	Extra year
11	Zoo medicine	Small animal II	Yes	None	No
12	Public health	Not employed II	Yes	Venue	No
13	Laboratory animal	Laboratory animal	Opportunity	Clinics	Yes
14	Exotic animal	Exotic animal	Experience	Clinics	Qualified
15	Research	Research	Yes	Clinics	Yes
16	Public health	Public health	Experience	None	Yes
17	Regulatory medicine	Small animal II	Experience	Venue	Interview

* See Appendix. †Question 3 referred to whether the respondent would still select the AT and why. ‡Question 4 referred to what changes the respondents would have made to their AT. §Question 7 referred to whether the AT helped prepare the respondent for their career. II Denotes a respondent continuing to seek employment in an alternative career.
See Table 2 for remainder of key.

Are we allocating the right amount of time in the fourth-year curriculum for the alternative career choice or could fewer weeks be allotted to the program without diminishing its effectiveness?—Two factors suggest that perhaps too much time was being allotted to the alternative track program. The first factor is the perceived value of additional or sufficient clinical training expressed by many of the respondents. This was particularly meaningful for a substantial number of respondents who were or were not employed in alternative careers and those whose jobs placed heavy demands on their clinical skills. The second factor involves the success rate of the respondents in achieving their goals in obtaining alternative careers. The information gained in the interviews suggested that the two-thirds success rate reported might have been even higher if the respondents had not opted for different careers. Furthermore, only 1 respondent (a class of 2005 graduate) reported being unable to find employment in his or her chosen field. This high success rate may suggest that the respondents, for the most part, may have competed just as successfully for their positions with less time being spent in the alternative track.

Other factors, however, suggested that it might be counterproductive to reduce the amount of time allotted to the alternative track. For example, 2 respondents reported that they were not able to complete their alternative track rotations prior to graduation. One respondent emphasized that the duration of the alternative track program allowed him to successfully compete for his present position because it allowed him to gain a wide variety of experiences in a short period.

It may be that this question could only be answered on a case-by-case basis. Some respondents, for example, stated that the alternative track experience did not put them at a disadvantage clinically because of the amount of clinical experience they had been able to gain prior to entering the veterinary medical degree program. Not only do students' educational needs vary, but the educational requirements of the various alternative careers also vary.

Does the alternative career choice adequately prepare students for licensing examinations?—Only a small percentage of the respondents (2/17) believed their participation in the alternative track had negatively impacted their preparation for the licensing examination (Table 2). However, the degree of impact was reported to be minimal. Most of the remaining respondents believed their alternative track experience had no effect on their performance on the licensing examinations (12/15), whereas 3 respondents believed it had a positive effect on their performance.

What careers are being pursued by alternative career choice graduates?—Most respondents were employed in alternative careers at the time of interviewing (Table 3). The term employment here is meant to include those respondents who were still in either a residency or a graduate program at the time they were contacted.

Are responses to interview questions given by respondents employed in alternative careers different than responses given by respondents not employed in an alternative career?—There were some differences in respondents' answers to the survey questions based on whether they were presently employed in an alternative career (Table 2). Three of the employed respondents indicated a desire for more clinical training, whereas only 1 of the nonemployed respondents mentioned clinical training. When asked whether 16 weeks was too long, just right, or too short, nonemployed respondents had a slightly greater tendency to think the program was too long. When asked whether their alternative track experience had a substantial impact on their present career track, nonemployed respondents were far more likely to report that the alternative track had no effect on their present career.

Conclusion

Although it is difficult to draw any certain conclusions from the indirect measures used in this survey study, the results do provide important infor-

mation for directing future research. The data from this study indicate that 1 important area for future research concerning the alternative track would be to examine the effect of decreasing the number of weeks allotted to the program. The importance of this question was indicated by the number of respondents employed in alternative careers who voiced a concern that more clinical training may be beneficial for some alternative careers. Also, this area of concern is augmented by the fact that almost a third of the respondents were employed in clinical careers.

Other questions for future research were not addressed by this study. For example, are participants in an alternative track program more likely to enter nonpractice careers than their counterparts in the professional curriculum? Researching this question would involve a much broader study tracking the careers of a sample of veterinary graduates over a number of years.

Finally, it should be remembered that the alternative career choice program attempts to prepare students for a wide variety of careers. It is doubtful that 1 program could be tailored to fit the specific needs of every student. However, despite the fact that slightly more than a third of the respondents were not employed in alternative careers at the time of this survey study, they all agreed that they would probably still have selected the alternative track if they had the chance to make the choice again.

Appendix

Telephone survey of recent graduates of the college's alternative career choice program.

1. What was your career interest upon entry into the professional veterinary curriculum?
2. Why did you choose the alternative career track in your fourth year?
3. If you had the fourth year of the veterinary professional curriculum to do over again, would you still select the alternative track as compared to small animal, large animal, or mixed? Why or why not?
4. What changes would you have made to the 16 weeks spent in the alternative track of your fourth year?
5. Was 16 weeks too long, just right, or too short?
6. Do you think your alternative track had a positive or negative effect on your performance on the licensing examinations?
7. Did your alternative track experience have a "significant" impact on your present career track?
8. Are you still pursuing the interest that drove your selection of an alternative track?
9. If not employed in your area of interest, why not?

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