

Poor housing conditions linked to respiratory health issues in young First Nations children

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A study documenting indoor air quality and housing characteristics in 4 isolated First Nations communities in northwestern Ontario found frequent rates of respiratory infections in children under 3 years of age and that high rates of wheezing in this age group were related to poor housing conditions. The study is published in *CMAJ (Canadian Medical Association Journal)*.

Researchers documented the extent to which many homes in the Sioux Lookout region, north of Thunder Bay, Ontario, did not meet even minimum standards, and they quantified the interior surface area of mould, monitored [indoor air quality](#) for 3–5 days in main living areas and conducted other detailed analyses, such as dust mite concentration and contaminants from wood smoke that could affect respiratory health.

Recent news coverage of requests for the Canadian Armed Forces to help remote Indigenous communities with COVID-19 outbreaks, which are partly attributable to poor [housing](#) conditions—particularly reduced ventilation and overcrowding—underscores the relevancy of these findings in a broader sense.

"Without adequate ventilation, these houses are like living in a [plastic bag](#)," says Michael McKay, director of Housing and Infrastructure, Nishnawbe Aski Nation, and a study author.

"Centuries of assimilation tactics, colonialism and systemic racism have created structural barriers including employment, education, economic

and housing inadequacies, as well as systematically disrupting transfer of intergenerational life skills," writes McKay along with Dr. Thomas Kovesi, a pediatric respirologist and clinical investigator at CHEO, and professor, University of Ottawa, and the other coauthors.

"Inequalities and underfunding have resulted in houses that are poorly constructed and of insufficient size, with inadequate funding for maintenance and upkeep," write the authors.

Researchers found high levels of interior surface area of mould and high levels of endotoxin (the residue of certain bacteria), which is associated with wheeze. Eighty-five percent of the houses lacked controlled ventilation, over half had damaged windows, 44% showed water penetration in exterior walls and 6% had immediate safety issues. Twenty-one percent of the children in the study were admitted to hospital during the first 2 years of life, and 25% of the children were medically evacuated for respiratory illness. Wheezing with colds was seen in more than one-third (39%) of children, although only 4% were diagnosed with asthma.

The study was conducted in partnership with the Sioux Lookout Meno Ya Win Health Centre, Sioux Lookout First Nations Health Authority and the Nishnawbe Aski Nation.

The authors urge action on improving housing and infrastructure in communities to benefit the overall health of First Nations peoples.

"Increased housing stock appropriate for local geographic, climatic and cultural needs should be matched to solutions that are [First Nations] led and governed. Economic opportunity, elimination of food insecurity and provision of potable water will allow communities and residents to apply more resources to the upkeep of existing houses," they conclude.

More information: Thomas Kovesi et al, Housing conditions and respiratory morbidity in Indigenous children in remote communities in Northwestern Ontario, Canada, *Canadian Medical Association Journal* (2022). [DOI: 10.1503/cmaj.202465](https://doi.org/10.1503/cmaj.202465)

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