



Finding pathways for bite prevention and decreasing dog populations: The process of animal control for indigenous communities in Canada

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Abstract

In Canada, an average of 1-2 fatal dog attacks in indigenous communities occur per year. The majority of these deaths have involved free-roaming or semi-restricted dogs. In many indigenous communities in Canada, especially those in northern or remote locations, increasing dog numbers are considered to be a dangerous and emotionally charged issue. Dealing with the issues that these animals create in communities requires having a population management plan

and dog bite prevention program in place. However, developing a community supported comprehensive intervention can be complicated. Research focused on three separate communities in which the communities themselves worked to create successful solutions for their own perceived issues. This article is the result of work within the three communities to highlight certain issues they noted on their road to creating sustainable programs for dog control.

Community A shares the progress of working towards a sustainable program, which focused on building support in the community for new community designed legislation. Community B shares the process of developing effective bylaws. And Community C shares the experience of enforcing the bylaws. Developing enforceable and appealing legislation in Canadian First Nations communities can often be fraught with difficulties due to the multilevel approval process involved. In addition, finding common ground for all community members requires substantial diplomacy, engagement and knowledge of all impacted community partners over an extended period of time. We discuss the steps and stumbles taken in developing and enforcing such legislation, and provide recommendations for communities looking to determine their desired

goals, create their own ‘dog bylaw’ or begin the process of managing dogs within their own boundaries.

Keywords: Dogs, population management, interventions, First Nations, dog bite prevention, public health

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Introduction

Worldwide, Indigenous people’s creation stories describe how their canine companions had critical impacts on survival; from hunting and security, to packing and transport (Constable, Dixon, & Dixon, 2010; Senior, Chenhall, McRae-Williams, Daniels, & Rogers, 2006). Today, the role of the dog has dramatically changed in Canadian communities, with the primary remaining role as a friend and companion. This often leads to disconnect between what is expected, and what is required, for care, welfare and survival of the dogs as they live amidst communities. Canadian indigenous communities historically had location and culture specific dog population control methods that are no longer in practice, resulting in increasing animal numbers. These circumstances too frequently lead to aggressive interactions, creating potentially dangerous environments for both dogs and people, and contributing to preventable injuries or fatalities (Castrodale, 2007; Raghavan, 2008; Russell, Grossman, Wallace, & Berger, 2001). Social, economic, physical and psychological consequences of dog bites are often devastating for both individuals and the community fabric.

Over the period of two decades, an average of 1-2 fatal dog attacks have occurred per year in Canada, with an unknown number of non-fatal injuries happening (Raghavan, 2008). In First Nations and Métis communities, free-roaming dog packs cause the majority of the serious or fatal dog-related injuries that occur each year in Canada, particularly in the prairie provinces. Physical attacks by dogs are often on children, leading to death or disfigurement, and generally result in long lasting psychological trauma (including post-traumatic stress disorder). Dog

population control, especially in rural and remote First Nations and Métis communities, is one option to mitigate such occurrences. Most communities recognise dog-related issues, but feel ill-prepared to manage dog populations sustainably with the resources that currently exist within their own boundaries. However, caution must be taken with individuals or groups outside of the community coming in and taking leadership roles involved in *solving* the perceived issues. Community concerns and viewpoints are required to improve the success and efficacy of approaches to dog bite prevention and dog population management; direct ownership of chosen approaches produces the best chance of success and sustainability (Lembo *et al.*, 2011).

Community A: Identifying Promising Interventions to Diminish Dog Issues in Remote Communities

Dog bites, and diseases transmissible via dog bites, are an ongoing public health issue among Métis and First Nations communities in Canada. In 2009, tragedy struck northern indigenous community A, when a 6-year-old child was mauled by a free-roaming community dog. Although in this instance the offending dog was destroyed and the child eventually recovered physically, the situation served to highlight the ongoing dog issues that remote and northern Métis and First Nations communities have been facing.

Financial constraints and competition for public assets de-emphasise dog control programs in resource limited communities, as other health needs such as inadequate housing, water supply and sanitation are more immediate. In addition, in northern communities there exists reduced access to regular veterinary care, animal health education, veterinary information or medications due to remote locations or limited financial resources. As a result, when free-roaming dogs cause problems, or there are dog-related aggression issues, limited options are available. In serious situations, dog populations are often reduced by culling in an effort to fix the immediate, short-term concerns. This approach

is known to be largely unsuccessful due to community resistance, as well as a lack of impact on dog population stability, dog bite incidence rates and dog-related disease transmission. For

engagement (see Figure 1). Meetings were held with all school classes, community groups and agencies, village council and elders. Small groups and individuals who had additional concerns or



Figure 1: Community discussion word cloud on dogs

The above word cloud was created by compiling and combining all of the community discussion transcripts during the community engagement period in 2014. The bigger the word, the more frequently it was used during discussions.

this reason, communities are working towards more sustainable, comprehensive programs that encompass all aspects of human-dog interactions to reduce the public health risk dogs pose. After their close call, Community A began working on multiple ways to approach the community's dog population and aggressive free-roaming pack problems. These methods include updating and creating more holistic bylaws and legislation, hiring a fulltime bylaw enforcement officer, building a holding facility for free-roaming dogs, school and community education sessions, and planning for a future high volume/low cost spay/neuter clinic.

These alternatives were selected and prioritised based on community-wide discussions and

suggestions were encouraged to speak to members of the village council personally.

Initial discussions identified that schoolyards were the community's principal area of concern, as dogs were following students, and then creating packs in the schoolyards. This resulted in dogs trailing young children and approaching school visitors. Additional misgivings included mounting numbers of aggressive situations, bully dogs, free-roaming dogs, possible zoonotic diseases, and insufficient owner control. Since the majority of these animals are individually-owned free-roaming dogs, and dogs have an important socio-cultural history within the community, publicly sanctioned solutions to these issues required alternatives other than terminal endings.

Community members compiled a list of solutions including creating a comprehensive fining system for bylaw infractions, educating owners regarding appropriate dog care and responsibilities, using social media to inform community members of important information, building a holding facility for captured animals, hosting dog training and dog behaviour education sessions, and proper bylaw enforcement. It was from this list that the village council created a realistic strategy to move forward on reducing the area's dog population, dog bite risk and aggressive dog-human interactions. It is hoped that the success of these interventions will be quantifiable by dog, bite and aggressive encounter demographic characteristics within 2 years of implementation.

The results of the public engagement of Community A emphasise the socio-cultural belief that a more effective means of population control outside of culling needs to be developed. Forming relationships with non-profit organisations and rescue groups, as well as creating a high school volunteer program to work in a new holding facility, are also potentially effective solutions. Addressing the safety issues produced by aggressive animals, in addition to the lack of proper bylaw enforcement and veterinary care, are persistent Métis and First Nations concerns. Overall, the key to a safer community is multifaceted, which will be enhanced above all, by a change in mindset.

Community B: Building a Better Bylaw - The Process of Animal Control Legislation Creation for First Nations Communities in Canada

Dog overpopulation is a growing and increasingly dangerous problem in many First Nations communities in Canada. In uncontrolled and unsocialised populations, dogs are often less predictable, with a greater tendency to run in packs. This frequently leads to increased dog bites and aggressive encounters, with the potential for transmission of zoonotic diseases and severe maulings. Improving these environments is an ongoing public health struggle for First Nations and Métis councils. Multiple methods are often employed in order to

develop manageable dog populations, however difficulties are regularly faced given the lack of access to resources in remote locations.

As a result First Nations communities are choosing to incorporate and enforce comprehensive bylaws, along with community education programs to develop new community philosophies and understanding. Most First Nations communities do not have bylaws whereas municipalities adopt the animal control bylaws which are created regionally. However, when a First Nation develops bylaws, they must be approved at a federal level due to the current legislation on First Nations reserves.

This is the case for one northern First Nations community, who began the process of bylaw creation in 2010. Community B had no official bylaw in place, and relied on yearly dog round up days to reduce overpopulation and deal with overly aggressive animals. As a result, not only were neighbourhood dogs terrified and consistently skittish, but community members were unhappy and dissatisfied, finding these methods distasteful and counter to cultural acceptability. The goal was therefore to develop some method that would allow better control over local animals, and promote a safe neighbourhood. In addition, education regarding animal welfare (e.g. care, immunisations, housing, etc.) and owner responsibilities was believed to be a critical key in shaping group mind-set.

The first step was to ensure that the community supported a new initiative, as without full community approval any proposal was doomed to fail. In 2011, after extensive discussions and surveillance (collected from door-to-door and Treaty table surveys in 2010/2011), 89% of the community favoured establishing a comprehensive bylaw covering all aspects of dog habitation within the community. This was to include building a holding facility, developing legislation with respect to permissible dog regulations, creating an educational school curriculum and community awareness program, and generating partnerships that would enable community members to access veterinary care.

In October of 2011 a fatal dog mauling of a 3-year-old girl occurred on Mosquito First Nation in Saskatchewan, resulting in considerable media

attention being focused on attacks occurring in rural and remote First Nations and Métis communities. Realising that significant numbers of free-roaming dogs were regularly running in packs in the schoolyards, the larger community believed that a change was needed immediately. Unfortunately, as with most northern communities, this First Nations community has reduced access to regular veterinary care and information, animal health education and resources, due both to remote location and limited financial resources. Therefore, it was decided that the first and easiest item on the agenda would be the creation of a new animal control bylaw.

The First Nation Band Council hoped that with a new animal control bylaw in place, the opportunity for better dog control and public education would have a major impact on dog population management and public safety. Legislation awareness could provide a discussion point regarding animal care (feeding, sheltering, immunising, etc.), in addition to owner responsibilities (restraining, socialising, neutering, training, etc.). Community education had the potential to establish a safer, more compassionate environment. Optimism soon hit a few snags however, as Indian and Northern Affairs Canada (INAC) almost immediately rejected the first draft submitted in the fall of 2012 (based on the old bylaw and the current nearby municipal bylaw). The feedback that this First Nation received was that the proposed bylaws were not *official* enough and should be reviewed by a lawyer.

Rewriting the bylaw to INAC's requirements was a lengthy process, and during that time a change in the First Nation's leadership (due to an election) also occurred (2014). This meant that the document needed to be reapproved and passed at band council level prior to being federally proposed. The new Council amended a few details, which were examined by the lawyer, and reworded. Rewording of the document required new Band Council resolution. At this point, the regional public health authority requested some major changes. Submission to the federal government was subsequently delayed as the First Nation's lawyer worked through the health authority's concerns.

The INAC approved the amended bylaws during the summer of 2014, with a strict requirement that the returned be ratified and returned by Chief and Council within 30 days. Given the timing and the composition of this multi-community Band Council (with councillors coming from different regions), ratification could not be completed within the thirty day time frame. Since the ratification deadline had passed, the bylaw had to be resubmitted for a new ratification issuance. Unfortunately, each subsequent issuance arrived either during a holiday period or during a community crisis, understandably leaving the animal control bylaw a lesser priority.

In the meantime, the community has built a holding facility that is capable of sheltering six to nine roaming dogs, and acquired the necessary equipment needed for safe and secure animal retrieval. Relationships concerning local dog issues have been developed and fostered with the surrounding municipalities. In addition, a partnership between the band and the local humane society and animal rescue is developing. An added bonus is the collaboration that has occurred between the First Nation, the municipalities, the animal rescue, and one of the Canadian veterinary colleges. As part of a novel northern outreach program created to provide fourth year students with an opportunity to develop surgical, clinical and educational skills in resource restricted areas, the university has run several spay-neuter clinics in the area to assist with population control. Each small piece of the puzzle assists in creating the safer environment that the community first began envisioning during discussions in 2010.

As a result of her own learning experiences, Community B Councillor has these recommendations for First Nations communities developing their own dog population control bylaws:

1. Ask for community input on all aspects of your program (*this ensures community members support and value your efforts*).
2. Look at several established bylaws from other communities, and develop yours based on what is appropriate for your area (*not all sections from other communities will be necessary for your community*).

3. Decide how detailed you want your bylaws to be early on (*more detail means there is a greater chance of rejection due to the potential for infringement of personal rights*).
4. Ask for help and input from experts when needed (*this can save a lot of time and unnecessary expense*).
5. Work from a place of knowledge (*truly know the issues in your community and what the potential solutions are*).
6. Understand the INAC's policies and regulations when it comes to bylaw amendment (*a good lawyer can help the process go more smoothly*).

Although the process for the First Nation community has been time consuming and full of complications, in the long run the process has been considered constructive. The resulting legislation is hoped to be robust and comprehensive enough to provide guidelines for any situation that might unfold. The progression has also been a means of connecting and engaging the community on issues that can otherwise be highly emotionally charged and divisive. By and large, appropriate animal bylaws are hoped to create a safer and more resilient community, and to date the preliminary demographic data has been suggestive of positive impact.

Community C: Creating Control - An Animal Control Officer's Tale: Building a Dog Population Management Program from the Ground Up

Imagine simply being asked to *deal with the dogs* in your community; a rural community in which 75% of the dog-human interactions for the previous several years have been aggressive, most of which resulted in injuries. A community in which more than 90% of the dogs are uncontrolled, untrained and free-roaming, and most of which are sexually intact. Then imagine you are told you have no protocols in place, an obscure bylaw as legislation, and few resources on which to depend. How do you begin?

This is the situation that often presents itself to animal control officers in remote and rural

Canadian indigenous communities. Meanwhile, dog bites and infectious diseases continue to be significant health care problems for Métis and First Nations communities. Unlike urban environments, in reserve communities these encounters are generally not in the family home. The historical tolerance for free-roaming dogs has often produced poor socialisation and dog packing behaviours. Lack of predictable interactions by these animals frequently results in numerous dog bites and increased aggression, with possible disease transmission or fatal mauling. Adding to the problem, dog overpopulation serves to intensify these issues.

Understandably, limited resources and increasing demand for public finances due to critical health needs such as lack of housing, poor water or improper sanitation, lead to an environment in which dog concerns take a secondary role. Add limited access to veterinary care, education, information or medications, and options become restricted in remote communities. For these reasons, culling after dangerous encounters is often used to control dog populations. However, communities are generally uncomfortable with this approach and research has shown that culling has little impact on dog population levels, bite reduction or disease transmission.

To start from scratch is a daunting task, however it is possible. Initially armed with only the World Wide Web, a notebook, and a printer, Community C animal control officer developed and instituted such a dog management program in two First Nations communities between 2009 and 2013. Over a period of four years, the protocols that were developed and enforced, and the community education that was provided, successfully reduced the overall dog population by 50%, the roaming dog population by 90%, and the number of reported dog bites from 6-10/year to 1/year (for 3 years).

Initially, advertising began through community meetings and social media that an animal control officer had been hired, and would be speaking with all households, school classes, and community groups. During household visits, pictures and identifying information were taken of all family dogs for future reference, as well as education provided on the requirements for appropriate dog care and welfare. A basic holding

facility for seven dogs (including space for two large breed dogs) was built, and outside ties and huts for a further 10 dogs were put in place.

In the first 2 weeks of program development, owners were warned when their dogs were found wandering *at large* via phone calls. Retrieved unknown dogs were advertised as having been found using social media posts (Facebook, town website) and posters. After this initial introductory period, all warnings were logged and leveled for each dog caught freely roaming. For first time offences, owners were given a verbal warning. If a second infraction occurred, owners were issued a written warning. Finally, subsequent violations resulted in both a verbal and a written warning, and the dog was impounded at a cost of \$10/day for a maximum of 7 days. If the owner chose not to recover the dog or not to pay the fine, dogs were relinquished to one of five nearby rescue groups/humane societies. All dogs responsible for attacking or biting a person were immediately impounded and quarantined for 10 days to eliminate the possibility of rabies (and further exposures), and were then euthanised as per community regulations.

Community-wide patrols were conducted several times daily to identify and detain roaming animals (potentially dangerous wildlife such as bears and mountain lions, as well as dogs). In addition, community members were encouraged to call and anonymously report any problem animals within their area. When alerted to an issue, an animal control officer would respond anytime of the day or night, any day of the year. Within 18 months, community reports of roaming animals had decreased from 4 or 5/day (all new or different animals) to 2 or 3/week (generally repeat offenders). In this new environment, elders and children reported feeling safer while moving freely around the community. Community members largely attributed success of the program to consistent enforcement, thorough program communication, and resolute dedication and determination of involved personnel.

Unfortunately, due to a change in band council members, the described animal control program was terminated in the summer of 2013. The new band council saw the successful results as an

indication that the dog population was no longer problematic and the resources being allocated could be otherwise distributed, relying instead on volunteer enforcement. The effect of this dramatic change in consistent implementation of animal control was a doubling of the dog population in less than 12 months, and a notable increase in dog roaming, dog packing and aggressive encounters. Two years later, the dog population had increased to double the numbers it was at prior to the population control program initiation, due to both immigration (community members bringing new dogs into the community) and increased births as most animals remain intact). Many community members now express renewed concern, fear and nervousness when walking alone, or being approached by unknown dogs.

In the meantime, the animal control officer in Community C has these recommendations for communities attempting to begin an animal control program:

1. Communicate all protocols and objectives to the entire community regularly (*this avoids any feelings of ill will or the idea that there is a hidden agenda*).
2. Ensure that all partners (that is the various councils, community members, shelters, educators, government/law enforcement, corporations) are in agreement with the protocols in place (*this reduces the chance of sudden withdrawal once the program is in place*).
3. Provide education at the same time you are enforcing legislation (*this creates an atmosphere of knowledge transfer so community members completely understand why decisions are being made and why specific protocols are in place*).
4. Find funding for sustainable development, including sterilisation and wellness clinics (*running a successful program requires financial support – equipment, personnel, education materials, etc. – without which little can be done*).

Although the dog population situation for this First Nations community regressed after the termination of the described established dog control program, several things are evident. First, with community support and engagement large changes can be made in a relatively short period of time. Secondly, a successful program requires consistency with respect to effort, time and

enforcement. Lastly, for long-term improvements to be possible any program must be ongoing and adapted as new challenges arise. Safer communities, with fewer aggressive dog-human interactions, are possible with relevant and timely programming and cooperation.

Conclusion: Community Options Beyond Creating and Enforcing Bylaws

This article has largely focused on only a few components of an effective dog population management program; community engagement and community led legislation and enforcement (Figure 2). Based on the three identified arms of an effective dog population and dog bite prevention program, communities must seek what fits their needs. No community shares exactly the same issues, concerns or problems when it comes to dog populations; therefore, no community should feel obligated to create the exact same dog population management program as another community. While the underlying principles or options chosen may appear to be similar, it is in the customising of the plan to the specifics of each community that will make it sustainable and effective. In summary, dog population management and dog bite prevention is not a one size fits all.

A lot of focus has been on providing veterinary services to communities, specifically spay and neuter services as a means to control dog populations and ultimately dog bites. While dog population can be stabilised and eventually reduced using both surgical and/or chemical sterilisation methods, without managing the introduction of dogs from outside the community, this will not be an immediate reduction and possibly not sustainable over time (ICAM, 2007). Although many authors discuss dog density numbers when considering dog bites, no published literature to date definitively establishes a causal link in the absence of other components of dog control programs. Instead, as evidenced by the fact that most fatalities in northern communities are tied to free-roaming or semi-restricted dogs, it is instead likely the ratio of controlled to free-roaming dogs plays a greater role in dog bite prevention. In fact, most organisations promoting the effective

management of dog populations around the world, advocate for veterinary services in conjunction with at minimum education programs that promote changes in human behaviours surrounding dog-human interactions (AMRRIC, 2012; ICAM, 2007).

In conclusion, for sustainable and effective dog population control, communities must be empowered to recognise their own issues; developed plans that may or may not utilise resources outside of their own boundaries, and be supported in the implementation of these plans within and outside of the community boundaries.

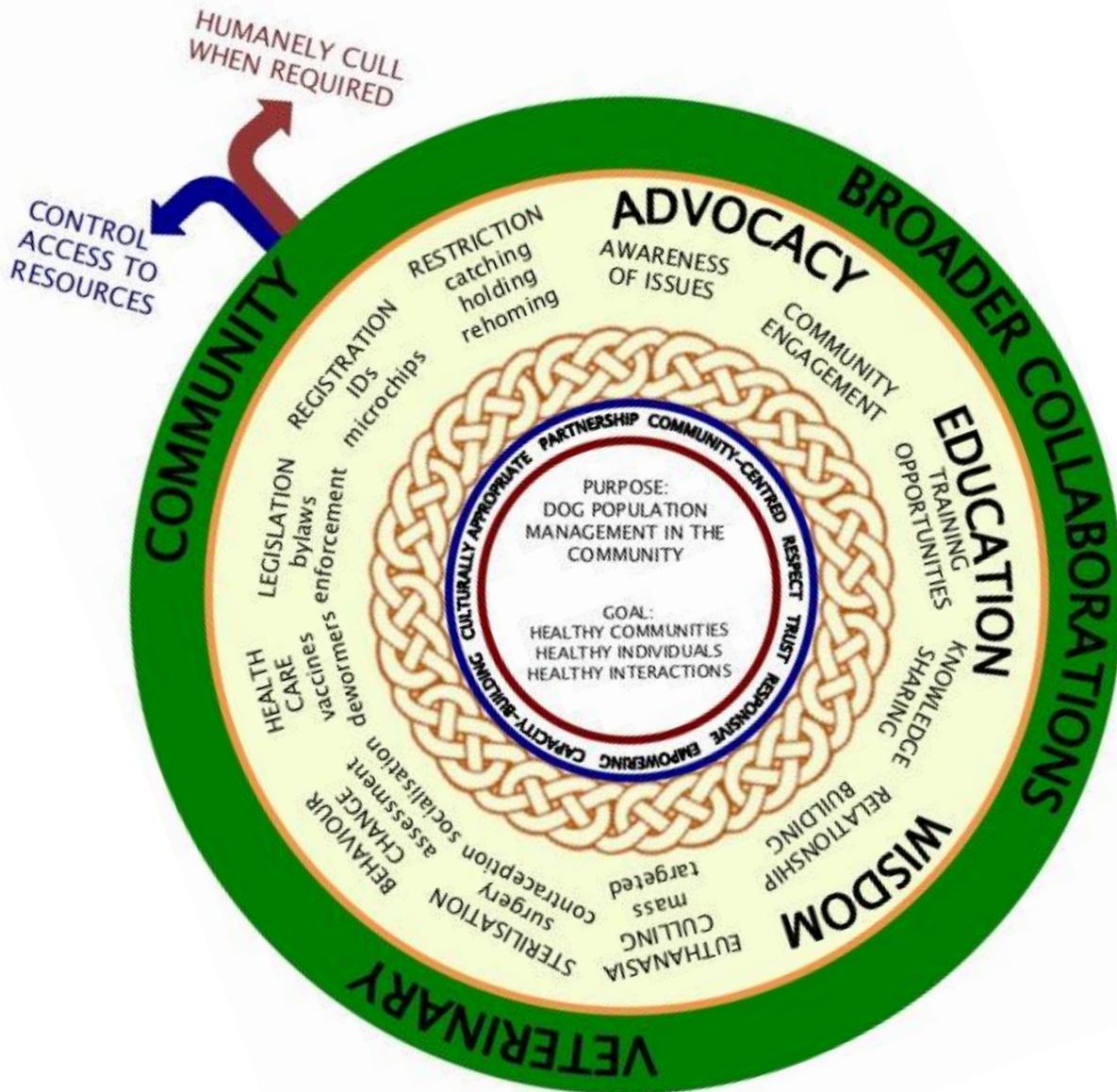


Figure 2: Components of an effective dog population control for northern, rural or remote First Nations and Metis communities in Canada.

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