



HIV diagnoses in indigenous peoples: comparison of Australia, Canada and New Zealand

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ABSTRACT

In industrial countries, a number of factors put indigenous peoples at increased risk of HIV infection. National surveillance data between 1999 and 2008 provided diagnoses for Aboriginal and Torres Strait Islanders (Australia), First Nations, Inuit and Métis (Canada excluding Ontario and Quebec) and Māori (New Zealand). Each country provided similar data for a non-indigenous comparison population. Direct standardisation used the 2001 Canadian Aboriginal male population for comparison of five-year diagnosis rates in 1999–2003 and 2004–2008. Using the general population as denominators, we report diagnosis ratios for presumed heterosexual transmission, men who have sex with men (MSM) and intravenous drug users (IDU). Age standardised HIV diagnosis rates in indigenous peoples in Canada in 2004–2008 (178.1 and 178.4/100 000 for men and women respectively) were higher than in Australia (48.5 and 12.9/100 000) and New Zealand (41.9 and 4.3/100 000). Higher HIV diagnosis rates related to heterosexual contact among Aboriginal peoples, especially women, in Canada confirm a widening epidemic beyond the conventional risk groups. This potential of a generalised epidemic requires urgent attention in Aboriginal communities; available evidence can inform policy and action by all stakeholders. Although less striking in Australia and New Zealand, these findings may be relevant to indigenous peoples in other countries.

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1. Introduction

In Australia, Canada and New Zealand, indigenous people account for 2.5%, 3.8% and 15.5% of the populations

respectively. These wealthy nations have comprehensive publicly funded health care systems yet there are major health disparities between non-indigenous populations and indigenous peoples in Australia (Aboriginal and Torres Strait Islanders),^{1,2} Canada (including First Nations, Métis and Inuit)^{3,4} and New Zealand (Māori).^{5–7}

Several countries report high rates of HIV infection among indigenous peoples.⁸ A study of HIV prevention

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among indigenous people is under way in Australia,⁹ Canada¹⁰ and New Zealand,¹¹ focusing on health related resilience and its relationship to the HIV epidemic. In this context, we compared rates of new HIV diagnoses in Australia, Canada and New Zealand to inform HIV prevention for indigenous peoples.

2. Methods

2.1. The surveillance programmes

2.1.1. Australia

HIV testing is free, widely available and done with informed consent. There is a legal obligation on the diagnosing doctor or HIV reference laboratory to report newly diagnosed HIV to the State or Territory health authority. These authorities send to the National HIV Registry details including sex, date of birth, date of diagnosis, self-reported indigenous status and self-reported exposure to HIV.

2.1.2. Canada

HIV infection is notifiable throughout the country with non-nominal data collated for national surveillance by the Public Health Agency of Canada. Health care providers consult with newly-diagnosed cases on ethnicity (including indigenous status) according to predefined categories. Ontario and Quebec do not report ethnicity information to the national level so we excluded these provinces, which account for some 30% of indigenous and 60% of non-indigenous Canadians.

2.1.3. New Zealand

Reporting is not obligatory but laboratories conducting confirmatory Western Blot testing have collated new cases since 1985. Indigenous status data were not collected before 1996, since which time the clinicians who arranged HIV testing provided anonymous information on indigenous status. Since 2002, laboratories performing viral load tests also provided reports. Western Blot or first viral load test in the study period confirmed each case reported here.

2.2. Identification as indigenous and non-indigenous persons

In Australia, identification as Aboriginal or Torres Strait Islander requires that the person is of this descent, that the person identifies as of this origin and their community accepts them.¹² In Canada, Aboriginal identification relies on self-reporting as First Nations, Inuit, Métis or 'Indigenous Not Specified'. In keeping with the New Zealand national census, a person is Māori who identifies as Māori and has Māori ancestry.

In Australia, non-indigenous rates exclude cases from sub-Saharan Africa, Burma, Cambodia and Thailand. In Canada, only HIV cases identified as 'White' were the reference group; non-indigenous figures presented here do not include other ethnic/racial groups in Canada. Similarly, in New Zealand the non-indigenous rates were those for European ethnicity.

From national surveillance systems of each country, we extracted new diagnoses of indigenous and non-indigenous cases along with age, sex, and exposure category during two five-year periods: 1999–2003 and 2004–2008. During these periods there was no screening in indigenous communities and testing was voluntary in all three countries. All countries tested donated blood and HIV testing was available in antenatal care.

2.3. Statistical methods

We based direct age standardisation of HIV diagnosis rates on the 2001 Aboriginal male population in Canada to allow inter-country comparison of overall rates. We had no reliable population figures for the number of men who have sex with men (MSM), intravenous drug users (IDU) or heterosexual people in each country. To facilitate comparisons, we calculated exposure-specific diagnosis ratios, recognising these dramatically underestimate actual diagnosis rates. We divided male heterosexual, MSM and male IDU by the male population aged 15–64 years and the female heterosexual and female IDU by the female population aged 15–64 years. We classified men reporting infection through same sex contact, but who also used injection drugs, as MSM.

3. Results

For the decade 1999–2008, Australia, Canada and New Zealand respectively analysed 7589, 5838 and 923 cases of new HIV diagnoses in people aged 15 years and older, of whom were 185, 1799 and 129 respectively were indigenous. Information on indigenous status at HIV diagnosis was not available for 518 cases in Australia, who we excluded from the analysis.

3.1. Indigenous and non-indigenous rates

Indigenous and non-indigenous men in Australia and New Zealand had similar age standardised rates of HIV diagnosis. In Canada, the rate of HIV diagnosis in indigenous men was four-fold that of non-indigenous men (Table 1). Across the three countries, non-Indigenous diagnosis rates were generally higher in men than in women. While male non-indigenous rates were similar across the three countries, rates for non-indigenous Canadian women were at least double those of non-indigenous women in Australia and New Zealand.

3.2. Time trends

In Australia, HIV diagnosis among indigenous women was six and three times higher than that in the non-indigenous population in 1999–2003 and 2004–2008 respectively. In Canada, HIV diagnosis among indigenous women was 14 times more common than among non-indigenous women in 1999–2003, the gap increasing to almost 20 times the non-indigenous rate in 2004–2008. Rates of HIV diagnosis among non-indigenous men showed a small increase over time, particularly in the 40–49 year age group. In Canada there was a drop in diagnosis among

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