

THE FOOD SUPPLY VETERINARY MEDICINE COALITION

Future Demand, Likely Shortages, and Strategies for Creating a Better Future In Food Supply Veterinarian Medicine Fact Sheet

“Future Demand, Likely Shortages, and Strategies for Creating a Better Future in Food Supply Veterinarian Medicine” was published July 1, 2006, in *Journal of the American Veterinary Medical Association*. It examined factors influencing supply and demand, as well as the impact of those factors on projected supply and demand of food supply veterinarians. The study concluded that between 2004 and 2016, demand for food supply veterinarians would increase 12 percent to 13 percent but supply would fall short of that demand by 4 percent to 5 percent per year. The study results are consistent with anecdotal evidence within the industry in recent years and with similar veterinarian food supply studies published in Britain and Australia in 2003. At the same time, the results are in direct conflict with a KPMG study published in the United States in the late 1990s, which projected zero growth in demand and projected surpluses of food supply veterinarians. This new study on food supply veterinarian medicine (FSVM) was conducted by the College of Business Administration at Kansas State University. The study also evaluated potential strategies for increasing the number of veterinarians entering this important field.

Study Methodology

The study was conducted using a Delphi expert judgment-based forecasting method. In contrast to the KPMG study, which used economic modeling, the Delphi technique draws on the insights of experts from within different sectors to provide unique and accurate projections of the FSVM profession. A total of 303 experts were recruited to participate on panels representing 13 different industry sectors, including:

- **Six Practice Areas** — Dairy, swine, poultry, beef cattle, small ruminants, and mixed food animal practitioners in rural settings
- **Five Areas of Government** — State and provincial government service, three sectors of U.S. Federal government service (public health, animal health, and food safety/security), and Canadian federal government service
- **Two Specialty Areas** — Food supply veterinarians serving in industrial roles with pharmaceutical companies and in academic roles in university settings

Opinions were gathered from panelists using a structured feedback process involving three different surveys over a four-month period. Panelists responded individually but had the opportunity to consider the views of other experts before completing subsequent surveys. Each of the three surveys had a similar design and required experts to:

- Rate the influence of 25 different factors on future demand in their sector
- Predict the expected changes in demand in their sector in each of five time periods between 2004 and 2016
- Rate the influence of 17 different factors on the expected supply of veterinarians within the FSVM discipline
- Forecast the expected future shortages or surpluses of veterinarians for five time periods between 2004 and 2016

- Rate the effectiveness of 18 different strategies for eliminated projected shortages within their particular sector

Study Findings

The comprehensive study summarized survey responses in five key areas: factors influencing demand, future demand, factors influencing supply, future supply, and strategies for addressing shortfalls or surpluses.

- **Factors Influencing Demand.** The highest-rated factor influencing future demand was “public concern over food safety”, which had a mean of 5.96 on a 7-point scale. In fact, five of the top seven demand factors related to general public concerns: “food safety” (1), “zoonotic disease” (2), “bio-terrorism” (4), “animal welfare” (5), and “animal health” (7). A second cluster of influencers related to client demand and included “animal tracking” (3), “certifications or verification of standards” (6), “herd management services” (11), “non-DVMs not giving prescriptions” (12), “service agreements for loans” (13), and “part-time farmers” (17).
- **Future Demand.** Based on those factors, panelists predicted an overall increase in demand of 12.46 percent over the 12-year forecast period. The projected increase in demand in the poultry sector, at 4.11 percent over the 12-year period, was the lowest of all sectors while the projected increase in the state/provincial government, at 20.8 percent, was highest, followed by the federal sectors (ranging from 15.44 percent to 17.46 percent), academic and industrial (12.83 percent), and mixed animal (10.7 percent). Panelists were asked to be conservative in their demand forecasting.
- **Factors Influencing Supply.** Panelists said the factor exerting the greatest negative pressure on supply was “less emphasis on food animal practice in veterinary colleges”, which had a mean score of 2.34 on a 4-point scale, with 1 representing the greatest downward pressure on supply. Three factors related to negative student experiences during vet school: “less emphasis on food animal practice” (1), “little exposure to food supply career options” (2), and “lack of food supply practiced-related externships” (6). A second set of supply-reducing factors related to rural economic and cultural constraints and included “lack of spousal career options” (4), “limited lifestyle and career opportunities” (11), and “lack of cultural and recreational opportunities” (13). Other negative influences included “poor income opportunities” (3) and “poor role models” (5). Overall, panelists felt that controllable factors, such as what students experience during vet school, are more likely to negatively affect future supply than non-controllable factors, such as the economic and lifestyle opportunities posed by rural job locations. The authors noted that there were some differences within the sectors. For example, sectors that projected more severe shortages also gave more weight to factors such as “more women veterinarians entering the workforce” and “physical demand of large animal veterinary work”.
- **Shortages.** Projected shortages ranged from -0.06 percent for the poultry sector to -6.86 percent for the Federal animal health sector, with a mean average shortage of -4.61 percent across all sectors for the 12-year forecast period.
- **Solutions to Shortages.** Panelists were asked to rate 18 different strategies for addressing shortages on a 7-point scale, with 7 being the most effective strategy. Overwhelmingly, panelists said that student debt repayment and scholarship programs were the single most important strategy in addressing future shortages. Several highly ranked strategies have implications for colleges of veterinary medicine, including “more involvement of food supply practitioners in training veterinary students” (2), “appointment of more food animal faculty” (4), “expanded postgraduate fellowships” (5), “paid externship requirements” (6), “expanded Centers of Excellence” (7), and “increased food supply coverage early in the curriculum” (13). A related idea, “mentoring initiatives”, was ranked third overall by panelists.

Implications

The study authors made several observations about the data, including:

- Even trends such as food system consolidation and the increasing size and scale of producers should be viewed as opportunities versus threats, because these trends can lead to the expansion of veterinary services and new value creation.
- Several of the highest-projected shortages are in areas related to food safety and security. This is problematic because it comes at a time when society is more aware of and concerned about these issues.
- While the academic sector is not the highest area of shortage, shortages in this sector have a ripple effect. Fewer teaching veterinarians makes it more difficult to increase the focus on recruiting and mentoring more food supply students.
- Some of the highest-ranked reasons for shortages, such as what FSVM students experience, are highly actionable and can be addressed with changes in resource allocations and programs.
- The profession should reconsider how colleges of veterinary medicine select, recruit, retain, and educate students for food supply careers. The authors noted that the words of one expert in assessing the earlier KPMG study seem to be even more relevant in light of this new study: "... if our profession doesn't make a series of strategic and substantive changes to create a different future, it is likely that we will wind up in a state of lost opportunity. Most important, the profession will fail to meet societal needs and demands."