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Family Health Team

Virtual Ward Program
9 November 2010

Objectives

- Provide an overview of the concept of a Virtual Ward.
- Review the benefits of a Virtual Ward Model in today's health care environment.
- Provide overview of SETFHT Virtual Ward Model
 - Goals
 - Roles
 - Processes
 - Outcomes measures
- Case Studies
- Discussion/Questions



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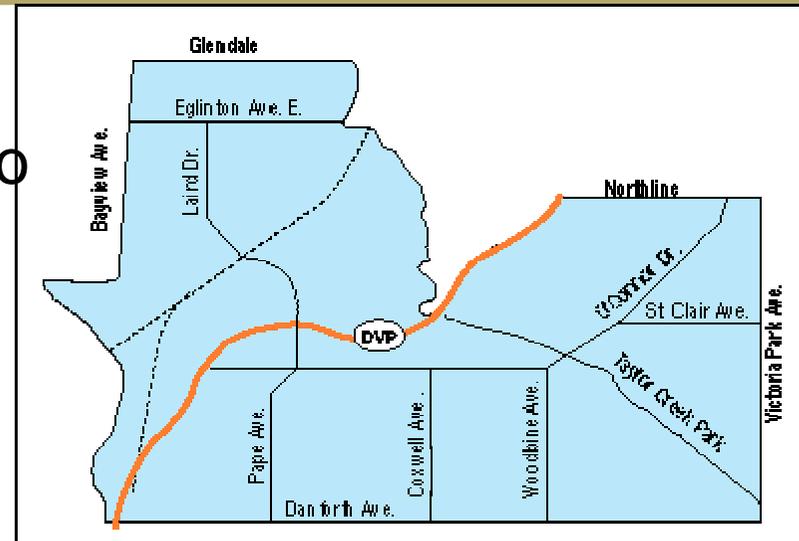
Who are we?

Location:

- 840 Coxwell Ave, Toronto
- # of rostered patients:
 - ~11500

Providers:

- 14 physicians (part-time), 16 medical residents, 2NPs, 4 RNs, 1 PA, 3 RDs, 1 pharm, 3 SW, 1 care navigator, 1 chiropodist, 1 mental health addictions counselor, 12 administrative/clinic assistants, 1 office administrator, 1 program coordinator, 1 executive director.



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What is a Virtual Ward?

- Wikipedia:

The concept was developed in Croydon, UK: "Virtual wards use the systems and staffing of a hospital ward, but without the physical building: they provide preventative care for people in their own homes. Patients admitted (...) are truly those who will benefit the most, i.e. those most at risk of unplanned hospital admission."



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Virtual Ward (UK)

- Mimics the hospital ward
- Patients are cared for in their own homes
- No physical ward building, hence the term Virtual Ward
- Patients case managed by a multidisciplinary team including nursing, pharmacist, social worker, physiotherapist, OT, mental health specialist.
- Ward team headed by a Community Matron



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Why its important in today's health care world?

- *Keeping patients out of hospitals* by reducing wait times, reducing the burden on hospital emergency departments.
- *Family Health Care for all* – providing access to a primary care provider.
- *Ensuring access* to the right provider at the right time by utilizing an Interprofessional team based approach to care.
- Managing the 'complex' patient through *chronic disease prevention and management* and empowering patients to take care of their own health at home through self-management support and health coaching;



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Why its important in today's health care world? (con't)

- Implementation of new *technologies* to monitor a patient's health through virtual means (i.e. Telehomecare).
- *Quality improvement* approach to improving patient outcomes.
- Opening the doors to new health care professionals as we face an aging population and less care providers (i.e. *integration of a Physician Assistant in primary care*).

A Virtual Ward within primary care empowers the role primary care has in bridging the care gap experienced by many patients at the time of hospital discharge.



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Cost of readmissions

- CIHI, Discharge Abstract Database FY 2010 :
 - TC LHIN hospital average: 16.2% of patients are readmitted again within 30 days after discharge
 - Toronto East General Hospital: 19.6% readmission rate
- Average cost per readmission is \$11,214.
- A 33% reduction in 90-day readmissions translates into health care savings of \$879,838 to \$1,173,117.

(Dr I. Dhalla, St Micheal's Hospital Central LHIN Virtual Ward)



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SETFHT Virtual Ward

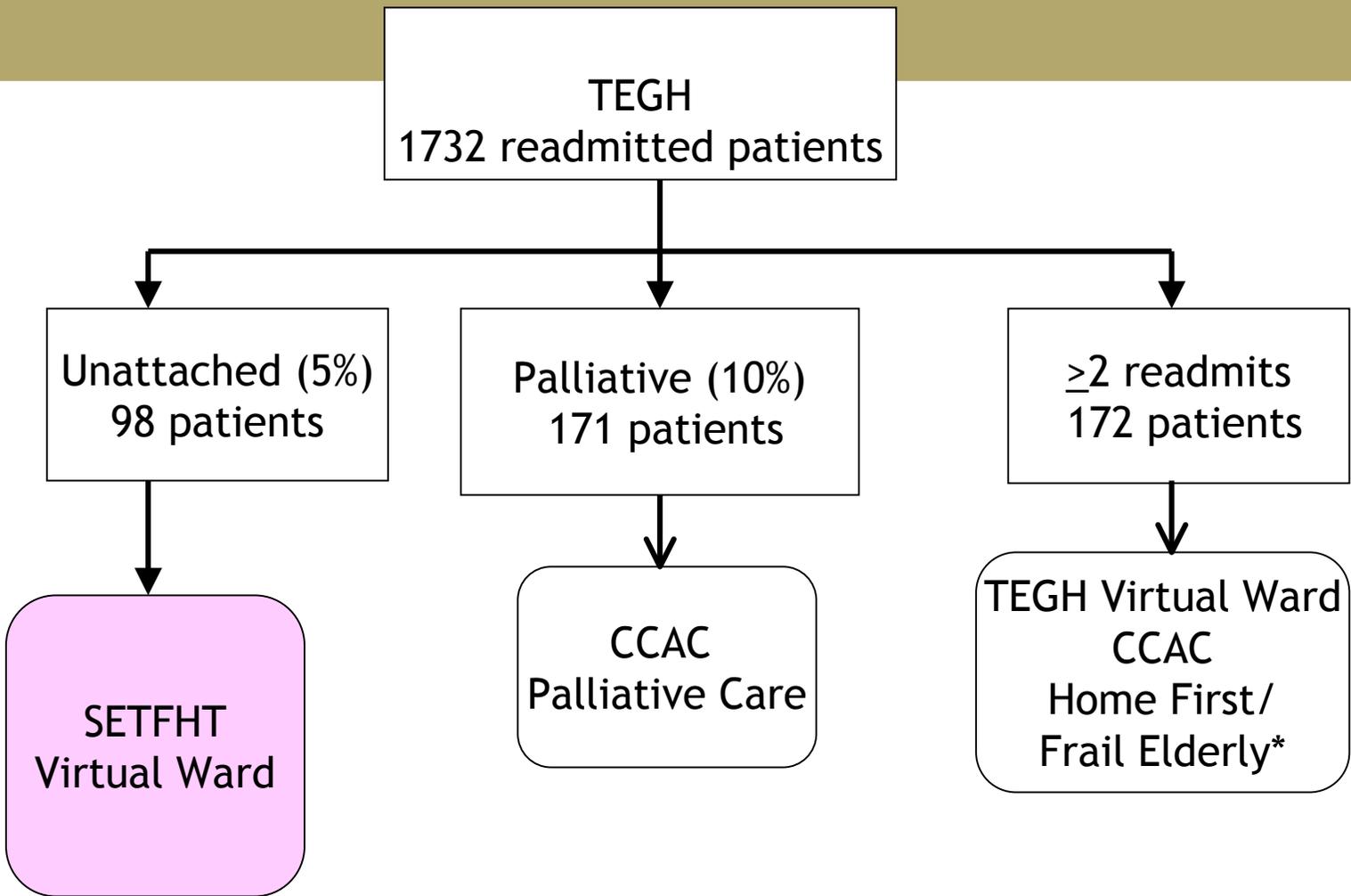
Goals:

- To collaborate with TEGH to provide this vulnerable high risk population with improved follow-up care after discharge.
- Identify and assist a growing population of unattached patients who do not have access to primary care and thus, are at increased risk for hospital readmissions.
- Admit these patients to a Virtual Ward in order to assist with the transition back home from hospital.



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Admission Criteria

- Admission to the Virtual Ward is based on the LACE score which allows identification of medical patients at high risk for readmission based on:
 - **L**ength of Stay
 - **A**cuity of admission
 - **C**omorbidities (CHF, COPD, DM2,...)
 - **E**mergency room visits - # in the last 6 months

(CMAJ 182(6) 2010, 551-557)



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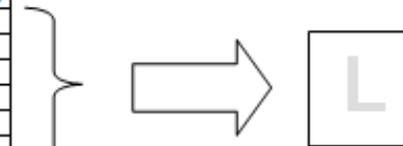
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LACE index scoring tool

Step 1. Length of Stay

Length of stay (including day of admission and discharge): _____ days

Length of stay (days)	Score (circle as appropriate)
1	1
2	2
3	3
4-6	4
7-13	5
14 or more	7



L

Step 2. Acuity of Admission

Was the patient admitted to hospital via the emergency department?
If yes, enter "1" in Box A, otherwise enter "0" in Box A

A

Step 3. Comorbidities

Condition	Score (circle as appropriate)	If the TOTAL score is between 0 and 3 enter the score into Box C. If the score is 4 or higher, enter 5 into Box C
Previous myocardial infarction	+1	
Cerebrovascular disease	+1	
Peripheral vascular disease	+1	
Diabetes without complications	+1	
Congestive heart failure	+2	
Diabetes with end organ damage	+2	
Chronic pulmonary disease	+2	
Mild liver disease	+2	
Any tumor (including lymphoma or leukemia)	+2	
Dementia	+3	
Moderate or severe renal disease	+3	
AIDS	+4	
Moderate or severe liver disease	+4	
Metastatic solid tumor	+6	
TOTAL		

C

Step 4. Emergency department visits

How many times has the patient visited an emergency department in the six months prior to admission (not including the emergency department visit immediately preceding the current admission)? _____
Enter this number or 4 (whichever is smaller) in Box E

E

Add numbers in Box L, Box A, Box C, Box E to generate LACE score and enter into box below. If the patient has a LACE score is greater than or equal to 11 the patient can be referred to the virtual ward

LACE

SETFHT Virtual Ward Staff Roles

Physician Assistant (PA)	Works as the clinical case manager Meets patient the day before discharge at TEGH Will round on patients daily by phone Primary contact for CCAC Identifies patients needing intervention: Provides home visits if indicated Arranges for clinic visits at 840 Coxwell or with specialists Communicates with family doctor
Supervising Physician	Reviews patients with PA daily/weekly
Care Navigator	Arranges CCAC, transportation, community supports, lab work at home if required
Pharmacist	Reviews/ adjusts medication in discussion with
Nurse Practitioner	Provides home visits if required
Addiction Mental Health Counselor	Arranges for mental health and addiction supports as required

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Physician Assistant

- Through a HealthforceOntario grant, we were able to secure a position of Physician Assistant (PA) within the FHT with a prospective of featuring a novel professional role for a new health care provider in Ontario, the **Physician Assistant (PA) in Primary Care.**
- PA's must work under the supervision of a registered physician and all PA activity takes place within the physician- patient relationship.
- PA's support physicians in a variety of health care settings. The specific duties of a PA will vary according to individual PA competencies, the physician's area of practice.



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SETFHT Virtual Ward -Admission

- Patients who are admitted to TEGH are identified by daily/weekly review based on their LACE score.
- Those who meet criteria and are without a family doctor, are seen prior to discharge from TEGH by Physician Assistant/MD for enrolment in SETFHT Virtual Ward.
- Patients are rostered to a SETFHT family doctor.
- CCAC is automatically notified of Virtual Ward admission and CCAC services are arranged for patient by hospital CCAC coordinator.
- Follow-up appt is arranged at SETFHT within 1-3 days of discharge from TEGH.



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SETFHT Virtual Ward -Admission (con't)

- Medications are reconciled by TEGH hospital pharmacist and list faxed to SETFHT.
- Patient is discharged home.
- Patient and family come for f/u appt at FHT to see family doctor and physician assistant for initial assessment, introduction to FHT and Virtual Ward.
- Patients may also receive Ontario Telemedicine Network (OTN) Telehomecare equipment for remote monitoring of vital signs.
- Baseline surveys are completed.



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Virtual Ward Monitoring

- Daily phone calls for 1 week and then regular f/u as needed x 8 weeks.
- Patients submit their vital signs via Telehomecare equipment.
- Interventions as required based on Telehomecare data and phone assessment.
- Weekly Virtual ward rounds with PA/MD and monthly rounds with entire team.



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Telehomecare

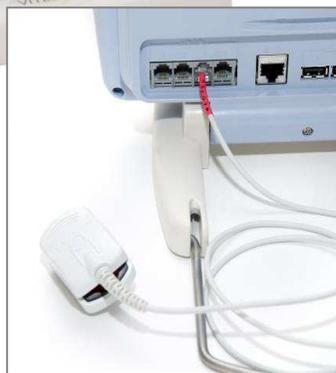
The Ontario Telemedicine Network provides equipment for remote monitoring of vital signs through their Telehomecare program.



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Telehomecare



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Outcome Measures

- Health care utilization:
 - 30 day readmission rate
 - PA time spent monitoring
 - Drop out rates, length of stay, visits to FHT
 - CCAC services
- Surveys
 - Health status – SF12
 - Use of health services
 - Patient experience/satisfaction
- Clinical indicators as per QIIP measures r/t COPD, Hypertension, and Diabetes.



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Results so far

- Started enrolling patients in June 2010.
- 14 patients enrolled so far with goal of 100 patients over the next year.
- 4 patients have completed the 8 weeks with no admissions to hospital or emergency.
- All 4 of these patients had interventions that prevented deterioration and possible ER visit.
 - Eg. meds adjusted, added, referral to specialist, diagnostic imaging.



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Case Study #1

D.F.

- 85 year old female with COPD, heart failure
- Admitted to TEGH in June with COPD exacerbation
- LACE score 16
- Prior to Virtual Ward admission, was admitted to hospital 1-2 x a month between Feb and June.
- No admissions to hospital for 3 mos post Virtual Ward admission.
- VW monitoring and f/u managed to detect worsening heart failure. Appointment with family doctor was fast tracked resulting in stabilizing her heart failure without the need for ER visit or hospital admission



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Case Study #1 (cont)

- Infectious exacerbation of her COPD identified on 2 occasions and medical intervention was provided **before** patient has deteriorated to the point that readmission is required.
- Awaiting valve replacement – will only do procedure if she remained stable and out of hospital 4 mos. Date pending.



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Case Study #2

BB

- 67 year old male with heart failure and poorly controlled diabetes
- LACE 12
- HbA1C on admission to VW in July was 13.8
- Glucometer provided, seen by Dietitian, heart failure meds adjusted based on OTN Telehomecare monitoring
- Team-based patient care approach by offering chronic disease management programs/ patient self management modules
- HbA1C now 9.2 and heart failure symptoms stable
- Pt reports feeling “the best I’ve ever felt”, has lost wt, is aware of what to eat and reports feeling more confident in managing his symptoms.



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Case Study #3

HM

- 72 year old male with heart failure
- LACE 12
- Admitted several times with heart failure.
- Caregiver burnout.
- Telehomecare monitoring and f/u resulted in medications being adjusted resulting in decreased edema and SOB.
- Family feels supported – state they didn't know where to turn or who to call prior to VW admission. Like knowing that someone is monitoring symptoms and vitals.
- Stable and ready to discharge.



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Case Study #4

MA

- 72 year old female with heart failure, lives alone, few family supports.
- LACE 12
- Previously admitted to hospital several times with heart failure. Caregiver burnout.
- Home visit made - detected that pt not doing well.
- Virtual Ward rounds – discussion with team on medical and social difficulties.
- Primary care physician updated on clinical and social status.
- Pt is now considering alternate placement.



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Questions?

Thank you!



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