



**Indigenous Children
Eye Examination**

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Nanatomihcik oshkishikowawa

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ICEE

Sustainable Eye Care for Indigenous Children

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iceenow.ca



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Indigenous Children Eye Examination (ICEE) Project

Creating a high quality, sustainable model of eye care for children in underserved parts of Canada

OUR VISION

To deliver eye care to all Indigenous children (First Nations, Metis, Inuit) aged 0 to 18 years across Canada. To use ICEE as a conduit to facilitate access to other health care services for the Indigenous communities.

WHY VISION MATTERS

- Over 80% of a child's learning is based on vision.¹
- Learning to see is an active process, occurring during early childhood.¹
- Normal vision is key for the development of children, both physically and emotionally¹
- Poor vision in children can easily go unnoticed as it causes no pain and has no external signs.
- Low vision and blindness have increased by 12% as a whole and by 7% in children aged 6-17 years.²
- Poor vision in childhood will lead to increased risk of blindness for life, mental illness and depression.³

Why Vision Screening for Indigenous Children is Particularly Important:

- Indigenous population is young with 32% under the age of 15.
- Thousands live in remote communities, with no easy access to eye care.
- **In the territories, patients on average travel over 900 Km to see an eye doctor.**
- Therefore, access for eye care for Indigenous people is severely limited by geography.
- Over 50% of Indigenous children that we have examined so far, have been in need of glasses.
- **Blindness is six times more common among Indigenous children than non-Indigenous children.**⁴
- Diabetes is becoming an epidemic among Indigenous children causing high risk of diabetic eye damage.⁵

Consequences of Growing Up with Poor Vision:

- School children with poor vision:
 - Become isolated socially and do less well educationally.
 - Have increased behavioral and mental health issues such as depression and suicide.³
- Adults with poor vision
 - Are more likely to live in lower socioeconomic status.
 - **Are three times more likely to lose their remaining eyesight, becoming blind for life.**
 - **Have double the risk of mortality.**
 - Have increased difficulties with daily living.
 - Have triple the risk of depression.
 - Only one-third of Canadian working-age adults with vision loss are employed.⁶
 - Canadian adults with vision loss struggle to make ends meet on less than \$20,000 a year.⁶
 - **The cost to the health care system for looking after one blind person is \$ 2 million.**⁷
 - The health inequalities that exist between Indigenous and non-Indigenous Canadians begin in childhood and diverge further from this foundational developmental period. This issue is long standing, as the Assembly of First Nations, the Chiefs of Ontario and the National Collaborating Centre for Aboriginal Health proclaimed 2011 the Aboriginal Vision Health Awareness Year.
 - **In June 2012, the National Collaborating Centre for Aboriginal Health identified vision health as one of their emerging priorities.**

FOUR PILLARS OF ICEE

I. On-site clinics in Indigenous communities

- ICEE is not-for-profit, providing comprehensive eye examinations for all children in underserved, remote areas.
- All children requiring vision correction are provided eyeglasses at no cost to parents/guardians or the community.
- Children requiring tertiary eye care are brought to the nearest tertiary Children's Hospital.

II. Telemedicine technology and clinics

- ICEE eye care professionals connect remotely with trained local nurses in community health centres to conduct weekly telemedicine clinics for on-going eye care.
- Ongoing work to develop new, custom-made software for remote vision testing in children

III. Train local community youth and healthcare workers

- Train local youth in each community to become eye technicians for their own community.

To achieve this:

- Hands-on training provided at McMaster Children's Hospital and optometry clinics in Ontario.
- Developed 8 custom-made interactive theory and skill training modules and quizzes.

IV. Facilitation of access to other health care services for the communities

- ICEE works hard at gaining the trust of the Indigenous communities. Once this trust is gained, other health care services, beyond just eye care, are brought into the communities. For example ICEE is now enabling plastic surgeons to travel to the First Nations communities along Hudson Bay in Ontario to set up wound care clinics.

COMMUNITIES CURRENTLY SERVED BY ICEE

Currently ICEE serves the following communities in two provinces:

Ontario: Attawapiskat First Nation, Fort Albany First Nation, Moose Cree First Nation, Kashechewan First Nation, Town of Moosonee, and Weenusk First Nation.

Saskatchewan: Île-à-la-Crosse and La Ronge.

IMPACT OF ICEE SO FAR

To date, over 800 children examined in person in their communities, and over 600 pairs of glasses prescribed and sent to the children. Over 150 children examined by telemedicine.

- Importantly 75% of Indigenous children did not have normal vision.
- Notably 48% of children seen had never had an eye exam.
- A worrying 72% of children needed eyeglasses.
- Only 25% of Indigenous children had normal vision, significantly lower than the National average of 70%.⁸

As well, statistics show that the lack of vision care can lead to the development of additional co-morbidities that place an avoidable burden on the health system and the society:

- Poor vision causes mental health challenges such as depression, social isolation, and anxiety.³
- Vision impairment leads to poorer educational outcomes.⁹
- Vision impairments increase the risk for dementia, and cardiovascular disease.⁹
- ICEE identified and treated 51 children who were legally blind in both eyes.
- **The cost to society of one blind person over their lifetime is \$1.9 million dollars, therefore savings from preventing long term blindness in 51 children with ICEE is approximately \$96.9 million dollars to date.**⁷

NEXT STEPS FOR ICEE

Expansion of the project into more indigenous communities across Canada, serving more children.

We are already in talks with more Indigenous communities in Ontario, Saskatchewan, Manitoba, British Columbia and P.E.I. for bringing eye care to their children.

Redouble our efforts for improving telemedicine.

New computer software and engineering developments to improve the delivery of eye care remotely.

IN SUMMARY

There are over 200,000 Indigenous children living in reserves in remote parts of Canada. Most of these children have never had an eye examination. Despite programs such as the Non-insured Health Benefits for First Nations and Inuit, most of these children will never visit an eye doctor due to the distances involved and socioeconomic challenges. Poor vision has major negative psychological and physical impacts on the affected individuals as well as major negative consequences for society. ICEE provides a proven, working model for bringing eye care to these underserved children in our country.

ICEE IN THE MEDIA:

CBC: McMaster University partnership brings eye care to Indigenous children in northern communities

CBC: Team brings vision for eye care to Île-à-la-Crosse

Saskatoon StarPhoenix: Optometrists offer free eye exams in Île-à-la-Crosse, Sask.

Timmins Today: Program brings eye care to Indigenous children in remote areas

The Hammer: Hamilton doctor, McMaster developers improving Indigenous children's eye care in Ontario's Far North

The Silhouette: McMaster partners with Indigenous communities to improve childhood eye care access



May 14, 2024

To whom it may concern,

I am writing to express the strong support of Métis Nation Saskatchewan for the Indigenous Children's Eye Examination Program (ICEE). This project has developed a national outreach program for delivering sustainable high-quality eye care to all Indigenous (First Nations, Métis, Inuit) children across Canada. So far, ICEE has visited two remote communities in Saskatchewan, La Ronge and Île à-la-Crosse, providing much needed eye care for over one hundred children who would not otherwise have received eye examinations.

In June 2012, the National Collaborating Centre for Aboriginal Health identified vision as an emerging health priority. As we know, health inequities between Indigenous and non-Indigenous Canadians begin in childhood. Currently, we have 10 other Métis Nation-Saskatchewan regions throughout the province in Saskatchewan with multiple communities eager to host an ICEE clinic, with over 400 plus children waiting to sign up for eye examinations.

ICEE is in need of funding in order to continue hosting clinics across our province. We are hopeful the various levels of government will be able to fund this program, allowing ICEE to expand, providing services to thousands of children. Listed below are a few of the reasons we wish to expand ICEE throughout our communities.

- Not-for-profit approach.
- Ability to examine over one hundred children per visit.
- Saskatchewan doctors performing the eye examinations.
- Poor vision leads to poor mental health and depression.
- Indigenous communities have young demographic with 28% under the age of fourteen.
- Poor vision can lead to permanent vision loss (amblyopia) - Over 10% of the general population have irreversible vision loss due to ocular disorders not treated in childhood.

We hope you agree that ICEE is a program worthy of support and will be able to facilitate this project, so that Indigenous children across Saskatchewan can continue to receive much needed eye care.

Your sincerely

Tanya Pruden
MN-S Director of Health

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May 24, 2024

To whom it may concern,

We are writing to express the strong support of the Weeneebayko Area Health Authority (WAHA) and the First Nations communities of Hudson Bay in Ontario for the Indigenous Children’s Eye Examination Program (ICEE). We have known Dr. Kouros Sabri for the past six years and can attest to his passion and dedication for improving access to eye care for Indigenous children.

This project has developed a national outreach program for delivering sustainable high-quality eye care to all Indigenous (First Nations, Métis, Inuit) children across Canada. So far, ICEE has made over 10 trips to Hudson Bay and visited Moose Cree First Nation, Town of Moosonee, Fort Albany First Nation, Attawapiskat First Nation, and Kashechewan First Nation multiple times. Over 600 First Nations children have been examined in person and over 100 children have been examined by telemedicine, with over 400 children receiving much needed eye glasses. The ICEE program has also successfully trained a high school graduate from Attawapiskat as the first ever eye technician for the said community.

In June 2012, the National Collaborating Centre for Aboriginal Health identified vision as an emerging health priority. Health inequities between Indigenous and non-Indigenous Canadians begin in childhood.

ICEE is in need of funding in order to continue hosting clinics across our province. We are hopeful the various levels of government will be able to fund this program, allowing ICEE to expand, providing services to thousands more Indigenous children. Listed below are a few of the reasons we wish to expand ICEE throughout our province:

- Not-for-profit approach.
- Ability to examine over one hundred children per visit.
- Poor vision leads to poor mental health and depression.
- Indigenous communities have young demographic with 28% under the age of fourteen.
- Poor vision can lead to permanent vision loss (amblyopia) - Over 10% of the general population have irreversible vision loss due to ocular disorders not treated in childhood.

We hope you agree that ICEE is a program worthy of support and will be able to facilitate this project, so that Indigenous children across Ontario and beyond can continue to receive much needed eye care.

Yours sincerely,

Lynne Innes
 President and CEO

Dr. Elaine Innes
 Chief of Staff

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