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Travel Cost Avoidance from Telehealth:

June 2, 2007
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Making the Connection for Health

Overview

- Study background and goals
- NORTH Network (NORTH)
- Ontario Telemedicine Network
- Northern Ontario Health Travel Grant (NHTG)
- Methodology
- Analysis and Findings
- Questions?

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Access to Healthcare

Exhibit 3.1 Physicians per 100,000 population, by physician type and geographic setting, in Ontario, 1996/97 and 2001/02

Physician Type	Geographic Setting	1996/97	2001/02
GPPs*	Northern rural/remote communities	84	98
	Southern rural/remote communities	61	70
	Large northern centres	80	79
	Urban centres	106	102
	Rural/remote communities	12	14
Specialists	Large northern centres	81	81
	Urban centres	121	126

*GPPs=General practitioners and family physicians

Data sources: Institute for Clinical Evaluative Sciences, ICES Physician Database; Ministry of Health and Long-Term Care, Ontario Health Insurance Plan, Registered Nurses Database; Statistics Canada, Annual Demographic Statistics, Catalogue no. 92-313-X98

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Study Background and Goals

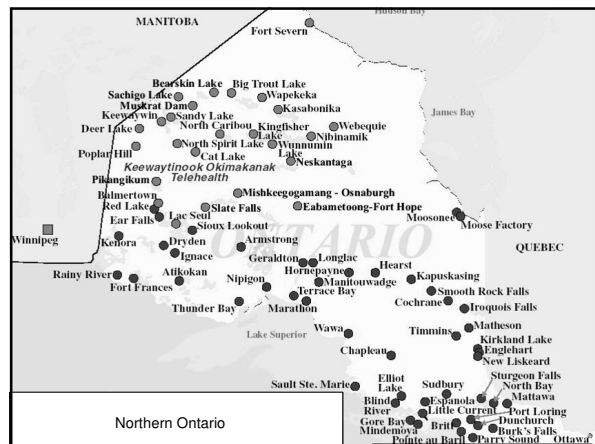
- OTN and the NHTG both aim to increase access to specialized medical care for residents of Northern Ontario
- NHTG: compensates patient's travel expenses
- OTN: eliminates unnecessary travel
- Hypothesis: Significant and concrete cost-avoidances to NHTG can be attributed to telehealth

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Study Background (Cont'd)

- NORTH had previously undertaken the calculation of NHTG cost avoidances unilaterally
- Goal of current study was to work jointly with NHTG officials to arrive at agreed-upon formula for estimating NHTG-qualifying travel avoided via Telehealth
- Work initiated on November 2004



A Brief History of OTN

- Merger of three successful Ontario telemedicine networks
 - CareConnect (East and South East)
 - NORTH Network (Central and North)
 - VideoCare (South West)
- April 1, 2006
 - Integration of three legacy networks
- July 1, 2006
 - incorporated as a not-for-profit organization
 - core MOHLTC funding is \$17M; plus MOHLTC and CHI project funding to support merger
- April 1, 2007
 - Operational Integration Complete (mostly)

Why One Network?

- Key component of Ontario's e-health strategy
 - reduces wait times, provides better access to doctors, nurses and other allied health professionals.
 - aligned with transformation agenda
- Opportunity to establish pan-provincial network interoperability, creating seamless and inter-regional service delivery and customer focus
- Creation of a common governance structure
- Harmonization of network business and service delivery models to enhance customer adoption, and expand service availability and ease-of-use
- Development of common standards for measuring outcomes and promotion of impact

OTN Quick Facts*

Canada's largest integrated telemedicine service:

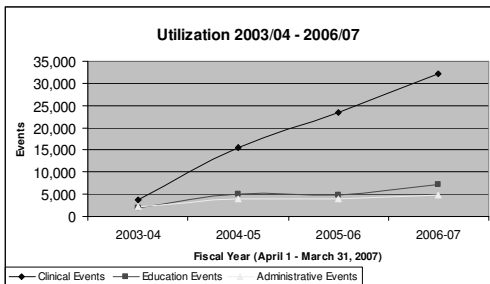
– Number of Employees	124
– Partnering Organizations	170+
– Hospital & Community Sites	399
– Videoconferencing Endpoints	798
– Polycom/Accord MGC 100/50	6
– Clinical Programs/Specialties	100+
– Annual Patient Encounters	31,000
– Annual Education Events	6,500

* as of March 31, 2007

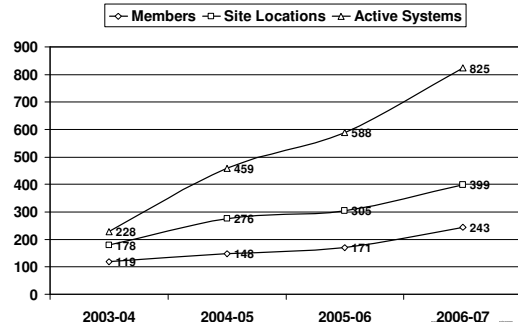
Vital Statistics 2003/2004 – 2006/2007

Core Data - Ontario Telemedicine Network 2003/04 – 2006/07				
Statistics	2003-04	2004-05	2005-06	2006-07
Clinical Events	3,660	15,565	23,472	32,136
Education Events	1,908	4,962	4,910	7,212
Administrative Events	2,196	3,835	3,930	4,889
Total Events	7,764	24,362	32,312	44,237
# of Site Locations Across Network	178	276	305	399
# of Members	119	148	171	234
# of Active Systems	228	459	588	825

Utilization 2003/2004 – 2006/2007



Sites, Members and Systems 2003/2004 – 2006/2007



NHTG Background

- Announced in December 1985
- Program to defray travel costs of residents in northern Ontario traveling for specialized medical care
- Committed to assisting patients while strengthening medical system in the north
- Program has been adjusted several times over last two decades

NHTG History

Year	Changes	Utilization Rate
1991	Rules to encourage referrals to closest specialist	44,000+ trips* \$7M+ grants
1994	Only pay to closest specialist; limits on follow-up appointments	
2001	Compensation doubled: two-way travel; 34.5¢ cents/km from 30.5¢ /km	93,000 trips \$8.6M grants (98/99)
Current	Review underway: specialist identification, specialist recognition, eligibility rules	161,000 trips \$25M grants (2004)

Study Methodology

- Data source: Centralized scheduling office receives all referrals for telehealth consults
- Data captured in online scheduling software
- Goal: Co-develop formula for translating telehealth activity to equivalent in NHTG-qualifying travel
- Use to estimate NHTG cost avoidances

Methodology (cont'd)

- NORTH randomly selected 100 referrals during 1-month period for close analysis
- NORTH and NHTG independently estimated distance and eligibility of referral based on referral notes, patient and consultant information
- No NHTG forms completed – assumed completed correctly, but no special circumstances/allowances requested
- Results compared

Initial Findings

- Of 100 events submitted:
 - 72% events fully or partially approved
- On a per km basis:
 - NORTH's estimates of grant-qualifying travel: **57,596 kms**
 - NHTG estimates of grant-qualifying travel: **30,181 kms**
 - Approximately a **52%** rate of acceptance

Reasons for Rejection

Reason	Description	Portion of rejected travel accounted for
Closer specialist (partial)	Closer specialist bypassed – compensation to closer specialist	28%
Closer specialist (rejected)	Closer specialist <100 km from patient – claim rejected	18%
Southern or Self-Referral (rejected)	Follow-up appointments rejected	33%
Provider not specialist/certified specialist (rejected)	Provider not recognized by CPSO	6.8%

Negotiating points...

Reason	Arguments for acceptance	Result	KMs added
Closer specialist (partial)	Case-by-case: - 'Closest specialist' made referral - Incorrect sub-specialty (e.g. paed, geriatric)	TBD	7568 km
Closer specialist (reject)			
Southern or Self-Referral	Follow-ups w/in 6 mos.	Accepted	8669 km

Findings – Qualifying Kms

NORTH Estimation of NHTG Distance Approval (km)	
100 sample cases: total travel submitted	57,596
Fully Approved distance	23,882
Partially Approved Distance	22,433
Total NHTG Approved distance	46,315
NHTG Approved Distance*	80.4%

* Removing TBD events = 72% approved distance

Assumptions and Formulas

- Assumptions for calculations:
 - Patients under 16 yrs are always accompanied by an escort
 - Patients over 16 yrs travel alone
 - Patients use private or commercial transport; no shared travel costs between patients (e.g.: no car-pooling)
 - No costs factored in for NHTG-approved disability requirements (e.g.: required escorts)

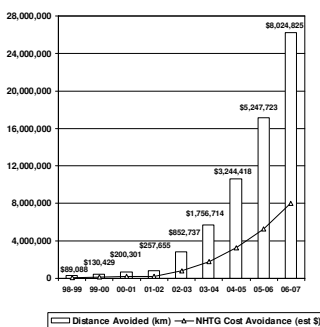
Paediatric (under 16 yrs): = 4 * [(Km-100) * 0.3425] (to include parental accompaniment)
 Adult (17 yrs plus): = 2 * [(Km-100) * 0.3425]
 • (Reimbursement is not available when the distance to physician is <100km)

Cost Avoidance to Northern Health Travel Grant Program*

Fiscal year	Clinical Events	NHTG-Qualifying Travel	NHTG Cost Avoidance
1998/99	306	145,561	\$89,087.56
1999/00	448	213,095	\$130,428.85
2000/01	688	327,275	\$200,301.44
2001/02	885	420,986	\$257,655.20
2002/03	2,989	1,393,297	\$852,736.82
2003/04	6,034	2,870,316	\$1,756,713.54
2004/05	11,144	5,301,094	\$3,244,417.58
2005/06	18,025	8,574,319	\$5,247,723.16
	40,519	19,245,943	\$11,779,064.64

+ or -10% 19 times out of 20

Cost Avoidance to Northern Health Travel Grant Program



- Total NHTG cost avoidance 1998 – March 31 2007
\$19,800,000
- Monthly NHTG cost avoidance @ 1900 Northern consults / month*:
\$669,000 per month or
\$8 Million per year

* Average monthly Northern clinical volume, FY 2006-2007



Questions?

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