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Exploring the Crisis: Factors Affecting Large Animal Veterinary Services In Northern Ontario's Rural Regions

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Abstract

The large territory of Northern Ontario encompasses 80% of Ontario's land but hosts only 2.52% of its farms, despite its tremendous potential for agricultural growth. There is an excellent strategic opportunity to expand livestock production in this region to meet rising food demands. However, a critical barrier is the lack of veterinary services in rural Northern Ontario. Veterinary care is essential for disease prevention, emergency treatment, food safety, and overall farm sustainability. Without reliable veterinary support, the risk of livestock disease, economic losses, and public health concerns increases significantly.

This crisis is fueled by a shortage of veterinary professionals and clinics in rural and remote areas, as most practitioners are concentrated in urban centers. Moreover, the large distance between farms and the long travel time make the crisis more severe in rural areas. Besides, the trend of rising pet ownership during the COVID-19 pandemic has led veterinary professionals to prioritize companion animal care, which leaves livestock producers in Northern Ontario facing ongoing challenges in accessing timely and adequate veterinary services.

This research examines the scope and causes of the veterinary service shortage in Northern Ontario. It aims to (1) present the current landscape of veterinary crisis in rural communities, and (2) identify underlying causes and potential solutions. Findings highlight the urgent need for targeted interventions to support regional agricultural development.

Keywords: Veterinary Crisis, Northern Ontario, Livestock farming, food security, Agriculture

Analyse de la crise : facteurs affectant les services vétérinaires pour les grands animaux dans les régions rurales du Nord de l'Ontario

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Résumé

Le vaste territoire du Nord de l'Ontario couvre 80 % de la superficie de la province, mais n'abrite que 2,52 % de ses exploitations agricoles, malgré son énorme potentiel de croissance agricole. Il existe une excellente occasion stratégique d'accroître la production animale dans cette région afin de répondre à la demande alimentaire croissante. Cependant, un obstacle majeur demeure le manque de services vétérinaires dans les régions rurales du Nord de l'Ontario. Les soins vétérinaires sont essentiels à la prévention des maladies, aux traitements d'urgence, à la sécurité alimentaire et à la viabilité globale des exploitations. Sans un soutien vétérinaire fiable, le risque de maladies animales, de pertes économiques et de problèmes de santé publique augmente considérablement.

Cette crise est alimentée par une pénurie de vétérinaires et de cliniques dans les régions rurales et éloignées, la plupart des praticiens étant concentrés dans les centres urbains. De plus, les grandes distances entre les fermes et les longs temps de déplacement aggravent la crise dans les régions rurales. Par ailleurs, la hausse du nombre d'animaux de compagnie pendant la pandémie de COVID-19 a incité les vétérinaires à privilégier les soins aux animaux de compagnie, ce qui pose des difficultés persistantes aux éleveurs du Nord de l'Ontario pour accéder à des services vétérinaires adéquats et en temps opportun.

Cette recherche examine l'ampleur et les causes de la pénurie de services vétérinaires dans le Nord de l'Ontario. Elle vise (1) à présenter le contexte actuel de la crise vétérinaire dans les communautés rurales et (2) à identifier les causes sous-jacentes et les solutions potentielles. Les résultats soulignent l'urgence d'interventions ciblées pour soutenir le développement agricole régional.

Mots-clés : Crise vétérinaire, Nord de l'Ontario, élevage, sécurité alimentaire, agriculture

1.0 Introduction

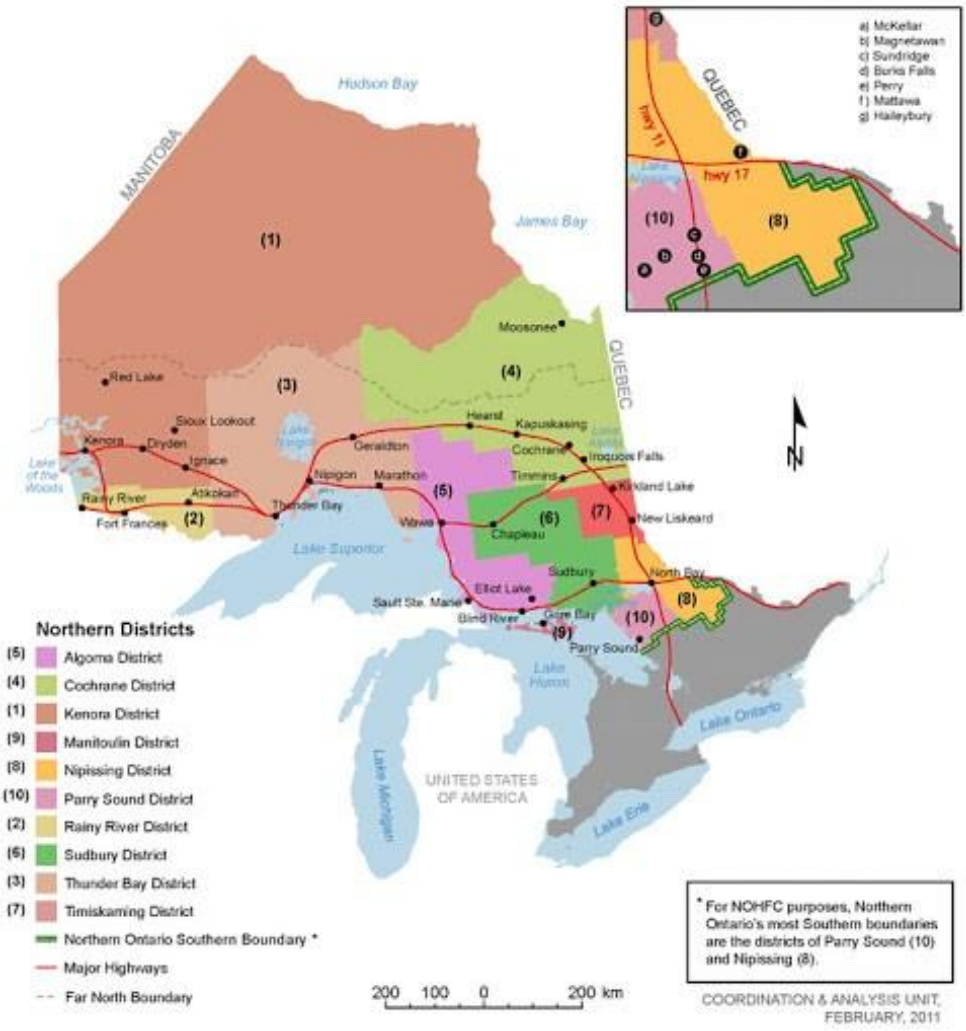
Agriculture in Ontario is extremely diverse, with most farming and commercial livestock operations located in Southern and Eastern Ontario, and to a lesser extent, in Northern Ontario. Northern Ontario, which makes up 80% of the province's total land area, is divided into twelve districts: Algoma, Cochrane, Greater Sudbury, Kenora, Manitoulin, Nipissing, Rainy River, Sudbury, Thunder Bay, Timiskaming, Parry Sound, and Muskoka. (Chapagain, 2017; Statistics Canada, 2021 (see Figure 1). According to the Census of Agriculture, in 2021, there was a total of 1217 farms across all of Northern Ontario, representing only 2.52% of Ontario's total number of farms (Statistics Canada, 2023). Considering the abundance of space in Northern Ontario, and the need to increase national food production by 70% by the year 2050, many consider Northern Ontario to be a place of great potential for economic development, including the agricultural sector (Chapagain, 2017; Food and Agricultural Organization of the United Nations, 2009). However, one of the primary barriers to the expansion of livestock production in rural and remote regions of Ontario is the lack of veterinary services to ensure optimal animal health and welfare (Prince et al., 2006). Veterinary services, such as advice on disease prevention and control, best production practices, access to antimicrobials and other medications, and emergency services, are essential for livestock health and a successful agri-food sector. Most notably, livestock diseases have a wide range of economic impacts, including production losses, diminished production quality, heightened consumption and waste of inputs, as well as the direct costs associated with disease control and prevention. These factors ultimately jeopardize farm profitability and sustainability (Truchet et al., 2017). Depending on the contamination risk, livestock diseases like foot-and-mouth disease can spread beyond the affected farm or agricultural site, which may result in catastrophic macroeconomic consequences (Boisvert et al. 2012). Therefore, veterinary services not only safeguard animal health but also protect human and public health by addressing concerns related to zoonoses, food safety, and biosecurity (Prince et al., 2006; Lem, 2019).

Despite the importance of veterinary services for livestock and broader society, certain regions of Ontario (often rural and remote areas, such as northern Ontario) have few veterinary clinics, which makes it difficult for operations in these areas to receive routine or emergency veterinary care in a timely manner. The ongoing crisis stems not only from the scarcity of veterinary clinics but also from the limited number of veterinary practitioners. Canada's five veterinary colleges generate fewer than 500 new veterinarians yearly, compared to the United States, where nearly 3,500 graduates join the profession annually (Nudds, 2023). The surge in demand is primarily fueled by the rise in pet ownership, which has been accelerated partly due to the COVID-19 pandemic in recent years, as well as the overall increase in the number of pet owners compared to the past. According to the Canadian Veterinary Medical Association and global counterparts, dog, cat, and bird owners are now more likely to spend more money on their pets now than they were a decade ago (Nudds, 2023). Therefore, an overall increase in the demand for veterinary services, a shortage of graduates entering the workforce, and a notable reluctance among veterinarians to locate in rural areas are creating an extreme crisis in veterinary services in Northern Ontario, despite the region's significant potential to contribute to the agricultural sector. In addressing this crisis over the long term, it is crucial to assess the nature of the veterinary crisis in rural Ontario and identify the underlying causes of this crisis. Given this context, this research aims to:

- Present the existing scenario of the veterinary crisis in rural Ontario.
- Identify the primary reasons for the veterinary crisis in rural Ontario and provide possible solutions.

This article will begin with a review of the existing literature related to veterinary care in northern Ontario and the world. We then present the methodology, findings, and recommendations from our study examining access to large animal veterinary care in northern Ontario.

Figure 1: Districts of Northern Ontario.



Source: Steer (2021).

2.0 Rural Veterinary Crises: Companion Animal to Livestock

Rural veterinary crisis is a globally discussed issue. Studies on the veterinary crisis mostly focus on issues related to companion animals and livestock or large animals, as most veterinarians work in these sectors. In the United States, only 5.3% veterinarians practice on food animals, whereas 69.7% veterinarians work on companion animals. Other veterinarians work on mixed animals, equine, in the

private sector, colleges, or universities (Weltzien, 2023). This makes companion animal practice the most popular choice, with food animal practice ranking second.

Several studies have emphasized the effects of veterinarian shortages and increasing demand on companion animal care. Boissonneault and Epp (2018) highlighted the insufficient availability of veterinary services for the growing dog population, posing public health risks in rural communities in Manitoba. Their research criticized current volunteer models of veterinary service and identified their limitations. They recommended integrating veterinary services with a public health focus, which may provide innovative solutions. This approach emphasizes the importance of understanding local needs and exploring effective methods as initial steps for the veterinary community. A study of the Sathu community in the Northwest Territories of Canada revealed significant issues with human-dog interactions, including high rates of dog bites and zoonotic diseases. Less than half of dog owners in these remote areas receive animal care due to various cultural, social, and economic barriers. To address this, the study proposes the establishment of Community-based Animal Health Care Workers in remote regions, utilizing existing programs and resources, such as veterinary practices and the territorial lay vaccinator program (Brook et al., 2010).

The large animal veterinary crisis in rural areas is particularly severe. Weltzien (2023) mentions that after World War II, the number of livestock veterinarians decreased by 90% in the United States, which poses a great risk to the agricultural sector as food animal veterinarians play a crucial role in any country's food supply chain by caring for the health and welfare of livestock. Studies find that the large geography, low density of farms, and greater distance between farms are the root causes of producers not receiving veterinary services when needed (Neal & Greenberg, 2022). For example, the geographic area of Northern Ontario is significantly large, and in 2020, the number of total livestock in Northern Ontario was 50–90% lower than in other regions of Ontario (Government of Ontario, n.d.). As a smaller number of farms are operated across a large geographical territory, veterinarians in Northern Ontario are forced to travel greater distances to reach their clients. Wallace's (2022) research supports this argument by stating that veterinarians are exhausted, overloaded with work, and travel long distances to provide their services, as the farms are geographically distant from each other. The Ontario Veterinary Medical Association (OVMA) found that a bovine veterinarian could not successfully operate within a single region if there were fewer than 75 dairy and beef farms, and the study acknowledges that this threshold is difficult to meet in Northern Ontario (OVMA, 2013). Long travel distances also lead to higher costs for veterinary services, which is a significant factor contributing to the veterinary crisis. Moran's (2010) research in West Virginia shows that producers typically travel an average of 58 miles for veterinary services or have veterinarians visit their farms, with costs exceeding $500 per visit, which is financially burdensome.

Beyond the geographic factor, other research reveals other underlying reasons for such veterinary crises in rural counterparts of countries like the United States and Canada. There are considerable logistical, operational, and financial challenges in serving large geographic areas with small populations, as well as challenges in attracting veterinarians to rural and remote areas (Lem, 2019). Baldwin (2025) states that veterinary employers face challenges in hiring and retaining qualified veterinary staff while ensuring the highest standards of care for their clients. He added, according to the Canadian Occupational Projection System, veterinarians are

expected to face a national labor shortage between 2022 and 2031, with an estimated 5,000 job openings but only about 4,300 qualified job seekers available (Baldwin, 2025). Furthermore, new graduates are more interested in working on small animals, as veterinary medicine in rural areas requires longer hours and lower pay, making the rural veterinarian's lifestyle very difficult (George, 2022). Similarly, Van Trump (2023) supports this finding, revealing that only 3–4% of new graduates choose food animal-focused practice. This study also states that recruiting and retaining recent graduates in rural areas is challenging because they lack familiarity with large animals. He also added that veterinary schools often emphasize companion animal medicine over food animal medicine, potentially contributing to this gap in skills and experience (Van Trump, 2023). Truchet et al. (2017) conducted a study on the determinants of the location choice of the new veterinary graduates and found that food animal veterinarians choose locations based on the number of livestock units, good access to the necessary urban amenities, and the presence of other veterinarians. Rural areas that do not meet these criteria fail to attract new veterinarians, and thus fall short of vet practitioners. Overall, the underlying reasons for regional gaps in veterinary service are complex and relate to socio-economic characteristics of the clientele (number and type of farms), veterinary business (operational costs, revenue models, staff retention), local infrastructure (schools, hospitals, public services, and amenities), in addition to other personal economic (school debt, wage/salaries) and social factors (lifestyle preferences, family opportunities and supports) (Gwinner et al., 2006; Andrus et al., 2006Truchet et al., 2018; Boissonneault & Epp, 2018; Lem, 2019).

Demographics and culture have also been identified as barriers to accessing veterinary service Differences between animal owners and veterinarians in terms of the cultural roles of animals, expectations regarding veterinary treatment, and personal experiences can hinder access to veterinary services (Boissonneault & Epp, 2018; Wasson & Wieman, 2018). Wasson and Wieman (2018) identify self-sufficiency, stoicism, and trust as cultural issues that pose barriers to accessing animal health service among rural Canadian farmers. Collectively, these social and economic barriers appear to be driving regional gaps in veterinary service and challenge the sustainability and growth of veterinary practices in less urban areas of Ontario.

There is no comprehensive study available to identify or measure the veterinary crisis in northern Canada or the reasons behind it. This research addresses this knowledge gap and seeks to identify regions in northern Ontario lacking adequate large-animal veterinary care, how farmers are impacted by access issues, and how access to veterinary care can be improved.

3.0 Methodology

This study utilized a variety of research methods to identify underserviced areas in Northern Ontario, examined how access to veterinary care impacts northern farmers and explored ways to improve access to veterinary care. These methods are summarized below.

3.1 Jurisdictional Scan and Literature Review

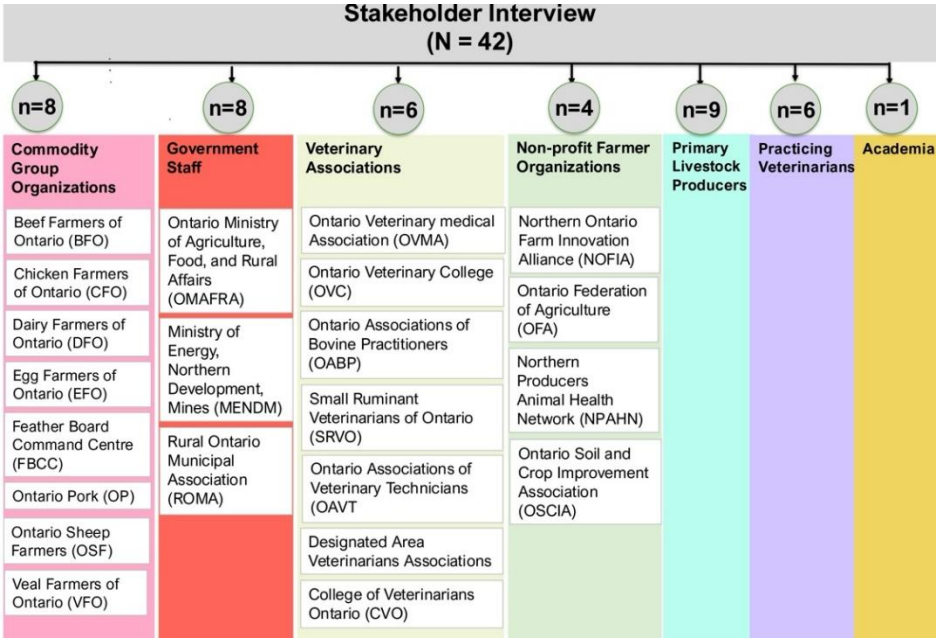
A jurisdictional scan, along with a literature review, was conducted to explore the underserviced areas located predominantly in northern Ontario, as well as parts of Eastern Ontario. This scan involved a comprehensive review of existing policies, programs, strategies, and literature related to veterinary service delivery and

workforce retention in rural and remote regions. Information was gathered from government publications, academic sources, industry reports, and grey literature across Ontario, Canada, and internationally. The findings were compared with Census of Agriculture data on farm size, livestock type and distribution, farm locations, and veterinary service mapping. In collaboration with the Ontario Ministry of Agriculture, Food and Rural Affairs, as well as veterinary and producer associations, the accuracy of the literature and data was verified.

3.2 Stakeholder Interviews

Forty-two semi-structured interviews were conducted by phone and video call with representatives from primary livestock production, veterinary services, and the public sector. As data collection occurred during 2020 and 2021, the COVID-19 pandemic impacted the research team's ability to travel to northern communities and conduct interviews in person. Telephone and video calls using Microsoft Teams or Zoom permitted the research to move forward and aligned with university protocols during the pandemic. The purpose of these interviews were to (1) understand the historical context (what programs have been in place, how have they impacted the situation, and how other regulations/policies/programs/practices are affecting capacity); and (2) characterize the current situation (number and type of farms, geographic location and proximity to veterinary services, current programs, policies, and tools in place to support veterinary capacity, and perceived challenges and barriers inhibiting veterinary service growth and staff retention). While interview discussions were tailored to each interviewee, interviews for each stakeholder group followed a pre-established interview guide. The distribution of interviews by participant group is depicted in Figure 2. With participant consent, interviews were audio-recorded, transcribed verbatim, and anonymized. No translation was required. Audio files and transcripts were stored on a secure, password-protected university server in compliance with institutional ethics protocols. Transcripts were managed and coded thematically using qualitative analysis software.

Figure 2: Distribution of interviews by participant group.



3.3 Focus Group Discussion

Focus groups were conducted virtually with current veterinary students at the Ontario Veterinary College at the University of Guelph. Four focus groups were held with a total of 43 students, representing each year of study and a diversity of specializations. Each focus group discussion lasted for 60 minutes and generally focused on (1) reasons for the students intended specialization and preferred geographic location, (2) in what ways the veterinary program influenced their decision, (3) recommended changes to the veterinary program to support students interested in large animal or mixed practice, and (4) opportunities to better support students interested in working in northern Ontario.

4.0 Data Analysis

4.1 Veterinary Coverage Analysis

To identify the appropriate picture of the veterinary crisis in northern Ontario, a veterinary coverage analysis was done by using collected data on the number of veterinarians, farms, and farm animals in Northern Ontario. Based on data collected from the Census of Agriculture, OVMA, OMAFRA, Ontario Animal Health Network, and OVC, farm and veterinary data were mapped to identify areas that are considered underserved. Due to limitations with the Census of Agriculture, especially in reporting data from northern Ontario, which was not publicly available at the municipal level, the research team worked with individual commodity groups (e.g., Poultry Farmers of Ontario, Dairy Farmers of Ontario, etc.) to obtain more accurate data at the community level. All producer associations provided details on the number of farms and animals by county across the province. In most cases, this information represented counts obtained between 2019 and 2021; however, some commodity groups (e.g., Beef Farmers of Ontario) were able to provide information only from the most recent census, which, at the time of data collection, reported on 2016 data. A more recent engagement with OMAFRA in early 2021 yielded some success through ConnectON, which is a supply chain mapping tool that provides information on agrifood, manufacturing, and growth across Ontario (Dunstan, n.d.). To protect the privacy of producers in northern Ontario, the mapping outputs created were not made publicly available; however, they were instrumental in identifying underserved areas. Table 1 demonstrates the ratio of farms to veterinarians, helping to identify underserved districts. This data was based on Farm Business Registration Numbers and was provided by OMAFRA.

4.2 Thematic Analysis

Thematic analysis was done on the data collected from the interviews and focus group discussions. Five themes were identified as being significant barriers to increasing access to large animal veterinarians in northern Ontario.

5.0 Findings

The results for this research are described in three major sections. The first section focuses on the veterinary crisis in Northern Ontario, and the second section reflects on the causes of the veterinary crisis in rural Ontario, followed by the recommendations for addressing the crisis.

5.1 Veterinary Crisis in Northern Ontario

The distribution of food animal veterinary services across Northern Ontario reveals significant geographic disparities relative to livestock populations. Regions such as Temiskaming and Rainy River appear comparatively well resourced, with multiple veterinarians and clinics serving large numbers of herds, including substantial beef and dairy operations. In contrast, several regions with considerable livestock populations, including Algoma (129 herds), Manitoulin (135 herds), and Thunder Bay (96 herds), are supported by only a single veterinarian or clinic, suggesting potential service strain and risks to timely animal care. Even more concerning are Cochrane South, Timmins, and Greater Sudbury, which have no dedicated local food animal veterinarians, leaving producers reliant on external services from neighboring districts. This dependence raises questions about the sustainability of coverage, particularly during emergencies when travel delays could compromise animal health and farm productivity.

Species-specific needs also highlight uneven coverage. While beef production dominates (70% of all herds), dairy herds are concentrated in Temiskaming, Thunder Bay, and Nipissing, requiring specialized reproductive and herd health services that may not be consistently available in other regions. Smaller but widespread populations of sheep and goats further complicate service demands, as these species often receive less targeted veterinary support. Additionally, gaps in available data, such as the unknown number of veterinarians in Sudbury West, limit the accuracy of planning and resource allocation.

Overall, the analysis suggests that the existing distribution of veterinary services does not align with the distribution of livestock populations, leaving some regions structurally disadvantaged. This imbalance carries implications for animal welfare, farm viability, and regional food security, and points to a need for policy interventions such as recruitment incentives, mobile or shared veterinary services, and the development of telemedicine options to mitigate inequities.

Table 1. *Estimated Number of Large Animal Farms and Veterinary Services by Region*

Region	**Available services**	**Total**	**Beef**	**Dairy**	**Goats**	**Horses**	**Sheep**	**Other**
Algoma	1 food animal veterinarian 1 food animal veterinary clinic	129	99	9	1	5	5	10
Cochrane North	1 food animal veterinarian that covers 2 clinics No dairy repo work	30	21	3	2	2	1	1
Cochrane South	No food animal veterinarian/clinic Relies on Temiskaming Vet Services	36	28	2	2	0	2	2
Dryden	1 food animal veterinary clinic/veterinarian (Dryden and Kenora)	27	17	0	0	2	2	6
Kenora	1 food animal veterinary clinic/veterinarian (Dryden and Kenora)	7	1	0	0	0	4	2
Greater Sudbury	No food animal veterinarian/clinic	44	20	0	0	13	1	10
Manitoulin	1 food animal veterinary clinic	135	115	6	3	3	3	5
Nipissing	2 food animal veterinarians 1 food animal veterinary clinic	104	58	11	4	4	13	14
Rainy River	2 food animal veterinary clinics	151	140	6	0	0	0	5
Sudbury East	2 food animal veterinarians 1 food animal veterinary clinic	45	28	6	0	5	1	5
Sudbury West	Number of veterinarians and clinics unknown	25	22	3	0	0	0	0
Thunder Bay	1 food animal veterinary clinic	96	47	28	1	4	4	12
Timmins	No food animal veterinarian/clinic Relies on Temiskaming Vet Services	17	8	1	2	2	0	4
Temiskaming	4 food animal veterinarians 1 food animal veterinary clinic	179	111	41	3	3	15	6
Parry Sound	2 food animal veterinarians 2 food animal veterinary clinics	97	66	4	2	7	8	10
TOTAL	**23**	**1,122**	**781**	**120**	**20**	**50**	**59**	**92**

Note: Farms were identified via Farm Business Registration Numbers. Information provided by OMAFRA.

5.2 Causes of the Veterinary Crisis

The causes identified by thematic analysis are generally related to economic limitations for existing veterinarians and the uncertainty of opportunities for new veterinarians. Five specific issues are discussed below.

1. ***Unprofitable veterinary business***

   According to Interviewees, building and sustaining a business that is solely focused on large animal medicine is very challenging, and most of them suggested that companion animal medicine is essential to maintain an economically viable business. This cause is also endorsed by Baldwin (2025). Interviewees also mentioned that since the early 2000's, there has been a trend in moving away from multi-species specialties, and a focus on companion animal specialties, which has led to better and more predictable revenues. Further, they highlighted that many regions have too few farms, and/or those farms' needs are too infrequent to support a profitable business. The frequency and type of services desired by farms in rural regions also present a challenge. Veterinarians commonly stated that they cannot plan for or rely on emergency work to be the foundation of their large animal practice and often noted that this type of work can be less desirable to perform compared to other consultative or routine work. Simply put, veterinary businesses must have a foundation of routine and reliable business to be profitable. The uncertainties and potential for unreliable service needs, in addition to the costs of driving to and servicing these clients, make this a difficult model to rely on.

2. ***Personal expectations of veterinarians regarding their career growth***

   Interviewees commonly pointed to the changing dynamics of what veterinarians desire in terms of a career. That is, today's veterinarians desire more work-life balance, with fewer days and weekends on call, an opportunity for mentorship and collegial activities, and the desire to use a broader set of skills and knowledge than that traditionally associated with "fire-engine" medicine; all opportunities that a larger, multi-veterinarian practice can offer. Most interviewees with experience in recruitment, hiring, and retention of new veterinarians and veterinary staff highlighted that one of the biggest challenges to retention is the extent to which the new hire and their family can access the social supports they need to build the life they desire.

3. ***Socio-economic barrier***

   During the focus group discussions with current veterinary students, the social and economic barriers were listed as significant factors in deciding the type and location of practice. Although only a few students were from northern Ontario, those students showed a strong interest in going back to their home community to work. Generally, students shared concerns regarding isolation, distance from family, and work-life balance as significant social barriers. They also highlighted language barriers, assuming French is the most common language spoken in northern Ontario, and that recreational opportunities for children and career opportunities for a spouse would be significantly limited. Economically, students stressed the long travel distances and lower rate of pay when compared to small animal practice as being the most significant barriers.

4. ***Hesitance to work with large animals***

   Students also discussed a general hesitance to work with large animals, noting limited exposure through their courses, which resulted in a lack of confidence when handling an animal. There was a consensus among students that if you did not grow up on a farm or have extensive work experience on a farm, large animal practice was not an appropriate path. Similar comments were made by farmers who were concerned about student comfort on a farm and their need to trust the individual caring for their animals. In rare cases, some participants were from urban communities and lacked a long-term connection to a livestock farm but had a desire to pursue large animal practice. They felt underprepared to work with large animals and suggested enhanced mentorship and promotion of large animal practice opportunities as imperative to change these feelings. It is important to note that the OVC program does follow a rigid curriculum, including courses on large animal care and mentorship with established veterinarians, but it is the student's responsibility to declare their area of specialization.

5. ***Demographics and culture***

   Demographics and culture have also been identified as barriers to veterinary care. Again, students noted the difficulty in working with farmers and a general sense that if you did not grow up on a farm, you would not be taken seriously by the client. Combined, these challenges appear to dissuade students from pursuing large animal practice. Some interviewees highlighted that while many dairy clients see the veterinarian as an important resource and member of the team, some beef, equine, and small ruminant clients viewed the veterinarian as a cost that should be avoided if possible. While these attitudes most certainly are influenced by the economics of different industries, interviewees felt the characteristics of the clients in these areas also influenced the likelihood that veterinarians could establish a solid base of reliable work to support their business. Lem (2019) identifies self-sufficiency, stoicism, and trust as cultural issues that impose barriers to access veterinary care by rural Canadian farmers.

5.3 Strategies to Strengthen Veterinary Services in Northern Ontario

The best possible strategies to improve the veterinary crisis are identified based on the jurisdictional scan, stakeholder interviews, and focus group discussions.

1. ***Upgrading the funding of Veterinary Assistance Program (VAP)***

   Veterinary Service Committees (VSCs) represent large animal owners in northern Ontario, proposing program improvements, recruiting veterinarians, issuing contracts, and educating producers (MENDM, 2021). There are 22 VSCs in the region. The Designated Area Veterinarians Association (DAVA) administers $800-$1,000 for students completing externships there. Interviews revealed that the program's annual budget of approximately $800,000 is rarely fully utilized due to rigid funding structures, not a lack of need or desire to issue financial support. Veterinarians emphasize the program's importance for providing large animal services and recommend modernizing the distribution of funds and increasing the budget. Specifically, they suggest raising individual contract funds to $60,000, totaling nearly $2 million for 32 contracts. They also

propose increasing the mileage rate from $1.20/km to $2.05/km, aligning it with current OVMA rates of $4.10/km for bovine calls. Additionally, practices should be encouraged to submit all mileage claims, allowing unspent funds to support those that exceed their budget.

2. ***Promoting rural veterinary careers through funding incentives***

   Researchers in other jurisdictions recommend that governments and organizations create region-specific student debt reduction, low-interest loans, OMAFRA and grants to encourage graduates to work in underserved areas (Prince et al., 2006; Gwinner et al., 2006). Many interviewees, including MENDM staff, suggested that OMAFRA increase its involvement by collaborating with the OVC to provide funding for second-year veterinary students interested in rural practice and enhancing support for final-year externs. Additionally, debt forgiveness programs for new graduates in rural Ontario were proposed, with one interviewee suggesting $10,000 per year for up to four years. OVC students noted that such grants or debt forgiveness would incentivize them to relocate to northern Ontario.

3. ***Boosting veterinary capacity, program recommendations***

   The CVO-led group emphasized the need to enhance business sustainability incentives in veterinary medicine that support comprehensive production management services. Below are government-supported programs and suggestions relevant to veterinary capacity in Ontario:

   - ***Federal Rural and Northern Immigration Pilot:*** This program, while not widely accessible, could attract new veterinarians to rural areas.
   - ***Northern Ontario Internship Program:*** Interviewees recommended expanding eligibility from one to two years and increasing the maximum funding per employee to $50,000. The CVO-led group aimed to lobby for a review of this program to increase both funding and the internship duration.
   - ***FedNor:*** Some interviewees suggested this program could fund clinic renovations to create haul-in facilities. Although many producers prefer in-home care, this model has succeeded in Western Canada and could provide an alternative for farmers who might otherwise have to euthanize animals due to treatment delays.

4. ***Developing online resource for veterinary funding***

   Discussions with MENDM revealed that provincial and federal grants exist to support veterinarians in staff recruitment and retention. However, there is no central resource to guide them to these funding sources. Many large animal veterinarians lack the time to research and apply for these programs. Therefore, it is essential to create a dedicated website to help veterinary businesses easily identify and access available funds for clinic retention and growth.

5. ***Promoting haul-in facilities and training***

   OMAFRA was identified as a potential solution for establishing haul-in facilities. One interviewee suggested that OMAFRA could lease underutilized facilities to veterinarians for livestock clinics and partner with

other organizations to create educational centers for training producers and registered veterinary technicians. Additionally, interviewees recommended that OMAFRA implement a mileage support program for qualified producers, helping offset costs when a veterinarian is unavailable in a specific area.

6. ***Enhancing veterinary services***

   OMAFRA should consider adopting the New Brunswick model for government-funded veterinary services. This approach involves employing a small number of veterinarians to routinely visit underserved areas, as implemented in New Brunswick's Provincial Veterinary Field Services Program (Government of New Brunswick, 2021). Here, government-funded veterinarians provide care in six rural regions, allowing producers to schedule services and view fees through the Ministry of Agriculture, Aquaculture, and Fisheries website (Government of New Brunswick, 2021). This model offers veterinarians a stable clientele and reduced working hours by distributing cases among multiple practitioners. Similarly, state-employed veterinarians in Norway, Sweden, and Finland provide essential services in rural areas, funded and managed by local governments (Federation of Veterinarians of Europe, 2020). Implementing a similar structure in Ontario could enhance veterinary care access for underserved regions.

7. ***Promoting OMAFRA's cost-share program for improved virtual veterinary service***

   OMAFRA announced a new cost-share program starting in February 2022 to enhance virtual care, expand telemedicine, and address challenges for mobile veterinary clinics in rural and northern Ontario (Ontario Ministry of Agriculture Food and Rural Affairs, 2021) . Funded through the Canadian Agricultural Partnership, the program will invest up to $4 million, offering 50% cost-share for equipment in underserviced areas. Despite a brief six-week application window and concerns from interviewees about the time and capacity to apply, this investment marks a significant step toward improving veterinary access in Ontario.

8. ***Promoting RED (Rural Economic Development Program) to strengthen veterinary services***

   To improve veterinary services in rural and northern Ontario, OMAFRA should actively promote the RED by raising awareness among veterinarians about funding opportunities for worker attraction and building re development. This competitive, application-based funding scheme focuses on projects that attract and retain workers, immigrants, and youth, or redevelop underutilized buildings. Successful applications can receive cost-sharing of up to 70% (maximum $150,000) for worker attraction or 50% (maximum $250,000) for building redevelopment (Rural Economic Development Program, 2024).

9. ***Enhancing staffing and leadership of Northern Producer Animal Health Network (NPAHN)***

   The NPAHN is structured to address regional veterinary care needs but is supported by one employee and numerous volunteers, which limits the extent to which NPAHN can have real impact, oversight, and reach. It is highly recommended to invest in additional staff to organize, lead, and support local Veterinary Service Committees (VSCs) and enhance communication with stakeholders. Besides, it has become mandatory to upgrade the NPAHN website, which should aim at sharing information and increasing visibility. It is suggested to link the NPAHN website to other commodity websites, develop and post 'good news' and success stories about the VAP, northern producers, and participating vets.

5.4 Cross-Program Lessons and Implications

Ontario offers a wide range of programs to support veterinary services, but their efficiency varies greatly. The most effective initiatives are those that provide direct, flexible funding to veterinarians or students, such as the Veterinary Assistance Program and student incentives, which enjoy strong uptake and clear impact (See Table 2). In contrast, programs that rely on complex applications, rigid structures, or limited promotion, such as FedNor, the Rural and Northern Immigration Pilot, and RED, remain underutilized despite the pressing need in rural areas (see Table 2).

A consistent pattern emerges when funding is straightforward, visible, and tied to tangible incentives, participation rises. Where bureaucracy, fragmentation, or low awareness dominate, programs fail to reach their intended beneficiaries. Moderate-efficiency initiatives, including the Northern Ontario Internship Program, telemedicine cost-share programs, and the Northern Producer Animal Health Network, show promise but are constrained by short timelines, limited capacity, or insufficient funding (See Table 2). The core issue, therefore, is not a lack of available funding but how it is structured and communicated. Fragmentation, rigid rules, and weak communication channels undermine effectiveness. Streamlining funding, expanding proven models, and creating a centralized resource to guide veterinarians toward opportunities would significantly strengthen service access across northern Ontario.

Table 2. *Evaluation Matrix of Veterinary Service Programs in Northern Ontario*

Program	Efficiency Grade	Current Usage	Barriers/ Challenges	Stakeholder Perception	Suggested Improvements
Veterinary Assistance Program (VAP)	High	High demand, budget underutilized	Rigid funding structure: mileage not fully claimed	Essential for large animal care; strong support	Modernize fund distribution; increase contract funds; raise mileage rates.
Student incentives (externships, debt forgiveness, grants)	High	Moderate uptake (externships funded), but limited	Lack of debt forgiveness; limited early-year funding	Strong motivator for students; would drive rural relocation	Expand externship support; add debt forgiveness program
Northern Ontario Internship Program	Moderate	Used, but limited scope	1-year cap; insufficient funding	Considered useful, but not sustainable	Extend to 2 years; raise funding to $50k
FedNor (clinic renovations)	Low	Rarely accessed	High cost; low awareness; preference for in-home care	Mixed views, model works in Western Canada	Targeted promotion; support haul-in facility pilot projects
Federal Rural & Northern Immigration Pilot	Low	Very low uptake	Limited accessibility; not well promoted	Potential seen, but minimal impact	Expand eligibility; market to international vets
Online resource hub for funding programs	Moderate	None (gap)	No central navigation vets lack time	High demand from vets	Build centralized website; simplify funding access
Haul-in facilities & producer training (via OMAFRA)	Moderate	Rare	Few facilities; no funding structure	Seen as valuable in some regions	Lease underused facilities; create mileage support for producers
New Brunswick Model (Gov't-funded vets)	High	Not in Ontario	Requires structural change	Proven effective elsewhere; good stakeholder support	Pilot in underserved northern regions
OMAFRA Cost-Share Program (virtual care, telemedicine)	Moderate	Launched, low uptake	Short application window; limited clinic capacity	Positive, but inaccessible to many	Extend deadlines; simplify application
Rural Economic Development Program (RED)	Low	Underutilized	Competitive, low awareness	Promising but not known in vet sector	Promote specifically to clinics; highlight worker attraction funding
Northern Producer Animal Health Network (NPAHN)	Moderate	Active but limited	Only 1 staff; weak web presence	Important but capacity-limited	Add staff; upgrade website; share success stories

Note: **High efficiency** (well-used, strong impact, good return on investment) **Moderate efficiency** (some impact, but barriers reduce effectiveness) **Low efficiency** (underutilized, poor accessibility, low impact so far).

6.0 Conclusion

The research highlights the significant challenges veterinary services face in Northern Ontario, particularly for large animal care. This study identifies underserved areas and reveals a stark mismatch between veterinary services and the number of large animal farms in counties such as Cochrane South, Greater Sudbury, Timmins, and Manitoulin. The primary reasons behind this crisis are a lack of economic viability, changing career expectations of veterinarians, socio-economic barriers such as long travel distances and lower pay rates, and hesitancy to work with large animals stemming from limited exposure and cultural factors, such as the relationships between veterinarians and farmers.

To address these issues, the recommendations emphasize the urgent need to modernize and expand the resources available for large animal veterinary services in rural and northern Ontario. Upgrading the Veterinary Assistance Program (VAP), enhancing funding incentives like student debt forgiveness, and expanding internship programs are essential steps toward attracting and retaining veterinarians in underserved areas. Initiatives such as the promotion of haul-in facilities, virtual care through telemedicine, and centralized online resources for veterinary funding could significantly improve access to services. Additionally, adopting successful models from regions like New Brunswick, which use government-funded veterinarians, could provide a sustainable solution to the ongoing crisis. By increasing awareness and funding opportunities through programs like the Rural Economic Development Program, these measures can help to create a more stable and accessible veterinary system for rural and northern communities.

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