

Past, present, and future – rural veterinarian

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Abstract

Historically, the term “rural practice” was synonymous with mixed animal, large animal, or food animal practice, and veterinary practitioners devoted the majority of their time ministering to food animals. This is no longer true. Rural practitioners’ caseloads have fundamentally changed, with most mixed practices in western Canada now devoting more time to companion (small animals and horses) versus food animals. Not only has rural practice become more companion animal-oriented, but the services being provided to producers is evolving. The food animal service model of the future will see a migration from the traditional service-on-demand model centered on individual animals towards a consultative type practice, wherein the herd becomes the economic unit. This change will be driven by changing producer demographics and economies of scale that will lead to far fewer, but much larger farm operations. The challenge for rural practitioners will be to create a value proposition for their producers.

Résumé

Historiquement, l’expression « pratique en milieu rural » était synonyme de pratique mixte, pratique des grands animaux ou des animaux destinés à l’alimentation, et les praticiens consacraient la plus grande partie de leur temps aux animaux destinés à l’alimentation. Ce n’est plus le cas maintenant. L’ensemble des cas pris en charge par les praticiens en milieu rural a changé radicalement, la plupart des pratiques mixtes dans l’Ouest du Canada consacrant maintenant davantage de temps aux animaux de compagnie (petits animaux et équins) qu’aux animaux destinés à l’alimentation. Non seulement la pratique en milieu rural est-elle plus orientée vers les animaux de compagnie, mais les services offerts aux producteurs évoluent également. Le modèle de service de l’avenir pour les animaux destinés à l’alimentation, qui était traditionnellement un modèle de service sur demande axé sur un animal en particulier, évoluera vers une pratique de type consultatif, dans laquelle le troupeau devient l’entité économique. Ce changement découlera des changements démographiques chez les producteurs et des économies d’échelle qui entraîneront la réduction considérable du nombre d’exploitations agricoles, qui seront toutefois beaucoup plus grandes. Le défi que

devront relever les praticiens en milieu rural sera d’offrir des propositions distinctives à leurs producteurs.

Brief History of Formalized Veterinary Education

Arguably, the veterinary profession was founded on rural practice. Last year marked the 250th anniversary of formalized veterinary medicine. In 1761, the Royal Council of France issued a decree for the establishment of a veterinary college in Lyon, France.¹ Based on the following, it was clear that the impetus behind the college was to control diseases of livestock, of which rinderpest was of particular concern, “...to open a school where would be taught publicly the principles and the method to cure the diseases of livestock ... to conserve livestock in times where this epidemic desolates the countryside”. The Veterinary College of London would be established 30 years later in 1791, and in 1823, one of its graduates, William Dick, founded the Royal Dick veterinary college in Edinburgh, Scotland.² The significance of the Royal Dick is that North America’s veterinary lineage can be traced back to this college, and to three people in particular: Andrew Smith, who founded the Ontario Veterinary College (OVC) in 1862, James Law, who was to become the first professor at Cornell University in 1868, and Duncan McEachran, who founded a private veterinary school in Montreal in 1866.

For a more in-depth review of the history of veterinary education in North America, I suggest reading an excellent series of articles authored by Smith and published in the *Journal of Veterinary Medical Education*.⁷⁻¹⁰ Briefly, the first wave of American veterinary colleges occurred in the 1850s with the establishment of ~35 for-profit private schools, all of which failed. A critical event, however, in American veterinary education occurred in 1862 when Congress passed the Morrill Land Grant Agricultural Act, which led to a renaissance in American veterinary education. By the early 1880s, 22 of the land-grant agricultural colleges had at least one veterinary professor. Unlike the for-profit schools, nine of the land grant veterinary colleges established from 1868 to 1907 are still in operation today. Post WWII saw a second wave of land grant affiliated colleges established, followed by a third wave in the 1970s. The latest college to receive accreditation in the continental USA was the College of Veterinary Medicine at Western University of the Health Sciences (Pomona, CA) in 2010. Discussions

regarding establishing three more veterinary colleges are ongoing, even though the number of veterinary graduates has increased by ~24% over the last decade.

Like our American counterparts, Canada has a long tradition in veterinary education, having the longest continuously operating veterinary college in North America, the Ontario Veterinary College. Furthermore, Canada played a key role in the formative years of American veterinary education, as nearly half of OVC's first 3,000 graduates populated American private practices and veterinary colleges.

Rural Practice on a Continuum

The following discussion is based on a series of Focus Group meetings involving mixed animal practitioners in western Canada, along with a survey of a similar group of veterinarians. The Focus Group meetings were held in September and October of 2009, and the number of veterinary participants ranged from seven to 16 per meeting; 96 veterinarians participated in the discussions. In addition, ~ 300 mixed and food animal practices in western Canada were surveyed in 2009 to assess how practice caseloads changed from 2000 to 2008; responses from 100 clinics were analyzed. The Focus Group meetings spawned many interesting sidebars with two distinct themes emerging: 1) rural practice can be viewed on a time continuum, and 2) what rural practitioners do can be viewed on a services continuum.

Rural Practice on a Time Continuum^a

Looking back to the pre-1970s, mixed practice was synonymous with food animal or rural practice, and veterinarians earned a living ministering to draft horses and cattle. A 100% mark-up on drugs was common, and the brucellosis and Tuberculosis eradication programs, supported by the federal agencies, provided an important revenue stream.

The 1970s saw an influx of Continental beef breeds into Canada. Weaning a large calf in the fall was the metric for success and producers embraced the idea of raising larger cows, which begat larger calves. Practitioners recalled the days of doing 500-800 caesarean sections in a spring, whereas today they were doing a tenth as many. Along with the caesarean sections, there were calvings, prolapses, and scouring calves. Those who were willing to work long hours made a very lucrative living doing 'fire engine practice'.

By the late 1980s to '90s, the trend in beef calf production was firmly back towards moderation and a live calf at calving was more important than a large calf at weaning. This trend was in part spurred by consolidation and economics in the livestock industry. The 1980s also ushered in greater competition in drug sales

and veterinarians began to more actively promote 'herd health', such as vaccination protocols, pregnancy checking, and bull evaluations. The emphasis was beginning to shift from the individual animal to the herd.

From 2000 to 2008 many of the common tasks and procedures that traditionally defined cattle practice were now in a steep decline. Practices also felt the impact of the "Own-Use Importation" provision, allowing producers to directly source low-cost, pour-on endectocides and other veterinary products from the United States. But the American influence on the Canadian cattle industry, and by extension food animal practice, was not limited to low-cost drugs. Bovine spongiform encephalopathy (BSE), Country of Origin Labeling (COOL), a high Canadian dollar, American ethanol subsidies, and a worldwide recession that led to a reduction in the consumption of high-end red meat all contributed to a drop in cattle prices. There were, however, some bright spots. Clinics involved in export testing saw a significant increase in revenues, and in Alberta the BSE program provided a significant revenue stream for many practices. Mixed animal practices also saw a large increase in their small animal workload, so much so that it was common to hear practitioners say that companion animals subsidized the clinic, allowing them to maintain a food animal practice, which many find the most enjoyable part of practice. This was confirmed by surveys conducted in 2007-2008 by Jelinski and Campbell that found only 4% of practitioners in western Canada were exclusively involved in food animal practice, and 43% of the 24% who self-identified as mixed animal practitioners were devoting less than 10% of their time to food animals.^{3,4} Looking forward, few practitioners were willing to predict the future. Many clinics were already devoting 60 to 80% of their time to small animals. Certainly, recent cattle prices have renewed enthusiasm in beef practice. Anecdotal evidence is that practitioners had a busier than usual 2012 spring, which was the result of higher cattle prices.

Regrettably, the food animal sector is now paying for the sins of the past, wherein the business model was to dispense information for free, while burying the consulting fees in the drug mark-up. Fast forward 50 years, producers are now habituated to getting free veterinary advice and competitively priced pharmaceuticals.

In reality, except for the 1970s and early '80s, rural practices have always struggled to generate sufficient cash flow from private food animal veterinary services alone. The 1970s and '80s were in some respects an aberration in the long history of food animal practice, yet, this is how we have traditionally defined food animal practice. The metric for assessing a rural practice has always been the number of caesarean sections, non-surgical dystocias, pregnancy diagnoses, and bull breeding soundness evaluations that were done annually. We are

now faced with a new environment wherein the herds are much larger, fewer individual animal procedures are being done, and small animals have become the primary revenue generator in many practices. The question then becomes – what do we teach our future colleagues? How critical is it that they become proficient with dystocias? And if the cost-benefit of IV therapy for a scouring calf does not compute, then how much time do we need to devote to teaching these principles? In the 1970s, not only were there plenty of dystocias, but more ‘high value’ animals, hence the cost of veterinary services were affordable. But the food animal sector of the profession has been slowly pricing itself out of the marketplace, a trend that has been accelerated in part by the numerous economic surveys that have attuned veterinarians to the true costs of running a practice. Lastly, if we want to see the future of cow-calf practice we can only need to look to the poultry, swine, dairy, and feedlot sectors to see how consolidation forced veterinary practice to evolve, but each over a different time frame. It seems logical that as the cow-calf industry consolidates, so too will the number of veterinarians needed to service it.

As for how much effort should be put into teaching these technical tasks, it was recognized that veterinarians will always be faced with having to do some caesarean sections, calvings, and reproductive procedures. However, if cow-calf practice is headed in the same direction as swine practice, then how much emphasis should be placed on teaching tasks that are in low demand? Perhaps the answer is that not all mixed animal graduates need to be created alike. Some will enter practices that continue to do a reasonable amount of individual animal medicine, while others will be employed by practices that have a bias towards providing consultative services. With this in mind, there is merit in examining the various tasks/procedures/services that veterinarians offer.

Rural Practice on a Services Continuum

Food animal practice can be represented on a continuum of tasks/procedures/services (Figure 1). On the left side are the technical tasks that we believe new graduates must be proficient at, but these are the same tasks that are in decline. In the middle are the services that are generally restricted to veterinarians. The right panel represents the services typically labeled as herd health/production or consultative services. Arguably, providers of these services do not necessarily have to be DVMs, and practitioners may find it difficult to compete with PhD animal scientists trained in nutrition, agri-economics, or genetics. Figure 2 is summary table of services that mixed practitioners in western Canada provide to their producers; only a third of veterinarians were involved in the areas of cost of production, nutri-

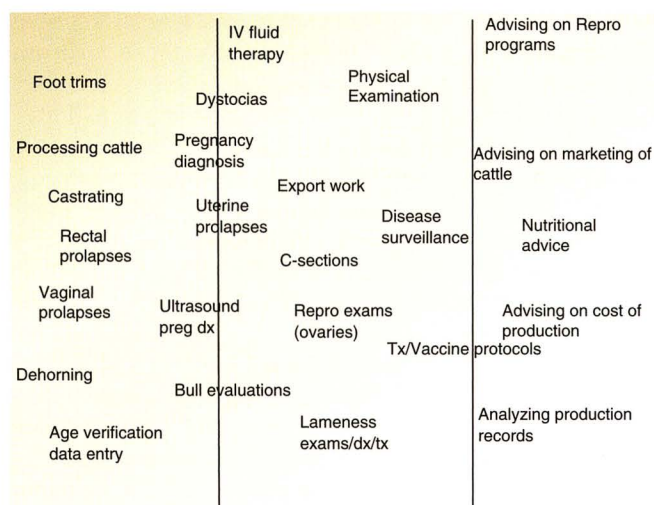


Figure 1. Continuum of food animal practice procedures/tasks/services with task-oriented procedures on the left and consultative services on the right.

	Yes	N/A
Assisting clients in interpreting EPDs	20%	80%
Designing estrus synchronization programs	77%	23%
Designing biosecurity programs	62%	38%
Discussing grazing and pasture management strategies	54%	46%
Selecting a marketing avenue for calves	36%	64%
Provide producers with written vaccine and treatment protocols	88%	12%
Assist in interpreting feedlot and carcass performance data	18%	82%
Assisting producers in determining their cost of production	39%	61%
Designing least cost rations for winter feeding of cows	32%	68%
Designing least cost rations for feeding calves	28%	72%

Figure 2. Percentage of practitioners providing each type of veterinary service to their producers.

tion, and marketing of animals.

The profession is now faced with producers doing more task-oriented procedures, largely because of economics. And on the right side of the spectrum, animal scientists, particularly those employed by governments (extension), feed companies, and other service industries are providing consulting services at very competitive prices. To compound matters, the internet is becoming an important conduit for free animal health and production-based information.

At issue is whether producers see a value proposition in what their veterinarian is offering. At current prices, there is probably a 2:1 to 4:1 return on investment for many of the individual animal ‘salvage’ procedures veterinarians are being asked to perform (such as caesarean sections, dystocias, prolapses). However, BSE demonstrated what happens to the number of veteri-

nary service calls when cattle prices soften, which they eventually will. Veterinarians are also faced with an increase in lay people performing traditional veterinary tasks, pregnancy diagnosis being a good example. Peter Drucker, one of America's most well-known business consultants, often uses the American auto industry as an example of what happens when businesses adopt "Cost-based pricing" versus "Price-based costing". The challenge for food animal practitioners is to adopt the price-based costing model.

Conclusion

Rural practice is being compressed on both ends of the spectrum: loss of technical tasks on the left and encroachment by animal scientists on the right. Is there enough in the 'middle' for veterinarians involved primarily in beef cattle practice? While many of the veterinarians in the Focus Groups agreed with the premise that we are getting 'squeezed' from both ends, when asked what the future holds for food animal practice, many indicated 'more of the same', decreasing amounts of individual animal procedures. Depending upon the practice, some were making a living by providing the services on the right, but it was recognized that not unlike the swine and poultry industries, it does not take many practitioners to look after a very large number of breeding females. It was also noted that the future may mean more regulatory work. This opens the door to the concept of the 'Rural Community Practitioner' model of practice,⁶ which would involve contracting private practitioners to perform tasks/services that are currently done by public service veterinarians. The other obvious potential growth area is animal welfare audits. But

again, if this work becomes too task-oriented in nature, then it too will be delegated to paraprofessionals.

Endnote

^aThe following discussion is excerpted from a report, "Consultation with Veterinary Practitioners on the Future of Food Animal Veterinary Education" that was distributed to the Focus Group attendees in December, 2009.

References

1. Dunlop RH, Williams DJ. *Veterinary medicine: An illustrated history*. St. Louis: Mosby-Year Book, 1996;321.
2. Dunlop RH, Williams DJ. *Veterinary medicine: An illustrated history*. St. Louis: Mosby-Year Book, 1996;342-349.
3. Jelinski MD, Campbell JR. The demand for veterinary services in western Canada. *Can Vet J* 2009;50:949-953.
4. Jelinski MD, Campbell JR, Naylor JM, Lawson KL, Derksen D. Demographic survey of veterinarians employed in western Canada. *Can Vet J* 2009;50:621-629.
5. Miller EB. Private veterinary colleges in the United States, 1852-1927. *J Am Vet Med Assoc* 1981;178:583-593.
6. Nielsen O, Evans B, King LJ. The concept of rural community practice (RCP). *J Vet Med Educ* 2006;33:549-553.
7. Smith DF. 150th Anniversary of veterinary education and the veterinary profession in North America. *J Vet Med Educ* 2010;37:317-327.
8. Smith DF. 150th Anniversary of veterinary education and the veterinary profession in North America Part 2, 1940-1970. *J Vet Med Educ* 2011;38:84-99.
9. Smith DF. 150th Anniversary of veterinary education and the veterinary profession in North America Part 3, 1970-2000. *J Vet Med Educ* 2011;38:211-227.
10. Smith DF. 150th Anniversary of veterinary education and the veterinary profession in North America Part 4, US Veterinary colleges in 2011 and the distribution of their graduates. *J Vet Med Educ* 2011;38:338-348.