Defining Digital Health Enabling Integrated Care

Digital Health Enabling Integrated Care
Special Interest Group
International Foundation of Integrated Care

2019/2020 Webinar Series
September 19th 2019
Speakers today

SIG Leads

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Guest speakers

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SIG Vision

The SIG on *Digital Health Enabling Integrated Care* aims to develop a clear understanding of the role digital solutions play in the delivery of integrated care.

Create a platform for an engaged group to share knowledge around available technologies and development, implementation, and evaluation methods to further the field and enable the spread of digital solutions.

Terms of Reference on the website
1. Develop a *better definition of digital health enabled integrated care* through furthering our understanding of *how* digital health supports integrated care.

2. Share novel and innovative approaches used to design and evaluate digital technologies. (eg. adopting co-design in an agile development, ethnographic approaches to evaluation).

3. Identify useful implementation frameworks and/or guidelines to support wide spread adoption of digital technologies to enable integrated care. In particular, business case development to support sustainability and spread of digital technologies.
How we will get there

1. Launch a Webinar Series
2. Launch a Newsletter
3. Guide curated content and special calls for conferences
2019/2020 webinar series

• 4 webinars in this series
• Solution-based approach
  • Presenting solutions to common challenges

Today: The definition challenge
November 28th: The interoperability challenge
January 16th: The engagement challenge
March 2nd: The scale and spread challenge
Monthly newsletter

- Webinar announcements and speaker bios
- Feature content on topics of interest
- Tech corner
- Events and announcements
ICIC20 – Croatia
April 27-29 2020

- Digital health focused presentation sessions
- Keynote on digital health
- Digital Health Dragon’s Den
  - Looking for collaborators!!
- SIG Annual Meeting
- Networking opportunities
Defining Digital Health Enabling Integrated Care

Vision for digital solutions as being both the “grease” and the “glue” of integrated models of care.

Grease: “allowing integrated care systems to operate smoothly”

Glue: “binds care systems together… to help influence the behaviours and motivations that drive high quality person-centred and coordinated care

Goodwin, N. Tomorrow’s World: Is Digital Health the Disruptive Innovation that will Drive the Adoption of Integrated Care Systems? IJIC, 2018; 18(4):14.
Formative and normative components of integrated care matter

Formative components

Rainbow Model of Integrated Care (RMIC)

Governance, accountability, performance assessment, financial incentives

Case finding
Risk stratification tools
Decision-support systems, care assessments
Care co-ordination
Supporting self-management:
  - Telehealth
  - Telecare
  - Personal Health Records
  - Health literacy
  - Health legacy
  - Bereavement

Monitoring, evaluation & Quality improvement
Business planning

Shared eHealth records
Inter-professional communication

Care in the Home
  - Assisted living
  - Smart homes
  - Home adaptations

Clinical and service integration
Smooth process of care & service delivery

Professional integration
Collaboration between professionals

Organizational integration
Collaboration between organizations

Systems integration
Political environment

Functional integration
Technical 'preconditions' (ICT, facilities)

Normative integration
Social 'preconditions' (Culture, trust)

Based on: Valentijn et al. (2013 & 2016)
Values of Integrated Care

Systematic review revealed 23 values underpinning integrated care from the literature.

23 values identified

Normative values at individual, organizational and societal levels can dictate the way individuals and organizations behave by acting as “guiding principles.”

If technology is truly going to be the grease of integrated care than our technologies need to resonate with our values and principles that drive our models of integrated care.

1. Supports rather than upends values of models
2. Improve engagement
Sinek’s Golden Circle

Why: Core aim of the model of care
How: Guiding values and principles
What: Activities of integrated care

The *why* of integrated care

World Health Organization (WHO) defines integrated service delivery as:

“the organization and management of health services so that people get the care they need, when they need it, in ways that are user-friendly, achieve the desired results and provide value for money.”

“integrated care should be centred on the needs of individuals, their families and communities”

6 patient attributes

Kuluski et al. What is important to people with multimorbidity and their caregivers? Identifying attributes of person centred primary health care from the user perspective. IJIC, 2019; 19(3):4
The use of digital health technologies to help achieve the aims of an integrated model of care by enabling and supporting functional activities and processes, as well as the foundational values and culture on which the model rests.
Digital Technology to Meet the Why

3 questions to guide adoption:

1. *Does this technology support delivery of user-centred care that meets the needs of patients and families?*

2. *Does the technology align with the values and guiding principles of relevant stakeholders in the model of care?*

3. *What functional activities of care are expected to be improved by this technology?*
Example

**IC Model:** Integrated community-based primary health care model.

**Aim:** Meet the needs of complex patients living in our community.

**Values:** Inter-professional and collaborative team work & holistic person-centred approach

**Challenge:** Many patients struggle to manage their diabetes

**Technology:**
Diabetes management app that integrates with EMR

**Person-centred?**
- ✗ Not meeting patient needs
- ✗ Not meeting team needs

**Values and guiding principles?**
- ✗ Single disease focused
- ✗ Not all providers access EMR

**Functional activities?**
- ✔ Helps patients manage diabetes
- ✔ Information connects to EMR

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International Foundation for Integrated Care
Digital Health Enabling Integrated Care SIG
Discussion – chat box
Guest Speakers

Fraser Edward
Shiran Isaackz
Digital Health Enabling Integrated Care

IFIC SIG Webinar
September 19, 2019
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Our Objectives Today

1. Making the case for digital health as an enabler of integrated care

2. Highlight some key examples on how digital health has enabled integrated care

3. Outline key principles we should consider when looking at digital health enabling integrated care
With an aging population we cannot afford to spend more money in the same way on more infrastructure, more human capital and more pharmaceuticals.
“Our investments in digital health have brought us to a point where the ongoing value created significantly exceeds the province’s cost to maintain and grow our digital health assets”  

Ed Clark
Ontario’s Digital Landscape

Primary Care
- \(\sim34,000\) eConsults conducted last year
- \(85\%\) of family physicians are using electronic medical record software

Tools that connect the health system
- \(174,000+\) clinicians have access to integrated clinical records
- \(6\text{ billion}+\) records stored in provincial repositories, including \(94\%\) lab tests and \(77\%\) diagnostic exams

Home and Community Care
- \(\sim900,000\) virtual visits last year
- \(\sim60-80\%\) Telehomecare visits avoided hospital admissions
- \$74 million saved for Ontario’s health system

Acute and Hospital Care
- \(100\%\) of hospitals are using digital information systems
- \(\sim9,000\) physicians are receiving reports and eNotifications from hundreds of hospitals
30.1 million Canadians have a cellphone

318,000+ health apps available + 200+ apps added daily

1 in 3 Canadians use health apps

There is room for improvement

We continue to adhere to an antiquated model where patients must travel to, and see their physician for everything.

70% of ER and clinic visits can be replaced by virtual consultations without any impact on quality of care.

A virtual visit saves ~102 minutes and resolves up to 92% of medical issues.

7 in 10 Canadians would take advantage of virtual physician visits.

Many believe virtual visits would lead to more timely, convenient and overall better care.

Consumer health can empower the patient to take better control of their own health.

What is Bundled Care
Bundled Care is a service delivery and funding model designed to:

• promote greater integration in health care delivery across multiple settings;
• drive high-quality, efficient care; and
• improve patient outcomes and experience

Bundled models provide a single payment for a defined episode of care across multiple settings and providers; this can be set for both chronic disease management and acute episodic or elective patient pathways.

Adapted from: Bundled Care Integrated Funding Models April 2018, MOH LTC Website accessed June 24, 2018
St. Joseph’s Health System Integrated Comprehensive Care (ICC) is an evidence-based model of Bundled Care. Our focus is to make the patient experience as seamless as possible, while utilizing existing human, financial and technology resources across the healthcare continuum, to deliver an integrated and comprehensive care experience.

ICC is sustainable, transformational system change enabled by an integrated service delivery and integrated funding model.
Guiding Principles
Digitally Enabled Bundled Care

1. Number to Call, 24/7
2. Health Care Team
3. Digital Health Record
How can digital health enable integrated care?

**Case Study 1:** Virtual Care for the ICC Program at St. Joseph’s Healthcare Hamilton

**Case Study 2:** Multiple Chronic Disease Management Platform

**Case Study 3:** Surgical Transition Solution Bariatric Patient Journey
Case Study 1:
Virtual Care for ICC Program at St. Joseph’s Healthcare Hamilton

Impact Virtual Care in Integrated Comprehensive Care Program
Case Study 1: Virtual Care for ICC Program at St. Joseph’s Healthcare Hamilton

Partner with Ministry of Health and Ontario Telemedicine Network

First Hospital to support OTN Partner Video Program

mydovetale is SJHH patient portal

Objective – 5% Virtual Care
Case Study 2: Multiple Chronic Disease Management Platform

Patient Application
Enter daily measurements of weight, blood pressure, heart rate, and symptoms

Receive instant feedback through the in-app Medly algorithm, which compares readings against personalized thresholds

Monitor your health status through reviewing trends, laboratory data, and alert history
Case Study 3: Vivify Health’s Surgical Transition Solution Bariatric Patient Journey

1. Meets Bariatric Team
2. Attends surgery education classes
3. Attends consult and consents to surgery
4. Attends Surgery Nutrition class: Introduce app, obtain consent, provide training guide
5. Visits hospital for surgery
6. Receives discharge education materials
7. Discharged home
8. 48 hrs follow-up
9. 1 month follow-up
10. 3 month follow-up
11. 6 month follow-up
12. 12 month follow-up

Pre-Surgery

Reminders on:
- Preparing for your pre-op appointment
- Getting ready for surgery

In Hospital

Reminders on:
- Weekly diet guide
- Vitamins and supplement

Post-Surgery

Transition to PCP
Key principles to digitally enable integrated care

- Involve the patient/carer; they are tremendously underutilized
- Take a service design approach; design a natively digital health service
- Keep it simple
- Partner with your vendors; let them do what they do best
- Digital does not automatically result in immediate improved efficiency; it takes time
- Leverage existing assets
International reflections

Leo Lewis
# Health System Challenges by theme

## Health System Challenges

<table>
<thead>
<tr>
<th>1</th>
<th>INFORMATION</th>
<th>2</th>
<th>AVAILABILITY</th>
<th>3</th>
<th>QUALITY</th>
<th>4</th>
<th>ACCEPTABILITY</th>
<th>5</th>
<th>UTILIZATION</th>
<th>6</th>
<th>EFFICIENCY</th>
<th>7</th>
<th>COST</th>
<th>8</th>
<th>ACCOUNTABILITY</th>
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Classification of digital health interventions

Source: Classification of digital health interventions v1.0: a shared language to describe the uses of digital technology for health. Geneva: World Health Organization; 2018
Banking - pre and post digital
Outpatients – pre, post and future
Key take-away messages

• Digital technologies introduce novel opportunities to address health system challenges:
  • they offer the potential to enhance the coverage and quality of health practices and services and empowerment of patients/clients
  • complement and enhance health system functions through mechanisms such as accelerating exchange of information

• Digital health will not replace the fundamental components needed by health systems such as:
  • active and engaged patients and clients
  • the health and care workforce
  • financing
  • leadership and governance
Up next

October & November Newsletters

Webinar: Interoperability
November 28th