

Indoor air quality issues in First Nations and Inuit communities in Canada

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for Environmental Health**



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for Environmental Health

Centre de collaboration nationale
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Why look at the state of knowledge?

- National picture of First Nations environmental health
- Identify Needs & Gaps



Background

- **Aboriginals account for 3.8% of the total pop. of Canada**
- **Aboriginals include First Nations (60%), Métis (33%) and Inuit (4%)**
- **All are young, fast-growing pop., nearly 6 times faster than non-Aboriginal pop.**



Inappropriate Housing

- Housing shortage
- Culturally unfit houses
- Overcrowding
- Poor ventilation
- Moisture build-up
- Biological contamination (mould)
- ETS, wood heating
- Chemical contaminants (Co₂, lead)



Health issues

- **Elderly, young children and chronically ill most vulnerable.**
- **Communicable diseases (TB), respiratory diseases, otitis media, allergies**



Gaps

- **Lack of data on indoor air as a determinant of health**
- **Two relevant studies demonstrated an association**



Most relevant study

Chisabi community, people living in houses with mould had (Harris Giraldo *et al.*, 2000):

- **3 times greater risk of developing sinus problems,**
- **2.2 times greater risk of having a chronic cough with sputum,**
- **3.5 times greater risk of having a chronic runny nose**
- **1.9 times of developing depression**

When the community was moved away from these houses, people reported improvement in their health

Most relevant study

- **Kovesi et al (2007) studied how reduced ventilation was associated with LRTI in Inuit children (Qikigtaaluk)**
- **Reduced ventilation and crowding may contribute to the observed excess of LRTI**
- **Unclear whether reduced ventilation and crowding are a risk marker (reflecting association) or a risk factor (reflecting causation)**

Poor Indoor Air Quality

Main factors of Poor IAQ:

- Insufficient funding
- Improper construction
- Inadequate ventilation
- Overcrowding
- Lack of ownership on reserve
- Lack of proper maintenance
- Culturally unfit houses



Gaps

- **Extent of mould contamination nationally not known**
- **Total cost of dealing with problem not known**
- **Jurisdictional ambiguity and challenges**
- **More community case and intervention studies are needed**



Research with Aboriginal Communities

**Any research must be one not only for, but also
with, and preferably by affected Aboriginal
communities and persons**

Partnership models

Guidelines:

- Guidelines for Health Research involving Aboriginal People (CIHR at: <http://www.cihr-irsc.gc.ca/e/29339.html>)
- Local guidelines (Northwest Territories)

Papers such as :

- “Ethic of Aboriginal Research” (Castellano MB, 2004 *J Abor Health* 98-114).
- Elias B., 2004. The politics of trust and participation: “A case study in developing First Nations and University Capacity to build Health Information systems in a first Nation Context” *J Abor Health* 68-77

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Thank you



Questions?