

Perspectives in Professional Education

A description of the Tufts Cummings School of Veterinary Medicine–Massachusetts Equine Clinic combined equine medicine internship program

Melissa R. Mazan, DVM, DACVIM, and Jay Merriam, MS, DVM

The body of information and clinical skills that is considered a minimum knowledge base for veterinarians and physicians has expanded dramatically over the past 2 decades. In human medicine, this has resulted in a gradual lengthening of the postgraduate training period, with fewer physicians entering practice after only 4 years of medical school training and a year-long internship. In contrast, the training period for veterinarians has largely been unchanged, with most veterinarians entering practice after 4 years of veterinary school and without first completing internship training. The combination of an increased minimum knowledge base and static training period may inhibit our ability to produce new graduates who are ready for practice. Although internship training was traditionally the pursuit of those students who intended to pursue specialty board certification through residency training, many graduates now complete an internship simply as a further training step before entering practice.

Currently, there are only 29 internship positions at university-based veterinary teaching hospitals devoted to equine medicine and surgery, meaning that there are limited opportunities for individuals interested in equine practice to obtain an internship position at an academic institution. By contrast, internship positions in private practice are more numerous, with more than 137 such internships listed through the American Association of Equine Practitioners Avenues program.

Traditionally, academic internships have been thought to provide more opportunities for didactic learning. Interns at university-based veterinary teaching hospitals typically have access to a wide range of nationally and internationally recognized experts not just in equine medicine and surgery but also in anesthesia, radiology, ophthalmology, cardiology, and other specialty areas. They also typically have access to extensive continuing education lectures and opportunities for one-on-one consultation with experts. Frequently, these interns are also exposed to clinical and basic research, providing them an opportunity to determine whether they wish to pursue research as a career.

The drawbacks of academic internships are also clear. Interns at university-based veterinary teaching hospitals are far less likely to be exposed to the types of routine cases typically handled by primary care veterinarians. In addition, depending on the hospital, these interns may receive little training in practice management or the financial aspects of veterinary practice. Because many university-based veterinary teaching hospitals are tertiary care facilities, interns will often be exposed to particularly complex cases that are beyond their capabilities given their current level of training. As a result, it may be difficult for individuals in academic internships to find a place, as they compete with third- and fourth-year students for opportunities to learn and perform more basic procedures and with residents for opportunities to handle more complex cases or more difficult clinical tasks. Finally, for individuals completing an internship at the same institution where they completed their veterinary school training, it can be difficult to transition from the student-professor relationship to a more collegial relationship. In the worst of all possible cases, interns may find themselves in a position where they have been given duties without the responsibility or authority to complete them. This situation in particular has been shown to decrease learning motivation among interns in human medicine.¹

By contrast, private practice internships have traditionally been thought to provide greater opportunities for learning entry-level medical procedures and becoming acclimated to business management aspects of veterinary practice, although the benefits of private practice internships extend beyond these things. Because most private practices treat large numbers of primary care cases, interns in such practices can often be given greater case responsibility earlier in their training, allowing interns to gain proficiency in entry-level procedural skills while developing confidence and skill in managing common problems. Complex cases beyond the intern's skill level will generally be less common in private practice internships than in academic internships. On the other hand, interns in private practice generally have less broad access to multiple experts and less access to continuing education seminars and lectures, compared with interns in academic programs, and the commitment to didactic training is typically less for private practice internships than for academic internships.

From the Department of Clinical Sciences, Cummings School of Veterinary Medicine, Tufts University, North Grafton, MA 01536 (Mazan); and the Massachusetts Equine Clinic, 75 Locust St, Uxbridge, MA 01569 (Merriam).
Address correspondence to Dr. Mazan.

In contemplating the benefits and drawbacks of academic and private practice equine internships, it seemed that combining the 2 would provide superior training both for those individuals who wished to pursue specialty training after completing an internship and for those who wished to pursue a career in private practice. Studies¹⁻³ from the United Kingdom and Australasia suggest that such an approach is effective in the training of physicians. In the United Kingdom in particular, combined private practice and university-based internships for physicians have become increasingly common and are perceived by interns as providing good formal and practical teaching that meets their educational needs.² A recent study³ found that teaching in human university-based hospitals was seen as more service based (ie, focused on ensuring that the patient received all medications and that all procedures were correctly completed), whereas practice-based training was seen as more learning focused. Interns reported that practice-based learning made them more reliant on their clinical skills and judgment, particularly when faced with a lack of resources, and that practice-based learning was less stressful and provided more time for reflection, with less need to solve problems urgently. At the same time, interns perceived the value of working with consultants at university-based hospitals and of observing more complex procedures and diagnostic workups of more complex cases. To our knowledge, there are no data concerning the effectiveness of either type of internship program for the postgraduate training of veterinarians.

In response to a need for an internship that would provide strong didactic and practical training, the Massachusetts Equine Clinic in conjunction with Tufts University Cummings School of Veterinary Medicine decided 15 years ago to create a combined academic and private practice equine internship program. In developing this program, it was understood that for this combined internship program to be successful, it had to be beneficial not only for the interns enrolled in the program but also for the university and participating private practice.

In particular, it was recognized that the internship year can have a large impact on the eventual career paths of participating veterinarians. Although there is little research on the training of veterinarians, studies^{3,4} on the training of medical doctors have found that the internship year has a strong influence on the ultimate career choice of physicians. In essence, the internship year can be seen as a process of professional assimilation during which interns are taught by example, direct instruction, and effective coaching how to function as veterinarians and colleagues. An important goal in developing the combined equine internship program, therefore, was to help develop confidence and independence in participating interns by providing training in and an appreciation for lifelong learning in the pathophysiology of disease, patient management, clinical procedures, client communication, and practice management. In particular, it was extremely important that interns not be seen merely as a source of inexpensive labor.

For the Massachusetts Equine Clinic, the combined equine internship program provided, at least in part, a type of year-long interview process, during which the clinic could decide whether it wished to invite individuals completing the internship to join the practice. Private practices often have trouble finding and training new associates, and this can be complicated by the fact that new graduates are frequently inexperienced in many basic procedures simply because of the types of cases they most commonly see during their veterinary school training. The combined internship program provided veterinarians at the Massachusetts Equine Clinic an opportunity to train interns at a time when the interns' salary was such that it did not demand a high level of productivity. In addition, although the interns frequently lacked experience and skills, they generally had the most up-to-date knowledge. Importantly, the combined internship program provided the Massachusetts Equine Clinic an affiliation with the university's referral practice, allowing cases to flow seamlessly from the equine clinic to the university and back again and providing a conduit for telephone and e-mail exchanges.

For Tufts University, the combined equine internship program provided the university an opportunity to provide additional postgraduate training opportunities without having to obtain substantial amounts of additional funding. In addition, the program offered an opportunity to provide interns additional training in primary care cases and to foster a relationship between university-based veterinarians and veterinarians in the private practice.

For both the university and the private practice, the combined internship program allowed them to add additional staff without adding permanent positions and overhead. Interns handled approximately half the emergency cases at the 2 institutions, provided an additional physical presence, and relieved some of the pressure associated with high caseloads.

The first step in developing the combined internship program was to ensure a strong working relationship between Tufts University and the Massachusetts Equine Clinic and to ensure that they shared common goals and standards with regard to the practice of medicine. Concerns were raised about difficulties associated with maintaining autonomy while ensuring continuity of care for patients and continuity of training for interns. Thus, while each institution was allowed to decide the extent of independence and level of responsibility each intern would have during each of the stages of the training program, it was thought important to reach a consensus as to how referrals would be handled.

Following these initial discussions, it then became necessary to obtain approval from department heads and the dean at Tufts University and to identify any potential problems related to professional licensing and insurance. A compensation package and schedule of participation was developed, and the internship program was registered with the veterinary intern and resident matching program.

Some early experimentation was then needed to arrive at an optimal configuration for the internship. The most important consideration was determining the length of time interns would spend at each institution

before rotating to the other, and after various permutations, it was found that a 2-month rotation schedule worked best. These 2-month blocks of time allowed interns enough time to settle into the new routine and to have some continuity of patient care and student teaching. An additional consideration was ensuring that interns were not scheduled to be on emergency duty on back-to-back weeks when they rotated from one institution to the other.

For the academic portion of the internship, interns would participate in general introductory activities for new house officers and then meet with one of the senior clinicians, who would assess each intern's clinical skills to determine the level and type of supervision that would be necessary. Interns would be closely supervised during the first 2 months of the program, but would be allowed, at the discretion of the primary house officer, to manage low-risk cases. During this period, the intern would be paired with a resident for emergency on-call duty and would participate in all emergency cases with that resident. After the first 2-month rotation, residents and senior clinicians would meet to decide whether individual interns should be provided greater autonomy. Most interns would be allowed at this time to admit emergency cases under the guidance of emergency clinicians and to have greater responsibility for case management. Interns would also participate in student teaching, help to lead rounds, participate in clinical laboratories for veterinary students, and participate in client communications. Interns would further be expected to attend intern-resident teaching rounds every week, participate in journal clubs, and prepare two 20-minute continuing education talks to be presented to an audience of veterinary students, house officers, and senior clinicians. If desired, the intern could also become involved in research projects.

For the private practice portion of the program, interns would spend the first 2-month rotation riding with one of the practitioners, observing and eventually working under the direct supervision of the practitioner. During the second 2-month rotation, interns were invariably proficient enough to begin some solo ambulatory and emergency duty with backup support available as needed. Interns were specifically trained in the areas of client relations, medical paperwork, and finances and spent 3 mornings each week discussing in-house patients and performing clinical procedures under close supervision. In addition, interns assisted the practice in providing veterinary services for horse shows in the area.

Individuals who have completed the combined equine internship program over the past 15 years have gone on to a variety of careers. Four obtained board certification from the American College of Veterinary Internal Medicine, with 3 of these eventually accepting faculty positions at veterinary schools and 1 entering a postdoctoral fellowship. One obtained board certification from the American College of Theriogenology and is pursuing a PhD in reproduction, and another obtained board certification from the American College of Veterinary Surgeons. Two pursued careers in laboratory animal practice, and 6 entered private equine practice. One eventually became an associate at the Massachusetts Equine Clinic, and several others entered residency training programs.

Together, Tufts Cummings School of Veterinary Medicine and the Massachusetts Equine Clinic have endeavored to produce confident, independent interns who have been able to experience and learn from the best of both the academic and a private practice environment. In the academic setting, interns are challenged to understand the pathophysiology of disease, appreciate the application of basic science research to patient management, and develop advanced clinical skills. In the private practice setting, interns are able to learn practical skills and gain confidence through managing more commonly encountered cases and are challenged to understand the importance of and gain competence in client communication and practice management. Both the university and the private practice benefit by the presence of these interns and by the pivotal position they occupy as they interact with the university and the private practice. Veterinarians who complete the combined academic and private practice internship will have a much better view of the relationship between the 2 types of practices and will be ready to enter either, depending on their interests.

References

1. Cantillon P, Macdermott M. Does responsibility drive learning? Lessons from intern rotations in general practice. *Med Teach* 2008;30:254-259.
2. Evans A, Gask L, Singleton C, et al. Teaching consultation skills: a survey of general practice trainers. *Med Educ* 2001;35:222-224.
3. Martin AA, Laurence CO, Black LE, et al. General practice placements for pre-registration junior doctors: adding value to intern education and training. *Med J Aust* 2007;186:346-349.
4. Mumford E. *Interns: from students to physicians*. Cambridge, England: Harvard University Press, 1970;1-298.