

**THE EFFECT OF HOUSING CONDITIONS ON HEALTH
IN THE CREE COMMUNITY OF CHISASIBI, EYYOU
ISTCHEE, NORTHERN QUEBEC, CANADA: A
QUANTITATIVE STUDY.**

SUMMARY

Robert Harris-Giraldo, MD, MPH, CCFP¹

Karine Soares, BA[&]

Amelie Hebert¹

Joanne Matowahom-

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¹ Dr. Harris-Giraldo is a Public Health Physician and the Director of the Public Health Department of the Cree Board of Health and Social Services of James Bay. He is a Family Physician at the Chisasibi Hospital of the Cree Board of Health and Social Services of James Bay. He is a part-time Faculty Lecturer with the Department of Family Medicine of McGill University.

[&] Ms. Soares is a Master of Sociology student presently completing her thesis with the Department of Sociology of the University of Montreal.

¹ Ms. Hebert is a medical student at Laval University.

- Ms. Matowahom is a Community Health Representative with the Cree Board of Health and Social Services of James Bay.

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Address all correspondence to: Robert Harris-Giraldo, Public Health Team, Cree Board of Health and Social Services of James Bay, Chisasibi, Quebec, J0M 1E0, Tel. 819 855 2844, Fax 819 855 2867, e-mail: rharris@creenet.com

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“Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care...”

*Article 25,
Universal Declaration of Human Rights*

EYYOU ISTCHEE: THE CREE TERRITORY OF EASTERN JAMES BAY



INTRODUCTION

Chisasibi is the largest of the nine communities of the Eastern James Bay Cree Territory, Eeyou Istchee. Between 1979 and 1980, the entire village was relocated to its present place from its original location in Fort George Island, at the mouth of the Chisasibi (La Grande) River. The move was related to the construction of the La Grande James Bay Hydroelectric project. Because the flow of the La Grande River doubled, there were fears that erosion would put the population of Fort George Island at risk.

During the move, 210 housing units suffered structural damage. In the new site, 90 new houses were built. But recent evaluation of those units found them to be of substandard quality.

“After relocating, it was very cold, very moldy; you could smell it and mice came in. The sewage was blocking... you could smell and the house became worse. The sickness came...”

Chisasibi resident

By mid-1993, physicians had noted a growing number of complaints about health problems made worse by the old houses (those moved from the Island and those first built in Chisasibi). The physicians wrote multiple letters to the Housing Department of the Cree Nation of Chisasibi recommending an improvement in the housing conditions.

By 1998, the Cree Nation of Chisasibi found that there were no funds available to carry out the housing renovations so urgently needed. They requested that the Cree Board of Health and Social Services of James Bay write a report on housing and health in Chisasibi. A qualitative study on housing and health was carried out and became a key part of the December 1998 claim to the Federal Government.

SYNOPSIS OF THE 1998 QUALITATIVE RESEARCH STUDY ON HOUSING AND HEALTH IN CHISASIBI

The study used qualitative research methods, including reviews of the medical charts. Fourteen key informant interviews were conducted in the Cree language or in English and the field notes were analysed with the NUD*IST computer program. An independent engineering firm made a report on the condition of the houses.

The objective was to determine whether poor housing conditions existed in Chisasibi, whether there are poor health outcomes in Chisasibi and whether there was a link between the poor housing conditions and the poor health.

The literature review showed that there are poor health outcomes in Chisasibi. Respiratory health is worse than the rest of Quebec and Canada: People are hospitalised twice as often, stay in hospital 3 times longer, the death rate is 2.6 times greater and 10

times as many potential years of life are lost due to respiratory problems. Young children appear to have a higher incidence of reactive airway disease similar to that described in other studies investigating moulds and health.

There are poor housing conditions in Chisasibi. The engineering report shows that the visible indoor mould growth is corroborated by multiple positive fungal cultures; there are large airborne fungal concentrations, in particular of *Aspergillus* and *Penicillium*. There is musty odour, water damage, high indoor humidity (50-80% as compared to a recommended 30%), limited ventilation and few extractor fans. There are high mite allergen levels and overcrowding (7.2 persons per house, the highest in Quebec).

There is a link between poor housing conditions and poor health. The literature review found that studies conducted around the world show a strong association between poor housing conditions and poor health. Home dampness and moulds lead to respiratory problems, decreased immunity and headaches. Mites lead to allergies and worsening of asthma. Mycotoxins from fungi have been reported to cause renal (kidney) failure and encephalopathy (brain damage).

The people living in the "sick" houses reported housing problems and health problems identical to those reported in the world literature:

- **Odours, strong smells:** *A...we started to have problems about the septic tank. The smell was very bad, sometimes we couldn't sleep in the house because of the smell. We went to our daughter in her apartment... Sometimes we couldn't eat (because) of the bad smell@. AThe smell of moulds is building up when water leaks into the walls@.*
- § **Mould and fungus:** *Aln the washroom, the vent, they keep fixing it, but it doesn't work. All the dampness stays and it=s black all over the bathtub and fungus everywhere. It is not improving at all. When somebody takes a shower, all the water goes down to the basement through the hole in the floor between the bathtub and the toilet bowl. The floor in the bathroom is all rotten, it might fall down in the basement one day@.*
- § **Sewage backup:** *ASometimes, the water from the sewage was backing up and the smell was very bad. One time, the sewage was all over the basement floor. Not only water, there was toilet paper and shit@.*
- § **Asthma:** *"My wife started to have asthma after they moved to the old house".*
- § **Wheezing:** *AI used to have headaches, very bad colds and wheezed all the time... the basement, which I felt affected my colds and wheezing@.*
- § **Nausea:** *AMy wife was OK, but she didn't like the smell. She felt like vomiting. It was very bad for us, I don't know how many years@.*

Dry air and poor ventilation, dust, and high electrical bills were other concerns.

The people also reported improvement in their health when they moved away from the "sick" houses:

§ *AThere is a difference if we go to my camp in the bush for two weeks. We don=t have any problems; everything seems to be back to normal. No colds, no asthma, nobody has a bleeding nose, no sneezing. Maybe because my house over there is bigger, much bigger@.*

§ *AWe stayed away in Montreal for three years. The air (in the house) is more fresh. Back in the old house, the problems start again. If we go out in the bush for two weeks, my baby was doing fine, my wife also; my children and I were fine. Back, entering the house, the same@.*

The Case of “Julie”

A documented case history reinforced the causal association between poor housing and poor health. A 60-year-old woman who had an average of 18 emergency room visits per year for asthma exacerbations moved to a newly built house. In her new house, she only had an average of 4 emergency room visits for the same cause. When a very sick family member was released from hospital, she had to return to her old “sick” house. The number of visits again increased, this time to 8 per year.

AI was just as sick as before I moved to my new house, but I didn=t bother going to the clinic as often because I knew that it wouldn=t make a difference. They couldn=t do anything there, the real problem was the house@.

Her symptoms while in the Asick@ house were severe:

AMany times I could not go to work due to colds, headache and asthma. One time I had a cold for one whole year@. AI used to have headaches, very bad colds and wheezed all the time. It seems I was always in poor health throughout years since living in the old house. We also had a lot of problems with dust and moulds@.

She experienced clear relief in her new house:

A...in my new house, I have less colds and less headaches. I only use my puffer when I have bad colds and I find that my asthma acts up only when I have colds@.

The researchers concluded that the qualitative study demonstrated a clear association between poor housing conditions and poor health and recommended that immediate action be taken to correct the situation.

SYNOPSIS OF RESULTS OF 2000 QUANTITTATIVE STUDY ON HOUSING AND HEALTH IN CHISASIBI

At the end of the qualitative study, there was a request by the Cree Nation of Chisasibi to complete a detailed quantitative survey to further define the impact of poor housing on health. The design of the survey was community-based and participatory. The questionnaire was developed using previous scientific studies and with input from the Cree Nation of Chisasibi housing department staff and with the participation of high school students. Youth were hired and trained to conduct the house-to-house interviews. In total, 80% of households were interviewed. Complex data analysis was carried out with Dr. John D. O'Neil, Professor and Director of the Northern Health Research Unit, Community Health Sciences, University of Manitoba.

- 435 houses were surveyed, with 2689 persons.
- There was an average of 6.25 persons per house.
- On average, 6 persons share 1 bathroom, much higher than the Canadian average.
- 1.9% of people (50 persons) did not have a bedroom, they slept in the living room.
- 41% of houses have more than 6 persons living in the house.
- 41% of houses are overcrowded (using the definition of the Quebec Occupancy Standards).

Age Distribution

- 47% of the population is under the age of 20 years old.
- 67.4% of the population is under the age of 30 years old.

Such a young population means that there will be a great increase in housing needs in the near future.

Problems reported with the houses

- 43% of houses reported problems with moulds.
- 68% of the houses report structural problems such as sagging ceilings, bent walls, uneven floors, etc. The engineers reported that these problems were either related to poor building standards or to the damage suffered during the move from Fort George Island.
- 58% of households reported that sand coming in through their windows was a major problem. All residential streets in Chisasibi are unpaved. With the lack of ventilation systems in the houses, the windows must be opened.
- 36% of houses have windows that cannot be opened.
- 35% of houses have boarded-up windows.
- 53% of houses do not have a working air exchanger.
- Houses with a working air exchanger have fewer moulds. Of houses without working air exchangers, 62% had moulds, compared to only 23% of houses with a working air exchanger.

Overcrowding

- 45% of households had the perception that they were overcrowded.
- There was a strong association between being overcrowded and having social, alcohol and family violence problems. 48% of houses that were very crowded reported these problems, compared to only 20% of those that were not crowded.

Mould and chronic and acute health problems

- Having moulds in the house significantly increased the chances of having acute or chronic health problems among the members of the household.
- Even when controlling for overcrowding, the presence of moulds had a significant negative impact on the health of the occupants.
- Acute health problems like colds, headaches, sore throats, runny nose, nose bleeds and wheezing were significantly increased when moulds were present.
- People living in a house with mould have twice the risk of wheezing or having a sore throat than people living in houses without mould.
- Chronic health problems, like asthma, heavy cough, chronic runny nose, allergies, sinus problems, chronic nose bleeds, chronic wheezing, chronic coughing up of mucus, and depression were significantly increased when moulds were present.
- People living in a house with mould have a 3.0 times greater risk of developing sinus problems, a 2.2 times greater risk of having chronic cough with sputum, a 3.4 times greater risk of having a chronic runny nose (particularly significant in children) and a 1.9 times greater risk of developing depression.
- All of these findings are consistent with results of studies published in the world scientific literature.

CONCLUSION

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Because of all the adverse effects of poor housing on health, the situation in Chisasibi is a public health emergency. Substandard housing leads to substandard health. Until housing

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is brought up to Canadian standards, all medical interventions to improve poor health become exercises in futility. In 1999 the United Nations declared Canada the country with the highest living standards in the world. Unfortunately, Canada only ranked tenth in terms of equity. This relatively large gap between the rich and the poor is most evident in the poor housing conditions of the Canadian Aboriginal population in general and in the Eastern James Bay Cree Nation in particular. In Chisasibi, poor housing began as a social issue, became a health issue, and is now a moral issue: a matter of equity, justice and fundamental human rights.

Influence of moulds in the house on a variety of acute health problems

Presence of Mould in Houses and Acute Health Problems (in the previous 2 weeks)
Controlling for age, sex and smoking

Problems	OR	CI	Signif.
Any Acute Health Probl.	1.6	(1.2-2.2)	.004
Cold	1.4	(1.0-2.0)	.08
Headache	1.9	(1.3-2.7)	.0003
Sore Throat	2.0	(1.3-2.9)	.0007
Runny Nose	1.9	(1.3-2.7)	.002
Nose Bleeds	1.9	(1.3-2.7)	.003
Ear Infections			ns
Wheezing	2.0	(1.4-3.0)	.0006

Influence of moulds in the house on a variety of chronic health problems

Presence of Mould in Houses and Chronic Health Problems Controlling for age, sex and smoking

Problems	OR	CI	Signif.
Any Chronic Health Problems	2.0	1.5-2.6	0.0001
Asthma			ns
Heavy Cough	1.9	(1.3-3.0)	.003
Runny Nose	3.4	(1.9-5.4)	.00001
Ear Infection			ns
Allergy	1.8	(1.1-2.8)	.01
Skin Rash			ns
Sinus Problems	3.0	(1.9-4.8)	.0001
Nose Bleeds	1.9	(1.4-2.9)	.0002
Wheezing	1.7	(1.2-2.6)	.002
Coughing Mucous	2.2	(1.2-3.7)	.006
Tuberculosis			ns
Depression	1.9	(1.0-3.6)	.02