

FINAL REPORT

Labour Market Study for the CVMA – SBCV Chapter

**PREPARED
FOR**

**Canadian Veterinary Medical Association –
Society of British Columbia Veterinarians Chapter
(CVMA-SBCV)**

BY

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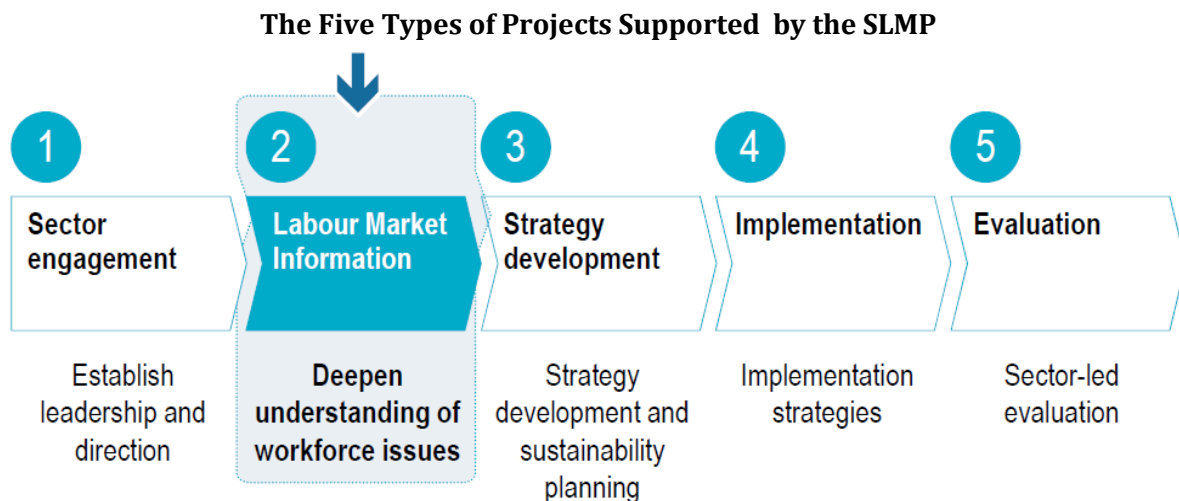
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EXECUTIVE SUMMARY

Purpose of the Study

The Sector Labour Market Partnerships (SLMP) program, administered by the BC Ministry of Advanced Education, Skills & Training, supports sectors in BC in undertaking labour market research, developing labour market strategies, and piloting innovative programs to address the workforce development challenges that they face. Under the SLMP program, funding can be provided for five types of projects.



In this project, SLMP funding was used to engage the veterinarian sector and collect and analyze labour market information to deepen understanding of workforce issues. By enabling a deeper understanding of the veterinary workforce and key labour market issues and outlook, the study supports evidence-based planning and decision-making by the industry leaders, educational institutions, and policymakers.

The research focuses on five research questions:

1. What is the current size, composition and characteristics of the BC veterinary sector workforce?
2. How is the sector forecast to grow and expand? What are the factors affecting growth?
3. Are there current and projected shortages for veterinarians in BC? If so, in what locations and what types of practices, including specialty practice, are the shortages most acute?
4. What are the critical impediments to attracting and retaining veterinarians in BC?
5. To what extent is the educational sector fulfilling the training and skills development needs of the industry?

Method of Study

Key elements of the study include:

- Meeting with and communicating with the Governance Committee (multiple times) to discuss the objectives of the study, the proposed approach and instruments, and the key issues in the industry. The Governance Committee members also provided feedback on the key project outputs.
- Reviewing labour market information related to the veterinary industry in BC available from the Government of BC, the federal government, and other sources.
- Developing an analytical framework, detailed methodology report, and research tools.
- Conducting surveys with 207 registered veterinarians and representatives of 111 employers of veterinarians (including owners, managers, and human resource professionals). These 111 employers reported employing 384 veterinarians, which accounts for a quarter of all registered veterinarians in BC.
- Conducting telephone interviews with 31 key informants including major employers, representatives of corporate practices, regulators, educators, association representatives, and key industry and government representatives.
- Conducting surveys of 22 Western College of Veterinary Medicine (WCVM) students in their 3rd and 4th year of veterinary medicine studies.

Major Findings and Conclusions

The major findings and conclusions arising from the review are as follows:

1. Veterinary establishments operating in BC employ nearly 1,600 veterinarians and more than 7,500 staff in total.

Most BC veterinarians are female, slightly older than rest of the BC labour force, equally likely to have graduated from WCVM and foreign institutions, and most likely to work in small animal practice. The median wage for veterinarians in BC is more than \$85,000, which is comparable to the Canadian average. While most veterinarians continue to work full-time, they may be working fewer hours on average than veterinarians did in the past.

2. The veterinary industry in BC is well-established, growing, and likely in an early stage of consolidation.

More than one-half of the employers surveyed have been operating for more than 20 years. Employers that have been operating for fewer than five years accounted for 11% of the employers surveyed and only about 7% of the reported number of veterinarians. Revenues and employment are increasing (for example, the number of veterinarians has been growing by 5.3% per year over the past five years). Employers attribute this recent growth to serving a larger number of clients, followed by clients purchasing more services and expansion of operations.

3. Most employers are projecting continued growth in employment.

About two-thirds of employers said they would hire additional veterinarians today if candidates were available and expect to hire additional veterinarians over the next two years. When discussing future growth, key informants and employers highlighted both the increasing demand for and the changing characteristics of veterinarians, particularly their declining interest in owning a practice and their desire for greater work-life balance which involves working fewer hours and fewer on-call hours (a shorter work week increases the number of veterinarians required to provide the same hours of service).

4. However, a shortage of veterinarians may constrain future growth.

When asked how difficult it will be to recruit qualified candidates to fill veterinarian positions, 71% of employers said it would be difficult (57% said it will be very difficult). Recruitment challenges were attributed to strong competition for available veterinarians, difficulties in recruiting applicants from other regions and internationally, inadequate numbers of veterinarians graduating, and a lack of experienced veterinarians available.

About 30% of employers said they may slow the rate of growth of their business due to shortages of veterinarians. In addition, the shortage of veterinarians adds stress, employee fatigue, and burn out among current veterinarians, can affect the quality and timing of services, and delays retirements. In addition, key informants strongly argued that shortages of veterinarians in practice areas such as food animal practitioners pose serious threats to BC by reducing our capacity to identify and manage risks to animal and human health caused by current or new diseases (or resistances).

5. The shortage of veterinarians is significant across all regions and most types of practice. Most acute shortages are outside major urban areas and small animal practice.

Over 80% of veterinarians reported that the demand for veterinarians in BC exceeds the supply. It was suggested that veterinarian shortages are going to become more acute as baby boomers retire (22% of surveyed veterinarians plan on retiring over the next five years) and as veterinarians reduce their number of hours worked (55% said they would like to reduce the hours worked in a week).

Employers from all regions and all types of practice anticipate future difficulties in recruitment. However, the most acute shortages are reported by communities outside the major urban centres and in areas of practice other than small animal and exotic animal. Concerns were also raised about replacing experienced veterinarians nearing retirement with expertise in areas such as poultry, furbearers, fish pathologies, and public sector practice. Shortages in large animal practice and specialists were also noted.

6. There is a strong need to increase the number of skilled graduates in order to address the significant existing shortage of veterinarians, to replace retiring veterinarians, and to meet the projected increase in demand.

The results of the study indicated that BC is very reliant on WCVN as a source of supply:

- About 45% of the veterinarians working in BC graduated from WCVN, followed by approximately a third of veterinarians who graduated from a program outside Canada.
- BC residents are generally not eligible to attend veterinary colleges in other regions in Canada. For example, the UPEI program is targeted at residents from Atlantic Provinces and

international students while the University of Calgary program is restricted to Alberta residents.

- While BC residents can attend programs located outside of Canada, the costs are very high (for Canadians, tuition ranges from 3.5 times to more than eight times the cost at the WCVM). High student debt restricts the ability of recent graduates to establish or purchase into private practice.

Key informants and veterinarians suggested that the WCVM is simply not graduating enough veterinarians to meet the demand and alleviate shortages. With only 20 seats for BC residents, the Government of British Columbia currently funds only about one seat for every 80 active licensed veterinarians in the province. In comparison, the Government of Alberta funds one seat for every 32 veterinarians in Alberta and while the governments in Saskatchewan and Atlantic Canada fund one seat for every 20 veterinarians. The constraint to increasing the number of graduates for BC is strictly funding, not lack of qualified applicants; the WCVM reports receiving about 140 highly qualified applications a year for the 20 seats allocated to the students from BC.

If we conservatively assume that demand in BC for veterinarians will continue to grow at even 2.5% per year and that 4% of the existing supply of veterinarians will leave the BC industry annually, the industry would need more than 100 new entrants each year to keep pace. Veterinarians are also needed to address existing shortages; the employers who were surveyed (which represent about 25% of the industry) indicated that they would hire over 100 veterinarians today should good candidates be available.

7. Veterinarians are somewhat divided as to the ability of the educational sector to meet the training and skill development needs of veterinarians in BC.

Practical skills, specialized skills, and understanding of the industry were the most commonly noted gaps.

8. The most common recommendations emerging from the study were to increase the number of BC students at WCVM and facilitate the hiring of experienced foreign-trained veterinarians.

Key informants, veterinarians, and veterinary students provided the following suggestions as to how government, industry, and academia can help to address the issues facing the industry:

- Increase the number of students from BC accepted at WCVM for veterinary medicine including an increase in the number of education equity seats for Indigenous students;
- Make it easier to hire internationally trained, experienced veterinarians;
- Provide incentives for veterinarians to practice in rural areas and to take ownership in a practice;
- Increase awareness and develop interest among new graduates for a wider range of veterinary practice;
- Provide more hands-on, practical training for veterinarians; and
- Conduct more targeted student recruitment and improve linkages between the industry and training institutions.

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1.0 Introduction

1.1 Background

The BC Labor Market Outlook (2018-2028) forecasts that growth in the employment for veterinarians in BC will average 1.7% in the next five years and 1.1% from 2023-28. This translates to about 550 job openings over the next 10 years, over half of which will be due to the need to replace retiring workers.

The primary source of supply for new veterinarians in BC is the Western College of Veterinary Medicine (WCVM), which graduates 20 people from BC per year. The WCVM is the premier centre of veterinary education, research, and expertise in Western Canada. Other sources of new veterinarians in BC are veterinarians coming from other provinces in Canada, international graduates, or immigrants.

In its annual report (2018), the College of Veterinarians of British Columbia reported a total of 1,599 registered veterinarians active in BC. The total includes 1,555 veterinarians in private practice (including 22 specialists), 22 in the public sector (there may be a few more who are accredited under the Health of Animals Act instead of the Veterinarians Act of BC, as they are not engaged in practice), and 17 classified as temporary. According to industry reports, the demand for veterinarians has been driven by pet owners spending more on animal care and advances in veterinary medicine enabling better care for animals.¹ West Coast Veterinarian Magazine (September 2018) suggests that very little is known about the challenges of attracting and retaining new graduates, particularly in small towns and rural areas².

The most recent survey of veterinary clinics in Western Canada, conducted in 2014, reported that 25% of clinics were looking to hire veterinarians. However, no conclusions were made about the urgency of the need or the regional distribution of the demand³. Another indicator of demand is the growing size of the industry (an annualized rate of 1.7%). A shortage of veterinarians will likely contribute to higher salaries in the future. According to an industry trend review, *“of those veterinarians who do not own their practice, approximately two-thirds are employees, with earnings starting at an average of \$70,000 per year out of school, net of benefits. The remaining one-third are associate veterinarians, earning approximately \$100,000 – \$120,000 per year. Total wages are expected to rise at an annualized rate of 4.6 percent over the next five years, to \$1 billion in 2021.”*⁴

1.2 Purpose of the Study

In order to support evidence-based planning and decision-making as well as respond to CVMA-SBCV member requests for reliable information about the status of the veterinary profession, the sector needed to gain a deeper understanding of the current and future supply of, and demand for, veterinarians and veterinary services by employment sector and geographic region.

¹ Pet Care in Canada, Euromonitor International Limited (2018)

² *How Practice Owners Can Survive The Current Veterinarian Shortage*. West Coast Veterinarian (September 2018; No32) <https://www.canadianveterinarians.net/news-events/news/west-coast-veterinarian-magazine-fall-2018>

³ Survey of western Canadian veterinary practices: A demographic profile
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4668821/>

⁴ Industry Trends: Looking Ahead; <https://www.mnp.ca/en/posts/industry-trends-looking-ahead>

The overall goal of this labour market research was to provide veterinary workforce information to veterinarians, prospective veterinary students, educational institutions, and policymakers. The research was designed to produce information regarding the number of veterinarians across BC by type of practice and specialization, identify and quantify key trends and factors related to workforce decisions, and assess the demand for services.

More specifically, the research questions addressed include:

1. What is the current size, composition, and characteristics of the BC veterinary sector workforce?
2. How is the sector forecast to grow and expand? What are the factors affecting growth?
3. Are there current and projected shortages for veterinarians in BC? If so, in what locations and what types of practices, including specialty practices, are the shortages most acute?
4. What are the critical impediments to attracting and retaining veterinarians in BC?
5. To what extent is the educational sector fulfilling the training and skills development needs of the industry?

1.3 Methodology

We have undertaken this project in three stages: (1) Development of the Methodology Report; (2) Field Research; and (3) Analysis and Reporting.

Development of the Methodology Report

To develop the methodology report, we:

- Conducted preliminary interviews with five members of the Governance Committee established for the project. During the interviews, we discussed available data and information as well as gathered further information about trends in the industry and factors impacting the demand and employment of veterinarians.
- Reviewed and assessed available labour market information, including information related to the industry in BC available from CVMA-SBCV, the College of Veterinarians of BC, WorkBC, Statistics Canada, Innovation, Science and Economic Development, and other sources.
- Developed an analytical framework. We determined what information will be needed to answer the research questions and defined the sources from which the information will be obtained. The analytical framework stipulates how the information collected from employer surveys, key informant, and secondary data sources will be used to address each of the research questions.
- Developed data collection tools including a survey questionnaire for veterinarians, veterinarian students, and key informants guide, as well as communication materials.

We then prepared the methodology report which defined the project objectives, study methodology,

activities, intended deliverables, and timelines. The methodology report also presented the analytical framework and proposed a schedule for meetings with the Governance Committee.

Field Research

In implementing the field research, we:

- **Reviewed secondary data sources.**

Data and reports available on CVMA website and generated by WCVM were reviewed to develop a preliminary profile of the veterinarian profession in BC such as data on demographics, education, type of practice, earnings, and job openings. Research reports and survey studies completed by WCVM were obtained and reviewed. An online search was conducted to gather information about the industry, revenues, growth in wages, trends, etc. Some of the secondary data sources used included:

- Statistics Canada 2016 Census, job vacancies and wage data
- BC Labour Market Outlook 2018 Edition
- Canada Job Bank Wage Report
- College of Veterinarians of BC Annual Reports
- Occupational profiles prepared by WelcomeBC
- Canadian Industry Statistics – Innovation, Science and Economic Development Canada
- Veterinary Services – Market Research Reports and Industry Report
- Veterinary Industry Outlook – Top Global Trends and Statistics
- Veterinary Services – Canada Industry Research Reports _ IBISWorld

For a full list of documents and reports reviewed see Appendix 1.

- **Conducted interviews with 32 key informants.**

Key informants included 15 representatives of major employers, 5 veterinarians working in the public sector (i.e. Agriculture), 2 representatives of the the College of Veterinarians in BC (CVBC), 4 representatives of the CVMA-SBCV, 1 educator, and 5 representatives from associations associated with sectors served by veterinarians (e.g. honey bee, poultry, and aquaculture sectors). The purpose of the interviews was to obtain input regarding the major drivers of future employment growth, current labour market conditions and projected future conditions, skill shortages, strategies used to attract, develop, and retain workers, available training, and recommendations regarding actions that should be taken by industry, training organizations, government, and others to address projected skill shortages.

- **Conducted survey with 22 BC students attending either third or fourth year of veterinary medicine at the WCVM.**

The purpose of the surveys was to learn about students' future plans and expectations regarding working in BC as veterinarians, type of practice they expect to work in, future specialization, ease of finding a job in BC, etc. Of 36 students invited, 22 completed the survey yielding a response rate of 61%. All students identified as female and none identified as Indigenous.

- **Conducted surveys with 207 registered veterinarians and representatives of 111 employers of veterinarians** (including owners, managers, and human resource professionals, etc.).

In total, we attempted to contact 1,080 veterinarians and employers. When contacting organizations, we asked for the person who was responsible for hiring; in most cases, this person was also a veterinarian. As such, nearly half of the people responded as both a veterinarian and an employer. In total, 216 people (20%) participated in the survey including 207 registered veterinarians (102 of whom also responded as an employer) and nine representatives of employers who are not veterinarians (e.g., managers, HR professionals, or senior administrators). This is a relatively high response rate given the nature of the study and the target group (very busy, hard to reach employers) as well as the tight timelines available for the survey.

The 111 employers who responded represent just over one-fifth of the estimated 550 veterinary employers in BC. These employers reported employing 384 veterinarians which accounts for a quarter of all registered veterinarians in BC. As indicated in the following table, the respondents are drawn from regions across BC.

Total Sample and Respondents By Region

| Regional Breakdown | Number Invited to Participate (Sample) | | Number of People Who Participated | |
|------------------------------------|--|-------------|-----------------------------------|-------------|
| | Number | Percent | Number | Percent |
| Mainland/Southwest Region | 456 | 51% | 87 | 40% |
| Vancouver Island/Coast Region | 237 | 26% | 75 | 35% |
| Thompson-Okanagan Region | 121 | 13% | 25 | 12% |
| Northeast, North Coast and Nechako | 32 | 4% | 12 | 6% |
| Cariboo Region | 23 | 3% | 9 | 4% |
| Kootenay Region | 31 | 3% | 8 | 4% |
| Total | 900* | 100% | 216 | 100% |

Source: Survey Contact List (CVMA-SBCV) and Survey of Veterinarians (2019);

*veterinarians for whom location was available

The veterinarians surveyed are generally well distributed across various type of practice. Compared to WCVM data on the BC population of veterinarians, the current survey sample is somewhat overrepresented in exotics/wildlife, small animal practice and equine in comparison to original WCVM data. That is because the survey question was not exclusive in terms of type of practice (i.e. veterinarians could select more than one practice). For example, most of the veterinarians in exotic/wildlife also work in small animal practice. Some types of practice (education, government) were specifically targeted so that we could learn more about the challenges and issues they are facing.

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% |

| Type of Practice | Total Population | | Respondents | |
|---|------------------|---------|-------------|---------|
| | Number | Percent | Number | Percent |
| Large Animal(food) | 54 | 3.6% | 11 | 5.3% |
| Exotics/wildlife | 13 | 0.9% | 48 | 23.3% |
| Aquaculture | 11 | 0.7% | 6 | 2.9% |
| Other (education, industry, laboratory, government, etc.) | 11 | 0.7% | 13 | 6.3% |
| N/C-not classified | 83 | 5.5% | - | - |
| Total | 1,501 | 100 | 216 | |

Source: WCVM data and Survey of Veterinarians (2019)

Analysis and Limitations of Data

We summarized the data collected through surveys and key informant interviews, and highlighted the major findings, conclusions, and recommendations presented in this report.

While the response rates for the surveys were high, covering a significant number of veterinarians employed in the province, these types of studies always carry some risk of self-selection bias (e.g., veterinarians and employers choosing to respond to the survey may be more likely to experience challenges). However, this does not diminish the significance of the findings with respect to the overwhelming agreement on issues of shortages, trends, and other challenges.

We were not able to obtain demographic data on the total population of BC veterinarians from CVBC. Thus, the information regarding age, gender, type of practice, region, and educational background is close approximation derived from surveys conducted by WCVM and as part of this study.

1.4 Structure of the Report

Chapter 2 of this report provides a brief profile of the veterinarians in Canada and BC, followed by a description of the veterinary industry and animal populations size that veterinarians serve. Chapter 3 presents the results of the survey of all veterinarians and WCVM students from BC. Chapter 4 summarizes the results of veterinarian employers. Chapter 5 used the major findings of the research, including interviews and secondary data, to address each of the research questions. A summary of the major findings and preliminary conclusions is provided in the Executive Summary.

2.0 Overview of the Veterinarian Sector

This chapter provides an overview of the veterinarian sector based on a review of secondary data and available literature.

2.1 Veterinarians in Canada By Gender and Province

According to the CVMA, there are about 12,500 veterinarians in Canada. The CVMA draws its data from registration data maintained by the regulatory body representing each province and territory.

Veterinarians by Gender and Province, 2018

| Gender Ratio | Number | Percent |
|--------------|--------|---------|
| Female | 7,260 | 58% |
| Male | 5,007 | 40% |
| Unknown | 250 | 2% |

| Breakdown by Province | | |
|---------------------------|---------------|-------------|
| Alberta | 1,623 | 13.0% |
| British Columbia | 1,546 | 12.4% |
| Manitoba | 395 | 3.2% |
| New Brunswick | 239 | 1.9% |
| Newfoundland and Labrador | 104 | 0.8% |
| Nova Scotia | 340 | 2.7% |
| PEI | 178 | 1.4% |
| Ontario | 4,880 | 39.0% |
| Quebec | 2,640 | 21.1% |
| Saskatchewan | 552 | 4.4% |
| Territories | 20 | 0.2% |
| Total | 12,517 | 100% |

Source: CVMA Website Statistics (2018)

Across Canada, there is approximately one veterinarian for every 3,000 residents. The number of residents per veterinarian in BC (3,135) is slightly above the national average (2,975).

Ratio of Practicing Veterinarians to Population by Province

| Breakdown by Province | Number of Veterinarians | Population | Ratio Population/ Veterinarian |
|-------------------------|-------------------------|------------------|-----------------------------------|
| Alberta | 1,623 | 4,330,206 | 2,668 |
| British Columbia | 1,600 | 5,016,322 | 3,135 |
| Manitoba | 395 | 1,356,836 | 3,435 |
| New Brunswick | 239 | 772,238 | 3,231 |

| Breakdown by Province | Number of Veterinarians | Population | Ratio Population/Veterinarian |
|---------------------------|-------------------------|-------------------|-------------------------------|
| Newfoundland and Labrador | 104 | 525,073 | 5,049 |
| Nova Scotia | 340 | 964,693 | 2,837 |
| PEI | 178 | 154,750 | 869 |
| Ontario | 4,880 | 14,411,424 | 2,953 |
| Quebec | 2,640 | 8,421,698 | 3,190 |
| Saskatchewan | 552 | 1,165,903 | 2,112 |
| Territories | 20 | 123,428 | 6,171 |
| Total | 12,517 | 37,242,571 | 2,975 |

Source: StatsCan (2018), CVMA Website Statistics (2018)

2.2 Veterinarians in BC

In its 2018 annual report, the College of Veterinarians of British Columbia reported a total of 1,599 registered veterinarians active in BC including 1,555 veterinarians in private practice (including 22 specialists), 22 in the public sector, and 17 classified as temporary. This figure is significantly higher than the Government of Canada projection of 1,370 veterinarians in BC, which was developed based on the 2016 Census. The difference is likely definitional; this project focuses on active licensed veterinarians in BC. It is likely that some of the veterinarians may have been classified under other occupations in the 2016 Census (e.g., particularly as managers). For the purposes of the study, data reported by the College of Veterinarians of British Columbia as well as data provided by the WCVM provide a better representation of the target group.

Source of Education

Data collected by WCVM through surveys suggest that, of approximately 1,500 veterinarians in BC on which they have data, 45% graduated from WCVM, 34% graduated from international schools, and 14% graduated from Ontario Veterinary College.

Sources of Education for Active Licensed Veterinarians in BC, 2018

| Where they graduated | Number | % |
|--|--------------|-------------|
| Western College of Veterinary Medicine | 678 | 45% |
| International schools | 511 | 34% |
| Ontario Veterinary College | 210 | 14% |
| University of Calgary Faculty of Veterinary Medicine | 14 | 1% |
| Atlantic Veterinary College | 66 | 4% |
| Faculté de médecine vétérinaire | 15 | 1% |
| no data | 7 | 0.5% |
| Total | 1,501 | 100% |

Source: WCVM data

Sector

According to the CVBC annual report, nearly all active BC veterinarians (including new registrants) work in private practice (about 2% work in the public sector).

Sector of Employment for New and All Active Veterinarians in BC

| Active Registration (includes new) | 2018 | | 2017 | |
|------------------------------------|--------------|-------------|--------------|-------------|
| | Number | Percent | Number | Percent |
| Private Practice | 1,533 | 96% | 1,480 | 97% |
| Specialty Private Practice | 22 | 1% | 20 | 1% |
| Public Sector | 22 | 1% | 23 | 2% |
| Temporary | 17 | 1% | 5 | 0% |
| Total | 1,594 | 100% | 1,528 | 100% |
| New Registrations | | | | |
| Private Practice | 92 | 97% | 111 | 96% |
| Specialty Private Practice | 2 | 2% | 2 | 2% |
| Public Sector | 1 | 1% | 3 | 3% |
| Total | 95 | 100% | 116 | 100% |

Source: CVBC, Annual Reports

Number of Establishments

Canada Industry Statistics (2016), published by Innovation, Science and Economic Development (ISED), provide a breakdown of veterinary business establishments by employment type (i.e., with and without employees) and size category. ISED reports 550 employers, most of which are small establishments. Of the 550 employers, 184 have four or fewer employees and 365 establishments have between 5 and 99 employees. In 2016, there was one establishment employing more than 100 veterinarians in BC.

Number of Veterinary Establishments In BC by Employment Type (2016)

| Employment Type | N |
|-------------------|-----|
| Employers | 550 |
| Without Employees | 396 |
| Employment Size | |
| Micro (1-4) | 184 |
| Small (5-99) | 365 |
| Medium (100-499) | 1 |

Source: ISED Canadian Industry Statistics (2016)

Specialists

There are 22 veterinarians in BC in specialty practice including four veterinarians who entered specialty private practice during the last two years. Veterinarians who perform specialist work require graduation from a university of recognized standing with a Doctor of Veterinary Medicine degree and post-graduate training in a specific area of veterinary medicine (such as radiology, surgery, internal medicine, cardiology, etc.). They must also have passed an examination that evaluates their knowledge and skills in that specialty area⁵.

⁵ <https://www.avma.org/public/YourVet/Pages/veterinary-specialists.aspx>

Type of Practice

Based on survey data, the WCVM categorized active veterinarians in BC in terms of their primary areas of practice. Of the 1,501 veterinarians, nearly three-quarters (73%) work primarily in small animal practice. The results also reported that 23 veterinarians worked for the CFIA and 7 work for the provincial government.

Distribution of BC Veterinarians By Type of Practice

| Type of Practice | N | % |
|--------------------------------------|--------------|------------|
| SA-small animal | 1,100 | 73.3 |
| MIX-mixed animal practice | 95 | 6.3 |
| N/C-not classified | 83 | 5.5 |
| EQU – equine | 60 | 4.0 |
| LA-large animal(food) | 54 | 3.6 |
| CFIA-Canadian Food Inspection Agency | 23 | 1.5 |
| PATH-pathology | 15 | 1.0 |
| EXO/WIL-exotics/wildlife | 13 | 0.9 |
| AQUA – aquaculture | 11 | 0.7 |
| EDU/RES – education/research | 11 | 0.7 |
| IND-industry | 11 | 0.7 |
| POU-poultry | 9 | 0.6 |
| LAB-laboratory animal medicine | 7 | 0.5 |
| PROV GOV-provincial government | 7 | 0.5 |
| REG-regulatory | 2 | 0.1 |
| Total | 1,501 | 100 |

Source: WCVM data

Gender and Age

According to the data collected through the 2016 Census, 58% of veterinarians in BC are female and 42% are male. In terms of age, 4% of the veterinarians were 65 years and older, 50% were between the ages of 45 and 65 years, 45% were between the ages of 25 and 44 years, and 1% were 24 years or younger.

Income

According to BC Labour Market Outlook, the range in wages for veterinarians working in BC was between \$32,764 and \$139,403 with a median rate of \$78,026. According to WCVM, most new graduates seem to be earning wages close to the median reported in official statistics. WCVM reported that 77% of recent graduates working in Western Canada in 2018 earned between \$70,000 and \$79,999 before the taxes⁶. Employers of new graduates across Western Canada provinces reported that 61% of new graduates earn an income above \$80,000. Those making above \$100,000 increased from 8% in 2016 survey to 15% in 2018.⁷

⁶ WCVM Two-Year Follow Up Survey (November 2018)

⁷ WCVM – 2018 Employer Survey (January 2019), completed by Insightrix Research Inc.

Immigration

Of the 1,370 veterinarians in BC reported for the 2016 Census, 370 were born outside of Canada (65% of whom are male). Of these 370 immigrants, 160 immigrated between 2001 and 2010 and 45 immigrated between 2011 and 2016. The most common source of recent immigrants (25 of the 45 immigrants) arrived under the Provincial Nominee Program.

2.3 Demand for Services

According to the market research studies, the size of the global veterinary services market was valued at \$91.78 billion USD in 2017 and is expected to achieve the compounded annual growth rate of 5.6% between 2018 and 2025. Projected growth in demand is driven both by both:

- **The important and increasing role that veterinarians play in food production.** Growth in the food animal market is expected to be fueled by rising prevalence of zoonotic and food borne diseases, and the need for veterinary services to ensure food safety. Under new Government of Canada regulations, which came into effect in December 2018, farmers require will need a prescription to obtain veterinary antibiotics. Antibiotics are used to treat, control and prevent bacterial disease, improve feed efficiency, promote growth and to maintain animal health and welfare. A key implication of the change is the greater demand for oversight by veterinarians regarding the use of antibiotics in animals.

Food animal production is a significant economic contributor in Canada, particularly outside of the major urban area, and a key component of food security. Globally, the animal market is divided into 25% cattle, 18% pigs, 11% poultry, 4% sheep and 42% companion animals and other (including equine).⁸ Demand for meat is expected to reach 445 million tonnes by 2050.⁹

Statistics on food animal market in Canada illustrates the significance of food animal production industry:

- Cattle and calves farm and meat production has been steadily increasing from 2.8 million slaughtered in 2013 to 3.3 million in 2018.¹⁰ In 2016 there were about 60,000 cattle producing farms in Canada identified and over 80,000 operators. The industry generated \$8.9 billion in cash for producers¹¹. Beef cattle raised in BC account for about 5% of the national beef herd.
- In 2017, Canada produced poultry and egg products worth \$4.4 billion, accounting for 7.1 % of cash receipts to farming operations. According to Agriculture and Agri-Food Canada, there were close to 3,000 regulated chicken producers and over 500 registered turkey producers in Canada.

⁸ Canadian Animal Health Institute: <https://www.cahi-icsa.ca/our-industry>

⁹ Market Research Report: Veterinary Services Market Analysis Report By Animal Type (Production (Poultry, Cattle, Swine), Companion (Cats, Dogs, Equine)), By Region (APAC, North America, Europe), And Segment Forecasts, 2018 – 2025

¹⁰ StatsCan: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210012501>

¹¹ Industry Statistics: <http://www.cattle.ca/cca-resources/industry-stats/>

- Canada is the 7th largest pork producer in the world accounting for about 2% of global pork production. In 2018, there were a total of 14.3 million pigs on farms in Canada. There were about 6,920 farms reporting producing pigs, which averages about 1,900 of pigs per farm¹². The hog sector industry reached over \$4 billion in revenues in 2016 and was expected to reach 6% growth in 2018.
- Dairy products generated \$6.56 billion in revenues and \$14.3 billion in manufacturing shipments in 2017.¹³ In 2018, there was 1.41 million head located on nearly 11,000 dairy farms in Canada and 478 dairy plants in operation.

Livestock production is a big industry in BC. In 2017, BC generated about \$1.5 billion in farm cash receipts from livestock including \$625 million from dairy, \$424 million from poultry production, \$236 million from cattle and calf production, \$144 million from egg production, \$32 million from pork production, and \$73 million from other livestock. Processing of animal products generated another \$760 million in sales.¹⁴

- **The rise in pet populations, increased recognition of the importance of pet health, and an increased emphasis on preventative care.** Growth of the pet population has been well-documented. Latest Canadian pet population figures, released by the Canadian Animal Health Institute, indicate that the Canadian dog population continued to grow from 2016 to 2018 while the population of cats has stabilized. Cats continue to outnumber dogs with 8.3 million cats considered household pets in 2018, down slightly from 2016. Dog population figures for 2018 increased to 8.2 million, up from 7.6 million in 2016. The Canadian dog population is now nearly equal to the cat population for the first time since these measures were established in 2004. About 41% of households have at least one dog, and about 38% have at least one cat. This research also tracks several key attitudinal metrics related to the way pet owners perceive veterinarians and veterinary care. Since 2016, there have been improvements in several key metrics:
 - The percentage of both dog and cat owners who rate the value they receive at the veterinarian as “good” (8, 9 or 10 on a 10-point scale) has improved significantly.
 - The proportion of pet owners consulting a veterinarian or veterinary technician “frequently” as an information source continues to rise and has improved significantly since 2014.
 - When asked for their top of mind concern as it relates to their pet, pet owners are more likely to identify animal wellbeing concerns in 2018 (flea infestation, tick infestation, disease/illness concerns) than affordability of veterinary services.

The Veterinary Services industry in Canada is in the growth stage of its life cycle. Industry value added (IVA), which measures the industry's contribution to the overall Canadian economy, is anticipated to increase at an annualized rate of 4.1% over the 10 years to 2023.¹⁵ Looking specifically

¹² Canadian Pork Council; Hog Farm Data: <https://www.cpc-ccp.com/hog-farm-data>

¹³ Canadian Dairy Information Centre http://www.dairyinfo.gc.ca/index_e.php?s1=cdi-ilc&s2=aag-ail

¹⁴ AgriService BC, Fast Stats 2017: British Columbia's Agrifood and Seafood Sector, October 2018

¹⁵ Veterinary Services – Canada Market Research Report <https://www.ibisworld.ca/industry-trends/market-research-reports/professional-scientific-technical-services/veterinary-services.html>

at the pet industry in Canada, veterinary services are estimated to generate about \$2 billion in revenues a year. Industry revenues are anticipated to grow at an annualized rate of 1.7%, reaching 2.2 billion by 2021¹⁶. This is due, in part, to growing pet owner awareness of the importance of routine care for their animal companions. Additionally, as Canada's population ages, more people are becoming pet owners for the companionship they bring.

2.4 Education Programs

A veterinarian is a doctor of animal health who has trained at a university for at least six years (including at least two years prior to admission and four years to earn a Doctor of Veterinary Medicine (DVM) degree) and is licensed to provide medical and surgical care for animals. Veterinarians are educated to protect the health of both animals and humans. Not only do they address the health needs of a wide variety of animal species, they also play a critical role in animal welfare, environmental protection, food safety, and public health. A licensed veterinarian can work in several different areas including private practice, government, teaching, research, or industry. To maintain a license to practice veterinary medicine, veterinarians are required to expand and improve their professional activities regularly through continuing education.

There are five veterinary colleges in Canada, each of which gives priority to applicants from a defined region within Canada. Only one of these – the Western College of Veterinary Medicine – consults with BC veterinarians regarding programming including requirements unique to the needs in BC.

- **The Western College of Veterinary Medicine (WCVN), University of Saskatchewan.**

The veterinary college funded by the Government of British Columbia to serve the provincial need for trained graduates is located at the University of Saskatchewan. It also currently receives funding from the Governments of Alberta, Saskatchewan and Manitoba. The WCVN was created in 1963 when Canada's four western provinces agreed to co-fund a regional veterinary college. Each year, 20 first-year students from each of BC, Saskatchewan, and Alberta and 15 first-year students from Manitoba have been admitted to the program. However, the Government of Alberta announced that it will not renew its participation in the inter-provincial agreement after 2020. This has created an opportunity for BC to increase the number of its residents who attend the WCVN. Capturing these seats would require additional funding from the Government of British Columbia.

First-year admission at WCVN totals 78 seats annually, including 75 from the four western provinces, one student from northern Canada (the Northwest Territories, Yukon or Nunavut), and two equity education students (from any region). The Education Equity Program encourages students of Indigenous descent to apply to the college.

Over the past four years, the number of applications received from BC residents for the 20 seats has ranged between 120 and 134. Eight Indigenous students applied in 2018, none of whom gained admission (the two equity education seats were filled by students from other western provinces). WCVN data shows that, in the last 10 years (2008 to 2018), there were 36 qualified Indigenous applicants of whom only 7 or 19% were successful in gaining admission to the Program. The quality of applicants is very high; the mean GPA of accepted students from BC was 87 in 2018. Overall, the WCVN received 432 applications for the 2018-19 school year for the 78 seats. Of the 78 students

¹⁶ Industry Trends: Looking Ahead; MNP (2017) <https://www.mnp.ca/en/posts/industry-trends-looking-ahead>

admitted in 2018, 64 are female.¹⁷

To be counted as a resident for a given province, applicants must have lived in the province for at least one year prior to applying. According to the Associate Dean at WCVM, this has led to some “province hoppers”, where students from one province (most commonly BC) move to Saskatchewan or Manitoba for at least a year to increase the likelihood they will be admitted to the program. Tuition for the program averages about \$10,000 per year.

While students can enter with only two years of university, only 8 of the 78 students did. One-half of the admitted students had completed a degree and 32 had completed five or more years of university prior to admission.

- **University of Calgary - Faculty of Veterinary Medicine (UCVM)**

The University of Calgary Faculty of Veterinary Medicine (UCVM) was established in 2005. Concurrent with the end of its agreement with the WCVM in 2020, the Government of Alberta is funding an increase in first-year UCVM enrolment from 30 students to 50.¹⁸

Students must be Alberta residents (i.e. Alberta is the province in which they have most recently lived for 12 consecutive months while not a full-time post-secondary student, they have never lived in any other Canadian province for 12 consecutive months and are attending a post-secondary school in Alberta, or have at least one parent who is living in Alberta). Indigenous applicants who meet the academic requirements are not subject to the residency requirement and can be accepted from across Canada.

- **The Ontario Veterinary College (OVC) University of Guelph**

The Ontario Veterinary College is the oldest veterinary college in Canada. Established in Toronto in 1862, the College moved to Guelph and became a founding college of the University of Guelph in 1964. For 2017-18, the College admitted 121 students of whom 99 are female.¹⁹

The College focuses primarily on students from Ontario but also admits some international students. Of the 121 students admitted for 2017-18, 101 were from Ontario, 15 were from outside of Canada, and 5 were from outside of Ontario. Tuition fees for international students (\$61,330) are much higher than for domestic students (\$9,782).

- **Faculté de médecine vétérinaire (FMV) Université de Montréal.**

The Faculty of Veterinary Medicine at the Université de Montréal is the only francophone veterinary educational institution in North America and the only five-year program. The program admits 95 students per year, most of whom are from Quebec. Admission is very competitive. For the 2016-2017 academic year, FMV received 944 applications for the 95 seats. In the end, 82 women and 13 men were admitted.

¹⁷ <https://admissions.usask.ca/veterinary-medicine.php#panel-section-14-201819veterinarymedicineentryadmissionstatistics>

¹⁸ <https://www.ucalgary.ca/utoday/issue/2018-09-11/ucalgary-faculty-veterinary-medicine-granted-72-million-province-expand-program>

¹⁹ University of Guelph, Fact Book 2017-18

- **The Atlantic Veterinary College (AVC), University of Prince Edward Island**

The Atlantic Veterinary College serves all of Atlantic Canada under a 10-year funding agreement with the four provinces. Admission is offered to 68 regional and international students annually, with approximately two-thirds of the seats reserved for regional students.²⁰ Applicants must meet residency requirements for one of the four Atlantic Canadian provinces in order to apply for a regional seat. The remainder are international students. Applicants residing outside of Canada, including those from the United States, may apply for an international seat. Tuition fees for international students (averaging about \$66,000) are much higher than for domestic students (about \$13,000).

Across the five institutions, 392 first-year students are admitted each year. In the programs which have reported admission by gender, 83% of the new students are female.

An indication of the extent to which the Canadian educational institutions will be able to meet the demand for future veterinarians can be gained by comparing the number of active veterinarians to the number of seats in the programs. For example, BC has 1,546 active veterinarians according to the CVMA data but funds only 20 seats in veterinary medicine, which is equal to a ratio of 77:1. At this rate, if BC were to rely solely on the seats funded by the Government of BC to supply its future veterinarians, it would take 77 years to replace the existing supply of veterinarians. In comparison:

- The Government Ontario funds 101 seats at the University of Guelph (a ratio of 48 active veterinarians for every seat funded);
- Alberta has 50 seats at the WCVM and UCVM (a ratio of 32:1);
- Saskatchewan has 20 seats at WCVM (28:1);
- Manitoba has 15 seats at WCVM (20:1);
- Atlantic Canada has 43 seats at UPEI (20:1);
- The three territories have one seat at WCVM (20:1).

In addition to the Canadian colleges, there are 30 veterinary schools in the US as well as 15 other schools in Australia, Europe, Mexico, Korea, and the Caribbean. These programs are much more costly than Canadian schools for Canadian students. Average annual tuition for these colleges ranges from US\$26,250 to US\$62,500. It is noteworthy that not all veterinary schools globally are accredited and only graduates of accredited foreign universities are able to (relatively) easily qualify to practice in Canada (graduates from non-accredited universities must take a second competency exam/program in Canada). Graduates from accredited programs can, more quickly than grads from non-accredited universities, help to address the shortage of veterinarians.

²⁰ UPEI Viewbook 2018 Digital, https://issuu.com/upei/docs/view_book_2018_digital

3.0 Survey of Veterinarians and Veterinary Students

This chapter summarizes the survey responses from all veterinarians surveyed (206) and students of 3rd and 4th year of WCVM from BC (22). Note that not all veterinarians answered all questions, so the total number of respondents for any given questions may be different.

3.1 Findings from the Survey of Veterinarians

Demographics and Plans for Retirement

Over half of veterinarians surveyed are between the ages of 35 and 54, and the respondents are predominantly female (68%). About a quarter of veterinarians (24%) are in the age bracket of 55 to 64 years and will be nearing retirement age within the next 10 years. Only 4 respondents identified as Indigenous.

Age and Gender Breakdown of Responding Veterinarians

| Age Bracket | Number | Percent |
|------------------------------------|---------------|----------------|
| Under the age of 34 years | 32 | 16% |
| 35 to 44 years | 52 | 26% |
| 45 to 54 years | 54 | 27% |
| 55 to 64 years | 48 | 24% |
| 65 years or over | 11 | 6% |
| Prefer not to answer | 2 | 1% |
| Total number of respondents | 199 | 100% |
| Gender Breakdown | Number | Percent |
| Female | 136 | 68% |
| Male | 58 | 29% |
| Prefer not to answer | 5 | 3% |
| Total number of respondents | 199 | 100% |

Nearly a quarter of veterinarians surveyed said they plan on retiring over the next three to five years, and about 10% said they are not sure. About half of those planning on retiring are self-employed (most of whom are practice owners).

Do you plan on retiring over the next three to five years?

| Response | Number | Percent |
|-----------------|---------------|----------------|
| Yes | 45 | 22% |
| No | 139 | 68% |
| Not Sure | 21 | 10% |
| Total | 205 | 100% |

Education

About half of BC veterinarians graduated from WCVM. Nearly a quarter (23%) graduated from the programs outside of Canada, mostly from schools located in the US, Europe and Australia.

From what program did you graduate?

| Range | Number | Percent |
|--|------------|-------------|
| Western College of Veterinary Medicine | 106 | 51% |
| A program outside of Canada | 47 | 23% |
| Ontario Veterinary College | 41 | 20% |
| Atlantic Veterinary College | 8 | 4% |
| University of Calgary Faculty of Veterinary Medicine | 3 | 1% |
| Faculté de médecine vétérinaire | 2 | 1% |
| Total number of respondents | 207 | 100% |

Respondents trained outside of Canada may be under-represented in the survey; according to data obtained during an interview with representatives of CVBC, about 41% of registered veterinarians in BC are foreign trained.

About 20% of survey participants are newly graduated (i.e. graduated less than 5 years ago), while over 40% graduated over 20 years ago.

Number of Years Since Graduation

| Number of Years Since Graduation | Number | Percent |
|------------------------------------|------------|-------------|
| 1 – 5 years ago | 41 | 20% |
| 6 – 10 years ago | 28 | 14% |
| 11 – 15 years ago | 26 | 13% |
| 16 – 20 years ago | 24 | 12% |
| 21 – 25 years ago | 17 | 8% |
| 26 – 30 years ago | 26 | 13% |
| Over 30 years ago | 40 | 20% |
| Total number of respondents | 202 | 100% |

Of veterinarians surveyed, 7% reported having board certification, mostly in dental medicine. Most specialization requires internship and residency, although number of years of residency reported varied from 2 to 6, depending on type of specialization.

Area of Specialization

| Specialization | Number | Percent |
|--|-----------|-------------|
| Dental | 5 | 25% |
| Ophthalmology | 2 | 10% |
| Dermatology | 2 | 10% |
| Rehabilitation and sports medicine | 2 | 10% |
| Surgery | 1 | 5% |
| Internal medicine | 1 | 5% |
| Oncology | 1 | 5% |
| Other (Integrative, aquatic, anesthesiology, laboratory, feline) | 6 | 30% |
| Total | 20 | 100% |

About two-thirds of veterinarians reported moving to BC right after graduating. When asked why they moved to BC, the most common reasons were lifestyle and quality of life (50%), followed by having lived in BC prior to going to school and always intending to return (45%), and wanting to be close to family and friends (33%). Nearly one-third of veterinarians surveyed moved to BC for a specific job.

Why did you move to BC? (select all that apply)

| Range | Number | Percent |
|---|------------|---------|
| I was living in BC prior to going to school and always intended to return | 92 | 45% |
| For a specific job | 60 | 29% |
| To be close to family and friends | 67 | 33% |
| Lifestyle reasons/quality of life | 102 | 50% |
| Cost of living | 4 | 2% |
| Strong demand for my specialized skills or practice area | 15 | 7% |
| Was transferred by my employer | 1 | 0% |
| Other | 16 | 8% |
| Total number of respondents | 205 | |

Other reasons for moving to BC included employment relocation, spouse relocation, or choosing to come back to open a practice in BC.

Current Employment of Surveyed Veterinarians

Most veterinarians surveyed work in a veterinary clinic (70%). Of those who identified as self-employed, half work in a clinic and more than 15% work as a locum veterinarian. Of those working as a locum veterinarian (14%), nearly half work full-time (35 hours per week or more) and a majority work in Southwest/Mainland or Vancouver Island regions.

Type of Employment

| Type of Employment | Number | Percent |
|---|------------|---------|
| A veterinary clinic | 144 | 70% |
| I am self-employed as a veterinarian | 75 | 37% |
| I am working as a locum veterinarian | 28 | 14% |
| An education or research institution | 6 | 3% |
| Government | 6 | 3% |
| A philanthropic practice (e.g. the BC SPCA or animal shelter) | 4 | 2% |
| Industry consultant | 2 | 1% |
| I am not currently employed | 2 | 1% |
| Semi-retired/retired | 2 | 1% |
| A laboratory (e.g. laboratory animal medicine) | 1 | 0% |
| Total number of respondents | 205 | |

Note: the number of respondents does not add up to total because veterinarians can work in more than one type of employment

Only 5 locum veterinarians said they would like to increase the number of hours they work. Interviews with a few locum veterinarians suggest that this is an attractive position, particularly for female veterinarians with young families because it allows for more flexibility including less hours. It was noted that the locum veterinarians are in high demand and are able to work in 2 to 3 locations where they are typically filling in for a full-time position.

About 40% of veterinarians have been working for their current employer or current organization for more than 10 years. Two-thirds of those who have been working for their current employer less than 3 years are new graduates (graduated within the last 5 years).

How long have you been working for your current employer or practice?

| Number of Years | Number | Percent |
|--|------------|-------------|
| Less than 1 year | 20 | 10% |
| 1 to 3 years | 47 | 23% |
| 4 or 5 years | 15 | 7% |
| 6 to 10 years | 34 | 16% |
| 11 to 20 years | 36 | 17% |
| More than 20 years | 48 | 23% |
| Other (locum, associate, purchased by VCA recently, owner) | 8 | 4% |
| Total number of respondents | 208 | 100% |

On average, veterinarians work 38 hours per week. While 5% of veterinarians reported working less than 15 hours, 26% reported working 45 hours or more. About a third of those participating work less than 35 hours a week.

Approximately how many hours per week do you work on average?

| Range of Hrs. Worked per Week | Number | Percent |
|-------------------------------|------------|-------------|
| Less than 15 | 11 | 5% |
| 16 to 25 | 21 | 10% |
| 26 to 35 | 40 | 20% |
| 35 to 45 | 77 | 38% |
| Over 45 | 53 | 26% |
| Total | 202 | 100% |

Over half of veterinarians reported that they would like to reduce the number of hours that they work (55%), and one third reported they will continue to work the same hours. Over two-thirds of veterinarians who would like to reduce the number of hours, reported working 40 hours or more. Only 5% of the veterinarians reported that they would like to increase the number of hours that they work, about half of whom are recent graduates working as locum veterinarians.

Do you think you may reduce or increase number of hours you work in a week over the next three to five years?

| Response | Number | Percent |
|--|------------|-------------|
| Yes, I would like to reduce the number of hours I work | 112 | 55% |
| Yes, I would like to increase the number of hours I work | 11 | 5% |
| No, I will continue to work the same hours | 63 | 31% |
| Not Sure | 13 | 6% |
| Other (please explain | 6 | 3% |
| Total | 205 | 100% |

Balance Between Demand and Supply

Most veterinarians (81%) reported that the demand for veterinarians exceeds the supply. Only 11% of the veterinarians indicated that supply exceeds the demand.

Perceived Balance Between Demand and Supply

| Demand and Supply Balance | N | % |
|--|------------|-------------|
| The demand for veterinarians in BC exceeds the supply? | 132 | 81% |
| Demand is relatively evenly balanced with supply? | 20 | 12% |
| The supply for veterinarians in BC exceeds the demand? | 11 | 7% |
| Total | 163 | 100% |

When asked about the trends in the industry that may affect the demand and supply of veterinary services, most veterinarians talked about the rising demand for services in general due to increasing numbers of clients and visits as well as increasing demand for specialized services. Increased awareness of health care options and changing attitudes towards pets, and increasing urbanization were also noted as the major factors that will affect demand for services. With respect to the supply, general shortages of veterinarians and specialists were the top issues identified. Changing attitudes about work schedules (i.e. less willingness to work long hours) and business ownership (i.e. an increasing preference to be an employee rather than an owner) combined with increasing corporatization of practices were seen as impacting the supply side.

The following table summarizes major trends related to the demand for, and supply of, services.

Major Trends Identified Related to Further Demand For Services and Supply of Veterinarians

| Trends Impacting the Demand for Services | Trends Impacting the Supply of Veterinarians |
|--|---|
| <p>Overall increased the demand for veterinary services (33 respondents):</p> <ul style="list-style-type: none"> ▪ Increasing pet population resulting in more clients ▪ Overall increase in the economy leads to an increase in the demand for veterinary services ▪ Increase in average time per visit (for some, the average used to be 15 minutes; now it can be 30 minutes) ▪ More frequent visits (e.g. more regular checkups or dental visits) | <p>Shortages of veterinarians, including shortages of specialists (27 responses):</p> <ul style="list-style-type: none"> ▪ Number of veterinarians retiring will increasingly exceed the number of graduates/ certain practices (e.g. equine) are identified as being particularly impacted by retirements ▪ The more limited range of skills of veterinarians entering the industry constrains the range of services they can provide (requires greater use of referrals/access to needed services can be constrained by the lack of specialists) ▪ Pressure on veterinarians to switch to higher-paying practices (urban, small animals) and/or practices offering a better lifestyle (e.g. urban, corporate) ▪ Lack of seats available to BC students will continue to increase the demand-supply gap |

| Trends Impacting the Demand for Services | Trends Impacting the Supply of Veterinarians |
|--|---|
| <p>Increased demand for specialized care (25 respondents):</p> <ul style="list-style-type: none"> ▪ Increased client expectations, knowledge, and willingness to pay for veterinarian services ▪ Animal status in society has increased further; pets are now considered as members of the family and pet-owners expect services that are comparable to human medicine | <p>Changing attitudes among new veterinarians related to work hours (on-call and overtime) and ownership (40 responses):</p> <ul style="list-style-type: none"> ▪ Increased emphasis on work-life balance (particularly amongst newer entrants to the industry) ▪ Newer graduates tend to want shorter work weeks and tend to prefer the amenities of a large city for their family. ▪ Increased concerns about mental health are leading to veterinarians working more limited work hours and not taking on any on-call emergency work. ▪ Newer veterinarians are perceived by some as being less willing than their predecessors to learn from their colleagues and are more corporate-minded. |
| <p>Increasing urbanization (22 respondents):</p> <ul style="list-style-type: none"> ▪ Increasingly difficult to recruit and retain graduates in rural practice; urbanization threatens rural clinics ▪ Most graduating veterinarians are choosing to practice in companion animal medicine in large cities ▪ Emergency clinics in cities make rural practice less desirable because veterinarians have to do after hours on call assignments | <p>Cost of living/student debt financial burden (21 responses)</p> <ul style="list-style-type: none"> ▪ Young people considering veterinary medicine are worried about high student debt load ▪ High costs of living and licensing in BC can be a deterrent for veterinarians to relocate to BC ▪ High debt and significant regulatory requirements make it too expensive for veterinarians to invest in a small practice |

Other comments regarding trends and issues impacting the industry included:

- A change in the use of antimicrobial drugs for large animals will require veterinarians to visit farms more frequently (12 respondents).
- There is an increased number of females in the profession with different working styles and demands due to family and other commitments (7 respondents).
- Growth in pet insurance will allow more affordable pet care, increase the demand for services, and increase the wages of veterinarians (5 respondents).
- Changing animal welfare laws are increasing the demand for veterinarian services (4 respondents).
- The limited number of graduates specializing in large animals negatively impacts animal welfare as work will be outsourced to generalists who have a more limited skill (2 respondents).

Training and Development

Survey participants were somewhat divided on the question as to whether the educational and training sector meets the skill development needs for veterinarians in BC. While 40% of the veterinarians indicated

that the educational and training sector is meeting the education, training, and skills development needs for veterinarians in BC, 44% indicated that it is not. Furthermore, most of those who selected 'other' identified at least some areas where the educational and training sector is not meeting the skill development needs.

Is the educational and training sector meeting the education, training and skills development needs for veterinarians in BC?

| Response | N | % |
|--------------|------------|-------------|
| Yes | 81 | 40% |
| No | 90 | 44% |
| Other | 33 | 16% |
| Total | 204 | 100% |

When asked about issues and gaps in training, about a quarter of veterinarians reported that the educational sector is simply not graduating enough veterinarians to meet the needs of the labour market and increasing demand for the services, including specialized care. This is creating additional stress, workload, and burn-out amongst experienced veterinarians.

Others expressed concern that new graduates may not be job ready (e.g. lack practical or on-the-job training), have key knowledge gaps or are not well prepared for specific areas of practice (e.g. poultry, avian medicine), and may have a limited understanding of the Industry and clients. These concerns are further described below.

Gaps and Issues Related to Training and Skills Development Needs

| Issues or Gaps | Examples Cited By Those Interviewed |
|---|---|
| Graduates are less job ready (e.g. need for more on the job training, practical skills and continued learning) (n= 36) | <ul style="list-style-type: none"> ▪ New graduates lack practical skills (e.g. some of the areas that were identified include dental training, surgical training, client communication skills, work-life balance management, and compassion fatigue) ▪ New graduates often lack self-reliance and confidence/tend to have limited exposure to common practice problems. Graduates need considerably more mentoring and oversight than those who graduated a few years ago ▪ Some new graduates lack people skills (client and staff management) ▪ New graduates tend to be very risk-averse, referring more complex cases without trying to address them. ▪ Rotation training programs are not meeting the objectives (e.g. there are too few specialized cases; student participation is too often restricted to observation only) ▪ More mentorship and residency programs are needed |
| Knowledge gaps in specific areas of practice (n= 15) | <ul style="list-style-type: none"> ▪ The existing continuing education modules are not sufficiently robust and have not evolved fast enough to keep pace with changing industry needs (too repetitive, unstructured) ▪ There are specific knowledge gaps (e.g. some of the gaps that were identified included animal dentistry, food safety, clinical diagnostics and behavioral medicine) ▪ The curriculum is too slow in evolving to meet the changing nature of food animal practice ▪ Much more emphasis is needed on particular topics (e.g. epidemiology, food production systems, aquaculture, etc.) |

| Issues or Gaps | Examples Cited By Those Interviewed |
|--|--|
| | <ul style="list-style-type: none"> ▪ There is a shortage of veterinarians ready for clinical work ▪ It is a challenge to keep the tools and equipment used to train veterinarian students current (e.g. students may be using x-ray equipment which has limited diagnostic capability) ▪ Graduates need a better understanding of business topics such as business operation, management, and finance are not offered ▪ There is a knowledge gap at the community level (e.g. existing clinics and veterinarians need better access to affordable seminars, workshops and wetlabs on more current topics) |
| <p style="text-align: center;">Limited understanding of the requirements of the industry and clients (n= 12)</p> | <ul style="list-style-type: none"> ▪ University programs have not given many graduates sufficient understanding of the requirements and economics of the industry. This may be reflected in: <ul style="list-style-type: none"> ○ Unrealistic wage expectations given the economic conditions facing some practices ○ An unwillingness to work on-call assignments ○ An unwillingness to put in the hours needed. According to some veterinarians, the focus of recent graduates has shifted more towards quality of life than quantity of hours worked. When veterinarians on average work fewer hours, more are needed ▪ Some perceive that newer veterinarians are more concerned about their pay and the hours they work than the importance and value of work itself |
| <p style="text-align: center;">Lack of specialists in the veterinary medicine (n= 9)</p> | <ul style="list-style-type: none"> ▪ There are very few specialist clinics in BC. Some specialty hospitals cannot find the professionals that they need (cardiologists, for example) ▪ There is limited availability of veterinarians who can perform services in key areas (e.g. internal medicine, oncology, anesthesiology, ER, critical care, and ophthalmology) |
| <p style="text-align: center;">Inability to the meet the needs for veterinarians in certain areas of practice or locations (n= 7)</p> | <ul style="list-style-type: none"> ▪ A majority of graduating veterinarians originate from urban settings and return there to focus on small animal practice ▪ New graduates tend to emphasize work-life balance. It can be more difficult to maintain work-life balance while operating in a small town or rural practice ▪ It is very difficult to hire veterinarians in rural BC, especially to service food animal practices such as poultry, beef, and aquaculture ▪ There is limited financial assistance/incentives for graduates to return to rural BC ▪ It is very difficult to find large animal veterinarians, particularly outside of the Lower Mainland and Fraser Valley ▪ Rural areas are not attractive for newer graduates/have great difficulties competing against urban areas ▪ There is limited awareness of veterinary medicine as a career |

Veterinarians overwhelmingly reported that the top priority for academia and government should be to increase the number of students graduating from veterinary medicine. Over half of veterinarians suggested the number of seats at the WCVM for BC students should be increased. Some suggested that BC should establish its own veterinary college.

The veterinarians recommended a wide variety of actions that could be taken to address these issues, including increasing the number of graduates in veterinary medicine, developing specific strategies to meet the needs of underserved regions and specialties (e.g. providing financial incentives), enhancing the education and training programs (e.g. expanding the program courses to include business and financial

management), and introducing mandatory internship programming to help new graduates to transition from academia to practice.

Recommended Actions to Address Workforce Development Challenges

| Leading Recommendations (n=130) | Summary of Related Recommendations and Comments |
|--|--|
| Graduate more BC students in veterinary medicine (n=68) | <ul style="list-style-type: none"> ▪ Increase the number of seats for BC students at the WCVM ▪ Establish a veterinary school in BC ▪ Meet the demand for veterinarians and interest in the profession by graduating more veterinarians |
| Develop strategies to meet the needs of underserved regions/specialties (n =44) | <ul style="list-style-type: none"> ▪ Provide student loan forgiveness or tax breaks to those who move to work in rural practice ▪ Ease the requirements for foreign-trained immigrant veterinarians to practice and incentivize them to settle in rural areas ▪ Make it easier to recruit foreign-trained veterinarians (e.g. make greater use of the Federal Skilled Workers program and the Provincial Nominee Program)/develop industry-wide initiatives that make recruitment less costly and time-consuming for individual practices ▪ Encourage students to consider areas of practice that are not small animal practice (e.g. aquaculture) ▪ Create admission criteria that will prioritize those wishing to work in underserved areas of practice and regions (e.g. agriculture) ▪ Support the introduction and adoption of telemedicine to meet the needs of rural and remote areas where there are no veterinarians available |
| Enhance the Courses and Programming offered at Veterinary College (n=19) | <ul style="list-style-type: none"> ▪ Introduce business and financial management courses, client management and communication courses ▪ Improve skills in using laboratory equipment & provide more specialized courses ▪ Offer post-graduate intensive courses (e.g. 2 to 3 week duration) for dentistry or other complex or focused veterinary activities or practices ▪ Increase understanding of the industry among new graduates and provide them with better-coping skills, and client management skills |
| Introduce mandatory internship Programs (n=10) | <ul style="list-style-type: none"> ▪ Establish co-op programs and/or internship programs to help students transition from academia to practice ▪ Provide incentives to business owners to hire/mentor students prior to their licensing ▪ Make dentistry e mandatory in clinical rotations |
| Improve gender balance in the profession and practice preference (n=9) | <ul style="list-style-type: none"> ▪ Implement strategies to achieve better gender balance in the profession ▪ Allocate seats specifically for those who are from rural areas or are interested in particular types of practice and special interests (e.g. emergency medicine) |
| Other | <ul style="list-style-type: none"> ▪ Ease the regulatory burden (some regulations are too burdensome and could result in loss of license if not complied with; some of the regulations have increased costs, particularly in rural areas) |

| Leading Recommendations (n=130) | Summary of Related Recommendations and Comments |
|---------------------------------|--|
| | <ul style="list-style-type: none"> ▪ Work to reduce barriers and provide financial incentives to set up rural practice (e.g. help to reduce the high costs and high standards that are very hard to meet) ▪ Find ways to ease the cost of living for new graduates |

3.2 Findings from the Survey of WCVM Students

Responses were obtained from 22 3rd and 4th year veterinary students who had been residing in BC at the time they entered the WCVM. Of these 22 students, 21 identified as female, none identified as Indigenous, and all but one had resided in an urban centre prior to enrolling. With respect to regions, 40% were from Mainland/Southwest region, 20% from Thomson-Okanagan Region and 35% from Vancouver Island/Coast Region. The other person was from Northeast region.

The veterinary students provided the following insights into their plans and expectations about job opportunities after graduations:

- 17 of the students (77%) intend to return to BC after graduation. Of the 17 students, 16 reported always intending to return to BC. Reasons given by the 17 students included:
 - To be close to family and friends (17 students)
 - Quality of life (16)
 - For a specific job (5)
 - Cost of living (3)
 - Strong demand for their specialized skills (2).
- Out of 5 students who said they will not return to BC, 3 expect to move to other provinces in Canada and 2 are planning to leave Canada.
- Students most commonly expect to work in small animal practice (77%) followed by equine, mixed animals, exotics or wildlife (29% each), and large animals (19%). Practices related to poultry, aquaculture, laboratory, and birds were each selected by one student.²¹
- Of the 22 students, 5 (23%) said they may pursue board certification in a broad range of specialized areas of veterinary medicine (e.g. internal medicine, radiology, surgery, oncology, ophthalmology, and dermatology). 6 students are not sure and 11 are not planning to pursue board certification.
- 81% of students expect to start working as soon as they graduate. Others reported wanting to take a break to travel, learn a language, or consider post-graduate studies.
- On average, students expect to work about 48 hours/week when they graduate. About half of the students expect to work less than 45 hours a week in their first job.

²¹ Students were allowed to select more than one area of practice in their responses.

- Nearly two-thirds of students surveyed anticipate having no difficulties in finding a job in veterinary medicine when they graduate, citing the strong job market. Many noted that they have a job lined up already. Those who expect some difficulties in finding a job cited their lack of clinical experience, the need for mentorship which is not always readily available, and being selective of the kind of practice and organizations for which they want to work.
- When asked about the industry trends that may affect the demand for and supply of veterinarians in BC, students noted salaries are low relative to the high costs of living in BC, the increase in corporate practices, changing attitudes towards food animal production which may increase the need for agricultural veterinarians, and increasing numbers of pets and people willing to pay for veterinarian services.
- Of 11 students who responded to the question about priority actions that should be taken by industry, academia, or government, the most common suggestions were to:
 - Increase the number of seats at the WCVM or establishing a College in BC (6 students)
 - Providing more opportunities for internship and residence, mentorship, and post-graduate training (4 students)
 - Providing greater access to scholarships and other incentives (2 students).

4.0 Survey of Veterinarian Employers

We conducted a survey of 111 employers of veterinarians in BC. The representatives who were surveyed are associated with organizations that operate through 209 locations (mostly veterinary clinics) in BC. In some cases, the representatives were able to provide data for all of the employer's operations in BC. In other situations, there were able to provide data for only one or several locations. In total, the 111 representatives provided data on operations at 139 BC locations. The results are summarized below.

4.1 Reported Employment

Total Employment and Employment of Veterinarians

The representatives surveyed reported that their operations employ 2,114 people in BC, of whom 386 (18%) are veterinarians. In other words, these organizations employ about 4.5 other types of employees for every veterinarian working in these locations.

Based on the respondent base of 111 employers and 139 locations (establishments), these organizations employ an average of about 3.5 veterinarians or about 2.8 veterinarians per site as indicated below.

Reported Employment of Veterinarians and Other Employees

Question: How many employees does this location (these locations) have in total? How many of those employees are veterinarians?

| Employment | Number | Percent | Average Per Employer | Average Per Site | Adjusted Average Per Site |
|------------------------|--------------|---------------|----------------------|------------------|---------------------------|
| Veterinarians | 386 | 18.3% | 3.5 | 2.8 | 2.76 |
| Other Employees | 1,728 | 81.7% | 15.6 | 12.4 | 9.76 |
| Total Employees | 2,114 | 100.0% | 19.0 | 15.2 | 12.52 |

The number of other types of employees per veterinarian reported in the survey is overstated, relative to the population overall, because of the inclusion of one major atypical organization (i.e. the BCSPCA) which employs a large number of non-veterinarians. If we adjust for this anomaly, the survey indicates that the number of veterinarians per site averages about 2.76 and total employment averages about 12.52 people per site (i.e. veterinary operations in BC employ about 3.5 employees for every veterinarian working in these locations).

Employment By Type of Operation

Some of these people will be formal employees of a clinic or hospital while others are self-employed professionals. For the purposes of the following table, we have categorized each veterinarian into one of the four categories. We have grouped the veterinarians into the veterinary clinic category if the respondent was providing data on the hiring and employment for the clinic overall, not just for one self-employed veterinarian. Those who are classified as self-employed are those who are working independently (e.g. not in a shared clinic) or were responding only for themselves.

Employment By Type of Operation

| Type of Operation | Employers | Veterinarians | Percent | Employees | Percent |
|-----------------------------------|------------|---------------|---------------|--------------|---------------|
| A veterinary clinic | 94 | 350 | 90.7% | 1,502 | 71.1% |
| Philanthropic (e.g. SPCA/shelter) | 2 | 19 | 4.9% | 570 | 27.0% |
| Self-employed as a veterinarian | 13 | 13 | 3.4% | 29 | 1.4% |
| Government | 2 | 4 | 1.0% | 13 | 0.6% |
| Total | 111 | 386 | 100.0% | 2,114 | 100.0% |

Employment By Region of Representative Surveyed

Of 111 employers, 47 are based in the Mainland/Southwest and 38 are based in the Vancouver Island/Coast Region. Of 386 veterinarians, 194 (50%) were reported by representatives based in the Mainland/Southwest and 110 (29%) were reported by representatives in the Vancouver Island/Coast Region.

Employment By Region of the Employer Respondent

| Region | Employers | Veterinarians | Percent | Employees | Percent |
|-------------------------------|------------|---------------|---------------|--------------|---------------|
| Mainland/Southwest Region | 47 | 194 | 50.3% | 1,353 | 64.0% |
| Vancouver Island/Coast Region | 38 | 110 | 28.5% | 435 | 20.6% |
| Thompson-Okanagan Region | 9 | 40 | 10.4% | 154 | 7.3% |
| Kootenay Region | 6 | 17 | 4.4% | 56 | 2.6% |
| Northern BC | 6 | 13 | 3.4% | 50 | 2.4% |
| Cariboo Region | 5 | 12 | 3.1% | 66 | 3.1% |
| Total | 111 | 386 | 100.0% | 2,114 | 100.0% |

The reported distribution of veterinarians outside of these regions may be understated somewhat in that several of the representatives surveyed were themselves based in the Mainland/Southwest Region or Vancouver Island/Coast Region but the organization (e.g. the Government of BC, the BCSPCA, or VCA – a large corporate employer) has employees in other regions as well.

Employment By Type of Operation

Of the 111 employers who responded, 91 indicated that their practice commonly involves working with small animals. 25 identified exotics or wildlife, and 14 identified equines.

Veterinarians By Type of Practice

Question: Does your work commonly involve working with (select all that apply):

| Type of Practice | Employers | Sites | Veterinaries | Percent |
|----------------------|------------|------------|--------------|---------------|
| Total | 111 | 139 | 386 | 100.0% |
| Small animals | 91 | 99 | 285 | 73.8% |
| Exotics or wildlife | 25 | 29 | 81 | 21.0% |
| Equine | 14 | 14 | 31 | 8.0% |
| Poultry | 6 | 7 | 21 | 5.4% |
| Mixed animals | 7 | 9 | 19 | 4.9% |
| Large animals (food) | 5 | 6 | 18 | 4.7% |
| Aquaculture | 3 | 3 | 6 | 1.6% |
| Other | 4 | 5 | 6 | 1.6% |

Employers were allowed to select more than one category. There is considerable overlap between the categories. For example, 24 of the 25 employers that identified commonly working with exotics or wildlife also identified commonly working with small animals. Overall, almost three-quarters of the veterinarians (74%) are with organizations that commonly work with small animals.

Employment By Years in Operation

The industry largely consists of long-established organizations. Organizations that have been operating for more than 20 years accounted for 55% of the employers surveyed and about 55% of the reported number of veterinarians. Organizations that have been operating for less than five years accounted for 11% of the employers surveyed and about 7% of the reported number of veterinarians.

Number of Years in Operation in BC

Question: How long has your organization been operating in BC?

| Years in Operation | Employers | Percent | Veterinarians | Percent |
|---------------------------|------------------|----------------|----------------------|----------------|
| Fewer Than 5 years | 12 | 10.8% | 25 | 6.5% |
| 5 to 9 years | 13 | 11.7% | 34 | 8.8% |
| 10 to 14 years | 16 | 14.4% | 98 | 25.4% |
| 15 to 20 years | 9 | 8.1% | 15 | 3.9% |
| Over 20 years | 61 | 55.0% | 214 | 55.4% |
| Total | 111 | 100.0% | 386 | 100.0% |

4.2 Growth in Employment Over the Past Five Years

Change in Veterinarian Employment

Of the 111 employers, 99 have been operating five or more years. Of these 99 employers, 40 indicated that the number of veterinarians they employ has increased over the past five years, 48 indicated that the number has stayed the same, and 11 indicated that the number has decreased.

Growth in Veterinarian Employment Over the Past 5 Years

Question: Relative to the number you employed five years ago, is the number of veterinarians that you now employ in this location (these locations) in BC:

| Change in Employment | Employers | Percent | Veterinarians | Percent |
|---|------------------|----------------|----------------------|----------------|
| Operating for Less Than Five Years | 12 | 10.8% | 25 | 6.5% |
| Much Lower | 3 | 2.7% | 4 | 1.0% |
| Somewhat Lower | 8 | 7.2% | 14 | 3.6% |
| About the Same | 48 | 43.2% | 111 | 28.8% |
| Somewhat Higher | 29 | 26.1% | 130 | 33.7% |
| Much Higher | 11 | 9.9% | 102 | 26.4% |
| Total | 111 | 100.0% | 386 | 100.0% |

Of the 386 veterinarians reported by the 111 employers, over 60% are employed by organizations that reported growth over the past five years.

Excluding the 12 employers that have been operating for fewer than five years (and the 25 veterinarians employed by them), the remaining 99 employers indicated that the number of veterinarians they employ has increased from 279 five years ago to 361 today (equal to a compound annual growth rate of 5.3%).

Aggregate Growth in Reported Veterinarian Employment Over the Past 5 Years

| Years in Operation | Employers |
|---|-----------|
| Number of Employers Operating 5 or More Years | 99 |
| Number of Veterinarians Employed Now | 361 |
| Number of Veterinarians Employed 5 Years Ago | 279 |
| Percentage Change Over 5 Years | 29.4% |
| Compound Annual Growth Rate | 5.3% |

Factors Contributing to Growth and Any Declines in Employment

When asked about the major factors that contributed to this increase, the employers were most likely to indicate that they are now serving a larger number of clients, clients are purchasing more services, they have expanded operations (e.g. more locations, longer hours, or a wide range of more services), and veterinarians are, on average, working fewer hours each (i.e. they now require more veterinarians to deliver the same number of hours of service).

Factors That Contributed to the Growth in Veterinarian Employment

Question: What are the main factors that contributed to this increase? (select all that apply)

| Factors Contributing to Growth | Employers | Percent |
|---|-----------|---------------|
| Employers Reporting Growth | 40 | 100.0% |
| We are serving a larger number of clients in our existing operation(s) | 29 | 72.5% |
| Clients are purchasing more services | 22 | 55.0% |
| We have expanded operations (e.g. more locations, longer hours, or a wide range of more services) | 17 | 42.5% |
| Our veterinarians are, on average, working fewer hours each (i.e. need more veterinarians to fill the same number of hours) | 16 | 40.0% |
| We employ more temporary staff | 5 | 12.5% |
| Regulatory changes | 4 | 10.0% |
| Technological changes (please specify in the comment box below) | 2 | 5.0% |
| Nature of the practice has changed | 1 | 2.5% |

Although the number of hours worked by the veterinarians may have declined somewhat over the past five years, most (84%) are still working 30 or more hours per week according to the employers.

Distribution in Hours Worked By Veterinarians

Question: How many of these veterinarians work 30 or more hours per week for your organization?

| Distribution in Hours Worked | Number | Percent |
|------------------------------|------------|---------------|
| Less than 30 Hours Per Week | 62 | 16.1% |
| 30 or More Hours Per Week | 324 | 83.9% |
| Total | 386 | 100.0% |

Of the 99 employers that have been operating five or more years, 11 indicated that the number of veterinarians they employ has decreased over the past five years. Nine of the 11 employers attributed this to a shortage of veterinarians (9 employers), one of whom also attributed this to a shortage of specialist veterinarians. Other reasons included that the owner of the clinic is winding down (2 owners indicated that they are preparing for retirement and looking for a buyer) and two indicated that the scale of their operation has narrowed.

4.3 Recent Hiring and Turnover

Recent Hiring

Of the 111 employers, 75 indicated that they have hired one or more veterinarians over the past two years (a total of 168 veterinarians were hired). At the time of hiring, these veterinarians were most commonly hired away from another veterinary clinic in the region (35%), a recent graduate from a degree program (20%), or hired from another region in BC (14%), in Canada (13%) or outside of Canada (12%).

Hiring in the Past Two Years

Question: Approximately how many veterinarians, if any, have you hired in the past two years?

| Hiring in the Past Two Years | Employers Reporting | Number of Veterinarians | Percent of Current |
|--|----------------------------|--------------------------------|---------------------------|
| Veterinarians Employed | 111 | 386 | 100.0% |
| Number Hired in Past Two Years | 75 | 168 | 43.5% |
| Did Not Hire in the Past Two Years | 33 | -- | -- |
| Not Noted | 3 | -- | -- |
| Sources of New Hiring | Employers Reporting | Number of Veterinarians | Percent of Current |
| Another veterinary clinic in the region | 37 | 59 | 35.1% |
| Just graduated from a degree program | 26 | 34 | 20.2% |
| Another region in BC | 17 | 23 | 13.7% |
| Another province or territory in Canada | 17 | 22 | 13.1% |
| Relocated from outside of Canada | 17 | 20 | 11.9% |
| Not employed at the time | 4 | 4 | 2.4% |
| Another type of employer in the region (e.g. government) | 3 | 3 | 1.8% |
| Not sure | 3 | 3 | 1.8% |
| Total | 75 | 168 | 100.0% |

Recent Turnover

Of the 111 employers, 56 indicated that they had experienced some turnover in veterinarians over the past two years (a total of 103 veterinarians had left). The major contributing factors included competition for workers from other employers in the region (36%), retirement or employee health issues (30%), competition for workers from employers in other regions (18%), and poor work performance resulting in termination (18%).

Reported Turnover During Previous Two Years

Question: How many veterinarians left your organization, if any, during the past two years? (i.e. veterinarians who left your organization, were laid off, or terminated)? Which of the following factors contributed to this turnover in staff?

| Turnover and Contributing Factors | Employers | Veterinarians | Percentage |
|---|------------|------------------|----------------|
| Veterinarians Current Employed | 111 | 386 | 100.0% |
| Number Left During the Past Two Years (Turnover) | 56 | 103 | 26.7% |
| Factors Contributing to Turnover | | Employers | Percent |
| Employers Reporting Turnover in Past Two Years | | 56 | 100.0% |
| Competition for workers from other employers in your region | 20 | 35.7% | |
| Retirement or employee health issues | 17 | 30.4% | |
| Competition for workers from employers in other regions | 10 | 17.9% | |
| Poor work performance resulting in termination | 10 | 17.9% | |
| Non-seasonal fluctuations in the volume of your work | 2 | 3.6% | |
| The seasonal nature of your work | 1 | 1.8% | |
| Other | 32 | 57.1% | |

As indicated, retirement and employee health issues are one of the factors that contribute to turnover. According to the employers, 25% of their veterinarians are between the ages of 45 and 54 years and 18% are over the age of 54.

Age of Veterinarians

Question: Of your veterinarians, how many do you estimate are:

| Age of Existing Veterinarians | Veterinarians | Percent |
|-------------------------------|---------------|---------------|
| Under the Age of 45 | 222 | 57.5% |
| 45 to 54 years | 95 | 24.6% |
| Over the age of 54 years | 69 | 17.9% |
| Total | 386 | 100.0% |

Thirty-two employers identified 'other' as a reason for turnover. Common reasons included that the veterinarian:

- Left the region (e.g. wanted to live elsewhere, spouse transferred, or they moved home – 15 employers);
- Left for a residency program, education program, or locum elsewhere (5 employers);
- Opened her or his own practice or purchased an existing practice (3 employers); and

- Disliked the working conditions (e.g. practice was not a good fit, too much stress, interpersonal conflict, lack of support staff, not wanting to be on call and in such a busy practice, and long hours - 4 employers).

Other reasons included leaving for additional income, family issues, or a full-time secure job or leaving to teach, because the practice split, or on maternity leave.

4.4 Future Hiring

Projected Hiring

Of the 111 employers, 72 indicated that they expect to hire one or more veterinarians over the next two years and, in fact, would hire more today if they were available. The employers indicated that they expect to hire 120 more veterinarians over the next two years and would hire 105 veterinarians today if available.

Current and Projected Hiring Needs

Question: How many more veterinarians, if any, would you hire today if there were good candidates available? How many veterinarians do you anticipate that your organization will hire over the next two years?

| Employment | Employers | Number | As Percent of Current |
|--|------------|------------|-----------------------|
| Veterinarians Currently Employed | 111 | 386 | 100.0% |
| Number Would Hire Today if Good Candidates Available | 72 | 105 | 27.2% |
| Number Expecting to Hire in Next Two Years | 72 | 120 | 31.1% |

Anticipated Difficulties

The employers were asked to rate how difficult they anticipate it will be to recruit qualified candidates for a veterinarian position, using a scale of 1 to 5, where 1 is not at all difficult, 3 is somewhat difficult, and 5 is very difficult. As indicated below, 57% of employers anticipate that it will be very difficult. The average rating was 4.4.

Anticipated Difficulties in Hiring

Question: On a scale of 1 to 5, where 1 is not at all difficult, 3 is somewhat difficult, and 5 is very difficult, how difficult do you anticipate it will be to recruit qualified candidates for these positions?

| Rating | Employers | Percentage |
|----------------------------------|------------|---------------|
| 1 Not At All Difficult | 1 | 0.9% |
| 2 | 0 | 0.0% |
| 3 Somewhat Difficult | 20 | 18.0% |
| 4 | 16 | 14.4% |
| 5 Very Difficult | 63 | 56.8% |
| No response/not planning to hire | 11 | 9.9% |
| Total | 111 | 100.0% |
| Average Rating | 4.4 | |

Employers from each region and type of practice anticipate difficulties.

Average Difficulty By Region and Type of Practice

Question: On a scale of 1 to 5, where 1 is not at all difficult, 3 is somewhat difficult, and 5 is very difficult, how difficult do you anticipate it will be to recruit qualified candidates for these positions?

| Region | Employers Hiring | Average Difficulty |
|-------------------------------|------------------|--------------------|
| Total | 100 | 4.4 |
| By Region | | |
| Mainland/Southwest Region | 42 | 4.3 |
| Vancouver Island/Coast Region | 33 | 4.5 |
| Thompson-Okanagan Region | 9 | 4.2 |
| Kootenay Region | 5 | 4.6 |
| Northern BC | 6 | 4.3 |
| Cariboo Region | 5 | 5.0 |
| By Type of Practice | | |
| Small animals | 86 | 4.4 |
| Exotics or wildlife | 23 | 4.3 |
| Equine | 10 | 4.7 |
| Poultry | 5 | 4.6 |
| Mixed animals | 7 | 4.7 |
| Large animals (food) | 4 | 4.0 |
| Aquaculture | 3 | 5.0 |

The most common reasons provided by the 99 employers who anticipate difficulties include the strong competition for veterinarians from other organizations in BC, difficulties in attracting qualified applicants to BC from other regions of Canada or internationally, not having enough people graduating with veterinary degrees, and that available education programs do not adequately prepare people to work in the industry (employers need people with more experience).

Factors That Will Make Hiring Difficult

Question: Which (if any) of the following factors do you expect will make it difficult to attract qualified candidates?

| Constraining Factors | Employers | Percent |
|---|-----------|---------------|
| Number Anticipating Difficulties in Hiring | 99 | 100.0% |
| There is strong competition for veterinarians from other organizations in BC | 55 | 55.6% |
| It is difficult to attract qualified applicants to BC from other regions of Canada, or internationally | 35 | 35.4% |
| There are not enough people graduating with veterinary degrees | 31 | 31.3% |
| Available education programs do not adequately prepare people to work in the industry/we need people with more experience | 30 | 30.3% |
| Lack of access to on-call/emergency veterinarians | 23 | 23.2% |
| Many of the existing veterinarians are nearing retirement | 18 | 18.2% |
| We are looking for people who are board certified in a specialized area/very few are available | 11 | 11.1% |
| Other | 31 | 31.3% |

Thirty-one employers also identified other reasons including:

- The high cost of living in the Greater Vancouver Regional District (GVRD) and Capital Regional District (CRD) (8 employers)
- Candidates are not particularly interested in the employer's area of specialization (e.g. they want to work in a mixed practice) or lack of specialization (e.g. they want to work in a more targeted practice) (7 employers)
- The tendency of people to want to work in urban centres (6 employers)
- Younger people tend to want to work on only certain hours, are less willing to work weekends or be on call, put more of a priority on work-life balance, and may not want to work full-time (5 employers)
- Young people are less committed and have more of a sense of entitlement (2 employers)
- There are too many other options for candidates (2 employers)
- There is a lack of experienced candidates (2 employers)
- The employer cannot offer enough hours to attract someone (1 employer)
- Many young veterinarians are on maternity leave (1 employer)

The 99 employers who anticipate difficulties are considering a variety of strategies in order to respond to the skills shortages. The strategies most commonly identified included increasing the wages or benefits, more aggressively promoting the job openings, hiring new or recent immigrants with the required skills, slowing the rate of business growth, increasing investment in formal or external training, and increasing use of overtime.

Strategies or Actions That Employers Will Likely Pursue

Question: Which, if any, of the following strategies or actions is your organization most likely to undertake in response to these skills shortages? (select all that apply)

| Strategies or Actions | Employers | Percent |
|---|-----------|---------------|
| Number Identifying a Particular Strategy | 99 | 100.0% |
| Increase the wages or benefits you pay to make our positions more attractive to candidates | 54 | 54.5% |
| More aggressively promote our job openings | 48 | 48.5% |
| Hire new or recent immigrants with the required skills | 30 | 30.3% |
| Slow our rate of business growth | 29 | 29.3% |
| Increase our investment in formal or external training | 23 | 23.2% |
| Increase the amount of overtime worked by our staff | 20 | 20.2% |
| Increase our investment in equipment or technology to reduce labour requirements | 18 | 18.2% |
| Hire temporary foreign workers with the required skills | 16 | 16.2% |
| Reduce our job requirements (in terms of education, experience, or certifications) where possible | 11 | 11.1% |
| Introduce or expand job sharing programs | 11 | 11.1% |
| Outsource certain functions or work | 8 | 8.1% |
| Other | 9 | 9.1% |
| Don't Know | 17 | 17.2% |

Other strategies that were suggested by employers including selling the operation to a corporate entity (which may be better able to deal with staffing issues – 2 employers), waiting for the right person (2 employers), cutting some services, reducing the hours of service, closing the practice to new clients, relying on locums, and hiring more support staff to help the veterinarians to work more efficiently.

5.0 Major Findings and Conclusions

This chapter draws from the findings of the key informant interviews, literature review, and the veterinarian and employers survey to address each of the research questions which were outlined in Chapter 1.

Question 1: What is the current size, composition and characteristics of the BC veterinary sector workforce?

The major findings are as follows:

1. Veterinary establishments operating in BC employ nearly 1,600 veterinarians and over 7,500 staff in total.

According to Innovation, Science and Economic Development Canada (ISED), there were 550 veterinary establishments operating in BC in 2016. Based on the results of the employer survey (outlined in Chapter 4), we estimate that about 1,590 veterinarians and 6,930 employees in total are employed in these locations. Including government organizations and shelters (which would not be classified as veterinarian establishments in the ISED data), we estimate that there are approximately 1,585 veterinarians working in BC and over 7,500 people in total in related employment.

Veterinarian and Total Employment in the BC Veterinary Industry

| Employment | Veterinarians | Other Employees | Total |
|-------------------------------|---------------|-----------------|-------|
| Private Practice | 1,540 | 5,390 | 6,930 |
| Government and Major Shelters | 45 | 650 | 695 |
| Total | 1,585 | 6,040 | 7,625 |

Source: Survey of Veterinarians (2019);

At this size, the veterinary industry would be larger than the beverage manufacturing industry in BC (which employed 6,900 people in 2018) and somewhat smaller than the animal production sector in BC (which employed 8,400 people in 2018).

The survey projection regarding the number of veterinarians working in BC is very close to the number active veterinarians in BC registered with the College of Veterinarians of British Columbia (which reported a total of 1,599 registered veterinarians active in BC). Both figures are significantly higher than the Government of Canada projection of 1,370 veterinarians in BC, which was developed based on the 2016 Census. The difference is likely definitional; this project focuses on active licensed veterinarians in BC. Some of these veterinarians would have been classified under other occupations in the 2016 Census (e.g., particularly as managers).

2. BC veterinarians tend to be female, almost equally educated at WCVM and foreign-trained, and somewhat older in comparison to the total BC labour force. Most work in veterinary clinics or hospitals, in a small animal practice located in urban centers in Mainland/Southwest Region and Vancouver Island/Coast Regions.

More specifically:

- Most BC veterinarians are female. According to the 2016 Census, 58% of veterinarians who are female. The percentage is steadily increasing as new graduates enter the industry and older veterinarians retire. Over 80% of students admitted to DVM programs in Canada are female.
 - The BC veterinary population is older in comparison to the total BC labour force (24% of surveyed veterinarians aged 55 to 64 years of age vs. 20% of total labour force; similarly, only 16% are under age of 34 vs. 25% of total labour force).²²
 - According to WCVM data and survey data, approximately half of veterinarians in BC graduated from WCVM. The survey of students, and other research conducted by WCVM, suggests that most BC students return to BC to work.
 - Over 90% of veterinarians work in a veterinary clinic or hospital, either as formal employees or as self-employed professionals. Others are self-employed persons who are working separate from a clinic, work in the public sector (e.g. government, education), or work in animal shelters. Overall, Jobs Canada reports that 43% of veterinarians are self-employed compared to an average of 14% for all occupations.²³
 - Over two-thirds of veterinarians (74%) work in small animal practice and, of those, about two-thirds work exclusively in small animal practice. The remaining one-third work in multiple practice areas, most commonly with exotic or wildlife animals as well. According to CVBC data, only about 1% (22) of veterinarians work in specialty practice.
 - Most veterinarians (over 90%) are employed by organizations based in three regions of BC (Mainland/Southwest, Vancouver Island/Coast, and Thompson-Okanagan).
 - Veterinarians are likely to stay in the same job or same organization for a long time (40% of surveyed veterinarians have been working for their current employer for more than 10 years).
3. **The median wage for veterinarians in BC is over \$85,000, which is comparable to the Canadian average. While most veterinarians continue to work full-time, they may be working fewer hours on average than veterinarians did in the past.**

Employment and Social Development Canada, through its Job Bank website, reports that the median wage for veterinarians is slightly higher in BC than in Canada overall.

Median Wage for Veterinarians, 2018

| Prevailing Wages | Low | Median | High |
|------------------|----------|----------|-----------|
| Canada | \$30,229 | \$85,074 | \$139,667 |
| BC | \$35,894 | \$85,140 | \$141,503 |

Source: ESDC, JobBank Canada – Job Profile Veterinarian in BC

²² StatsCan: BC labour force characteristics by sex and detailed age group: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410032701&pickMembers%5B0%5D=1.11&pickMembers%5B1%5D=2.3>

²³ <https://www.jobbank.gc.ca/marketreport/outlook-occupation/4127/BC>

According to BC Labour Market Outlook, the wage range for veterinarians working in BC in 2017 was between \$32,764 and \$139,403 with median rate of \$78,026.

According to WCVM, most new graduates seem to be earning wages close to the median reported in official statistics. WCVM reported that 77% of recent graduates working in Western Canada in 2018 earned between \$70,000 and \$79,999 before the taxes²⁴. Employers of new graduates across Western Canada provinces reported that 61% of new graduates earn an income above \$80,000. Those making above \$100,000 increased from 8% in 2016 survey to 15% in 2018.²⁵

While most veterinarians continue to work full-time, they may be working fewer hours on average than veterinarians did in the past. Job Bank Canada reports that only 15% of veterinarians work part-time (compared to 23% for all occupations). The average number of hours worked reported by veterinarians in the survey is 38 hours (compared to 36.8 average hours worked in BC by full time and part time employees)²⁶. In the survey, 40% of employers reported that the veterinarians, on average, work fewer hours on average than they did in the past (which means that more veterinarians are required to provide the same hours of service). Key informants noted that existing wage statistics may not reflect the effective increase in wages for veterinarians, given that veterinarians tend to work fewer hours now than in the past to earn those wages.

Question 2: How is the sector forecast to grow and expand? What are the factors affecting growth?

The major findings are as follows:

1. The veterinary industry in BC is well-established, growing, and likely in an early stage of consolidation.

More specifically:

- **The employer organizations are well-established.** More than one-half of the employers surveyed have been operating for more than 20 years. Employers that have been operating for less than five years accounted for 11% of the employers surveyed and only about 7% of the reported number of veterinarians.
- **Employment is increasing.** The aggregate number of people employed by the employers surveyed that have been operating for at least five years (89% of those surveyed) increased from 279 people to 361 over the past five years (equal to an average annual growth 5.3%). Nearly half of these employers reported that the number of veterinarians they employ has increased over the past five years. The employers attribute this recent growth to serving a larger number of clients (identified by 73% of employers with increased employment), followed by clients purchasing more services (55%) and expansion of operations (43%). Veterinarians are also

²⁴ WCVM Two-Year Follow Up Survey (November 2018)

²⁵ WCVM – 2018 Employer Survey (January 2019), completed by Inshixtrix Research Inc.

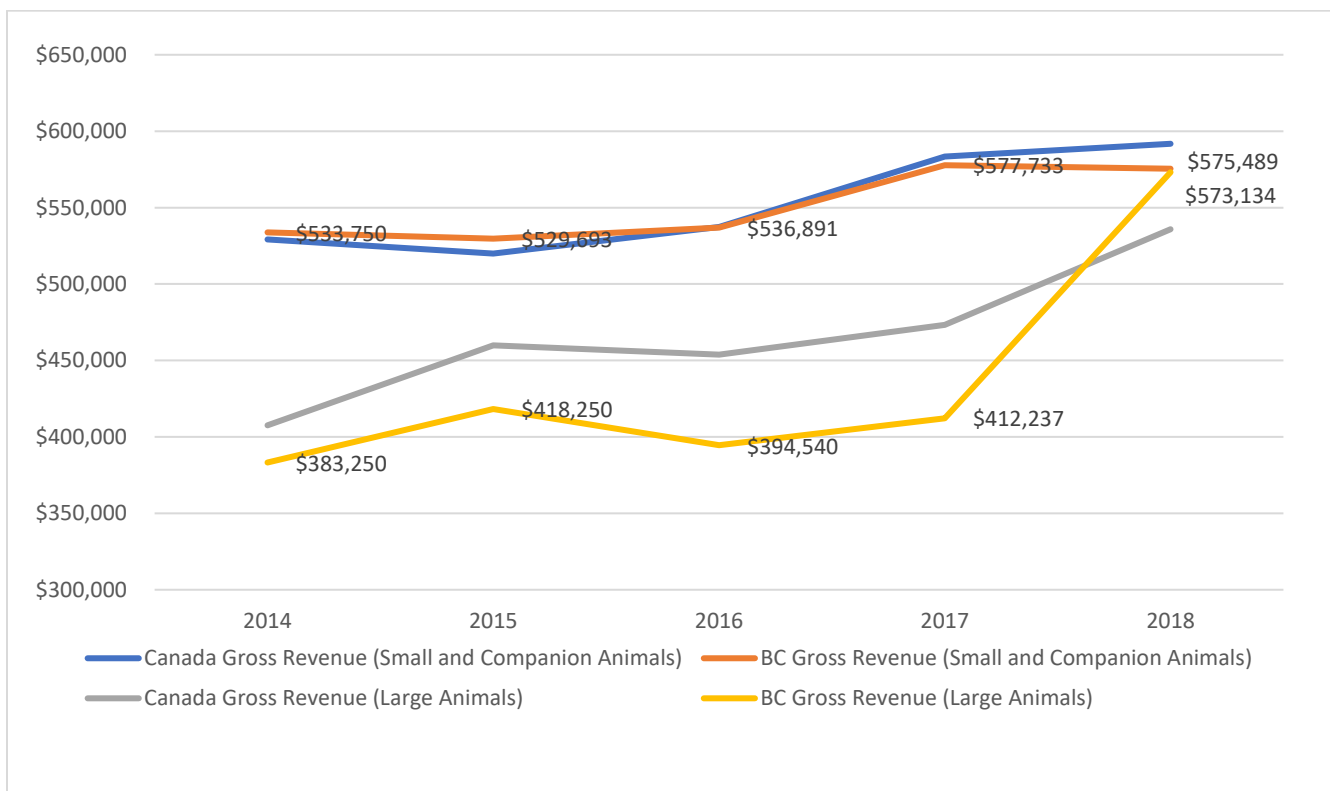
²⁶ StatsCan: Average usual and actual hours worked in a reference week by type of work
<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410004301&pickMembers%5B0%5D=1.11&pickMembers%5B1%5D=3.1&pickMembers%5B2%5D=5.1&pickMembers%5B3%5D=6.6>

spending more time per client than in the past; the 2018 National Economic Report notes the average duration of examination is 28 minutes in BC, which is the highest among Canadian provinces.

Key informants suggested that the growth of some organizations has been fueled by increased corporate acquisition of smaller practices. Only 11 employers indicated that the number of veterinarians they employ has decreased over the past five years, a decline they attributed largely to shortages of veterinarians and lack of interest of new graduates in owning a practice.

- Revenues are also increasing.** The CVMA conducts an annual economic survey of practice owners (2018). The number of respondents from BC increased from 74 in 2017 to 85 in 2018 (including both small and companion animal practices and large animal practices). According to the report, average revenues for small and companion animal practices per full-time equivalent (FTE) Doctor of Veterinary Medicine increased by an average of 1.9% annually over the past four years (to \$575,489 in 2018) while revenues per FTE for large animal practices in BC increased by about 8.8% annually (to \$573,134 in 2018).²⁷

**Gross Revenues Per Full-time Equivalent Doctor of Veterinary Medicine
- Canada and BC (Small and Large Animal Practice)**



- There is significant consolidation occurring in the industry.** For example, VCA Canada operates in 17 locations in BC and is continuing to expand its market presence. Across Canada,

²⁷ Economic Survey of National Practice Owners, BC Edition (2018).

VCA employs more than 300 veterinarians at over 100 locations in BC, Alberta, Saskatchewan, Ontario, and Quebec. In turn, VCA itself has been purchased by Mars Inc. (a company based in Brussels), which has also purchased other leading veterinary chains including Banfield, BluePearl, and Pet Partners. Brakke Consulting recently projected that, within the five years, 25% of the veterinary practices in the US will be corporately owned.²⁸

Opinions were mixed regarding the impact of increased consolidation. Some potential benefits were identified including increased standard of care resulting from easier access to specialists and more favorable working conditions (less need for employees to work overtime and on-call hours, better benefits). However, others noted that this trend will make it even more challenging for smaller rural practice to recruit qualified veterinarians, increase competition, and potentially increase costs for clients. Literature suggests that workplace structures are changing and fewer veterinarians, particularly millennials, are interested in buying a practice or running a veterinary business.²⁹

2. Most employers are projecting continued growth in employment.

Employers were asked whether they would hire additional veterinarians today if candidates were available and how many, if any, veterinarians they expect to hire in the next two years. About two-thirds of employers said they both would hire additional veterinarians today if candidates were available and expect to hire additional veterinarians over the next two years. In aggregate, the employers indicated that they expect to hire 120 more veterinarians over the next two years (which represents 31% of current employment) and would hire 105 veterinarians today if available (which represents 27% of current employment).

3. Further growth in employment will be driven by increased demand for services and changes in the nature of veterinarians.

When discussing future growth, key informants and employers highlighted both the increasing demand and the changing characteristics of veterinarians:

- **Increasing demand for veterinarian services, including specialized care.** Increasing demand was identified by 80% of key informants and 60% of veterinarians. Key informants and veterinarians provided numerous reasons for the increasing demand for services including technological changes, elevated status of pets in the society (e.g. pets are considered a family member), and willingness of people to pay for extended care and expensive treatments to keep their animals alive. Clients are more invested in the health of their pets, visit veterinarians more often, have access to more information and medication, and expect 24-hour support and access to services when they have concerns. A veterinarian pathologist who was interviewed noted that most pets go through numerous treatments prior to their death. New technologies have impacted the scale and the intensity of the treatments available. For example, wearable technology is used to diagnose and assess potential diseases and monitor pet health. Technology enables veterinarians to diagnose and treat diseases more accurately and faster than ever before but also

²⁸ Veterinary practice trends: <https://www.veterinarypracticenews.com/veterinary-practice-trends-webinar-highlights-further-industry-consolidation/>

²⁹ The Corporatization Of The Veterinary Industry. <https://www.vets-on-commission.com/the-corporatization-of-the-veterina>

requires enhanced skill sets. Pet insurance is becoming more common and is expected to continue to grow which will allow pet owner to spend more on veterinary services.

- **Changes in the demographics of veterinarians and attitudes towards practice** (noted by 75% of key informants and 35% of veterinarians). Historically, the industry has been dominated by males. However, increasing numbers of women are working in the industry (85% of students applying to WCVM are female). Female veterinarians are likely to take maternity leave and work fewer hours when they start a family. This, when combined with changing attitudes toward ownership, overtime, and on-call hours, can result in higher numbers of veterinarians being required to fill the same number of FTE positions. Increasing urbanization of people and animals, as well as veterinarians who prefer urban setting, is creating increasing challenges for rural areas and large animal practice to find suitable candidates.

4. **New regulations, changing consumer attitudes, and expectations will also have a significant impact on the agricultural industry.**

Veterinarians working in the agricultural sector, specifically food animal practitioners, will experience similar challenges and trends affecting the overall industry including urbanization and changing priorities, shortages of veterinarians, and salary competition with other areas of practice and regions, etc. In addition to these challenges, the agricultural industry is facing major operational and regulatory changes that will place increasing pressures on the veterinary industry and the role of veterinarians.

A review of online industry sources and interviews with key informants highlighted the following key trends that will impact the animal food industry³⁰:

- **Antimicrobial regulations and oversight.** Health Canada has recently introduced new regulations regarding antimicrobial drugs. Both Canada and the US are placing new restrictions and tighter oversight on reliance on antimicrobials as a production tool. This will increase the workload and pressure on veterinarians working in food production (e.g. poultry, bovine, swine, and bees). Key informants noted that larger producers who have strong and ongoing engagement with the veterinarians may not be as challenged as smaller animal producers who do not have ready access to veterinary services and are forced into 'creative solutions' to get antimicrobials (e.g. buying it online).
- **Increased consumer expectations and concern about the welfare of farmed animals.** Customers and consumers continue to demand enhanced transparency and high standards of care and welfare for food animal production. Consumers want to know how food animals are cared for and produced. Veterinarians play an important role in educating clients about animal care and animal welfare and addressing issues related to animal neglect. However, some key informants suggested that animal welfare advocates and the public often do not have a good understanding of the industry and issues related to health management and food safety. Recent studies have raised the concern about the absence of veterinarian voices in public discussion of animal care and welfare.³¹

³⁰ Poultry Partners: Perfect storm of changes drives expanded role for poultry veterinarians <http://www.poultrypartners.ca/perfect-storm-of-changes-drives-expanded-role-for-poultry-veterinarians/>

³¹ Summer, C.L at All (2018). Perspectives of farmers and veterinarians concerning dairy cattle welfare. *Animal Frontiers*, Volume 8, Issue 1, January 2018 (Pages 8-13)

- **Sustainability and environmental protection.** In addition to antimicrobial oversight and animal care, the sustainability of food production involves a wide range of issues such as housing, biosecurity, environment, quality, food safety, carbon footprint, and water and waste management. Because of their expertise, veterinarians play an important role in developing, advocating and educating farmers and the public about sustainable agriculture that protects the environment, human, and animal health.³² Key informants strongly argued that the shortages of veterinarians in practice areas such as food animal practitioners pose serious threats to the industry, and reduce BC's capacity to identify and manage risks to animal and human health caused by new diseases or diseases new to BC. For example, it was noted that environmental disasters combined with movement of people and animals increase risks of diseases such as African Swine Fever, a highly contagious viral diseases of domestic and wild pigs, which could have a major impact on Canada's pig population.³³

Question 3: Are there current and projected shortages for veterinarians in BC? If so, in what locations and what types of practices, including specialty practice, are the shortages most acute?

The major findings are as follows:

1. There are significant current and projected shortages of veterinarians in BC across all types of practice and regions.

All veterinarians completing the survey were asked to comment about the balance of demand and supply of veterinarians. As indicated in the following table, over 80% reported that demand exceeds the supply. Those who said the supply exceeds demand or it is relatively evenly balanced mostly work in urban areas and in small animal practice.

| Demand and Supply Balance | N | % |
|--|------------|-------------|
| The demand for veterinarians in BC exceeds the supply? | 132 | 81% |
| Demand is relatively evenly balanced with supply? | 20 | 12% |
| The supply for veterinarians in BC exceeds the demand? | 11 | 7% |
| Total | 163 | 100% |

When employers were asked how difficult they anticipate it will be to recruit qualified candidates for a veterinarian position, over 70% of employers said it will be difficult (including 57% who said it will be very difficult). Employers from all regions and across various types of practice anticipate difficulties. Another indicator of strong employment is that students anticipate no difficulties in finding a job. In fact, nearly half said that they already have a job lined up for them when they graduate.

³² The Issue of Sustainability: How Veterinary Medicine Comes into Play
<https://permaculturenews.org/2016/02/22/the-issue-of-sustainability-how-veterinary-medicine-comes-into-play/>

³³ QUADS Chief Veterinary Officers meet to discuss opportunities to work together to mitigate risks to animal health
<http://www.inspection.gc.ca/animals/chief-veterinary-officer/cvo-statements/2019-04-11/eng/1555013658573/1555013658871>

Nearly all key informants reported shortages of veterinarians and provided various examples and stories related to difficulties in hiring veterinarians. One practice owner closed their clinic after two years of attempting to find an experienced veterinarian to take over the practice and failing to find one. Others talked about fewer applications received in response to advertisements, an inability to retire because they cannot find replacements, advertising for years or simply giving up advertising, and using different strategies to recruit (working with colleges to recruit new graduates, participating in job fairs, recruiting from Europe and the USA). A few key informants from northern BC noted that the requirement for veterinarians is constant and it has become even more difficult to recruit during the last five years.

Analysis of job ads for veterinarian positions posted on the CVMA-SBCV website shows that, between June 2018 and April 2019, there were more than 100 ads posted on the website. The average length of days for ads posted was 48 days and many organizations were running multiple ads during this time period (suggesting that the previous posts were not successful). About 13% of ads were running for more than three months.

2. Assuming that the demand in BC for veterinarians will continue to grow at even 2.5% per year and that 4% of the existing supply of veterinarians leave the BC industry annually, the industry will need more than 100 new entrants each year to keep pace.

The BC Labor Market Outlook (2018-2028) forecasts that growth in the employment for veterinarians in BC will average 1.7% in the next five years and 1.1% from 2023-28. This translates to about 550 job openings over the next 10 years (an average of 55 per year), nearly two-thirds of which (62%) will be due to the need to replace retiring workers.

The results of this study suggest that the BC Labour Market Outlook both understates the likely number of job openings and overstates the anticipated supply of new workers entering the industry:

- The number of veterinarians in BC is significantly understated in the Outlook (by about 15%) because of the difference between the occupational definition and the professional license.
- The projected growth rates in employment used in the Outlook appear low given recent growth in the industry and the presence of strong economic drivers going forward.
- Veterinarians are needed not only to fill new positions but to address existing shortages. The employers who were surveyed (which represent about 25% of the industry) indicated that they would hire over 100 veterinarians today should good candidates be available and project hiring over 120 during the next two years.
- The BC Labour Market Outlook projections do not take into consideration the impact that new entrants into the industry tend to work fewer hours than did those who are leaving the industry, which will increase the number of veterinarians required. The projections also do not take into consideration new requirements, such as the prescription of antimicrobials, which increase pressure on time and demand for veterinary services.
- The projections likely understate the rate at which existing veterinarians will retire or at least reduce the number of hours worked as they age. Twenty-two percent of surveyed veterinarians plan on retiring over the next 5 years and 55% said they would like to reduce the hours worked in a week.

- In terms of supply, the BC Labour Market Outlook projected that, over the 10 year period, 115 young graduates (aged 17 to 29 years old) and 10 older people (30 years or older) with public post-secondary education would enter the industry. In addition, there would be a net immigration of 102 immigrants and 34 people from other provinces. These figures, which account for an average increased supply of about 26 people per year, are reasonable. However, the projections also include an “other additional supply” of 289 veterinarians, a category which generally consists of workers moving into one occupation from other occupation (which does not fit with this veterinarian occupation, given the licensing requirements) as well as some older workers delaying retirement. This figure seems unreasonably high given the nature of the veterinarian occupation.

The results of the study suggest that, even if the BC Labour Market Outlook supply projections are correct, the supply would not be sufficient to address projected needs let alone address the existing demand and supply imbalance.

3. Shortages are particularly acute outside of small animal practice and urban areas, and for experienced specialists.

Although most veterinarians and veterinarian employers reported shortages, the most acute and pressing shortages are outside urban areas and small animal practice, and for specialized practice. For example, key informants and veterinarians provided the following comments:

- Shortages are most significant among food animal practitioners, veterinarians with expertise in small ruminants, small flock poultry, furbearers, fish pathologists, laboratory, and public sector/government practice. It was estimated that there are currently up to 20 positions that could be filled just in agricultural practice.
- Shortages are particularly acute among specialists. For example, there are only 22 board-certified specialists in BC, and some specialized practice is very difficult to access (e.g. oncologists, cardiologists, ophthalmologists, anesthesiologist, etc.).
- Strong competition from corporations and small animal practice employers in urban areas are placing additional pressures on rural and large animal practice.
- It is particularly difficult to find veterinarians who are willing to do on-call and emergency cases outside their regular practice hours.
- There is a lack of veterinarian positions related to health infrastructure (intersection between animal and human public health), conservation, and management of climate change impact.

4. The veterinarian shortages have a particularly negative impact on small employers, rural practices, and those owners nearing retirement.

Veterinarians who identified shortages were asked to comment on the impact that has on them and their practices. Veterinarians note that the shortages:

- **Added stress, employee fatigue, and burn out** (identified by 45 veterinarians). The shortage of veterinarians increased the workload, hours worked, and stress to meet increasingly demanding clients, and reduced life-work balance resulting in higher burn-out rates.

- **Impacted the quality of service** (identified by 21 veterinarians). Veterinarians raised concerns about the impact on the quality of services, including their ability to serve clients who are seeking more time and additional services. One veterinarian noted that she spends a lot of time educating clients about conditions or issues they may have learned about online. A few respondents noted concerns about misdiagnosis and inadequate record keeping because of the workload and limited access to specialists.
- **Constrained their ability to grow the practice** (identified by 18 veterinarians). Challenges in filling the positions have resulted in some veterinarians 'outsourcing' services and referring clients to hospitals for services they used to provide. This can have a negative impact on clients and animals when clients have to travel to a more distant clinic or hospital for services they could be receiving from local veterinarians. Other veterinarians noted that they stopped taking new clients because they cannot meet the demand.
- **Delayed retirement** (identified by 16 veterinarians). Difficulties in recruiting veterinarians, particularly more experienced ones, combined with fewer veterinarians willing to own practices, has resulted in more practice owners being unable to retire or contemplating closing their practice. Some decided to sell their practice to corporations and continue to work until an adequate replacement is secured.
- **Increased competition from larger, urban organizations** (identified by 11 veterinarians). Some rural owners reported increased difficulties in competing with larger, urban-based practices that tend to offer better salaries and benefits than they are able to offer. Veterinarians surveyed talked about the impact on rural clients and animals who simply do not have access to services or cannot afford long travel to hospitals.

Other impacts of shortages that were identified included issues such as increased turnover (the tight labour market enables veterinarians to be more selective and have high demands), more pressure on clients, increased pressures from the regulators, increased operational costs, etc.

Question 4: What are the critical impediments to attracting and retaining in-demand skills and occupations?

The major findings are as follows:

1. The significant shortage is contributing to strong competition for veterinarians between employers in BC and other regions.

Just over one-half of the employers surveyed report that they experienced some turnover in veterinarians over the past two years (the level of turnover is equal to 27% of current employment). The major factors contributing to turnover included competition for workers from other employers in the region (36%), retirement or employee health issues (30%), competition for workers from employers in other regions (18%), and poor work performance resulting in termination (18%). The survey of employers shows that, in the past two years, employers were most likely to recruit veterinarians from another clinic in the region or new graduates.

Similarly, when asked about factors that make it difficult to recruit veterinarians, more than half of the 99 employers who provided responses noted the strong competition from other organizations in BC and over one-third reported strong competition from other regions and internationally. The shortages of veterinarians in Canada has been long recognized. For example, similar trends and challenges for recruiting veterinarians for the agriculture industry in Ontario were reported in 2017. It was reported that about 130 Ontario practices were seeking to hire a veterinarian.³⁴ There is strong competition for veterinarians from the United States. The median annual wage for veterinarians was \$93,830 USD in May 2018.³⁵ The shortage of veterinarians has given rise to the organizations such as Oxilia which provides access to locum veterinarians for veterinary clinics in Canada looking to fill their temporary or permanent human resource needs.

Apart from general shortages, other factors identified as contributing to difficulties in recruiting and retaining veterinarians include:

- High cost of living in some regions of BC (e.g. the students surveyed were mostly concerned about salaries relative to the increasing costs of living in BC);
- High student debt levels;
- Preference for urban centers, limited hours, and no weekend or on-call hours;
- Emphasis on work-life balance;
- Many experienced veterinarians are nearing retirement. Over 30% of veterinarians surveyed are aged 54 years and older and will be nearing retirement over the next 5 to 10 years;
- Changing demographics and work preferences including increasing of work-life balance for family and parental leave have contributed to decreasing FTEs and a preference for part-time hours;
- Low awareness and interest for the specific areas of practice, such as aquaculture, agriculture, and pathology.

2. Employers are contemplating various potential strategies to address shortages and recruit veterinarians; however, nearly one-third are suggesting they will slow the rate of business growth.

To deal with shortages, employers are considering raising wages or benefits to make their vacant positions more attractive, more aggressively promoting their job openings, and hiring new or recent immigrants. About one-third of employers said they will slow the growth of their business or outsource certain functions of work (29% and 8% respectively).

Some key informants noted that while certain employers, for example, those in urban settings and corporate entities, may be able to raise the wage and pass that cost on to the consumer, employers in rural areas may not have that option. Increasing private sector wages may also result in public sector positions being less attractive to new graduates.

³⁴ Producers warned about veterinarian shortages

<https://www.realagriculture.com/2017/12/producers-warned-about-veterinarian-shortage/>

³⁵ United States Department of Labour, Bureau of Labour Statistics

<https://www.bls.gov/ooh/healthcare/veterinarians.htm>

Question 5: To what extent is the educational sector in BC fulfilling the education, training and skills development needs of the industry?

The major findings are as follows:

- 1. There is a strong need to increase the number of qualified graduates in order to address the significant existing shortage, replacing retiring veterinarians, and meet the projected increase in demand.**

The results of the study indicated that BC is very reliant on WCVM as a source of supply:

- The survey data and research conducted by WCVM suggests that about 45% of the veterinarians working in BC graduated from WCVM, followed by approximately a third of those who graduated from a program outside Canada (in the interview, representatives of CVBC suggested that about 40% of veterinarians have a foreign degree).
- BC residents are generally not eligible to attend veterinary colleges in other regions in Canada. For example, the program at UPEI is targeted at residents from the Atlantic Provinces and international students while the program at the University of Calgary is restricted to Alberta residents.
- While BC residents can attend programs located outside of Canada, the costs are very high. There are 30 veterinary schools in the US as well as 15 other schools in Australia, Europe, Mexico, Korea, and the Caribbean. These programs are much more costly than Canadian schools for Canadian students. Four year tuition for these colleges ranges from US\$105,000 to US\$250,000 (as a comparison, tuition for four years at WCVM totals about CDN\$40,000). The high costs often result in high student debt levels, which impact on the ability of recent graduates to establish or purchase into private practice.

Key informants and many veterinarians suggested that the WCVM is simply not graduating enough veterinarians to meet the demand and alleviate shortages. With only 20 seats for BC residents, the Government of British Columbia currently funds only about 1 seat for every 80 active licensed veterinarians in the province. The ratio is much better in other provinces; for example, there is one funded seat for every 32 veterinarians in Alberta and 20 veterinarians in Saskatchewan and Atlantic Canada. The constraint to increasing the number of graduates for BC is funding. The WCVM reports receiving about 140 highly qualified applications a year for the 20 seats allocated to the students from BC.

- 2. Veterinarians are somewhat divided as to the ability of the educational sector to meet the training and skill development needs of veterinarians in BC. Practical skills, specialized skills and understanding of the industry were the most commonly noted gaps.**

About 40% of veterinarians noted gaps and issues related to training and skills development needs. The most commonly noted issues related to practical skills (e.g. job-readiness) and confidence to complete common practice tasks. Most employers believe that new graduates receive an adequate education and have gained an excellent medical knowledge but may lack the confidence to, for example, perform dental work, and thus tend to overly refer clients to specialists rather than trying to deal with issues (e.g. surgical) themselves. New graduates also require significant mentoring time which places additional

demands on available time of the experienced veterinarian. Surveys of new graduates conducted by WCVM indicate that importance of mentorship has always been high and has only increased in the last few years (94% of students in 2018 survey said mentorship is very important compared to 80% of students surveyed in 2009). Other issues that were highlighted include lack of basic business management skills and understanding of the industry, and unrealistic expectations on how quickly they will get a return on their investment in their education.

A survey of employers conducted by the WCVM found similar issues. Although employers are largely satisfied with the performance of new graduates (8 of 10 are satisfied), a lack of practical skills (e.g. surgical) and communication skills were the main reasons for dissatisfaction. Similarly, about 15% of employers reported that performance issues were the reasons for graduates leaving the practice, citing communication issues and fitness for practice as common concerns.

A two-year follow-up survey with graduates in 2018 found the top three desired changes to veterinary education including changes to the curriculum (60%), more practical/hands-on experience (48%), and changes to rotations.

3. **The most common recommendations emerging from the study were to increase the number of BC students at WCVM and making it easier to hire experienced foreign-trained veterinarians.**

Key informants, veterinarians, and veterinary students provided the following suggestions as to how government, industry, and academia can help to address the issues facing the industry:

- **Increase the number of students from BC accepted at WCVM for veterinary medicine, including the number of equity seats for qualified Indigenous applicants.** Given the ongoing shortages of veterinarians in BC and across Canada, the increasing demand for services and the limited number of veterinary medicine graduates from BC, it is not surprising that the number one suggestion was to increase the number of students graduating from WCVM. Most BC students return to BC to practice veterinary medicine. Several key informants recommended that some of the new seats should be allocated to prioritize underserved areas of practice (rural and Indigenous applicants, students interested in a large animal practice, poultry, pathology).
- **Make it easier to hire internationally trained, experienced veterinarians.** Administrative requirements for hiring foreign trained veterinarians, recruitment costs, and recertification and licensing processes can create barriers for employers to recruit from abroad. It was suggested that the government should make it easier to hire more experienced veterinarians from other countries to replace those retiring and incentivize immigrants who want to move to Canada to settle outside of the urban areas.
- **Provide incentives for veterinarians to practice in rural areas and take ownership in the practice.** It was suggested that veterinary medicine should implement similar strategies that human medicine has done to attract more doctors to rural areas by providing incentives such as scholarships, student loan forgiveness, tax incentives, or other forms of financial incentives to start their own practice. Some key informants noted that increasing regulatory requirements for certain technologies and instruments are putting an additional financial burden on private practice in rural areas and serve as barriers to ownership among new veterinarians.
- **Increase awareness and develop interest among new graduates for a wider range of veterinary practice.** The shortages of veterinarians in specific areas of veterinary practice are

particularly acute. The preference for urban and small animal practice, combined with overall shortages, is leaving positions related to food safety, pathology, aquaculture, large and mixed animals, aquaculture, poultry, and non-traditional veterinary practice under increasing pressure. Some key informants noted that the veterinary medicine program should do more to increase awareness of these areas of veterinary practice, highlighting the need and demand, promoting benefits of working in these areas, and increasing the number of courses and practical training for such jobs.

- **Provide more hands-on, practical training for veterinarians.** There is a recognition that new graduates need significant mentorship in their first year of practice, but employers noted that new graduates need increasingly more supervision and tend to lack confidence. To address some of these issues, they suggested providing more on-the-job training as part of the program as well as strengthening rotation programs to better expose students to different types of problems and various practices, with an emphasis on hands-on experience.
- **Conducting more targeted recruitment and improving linkages between the agricultural sector and training institutions.** To increase the number of graduates choosing underserved regions and areas of practice, it was suggested that the College should engage with industry during the admission process to help identify candidates who are more likely to work in particular area or region. Key informants also suggested that the College should work more closely with the industry to create internship and training opportunities, develop more formal mentorship programs, and create innovative solutions to help clients in rural and remote areas access services (e.g. telemedicine).

Appendix 1: List of Documents and Literature Reviewed

Canadian Animal Health Institute: <https://www.cahi-icsa.ca/our-industry>

Canadian Pork Council; Hog Farm Data: <https://www.cpc-ccp.com/hog-farm-data>

Economic Survey of National Practice Owners, BC Edition (2018).

How Practice Owners Can Survive The Current Veterinarian Shortage. West Coast Veterinarian (September 2018; No32) <https://www.canadianveterinarians.net/news-events/news/west-coast-veterinarian-magazine-fall-2018>

Industry Trends: Looking Ahead; <https://www.mnp.ca/en/posts/industry-trends-looking-ahead>

Industry Statistics: <http://www.cattle.ca/cca-resources/industry-stats/>

Industry Trends: Looking Ahead; MNP (2017) <https://www.mnp.ca/en/posts/industry-trends-looking-ahead>

Market Research Report: Veterinary Services Market Analysis Report By Animal Type (Production (Poultry, Cattle, Swine), Companion (Cats, Dogs, Equine)), By Region (APAC, North America, Europe), And Segment Forecasts, 2018 – 2025

Pet Care in Canada, Euromonitor International Limited (2018)

Producers warned about veterinarian shortages
<https://www.realagriculture.com/2017/12/producers-warned-about-veterinarian-shortage/>

Poultry Partners: Perfect storm of changes drives expanded role for poultry veterinarians
<http://www.poultrypartners.ca/perfect-storm-of-changes-drives-expanded-role-for-poultry-veterinarians/>

QUADS Chief Veterinary Officers meet to discuss opportunities to work together to mitigate risks to animal health <http://www.inspection.gc.ca/animals/chief-veterinary-officer/cvo-statements/2019-04-11/eng/1555013658573/1555013658871>

StatsCan: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210012501>

StatsCan: BC labour force characteristics by sex and detailed age group:
<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410032701&pickMembers%5B0%5D=1.11&pickMembers%5B1%5D=2.3>

StatsCan: Average usual and actual hours worked in a reference week by type of work
<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410004301&pickMembers%5B0%5D=1.11&pickMembers%5B1%5D=3.1&pickMembers%5B2%5D=5.1&pickMembers%5B3%5D=6.6>

Summer, C.L at All (2018). Perspectives of farmers and veterinarians concerning dairy cattle welfare. Animal Frontiers, Volume 8, Issue 1, January 2018 (Pages 8-13)

Survey of western Canadian veterinary practices: A demographic profile

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4668821/>

The Issue of Sustainability: How Veterinary Medicine Comes into Play

<https://permaculturenews.org/2016/02/22/the-issue-of-sustainability-how-veterinary-medicine-comes-into-play/>

United States Department of Labour, Bureau of Labour Statistics

<https://www.bls.gov/ooh/healthcare/veterinarians.htm>

Veterinary Services – Canada Market Research Report [https://www.ibisworld.ca/industry-](https://www.ibisworld.ca/industry-trends/market-research-reports/professional-scientific-technical-services/veterinary-services.html)

[trends/market-research-reports/professional-scientific-technical-services/veterinary-services.html](https://www.ibisworld.ca/industry-trends/market-research-reports/professional-scientific-technical-services/veterinary-services.html)

Veterinary practice trends: [https://www.veterinarypracticenews.com/veterinary-practice-trends-](https://www.veterinarypracticenews.com/veterinary-practice-trends-webinar-highlights-further-industry-consolidation/)

[webinar-highlights-further-industry-consolidation/](https://www.veterinarypracticenews.com/veterinary-practice-trends-webinar-highlights-further-industry-consolidation/)

WCVM Two-Year Follow Up Survey (November 2018)

WCVM – 2018 Employer Survey (January 2019), completed by Insightrix Research Inc.