

Reducing the incidence of suicide among Indigenous peoples worldwide: Local evidence for a global goal

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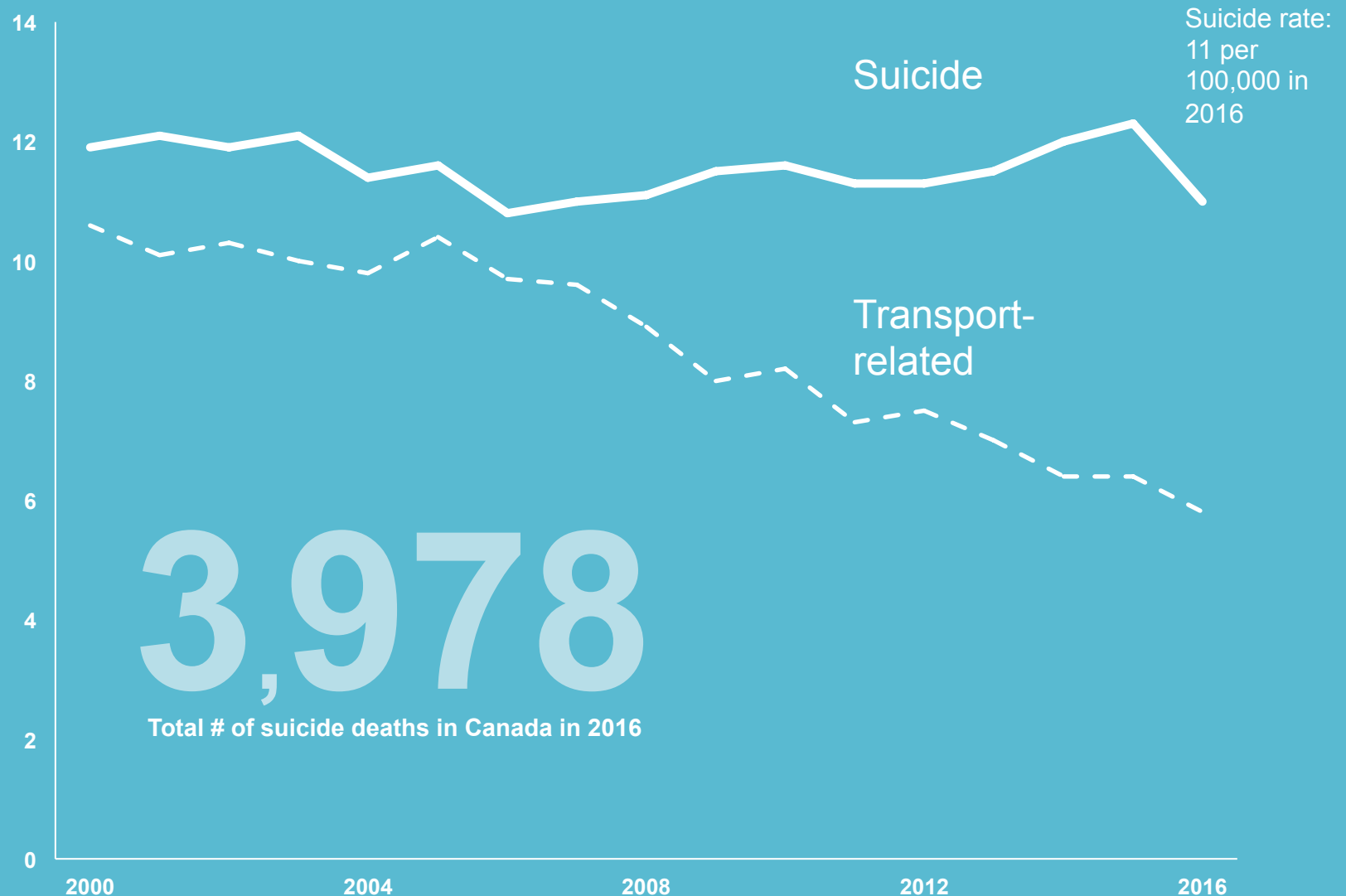
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Overview

- ① Policy context of suicide prevention
- ② Epidemiology of suicide in Labrador
- ③ Global incidence of suicide among
Indigenous peoples
- ④ Public health surveillance
- ⑤ Discussion

Suicide and transportation-related mortality rates in Canada



Policy Context for Surveillance

- WHO and SDGs
- Royal Commission on Aboriginal Peoples
- Truth and Reconciliation
- Mental Health Commission of Canada
- Federal Framework for Suicide Prevention

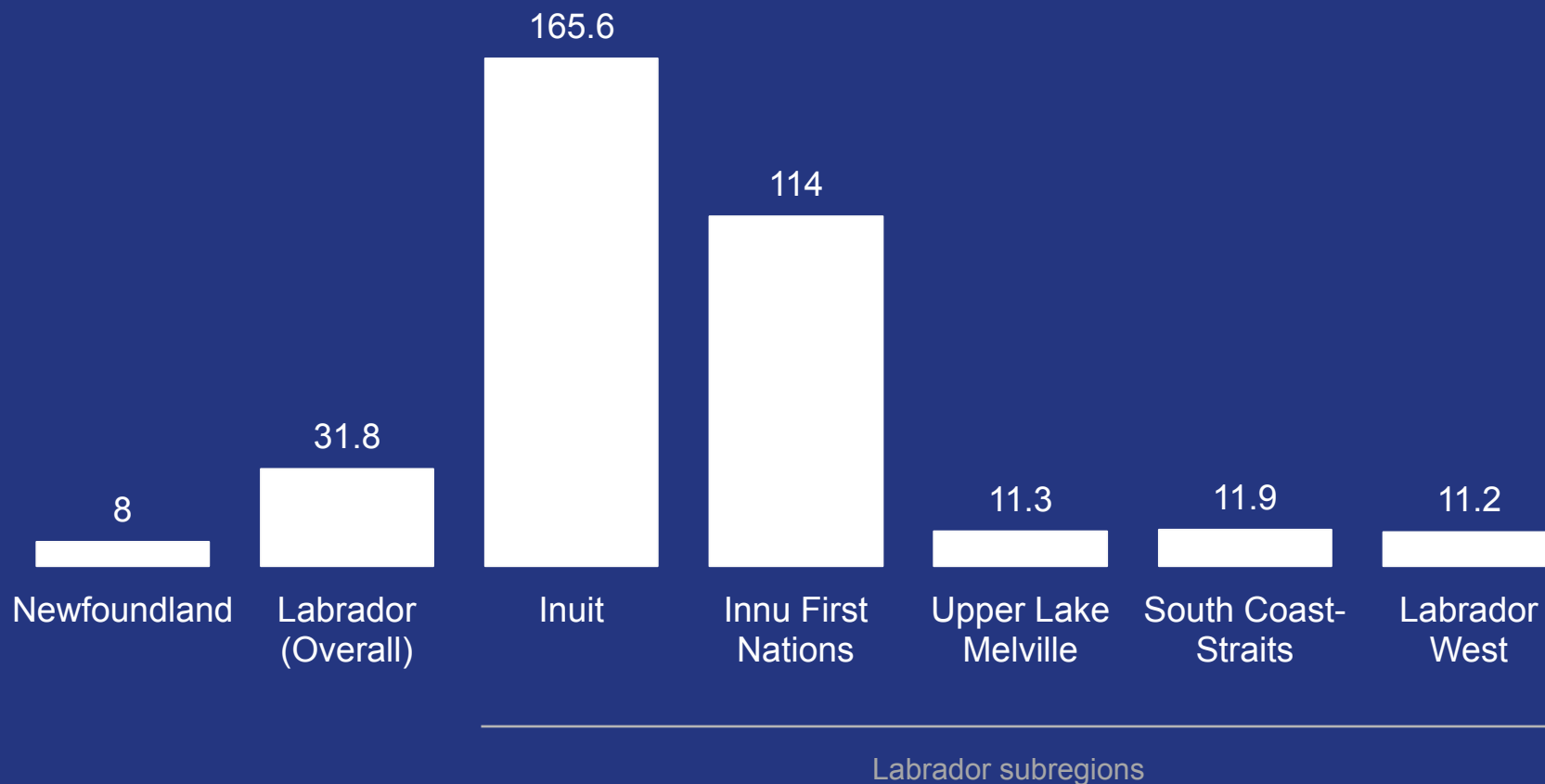
Methodology

Community-centered approach involved:

- ① Partnerships
- ② Consultations
- ③ Consent
- ④ Research Agreements

Suicide rates in Aboriginal communities in Labrador

Age-standardized suicide rates per 100,000



**In Newfoundland and
Labrador, less than 1%
of the population
accounts for 12% of all
suicide deaths**





31

**The suicide rate was 31 times higher
among women in Nunatsiavut than
among women in Newfoundland**

Suicide rates were highest among youth under 30 years old in Labrador

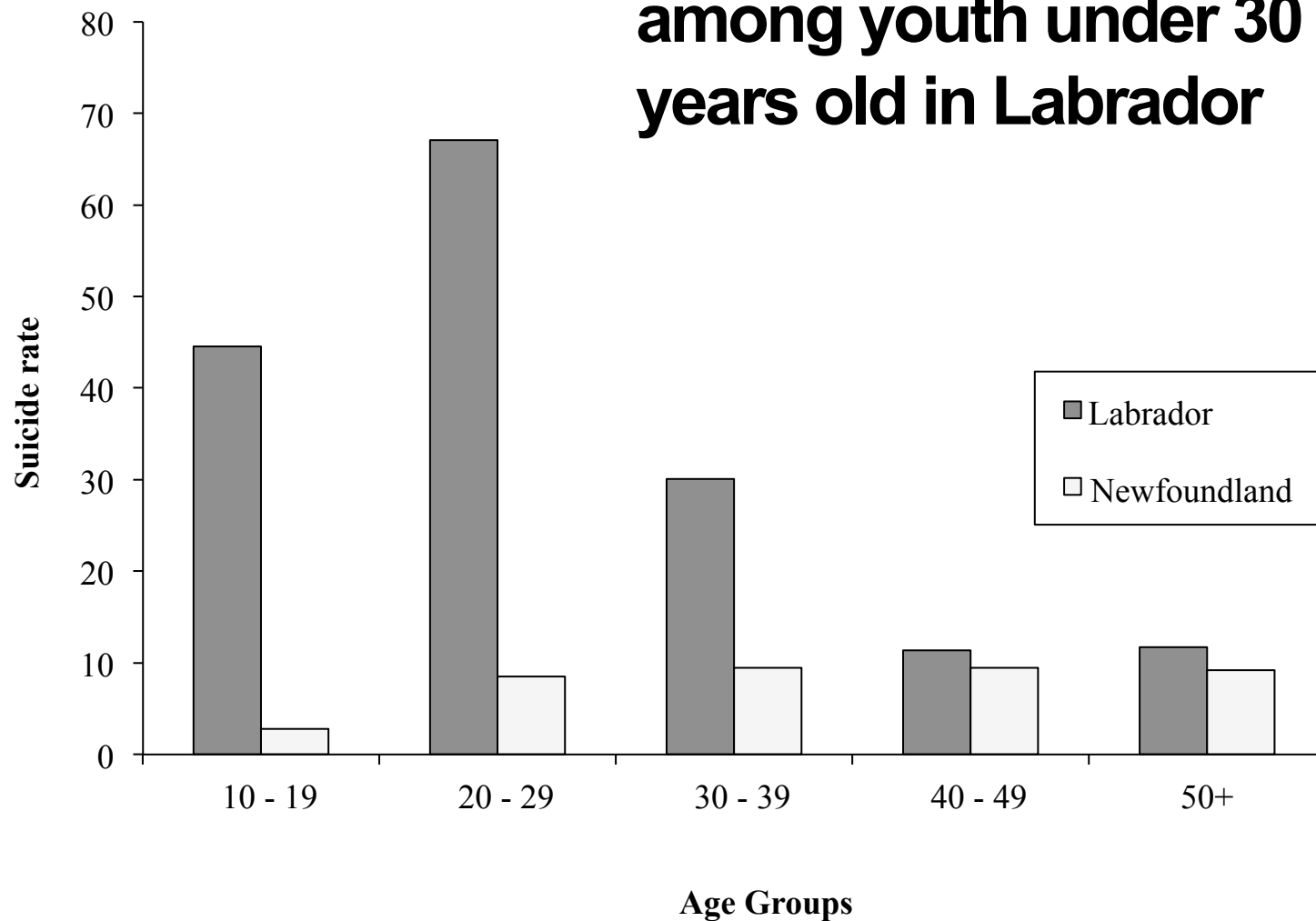
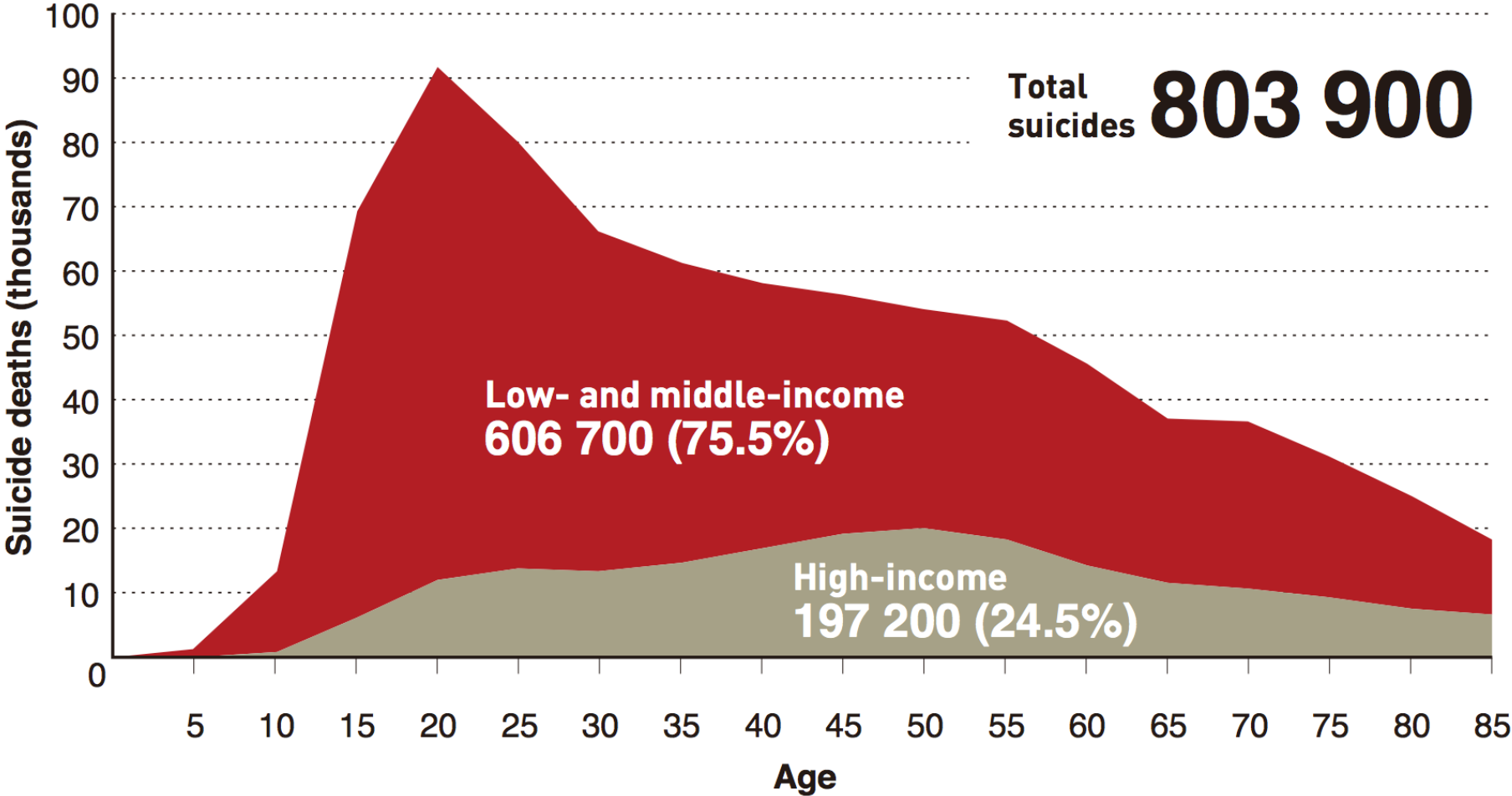


Figure 2. Global suicides by age and income level of country, 2012



Objectives

1. To examine the incidence of suicide of among Indigenous peoples globally
2. To compare rates with non-Indigenous or general populations to assess disparities

Methods

1. Systematic search for published studies in PubMed, MEDLINE, Embase, CINAHL, PsycINFO, Lilacs, SCiELO, and supplemental sources
2. Indigenous-specific search terms
3. No language or date restrictions
4. Peer-reviewed studies

Identification

Potentially eligible studies identified through
database searching and other sources
(n = 13,736)

Screening

Duplicates
(n = 7,264)

Records screened
(n = 6,472)

Screened out
(n = 6,181)

Eligibility

Full-text articles assessed
for eligibility
(n = 291)

Full-text articles excluded,
with reasons (n = 199)
Not available, n = 10
Duplicate data, n = 29
Published studies in iteration, n = 3
Not primary research, n = 31
No Indigenous population, n = 42
No population-based rates, n = 64
Evaluation study, n = 2
Not peer reviewed, n = 18

Included
(n = 92)

Included

Articles cited by
included studies
(n = 7)

Final
(n = 99)

Table 1: Overview of included studies

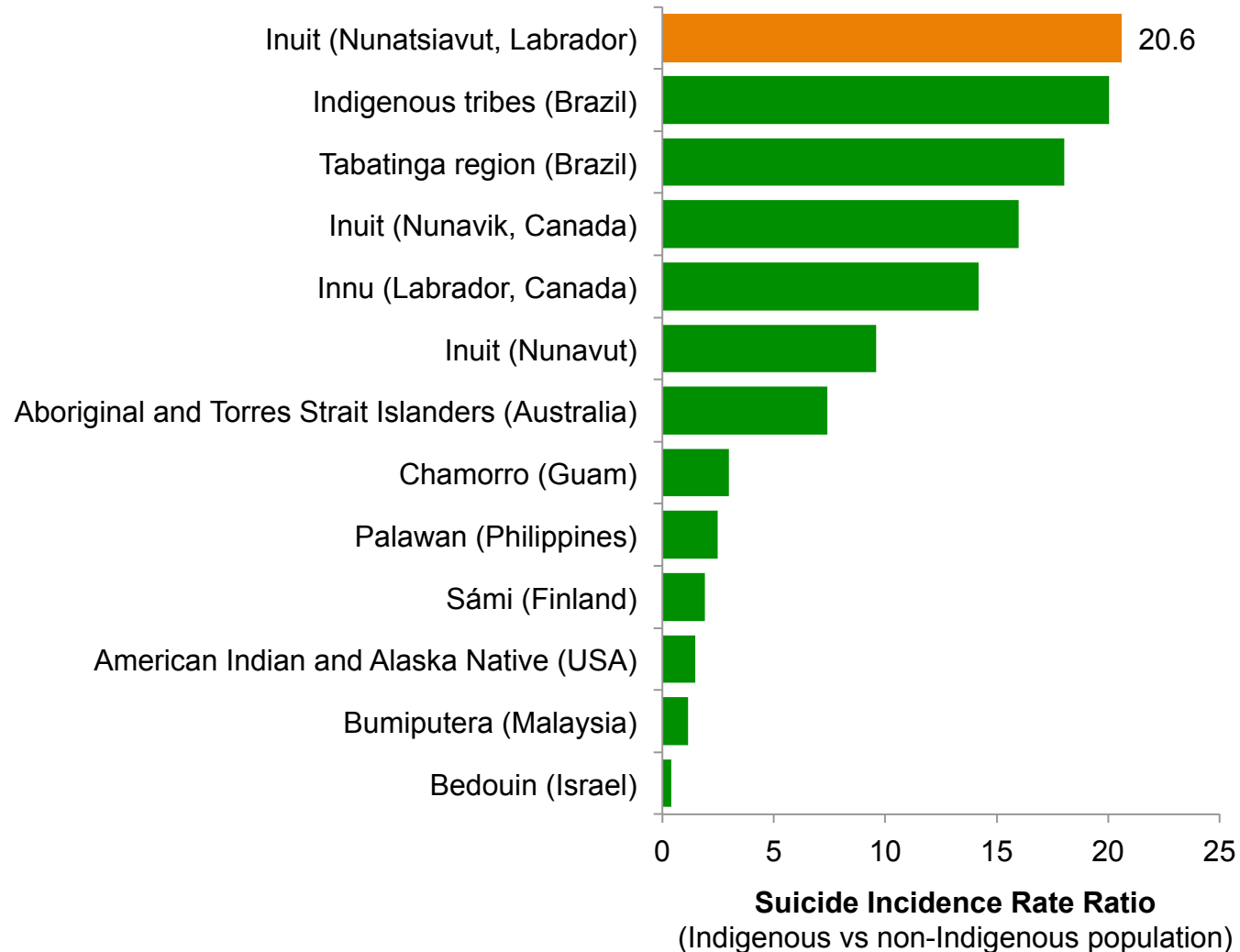
	# of studies (n =)	% of total
Decade of publication		
1960 - 1979	12	12.1%
1980's	23	23.2%
1990's	25	25.3%
2000's	17	17.2%
2010's	22	22.2%
World Bank Income		
High Income	76	76.8%
Low-and-Middle Income	22	22.2%
Multiple	1	1%
Total Indigenous population		
Less than 10,000	17	17.2%
10,000 - 99,999	32	32.3%
100,000 - 999,999	12	12.1%
1,000,000 +	4	4%
Not reported	34	34.3%
Number of suicide deaths among Indigenous population		
Under 20	18	18.2%
21 - 99	23	23.2%
100 - 999	23	23.2%
1000 +	4	4%
Not reported	31	31.3%

Selected recent suicide rates among Indigenous populations worldwide

Country	Population	Suicide Rate	Study Period
Greenland	Kalaallit (Inuit)	187.5	1970-2011
Canada	Inuit (Nunatsiavut)	165.6	1993-2009
Canada	Inuit (Nunavik)	159.8	1999-2003
Philippines	Palawan	134	2002-2012
Canada	Innu First Nations	114	1993-2009
Brazil	Guarani-Kaiowá	96.2	2000-2003
Canada	Inuit (Nunavut)	95.6	1999-2003
Russia	Nenets	79.8	2002-2012
Brazil	Tabatinga	75.8	2006-2010
Australia	Aboriginal & TSI	74	2005-2014
Finland	Sámi	50	1979-2005
USA	Alaska Native	42.4	2004-2008
USA	American Indian	21.1	1999-2010
Guam	Chamorro	21	1998-2000
Sweden	Sámi	11.7	1961-2000
Israel	Bedouin	3.2	1999-2011
Tonga	Tongan	2.9	1982-1997
Brunei Darussalam	Indigenous tribes	1.7	1991-2010
Vanuatu	ni-Vanuatu	0.8	2010
Malaysia	Bumiputera	0.4	2009

NOTES: *Suicide rates are deaths per 100,000 population. Rates are crude or age-adjusted with various standard populations used for calculations. **TSI=Torres Strait Islanders

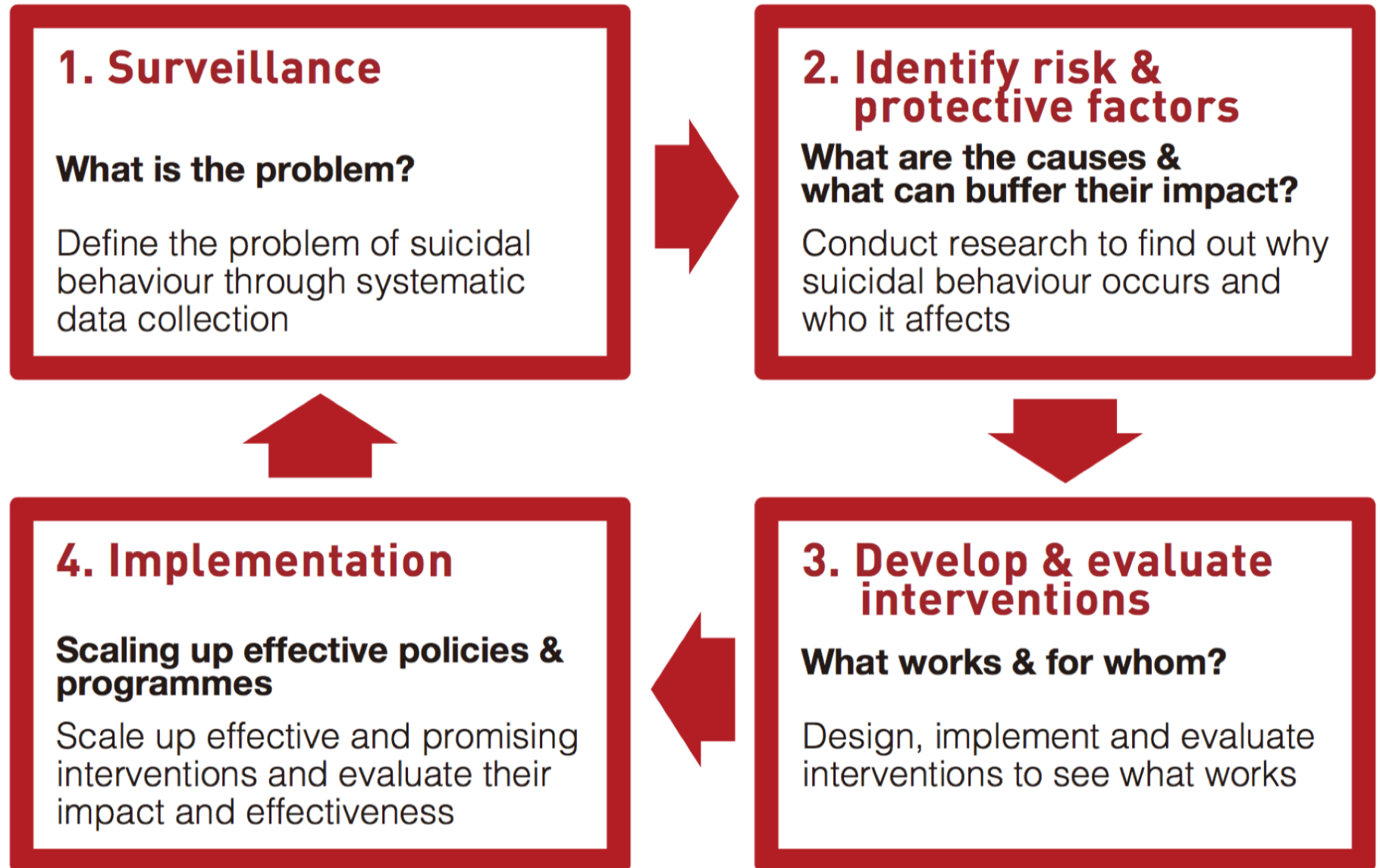
Figure 2: Disparities in suicide mortality between Indigenous and non-Indigenous populations from select recent studies



TRC Call to Action

“We call upon the federal government, in consultation with Aboriginal peoples, to establish measurable goals to identify and close the gaps in health outcomes between Aboriginal and non-Aboriginal communities, and to publish annual progress reports and assess long-term trends”

Figure 1. The public health model



References

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- Pollock, N. J., Healey, G. K., Jong, M., Valcour, J. E., & Mulay, S. (2018). Tracking progress in suicide prevention in Indigenous communities: a challenge for public health surveillance in Canada. *BMC Public Health*, 18(1), 1320. doi:10.1186/s12889-018-6224-9

Community Partners



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Institutional Support



Thank you.

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Table 4.2 Crude and ASMR per 100,000 per Year and Rate Ratios for Suicide by Region and Gender: Labrador and Newfoundland, Canada, 1993–2009

Region (Aboriginal Group), Gender	Suicide Deaths	Person-Years	Crude Rate ^a	ASMR ^a (95% CI)	ASMR Ratio (95% CI)
Newfoundland (Ref)					
Male	522	3,672,450	14.2	14.0 (12.8, 15.2)	1
Female	95	3,875,800	2.5	2.4 (1.9, 2.9)	1
Both	617	7,549,140	8.2	8 (7.4, 8.7)	1
Labrador					
Male	110	206,050	53.4	55.1 (44.1, 66.1)	3.9 (3.2, 4.9)
Female	18	199,125	9	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	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)
Both	28	20,435	137	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	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)
Both	14	156,990	8.9	11.2 ^c (4.1, 18.3)	1.4* (0.7, 2.7)

Notes: 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.

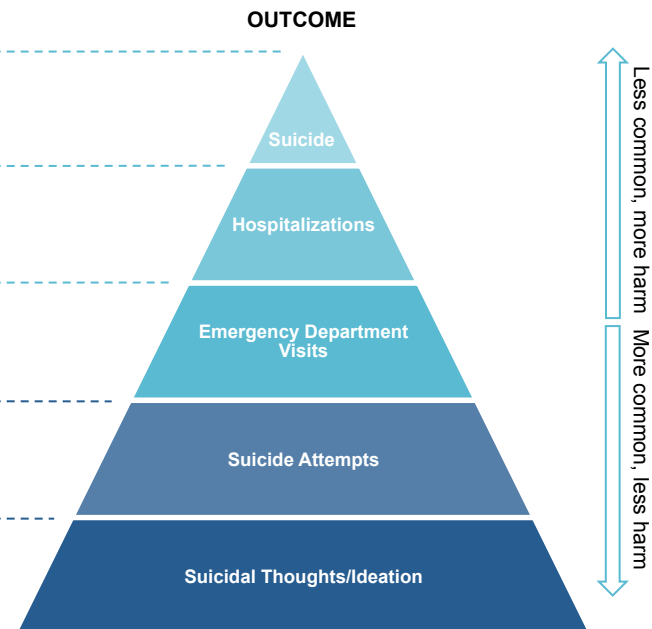
^cRSE is >.25% for the ASMR; therefore, the rate estimate is less reliable and should be interpreted with caution.

* RR 95% CI includes 1, therefore rates are not significantly different

Figure 1(a): Suicide Surveillance Indicator Framework^a

INDICATOR MEASURE	DATA SOURCE & CUSTODIAN
Suicide rate Mortality rate for deaths due to intentionally self-inflicted injury (Incidence of deaths per 100,000 population) ^b	Canadian Vital Statistics Database – Mortality Statistics Canada
Hospitalization rate for self-injury Suicide attempts and non-suicidal self-harm related to injuries or poisoning (Incidence of admissions per 100,000 population)	Discharge Abstract Database Canadian Institute for Health Information
ED^c visit rate for self-inflicted injury Suicide attempts and non-suicidal self-harm related to injuries or poisoning (Incidence of visits per 100,000 population)	National Ambulatory Care Reporting System Canadian Institute for Health Information
Prevalence of suicide attempts % of the population ^d who report having attempted suicide (in the past year or lifetime)	Canadian Community Health Survey Statistics Canada
Prevalence of suicidal thoughts/ideation % of the population ^d who report having serious thoughts about suicide (in the past year or lifetime)	Canadian Community Health Survey Statistics Canada

Figure 1(b): Iceberg Model of Suicide



NOTES: (a) Suicide Surveillance Indicator Framework is based on model by the Public Health Agency of Canada (2017);³² (b) Suicide mortality rates are typically calculated based on data from the population ≥ 10 years old; (c) ED = Emergency Department; (d) Age ≥ 15 years old;