Economic Evaluation of the KOTH/NORTH Network Expansion Project and application to other aboriginal telehealth initiatives

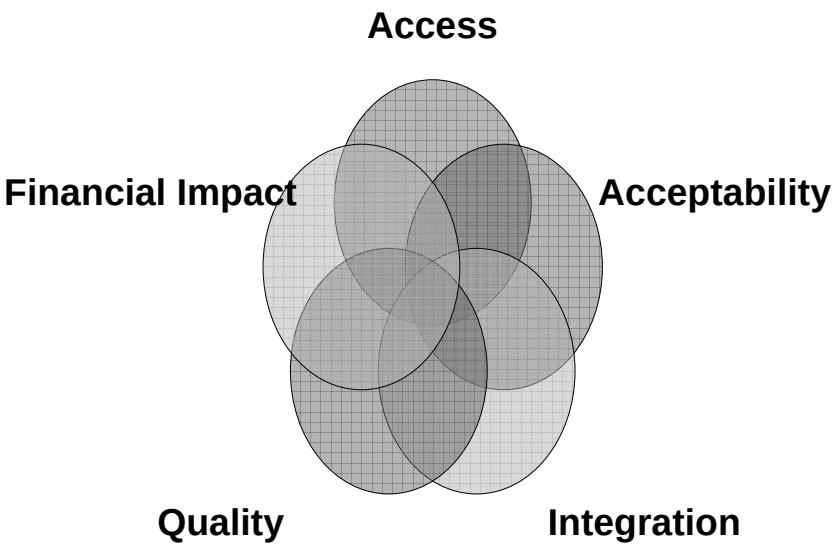
Evaluation of KOTH-NORTH Network Expansion Project

- John C. Hogenbirk, Centre for Rural and Northern Health Research, Laurentian University
- Ricardo Ramirez & Andres Ibanez, School of Environmental Design and Rural Development, University of Guelph
- Sheila Hardy, Native Human Services & CRaNHR
- Raymond W. Pong, CRaNHR
- David Robinson, Dept. of Economics
- Bruce Minore, CRaNHR
- KO, KOTH, KORI & K-Net personnel
- Providers and educators
- Members of First Nations communities
- Government and health care agencies

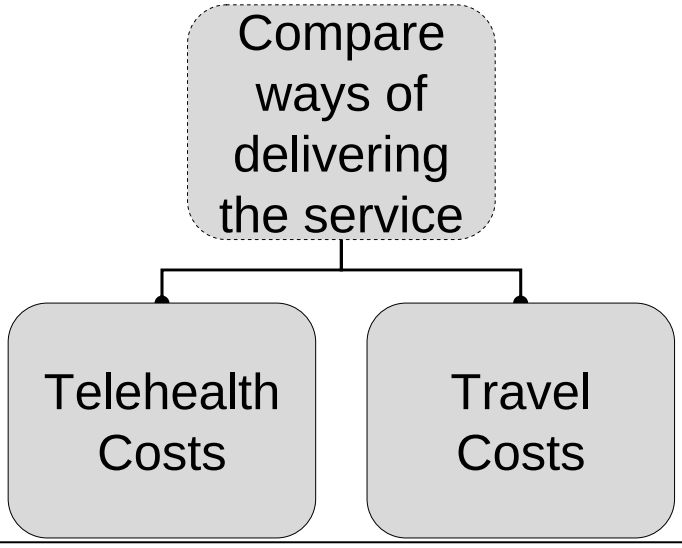
Presentation Outline

- Placing the economic evaluation within the context of the Evaluation Framework
- Describing the economic model
- Sharing major findings
- Applying the model to other Aboriginal telehealth programs

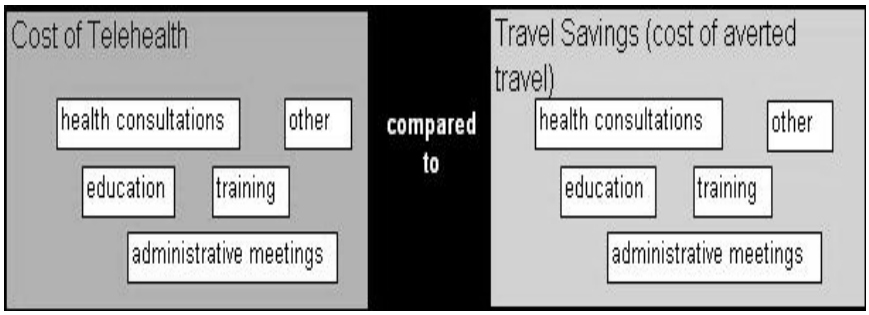
Evaluation Themes



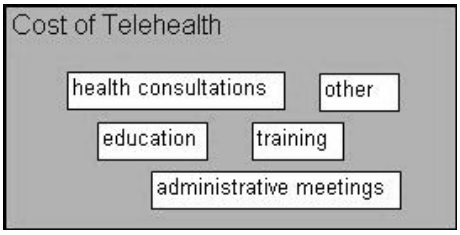
Financial Impact → Cost Analysis



Model Components



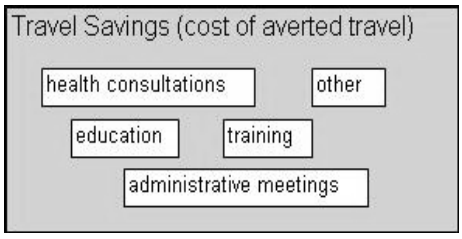
Telehealth Cost



- Operational Program: 24 First Nations communities
  - Personnel costs
  - Communication costs
  - Some equipment costs
  - Estimated from:
    - Grant applications
    - KOTH budget
    - Vendor invoices
    - Market values

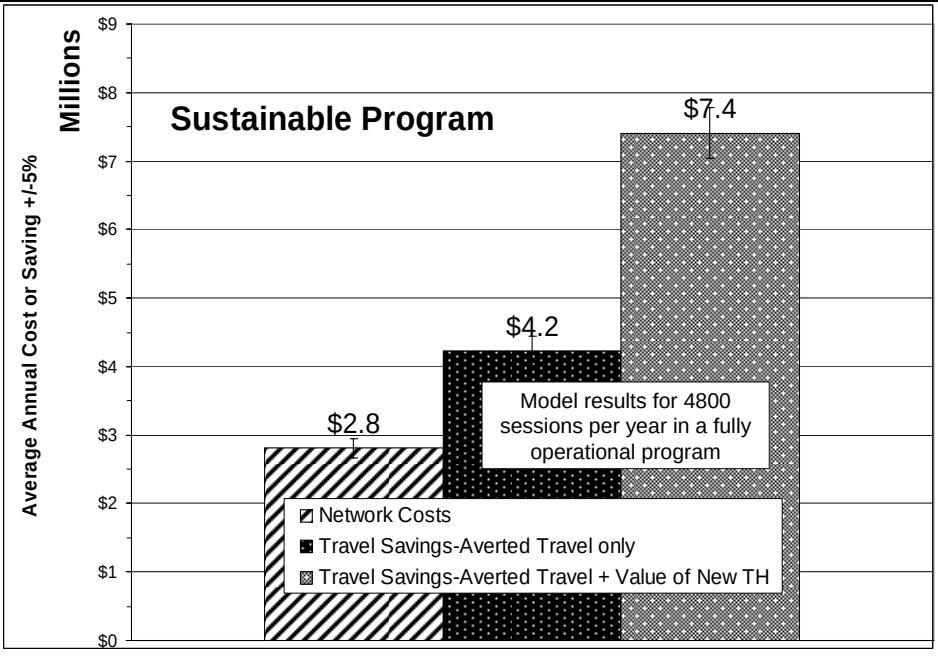
Travel Savings (averted costs)

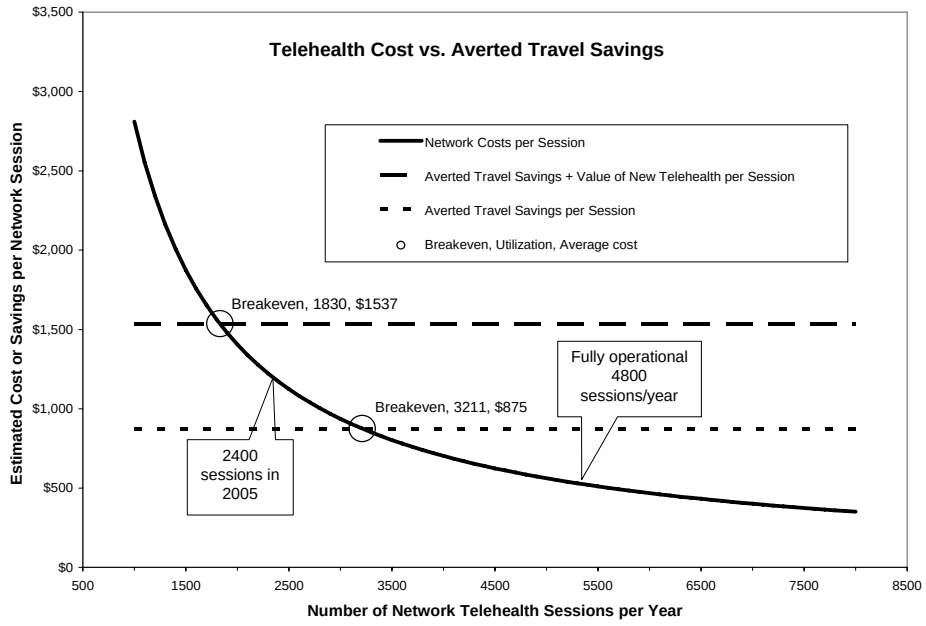
- Operational Program: 24 First Nations communities
  - TH that averts travel
  - TH that represents a new service
  - Estimated from:
    - Agency values
    - Per diem allowances
    - Market values



Averted Travel Vs. "New" Telehealth

- Some telehealth sessions will avert a trip
- Other telehealth sessions would **not** have needed a trip in the past and are "new" telehealth
- Averted and "new" telehealth were valued differently
- Values for averted and "new" telehealth also depend on type of use (clinical, educational, etc.)





Applying the model to other TH programs

- Model focused on travel as the main savings
  - Clinical ~$3k/trip, Educ., Training, Mtgs, $0.5-2.5k/trip
- Future models may wish to include *changes* in:
  - Lost earnings or lost leisure time of patient & escort
  - Productivity or efficiency of provider & administrator
  - Health status, anxiety, quality of life or well-being
  - Risks associated with less/more travel
  - Other costs or benefits to all those impacted

  Note: these items were <u>implicitly</u> included in the value for "new" telehealth

Applying the model to other TH programs

- Future models may wish to:
  - Determine costs (savings) separately for:
    - Individuals
    - First Nations communities
    - Aboriginal organizations
    - Government agencies (federal, provincial)
    - Health care facilities (hospitals, clinics)
  - Include variable and fixed costs for telehealth sessions
  - Explore changes in economic assumptions (amortization period and rate)

Stories and Statistics

- Difficult to assign dollar values to all of the costs and benefits of telehealth & travel
  - Different methods for determining the $ value
  - Different people place a different value on different components of telehealth and travel
    - "Can't put a dollar figure on…"
- In our economic evaluation we augmented the statistics with stories from the people who were impacted by telehealth

Stories and Statistics

- "I saw a patient today from very far away with a [condition] that was probably not diagnosed correctly … I was able to completely diagnose the problem … and organize the follow-up without having to bring the patient down…" (Specialist)
- "[We] have more people staying in the community and that saves us all this time of [having to worry about] travel, planes that get cancelled, re-bookings, all that kind of thing" (Community Health Nurse)
- "[...] education is very convenient now, because [we] have a chance to learn new skills, not like before, because we [didn't] have any funds to travel …, so whenever it is available we can now attend" (Community health Worker)

For more information, please contact:
John Hogenbirk
jhogenbirk@laurentian.ca
705-675-1151 x 3435
www.cranhr.ca