

Suicide Rates in Aboriginal Communities in Labrador, Canada

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Objectives. To compare suicide rates in Aboriginal communities in Labrador, including Innu, Inuit, and Southern Inuit, with the general population of Newfoundland, Canada.

Methods. In partnership with Aboriginal governments, we conducted a population-based study to understand patterns of suicide mortality in Labrador. We analyzed suicide mortality data from 1993 to 2009 from the Vital Statistics Death Database. We combined this with community-based methods, including consultations with Elders, youths, mental health and community workers, primary care clinicians, and government decision-makers.

Results. The suicide rate was higher in Labrador than in Newfoundland. This trend persisted across all age groups; however, the disparity was greatest among those aged 10 to 19 years. Males accounted for the majority of deaths, although suicide rates were elevated among females in the Inuit communities. When comparing Aboriginal subregions, the Innu and Inuit communities had the highest age-standardized mortality rates of, respectively, 165.6 and 114.0 suicides per 100 000 person-years.

Conclusions. Suicide disproportionately affects Innu and Inuit populations in Labrador. Suicide rates were high among male youths and Inuit females. (*Am J Public Health*. 2016;106:1309–1315. doi:10.2105/AJPH.2016.303151)

Globally, suicide persists as an urgent public health problem among Indigenous populations in many high-income countries, including the United States¹ and Australia.² In Canada, suicide is one of the leading causes of death among Aboriginal people.^{3–5} Suicide rates for First Nations (31.8 per 100 000 population)⁶ and Inuit (73.6 per 100 000 population)⁵ populations are elevated compared with the national rate (10.8 per 100 000 population),⁷ although incidence varies substantially at the community level.⁸ Rate disparities are especially evident in Indigenous regions such as Nunavut,⁵ an arctic territory in northern Canada, and elsewhere in the circumpolar world.⁹

Previous research reported a high suicide rate in Labrador^{10,11} and suggested that local First Nations and Inuit populations have elevated rates of suicidal ideation¹² and death.^{5,10,11,13} However, these studies used a short study period or regionally aggregated data, focused on youths, or did not distinguish among different Aboriginal groups. As a result, they missed possible subregional

inequalities¹⁴ and therefore were unable to identify specific populations with the greatest burden.

Labrador is a large subarctic area in northeastern Canada that borders Quebec and Nunavut and is politically part of the province of Newfoundland and Labrador. The region's diverse population is small, relatively young, and dispersed, with a high proportion of Aboriginal people (Table 1). The population includes 3 Aboriginal groups: the Mushuau and Sheshatshiu Innu First Nations, the Labrador Inuit, and the Southern Inuit. These groups are politically separate and have unique cultures, languages,

traditional territories, colonial histories, and social circumstances. We identify the Aboriginal groups with the terms used by the respective governing authorities for collective identity. In some cases, these terms may differ from those used by individuals to self-identify. For example, the NunatuKavut Community Council refers to the group it represents as “Southern Inuit” although individually some community members may use the terms “Metis” or “Inuit-Metis.” Most of Labrador's Aboriginal communities are located along the remote north and southeast coasts, with limited or no road access.

Our comparison region, Newfoundland, is a large island that is geographically separate from Labrador and is located in the Atlantic region of Canada. Both areas are primarily rural, although Newfoundland's population is older, is mostly non-Aboriginal, and lives within a 300-kilometer drive of a regional center or the provincial capital. The population health profile and socioeconomic and geographic context of Labrador resembles other circumpolar regions such as Alaska and Greenland. Conversely, Newfoundland, although distinct in its own right, has more in common with the provinces of Atlantic Canada.

We developed this retrospective, population-based study of suicide mortality in response to requests from communities for local data on suicide. Our objective was to establish baseline trends in suicide epidemiology in Labrador. We compared age,

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TABLE 1—Demographics and Governance in Aboriginal Populations: Labrador and Newfoundland, Canada, 2006

Region or Subregion	Population	Younger than 30 Years, ^a %	Aboriginal Identity ^b % of Population	Aboriginal Governance
Provincial regions				
Newfoundland	479 100	33.4	Aboriginal: 2.9 ^c	Miawpukek First Nation Qalipu Mi'kmaq First Nation
Labrador	26 365	41.7	First Nation: 7.2 Inuit: 15.0 Southern Inuit: 15.1	
Labrador subregions				
Innu communities	1 815	65.3	Innu First Nations: 88.4	Sheshatshiu Innu First Nation Mushuau Innu First Nation
Labrador West	9 660	38.4	Aboriginal: 6.6	
Nunatsiavut	2 415	53.4	Inuit: 89.4	Nunatsiavut Government
South Coast-Straits	4 410	36.2	Southern Inuit: 50.0	NunatuKavut Community Council
Upper Lake Melville	8 065	39.9	Inuit: 18.7 Southern Inuit 17.5	

Source. 2006 Census, Statistics Canada.

^aProportion of region or subregion's total population.

^bAboriginal Identity is a census variable that refers to an individual's self-reported identification with the constitutionally recognized Aboriginal peoples of Canada (First Nation, Inuit, and Métis).

^cAboriginal includes all 3 Aboriginal identities (Innu First Nation, Inuit, and Metis) combined. In Newfoundland, this includes the Miawpukek First Nation, the Qalipu Mi'kmaq First Nation, and Innu, Inuit, and Southern Inuit from Labrador who live in Newfoundland.

gender, and geographic patterns in incidence rates among Innu, Inuit, and Southern Inuit populations with those of the general population in the Canadian province of Newfoundland and Labrador from 1993 to 2009. This project was a collaborative inquiry that combined community-based and epidemiological research methods.¹⁵

METHODS

From the outset of the project, we partnered with the region's Aboriginal political authorities, including the Innu Nation, the Nunatsiavut Government, and the NunatuKavut Community Council (formerly the Labrador Metis Nation), and with the regional health care organization, Labrador-Grenfell Regional Health Authority. Our goal was to develop an understanding of suicide rooted in the region's historical, cultural, and socioeconomic

contexts. For the planning phase, we conducted consultations with Elders, youths, mental health and community workers, primary care clinicians, and government decision-makers. Through this engagement, suicide prevention and the promotion of resilience emerged as shared priorities among stakeholders. Our partners also indicated that research would be most helpful if it informed health service planning with local evidence.

The institutional review committees of all 4 community partners provided research licenses for this study, and each had a representative that maintained ongoing project oversight. We also codeveloped distinct research agreements with each partner organization. These agreements outlined our joint commitments to project planning, data management, and communication. We shared the preliminary results of this study at meetings with our research partners and roundtable discussions with other local stakeholders. This process helped contextualize

our discussion by eliciting interpretations of the results from historical, sociocultural, and clinical perspectives.¹⁶ All project partners reviewed and approved this article before submission.

Data Sources

For our data, we drew on Statistics Canada's Vital Statistics Death Database. This administrative data set covers all physician-certified deaths recorded in provincial registries, and it includes a nearly complete count of all deaths because of the legal requirement for death registration. Each record provides the cause of death as determined by the Canadian Enhancement of the *International Classification of Diseases-Canada*,¹⁷ 10th Revision (*ICD-10-CA*), date, and demographic information. For our study, we examined the following variables: death by suicide (*ICD-10-CA* code X60–84), year (1993–2009), gender, age group, region of residence (Labrador or Newfoundland), and subregion of residence within Labrador (Innu communities, Inuit communities, Southern Inuit communities, Labrador West, and Upper Lake Melville). We defined subregions on the basis of geography, sociopolitical distinctions, and population composition (Table 1).

We used Statistics Canada's census division geographic units to group regional populations for Labrador and Newfoundland, and we determined subregional populations by combining smaller units (census subdivisions) that are approximately equivalent to communities (Table A, available as a supplement to the online version of this article at <http://www.ajph.org>). We used "subregion" as a geographic proxy for the Aboriginal groups because vital statistics do not include record-level Aboriginal identifiers.^{14,18,19} We defined each subregion by the proportion of the population that was Aboriginal on the basis of census data (Table 1), as has been done elsewhere.^{3,4} We refer to the subregions that include predominantly Aboriginal communities by their specific population (Innu communities, Inuit communities, and Southern Inuit communities) rather than their place names (e.g., Sheshatshiu and Natuashish, Nunatsiavut, South Coast-Straits).

Statistical Analysis

We examined patterns in suicide mortality among those aged 10 years and older by

region, subregion, gender, and age groups using crude rates and directly age-standardized mortality rates (ASMRs), rate ratios (RRs), and 95% confidence intervals (CIs). We calculated incidence as a rate per 100 000 person-years for the 17-year study period by dividing the total number of deaths in each stratum for all years combined by the corresponding population.

For the denominators, we estimated person-years at risk by totaling the annual population counts by age and gender strata categories within each region and subregion from Statistics Canada's censuses for 1991, 1996, 2001, 2006, and 2011. For the population estimates in noncensus years, we imputed counts from the most proximal census. For example, we used the 2001 census as the estimate for each year from 1999 to 2003. To make a comparison of rates, we age-standardized rates on the basis of 5-year age groups to the 1991 Canadian Standard Population and calculated 95% CIs. We selected this commonly used standard population to improve comparability between our research and other studies.

We aggregated data by combining subgroups to achieve a minimum count of 20 deaths per strata or a relative standard error (RSE) below 23%, in accordance with benchmarks for the analysis of small numbers. Rather than uniformly suppressing results for strata above the RSE threshold, we reported findings and interpreted them with caution when they were locally meaningful or had marginal reliability (RSE 23%–25%) or when it was inappropriate to combine cells. For example, we reported the ASMR for women in Inuit communities on the basis of $n = 16$ deaths, even although rate stability was borderline.

We used Newfoundland as the reference group and calculated RRs with 95% CIs using the method of Greenland and Rothman (see reference in Appendix A, available as a supplement to the online version of this article at <http://www.ajph.org>). After we compared the rates, we considered them to be significantly different if the RR limits did not contain 1. We conducted the analysis with SPSS version 21.0 (SPSS, Inc, Chicago, IL) and Stata version 13.1 (StataCorp LP, College Station, TX).

RESULTS

There were 128 suicide deaths in Labrador and 617 in Newfoundland during the study period, and the majority of suicide deaths in Labrador occurred in the Inuit ($n = 64$; 50.0%) and Innu ($n = 28$; 21.9%) communities. These 2 subregions include 7 communities that had a combined population of 4230 in 2006, or 0.84% of the provincial population, but accounted for 12.3% of suicide deaths in the province during the study period.

We found substantial differences in suicide rates between regions and among specific Labrador subregions (Table 2). The ASMR for suicide in Labrador was 4 times higher (RR = 4.0; 95% CI = 3.2, 4.8) than was that in Newfoundland (31.8 vs 8.0 per 100 000 person-years). Within Labrador, the Inuit and Innu communities had the proportionately largest Aboriginal populations (Table 1) and the highest ASMR and RRs for suicide (Table 2).

The gender divide in suicide mortality was similar in Labrador and Newfoundland because males accounted for the majority of deaths (respectively, $n = 110$; 85.9% and $n = 522$; 84.6%) and had higher ASMRs than did females in both regions (Table 2). However, rates were higher for both genders in Labrador than in Newfoundland (Table 2). In Labrador, 88.9% ($n = 16$) of the female suicides were in the Inuit communities, where the ASMR among females was 31 times higher than was that in Newfoundland (RR = 31.5; 95% CI = 18.3, 54.4).

The mean age of individuals who died by suicide was 28.8 years (SD = 13.6) in Labrador and 44.3 years (SD = 16.2) in Newfoundland. The suicide rate was highest among those aged 20 to 29 years in Labrador, and 30 to 39 and 40 to 49 years in Newfoundland (Figure 1; Table B available as a supplement to the online version of this article at <http://www.ajph.org>), although the age-specific disparity was largest among youths aged 10 to 19 years, the rate being nearly 16 times higher (RR = 15.8; 95% CI = 9.6, 26.0) in Labrador (Figure 1, Table B).

DISCUSSION

We found large suicide rate disparities between Aboriginal and non-Aboriginal

populations in Labrador, with the highest rates in the Innu and Inuit communities. To our knowledge, this is the first study to examine suicide among Southern Inuit and to show subregional suicide rate variation across Labrador. The rate difference between Labrador and Newfoundland is consistent with previous research,^{10,11} although our estimated RR is slightly higher (4.0 vs 3.3). Overall, the suicide rate in Labrador was nearly 3 times higher than the national rate in Canada, while the suicide rates in the Innu and Inuit communities were 10 and 15 times higher, respectively. These patterns are similar to those found in other studies of Indigenous and circumpolar populations in Canada and internationally.^{1,2,5,6,8,9,20}

Males were disproportionately affected by suicide in our study, and the majority of suicide deaths in the Aboriginal communities in Labrador were among males younger than 30 years, which is consistent with the literature.^{6,9,20} This trend differs from the general population in Canada, where rates are highest among men aged 45 to 49 years.²¹ In Newfoundland, male ASMRs in our study peaked across 2 age groups (30–39 years and 40–49 years), which is also younger than in Canada.

One important gender difference we discovered was the absence of any suicide deaths among women in Innu communities, which contrasted with the high rate among Innu men. This may be partially explained by a gendered trend toward choosing more lethal attempt methods in this community as in the general population.²² However, the absence of suicide among Innu women also contrasted with women in Inuit communities, where we identified an extraordinary inequality compared with women in Newfoundland. In part, the magnitude of this disparity may be related to the exceptionally low ASMR among women in Newfoundland, who have the lowest incidence rate of either gender in all provinces and territories in Canada.^{7,21} Nonetheless, the ASMR for women in Inuit communities in our study was twice as high as was that for all other Inuit regions in Canada combined and approximately 17 times higher than is the national rate among women.⁵ We note that ASMR for women in Inuit communities had borderline reliability as the RSE (25%) was slightly above the threshold.

TABLE 2—Crude Rates and ASMR per 100 000 Person-Years and Rate Ratios for Suicide by Region and Gender: Labrador and Newfoundland, Canada, 1993–2009

Region (Aboriginal Group) Gender	Suicide Deaths, No.	Person-Years	Crude Rate ^a	ASMR ^a (95% CI)	ASMR Ratio (95% CI)
Newfoundland					
Male	522	3 672 450	14.2	14.0 (12.8, 15.2)	1 (Ref)
Female	95	3 875 800	2.5	2.4 (1.9, 2.9)	1 (Ref)
Both	617	7 549 140	8.2	8 (7.4, 8.7)	1 (Ref)
Labrador					
Male	110	206 050	53.4	55.1 (44.1, 66.1)	3.9 (3.2, 4.9)
Female	18	199 125	9.0	8.3 ^b (4.4, 12.1)	3.5 (2.1, 5.8)
Both	128	405 050	31.6	31.8 (26.0, 37.6)	4.0 (3.2, 4.8)
Nunatsiavut (Inuit communities)					
Male	48	17 605	272.6	248.7 (175.4, 322.0)	17.8 (13.1, 24.1)
Female	16	16 480	97.1	75.5 ^b (37.4, 113.6)	31.5 (18.3, 54.4)
Both	64	34 270	186.8	165.6 (122.7, 208.5)	20.6 (15.7, 27.0)
Innu Communities (Innu First Nations)					
Male	28	10 295	272.0	223.2 (136.0, 310.4)	15.9 (10.7, 23.8)
Female	0	10 405	0.0	0.0 (0.0, 0.0)	0.0 (0.0, 0.0)
Both	28	20 435	137.0	114.0 (69.1, 158.9)	14.2 (9.5, 21.2)
Upper Lake Melville (Inuit, Southern Inuit, and non-Aboriginal population)					
Male	14	61 550	22.7	21.7 ^c (10.2, 33.2)	1.5 (0.9, 2.6)
Female	1	62 825	1.6	1.5 ^c (0.0, 4.4)	0.6 (0.1, 4.4)
Both	15	124 405	12.1	11.3 ^c (5.5, 17.1)	1.4 (0.8, 2.4)
South Coast-Straits (Southern Inuit communities)					
Male	6	36 005	16.7	19.8 ^c (3.6, 35.9)	1.4 (0.6, 3.2)
Female	1	32 865	3.0	2.5 ^c (0.0, 7.5)	1.1 (0.1, 7.6)
Both	7	68 965	10.2	11.9 ^c (2.7, 21.2)	1.5 (0.7, 3.2)
Labrador West					
Male	14	80 750	17.3	21.5 ^c (7.7, 35.2)	1.5 (0.8, 2.9)
Female	0	76 555	0.0	0.0 (0.0, 0.0)	0.0 (0.0, 0.0)
Both	14	156 990	8.9	11.2 ^c (4.1, 18.3)	1.4 (0.7, 2.7)

Note. ASMR = age-standardized suicide mortality rate; CI = confidence interval; RSE = relative standard error. Person-years may not sum to totals due to rounding. ASMR and ratio estimates are rounded.

^aPer 100 000 person-years.

^bRSE for the ASMR is 23%–25%; therefore, the rate estimate has borderline reliability.

^cRSE is > 25% for the ASMR; therefore, the rate estimate is less reliable and should be interpreted with caution.

The geographic and gender differences we found likely arise from complex interactions between risks related to mental health problems, access to care, and socioecological conditions. Many Aboriginal communities in Labrador are geographically remote and have limited access to comprehensive mental health services. This may increase vulnerability in communities with an already elevated prevalence of self-reported depression, suicidal ideation, and suicide attempts,^{12,23} all

of which are known risks for suicide.²⁴ A recent follow-back study among Inuit in Nunavut found that mental illness, substance abuse, and childhood maltreatment were strong predictors of suicide.²⁵ Although there is uncertainty about the role of mental illness as a risk factor for suicide in Aboriginal communities,^{25,26} psychological distress and social adversity are likely interconnected²⁵ and may affect suicidality among men and women differently. For those communities

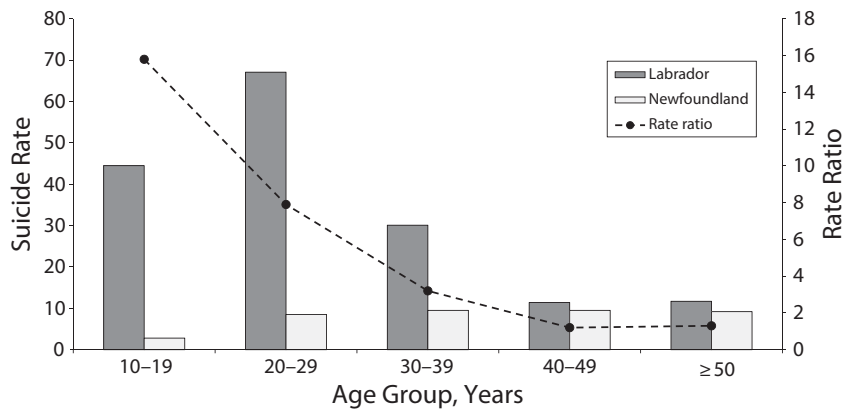
that are already at increased risk because of mental health and social problems, young people in particular may be additionally vulnerable following a suicide by a peer, owing to the influence of social contagion.²⁷

Increasingly, research has linked suicide in Aboriginal contexts to social distress and historical trauma, which have their origins in persistent and systemic inequality.^{26,28,29} Aboriginal communities in Labrador have experienced immense social disruptions, such as the government-initiated relocations of northern settlements in the mid-20th century. The health consequences of such historical events and resulting social changes may be long lasting and may persist across generations,³⁰ but the repercussions probably have different impacts on men and women and on different communities. As a risk factor, varied experiences of historical trauma might in part explain the geographic and gender variations in suicide rates.

Political and Socioeconomic Context

At a structural level, political and socioeconomic conditions may also contribute to rate disparities. A study of First Nations communities in British Columbia found that low suicide rates were associated with a higher degree of political self-determination related to land claims and local governance but not with socioeconomic factors.⁸ The possible influence of community self-determination on suicide or other health indicators in Labrador remains unclear. Local governance and the land claims process evolved for each of the Aboriginal groups during the study period. The Labrador Inuit established their land claims agreement in 2005; the Innu Nation and NunatuKavut Community Council's land claims have not been settled, though the Innu reached an agreement-in-principle in 2011. These groups differ in the degree of control they have over natural resources and health and social services; however, these differences do not seem to correspond with inequalities in suicide.

Kirmayer suggested that the uneven distribution of socioeconomic factors might contribute to suicide rate variability in Aboriginal communities (supplemental citations can be found in Appendix A). Evidence from the general literature is mixed but seems



Note. Suicide rates are crude rates per 100 000 person-years. Results including rate ratio 95% CIs are reported in Table B (available as a supplement to the online version of this article at <http://www.ajph.org>).

FIGURE 1—Crude Suicide Rates and Rate Ratios by Age Group: Labrador and Newfoundland, Canada, 1993–2009

to show an inverse relationship between area-level poverty and suicide rates.³¹ In contrast to the British Columbia study, to some extent we found that the ASMR variations seemed inversely related to socioeconomic indicators. Labrador West had the highest personal income per capita (Table 3) and the lowest suicide rate in the region,

whereas the Southern Inuit communities had relatively low incomes but the second lowest ASMR (Table 3). By contrast, for Aboriginal communities in northern Labrador, where suicide rates were the highest, per capita income was the third lowest of any region in the province (Table 3). In addition to low incomes, families in many

of the Aboriginal communities experience food and housing insecurity.^{12,23}

The suicide rate disparities we identified are important in the context of broader social inequality because they help reveal high-risk areas where Aboriginal-specific health determinants are likely important factors. For example, many circumpolar regions are facing new public health threats related to climate change; recent studies in Inuit communities have shown that less predictable environmental conditions are decreasing safe access to the land, which in turn may affect mental health.³² This emerging evidence is part of a broader recognition of the relationships between colonial policies, marginalization, connections to the land, and disparities in Aboriginal health.^{28–30} In suicide prevention, and in Aboriginal health research in general, we continue to be challenged by calls to bridge the “epistemological divide”^{15(pe5)} between Western and Indigenous forms of evidence and approaches to intervention.

In Canada, landmark efforts such as those of the Royal Commission on Aboriginal Peoples and the Truth and Reconciliation Commission have made vital contributions to our understanding of the complex relationships between historical and contemporary social factors and inequitable health status. These works have helped reveal and give voice to the individual and collective experiences of intergenerational trauma related to Canada’s residential school system. This trauma has fostered and compounded the poor health and mental health that persists in many Aboriginal communities today.^{28–30} This understanding helps us trace the pathways that contribute to social distress and, conversely, to resilience. As suicide remains an important driver of the overall health gap between Aboriginal and non-Aboriginal people,¹⁸ knowledge of the determinants of Indigenous health must continue to inform the evolution of suicide prevention.

Suicide Prevention in Aboriginal Communities

At present, there is limited but emerging evidence of effective approaches to suicide prevention in Aboriginal populations.^{33,34} It suggests that we are most likely to prevent suicide when communities have sustainable resources and are in control of the

TABLE 3—Economic Inequality by Subregion: Labrador, Canada, 2006

Local Area ^a	Personal Income Per Capita, Canadian \$ (Provincial Rank) ^b	Families Below Low Income Threshold, % (Provincial Rank) ^c	Income Support Assistance, % (Provincial Rank) ^d
Labrador North	15 200 (73)	42.1 (77)	21.3 (74)
Goose Bay Area	27 100 (3)	19.0 (56)	10.6 (39)
Labrador West	35 800 (1)	7.9 (1)	4.5 (4)
Pinware River	20 100 (19)	13.7 (14)	4.1 (3)
Labrador East Coast	17 000 (62)	21.6 (70)	10.4 (36)
Entire Province	22 900 (NA)	18.6 (NA)	11.4 (NA)

Note. NA = not applicable.

Source. Indicators of Wellbeing, Community Accounts, Newfoundland and Labrador Statistics Agency, Government of Newfoundland and Labrador.

^aLocal Areas do not correspond exactly with subregions in the study. Pinware River and Labrador East Coast are equal to the South Coast-Straits subregion; Labrador North includes Nunatsiavut communities (except Rigolet) plus Natuashish Innu First Nation; Goose Bay area is equal to Upper Lake Melville plus Sheshatshiu Innu First Nation and Rigolet.

^bOut of 76.

^cOut of 78.

^dOut of 80.

intervention process. More specifically, the literature emphasizes the need for interventions that redress structural inequalities such as poverty, are focused on collective change rather than individual deficits, are embedded in a social context, and are rooted in culturally specific knowledge.^{8,26,28,33–36} Elsewhere, comprehensive public health interventions have successfully reduced suicide and suicide attempt rates,^{37,38} including rates among youths and rural populations.³⁸ Some components of these approaches may be relevant in some Aboriginal contexts.

Limitations and Strengths

One limitation in our study was the possibility that suicides may have been underreported or misclassified.^{10,11} Another limitation was that Canada's vital statistics registry lacks Aboriginal identifiers.¹⁹ To overcome this, we used a geographic approach similar to that used in other studies.^{3,4} Although this could result in the misclassification of non-Aboriginal deaths in Aboriginal subregions and contribute to conservative rate estimates, it is less likely where populations are predominantly Aboriginal. Another consequence of the lack of identifiers was that we could not determine group-specific rates within a subregion with more than 1 Aboriginal group, such as Upper Lake Melville. The geographic approach is also problematic because the Canadian census underenumerates Aboriginal people.¹⁹ This results in incomplete dominator data and consequently may have affected the accuracy of our mortality estimates.¹⁹

Another limitation was that we were unable to examine community-level rate variation because of small cell counts and wide CIs, which occurred even at the subregional level. Our ASMRs for Upper Lake Melville, Labrador West, and the Southern Inuit communities were less stable for these reasons, as were our estimates for specific subpopulations such as females. However, because data before 1993 was of poor quality and data after 2009 was not released for analysis, our data set was the largest, most reliable, and most up-to-date mortality data available in the province. Overall, we believe that these limitations are balanced by the comprehensiveness of the data set and a cautious interpretation of our results.

Our study also had multiple strengths. We were the first, to our knowledge, to examine suicide mortality differences by subregion and in all Aboriginal groups in Labrador. We used disaggregated data and uncovered dramatic inequalities between Innu, Inuit, and non-Aboriginal populations that otherwise might have remained hidden. Too often, health disparities are obscured in provincial and national estimates that do not detect localized differences such as the relative absence of suicide^{14,15} or are unable to distinguish between specific cultural groups.¹⁴ Although we reported select rates that were less reliable, including those for strata with counts of 0 or 1, the majority of our ASMR and age-specific rates were stable, especially when disparities were the greatest. This disaggregation offers specificity for local contexts, which is integral for Indigenous statistics.^{15,19} This approach reflects our community-based methodology, which is another strength of our study.

Community-Based Epidemiology

Epidemiological methods are often seen as incongruent with the qualitative and participatory approaches that are favored in many Aboriginal contexts.³⁹ Indeed much quantitative research in Aboriginal health is investigator driven and does not respect community governance, research priorities, or autonomy over data.^{15,39} Recent studies^{12,23,35} have demonstrated that community-based epidemiology in Indigenous contexts is both feasible and valuable, and some authors argue that this is a critical methodological shift that must take place in future research on suicide in Indigenous communities.¹⁵

Our study contributes to this literature by focusing on meeting a community-identified research need through collaborative relationships, which we demonstrated in multiple ways. We obtained research permits from our partners' institutional review committees and codeveloped research agreements related to data management and knowledge translation. We also conducted consultations to guide study planning and to develop a contextual understanding of our results. Last, we disaggregated suicide rates to provide subregional estimates. By conducting research in this manner and by reporting these

processes, we respected key ethical standards in Aboriginal health research.

As Aboriginal communities and governments continue to assert control over territories, economic resources, and health systems, this study can serve as an example of a multisector collaboration in public health research that can inform these efforts. Our results underscore the need to disaggregate data to uncover variations in local health status and identify the most vulnerable groups. In developing partnerships and sharing these results with Aboriginal groups, our study provides evidence to health system decision-makers who can then allocate resources in proportion to community need¹⁴ and support community mobilization of suicide prevention.

Conclusions

Our results confirmed that the suicide rate in Labrador was higher than that in Newfoundland and revealed that rates were elevated in 2 specific Aboriginal populations. Young males accounted for the majority of all suicides and had the highest rates in all areas, although females in Inuit communities had the greatest rate disparity. Our results illuminate an area of substantial health inequality between the 2 regions and between Aboriginal and non-Aboriginal populations. These findings reinforce the need to close the gap on health inequality between Aboriginal and non-Aboriginal communities. In Labrador, this will be aided by long-term public health approaches to suicide prevention that target high-risk subregions. **AJPH**

CONTRIBUTORS

N.J. Pollock drafted the article. N.J. Pollock and S. Muly obtained the data. N.J. Pollock and J. Valcour planned and conducted the analysis. N.J. Pollock and M. Jong liaised and consulted with Aboriginal organizations and governments in Labrador. All authors conceptualized and designed the study, interpreted the results, revised the article, and approved the final version.

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