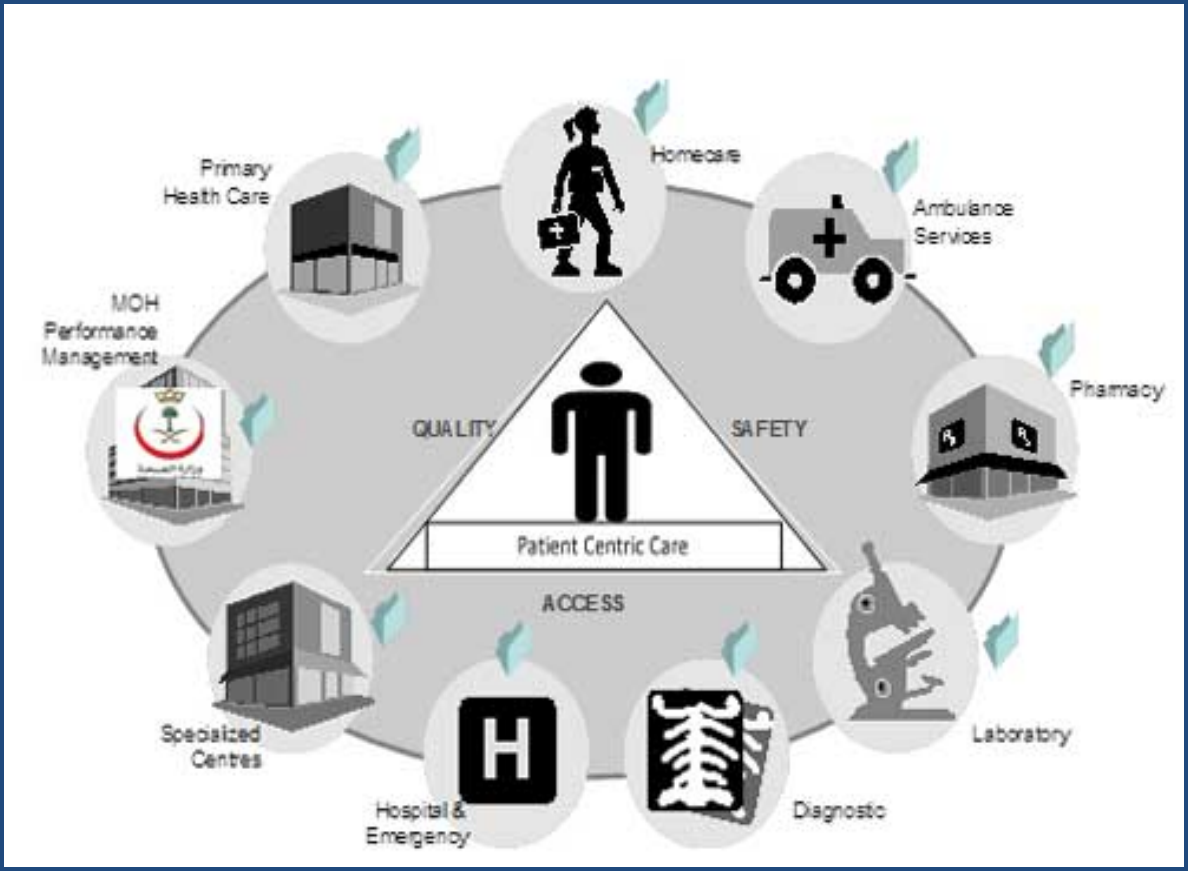
# ELECTRONIC HEALTH INFORMATION


**eHealth - An Enabler of Integration, Sustainability and Patient Accountability/Empowerment**

**Linda Bisonette, BScN, MHS, CHE**

# ELECTRONIC HEALTH INFORMATION

**eHealth** is defined by the World Health Organization as "the combined use of electronic communication and information technology in the health sector"



# ELECTRONIC HEALTH INFORMATION

## eHealth Definitions

**Electronic Health Record** – refers to the systems that make up the private lifetime record of a person's health and health care history made available to all with the need to know.

**Electronic Medical Record** – refers to an office based system that enables the health care provider to record information gathered during a patient's episode of care.

**Personal Health Record** – refers to complete record under the custodianship of the patient/family member ideally contributed to by providers following each episode of care regardless of the location of same.

**Telehealth** – often a confusing term – refers to the use of technology to allow patients to have consultation with a provider who is in another location.

# FEDERAL FOCUS ON eHEALTH

Canada Health Infoway is the Federal Body working with participants to accelerate the development, adoption and effective use of digital health solutions across Canada Their purpose is to realize the vision of healthier Canadians through innovative digital health solutions.

Canada's digital health initiative involves creating a network of systems to securely connect and share health information to empower providers and indeed, patients to better understand and manage health and health care.

The approach – funding a variety of proposals which create excellent solutions to one or more areas of practice, but fail to focus on integration across the continuum of care, e.g.  Hospital Diagnostic Imaging Repository Systems (HDIRS)

Millions spent on funding projects which make sense to the group involved and have some relationship to an overarching goal, but not standardized and driven from one vision of the ideal.

**Better Health Together Campaign** – this initiative is starting to focus on patient stories relating to successes involving digital health care.

# PROVINCIAL FOCUS ON eHEALTH

Underpinning of the eHealth Ontario Blueprint is the use of Registries:

- Client registry – one ID for one individual – photo I.D.
- Provider registry – populated by various colleges e.g. College of Physicians & Surgeons

Accomplishments Cited:

- Three regional hubs formed – cNEO; cSWO; cGTA
- cNEO = connecting Northern and Eastern Ontario
- Clinical Connect – connecting physicians via web-based viewer
- Ontario Laboratory Information System
- All 154 hospital have systems in place
- > 9500 community based clinicians have or will implement EMRs
- Rolling out **ONE ID** – security related to provider identification
- Clinical Data Repository (CDR)

# LOCAL FOCUS ON eHEALTH

- Implementation of Meditech at P&SFDH in 1995; Comprehensive, integrated patient, financial and administrative system

  Reports from the hospital to various providers related to ER and In-Patient Visits

  Participant in HDIRS and OLIS – however still a significant amount of duplication of testing

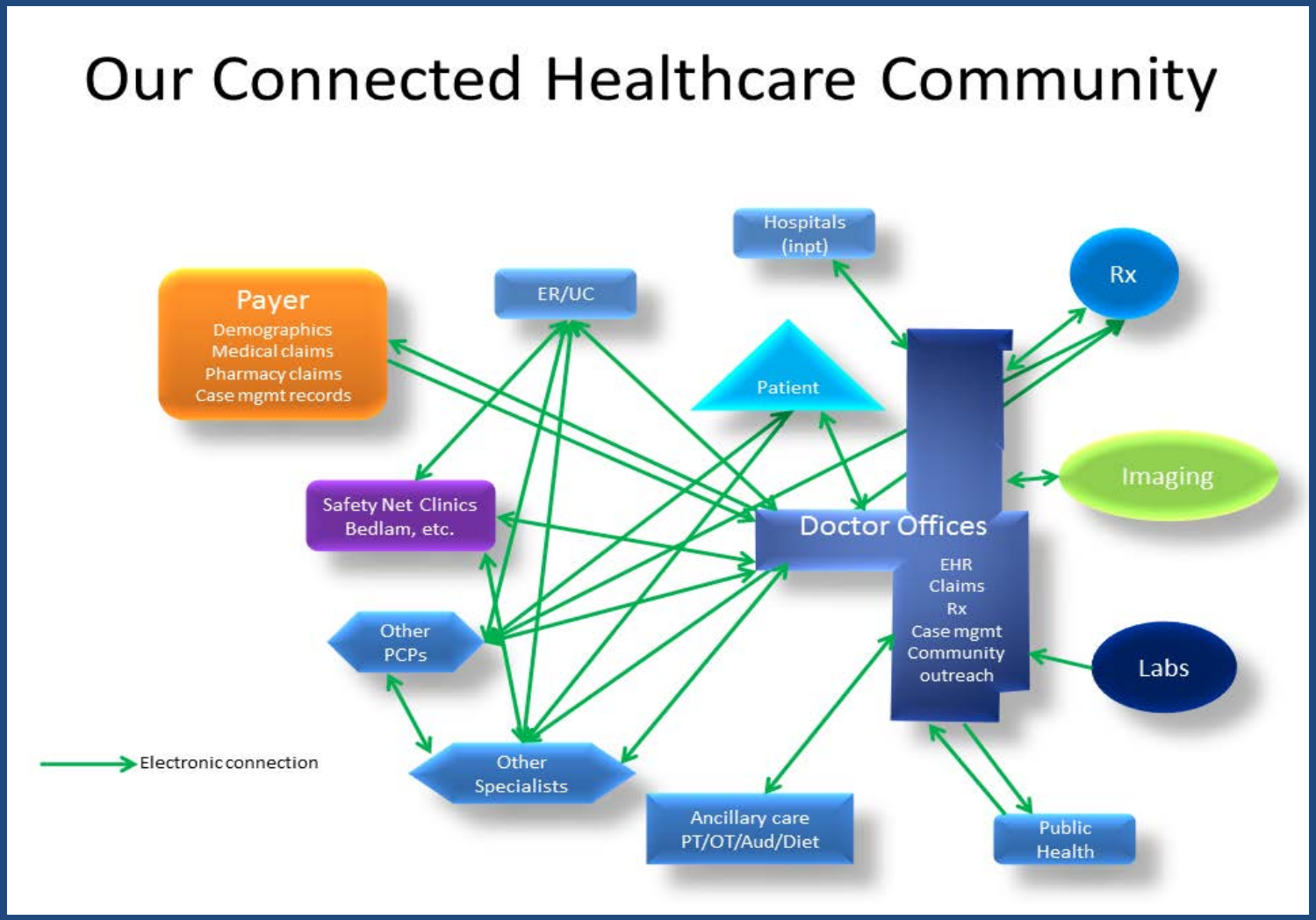
  Downloads to physician office systems

  Multiple business functions including electronic inventory management
- Participation in Regional Clinical Data Repository
- CCAC, Public Health, and Long Term Care facilities are part of their own provincial system rollouts
- Telehealth through Rideau Community Health Services
- Development and use of SHIIP – South East Health Integrated Information Portal – Clinical access by all providers for high needs patients

# LOCAL FOCUS ON eHEALTH

- **Soooo – what do we have?**
  **Silos of electronic health information**

# OR THIS...


Our Connected Healthcare Community
Hospitals (inpt)
Rx
Payer
Demographics
Medical claims
Pharmacy claims
Case mgmt records
ER/UC
Patient
Imaging
Safety Net Clinics
Bedlam, etc.
Doctor Offices
EHR
Claims
Rx
Case mgmt
Community outreach
Other PCPs
Labs
Electronic connection
Other Specialists
Ancillary care
PT/OT/Aud/Diet
Public Health

# Care Providers should be able to...

- View patient's results from their offices whether they be tracings from ECGs, diagnostic imaging results, lab results, patient inputs such as weights, medication compliance, blood glucose readings, etc.
- Have immediate access to patient services provided in hospitals, clinics, at home or from referred services/specialties
- Count on pharmacy services to pick up prescription errors and abuse
- Allow pharmacists to be alerted to potential drug interactions as many patients use multiple pharmacy locations
- See test results earlier such as diagnostic imaging systems which have cut time for imaging and reporting by approximately 40%
- Compare results over time in order to assist patients with managing their diseases
- Have electronic reminders when screening is needed or results are critical or ready for viewing
- Reduce storage space and clerical time

# OR, IDEALY THIS...

# Clients/Patients should be able to...

- Book appointments on-line
- View their test results
- Consult with care providers when issues arise – e.g. weight gain in patients with heart failure to discuss diuretic management, diabetics who are ill and need assistance with managing blood glucose levels
- Request prescription renewals and drug refills
- Engage in patient consultations using modalities such as *Facetime* when travel makes consultations difficult from a time and money perspective; even the savings in workers taking sick time for appointments would be dramatically impacted.

# Clients/Patients should be able to...

- Participate in patient/family conferences using electronic means versus family members taking full days from their work
- Know wait times for ERs and various appointments
- Enter their own glucose values, blood pressures, weights etc.
- Update their personal information at any time to allow it to be accessible for all with the need to know; on-line up to date history and medication list
- Expect to receive reminders related to specific issues e.g. time for mammogram, colonoscopy screening, PAP smears, prostate exams etc.
- Have electronic access to support groups

# I wish it was this simple but…

# What are the Barriers?

- Difficulties associated with adding older records to an EHR system – scanning is often difficult to read
- Long Term storage issues and inconsistencies in policy related to record retention
- Synchronization of Records from a variety of locations of care
- Privacy Issues or fear of same
- Hardware and software limitations
- Issues of Cost – not only start up but maintenance costs

# What are the Barriers?

- Inertia or resistance to change
- Legal issues or the fear of same
- Currently patients navigate the medical system to achieve the best outcome in the shortest times, but physicians are incentivized to provide more services; who pays for and who gets paid when eHealth solutions are used
- Customization rendering integration difficult if not impossible
- Vendor Competition
- Lack of leadership, solid standards and direction leading to fragmented systems implementation
- Technologies must be adaptable to highly mobile devices such as *i*PADS/*i*Phones or *i*PODS

# Why is eHealth an Enabler?

- 80% of Americans who have access to their health record use it.
- People who are more engaged get better health care and take better care of their health.
- 27% of adults (US data) who use the internet have tracked their weight, diet, exercise routines, health indicators and symptoms.
- Empowering patients with the support and tools to be responsible for and more involved in their own health is critical to improving outcomes and reducing costs.
- Sensors for monitoring health in real time are available and will become pervasive as people see the benefits of preventing and managing chronic conditions.
- Will sustainability require the client/patient to cooperate with healthier behaviours prior to receiving restorative surgeries or post acute surgeries? and will they be required to prove that by submitting pedometer results, weight charts, etc ?

# Available any time - anywhere