

Appendix B



2020 CVMA Workforce Study Final Report



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EXECUTIVE SUMMARY

The primary mandate for this research is to examine the supply and demand balance for veterinary services across the Canadian companion animal, food animal and equine sectors now and into the future.

Supply and Capacity of Canadian Veterinarians

Analysis of supply includes both an examination of trends in the population of veterinarians, by province and practice type, but also an analysis of capacity for veterinarians to provide consultation and veterinary care to the marketplace. Regardless of the segment, the main contributing factors to veterinary capacity are:

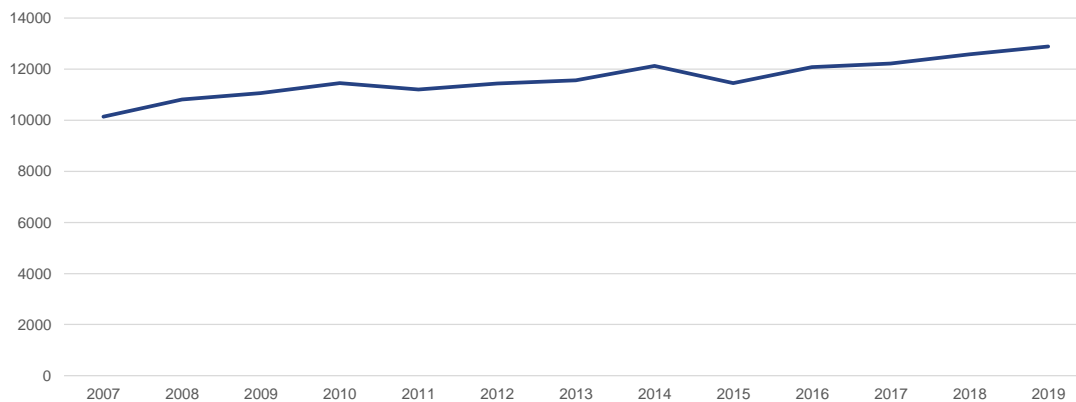
- The current total population of veterinarians of any type
- Number of annual graduates from Canadian veterinary colleges
- Number of annual graduates from foreign veterinary colleges
- Number of hours worked by veterinarians in practice
- Retirement rate of veterinarians

Canadian Veterinarian Population



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Number of Practicing Veterinarians in Canada



- - Important to note, based on provincial interviews results above represent total veterinarians employed in any capacity, not exclusively those in practice.

The population of Canadian veterinarians has been increasing steadily since 2015, with a compounded annual growth rate (CAGR) of 2.4% over this period. All provinces have reported a net increase in veterinarians over this period. However, CAGR varies significantly by province with Alberta, Manitoba and Quebec reporting CAGR's under 2%. The low rate of growth for Quebec is of particular concern due to the large and predominantly francophone population. A



comparison of CVMA and province-supplied statistics for the veterinarian population in Quebec reveal it is the only province experiencing stalled growth in the veterinary population in 2019 – perhaps even a decline.

Canadian veterinary colleges provide a consistent pool of approximately 350 graduates each year, of which 60% intend to enter practice upon graduation. The full graduating class represented 2.9% of the total Canadian veterinarian population in 2019, down from 3.3% in 2015. In reality, these proportions are inflated somewhat as international students attend all Canadian veterinary colleges and intend to return home after graduation. When compared with an anticipated annual retirement rate of approximately 3%, it is clear that Canadian veterinary colleges are now merely keeping up with replacing retirements at best. Growth in the number of veterinarians is being driven by students who receive training in veterinary medicine internationally. The number of veterinarians entering the workforce after receiving training from accredited international schools increased from 51 in 2015 to 177 in 2019.

Practice Focus by Species

Due to a lack of consistency in provincial-level statistics, it is not possible to benchmark veterinarian populations by area of practice specialization. Results from the survey phase reveal the degree to which the Canadian veterinarian population is weighted toward those working in companion animal medicine:

% of Veterinarians Spending at Least Some Time Working with Species	
Dogs	89%
Cats	89%
Other companion animals	24%
Equine	16%
Beef Cattle	15%
Dairy Cattle	10%
Sheep/Goats	10%
Swine	4%
Poultry	3%

Hours of Availability and Hours Worked

Most companion and food animal practices are open ~12 hours daily, Monday-Saturday. Sunday hours are more common in companion animal practice than food animal practice. On-call or emergency hours would be in addition to these hours. Most veterinarians work full-time (31-44 hours per week) or more (45+ hours), with part-time work more common among older veterinarians.

Respondents' Current Working Hours			
Current Age	Part Time: 0-30 hours	Full-time: 31-44 hours	Overtime: 45+ hours
All Ages Total	24%	44%	31%
< 29	4%	59%	37%
29 - 39	17%	46%	37%



40 - 49	22%	48%	30%
50 - 59	32%	43%	25%
60 - 69	47%	26%	26%
>= 70	57%	26%	17%

Demand for Canadian Veterinary Services

The factors influencing demand for veterinary services vary by species and are more similar for companion animal and equine than for food animal.

For companion animal and equine, the primary factors influencing demand are:

- Population/household growth
- Animal population
- Disposable income

For food animal, animal population has little impact on demand for veterinary services in large commercial operations as the nature of production is a consultative herd health/production management relationship with veterinarians not directly involved in on-site acute care and treatment. Using swine and poultry as examples, hog and poultry production in Canada is at, or near, historical peaks, but industry consolidation has resulted in larger operations with fewer decision-makers. The market price for individual animals is taken into account, and livestock operators are more likely to invest in animals when their market value is perceived to be higher. The situation is somewhat different in beef cow/calf operations and dairy, where acute services are more commonly used.

For food animal production, the key drivers of demand for veterinary services are:

- Number of operations/decision-makers
- Value of animals

Demand for Companion Animal Veterinary Services

Leading up to the COVID crisis, Canada was experiencing exceptional household and population growth. From 2006-2016, the number of households grew at a CAGR of 1.31%, with the population growing at 1.4% (the highest rate of growth since 1989/90), the highest among G7 countries.

Disposable income also has been growing rapidly, with a CAGR of 3.7% between 2010 and 2019, also the highest among G7 countries.

According to CAHI, the population of animals has also increased significantly in recent years, particularly for dogs. In 2018, approximately 7 million dogs visited the veterinarian, up from 5 million in 2007 (CAGR 3.8%). Cat ownership has remained relatively stable over this period, with approximately 4.5 million visiting a veterinarian in 2018. Unfortunately, no such database exists for the Canadian equine population. However, the 2010 Canadian Equine Industry Profile Study anticipated the population of horses in Canada would remain steady over the coming



years. It should be noted that while cats and dogs have nearly equal populations in Canada, demand for veterinary services is predominantly driven by the dog population as they are more likely to visit a veterinarian.

The pre-COVID environment is conducive to an increasingly high demand for companion animal veterinary services.

Demand for Food Animal Veterinary Services

The prospects for the Canadian beef and hog sector were optimistic, leading up to the COVID crisis due to forecasted increased demand, and individual animal value, related to African Swine Fever in China and Southeast Asia. While this is good news for this sector, it is unlikely to result in significantly larger numbers of livestock operators, or decision-makers.

Dairy and poultry production will be dependent on changes in quota volumes. These sectors are not expected to experience a significant increase in the number of operations in the near future.

The pre-COVID environment for food animal veterinary services is not materially different from recent years, with the exception of competition from companion animal medicine for attracting new veterinary graduates.

Demand for Veterinary Services in Remote Areas

In all provinces, there is anecdotal evidence of shortages of veterinarians in specific, remote communities or regions. While there is no doubt such situations are unfortunate, many are unlikely able to provide a veterinarian with sufficient income to move to this area without rich grants or income support programs. The pool of potential candidates is also affected by the ability of a veterinarian's spouse/partner to find gainful employment in remote communities.

Survey Results Confirm High Demand for Veterinary Services

Survey results confirm companion animal veterinarians, at least pre-COVID were stretched to meet increased demand:

- Wide recognition of the shortage of veterinarians/veterinary technicians as an issue faced by the veterinary profession, especially in Quebec.
- About half of clinics indicating >80% of appointments were booked, especially in Saskatchewan, British Columbia and Quebec
- Almost one-in-five clinics having scaled back hours of operation due to a shortage of veterinarians to fill shifts, especially in Quebec.
- Almost one-in-five clinics "frequently" turning patients away, especially in Quebec, Saskatchewan and British Columbia



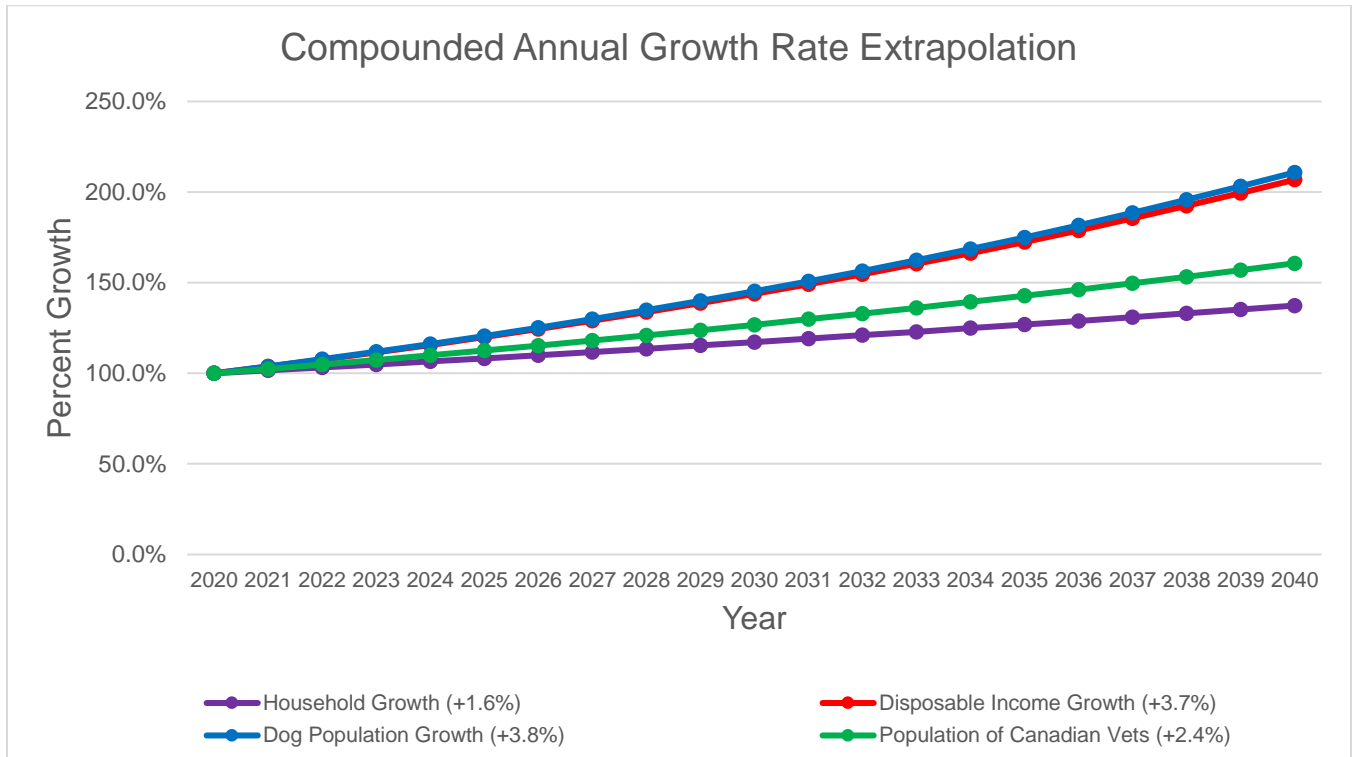
- Half of the clinics are looking to hire a new veterinarian and/or veterinary technician, with the average looking to hire 1.4 veterinarians and/or 1.8 veterinary technicians. Many veterinarians indicate open positions take more than six months to fill. The likelihood to have an open position is highest in Quebec and Saskatchewan. It is important to note, however, that only 7% of those with open positions indicate new hires would only be needed to keep up with current demand. The vast majority would need new hires to also increase patients in order to keep busy.
- Nearly all clinics indicate wait times for wellness exams or non-emergency farm calls are within a week.

Prior to the COVID-19 crisis, there was substantial evidence to support CVMA's original hypothesis that demand for veterinary services currently exceeds or will soon exceed capacity at a national level. Some areas, specifically Quebec, British Columbia and Saskatchewan, are showing acute signs of stretched or exceeded capacity. The shortage of veterinary technicians exacerbates the need for veterinarians and must also be addressed.

While the emerging economic crisis may reduce demand for veterinary services in the short term, the economy will eventually recover, and Canadian population growth will continue, and disposable income will rebound.

The graph below illustrates an extrapolation CAGR for the Canadian veterinarian population, as well as factors related to the demand for veterinary services. All things being equal, by 2030, the Canadian dog population and disposable income will be approximately 45% higher, and there will be approximately 17% more households than today. The population of Canadian veterinarians, however, will only have increased by 27%. In some provinces, the gap is expected to be even greater.





Recommendations

1. The emerging economic crisis likely will reduce demand for veterinary services to some extent in the near term, but an eventual veterinarian supply crisis awaits. CVMA and related stakeholders must align, recognize that underlying capacity issues present now will be exacerbated during the eventual economic recovery. A long-term strategy to grow the Canadian veterinarian population at an annual rate of 3.5-4.0% is needed. A parallel strategy to address the shortage of veterinary technicians is also required, which may provide quicker returns due to the shorter time required to graduate veterinary technicians.
2. Canadian veterinary colleges are graduating veterinarians at a rate currently equal to retirement. CVMA and related stakeholders should investigate the degree to which the supply of internationally trained veterinarians can be forecasted as a reliable and manageable source of growth. CVMA should align with the government and universities to develop a long-term plan for a sustainable increase in veterinarian graduates.



3. Of all provinces, Quebec is experiencing the greatest degree of stretched veterinarian resources and capacity. Developing a solution for Quebec is more complex due to the large pet population, robust food animal sector and French language requirements. CVMA should partner with stakeholder organizations to identify partnership opportunities in Francophone international schools and/or look for expansion of FMV.
4. There is no cost-effective and easy solution for the absence of veterinary care in remote areas. The gap in threshold client demand to support veterinary services is at least as important as the willingness of veterinarians to service these areas. CVMA should investigate the degree to which telemedicine and training of local "nurse practitioners" can suffice for day-to-day well-care needs.

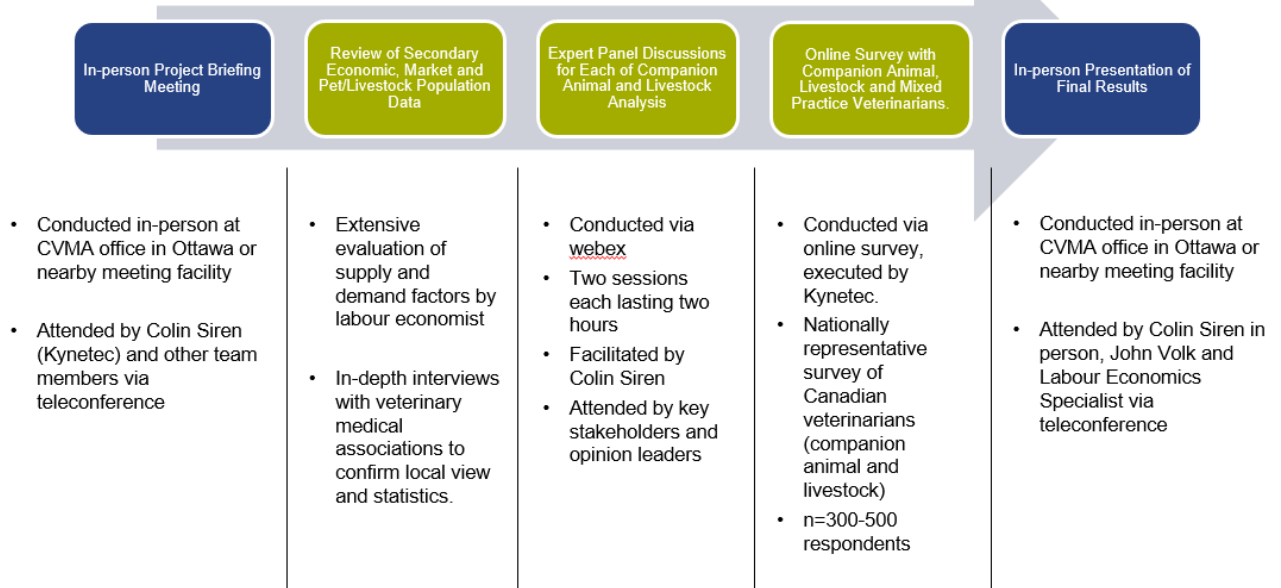
BACKGROUND

Framework for Veterinary Workforce Assessment

The framework for this assessment was developed by Kynetec (Colin Siren) in collaboration with Brakke Consulting (John Volk) and Agri-food Economic Systems (Al Mussel), and the CVMA. The overall approach to this research was to take a holistic view of the supply/capacity-side and demand-side factors and underlying trends that impact them.

The research framework was specifically designed to leverage a wide range of information sources and points of view. The illustration below identifies the three main stages for this research, along with the sequence in which they were conducted:





Step 1 – Review of Secondary Research Sources

a) Review of AVMA Workforce Study and Impact of Financial Crisis/Great Recession on Veterinary Medicine (2008-2013): Conducted by John Volk, this stage of the research framework was designed to review and understand an examination of the U.S. Veterinary workforce during an economic recession. The rationale for this was twofold:

- I. Identify lessons learned from the U.S. study methodology for implementation in the CVMA study.
- II. Identify key factors that impacted the demand for veterinary services during the years 2008 and 2013.

At the onset of the study, it was hypothesized that while the 2019 Canadian economy was robust and healthy, it would be important for the industry to take a long view and understand how a potential recessionary environment could affect demand for veterinary services in Canada. Now faced with the uncertainty of a global economic crisis, these findings are particularly relevant as the Canadian animal health industry proceeds into uncertain times.

b) Review of secondary information sources to understand Canadian trends relating to supply/capacity and demand for veterinary services:

- I. Economic data examining Canadian population growth, household formation,

- disposable income, pet/animal population and cost of veterinary services
- II. Findings from CVMA graduate surveys
- III. Trended veterinarian population data from CVMA and provinces, followed by in-depth interviews with each province who shared results to understand local factors influencing trends

Step 2 – Workshops with Industry Stakeholders

Upon completion of Step 1, results of secondary research were presented to CVMA personnel initially, then to two workshop groups. The purpose of the workshop groups was to bring a range of industry stakeholders together for a 2-hour discussion dedicated to each of Food Animal and Companion Animal. In both cases, these discussions validated secondary research findings and provided an opportunity for fine-tuning the quantitative survey instrument.

Step 3 – Survey with Canadian Veterinarians

This research included the execution of a quantitative survey conducted online using CVMA's membership directory as the sample. The survey was completed with veterinarians working in practice (Food animal, Companion Animal, Equine, Mixed).

The purpose of this final step of the research framework was to confirm anecdotal findings from discussions with provinces during Step 1 and stakeholder workshops, quantify the degree to which veterinarians currently feel they are working to capacity and gather feedback on solutions developed for testing.

Defining Study Terms and Scope

For the purpose of this research, it is important to establish the scope of the veterinary profession included in this analysis. The assessment was limited to veterinarians employed in companion animal, food animal, mixed and/or equine practice. Although the supply of veterinarians working in other capacities (academia, industry, regulatory, research, government, etc.) are summarized in the analysis of supply, we have not analyzed demand for these positions due to the complexity of dealing with data from private, academic and government sectors. In addition, veterinarians not working in practice make up a relatively small segment of the veterinary population.

Wherever "companion animal" veterinarians or practices are referenced, we mean exclusively or predominantly companion animal practices of all sub-types (independent, corporate, mobile, emergency, specialist, charities, etc.).

Wherever "mixed animal" veterinarians or practices are referenced, we mean practices that practice some companion, food animal and/or equine medicine but do not consider themselves to predominantly focus in any sector.

Wherever "equine" veterinarians or practices are referenced, we are referencing the complete equine veterinary segment, including both performance/race and equine generalists. Because



the economic factors which influence equine medicine are more similar to companion animal medicine (I.e. household formation, disposable income, animal population, etc.), equine is often included in the companion animal analysis of demand for veterinary services.

Wherever "food animal" veterinarians or practices are referenced, we mean exclusively or predominantly food animal practices of all species types (dairy, swine, beef cow/calf, beef feedlot, poultry, food animal consulting/management practices, etc.).

Wherever "veterinary students" are referenced, we refer to the sample of students from Canadian veterinary colleges who participated in the quantitative survey component.

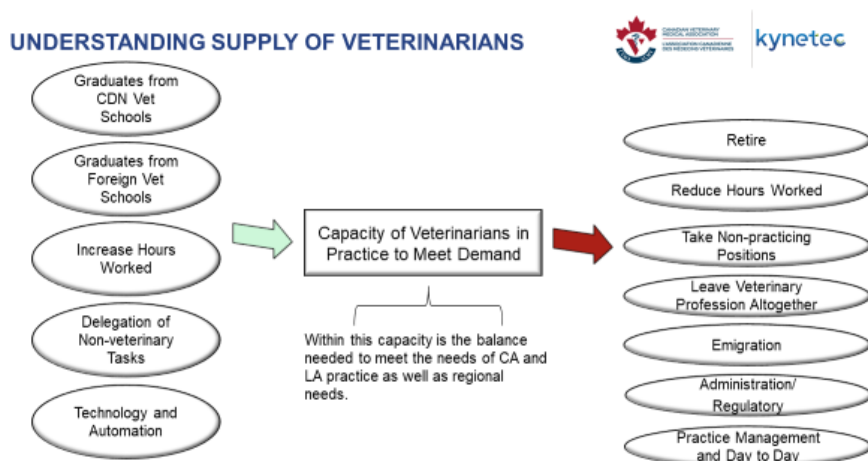


METHODOLOGY

The primary methods used for estimating demand and capacity for veterinary services in Canada included secondary research, subjective feedback from stakeholder in-depth interviews and analysis of survey results.

Secondary Research - Methods for Estimating Capacity of Canadian Veterinary Services to Meet Demand

Measuring and forecasting the ability for Canadian veterinarians to meet demand requires an in-depth understanding of myriad factors that positively or negatively affect the availability of hours for veterinarians to provide needed services.



The following sources were utilized to estimate the current supply, and related historical trend, of Canadian veterinarians:

- Nationally, CVMA data were utilized to estimate the number of veterinarians annually for the years 2007 to 2019. CVMA data can be analyzed in the aggregate only, without the possibility of examining subgroups such as practice type (companion animal, food animal, equine, etc.) or role (in practice, academia, industry, etc.).
- Provincially, veterinary medical associations were contacted and asked to provide veterinarian population estimates dating as far back as possible, including populations by subgroup. All veterinary medical associations were contacted. However, only Manitoba, New Brunswick, Ontario, Prince Edward Island, Quebec, B.C. and Saskatchewan participated. In addition to the population estimates, ten in-depth interviews were conducted as follow-up with each provincial veterinary medical association in order to confirm assumptions and gather insight into the local situation.

While all participating provinces were extremely cooperative and supportive of the process, a lack of standardization exists for tracking veterinarian populations by type. As such, national-level estimates of veterinarians working full-time in companion animal



practices, food animal practices, mixed practices or equine practices are directional only.

- Annual new graduate data were provided by each Canadian veterinary college, starting in 2012 for UCVM and 1990 for all other veterinary colleges.
- CVMA statistics for international candidates who have received their certificate of qualification were provided for 2014-2019, allowing for accurate immigration statistics for new Canadians seeking employment in veterinary medicine.
- CVMA's new graduate survey statistics were provided to estimate the proportion of annual graduates seeking full-time employment in veterinary practice upon graduation.

Secondary Research - Methods for Estimating Demand for Canadian Veterinary Services

Information sources and the research approach were tailored for each of the three main practice types explored in this study: companion animal, equine and food animal, recognizing that demand for companion animal/equine services is driven by significantly different factors than those driving demand for food animal veterinary services.

UNDERSTANDING DEMAND FOR VETERINARIANS



For companion animal/equine veterinary services, the interaction is retail/transactional in nature based on periodic checkups and acute animal health issues. The ultimate demand is derived from a range of demographic factors and economic conditions in households that facilitates pet/horse ownership and the medicalization of these animals.

For food animals, the demand for veterinary services is derived from the scale and profitability of the food animal enterprise. In some enterprises, this is more transactional, with the individual farming operation.



This is especially the case where the value of individual animals, or structure of production system, justifies direct veterinary involvement in acute care. In other enterprises, veterinary services are more consultative rather than transactional in nature with less direct involvement in acute care services.

Primary Research - Survey

A quantitative survey was programmed by Kynetec and hosted on a secure server. In order to increase the response rate, CVMA sent an e-mail letter to all veterinarians in the sample informing them of the purpose of the survey and encouraging participation. Subsequently, the sample received one or more e-mail invitations to participate in the survey. For those who wished to, the opportunity to enter a draw for one of 10 gift cards was offered to both those who completed the survey as well as those who attempted to but were screened out.

Each respondent was provided with a unique identification number to ensure that each respondent could only complete the survey once. Respondents were able to complete the survey between February 21st and March 16th. It is important to note that the survey fieldwork period was concluded before social distancing and travel restrictions were implemented in any Canadian provinces.

Approximately 12,500 e-mail addresses from the CVMA database were deemed eligible for this study. All records were contacted at least once, and no limit was placed on the total number of respondents permitted to participate in the survey.

In order to participate in the study, respondents needed to be veterinarians living in Canada and currently working in practice.



KEY FINDINGS

Examination of AVMA Workforce Research and Lessons Learned from 2008-2013 (Financial Crisis and Great Recession)

While developing the analytical framework for this study, the project team reviewed numerous veterinary workforce studies conducted worldwide. The purpose of this literature review was to identify approaches that had proven successful in predicting workforce needs. One particular study provides critically important learnings for CVMA.

In 2013 the U.S. American Veterinary Medical Association issued a major report called the *2013 U.S. Veterinary Workforce Study: Modeling Capacity Utilization*. The study was conducted in response to a growing concern that the U.S. was producing too many veterinarians. Job offers for new D.V.M. graduates were at a modern low point. Starting salaries were stagnating at a time when student debt was increasing at an alarming rate.

One conclusion of the study stated:

"... the supply of veterinarians in the United States in 2012 (90,200) exceeded the demand for veterinarians (78,950) by approximately 11,250 (i.e., excess capacity of 12.5%) at current pricing levels for services. Further, results indicated that excess capacity ranging from 11% to 14% (i.e., from 9,300 to 12,300 full-time equivalents) would persist each year from 2012 through 2025."

Yet just five years later, in 2018, there was an industry-wide clamour over the shortage of veterinarians, a concern that grows more acute each day, in spite of the fact that two new veterinary schools have begun graduating D.V.M.s bringing the total number of U.S. veterinary schools to 30, and two more universities have started the process of establishing new veterinary schools.

What happened? How did the AVMA report get it so wrong? And what can CVMA learn from it?

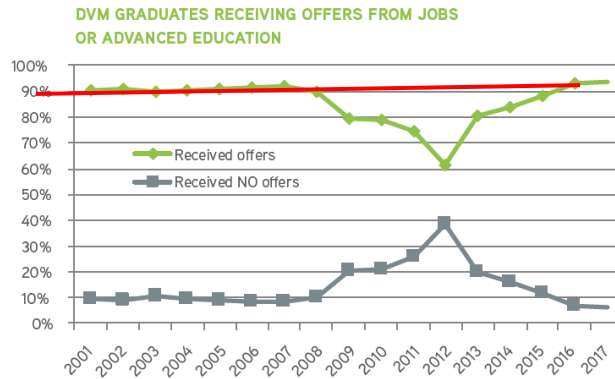
Timing Is Everything

In his landmark book, *Capitalism in the 21st Century*, French economist Thomas Piketty advises that in economic research, it's important to take the long view.

As the chart from AVMA below illustrates, the AVMA study may have been done at the worst possible time because it occurred when there was an unprecedented dip in new D.V.M.s receiving job offers. No doubt, investigators were unduly influenced by the near term, and short-term events.

Percent of New D.V.M.s Receiving Job Offers, 2001 to 2018





When making forecasts, it's not easy to ignore short term anomalies because they often seem like crises at the time. But ignore them at your peril.

It is to that end that as the COVID crisis transitions from a public health crisis to an economic crisis, it is important for CVMA and other industry stakeholders to take the long view.

Basic Factors

So, what are the essential factors that influence demand for veterinary services, and thus the need for veterinarians?

For food animal veterinarians, the single most important issue is the number of food animal and poultry producers. Animals don't hire veterinarians, producers do. In Canada, as in the U.S., as food animal and poultry production has become more consolidated and concentrated, the number of veterinarians engaged in food animal medicine has declined. Roles have changed as well, from less hands-on animal doctoring to more consulting on health management. One only needs to look at the poultry industry to see where swine production and cattle feeding are headed from a veterinarian demand perspective. Even in rural areas with significant cow-calf production, many formerly food animal practices are increasingly becoming mixed practices with dogs, cats and horses representing an increasing share of the revenue.

For companion animal veterinarians, the picture is more complex, primarily because it represents most practicing veterinarians. Based on decades of experience and viewing numerous research studies over the years, it appears that there are three factors so important to demand that they could be considered elemental. They are household formation, disposable income, and cost of veterinary services.

Household Formation

In the U.S., the percentage of households with pets has not changed very much from year to year, according to the U.S. Pet Owner Demographics Study published every five years by the AVMA. In fact, in the 30-year period from 1986 to 2016, the percentage of households owning dogs varied between 36.1% and 38.4%, less than the margin of error in the research studies. (It

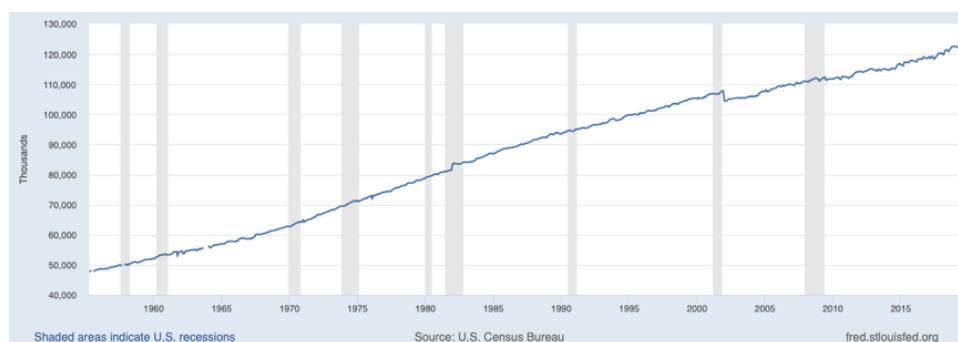


does appear, however, that there may be an ever-so-slight increase in pet ownership as a percentage of households with children declines.)

Over the long term, the number of dogs and cats increases as the number of households grows, with some minor periodic, explainable variations.

Although not easily seen in the long-term chart below, there was definitely a change in household formation during the Great Recession. From 2000 to 2018, the number of households grew at a compound annual rate (CAGR) of .77%. But from 2007 to 2010, the CAGR of households was only .42%, slightly more than half. During that period, the U.S. faced an unprecedented number of home mortgage foreclosures, and stories of pet abandonment were rife.

Number of Household in U.S., 1955-2018



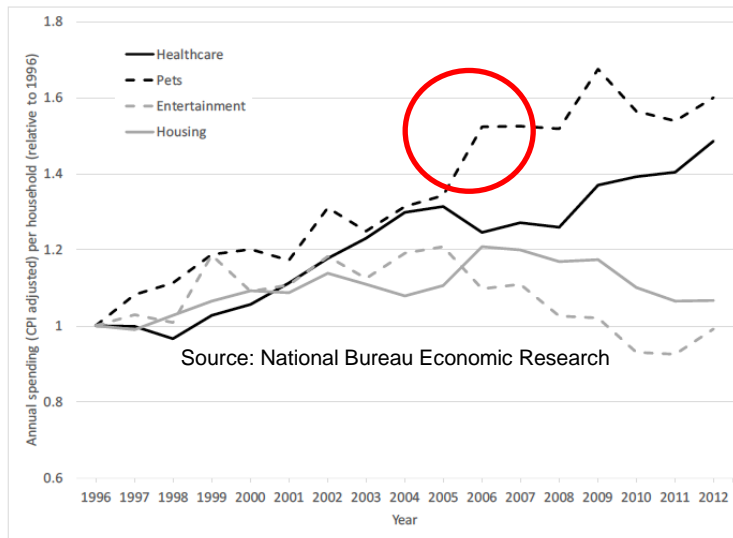
Disposable Income

All pet care is paid with disposable income—changes in total disposable income and per-household disposable income impact funds available for veterinary services. Again, the recent Great Recession in the U.S. is instructive. From 2000 to 2018, disposable income in the U.S. grew at a compounded annual rate of 4.29%. However, from 2007 to 2010, in the teeth of the recession, per-household disposable income grew at only 2.52%. Unemployment reached modern highs, meaning that many households had little if any disposable income.

The next two charts provide an important perspective on the claim of pets to disposable income, however. The graph below shows mean annual spending on four household categories, 1996-2012. Note that spending on entertainment and housing declined dramatically just prior to and during the Great Recession. Healthcare and pets showed some softness but continued to climb overall. Veterinary care, then, is not recession-resistant, but it is not as responsive to recessions as many other discretionary purchases.

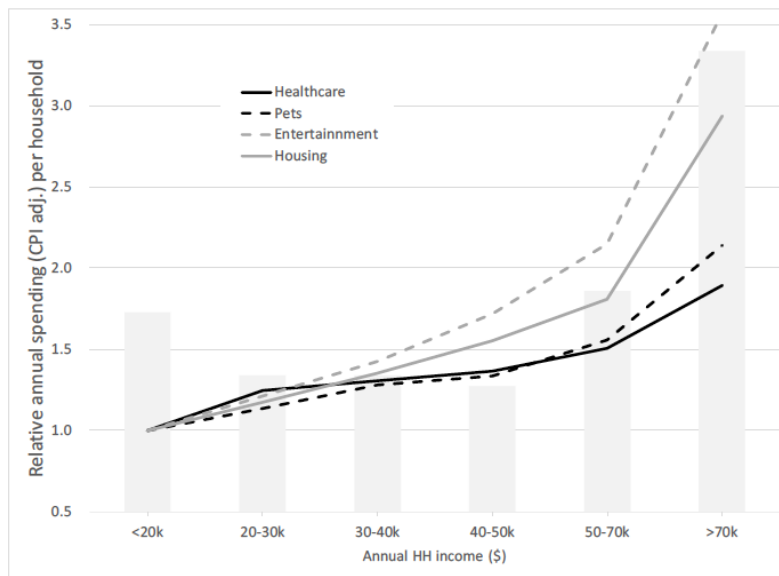
Mean Expenditures on Four Household Categories, 1996-2012





Meanwhile, the graph below shows that as incomes increase, healthcare and pet care increase, but not nearly as rapidly as expenditures on entertainment and housing. Pet care demand, in other words, is less elastic than entertainment.

Mean Expenditures on Four Household Categories in Relation to Income



Cost of Veterinary Services

While the number of households affects the number of pets and the amount of disposable income affects the ability of pet owners to pay, the cost of veterinary services affects how much



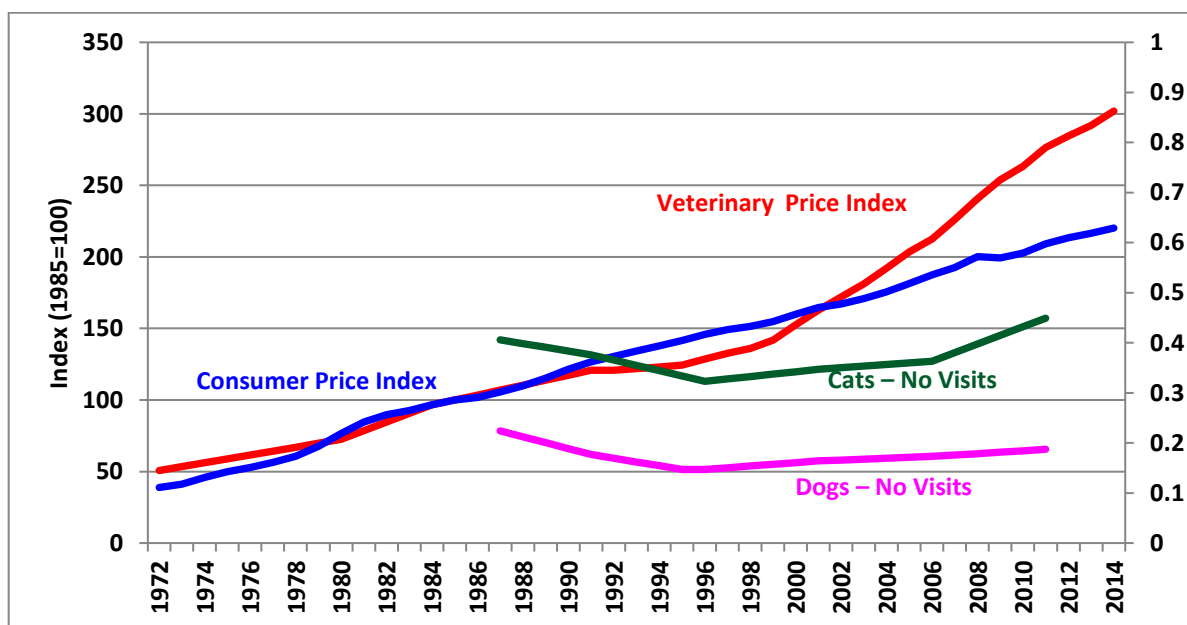
service pet owners can or are willing to buy.

In the Bayer Veterinary Care Usage Study, conducted in 2011 by Brakke Consulting and Ipsos (now Kynetec) Research, two of the three biggest obstacles to veterinary visits among pet owners were "sticker shock," and not understanding the need for veterinary services beyond "shots." ("Feline resistance," the difficulty of getting cats to the veterinarian, was the third major obstacle.) In the Bayer Study, 53% of pet owners agreed with the statement, "Veterinary costs are usually much higher than expected"; only 19% disagreed. "Value for money spent" was the factor identified as having the most significant room for improvement when it came to pet owner satisfaction with veterinary services.

In a study using the U.S. Bureau of Labor Statistics data, the AVMA found that as the cost of veterinary services rose faster than the Consumer Price Index, the number of dogs and cats not taken to the veterinarian increased.

No one would argue that veterinarians and staff need to be properly compensated for their professional services. In addition, veterinarians continue to add more and more sophisticated medical treatments to their capabilities. However, price inflation for veterinary services is becoming an increasing problem in the U.S. The Veterinary Hospital Managers Association (VHMA) shows in its monthly reports that the pace of new client acquisitions has been declining for more than two years, in spite of a relatively robust economy in the U.S.

Dog and Cat Veterinary Visits in Relation to Veterinary Cost Inflation

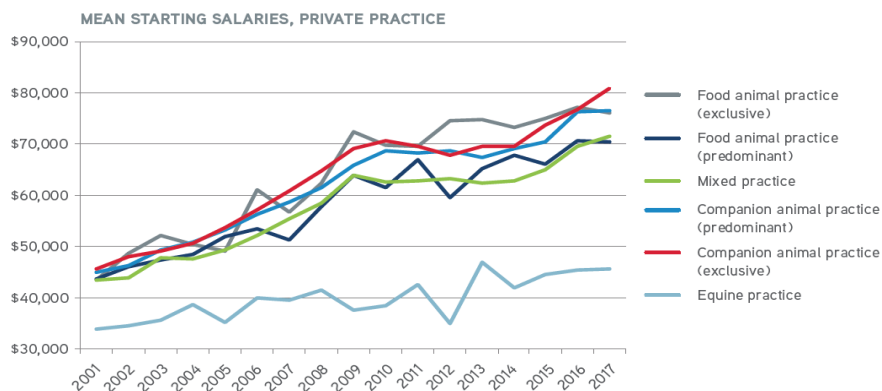


In summary, forecasting is an imperfect science. But if the essential factors are evaluated over long enough periods of time, they should provide a solid foundation for prognostication.



But how does one know when there is a growing shortage or surplus? Two signs are useful. As shortages grow, starting salaries for veterinarians should increase. There is substantial evidence of that in the U.S. today. After a period of relative stagnation from 2008-2013, the starting salaries of new D.V.M.s are showing a distinct upward trend. Practices are bidding up the price to attract additional veterinarians.

Mean Starting Salaries of New Veterinarians



A second indicator is wait times for routine appointments. If there is a shortage of veterinarians to see appointments, the wait time to schedule a routine pet wellness examination should increase. Wait times are not measured routinely in the U.S., but when measured by Brakke Consulting during the Great Recession, most veterinarians had open appointments the same day or following day. If appointment calendars are not at least 75% to 80% or more filled on a regular basis, it's hard to argue that there is a shortage of veterinarians.

In summary, the *2013 U.S. Veterinary Workforce Study: Modeling Capacity Utilization* provides important contextual lessons for CVMA:

- The Canadian veterinary profession must be planned with the "long view" in mind.
- Veterinary services are vulnerable to economic crises, as demonstrated through the Great Recession's impact on the U.S. veterinary economy.
- While the companion animal/equine and food animal veterinary economies are distinct, they compete to attract veterinarians entering the profession.
- Housing formation, disposable income and the cost of veterinary services are core components of a "long-view" understanding of companion animal/equine demand for veterinary services, which represent most veterinary positions in both the United States and Canada.

Current and Future Supply of Veterinarian Capacity in Canada

The Population of Veterinarians in Canada

The current supply of veterinarians has been estimated using both CVMA statistics as well as statistics provided by provincial veterinary medical associations. The combination of these sources provides a complete understanding of veterinarian population trends at a national and



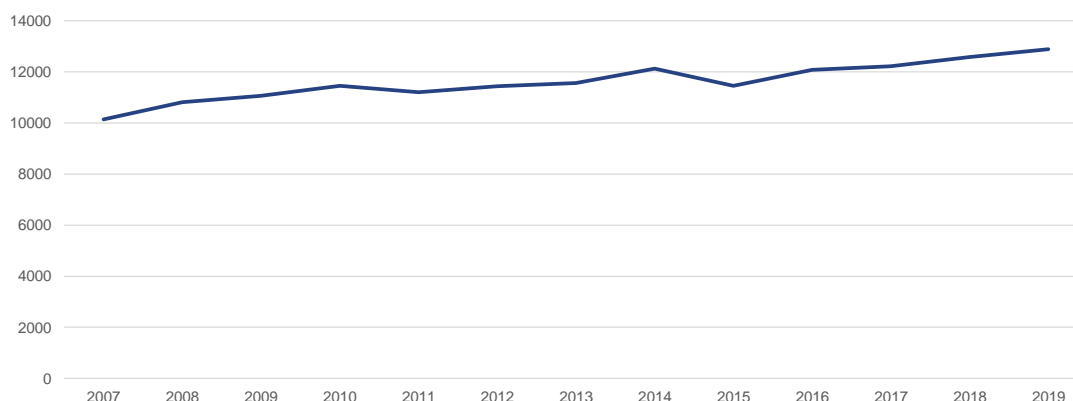
provincial level, including the relative size of specific segments. While some differences exist between CVMA provincial estimates and those provided by provinces, differences tend to be insignificant.

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- - Important to note, based on provincial interviews results above represent total veterinarians employed in any capacity, not exclusively those in practice.

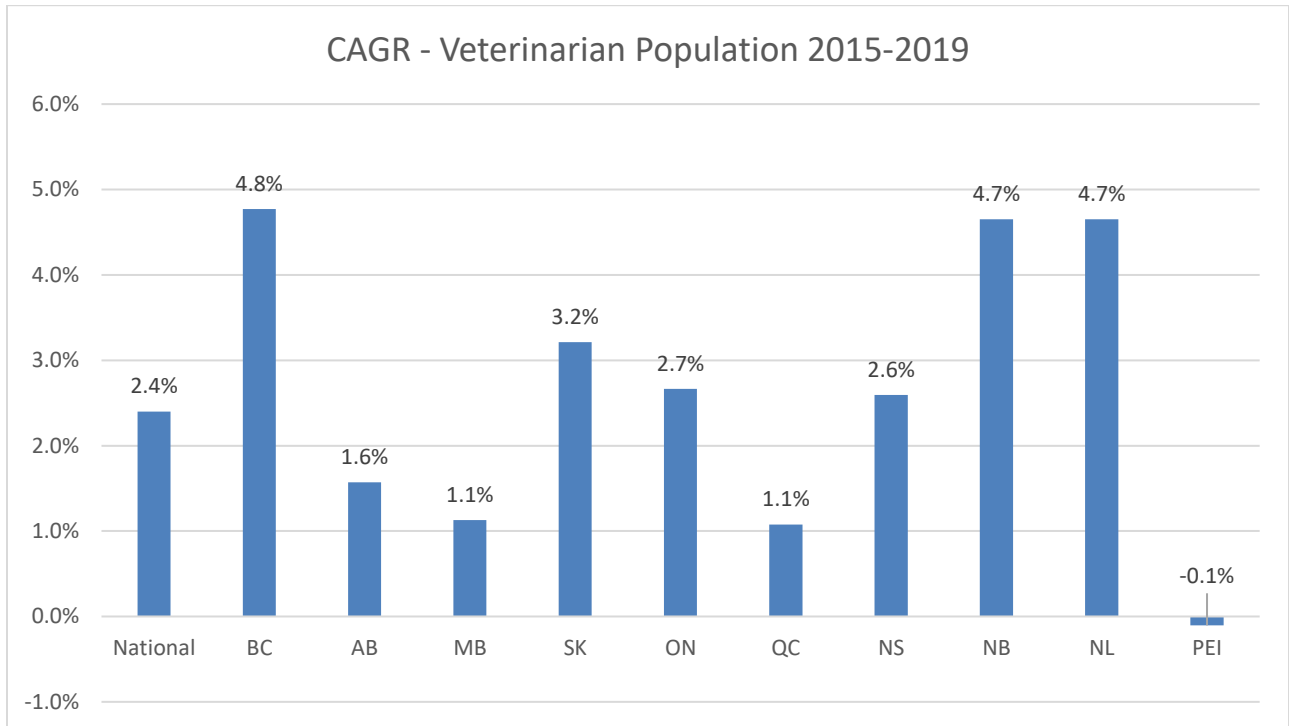
CVMA has monitored the number of veterinarians in Canada since 2007. CVMA statistics are based on membership data and is summarized at national and provincial levels

In 2019, CVMA reported there are 12,886 veterinarians employed in practice, up from 10,139 veterinarians in 2007, representing a CAGR of 2.1%. Since 2015, the rate of growth has been slightly higher, with a CAGR of 2.4%. Feedback from provincial interviews, CVMA personnel and industry stakeholders suggests growth at historical rates to continue for the foreseeable future.

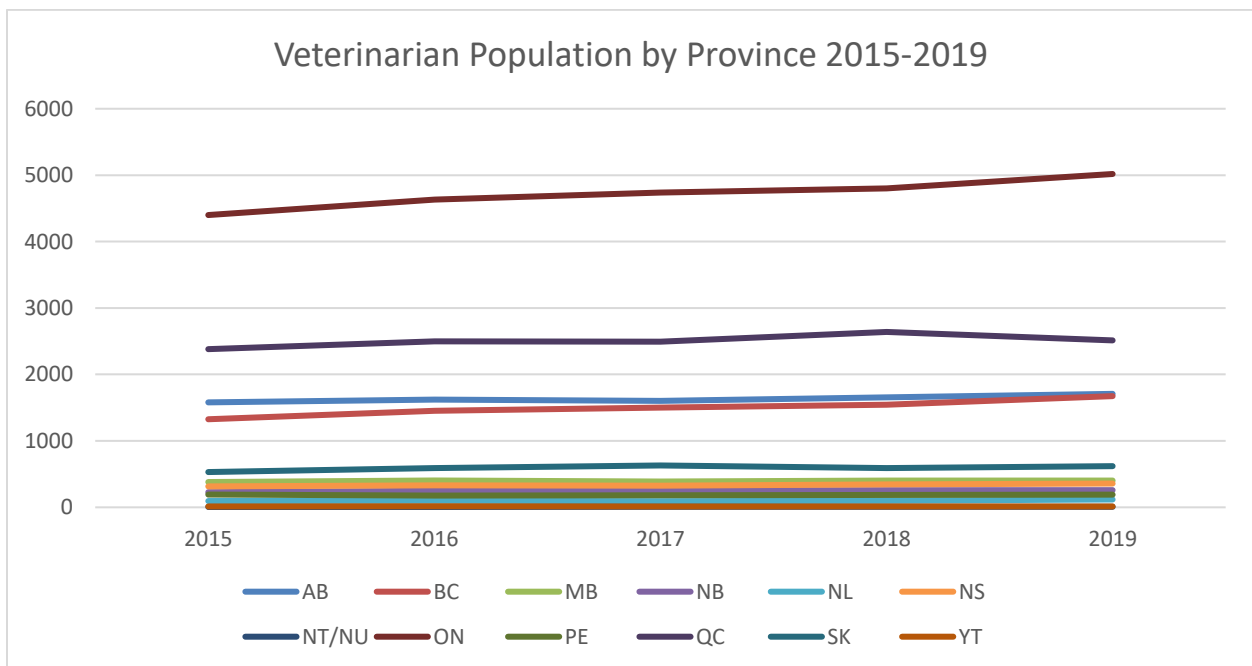
The graph below shows CAGR for the population of veterinarians in each province over this same period (territories not shown due to very small base size). While the number of veterinarians has increased in all provinces since 2015, the rate of change differs significantly:

- British Columbia, New Brunswick and Newfoundland/Labrador have experienced the fastest growth.
- Saskatchewan, Ontario and Nova Scotia are growing at a rate on par with the national average.
- Growth has been significantly slower in Alberta, Manitoba and Quebec.
- PEI's veterinarian population declined by one individual during the period of 2015 to 2019.





Analysis of the veterinarian population by province reveals a troubling indicator for Quebec, which experienced a year over year decline in 2019. Although the decline is slight, Quebec's population grew over this same period, and in each of the previous five years.



In order to gain an in-depth understanding of dynamics within each province, each provincial veterinary medical association was invited to participate in an in-depth interview where demographics of veterinarians were discussed, along with the degree to which there is perceived to be a shortage/surplus of veterinarians at this time. Interviews were conducted with personnel at each of the following veterinary medical associations: Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick and Prince Edward Island (P.E.I.). B.C. supplied a comprehensive workforce study completed earlier in the year in place of an interview.

Overall, findings were consistent across all provinces except for P.E.I.:

- All other provinces described local situations where demand pushing against the capacity of veterinarians. In most provinces, this is not yet described as a crisis. However, the issue is expected to worsen in the coming years.
- All provinces report a need for both food animal and companion animal veterinarians
- Most provinces reported specific rural or remote areas with no local veterinarian support.
- There are anecdotes of reduced hours, including emergency services closing due to a lack of staff available to work.
- In recent years, graduates are more likely to focus entirely on companion animal medicine and not seek positions in food animal practice. The food animal stakeholder discussion groups suggest that while this may be correct, leading food animal practices are effective at identifying prospective candidates and filling positions.

The following are consistently identified as the main contributing forces to a shortage of veterinarians in all provinces, except for P.E.I.:

- Population growth has exceeded the rate at which new veterinarians join the workforce
- Increased willingness to medicalize and spend on pets, creates additional demand
- Historically high retirement rates amongst large baby boomer cohort, accelerated by the opportunity to sell clinics to corporates



The Population of Veterinarians in Canada - Ontario

The interview conducted with OVMA directionally suggests the province is experiencing a very high demand for veterinary services, especially in urban centers. Left unchecked, this will create a shortage of veterinarians in small communities and rural areas. There is a perceived shortage of food animal veterinarians, limiting succession options for retiring practice owners.

Historical statistics are based on information provided at the time of licensing, so an accurate distribution of clinics by main species of focus is not available through OVMA. However, these statistics do confirm veterinarians are increasingly indicating at least some of their time is dedicated to companion animal medicine.

Year	Veterinarians Practicing Companion Animal Medicine >10% of Time	Companion Animal Registrants as a Percentage of Total Veterinarians
2018	4,088	84%
2017	3,997	84%
2016	3,786	81%
2015	3,697	81%
2014	3,854	84%
2013	3,770	83%
2012	3,565	81%
2011	3,228	75%

The table below shows OVMA statistics by place of employment. Private practice leads all categories in all years. From 2012 to 2017, private practice was growing as a proportion of total practices. However, this trend has been reversed in 2018 and 2019.



The proportion of veterinarians working in the industry more than doubled in 2018 while the proportion of government and university/education positions has declined steadily since 2012.

	2012	2013	2014	2015	2016	2017	2018	2019
Private Practice	77.65%	77.47%	78.60%	79.41%	79.88%	80.32%	78.39%	76.94%
Industry	3.08%	3.00%	3.02%	3.13%	3.16%	3.06%	6.36%	7.44%
Government - Net	7.14%	6.85%	6.39%	6.11%	5.65%	5.78%	5.68%	5.78%
University & Other Educational (includes U of G)	6.96%	7.00%	6.96%	6.59%	5.80%	5.93%	5.45%	4.57%
Inactive/Other	5.17%	5.68%	5.03%	4.77%	5.50%	4.91%	4.12%	5.27%



The Population of Veterinarians in Canada - Quebec

As in Ontario, there is a perceived shortage of veterinarians in Quebec, with particular concern for rural and remote areas. Quebec is the only province to articulate a concern that the number of new veterinarians joining the workforce may not be enough to offset an expected high volume of retiring baby boomers.

The table below summarizes the Quebec veterinarian population in 2019 by area of job focus. It is important to note that, unlike Ontario, these metrics do not include inactive, retired or lapsed veterinarians. Quebec statistics also do not allow for the identification of industry, government and education positions.

Feedback on the specific counts by species is that all are accurate depictions of the number of veterinarians working with each species for at least 10% of total time. The exception is equine, where the threshold is only 1% of total practice time.

	Total	Companion Animal	Poultry	Equine	Dairy	Beef	Swine
Count	2,646	1,761	20	155	382	44	34
Percentage	100%	67%	1%	6%	14%	2%	1%

The population of Veterinarians in Canada - Manitoba

Manitoba reports challenges as other provinces and currently has a shortage of veterinarians, especially in remote areas. Statistics shared by Manitoba are very detailed for the periods 2015-2019, are unavailable for 2012-2014. Populations by practice type are mutually exclusive and sum to 100%, however, they should be interpreted directionally.

While it is estimated that 6% of veterinarians work in food animal practice, a significant degree of consolidation has occurred where there are relatively few practices in swine, dairy and poultry.

	Total	CA Practice	F.A. Practice	Mixed	Equine Practice	Government/ Education	Zoo	Other
2019	388	161	22	95	10	38	2	60
		41%	6%	24%	3%	10%	1%	15%
2018	381	171	25	101	8	42	3	31
		45%	7%	27%	2%	11%	1%	8%
2017	371	163	22	100	9	46	3	28
		44%	6%	27%	2%	12%	1%	8%
2016	359	157	20	100	8	43	2	29
		44%	6%	28%	2%	12%	1%	8%
2015	358	150	21	102	7	43	4	31
		42%	6%	28%	2%	12%	1%	9%



The Population of Veterinarians in Canada - Saskatchewan

Despite having similar populations, Saskatchewan reports a significantly higher veterinarian population due to the presence of a veterinary college (WCVM). While the total number of companion animal veterinarians is lower in Saskatchewan, WCVM operates a sizeable teaching hospital with 24-hour emergency service in Saskatoon.

Year	Total	Companion Animal	Food Animal	Mixed Animal	Swine	Embryo	WCVM/CFIA GOV/IND/PDS/OTH
2019	540	136	23	153	5	4	219
		25%	4%	28%	1%	1%	41%
2018	530	131	24	155	5	4	211
		25%	5%	29%	1%	1%	40%
2017	533	126	22	159	5	4	217
		24%	4%	30%	1%	1%	41%
2016	529	128	24	159	7	4	207
		24%	5%	30%	1%	1%	39%
2015	514	124	21	156	6	4	203
		24%	4%	30%	1%	1%	39%
2014	511	115	24	156	7	4	205
		23%	5%	31%	1%	1%	40%
2013	493	105	23	151	8	3	203
		21%	5%	31%	2%	1%	41%
2012	489	107	20	151	9	3	199
		22%	4%	31%	2%	1%	41%
2011	467	95	19	147	8	2	196
		20%	4%	31%	2%	0%	42%
2010	457	92	19	141	7	2	196
		20%	4%	31%	2%	0%	43%



The Population of Veterinarians in Canada - New Brunswick

New Brunswick reports steady growth, attributable to the establishment of A.V.C. Geographically, most growth in veterinary numbers is occurring in the southern part of the province in urban centers. There is a feeling that northern areas of the province are facing challenges attracting younger veterinarians, who tend to prefer urban clinics with regular hours.

	Total	Companion Animal	Poultry Spec.	Equine Spec.	Dairy Spec.	Beef Spec.	Swine Spec.	Other
2019	246	190	22	37	32	21	22	41
		77%	9%	15%	13%	9%	9%	17%
2018	232	176	21	37	30	20	21	38
		76%	9%	16%	13%	9%	9%	16%
2017	229	176	20	37	30	18	18	33
		77%	9%	16%	13%	8%	8%	14%
2016	214	165	19	35	27	18	18	35
		77%	9%	16%	13%	8%	8%	16%
2015	219	165	18	37	29	17	17	35
		75%	8%	17%	13%	8%	8%	16%
2014	214	157	22	35	29	22	21	35
		73%	10%	16%	14%	10%	10%	16%
2013	209	154	24	42	34	23	22	33
		74%	11%	20%	16%	11%	11%	16%
2012	194	141	25	40	32	24	24	30
		73%	13%	21%	16%	12%	12%	15%
2011	193	137	25	39	35	23	23	33
		71%	13%	20%	18%	12%	12%	17%
2010	185	132	24	40	33	25	22	29
		71%	13%	22%	18%	14%	12%	16%



The Population of Veterinarians in Canada - Prince Edward Island

Prince Edward Island maintains accurate estimates for the total number of veterinarians but recommends interpreting results by practice type as directional only. The large "Other" population is related to the presence of Atlantic Veterinary College, which operates a teaching hospital in Charlottetown.

At this time, it is reported that local veterinarian capacity is balanced with demand.

Year	Total	Companion Animal	Food animal Animal	Mixed	Other
2019	191	52	25	7	107
2018	179	50	25	7	97
2017	185	50	25	6	104
2016	182				
2015	182				
2014	182				

The Population of Veterinarians in Canada - British Columbia

The SBCV Chapter of the CVMA provided a final report for a Labour Market Study concluded in May of 2019. The report provides several key conclusions suggesting the same over-capacity issue identified in other provinces also exists in British Columbia:

- Most clinics are projecting continued growth in employment
- Growth in demand for veterinary services is being driven by companion animal medicine, with particularly strong growth in specialized care
- A demographic shift toward female veterinarians results in a greater proportion of veterinarian capacity declining during maternity leave and young family years.
- There are significant current and projected shortages of veterinarians in B.C. across all types of practice and regions

Total Sample and Respondents By Type of Practice

Type of Practice	Total Population		Respondents	
	Number	Percent	Number	Percent
Small animals	1,100	73.3%	184	89.3%
Mixed animal practice	95	6.3%	10	4.9%
Equine	60	4.0%	19	9.2%



New D.V.M. Graduates from Canadian Veterinary Colleges

CVMA consolidates and tracks graduation statistics from each of the four Canadian veterinary colleges and possesses records back to 1990. In recent years, Canadian veterinary colleges generate approximately 360 new graduates per year, virtually unchanged since the first UCVM graduating class in 2012. In 2019, the number of Graduates from Canadian veterinary colleges represented 2.9% of total veterinarians, down from 3.3% in 2015.

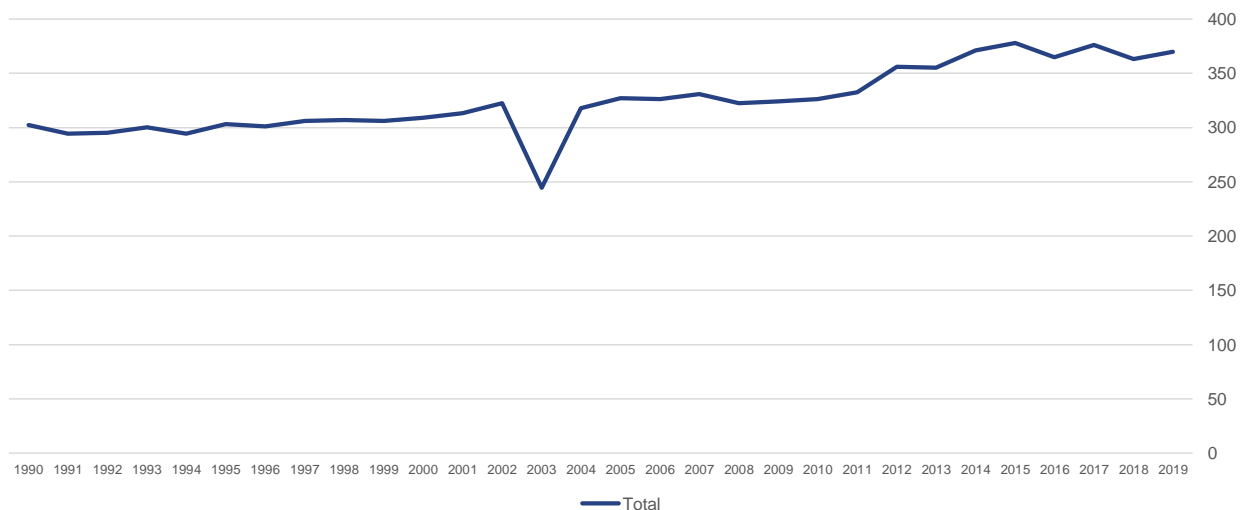
The graduation statistics summarized below include veterinarians studying in Canada but intending to return to another country to practice. These numbers vary from year to year, but at A.V.C., these graduates account for as much as half the graduating class (half of approximately n=60 graduates).

Canadian Veterinarian Population – New Graduates



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DVM Graduating Class Size - National (All Veterinary Colleges)



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Since 2010, Canadian veterinary colleges have produced a consistent volume of graduates annually. The most significant increase in Canada's capacity to produce veterinary graduates occurred in 2012, with the addition of UCVM.

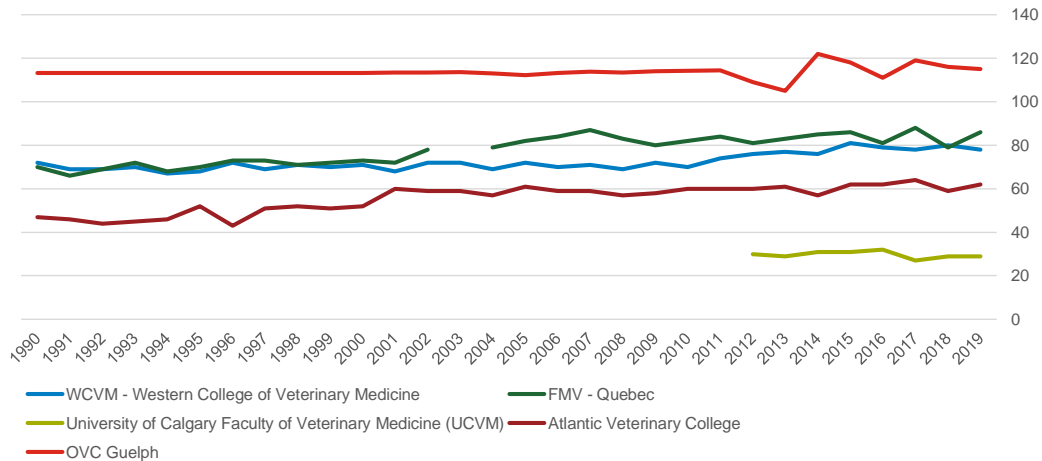


Canadian Veterinarian Population – New Graduates



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DVM Graduating Class Size by Veterinary College



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Results from the student survey reveal that 87% of veterinary students would consider seeking employment in the province where they study. This underscores the importance of veterinary schools producing graduate numbers proportionate to the population of veterinarians overall. Currently, the relative size of the new graduate pool to the total population of veterinarians is the smallest in the West and Ontario.

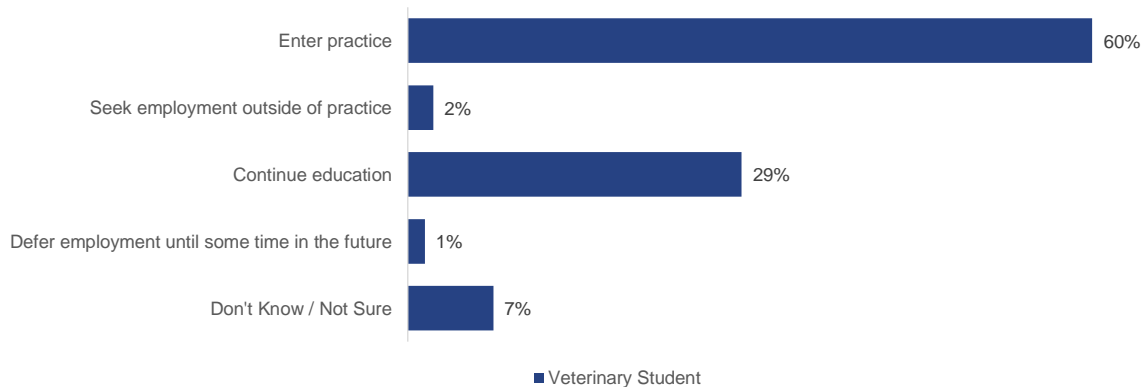
While Atlantic Canada appears to be producing graduates at a rate that exceeds all other regions in Canada, it is important to note that as many as half A.V.C. graduates intend to return to the United States upon graduation. 14% of Canadian students surveyed indicated they would consider moving to the United States to seek employment upon graduation.

Annual Class Size as % of Total Veterinarians in Province/Region					
	Total	West	Ontario	Quebec	Atlantic
2019	2.9%	2.4%	2.3%	3.4%	6.7%
2018	2.9%	2.6%	2.4%	3.0%	6.6%
2017	3.1%	2.5%	2.5%	3.5%	7.5%
2016	3.0%	2.7%	2.4%	3.2%	7.3%
2015	3.3%	2.9%	2.7%	3.6%	7.5%

Survey results with students reveal that as many as 30% of new D.V.M.s continue their training (e.g., residencies) or education, reducing the proportion that joins the workforce in their graduation year. This group is offset by those who have completed their advanced degree or specialization and are now entering the workforce. However, they may have different employment goals or expectations than standard D.V.M. graduates.



Student – Plans After Graduation



SEmploy1. When you graduate, do you intend to enter practice or other employment immediately, continue your education (e.g. residency, doctoral program), or otherwise defer employment?

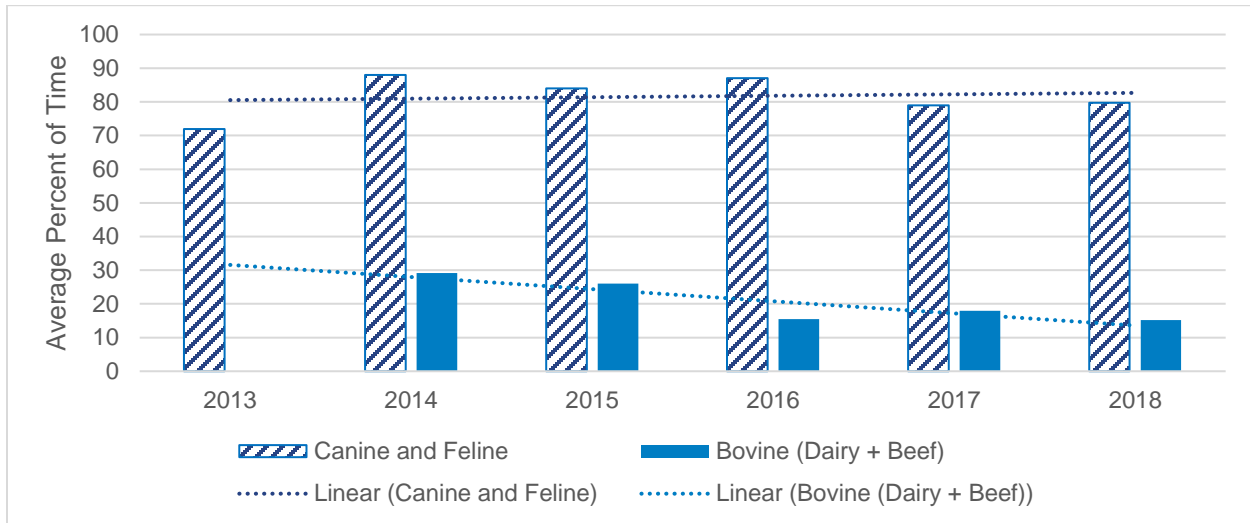
Base: Veterinary Students (n=134)

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Results from the CVMA New Graduate survey quantify a significant shift in species focus among new graduates. Based on surveys conducted by the CVMA, the fields of specialization or relative emphasis can be inferred. One way to fragment the focus of new graduates is into the share of time spent working on companion animals (canines and felines) versus bovine (dairy and beef).

The illustration below shows that, based on the mean percentage of time allocated by species, new graduates are overwhelmingly spending their time on companion animals, and this is increasingly the case since 2013. In contrast, in aggregate new graduates are not spending nearly as much time on bovines (recently less than 20 percent) and the trend is decreasing.



The Population of Veterinarians Trained at International Schools

Since 2013, CVMA has tracked annual statistics for international candidates who have received their certificate of qualification. Results show the number of international candidates has nearly doubled since 2013, due to significant gains in the number of candidates from international accredited schools. Candidates from non-accredited international schools represent a substantial portion of international candidates in all years. This stream fluctuates significantly from year-to-year.

International students represent approximately 40% of the veterinary certificate of qualification candidates, up significantly from 28% in 2014.

Year	International, Non-Accredited	International, Accredited	Total	Total as a % of All C of Q Candidates
2019	65	177 (includes 15 U.S.)	242	41%
2018	77	125 (includes 23 U.S.)	202	38%
2017	98	121 (includes 27 U.S.)	219	39%
2016	81	52 (includes 23 U.S.)	133	28%
2015	138	18	156	32%
2014	76	51 (includes 16 U.S.)	127	28%

Analysis of certificate of qualification candidate data reveals the importance of international schools when understanding the total influx of new Canadian veterinarians each year. The total number of certificates of qualification candidates has increased significantly from 450 in 2014 to



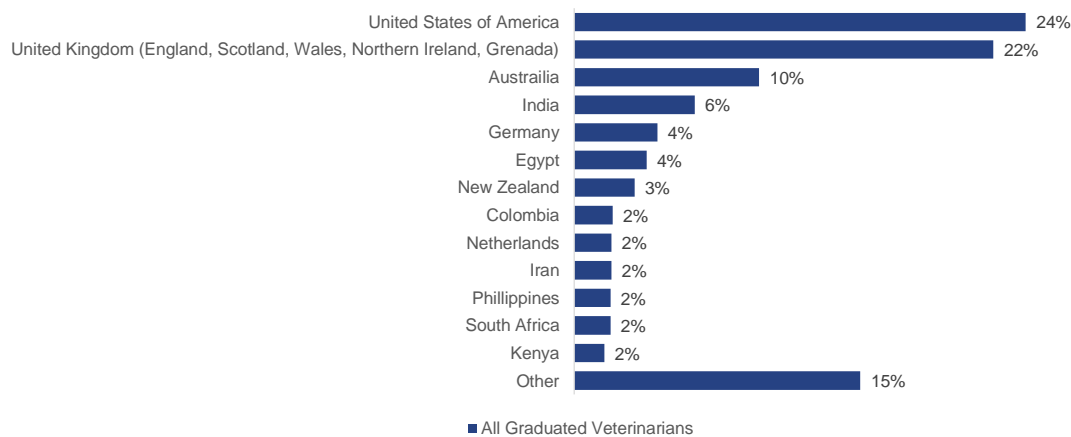
591 in 2019. Although a relatively short period of time, this represents a CAGR of 5.6%. Growth is almost entirely derived from candidates who attended accredited international veterinary schools.



Year	Canadian Veterinary Schools	International, Non-Accredited	International, Accredited	Total
2019	349	65	177 (includes 15 U.S.)	591
2018	329	77	125 (includes 23 U.S.)	531
2017	332	98	121 (includes 27 U.S.)	551
2016	338	81	52 (includes 23 U.S.)	471
2015	338	138	18	494
2014	323	76	51 (includes 16 U.S.)	450

15% of respondents participating in the quantitative survey component of this research indicated they had received their veterinary training at a veterinary school outside Canada. Schools in the United States, the United Kingdom and Australia were identified by 56%. Of particular note is the lack of francophone countries included in the list, as these would be potential sources of growth for Quebec.

International Veterinary Schools Attended



*Responses <1% are classified as "Other"
 Dem5. In what country did you attend veterinary school?
 Base: Vets selecting they did not attend school in Canada (n=152)
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Hours Worked and Retirement

The majority of veterinarians report working 30-49 hours weekly and about one-quarter report working 50+ hours weekly. By province, Alberta (42%) reports the highest prevalence of veterinarians working more than 45 hours/wk.

Veterinarians are more likely to work 45+ hours weekly between the ages of 29 and 39 while veterinarians 50+ are more likely to work part-time hours. An analysis of practice open hours reveals that most companion animal practices are open 12+ hours per day, six days a week.

Respondents' Current Working Hours			
Current Age	Part Time: 0-30 hours	Full-time: 31-44 hours	Overtime: 45+ hours
All Ages Total	24%	44%	31%
< 29	4%	59%	37%
29 - 39	17%	46%	37%
40 - 49	22%	48%	30%
50 - 59	32%	43%	25%
60 - 69	47%	26%	26%
>= 70	57%	26%	17%

When asked about intended work hours, veterinarians across all age segments indicate an intention to ramp their hours worked down steadily as they age. By the time veterinarians reach age 56-65, the average number of hours worked declines to approximately 25 hours. Relatively few veterinarians expect to work after the age of 65.

Mean Expected Hours Worked				
Current Age	At Age 36-45	At Age 46-55	At Age 56-65	At Age 65+
< 29	40.3	36.1	25.0	5.5
29 - 39	38.4	35.7	26.0	8.1
40 - 49	-	37.1	26.1	7.1
50 - 59	-	-	28.2	10.4
60 - 69	-	-	-	16.0

Based on most veterinarians either retiring or significantly scaling back hours worked by age 65, the average full-time career of a veterinarian is between 30 and 35 years. Based on this, it is expected the annual rate of retirement within the profession to be approximately 3% per year.

Avg. Career Length	Avg. Estimated Annual Rate of Retirement
30 years	3.3% per year
35 years	2.9% per year



ESTIMATING DEMAND FOR VETERINARY SERVICES

Companion Animal and Equine

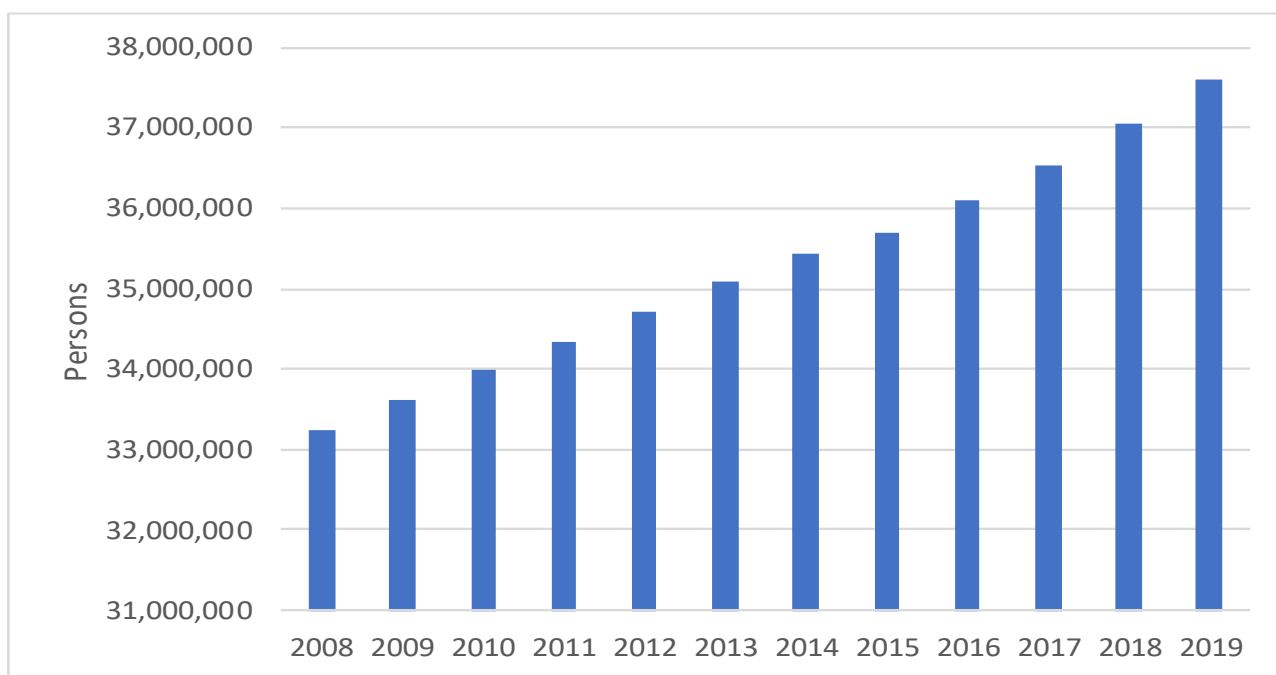
The primary factors influencing the demand for companion animal and equine veterinary services are:

- Canadian Population and Household Growth
- Animal population
- Disposable Income

Canadian Population and Household Growth

Over the period 2006-2016, the number of Canadian households increased at a CAGR of 1.16% while the Canadian population grew at a CAGR of 1.31% (Statistics Canada). Canada's population growth rate for 2018/2019 was 1.4%, the highest since 1989/90 (1.5%) and is the highest among G7 countries.

It is more than twice the United States and the United Kingdom and exceeds the growth rates of both Germany and France.



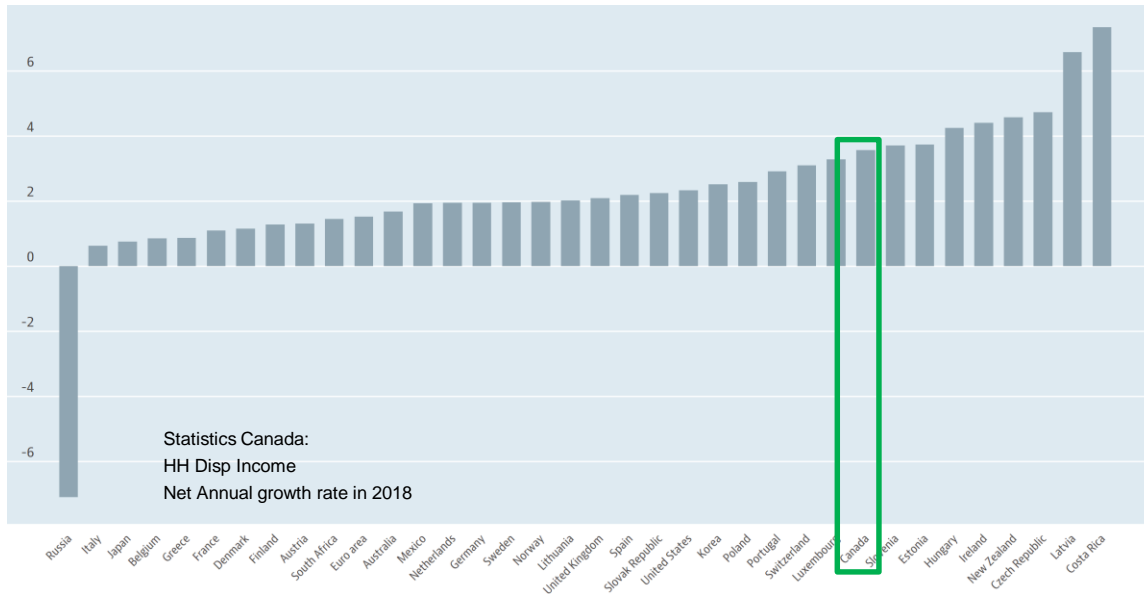
Disposable Income

Over time, total disposable income in Canada has grown at a steady rate, particularly since 2002. Disposable income increased at a CAGR of 3.7% between 2010 and 2019 and is the highest among G7 countries.

Estimating Demand for Veterinarians – Disposable Income



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Companion Animal and Equine Population

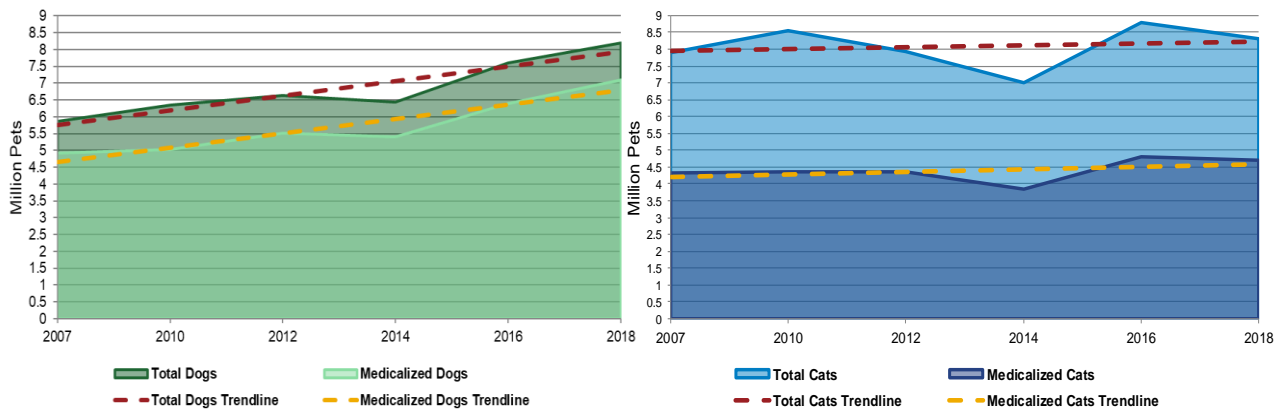
Since 2007, the population of medicalized dogs (dogs that visit a veterinarian at least once per year) has increased from 4.5 million to 7.1 million. Over this same period, the population of medicalized cats has held steady at approximately 4.7 million. The rate of growth in the medicalized dog population alone represents a CAGR of 3.8%.

Unfortunately, no such database exists for the Canadian equine population. The 2010 Canadian Equine Industry Profile Study anticipated that the population of horses in Canada would remain steady over the coming years.

Canadian Dog and Cat Population



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Food Animals

The demand for veterinary services is much more economically derived compared with companion animals and horses and is also segmented into cattle/small ruminants versus hogs and poultry. The ruminant business- essentially cattle, with sheep and goats as a sideline- is really driven by the high value of individual animals and the management of reproductive success. The business is somewhat transactional with clients periodically calling for service related to reproduction or occasional acute treatment. Cattle do not face the same extent of regular disease and biosecurity challenges as would hogs or poultry and are at least partially housed in an outdoor environment. Small ruminants face more disease and pest pressures, but they are largely a sideline of a practice based on cattle.

For swine and poultry, the business is much more process-oriented rather than transactional,



due to the relatively lower value of individual animals. Disease pressure and biosecurity are relatively more important vs ruminants due to the imminent disease pressure - such as viral diseases in pigs and salmonellae in poultry.

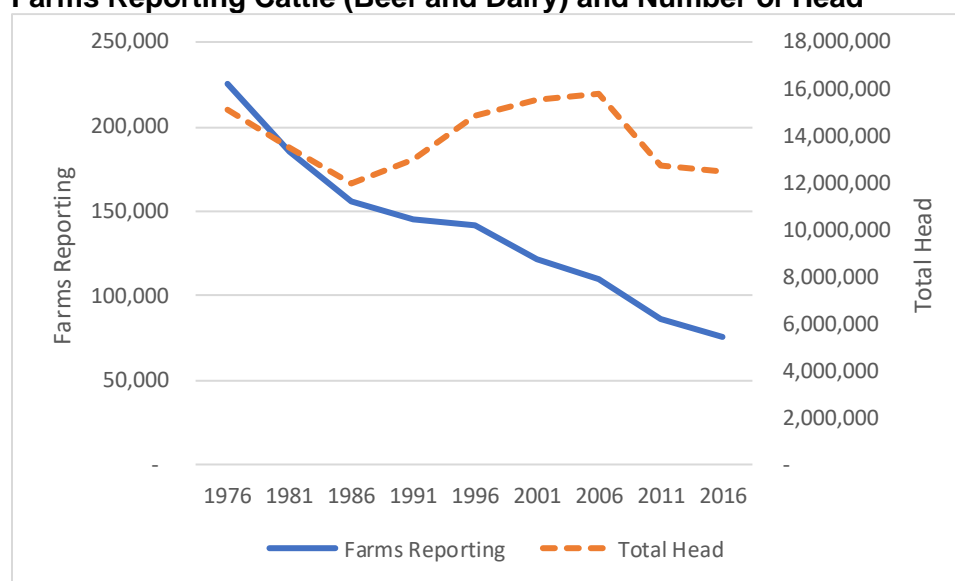
For both ruminant and swine/poultry services, veterinarians play a role as "solutions providers"- helping in diagnosing and fixing specific problems. They also face ongoing competitive pressure from technological solutions.

Cattle Situation and Outlook

The graph below presents the long-term trend in terms of farms reporting inventories of cattle and the herd- dairy and beef. The figure shows that the long-term, the number of farms reporting cattle has declined - consistent with the broader trend in decreasing numbers of farms and increased specialization of farms into crops. The total cattle inventory has ranged around 14 million head and has recently declined to just over 12 million head.

The dynamics of cattle inventories can be further disaggregated into dairy and beef.

Farms Reporting Cattle (Beef and Dairy) and Number of Head



Statistics Canada Table 32-10-0424-01 Cattle and calves on census day

Dairy

The number of dairy cows and heifers has declined slowly over time in a supply-managed system in which the milk market has grown slowly, and increases in milk production per cow have increased at a greater rate than the market, leading to a decrease in the number of cattle head.

Fluctuations in the cattle inventory occur to a greater degree in the beef market, based on expectations of fed cattle prices, feed prices, and the Canada/U.S. exchange rate. However,



even then, adjustments in the breeding herd are slow, with material adjustments occurring over the course of a decade or more.

The outlook for Canadian dairy is of ongoing market stability in a supply-managed environment. Growth in milk quota, which was robust 2016 to 2018, is expected to slow down due to increased dairy imports under trade agreements recently implemented and increased dairy imports from the renewed NAFTA with the U.S. and Mexico. However, the overall Canadian dairy market is growing, and the anticipated impact of the increased access allowed under trade agreements is to split the effect of this growth between imports and domestic production.

Further afield Canadian dairy will need to reckon with the ending of export subsidies in 2021, with adjustment impacts extending beyond this period.

Given overall stability in the number of dairy operations and the value of dairy cattle, demand for veterinary services in the dairy sector is expected to be fairly steady for the next few years.

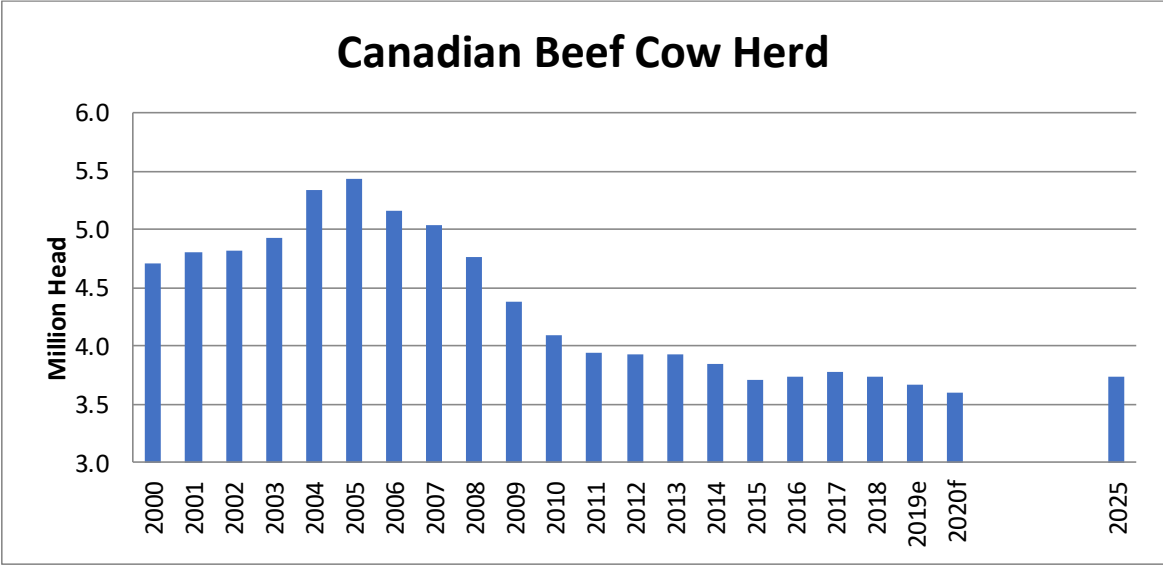
Beef

The prospects for the Canadian beef cattle sector are going to be impacted by African Swine Fever in China and Southeast Asia. The disease will result in stark increases in demand for animal proteins from that region of the world. That, in turn, will lead to significant increases in exports of beef from North America over the 2020-2025-timeframe. The net impact will be larger inventories of cattle and higher producer incomes than would have been the case had the disease not been so significant.

The expectation in the coming five years is that the beef cow herd will stabilize and begin a very slow growth phase. This is due to the pricing impact of African Swine Fever on North American cattle prices. That is, while Canada will not necessarily export large volumes of beef to China, the overall A.S.F. impact on meat proteins will flow through in high cattle prices. Pricing levels should be high enough to stem the erosion of the herd. In addition, prices of cattle and beef should also be high enough to create income and demand levels that are greater than current levels by 10% at the farm level.

Regarding the beef cow herd, the inventories have been in slow decline for many years, as illustrated in the figure below. This decline has occurred despite above-average returns in recent years for farmers and ranchers. The herd has declined due to the opportunity costs of other agricultural enterprises and demographics. With that noted, the overall slaughter levels and cattle on feed in Canada has trended steady to higher in recent years. This is because of higher prices in Canada versus the United States have kept cattle in Canada as opposed to being shipped to the United States.

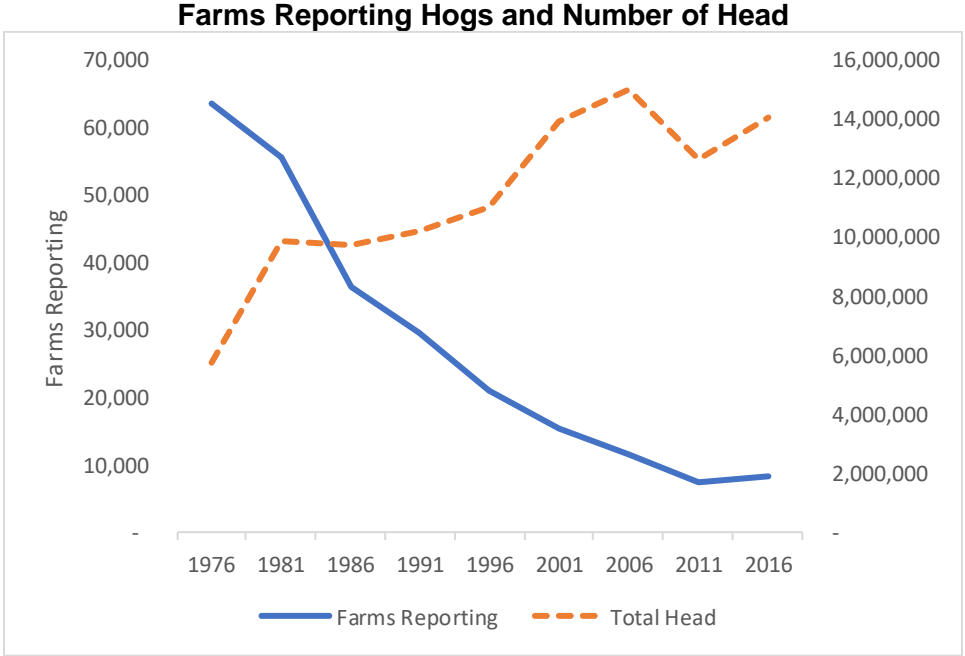




The combination of an increase in overall herd size, as well as the value of beef cattle, will yield a modest increase in demand for veterinary services over current levels.

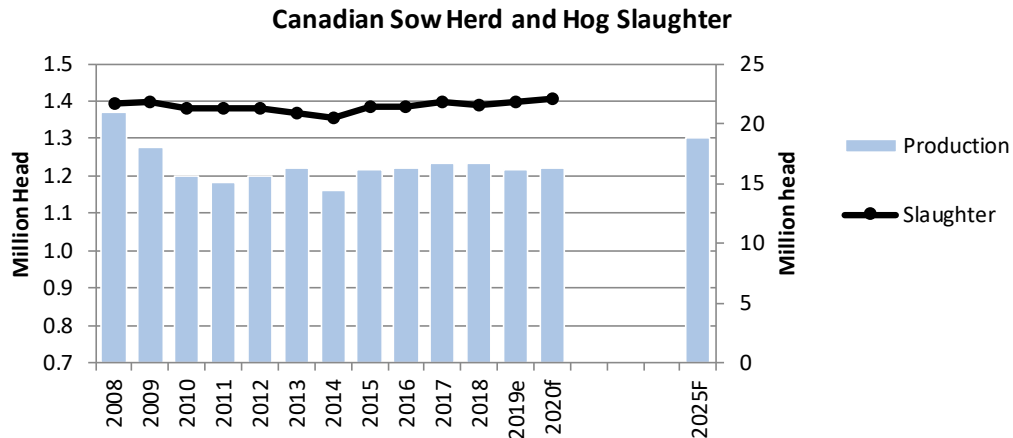
Hog Situation and Outlook

Figure 10 plots the long-term trends in farms reporting hogs and the total hog inventory. The trends are quite starkly and consistently opposite in direction, with the number of farms consistently falling from over 60,000 in 1976 to less than 10,000 recently, but with about 14 million head in inventory 2016, more than double that in 1976.



Source: Statistics Canada Table 32-10-0426-01 Pigs on census day

The Canadian hog industry has been characterized by stable levels in terms of sow inventory and slaughter for many years. The sow herd has trended around 1.2 million with slaughter ranging around 21 million. It is anticipated that there will be large scale Canadian pork exports created due to African Swine Fever in East Asia. This, in addition to the overall pricing impacts of A.S.F. on North American hog markets, should result in 15-20% higher revenue levels. It should also result in a modest increase in the overall herd levels.



Source: Statistics Canada Food animal Inventory and Kevin Grier forecasts

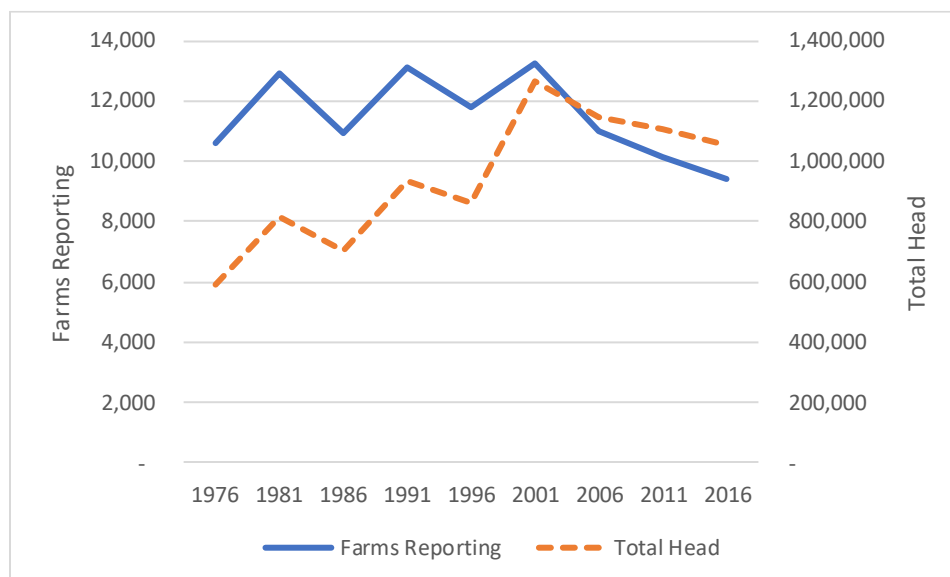
The swine veterinary service model is consultative in nature, similar to poultry and beef feedlot production. The demand for veterinary services is driven more by the number of operations, and decision-makers, than the animal population. For the next few years, demand for veterinary services from swine specialist veterinarians is expected to be stable.

Sheep and Lamb Situation and Outlook

The graph below presents the farms reporting sheep and lambs and the census day inventory of sheep and lambs. The figure shows that the number of farms reporting sheep and lambs has been in decline since 2001. The total head in inventory has also declined since 2001. The market outlook facing sheep and lamb is similar in nature to that facing other red meats, especially beef. The outlook is bullish based on the anticipated impacts across the meat complex related to A.F.S. in East Asia. As with beef, the adjustment is relatively slow and more likely to dampen the decline in sheep and lamb inventory than it is to increase it. This makes for essentially a *status quo* outlook for veterinary service demand.



Farms Reporting Sheep and Lambs and Number of Head



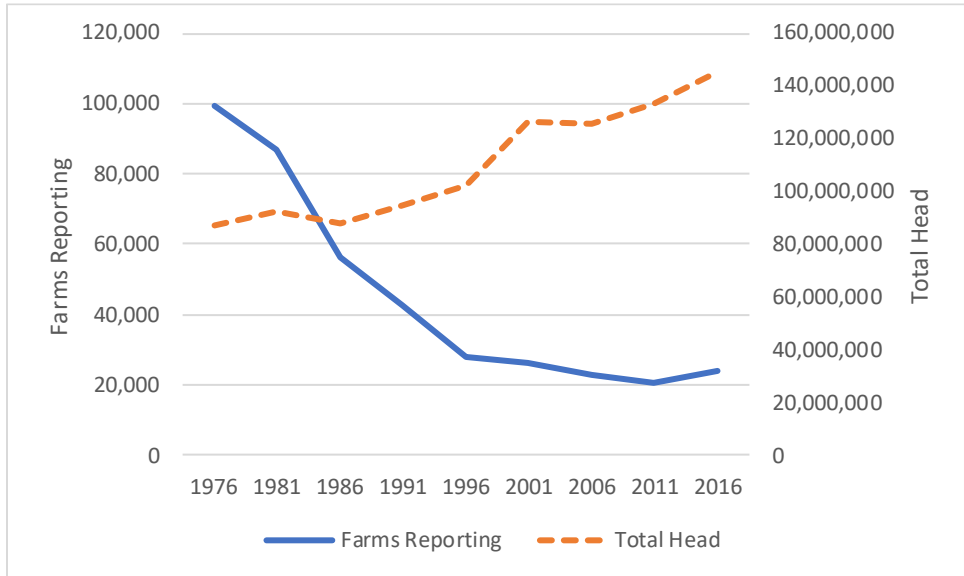
Source: Statistics Canada Table 32-10-0425-01 Sheep and Lambs on census day

Poultry Situation and Outlook

Similar to hogs, the inventory and number of farms reporting chicken and hens have experienced divergent trends. This is illustrated in the graph below. The number of farms reporting chickens and hens has declined heavily, just as inventories have aggressively expanded. The situation for turkeys is somewhat different, with stable inventories over time, but with the number of farms decreasing from almost 14,000 in 1976 to about 2,700 in 2016.

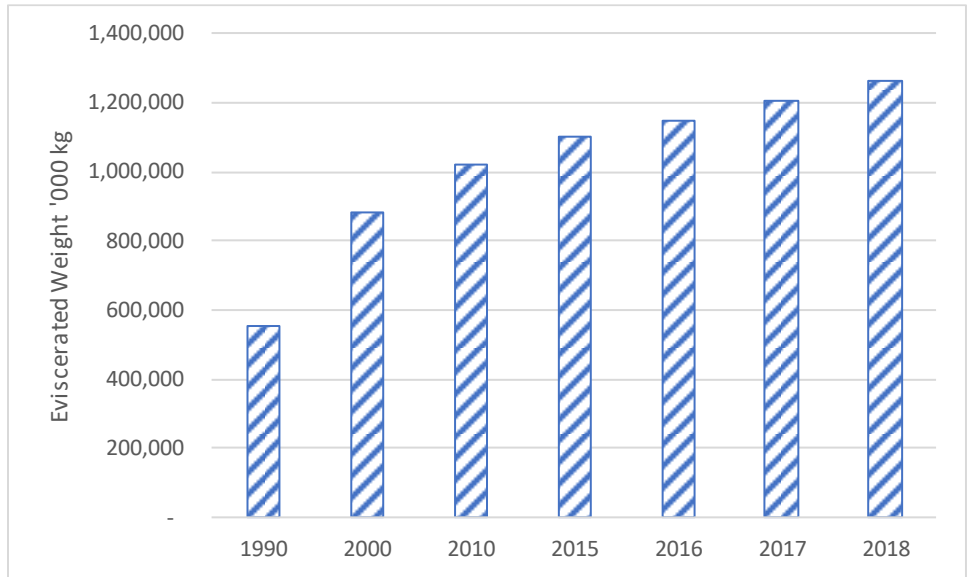
The outlook for poultry segments is broadly stable, given a supply-managed structure. The chicken market exhibits consistent, stable growth, as illustrated in the graph below. This growth is expected to continue, with the prospect of additional growth in the coming years under the demand pressure posed by broad meat shortages associated with A.S.F. The egg market has seen similar consistent growth in recent years, at a somewhat lower rate compared with chicken; this is expected to continue. Demand for Turkey has been flat, with decreasing per capita consumption offset with increases in population; the outlook for turkey essentially remains unchanged, with the prospect for some support in demand due to A.S.F.





Source: Statistics Canada Table 32-10-0428-01 Poultry Inventory on census day

Chicken Production in Canada



Source: Chicken Farmers of Canada Databook 2019

As with swine, the Canadian poultry veterinarian service model is a consulting service model. It is expected that the demand for poultry specialist veterinary care will be stable for the next few years.

Covid-19 as an Intervening Factor on Food Animals



Covid-19 has created some urgent economic issues in the immediate term for food animals- notably swine, beef, and poultry and to a lesser extent, dairy. The proximate causes are two. The loss of the foodservice market has resulted from the dramatic slowdown in demand from hotels, restaurants, and institutions associated with social distancing requirements. The sudden loss of processor demand has resulted from instances in which Covid-19 outbreaks have occurred around processing plants that have been forced to close, and/or absenteeism from processing plant employees fearing becoming sick if they report to work.

These issues are, in some cases, severe, but they result from a lack of coordination in intermediate market levels- there is no reduction in demand for meat, milk, and eggs at the consumer level, and no loss of livestock output or capacity at the farm level. As such, it can be anticipated that those market adjustments will be transitory. Meat demand in domestic and export markets has begun to recover, and meat price levels are up sharply. Many areas are reopening to limited foodservice demand, and in other cases, intermediate supplies are being reoriented toward grocery retail demand. It can be anticipated that as improvements in the workplace, and worker safety occurs, processing plant demand for slaughter animals will return to more normal levels and become more certain, and live animal prices will increase. Producer incomes are also likely to be complemented with government support programs targeted to livestock. Thus, the immediate situation is not indicative of and does not alter, the longer-term outlook for food animals.

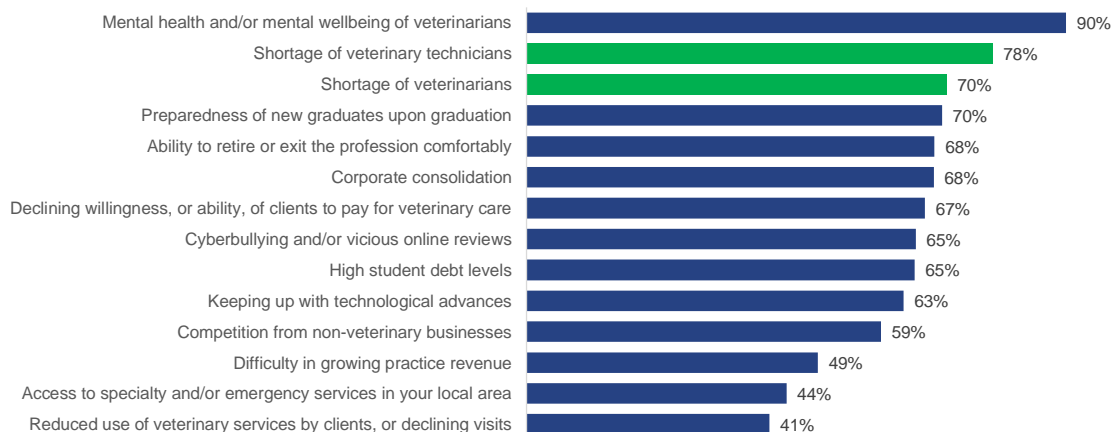


INDICATIONS VETERINARIANS ARE CURRENTLY WORKING NEAR, OR ABOVE CAPACITY

This section of the report includes findings from the quantitative survey conducted with veterinarians and is intended to provide insight into the degree to which a shortage of veterinarians is acknowledged attitudinally and observed through behaviour.

At the beginning of the survey, veterinarians were asked to rate the degree to which they recognized each of the following as challenges faced by the veterinary profession. After mental health/wellbeing, a shortage of veterinary technicians was identified as the second-most significant challenge. A shortage of veterinarians is recognized by many as a challenge; however, it is one of the many challenges faced by the veterinary profession. Other issues such as preparedness of new graduates, the ability to retire comfortably and corporate consolidation are of near-equal importance.

Issues Facing the Veterinary Profession



Issue1. Listed below are several issues you may or may not consider to be significant challenges faced by the veterinary profession today. Please rate each issue using the scale below.
Base: All graduated veterinarians (n=1044)

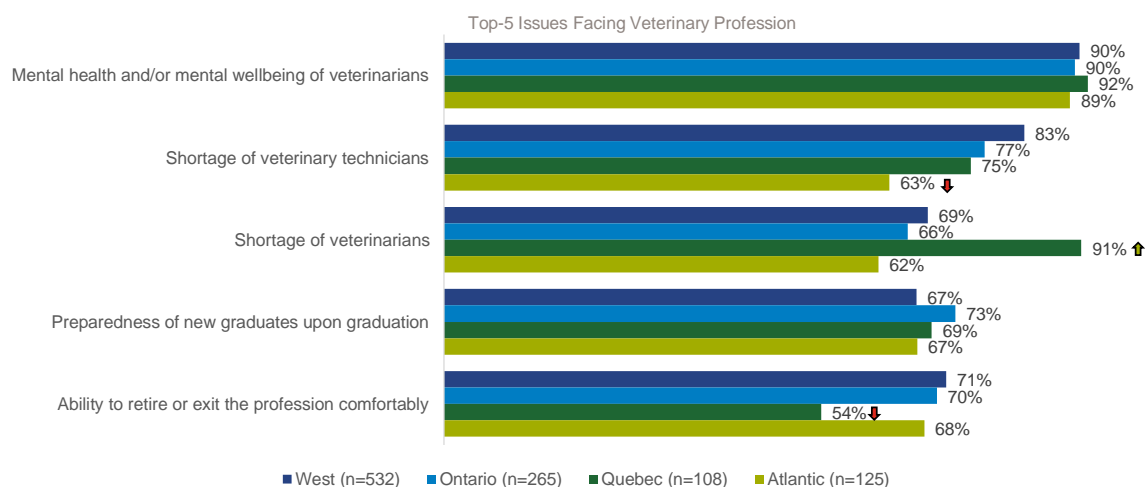
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When results are analyzed by province/region, a shortage of veterinarians is much more likely to be recognized as a concern in Quebec. There are no significant differences between those employed in food animal or companion animal practice, and equine veterinarians are the segments least likely to be concerned with a shortage of veterinarians.



Significant Difference in Issues Facing the Veterinary Profession, by Region



Issue1. Listed below are several issues you may or may not consider to be significant challenges faced by the veterinary profession today. Please rate each issue using the scale below.
Base: All graduated veterinarians (n=1044)

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↓↑ - Shows Significant Difference

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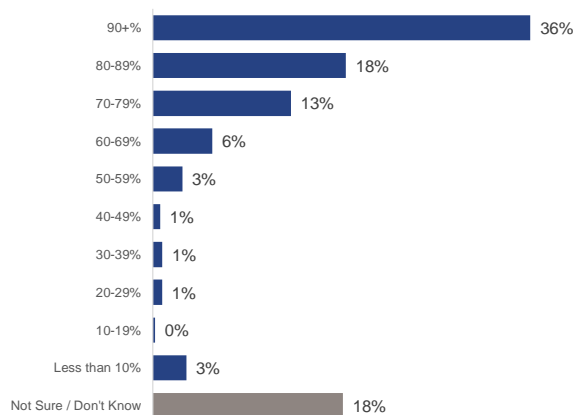
A sizeable proportion of veterinarians indicate their clinics were at 90%+ capacity during September-November of 2019. This perception is most prevalent in British Columbia (46%), Saskatchewan (48%) and Quebec (45%). In all other provinces, far fewer reported being at 90%+ capacity.

Clinics that are >2 hours from an urban centre and clinics in small cities are more likely to be over 90% capacity. Urban clinics and clinics near urban areas are the least likely to be over capacity.

Differences between companion animal, mixed, food animal and equine were relatively small.



Clinic Appointment Capacity Booked – September to November 2020



Demand1. During September, October and November 2019, approximately what percentage of your available client appointments or farm calls were filled each week?
 Base: Currently employed veterinarians (n=1019)

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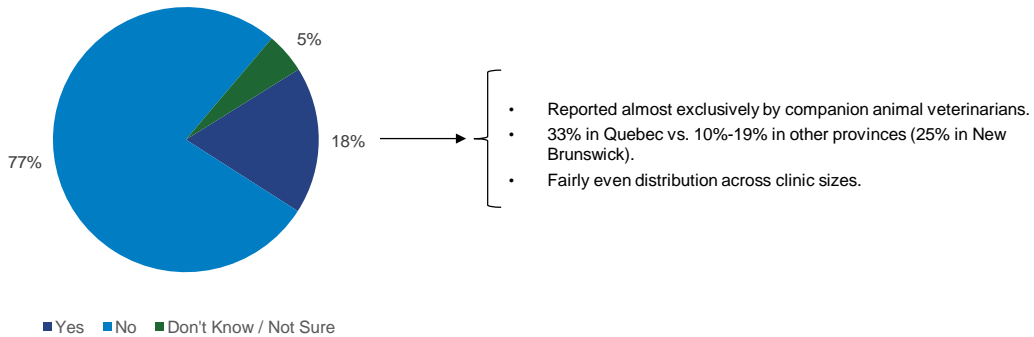
15

Nearly one-in-five veterinarians indicate they have scaled back hours of operation due to a lack of availability for a veterinarian to work those hours, a trend almost exclusively found in companion animal clinics (21% in companion animal versus only 5% in food animal practice and 6% in equine practice).

While relatively uncommon in most provinces, one-third of veterinarians based in Quebec reported reducing clinic hours due to a lack of resource availability to work those hours.



Prevalence of Having Scaled Back Hours of Operation due to Shortage of Veterinarians



Demand3. Thinking back over the past year, has your clinic scaled back its hours of operation due to a lack of availability of veterinarians to work those hours?
 Base: Currently employed veterinarians (n=1019)

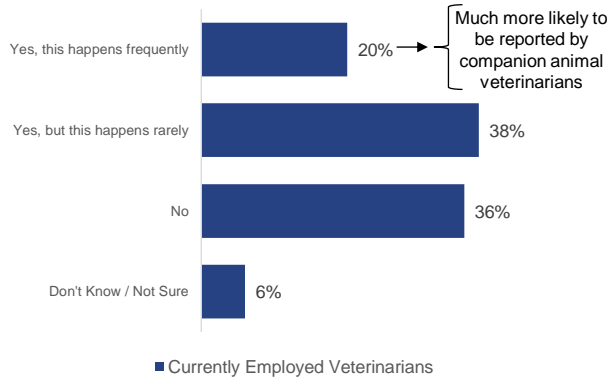
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About one-in-five indicate they have turned clients away "frequently" due to lack of veterinary capacity during the past year. Veterinarians based in British Columbia (30%), Saskatchewan (24%) and Quebec (29%) are more likely to report frequently turning away clients due to lack of capacity. Those living in rural areas are more than two hours from an urban area or more likely to report this behaviour; however, it is important to note that these clinics only represent 5% of Canadian veterinary clinics.



Frequency at which Clients are Turned Away



Responded "Yes, this happens frequently"

	Large / Medium City	Small City	Near Urban Area	Far From Urban Area
British Columbia	28%	38%	29%	12%
Alberta	17%	20%	11%	17%
Saskatchewan	20%	28%	21%	33%
Manitoba	15%		6%	
Ontario	14%	19%	18%	25%
Quebec	25%	30%	30%	100%
Atlantic	7%	11%	7%	20%

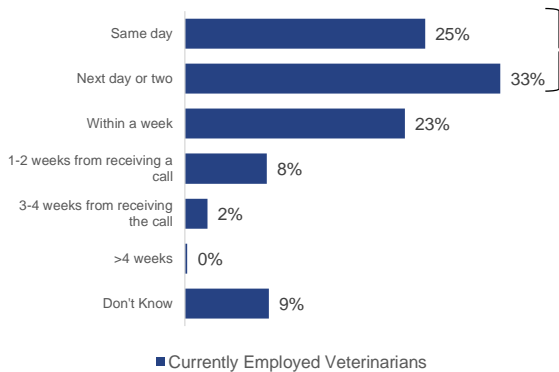
Demand7. Within the last year, has your practice turned away one or more clients due to lack of veterinary capacity?
Base: Currently employed veterinarians (n=1019)

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More than half of veterinarians would be able to schedule a routine appointment within the next few days if asked. Only 10% of veterinarians indicate they would need to book that appointment more than a week out. This suggests that while capacity may be constricted, over 80% of clinics would be able to schedule a wellness exam or non-emergency farm call within a week.

Wait Times for Wellness Exams or Non-emergency Farm Calls



The majority of livestock and companion animal veterinarians would be able to see a client for a routine appointment either same day or within the next day or two.

By province, the majority of clinics in all provinces, except BC, indicate they could provide a routine appointment within the next day or two.

BC	AB	SK	MB	ON	QC	NS	NB	PEI	NF
n=217	n=190	n=62	n=60	n=262	n=104	n=72	n=24*	n=13*	n=11*
46%	63%	48%	62%	58%	58%	68%	75%	62%	64%

Demand2a. If a client were to have called and requested a routine appointment for a wellness exam or non-emergency farm call, how long would it have typically taken to see a veterinarian?

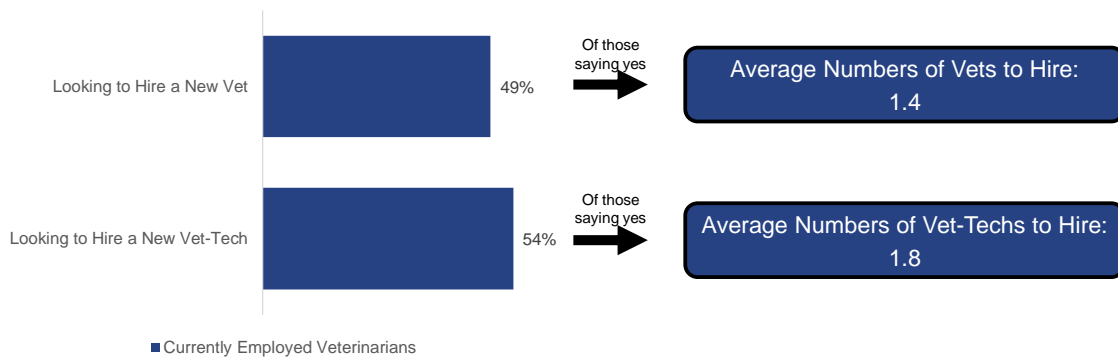
Base: Currently employed veterinarians (n=1019)

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The prevalence of currently open positions is a key indicator for evaluating the degree to which a sector or profession's supply of capacity is exceeded by demand. Half of the respondents indicate their practice is currently looking to hire a veterinarian and/or a veterinary technician. The likelihood to have an open position available is slightly higher in companion animal clinics than in food animal clinics. Only 7% of those with open positions, however, indicate the new veterinarians would only allow the clinic to keep up with current clients. Sixty-nine percent expect new positions, once filled, will help with current clients, but also have time for new clients. 32% indicate that new veterinary hires would need to bring in new clients for them to be kept busy.

Prevalence of Open Veterinarian Positions in Canada



Demand4. Does your clinic currently have openings for additional veterinarians or veterinary technicians?
 Base: Currently employed veterinarians (n=1019)

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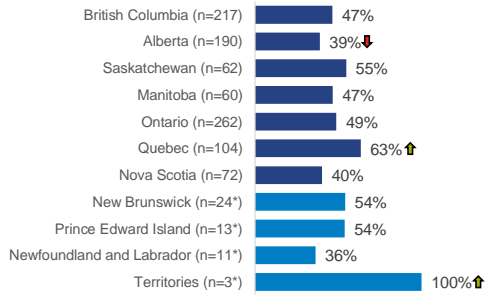
The graph below shows the percentage of clinics with a veterinarian and/or veterinary technician position open. While the situation is clearly more pronounced in Quebec, a sizeable proportion of veterinarians report open positions in all provinces.



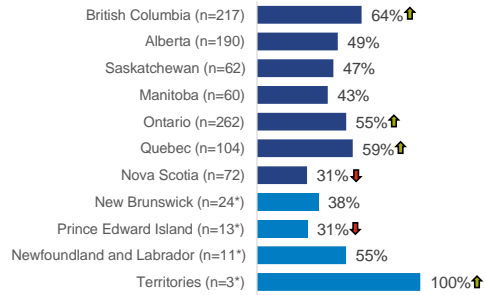
Prevalence of Open Veterinarian Positions in Canada, by Location



Looking to Hire a New Veterinarian



Looking to Hire a New Vet Tech



Demand4. Does your clinic currently have openings for additional veterinarians or veterinary technicians?
 Base: Currently employed veterinarians (n=1019)

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* - Caution Small Base Sizes

↓ ↑ - Shows Significant Difference

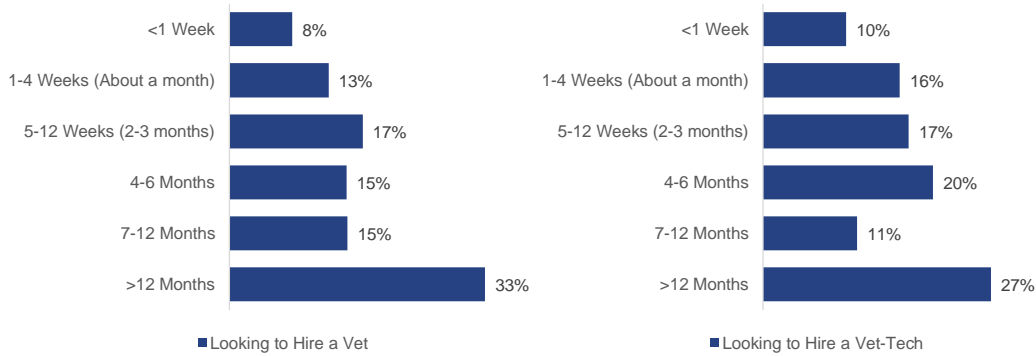
22

Approximately half of those with an open position for a veterinarian indicates it has been open for longer than seven months. Veterinarians in Alberta, Saskatchewan and Quebec report longer waits for positions to be filled.

More than half of veterinary clinics indicate they could hire a veterinarian (59%) and/or veterinary technician (67%) to keep up with current demand. On average, these clinics could add 1-2 FTE veterinarians and about two veterinary technicians.



Duration of Looking to Fill Posted Positions



Demand5. How long have you been actively searching to fill the positions?
 Base: Currently looking to hire (Vet n=488, Vet-Tech n=537)

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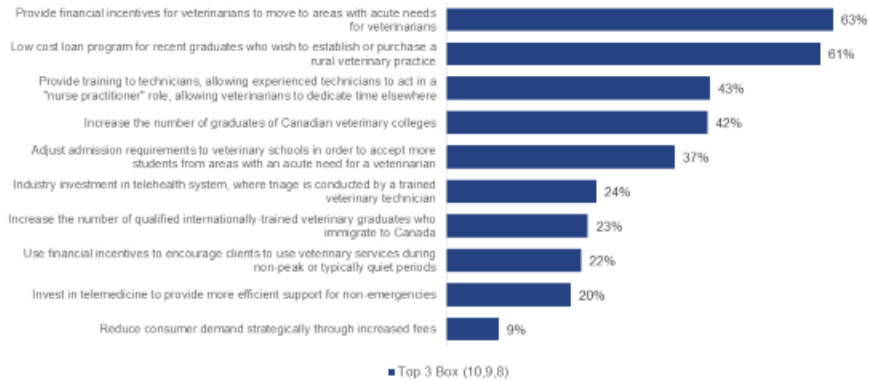
At the end of the survey, respondents were asked to rate a list of potential solutions to the issue of a shortage of veterinarians. The two concepts with the broadest appeal were financial incentives for veterinarians to move to areas with acute needs and a low-cost loan program to establish a rural practice.

Training technicians to act in a nurse practitioner role, increasing the number of Canadian veterinary school graduates and adjusting admission requirements to accept students from areas with an acute need rank in the second tier of concepts, with approximately 40%.

Generally speaking, respondents from Quebec and Western Canada were more likely to agree with solutions than veterinarians from Ontario or Atlantic Canada.



Solutions to the Capacity Problem



So11. Listed below are several different ways the industry could increase the capacity of Canadian veterinarians, if needed. Please indicate the degree to which you support each approach.
 Base: Currently employed veterinarians (n=1019)
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CONCLUSIONS AND RECOMMENDATIONS

Conclusions

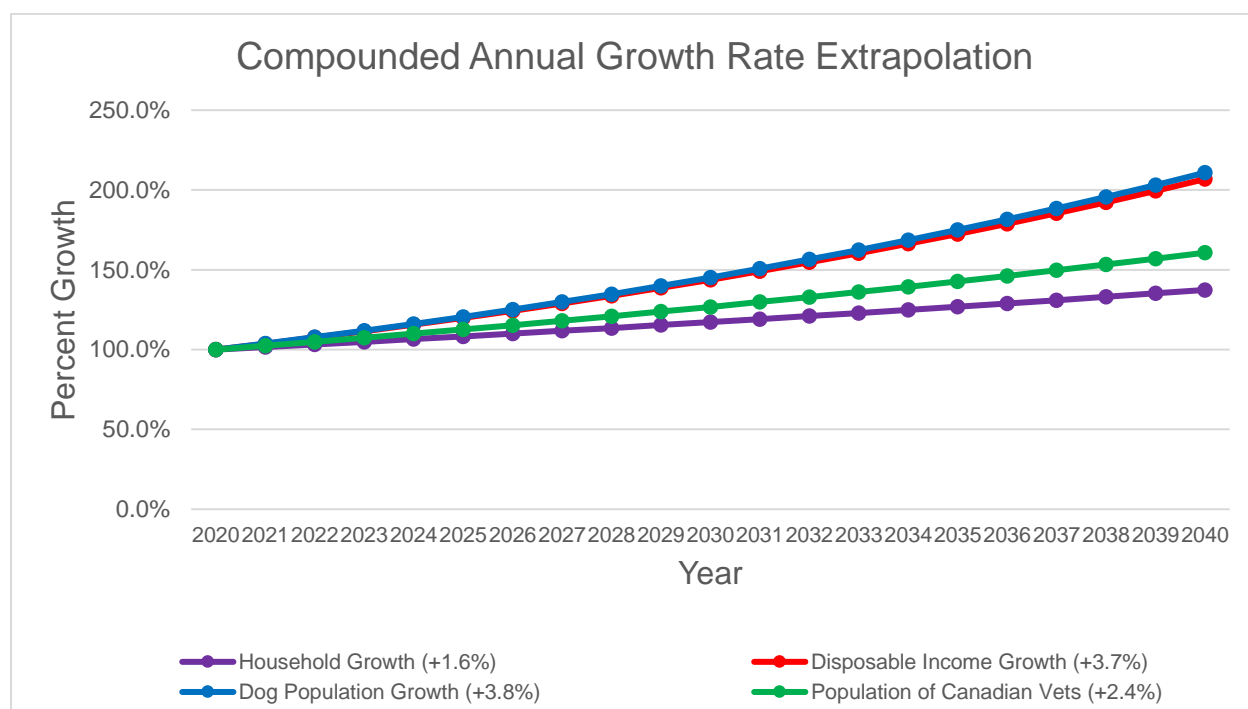
In order to estimate the total capacity of Canadian veterinarians, we examined both factors which affect the population of veterinarians as well as that population's ability to provide service to clients.

Canada's population of veterinarians has grown since 2015 at a CAGR of 2.4%, despite an estimated annual retirement rate of approximately 3.0%. This growth has only been possible due to an increasing influx of veterinarians trained at international veterinary colleges. Future growth will be dependent on either an increase in domestically or internationally trained veterinarians.

Capacity within the population of veterinarians is showing signs of being stretched, and in some provinces exceeded. The situation is exacerbated by a parallel shortage of veterinary technicians.

Leading up to the COVID crisis, a favourable economic climate combined with household and dog population growth has resulted in increased demand for veterinary services in recent years, and continued growth moving forward.

Left unchecked, an analysis of CAGR for household growth, dog population growth and veterinarian population growth reveals the risk of allowing Canada's veterinarian population to continue to grow at current rates. Although perhaps not a crisis yet, the situation becomes dire in the next 10-15 years.



The economic fallout of the COVID crisis will potentially soften demand for veterinary services and provide CVMA and related stakeholders with an opportunity to develop a long term strategy.

Recommendations

1. The emerging economic crisis likely will reduce demand for veterinary services to some extent in the near term, but an eventual veterinarian supply crisis awaits. CVMA and related stakeholders must align, recognize that underlying capacity issues present now will be exacerbated during the eventual economic recovery. A long-term strategy to grow the Canadian veterinarian population at an annual rate of 3.5-4.0% is needed. A parallel strategy to address the shortage of veterinary technicians is also required, which may provide quicker returns due to the shorter time required to graduate veterinary technicians.
2. Canadian veterinary colleges are graduating veterinarians at a rate currently equal to retirement. CVMA and related stakeholders should investigate the degree to which the supply of internationally trained veterinarians can be forecasted as a reliable and manageable source of growth. CVMA should align with the government and universities to develop a long-term plan for a sustainable increase in veterinarian graduates.
3. Of all provinces, Quebec is experiencing the greatest degree of stretched veterinarian resources and capacity. Developing a solution for Quebec is more complex due to the large pet population, robust food animal sector and French language requirements. CVMA should partner with stakeholder organizations to identify partnership opportunities in Francophone international schools and/or look for expansion of FMV.
4. There is no cost-effective and easy solution for the absence of veterinary care in remote areas. The gap in threshold client demand to support veterinary services is at least as important as the willingness of veterinarians to service these areas. CVMA should investigate the degree to which telemedicine and training of local "nurse practitioners" can suffice for day-to-day well-care needs.



Appendix:

CVMA Workforce Study

DRAFT

SURVEY SPECIFICATIONS:

Target as many completed surveys as possible

No incentive payment

Nationally Representative of Canada

English and French

Sample to be provided by CVMA

E-mail Invitation

Dear Doctor:

We want to gather your opinion on an important industry matter.

Kynetec Research, in collaboration with the Canadian Veterinary Medical Association and a team of experts, is conducting a major study on the current and future needs of the veterinary workforce. This survey is intended for veterinarians working in practice with companion animal, equine or food animal clients.

Findings from this study will be used to guide policy and ensure the Canadian veterinary community meets the needs of clients, pets and food animals. Please help by participating in the survey below.

Your name has been randomly selected from a large database of veterinarians provided by the CVMA. You will never be identified individually in the study, and neither Kynetec nor the CVMA will ever know the names of individual respondents.



The survey should take only **20 minutes** to complete. Your contribution is vitally important and very much appreciated. We would encourage you to complete the survey in your hospital as some questions may require you to consult your practice management software.

All respondents will have the opportunity to be entered into a drawing for one of 10 \$100 gift cards. ~~A separate link appears at the end of the survey to enter in the draw.~~

Screener

Thank you for taking the time to participate in our survey, the next few questions are designed to determine if you should qualify for this study.

Please complete the online survey by [INSERT DATE] or sooner.

Please click the arrow to see if you qualify for our survey.

SC1. Are you a veterinarian, or currently attending veterinary college?

Yes

No [TERMINATE]

[TERMINATE TEXT: We're sorry, however, for this study we are only interviewing veterinarians. Thank you for your interest in the study.]

SC2. Which of the following best describes your employment status?

Currently employed

Currently unemployed

Student

Retired [TERMINATE]

Other



[TERMINATE TEXT: We're sorry, however, for this study we are only interviewing veterinarians who have not yet retired. Thank you for your interest in the study.]

[IF UNEMPLOYED IN SC2 SKIP TO SC4.]

[IF STUDENT AUTOMARK SC3 AS VETERINARY STUDENT AND DO NOT ASK]

SC3. Which of the following best describes your current position? *If more than one is relevant, please select the option that best describes how you spend the majority of your work time.*

[LIST – DO NOT RANDOMIZE]

Associate/employed veterinarian

Relief/Locum veterinarian

Consultant/Contract Work

Owner or Co-Owner of veterinary practice

Medical Director of Corporately-Owned practice

Veterinary student

Resident working towards board certification in a veterinary specialty

Professor [TERMINATE]

Executive (CEO/VP/Chief Administrator/Dean) [TERMINATE]

Non-executive role in industry [TERMINATE]

Practice Manager (no D.V.M. or equivalent degree) [TERMINATE]

Clinician [TERMINATE]

Researcher [TERMINATE]

Other [SPECIFY][TERMINATE]

[TERMINATE TEXT: We're sorry, however, for this study we are only interviewing veterinarians currently employed in companion, equine or food animal practice, and veterinary students. Thank you for your interest in the study.]

SC4. In what province or territory do you live?

[PROVINCE DROPBOX – SELECT ONE ONLY]

British Columbia



Alberta

Saskatchewan

Manitoba

Ontario

Quebec

Nova Scotia

New Brunswick

Prince Edward Island

Newfoundland/Labrador

Northwest Territories

Nunavut

Yukon

My permanent residence is outside of Canada [ANCHOR AT BOTTOM - TERMINATE]

[TERMINATE TEXT: We're sorry, however, for this study we are only interviewing veterinarians currently living in Canada. Thank you for your interest in the study.]

[IF STUDENT AUTOMARK SC5 AS VETERINARY STUDENT OR RESIDENT AND DO NOT ASK]

[DO NOT ASK IF UNEMPLOYED IN SC2.]

SC5. How would you best describe the practice or other employer at which you work?

[LIST – DO NOT RANDOMIZE]

Food animal practice (exclusive)

Food animal practice (predominant)

Mixed practice (at least 25% companion and 25% food or equine)

Companion animal practice (predominant)

Companion animal practice (exclusive)

Equine practice (predominant)

Veterinary student or resident

College or University teaching hospital [TERMINATE]

Other (Please Specify): [OPEN-ENDED TEXT]



Not applicable

[TERMINATE TEXT: We're sorry, however, for this study we are only interviewing veterinarians working in practice. Thank you for your interest in the study.]

[PAGE BREAK]

Congratulations, you have qualified to participate in our study.

[PAGE BREAK]

[IF STUDENT SELECTED IN SC2 SKIP TO STUDENT QUESTIONS, OTHERWISE CONTINUE]

Top Issues Facing the Veterinary Profession

Issue1. Listed below are several issues you may or may not consider to be significant challenges faced by the veterinary profession today. Please rate each issue using the scale below.

[SCALE]

Critically Important Issue

Moderately Important Issue

Minor Issue

Not an issue at all

Don't Know/Not Sure

[LIST – RANDOMIZE, PLEASE SHOW SCALE AGAIN MIDWAY THROUGH LIST]

Shortage of veterinarians

Shortage of veterinary technicians

Preparedness of new graduates upon graduation

High student debt levels

Reduced use of veterinary services by clients, or declining visits

Mental health and/or mental wellbeing of veterinarians

Ability to retire or exit the profession comfortably



Declining willingness, or ability, of clients to pay for veterinary care
Difficulty in growing practice revenue
Cyberbullying and/or vicious online reviews
Corporate consolidation
Keeping up with technological advances
Access to specialty and/or emergency services in your local area
Competition from non-veterinary businesses (pet stores, human pharmacies, corporate chains, etc.)

[IF UNEMPLOYED IN SC2 SKIP TO DEMOGRAPHICS SECTION.]

Employment Profile

EMP1. For how many years have you worked as a veterinarian?

[VALUE RANGE: 0.0-99.9] years

EMP2. Thinking about yourself personally, what percentage time would you estimate you spend working with each of the following species during a typical week:

[LIST – VALUE RANGE FOR EACH 0-100%, AUTOPOPULATE WITH ZEROES, INCLUDE AUTOSUM AT BOTTOM, TOTAL MUST ADD TO 100%, DO NOT RANDOMIZE]

Dogs

Cats

Other Companion Animals, including exotics and avian

Horses

Beef Cattle

Dairy Cattle

Swine

Sheep and/or goats

Poultry

Other Livestock Animals

Other Animals Not Listed Above



EMP3. At what age do you hope to retire from practicing veterinary medicine?

[VALUE RANGE: 0-120] years of age

EMP4. For how many years have you worked at your current practice?

[VALUE RANGE: 0-120, ALLOW FOR DECIMAL] years

[IF PRACTICE OWNER/CO-OWNER IN SC3 DO NOT ASK EMP6]

EMP6. What is the maximum distance you would consider moving to take a new position as a veterinarian? [*Please check only one.*]

[LIST]

I am not interested in leaving my current place of employment

I would be willing to change jobs, but not move to a different community or region

A different community within 5 hours of my current clinic

A different community within my province

A different community in another province

A different country

EMP7. Please indicate your agreement with each of the following statements using the scale provided:

[SCALE]

10 – Completely Agree

9

8

7

6

5

4



3

2

1 – Completely Disagree

Don't Know

Not Applicable

[STATEMENTS - RANDOMIZE]

I want to stay in practice, but not own a clinic

I want ~~like~~ to take a veterinary position with a government agency

I want to take a veterinary position in industry

I want to own a veterinary clinic someday [DO NOT SHOW IF OWNER SELECTED IN SC3]

I want to go back to school to earn an advanced degree or qualify as a specialist

I want to leave the veterinary profession to pursue another interest

I want to emigrate from Canada

Demographics

DEM1. What is your gender? (Please check only one)

[LIST – DO NOT RANDOMIZE]

Female

Male

Non-binary/Third gender

Prefer to self-describe [TEXT BOX]

Prefer not to say

DEM2. In what year were you born?

[LIST – DROP BOX, YEAR RANGE 1930-2000]

DEM3. In what year did you graduate from veterinary school?

[VALUE RANGE: 1950 – 2019]



DEM4. From which veterinary school did you receive your D.V.M., D.M.V. or equivalent?
Please select one only.

[RANDOMIZE]

Ontario Veterinary College (OVC)

Atlantic Veterinary College (A.V.C.)

Faculty of Veterinary Medicine, University of Montreal

Western College of Veterinary Medicine (WCVM)

Faculty of Veterinary Medicine, University of Calgary

Other: PLEASE SPECIFY

[IF OTHER, ASK DEM5. OTHERWISE SKIP TO DEM 6.]

DEM5. In what country did you attend veterinary school?

[OPEN-ENDED TEXT]

DEM6. Are you a board-certified specialist?

Yes (Please enter specialization) [TEXT BOX]

No

[IF UNEMPLOYED IN SC2 SKIP TO END.]

DEM7. Approximately how many hours per week do you work in veterinary practice?

[VALUE RANGE: 0-999]

DEM8. Do you typically work evenings, weekends or holidays? *Please do not include on call time in your response.*

[LIST – RANDOMIZE]

Evenings



Weekends

Holidays

[RESPONSES]

Always

Often

Sometimes

Rarely

Never

Prefer not to answer

DEM9. Which best describes how satisfied you are with your current workload?

[RANDOMIZE – SINGLE PUNCH]

I'm working more hours than I would like

I'm working fewer hours than I would like

I'm satisfied with the number of hours I'm working

Prefer not to answer

DEM10. Do you have children living currently living with you in your household either full-time or shared-time?

[RESPONSES]

Yes

No

Prefer not to answer

DEM11. What was your starting annual salary when you first started working full-time as a veterinarian?

[VALUE RANGE: \$0-999,999]

Don't Know / Not Sure

Not Applicable



DEM12. At the time of your graduation from veterinary school, what was your approximate level of student debt?

[VALUE RANGE: \$0-999,999]

Don't Know / Not Sure

DEM13. Approximately how many hours per week do you expect you will work when you are...

[O.N.L. Y SHOW AGE BREAKS FOR RESPONDENTS WHO ARE YOUNGER THAN THAT AGE BREAK. FOR EXAMPLE, IF A RESPONDENT IS 47 YEARS OF AGE IN DEM2, ONLY SHOW LEVELS 3 AND 4.]

36-45 years of age	
46-55 years of age	
56-65 years of age	
>65 years of age	

Clinic Profile

CLINIC1. Which of the following best describes your practice? *Please select all that apply.*

[LIST – DO NOT RANDOMIZE, MULTI-PUNCH]

Independent Private Practice

Corporate Practice with Centralized Decision-making

Emergency Practice

Specialty Practice

Mobile Practice

Shelter

Naturopathic, holistic or alternative medicine practice

Not-for-profit practice or charity



Other [SPECIFY]

Not applicable

CLINIC2. Which of the following best describes your clinic?

[LIST]

Independently owned with one location

Independently owned with more than one location

Corporate clinic with more than one location

Other

CLINIC3. Thinking of the primary clinic in which you work, please indicate how many full time equivalent (FTE) staff your clinic employs. For example, if your practice has two full-time and 3 half-time veterinarians, that is equivalent to 3.5 FTE. *Please include yourself in your response.*

For the purpose of this research, please assume FTE to mean approximately 40 hours per week.

[LIST – ROWS, VALUE RANGE 0.0 – 100.0]

Veterinarians

Veterinary technicians

Practice managers

Administrative staff members

Other staff members

Don't Know

CLINIC4. Check which days of the week that your practice is typically open, and please indicate the number of hours the practice is open on each day.

	Practice is Open on These Days	Number of Hours Practice is Open on this Day
--	--------------------------------	--



Monday	[RADIO]	[VALUE RANGE: 0-24, ONLY POSSIBLE IF RADIO SELECTED]
Tuesday	[RADIO]	[SAME]
Wednesday	[RADIO]	[SAME]
Thursday	[RADIO]	[SAME]
Friday	[RADIO]	[SAME]
Saturday	[RADIO]	[SAME]
Sunday	[RADIO]	[SAME]

CLINIC5. How many active clients would you estimate your practice has?

For active clients, please think of clients who have visited at least once during the past 18 months, or for which you have otherwise provided services (e.g. farm calls).

[RANGE: 0-99,999]

Don't know

CLINIC6. How many new clients has your clinic acquired during the past 12 months?

[RANGE: 0-99,999]

Don't know

CLINIC7. How many clients has your clinic lost for any reason (including no longer have animals) in the past year.

[RANGE: 0-99,999]

Don't know

CLINIC8. What is the approximate distance between your clinic location and your most distant client?



Approximately [RANGE: 0-99,999] kilometers

Don't Know / Not Sure

Not applicable

CLINIC9. How many other veterinary clinics would you say operate in your trade area? By trade area, we mean the geographic area in which any clients of your practice are located.

Please do not include your clinic in your responses below

[LIST – VALUE RANGE FOR EACH 0-500, AUTOPOPULATE WITH ZEROES, INCLUDE OPTIONAL CHECKBOX FOR EACH "Don't Know / Not Sure"]

Companion animal practices (include private, corporate, shelter veterinarians, etc.)

Mixed animal practices

Food animal practices

Equine practices

Specialty/referral/emergency practices

CLINIC10. How would you describe the community your practice is located in?

[LIST]

Large City/Urban Area (>300,000 population)

Suburb of Large City that has a population >300,000

Small/Medium City (<200,000 population)

Rural Town or Area – <2 hours from an urban area or suburb

Rural Town or Area – 2+ hours from an urban area or suburb

[DO NOT ASK CLINIC8-11 IF RESPONDENT SELECTED ANYTHING OTHER THAN OWNER IN SC3]

CLINIC11. What were your practice's approximate gross revenues in 2019? If you work at a clinic with multiple locations, please select the location you most often work at.

[RESPONSES – SINGLE PUNCH]



- Less than \$500,000
- \$500,000 to \$999,999
- \$1,000,000 to \$1,499,999
- \$1,500,000 to \$1,999,999
- \$2,000,000 to \$2,999,999
- \$3,000,000 to \$4,999,999
- \$5,000,000 or more
- Don't know/no answer

CLINIC12. Did your clinic implement a price increase in 2019 and/or 2020?

[RESPONDENT MUST SELECT EITHER YES OR NO FOR EACH YEAR]

	2019	2020
Yes (Please enter percentage of price increase)	[VALUE RANGE: 0-99]%	[VALUE RANGE: 0-99]%
No	[RADIO BUTTON]	[RADIO BUTTON]
Don't Know / Not Sure	[RADIO BUTTON]	[RADIO BUTTON]

CLINIC13. How did your practice's 2019 revenues compare with 2018 revenues?

[LIST]

- Increased 5% or more
- Increased 1-4%
- Revenues were unchanged
- Decreased 1-4%
- Decreased 5% or more
- Don't Know / Not Sure

CLINIC14. Would you recommend a career in veterinary medicine to a friend or family member?

Yes



No

[IF NO IN CLINIC14 ASK CLINIC15]

CLINIC15. You indicated you would not recommend a career in veterinary medicine, what are the main reasons why?

[OPEN-ENDED TEXT]

Demand Questions

DEMAND1. During September, October and November 2019, approximately what percentage of your available client appointments or farm calls were filled each week?

[SELECT ONE ONLY]

Less than 10%

10-19%

20-29%

30-39%

40-49%

50-59%

60-69%

70-79%

80-89%

90+%

Not Sure / Don't Know

DEMAND2a. For this question, please think back to September, October and November 2019.

If a client were to have called and requested a routine appointment for a wellness exam or non-emergency farm call, how long would it have typically taken to see a veterinarian?

[LIST]



- Same day
- Next day or two
- Within a week
- 1-2 weeks from receiving a call
- 3-4 weeks from receiving the call
- >4 weeks
- Don't Know

DEMAND2b. How long is does a typical wellness exam, or non-emergency farm call take you personally?

Please enter the number of minutes, including travel time (if applicable).

	Time in Minutes	Not Applicable
Wellness Exam	[VALUE RANGE: 1-999]	[CHECKBOX]
Non-emergency Farm Call	[VALUE RANGE: 1-999]	[CHECKBOX]

DEMAND3. Thinking back over the past year, has your clinic scaled back its hours of operation due to a lack of availability of veterinarians to work those hours? Please do not include times where hours were reduced due to vacations/holidays.

- Yes
- No
- Don't Know / Not Sure

DEMAND4. Does your clinic currently have openings for additional veterinarians or veterinary technicians?

If so, please enter the number of FTE positions looking to be filled. Please enter a decimal value if a part time position is included.

[RESPONDENT MUST SELECT ONE OPTION IN EACH COLUMN]



	Veterinarian Positions	Veterinary Technician Positions
Yes	[VALUE RANGE: 0-99.9]	[VALUE RANGE: 0-99.9]
No	[RADIO BUTTON]	[RADIO BUTTON]
Don't Know / Not Sure	[RADIO BUTTON]	[RADIO BUTTON]

[IF YES IN DEMAND4 ASK DEMAND5]

DEMAND5. How long have you been actively searching to fill the positions?

___ Veterinary position(s)

___ Technician position(s)

DEMAND6. Regardless of whether your practice is currently hiring, approximately how many additional FTE veterinarians and/or veterinary technicians would you estimate your clinic needs to keep up with current workload? For example, if you could readily use another half a veterinarian, list as 0.5 FTE.

[RESPONDENT MUST SELECT ONE OPTION IN EACH COLUMN]

	Veterinarian Positions	Veterinary Technician Positions
	[VALUE RANGE: 0-99.9]	[VALUE RANGE: 0-99.9]

DEMAND7. Within the last year, has your practice turned away one or more clients due to lack of veterinary capacity?

[LIST]

Yes, this happens frequently

Yes, but this happens rarely

No

Don't Know / Not Sure



DEMAND8. Which of the following would you say best describes the volume of work in your clinic?

[LIST]

The volume of work is relatively consistent throughout the year.

The work is seasonal (If selected, what are your three busiest months?) [THREE DROPBOXES CONTAINING MONTH NAMES, SAME MONTH MAY ONLY BE SELECTED ONCE]

DEMAND9. What is the approximate salary range for each of the following types of positions in your area? Please only consider full-time salaries in your response.

Associate Veterinarian with 5 years of experience	\$(VALUE RANGE: 0-999999)	Don't Know / Not Sure
New Graduate Veterinarian	\$(VALUE RANGE: 0-999999)	Don't Know / Not Sure

DEMAND10. Thinking back 2 years, what was the approximate salary for each of the following types of positions in your area? Please only consider full-time salaries in your response.

Associate Veterinarian with 5 years of experience	\$(VALUE RANGE: 0-999999)	Don't Know / Not Sure
New Graduate Veterinarian	\$(VALUE RANGE: 0-999999)	Don't Know / Not Sure

DEMAND11. If your practice were to add a full-time veterinarian, which of the following describes the role they would likely play in your clinic?

A new full-time veterinarian would...

[LIST – SELECT ONE ONLY]

Only allow us to keep up with current clients (**Very Understaffed**)

Help with current clients, but would also have time available for some new clients. (**Moderately Understaffed**)

Need to bring in new clients for them to be kept busy (**Appropriately Staffed**)



Solutions Questions

SOL1. Listed below are several different ways the industry could increase the capacity of Canadian veterinarians if needed. Please indicate the degree to which you support each approach.

[LIST]

Adjust admission requirements to veterinary schools in order to accept more students from areas with an acute need for a veterinarian

Increase the number of graduates of Canadian veterinary colleges

Increase the number of qualified internationally-trained veterinary graduates who immigrate to Canada

Invest in telemedicine to provide more efficient support for non-emergencies

Provide financial incentives for veterinarians to move to areas with acute needs for veterinarians

Provide training to technicians, allowing experienced technicians to act in a "nurse practitioner" role, allowing veterinarians to dedicate time elsewhere

Industry investment in telehealth system, where triage is conducted by a trained veterinary technician

Low cost loan program for recent graduates who wish to establish or purchase a rural veterinary practice

Reduce consumer demand strategically through increased fees

Use financial incentives to encourage clients to use veterinary services during non-peak or typically quiet periods

[SCALE]

10 – Completely Support

9

8

7

6

5

4

3

2



1 – Do not Support at All

[O.N.L. Y ASK STUDENT QUESTIONS IF RESPONDENT IS A STUDENT IN SC2]

Student Questions

S – Years. What year of veterinary college are you in?

[LIST]

First

Second

Third

Fourth

Other: SPECIFY

S - Issue1. Listed below are several issues you may or may not consider to be significant challenges faced by the veterinary profession today. Please rate each issue using the scale below.

[SCALE]

Critically Important Issue

Moderately Important Issue

Minor Issue

Not an issue at all

Don't Know/Not Sure

[LIST – RANDOMIZE, PLEASE SHOW SCALE AGAIN MIDWAY THROUGH LIST]

Shortage of veterinarians

Shortage of veterinary technicians

Preparedness of new graduates upon graduation

High student debt levels

Reduced use of veterinary services by clients, or declining visits

Mental health and/or mental wellbeing of veterinarians



Ability to retire or exit the profession comfortably
Declining willingness, or ability, of clients to pay for veterinary care
Difficulty in growing practice revenue
Cyberbullying and/or vicious online reviews

S – EMPLOY1. When you graduate, do you intend to enter practice or other employment immediately, continue your education (e.g. residency, doctoral program), or otherwise defer employment?

[SELECT ONE ONLY]

Enter practice
Seek employment outside of practice
Continue education
Defer employment until some time in the future
Don't Know / Not Sure

[IF S – EMPLOY1. = ENTER PRACTICE OR SEEK EMPLOYMENT CONTINUE, OTHERWISE SKIP TO S-DEM1.]

S – EMPLOY2. [If plan to enter practice or seek other employment] What employment do you plan to seek after graduating from veterinary school? (Please check only one)

[LIST – SELECT ONE ONLY]

Work in companion animal practice
Work in equine practice
Work in mixed practice
Work in livestock practice
Work in uniformed services
Work for a non-profit organization
Work for the federal government
Work for any other level of government
Work for a college or university
Work for a research organization
Work in another capacity [SPECIFY]

S – EMPLOY3. Upon graduation, where would you would consider moving to take a position as



a veterinarian? Please select all that apply.

[LIST]

I would not want to move from where I am currently located

A community within 5 hours of my current location

A community within my province

A community within another Canadian province

The community I grew up in

The United States

A country outside of Canada or the United States

S - DEM1. What is your gender? (Please check only one)

[LIST – DO NOT RANDOMIZE]

Female

Male

Non-binary/Third gender

Prefer to self-describe [TEXT BOX]

Prefer not to say

Survey Close-out

Those are all of the questions we have for you today. On behalf of Kynetec and the CVMA we would like to thank you for participating.

Please enter your name and e-mail address below so that we may enter you in the draw for:

- 1 of 10 \$100 gift cards.

If you wish to provide your name and e-mail address below so that we may enter you in the draw please click on the link below

Please enter your contact information below so that we can contact you if you win.

[FIRST NAME]

[LAST NAME]

[TELEPHONE NUMBER]

[E-MAIL]



