Teleophthalmology
Screening of diabetic retinopathy
For the sustainability of the service
Development component
Montreal, May 9 2017
Presentation plan

• Contextualization of the project

• Service expansion

• Tools

• Service Sustainability
The screening of diabetic retinopathy through telehealth: Why?

• Strengthening of early screening activities of illnesses

• Development of telehealth in First Nations communities, considering:
  ➢ the isolation of certain communities
  ➢ the shortage of specialized labour in remote regions
  ➢ the difficult access to health services
  ➢ the costs related to transport for medical reasons

From the Quebec First Nations Health and Social Services Blueprint (2007-2017)
Why? (continued)

• First Nations are 2 to 3 times more likely to have diabetes than the Canadian population

• 80% of people with type 2 diabetes develop diabetic retinopathy 15 years after being diagnosed with diabetes

• Emergence of telehealth, financing possibilities and other similar projects throughout the world
Objectives of the project

• General objective:
  Reduce the incidence of blindness by providing access to remote diabetic retinopathy screening for First Nations living in the communities

• Specific objectives:
  ➢ Developing First Nation competencies
  ➢ Creating/consolidating links with the provincial health network
  ➢ Creating collaborative links between the communities
  ➢ Integrating the service into the existing diabetes program
A unique and innovative model which is part of an ongoing community empowerment process

- **Voluntary participation** of communities
- **Training of local resources** through the sharing of cameras among communities rather than mobile equipment
- **Service corridors** with the local health network
- The development of a **collective prescription** allowing:
  - the pupillary dilation of diabetic patients
  - to act as a lever for the autonomous professional practice of nurses
Structure of Health Services
Structure of Telehealth Services
Projected structure of services
Timeline

2008: Development of the service delivery model

2010: Implementation of pilot sites

2013: Expertise repatriated to the FNQLHSSC

2017: End of the implementations
23 communities
2,060 screenings
203 referrals to ophthalmology (9.85%)
| Trained staff in the communities | • 63 nurses (43 also trained as imagers)  
    • 51 imagers  
    • 2 nurse trainers  
    • 2 imager trainers |
| Equipment | • 9 shared cameras |
| Service contract with analysis centre | • 1 service contract |
| Partnership with the network and increased responsibilities of the nurses | • 15 service corridors  
    • 14 collective prescriptions (2 regionalized under development) |
| Regional monitoring, quality control | • Checklists  
    • Second opinions for diagnoses |
| Clinical and technological support | • Over 130 requests |
| Training and awareness tools | • Training manuals  
    • Capsules  
    • Pamphlets and posters  
    • Promotional video |
Tools
Teleophthalmology (diabetic retinopathy)

Diabetic retinopathy (DR) is a complication of diabetes resulting from damaged blood vessels of the retina that threatens the visual prognosis which affects approximately 40% of people with diabetes.

The prevalence of diabetes is higher among First Nations, likewise, vision loss due to diabetic retinopathy is higher among Canada’s Aboriginal population.

The majority of those inflicted are asymptomatic in the early stages of the evolution of the disease.

Rarely, the following symptoms may appear:
- A sudden loss of vision in one eye or both eyes;
- Blurred or double vision;
- Fluctuating vision;
- Floating or blind spots in the field of view.

FNQLHSSC publications:
- Diabetic surgery (part 1) - Information capsule
- Bariatric surgery (part 2) - Information capsule
- Pamphlet “What Is diabetic retinopathy?”
- Technical Data Sheets - Remote Diabetic Retinopathy Service
- Evaluation of the diabetic retinopathy remote screening pilot project among the Quebec First Nations: Report
- Diagram of the diabetic retinopathy screening process
Video

- To promote the service
- To demystify telehealth
- To present the benefits of a remote service
Fact sheets and information capsules

Themes:

• Collective prescription
• Diabetes and erectile dysfunction
• Optimal management of a diabetic person
• Bariatric surgery
• Glycemic index
• The virtues of maple syrup and diabetes
• Diabetic retinopathy (DR): special circumstances
Telehealth services implementation process
Sustainability

Sustainability is the continuation of the activities required for the maintenance of the established services, that is to say the monitoring, management, support and updating of the knowledge required to ensure the appropriateness, safety and quality of a service.
Considerations to ensure sustainability for the service

- Analysis and diagnosis service
- Equipment
- Training and support
- Surveillance
### Analysis and diagnosis service
- Service contract with the analysis centre (fixed costs and analyses)

### Equipment
- Transport and management
- Repair and renewal *(agreements between communities sharing the same equipment)*

### Training and support
- Clinical support and training
- Technological support and training
- Training accreditation procedures

### Surveillance
- Monitoring and renewal of the service corridors
- Monitoring and renewal of the collective prescriptions
- Scientific vigilance
- Software updates
- Quality assurance

Communities

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*agreements between communities sharing the same equipment*
Points importants pour la planification et l’organisation des cliniques

• Local committees to discuss about practices and the sharing of the camera

• Plan for human and financial resources (ADI funding programs)

• Service evaluation: user satisfaction and patient follow-up
Questions?
Comments?

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