Objectives

**Who**
- Define Triple Aim from the perspective of the “5%” – Who are they & what are their needs?

**What**
- Share cases where a shift is underway from acute care as the “hub of the system” to home & community

**How**
- Identify lessons learned for local application – How can you apply this in your local care context?
Disclosures
Recently received a grant to evaluate Triple Aim work from Alberta Innovates Health Solutions partially funded by Merck Canada

Join the Conversation
@CFHI_FCASS
@CFHI_JVerma
@AHS_YEGZone
@WCHospital
@HQOntario

#27Forum
#IHIAlliance
#TripleAim

The Canadian Foundation for Healthcare Improvement (CFHI)
We accelerate the spread of proven innovations by supporting healthcare organizations to adapt, implement and measure improvements in patient care, population health and value for money.
**Figure 2.6: Nation Summary Scores on Health Systems Performance**

<table>
<thead>
<tr>
<th></th>
<th>AUS</th>
<th>CAN</th>
<th>FRA</th>
<th>GER</th>
<th>NETH</th>
<th>NZ</th>
<th>NOR</th>
<th>SWE</th>
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<td>Cost-Related Access Problems</td>
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<td>Health Expenditures per Capita, 2011*</td>
<td>$2,800</td>
<td>$4,522</td>
<td>$4,118</td>
<td>$4,495</td>
<td>$5,099</td>
<td>$3,782</td>
<td>$5,669</td>
<td>$3,925</td>
<td>$5,643</td>
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*Expenditures shown is $13 PPP, purchasing power parity data for Australia from 2010.

(Data: OECD, 2011 Health Data, 2011-2012)

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**Distribution of health expenditure for the Ontario population, by magnitude of expenditure, 2007**

On average, health care spending is highly concentrated with the top 5% of the population (ranked by cost) accounting for 86% of expenditure.

Who are the 5%?
- patients at the end of their lives
- individuals with chronic diseases or multiple chronic diseases
- infants with high healthcare needs
- the 60+ age group accounts for the largest proportion
- more likely to come from disadvantaged groups
- more likely to be poor, unemployed and socially isolated

What characterizes their healthcare experience?
- High costs
- Low primary care accessibility
- High acute hospitalizations for ambulatory care sensitive conditions
- High readmission rates
- Poor care coordination
Many good examples of care integration exist. For different patients/needs, promising results from “service bundles” are being observed. Examples of targeting care:

- Who is at risk for what outcome?
- What is(are) the best intervention(s) to avoid that outcome?
- Which risks are modifiable? What are the gaps in care?

“Even among the sick fraction of the population there is an especially sick sub-fraction whose need for different hospital services given... It is a challenge to public health and hospital administration to isolate that minority group for which actual costs are disproportionately high. What is the repeated admissions rate? What is that cost? Can the problem be identified, perhaps health control efforts could be concentrated on them? Which risks are modifiable? What are the gaps in care?”

Roemmer and Myers 1956: 480

**Triple Aim in Canada**

[Diagram showing the Triple Aim: Population Health, Experience of Care, Per Capita Cost]
Edmonton Zone

Project Team | No. Pts. | Description
--- | --- | ---
Addictions & Mental Health – Inner City | 1,024 | Patients with high ED use, A&MH issues, homeless Hospital in-reach – assertive engagement, intensive case management, Peer support.
Home Living | 44 | Complex home pts. 4+ ED visits/6 mo. A/MH issues.
East Edmonton Health Centre | 114 | Complex patients with chronic disease and high ED use.
Women & Addictions | 375 | Women of child bearing age with addictions issues - to improve the health status of the women and babies they may bear.
Boyle McCauley Health Centre | 587 | Inner city primary care clinic serving the most vulnerable striving to improve wound care outcomes(515 pts.) and reduce frequency/duration of crisis episodes (72 pts)
EMS | 283 | Reduce ED visits by providing care in the community. A&MH crisis response (~186 pts./mo.). Continuing care (~97/mo.)
Palliative Care | (TBD) | End of life care for inner city patients with liver disease
Total | 2,326 |

Population Segmentation and Costs

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<tr>
<th>Segment</th>
<th>Population</th>
<th>Average Cost</th>
<th>Total Cost</th>
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<tr>
<td>High Needs Children</td>
<td>240</td>
<td>$21,213</td>
<td>$5,090,720</td>
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<tr>
<td>Women</td>
<td>463</td>
<td>$22,403</td>
<td>$10,303,537</td>
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<tr>
<td>Complex Infections/Tobacco</td>
<td>311</td>
<td>$56,451</td>
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<td>High Needs Teen/Adults (Addictions &amp; Mental Health)</td>
<td>554</td>
<td>$32,993</td>
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<td>Complex Older Adults (Addictions &amp; Mental Health)</td>
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<td>$29,893</td>
<td>$50,885,728</td>
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<td>Frail Elderly</td>
<td>1,206</td>
<td>$44,714</td>
<td>$53,287,219</td>
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<tr>
<td>Total</td>
<td>4,518</td>
<td>874,812</td>
<td>$2,120,885,728</td>
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Source: Edmonton Zone Eastwood, Planning Profile (Draft; 2013)
Before Triple Aim

Edmonton Zone

We’re talking about ‘Joe’
Joe’s Intervention

- Hospital ED in-reach
- A&MH - Assertive engagement and case management
- Peer support worker – lived experience
- Homecare – OT and RN case manager
- Shelter Society – funding for a tolerant residence
- Harm reduction - dispensed alcohol for consumption
- Health care aides – Joe’s personal care needs
- Enhanced communication – caseworkers, providers, shelter and hospital

What changed for Joe

- Formed trusting relationships
- Income
- A home
- Significantly reduced ED visits
- Reduced alcohol consumption
- Reconnected with his aboriginal culture
- Found hope
Edmonton Zone

Project Level Data

Average Inpatient Days of Triple Aim Clients (NH660)
(pre median=4.78; post median=4.785)

Average ED Visits of Triple Aim Clients (NH660)
(pre median=4.223; post median=4.208)

www.albertahealthservices.ca

Edmonton Zone

Project Level Data

Tri-Aim Addictions, Mental Health and Home Care Trans
Sample of 12 Clients, Average Monthly Costs for Acute Care, EMS and Community Utilization

Pre-Triple Aim Intervention

POST-Triple Aim Intervention

www.albertahealthservices.ca
Population Level Data
Family Practice Sensitive Conditions

Scale and Sustainability

- Expanded hours for hospital in-reach
- Added peer support worker with lived experience
- Expanded job scope - include social determinants
- Service agreements with community partners
- 6 supportive beds at homeless shelter
- Alcohol dispensation
- Integration/collaboration among providers/agencies
- ED flag for TA clients (in progress)
- Evaluation plan with grant funding
Edmonton Zone

Clarence

“Having a home keeps me off the streets and I am able to eat- I guess I am healthier and I am not drinking…at least I’m pointed in the right direction and maybe then I’ll work on quitting smoking”.

Local Context: Women’s College Hospital (WCH)

An academic ambulatory care hospital in Toronto, Ontario with a strategic focus in health system solutions and chronic complex conditions.

- New (May 2013) facility designed solely for ambulatory care
- Population served in region:
  - A majority of patients are 40+ years old and most have a minimum of >5 co-morbid chronic medical conditions
  - Large, ethnically and culturally diverse urban area
    - 41% born outside Canada
    - 18% below Low Income Cut-Off
- The use of multiple services are necessary for care for the complex patients

Source:
Target Triple Aim Population: High Needs High Cost

**High needs, high cost (HNHC) patients:**
- 1-5% of the population, whose health care needs are better met outside of emergency departments and inpatient wards
- Identified through:
  - Health care utilization
  - Screening tool of health status
  - Hot spotting of providers

**Our Triple Aim population size is...**
- Approx. 13,000 unattached patients in our catchment area
  - 983 of these are HNHC and lack a primary care physician (PCP)
  - 3203 patients identified as HNHC (defined as 2 or more ED visits in last 1 year) from hot-spotting of providers.

Triple Aim in Action: WCH Portfolio of Projects

**Three strategies** for reaching high needs medically complex patients in the community:
- Creating Pathways to Primary Care
- Facilitating Access to Specialist Care
- Enabling Timely and Appropriate Imaging

All projects together aim to achieve the Triple Aim.
Case Example 1: PATH

Promoting Access to Team-Based Healthcare (P.A.T.H.)

Poor access to primary care can result in treatment delays and increased ED utilization. PATH creates a structured way to bring unattached medically complex patients who are most at risk of avoidable Emergency Department visits into a team based primary care practice.

Outcome Measures

- Preventive health screening and uptake [Population Health]
- Self-rated Health [Population Health]
- Patient experience [Experience of Care]
- ED and walk-in clinic utilization [Per Capita Cost]

Extensive Process Evaluation

- Number of complex patients
- Cycle time
- Provider experience

Case Example 1: PATH Definition of HNHC patients

Ontario LHINs’ definition: complexity as a “composite of a number of reinforcing medical and psychological issues”.

1. Screen positive according to the Hospital Admission Risk Prediction (HARP) tool
   - Variables as predictors of hospital admission:
     - 1) Age, 2) Place patient was discharged to 3) # of acute admissions last 6 mo, 4) # ED visits in last 6 months, 5) Medical comorbidities

2. Polypharmacy
3. Cognitive impairment and/or mental health/addiction
4. Social factors (compromised living situation, lacking economic stability, refugee status, language/literacy level).
Case Example 1: PATH Baseline Population Health

Baseline Self-Rated Health (n=24)

- Very Good/Excellent
- Good
- Fair

Length of Time Unattached to a PCP (n=17)

- Less than 1 year
- 1-4 years
- 5-10 years
- 10 years or more

Healthcare Utilization in Prior 6 months (n=24)

- ED Visits
- Walk-ins

As of August 2015: Have brought 37 previously unattached patients to a regular Primary Care Provider

Ongoing data collection re: health care utilization, time to initiation of preventative care services

Case Example 2: 1-800-IMAGING

1-800-IMAGING

Challenges exist for community-based PCPs to access urgent imaging to support clinical decisions. 1-800-Imaging provides a central access point for PCPs with medically complex patients requiring urgent radiology exams, other informational services, and access to a radiologist as to the most appropriate exam based on the clinical indication.

Aim:

Deliver a pilot of the virtual hub that will provide service to 30-60 solo community based PCPs with HNHC patients within the first year of program launch

Outcome Measures:

- Improved timeliness of care [Experience of Care]
- Critical results delivery time from report completion to findings communicated [Experience of Care]
- Decreased ED admissions for reasons of urgent medical imaging [Per Capita Cost]

Process Measures:

- Call Volume
- Services Accessed
1-800-IMAGING: Process Measure

Call Volumes

Pilot
May 2014 – March 2015
60 PCPs

Operational Sustainability
April 2015
120 PCPs

# of Calls

PCP engagement

Median = 21

Total = 354 calls
17 months to date

1-800-IMAGING: Process Measure

Services Accessed
May 2014 – August 2015

Unique callers
(n=60)
78% of the PCPs used the service

Repeat callers
(n=47)
77% of PCPs used the service more than once
1-800-IMAGING: Outcomes

Avoided Emergency Department Visits
Referring PCPs were asked if they would have referred to ED if call centre was not available

39% of 103 urgent imaging calls

Improvement in Appropriate Imaging
Appropriateness

40

*Based on data collected during pilot (n=218 calls)

1-800-IMAGING: Balancing Measure

PCP User Satisfaction Qualitative quotes

“The service was efficient and wonderful. My patient and I are extremely pleased with the service provided “

“It is an excellent service. It helps me tremendously to manage my urgent cases.”

“This service was nothing short of spectacular - I cannot remember a time since I was a resident on site 24 hr a day where I could access this much service”

100% of surveyed callers were satisfied with the call centre

100% of surveyed callers would recommend the call centre to colleagues
Lessons from WCH: Elements required for Triple Aim success within an organization

1. Executive leadership support with frontline engagement

- Co-Executive Leads
  - Dr. Danielle Martin
  - Jane Mosley

- Measurement Team
  - Cheryl Woodman
  - Monique Crotteau
  - Sehitha
  - Thamanam

- Finance Team
  - Beverly Conquest
  - Jimmy Liu
  - Veronica Ho

- PATH Project
  - Lead: Holly Finn

- SCOPE 2 Project
  - Lead: Laura Pus

- 1-800-Imaging Project
  - Lead: Marlo Fernandez
  - Jeffrey Zorn

Lessons from WCH: Elements required for Triple Aim success within an organization

1. Executive leadership support with frontline engagement
2. Building capacity and infrastructure at outset
3. Closer engagement across departments and leveraging existing capability
4. Greater use of standardized measurement tools
5. Strong communication between QI project teams
Case Examples: Challenges

Challenges
- Limited ability to report on patient outcomes
  - Lack of system level data
  - Limited robust electronic data
- Funding for sustainability and scalability

Project Specific
- 1-800-Imaging: Reconciling clinical appropriateness, urgency with existing wait lists – ensure equitable access
- PATH: limited resources – staff and personnel

Triple Aim Legacy at WCH

1. Capacity Building:
   - Able to apply Triple Aim to current and Future projects
   - WCH portfolio management team and measurement leads
   - Closer engagement across Departments

2. New Hospital Processes and Legacy of Triple Aim:
   - Pipeline of projects incorporating Triple Aim
   - PATH incorporated into Hospital QIP
   - New WCH AP-QIP Ethics Process

3. WCH Strategy
   - Triple Aim is informing the Strategic Directions of WCH
Who are Canada’s High-Risk, High Cost Populations?
The Target 5% Experience:

- Lack access to effective care and entitlements
- Receive care that is fragmented, episodic, crisis driven and not integrated
- Vulnerability, isolation, resilience, voiceless
- Poverty

Social Inequity and Health Inequity: Impact on Health & the Health Care System
Health and Health Care Through A Health Equity Lens

- Define the nature and extent of the community involved
- Consider systems based barriers to access
- Engage communities in effective solutions
  - Care on their terms
- Mitigate underlying social factors through partners and advocacy
- Define and measure success on their terms

Homelessness in Ottawa

- 6,705 individuals

  - 379 Youth
  - 706 families
  - 984 women
  - 3,180 men
Inner City Health
A health inequity mitigation strategy

Summary of Inner City Health Program and Services

- Managed Alcohol Program   16 beds
- TED                       46 beds
- Special Care for Women     16 beds
- Special Care for Men       30 beds
- Hospice                   14 beds
- Supported Housing
- Oaks                      55 units
- Booth House               20 units
- Montreal Road             34 units
- Supportive Housing (SSH)  10 units
- Primary Care Clinic
Engagement & Access

The right care, at the right time, in the right place.

Integrated Case Management with Alignment of Goals for Health and Health Care
Integrated & Connected Team-Based Care
New roles, new providers, new partners

OICH Members

- Ottawa Hospital
- University of Ottawa
- Royal Ottawa Hospital
- Community Care Access Centre
- Community Health Centres
- The Mission
- The Salvation Army
- Options Bytown
- Anglican Social Services
- Cornerstone
- Shepherds of Good Hope
- Canadian Mental Health Association
- Wabano Centre for Aboriginal Health
- Centre for Addiction and Mental Health
- Carefor Health and Community Services
- Youth Service Bureau
Stabilizing Sources of Inequity and Setting Goals Appropriately

Evaluate Performance with Realistic Goals
Impact

January 2013 – 2014

- True ER Diversions 618
- 9 transferred to paramedics due to > 2 person assist
- 7 transferred to paramedics due to non response to verbal stimuli
- 7 transferred to Police for aggression
- 0 transferred due to deterioration of vital signs
- Therefore 96% were true ED diversions
Impact

January 2014 – 2015

- True ER Diversions = 5320 events
  - 3480 (842 clients)
  - 473 > 1 admission
  - 83% < 10
- Transfer to ED from TEDS = 108 (3%)
- Transfer to Police from TEDS = 89 (2.6%)
- Cost without diversion = 1.74 million
  (Paramedics + ED Assessment + $500.00)
- Cost of TED = $300,000.00
What lessons can caring for the 5% yield for the health of the population?

Source: Lynn J, Straube BM, Bell K, Jencks SF; Kambic RT in Milbank Quarterly, Vol 85 No. 2, 2007 (pp. 185-208)
How can we hasten the pace of scale up?

**10 Rules to Accelerate Healthcare Redesign**

- Change the balance of power
- Standardize what makes sense
- Customize to the individual
- Promote well-being
- Create joy in work
- Make it easy
- Move knowledge, not people
- Collaborate and cooperate
- Assume abundance
- Return the money

Thank You

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