An introduction to oral health inequalities among Indigenous and non-Indigenous populations

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Indigenous People

- UN has no official definition of “indigenous people”

- Estimated 370 million Indigenous people in the world (WHO, 2007)

- Internationally, Indigenous populations are considered vulnerable because of their susceptibility to health-related outcomes and events (United Nations, 2008).
International Data

- In most countries, systematic oral health data on a national scale is lacking.

- There is some information from a limited number of national oral health surveys that reveal important findings.

- National surveys often not truly representative of Indigenous groups.
Overview

• AIM:
  – to provide background information on the oral health inequalities experienced by Indigenous populations residing in the United States, Canada, Brazil, Australia and New Zealand.

• the five nations were selected for reasons pertaining to availability of oral health-related inequality information
United States of America

• Indigenous people: those who identify as being American Indian or Alaska Native

• United States government recognises more than 560 American Indian or Alaska Native tribes and communities.

• Indigenous people are estimated to compromise 1.4 percent of the total United States household population. (US Census Bureau 2007).
United States of America

- Indian Health Services 1999 survey:
  
  Children:
  - 2–5 year olds: 68% had untreated dental decay, 3x more than children in the general population
  - 6–12 year-olds: untreated dental decay in both the primary and permanent dentition ranged between 60% and 75%
  - for the permanent dentition, 46% of American Indian or Alaska Native children had untreated decay compared to 11% of their counterparts

  Adults:
  - 68% of 35–44 year-olds had untreated decay
  - Mean DMFT of 14.4.
  - 61.3% aged 55+ years had untreated decay and a mean DMFT of 16.2 (IHS, 1999).
Canada

• Indigenous people: those identifying as North American Indian (First Nations people), Métis and Inuit.

• Total Indigenous Canadian population increased by 45% in the last decade, to almost 4% of the total population (Statistics Canada 2008).

• Until 1996, national health surveys in Canada specifically excluded First Nations people living on reserves and Inuit communities in the provinces (FNIRHS, 1997).
Canada


- 1996: 95% of six-year-olds and 89% of 12 year-olds had experienced dental caries (FNIRHS, 1997).

- Around 22% of respondents reported experiencing dental pain or problems in the past month (FNIRHS, 1997).
Canada


• For adults, revealed increasing dental treatment needs for all types of services since 1997, particularly for urgent dental care.

• Youth (12-17 years): 79% reported having received dental care within the past year, however, nearly 37% reported needing restorative work and 19% reported experiencing dental pain in the previous month.

• Pre-school-aged children:
  – 11% of 1–2 year olds had received restorations
  – prevalence of early childhood caries estimated as being approximately 12% for 0–2 year olds and 29% for children 3–5 years.
Brazil

- The Indigenous population in Brazil totals approximately 735,000 people, based on those self-declaring Indigenous status in the national census.

- Referred to as Indians, the Indigenous groups are a diverse population, representing many different language and distinct cultural bands (Instituto Brasileiro de Geografia e Estatística, 2005).
Brazil

- Need for preventive care and caries treatment for children and adolescents has been demonstrated. (Carneiro et al 2008; Arantes et al 2001)

- High levels of untreated dental caries and low levels of restored and missing teeth signify the lack of access to appropriate dental services for Indian communities. (Rignotto et al, 2001; Carneiro et al 2008; Arantes et al, 2001)

- Regional survey:
  - 22% of children 0–5 yrs were caries-free;
  - 5–7 years mean dmft of 8.5
  - adults over fifty years a DMFT of 19.3
  - caries experience of Indian children in this region was greater than that of children in other Brazilian studies (Rignotto et al, 2001).
Australia

- 2.5% of the Australian population self-identify as being of Aboriginal or Torres Strait Islander descent (ABS 2008).
- National estimates indicate that Indigenous Australians have
  - higher rates of edentulism,
  - higher percentage of reported toothache,
  - lower mean number of dental visits
  - more likely to visit for a problem rather than for a check-up
  - receive lower mean number of dental fillings compared to the non-Indigenous population (Brennan and Carter, 1998; AIHW, 2000).
Australia

• 2.3 fold difference in the prevalence of untreated coronal decay between Indigenous and non-Indigenous Australians (Roberts-Thomson and Do, 2007).

• Despite the general improvement in children’s oral health and decreasing levels of dental caries from 1977 to 1993, caries levels among Indigenous children have increased (Cooper et al 1987, Davies et al 1997).

• Twice the levels of dental caries in both the deciduous and permanent dentitions of children than their non-Indigenous counterparts, with a greater proportion of untreated decay (ARCPOH 2004; Jamieson et al., 2007).
New Zealand

• Indigenous people are those with Māori ancestry, forming approximately 17% of the population in 2006 (Statistics New Zealand 2007).

• No recent national-level oral health data available.

• Community-level studies have consistently demonstrated that Māori children are around 3 times more likely than non-Māori to have experienced dental caries than non-Māori children (Thomson et al 2003; Thomson 1993; Thomson et al 2002).
New Zealand


- In both fluoridated and non-fluoridated areas, Māori children have higher caries experience and less children caries-free than their non-Māori counterparts for both deciduous and permanent dentitions at ages 5 and 12 respectively (Lee, Dennison 2004).
Discussion

• Notable similarities in oral health inequalities exist for all Indigenous groups discussed, despite the marked differences in geography, culture, language and history experienced by these groups.

• Evidence suggests that these inequalities are increasing.
Key factors contributing to inequalities

**Historical factors**

- Indigenous peoples have experienced attempts to have their identities negated and erased.

- Indigenous populations consistently suffering isolation, discrimination and alienation.

- Such upstream factors are known to strongly influence health outcomes (Paradies, 2006).
Key factors contributing to inequalities

*Culturally inappropriate oral health service provision*

- Evidence suggests that the general oral health service provision framework is not an appropriate form of providing oral health care to Indigenous populations (Nash and Nagel, 2005).

- Service provision frameworks are typified by a Western ideology that does not embrace the holistic approach to health favoured by Indigenous peoples (Hughes, 2004).

- Cultural factors become an additional barrier when oral health care providers ignore or undermine traditional medical practices, attitudes and health knowledge.
Key factors contributing to inequalities

**Geographic factors**

- Many Indigenous communities in the five observed nations are rurally or remotely located, and consequently do not have access to clean water, adequate sewage systems, electricity or paved roads.

- All of these affect both oral health service provision and the regular supply of both oral health-promoting foods (for example, fresh produce) and oral self-care devices (for example, toothbrushes and toothpaste).
Key factors contributing to inequalities

**Social determinants**

- Without exception, the Indigenous populations in each of the five observed nations are socially impoverished in relation to their non-Indigenous counterparts (United Nations, 2008).

- The role of social determinants in oral health is undisputed, with social disadvantage being one of the strongest predictors of poor oral health outcomes, over and above individual-level risk factors such as high sugar diet and infrequent tooth brushing (Poulton et al., 2002).
Key factors contributing to inequalities

Reliable national level data

• The lack of regularly collected, reliable and representative Indigenous oral health information available at a national level contributes to the continued marginalisation of Indigenous populations.

• Difficult to monitor oral health-related outcomes and to implement programs to maintain, promote or restore oral health.
Conclusion

• The oral health inequalities experienced by Indigenous populations in the United States, Canada, Brazil, Australia and New Zealand are marked.

• There is a need for:
  – Measures that embrace the historical context, geographic barriers, social determinants, culturally-appropriate oral health service provision
  – Population and individual preventive programs
  – National level Indigenous oral epidemiological surveys
References

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