Extending Telehealth in a Multi-Site Academic Hospital – Anytime, Anyplace, Anywhere

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Presentation Overview

Use of 'Guest Link' for clinical videoconferences

- Setting: University Health Network (UHN)
  - Overview & Evolution of UHN Telehealth Program
- What is Guest Link?
- Guest Link Project Plan
  - User Selection
  - Implementation (Clinical/Educational Scenarios)
  - Evaluation (Preliminary Results)
- Moving Beyond Guest Link

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University Health Network (UHN)

Toronto General Hospital

Toronto Western Hospital

Princess Margaret Cancer Centre

Toronto Rehabilitation Institute

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UHN Telehealth Program
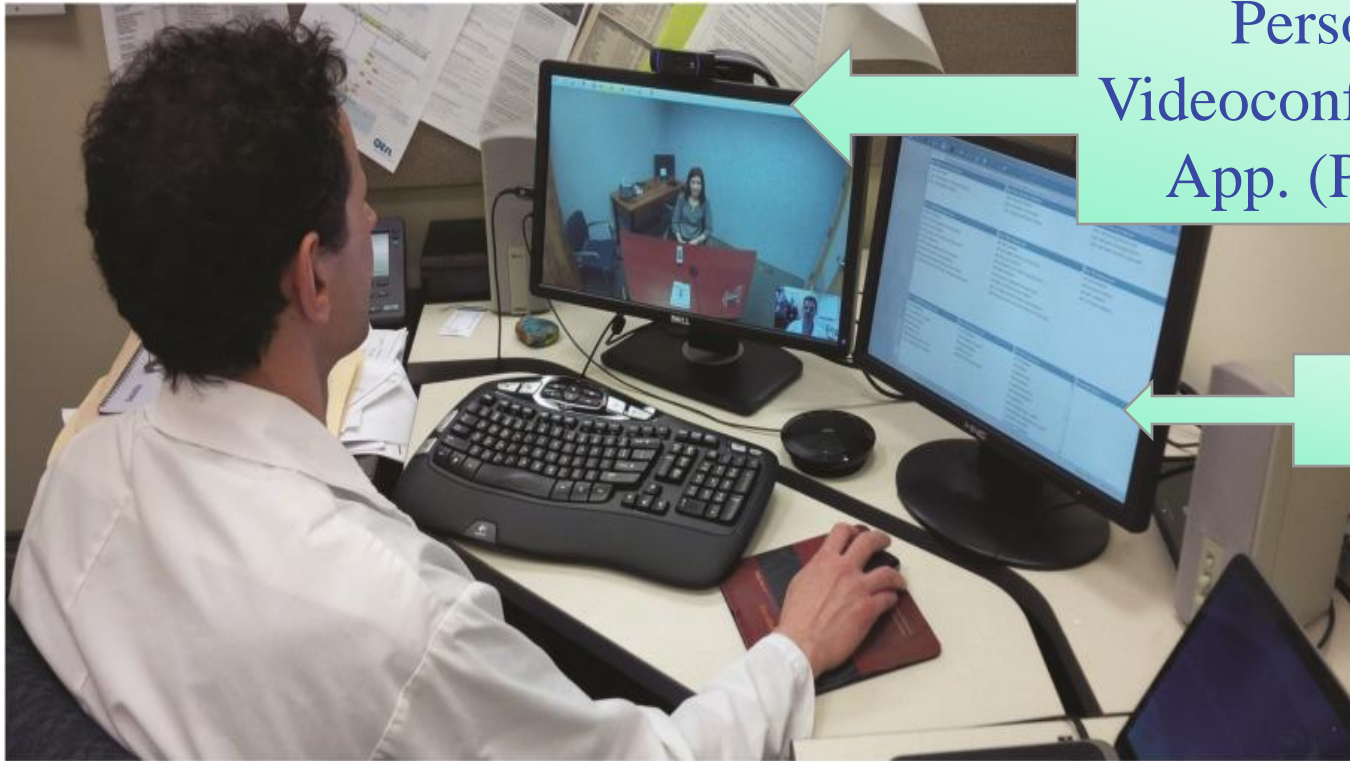
Personal Videoconferencing App. (PCVC)

EPR

Increasing access to UHN's specialist services through the use of Audiovisual Communications Technologies

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Ontario Telemedicine Network (OTN)

Providing a secure, dedicated network for clinical videoconferences

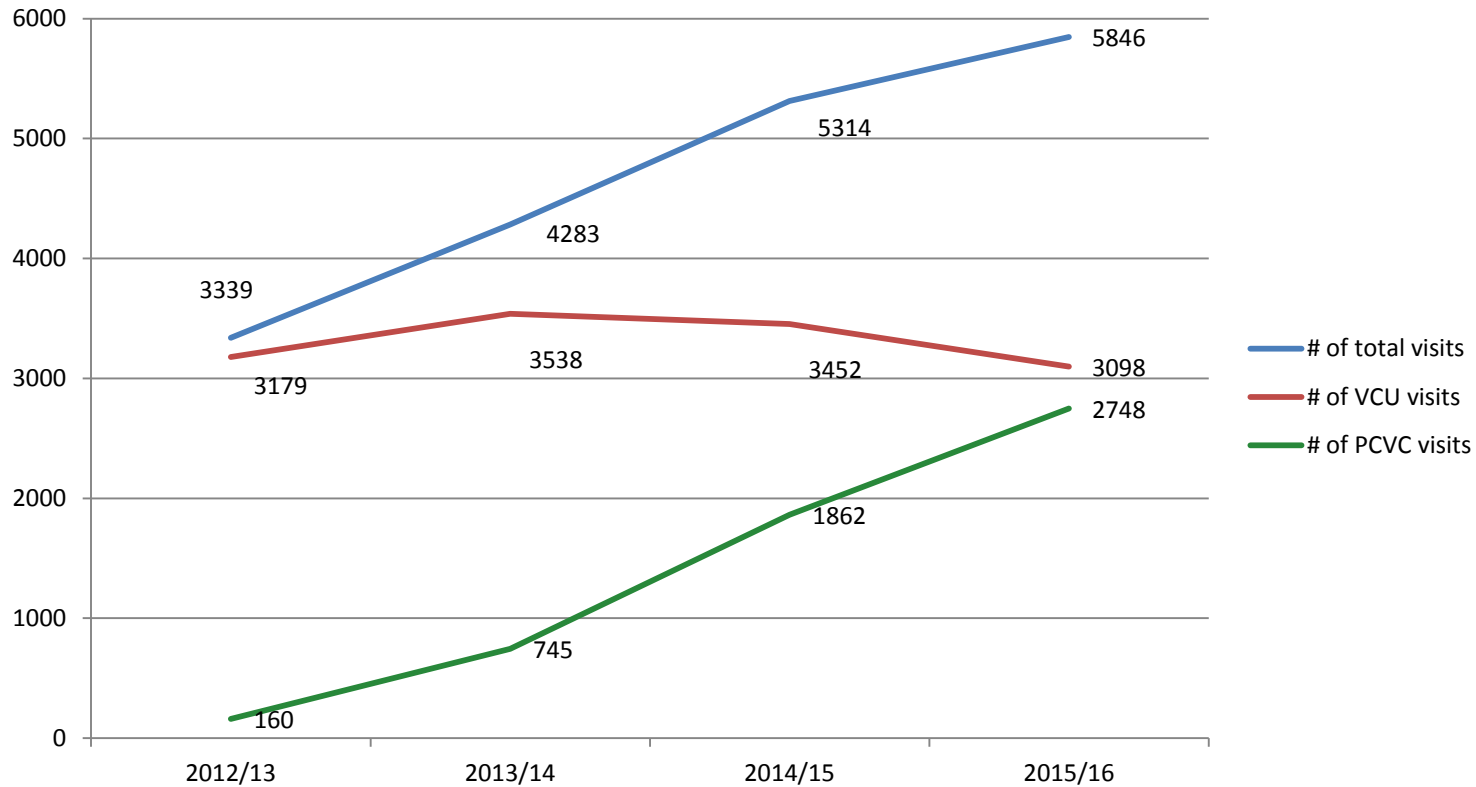**Patients typically travel to the studios of their local OTN member organizations**

UHN Telehealth - Growth driven by Usability & Accessibility

- Ease of Use supported by in-house scheduling and technical services

- Video accessibility achieved by embedding technology in clinicians' workspaces

- Increased access evolved in two stages

  1. Mobile Videoconferencing Units (VCUs) deployed from Telehealth offices to clinical areas and satellite studios

  2. Introduction of desktop computer based PCVC

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Total UHN Telehealth Clinical Visits, VCUs vs. PCVC, FY 2012-2015

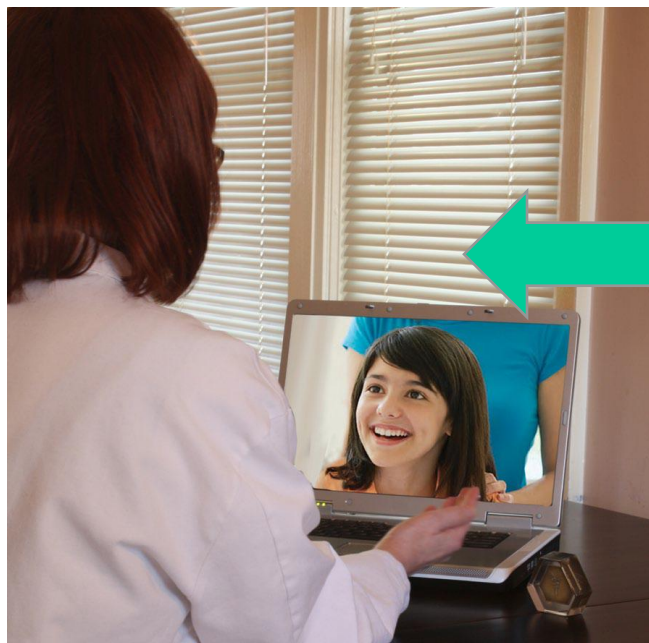|	2012/13	2013/14	2014/15	2015/16
# of total visits	3339	4283	5314	5846
# of VCU visits	3179	3538	3452	3098
# of PCVC visits	160	745	1862	2748

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Next Step in the Technical Evolution of UHN Telehealth

Guest Link
for Patients

What is Guest Link?

Encrypted, Public Internet Connection

Clinician in Office
OTN Member

Patient at Home
OTN <u>Non</u>-Member

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How does Guest Link work?

1) Clinician schedules Guest Link videoconference online. Telephones patient with secure access code (PIN)

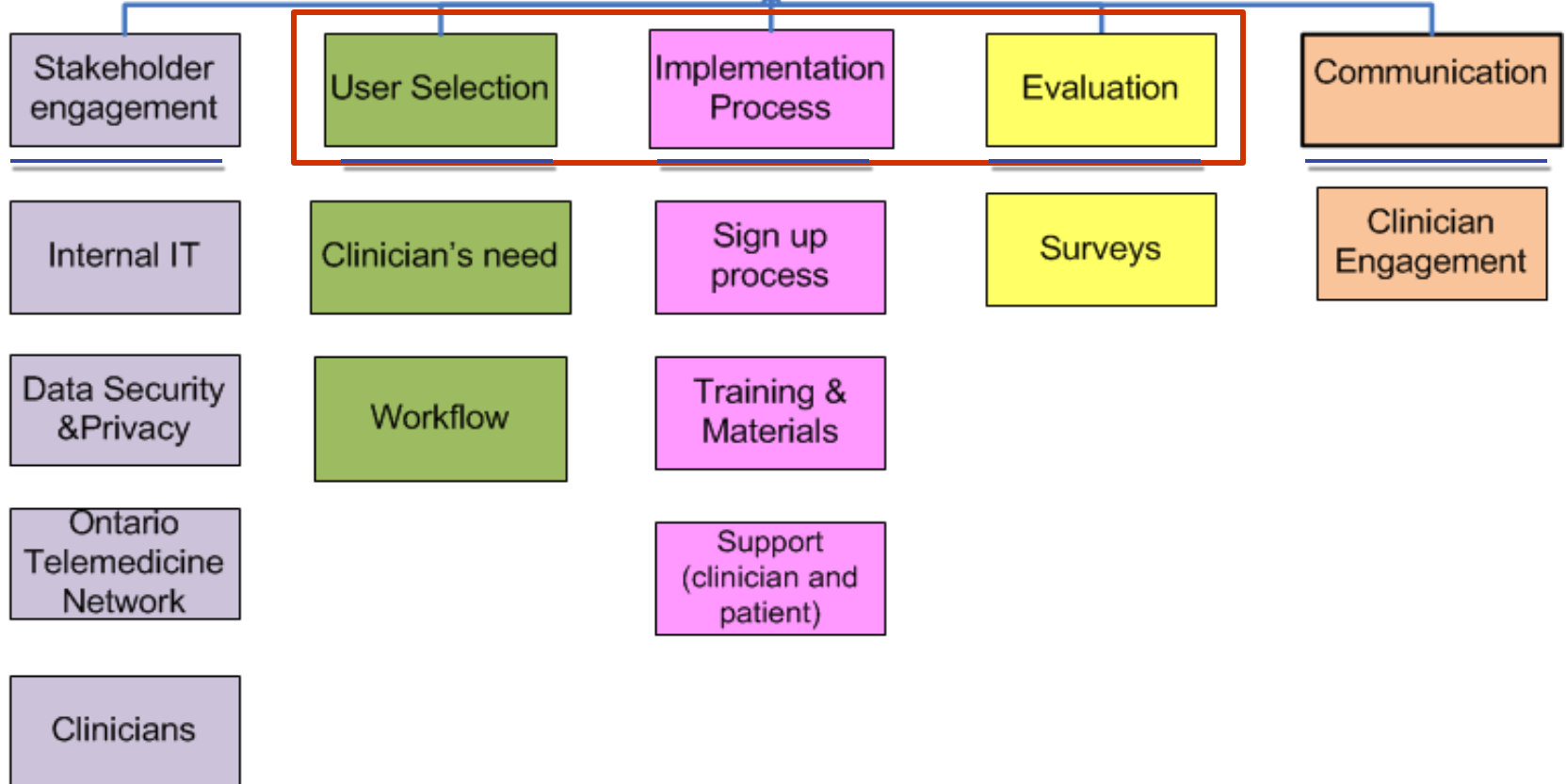2) Guest Link generates automatic appointment notification

3) Patient receives Guest Link email with **hyperlink** to videoconference

4) Clinician and Patient access Guest Link on scheduled date/time

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Guest Link –
Selecting Suitable Clinicians

- Best suited for hospital funded clinicians
  - Physician reimbursement by Ontario Health Insurance Plan (OHIP) is currently restricted
- Clinicians should manage their schedules independently
  - They are typically not supported by an administrative assistant
- Workflow for in-person consultations should be similar to Guest Link

Guest Link – Selecting Suitable Patients

- Personal Immobility
  - Health issues prevent patients leaving their homes
- Technical Proficiency
  - Patients or their caregivers feel comfortable installing and using new computer/smartphone software
- Internet Connectivity
  - Patients have high-speed internet access at home
- Limited OTN Accessibility
  - Local OTN sites may be busy or closed at preferred date/time for scheduled clinical consultation

Guest Link – Implementation

- Developed user protocols, email templates and workflow processes

- Created concise user educational material

- Enrolled new users in OTNhub

- Installed webcams and speakers

- Conducted test calls

- Provided ongoing technical and scheduling guidance

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Guest Link – Clinical Scenarios

Home Videoconferencing

Guest Link – Clinical Scenarios

- <u>Peritoneal Dialysis</u> – Patient cannot travel by car when condition has deteriorated

- <u>Gastroenterology</u> – Patient finds travel to be inconvenient and expensive

- <u>Psychosocial Oncology</u> – Patient avoided 2 hour drive to closest available OTN studio

- <u>Q22 Deletion Syndrome</u> – Patient experiences marked anxiety due to travel

Guest Link – Clinical Scenarios

- <u>Chronic Pain</u> – Patient unable to access UHN due to severe pain evoked by travel

- <u>Tourette's Syndrome</u> – Patient experiences increased verbal outbursts in public settings

- <u>COPD</u> – Patient was provided education & support of complex respiratory regime

- <u>Quadriplegia</u> – Patient was at home required training on speech generating device from SLP

Guest Link – Educational & Administrative Scenarios

Increasing video access to clinicians without access to a dedicated OTN network connection

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Guest Link – Educational and Administrative Scenarios

- <u>Group education</u> -Dietician provides education to group home staff
- <u>Rehabilitation</u> – Regular meetings between clinicians based at UHN sites without ready access to a dedicated OTN connection
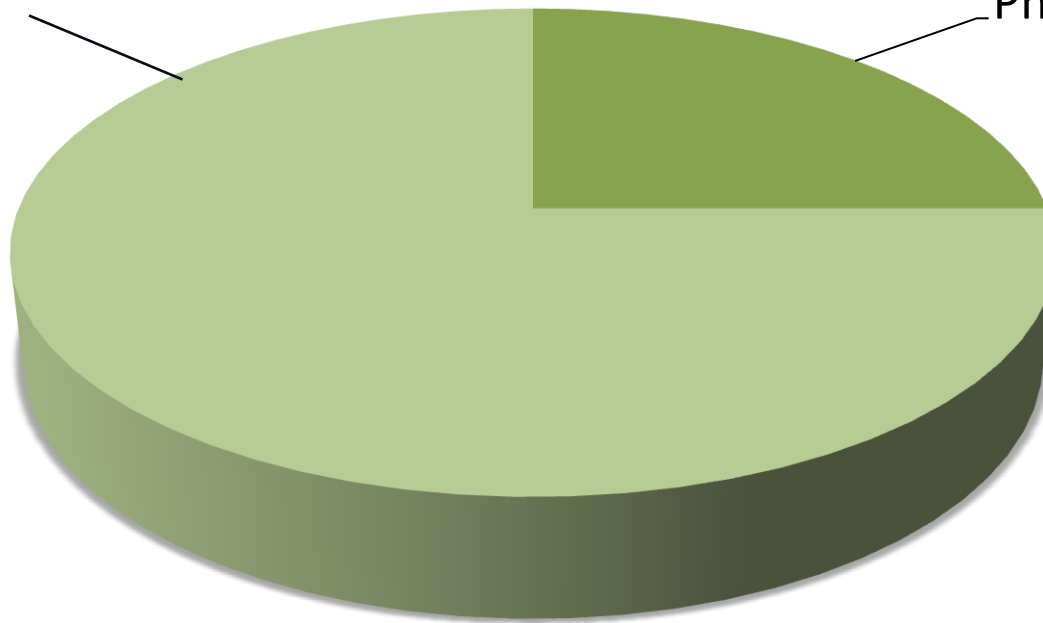
Guest Link – Preliminary Results

Guest Link – Clinicians' Professions
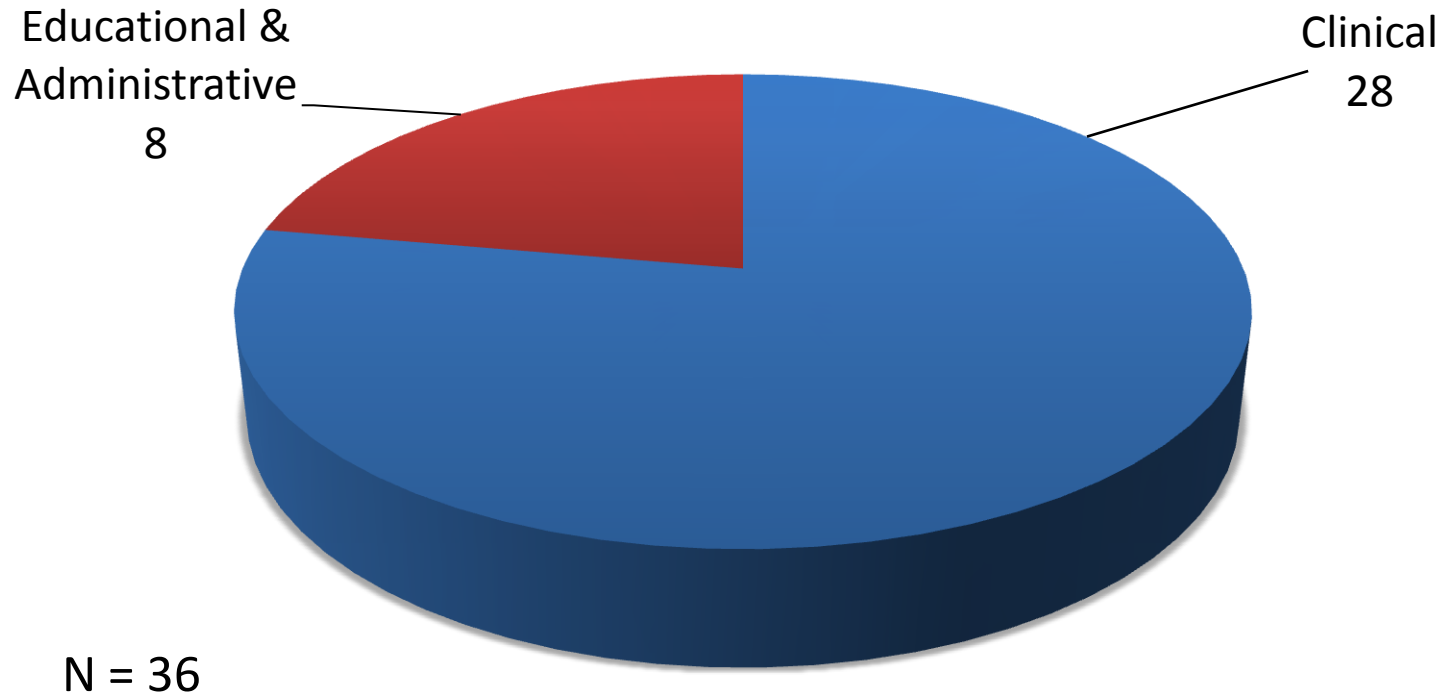

Allied Health Professionals
9

Physicians
3

N = 12

New Telehealth Clinicians = 7

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Guest Link – Activity by Event Type

Educational & Administrative 8

Clinical 28

N = 36

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Would you recommend Guest Link?

- Surveys distributed to clinicians and patients
- Low survey return rate
- 80% Clinicians' Recommend Guest Link (N = 5)
- 100% Patients' Recommend Guest Link (N = 2)

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Clinician Survey

"I have found the service to be invaluable in allowing me to see people who otherwise would not receive service".

- – Mental Health Counsellor, Chronic Pain Service

Patient Survey

"The service is a valuable one. However, as someone without much technical knowledge, I struggled with the following the instructions on how to connect".

Patient 'A'

"This was very easy, just as easy as my usual OTN connection".

—   Patient 'B'

UHN Telehealth Staff Observations

- Guest Link Issues
  - Patient auto-notifications emails were sometimes mistaken for spam
  - Software installation on PCs was problematic
  - Smartphone apps were 'Plug and Play'
  - Image freezing commonly occurred with slow internet connection or too many applications running on patients device

Moving beyond Guest Link

Thank you for your attention

Questions?

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