

# **The Personal Health Record**

## **A Game Changer for Nova Scotia**

Mary W. Russell, BN, MHA, FCCHL  
Alexandra (Alexa) Thompson  
Dr. Ajantha Jayabarathan, MD, CCFP, FCFP  
NS Dept of Health & Wellness  
Oct 17, 2013

# Overview



- Setting the Context
- Our Approach
- Challenges / Lessons Learned
- The Way Forward
- First Voice

# Setting the Context

## Health and Wellness

### Responsible for

- Strategic direction of health-care system
- Development of service delivery standards
- Monitoring and evaluation of quality, accessibility and comprehensiveness of health services
- Financial and human-resource planning
- Allocation of resources
- Establishing requirements for information systems

### Vision

An innovative and sustainable health system for generations of healthy Nova Scotians

### Mission

Providing leadership to the health system for the delivery of care and treatment, prevention of illness and injury, promotion of health and healthy living

Budget: \$3,910,819,000

Dept Employees: 489

NS Population: 921,725

Hospitals: 35 in 9 DHAs + IWK<sup>1</sup>

Beds: 2928<sup>1</sup>

GPs: 1002<sup>2</sup>

Specialists: 1402<sup>2</sup>

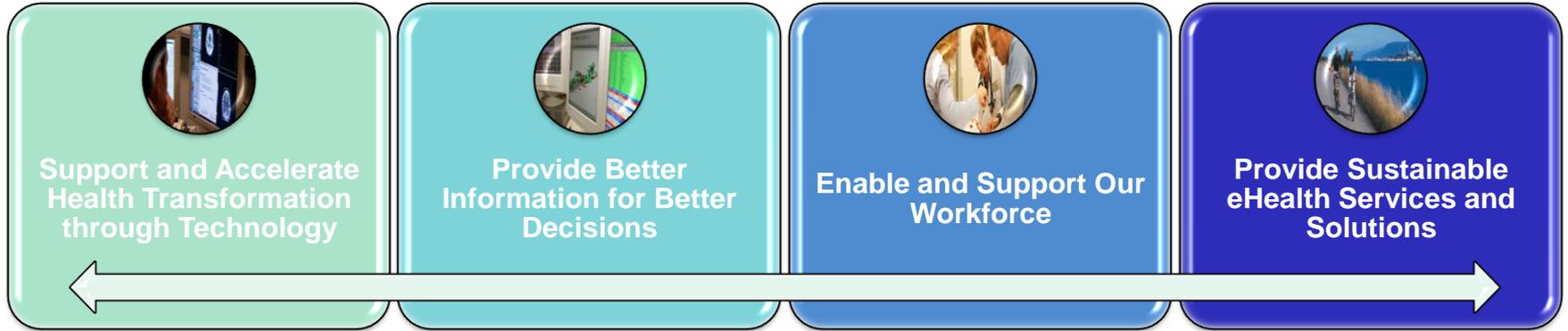
**Key Services/Program Areas:** 811, Acute & Tertiary Care, Addiction Services, Better Care Sooner, Continuing Care, eHealth, Emergency Health Services, Family Physicians, Health Card (MSI), Health Team Nova Scotia, Infection Prevention and Control, Mental Health, Nursing Strategy, Personal Health Information Legislation, Pharmacare Programs, Primary Health Care, Public Health, Quality & Patient Safety, Travel and Accommodation Assistance, Wait Times...

1. *Business Intelligence & Analytics, Health Information Office, 2012*

2. *Physician Services, 2011/12*

# Health Information Office

## ➤ Priorities



## ➤ Strategic Actions

Reduce Complexity



Data for Decisions



Devices



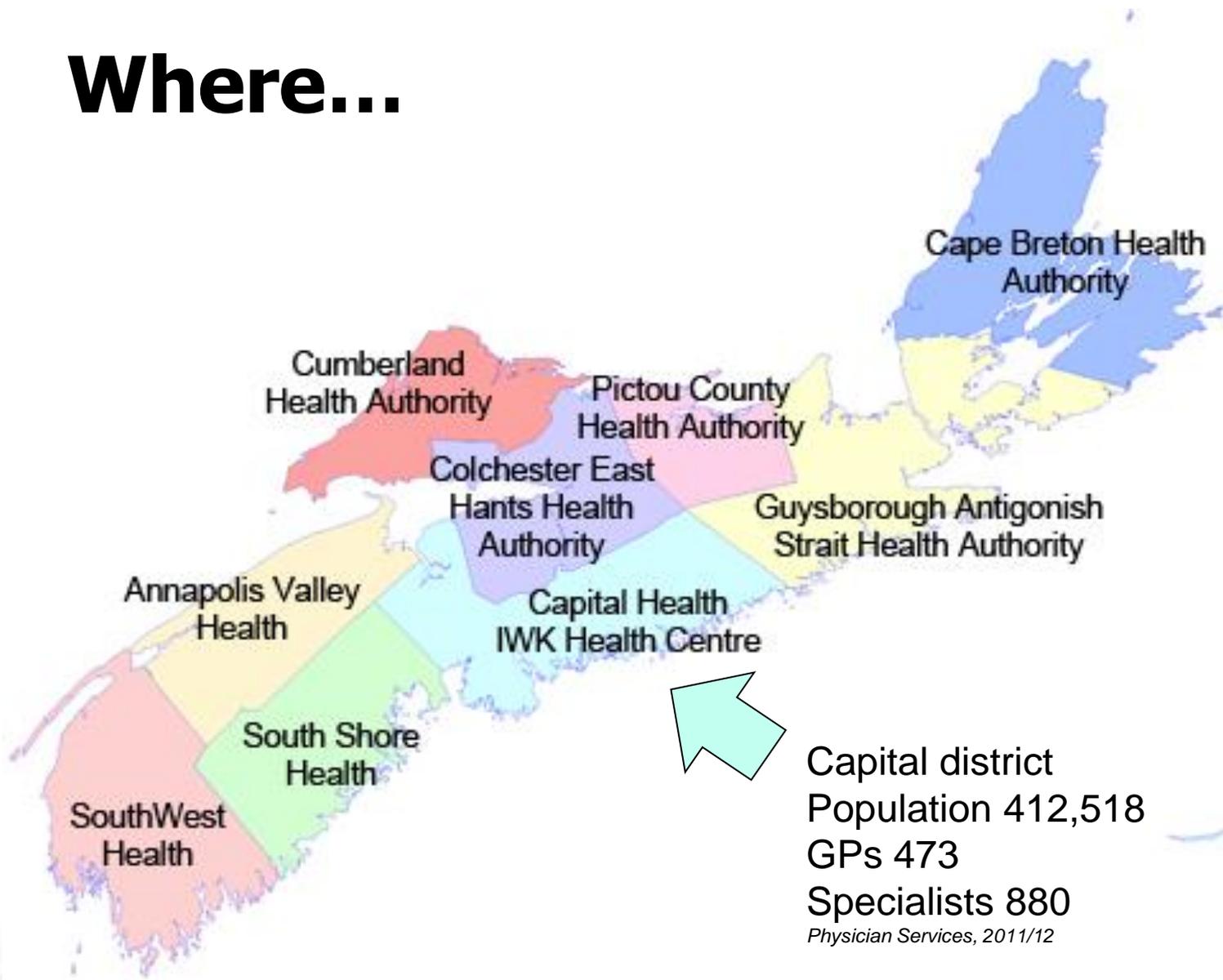
Rapid Deployment



Person Centric



# Where...



Capital district  
Population 412,518  
GPs 473  
Specialists 880  
*Physician Services, 2011/12*

Capital Health covers both  
Halifax Regional Municipality  
and ...





...the Western part of Hants County

Howard Dill,  
4 time world champion  
pumpkin grower

# So, what is a PHR?



- A complete or partial electronic health record, ***under the custodianship of a person(s)*** (e.g. a patient or family member), that holds all or a portion of the relevant health information about that person over their lifetime (Infoway).
- Stores information from many health providers in one central location, available 24/7.

# A PHR enables ...



- patient e-access to their own health information
- patient ↔ provider e-communication
- provider ↔ provider linkages across the health system
- patient log of OTCs, symptoms, self-monitoring data
- patient access to targeted wellness programs

# A game changer ...



- Opportunity to engage patients in new ways
- Helps people better understand their health and care for themselves
- New ways of communication, education & awareness

... for patients, providers and the health system

# Why now?



- Build it now they ARE coming! (demand)
- Expected connectivity
- Get ahead of the game

*... A systematic, coordinated approach to PHRs is needed*

# Evidence

**97%** of Canadians say it is 'somewhat or very important' to have their health records kept electronically for portability across the health system <sup>1</sup>

**73%** of those > 55 and **70%** with chronic conditions say eRecords are 'very important' compared with the population as a whole (64%) <sup>1</sup>

## Perceived Benefits: <sup>2</sup>

- **77%** - Make interacting with multiple health care providers better
- **76%** - Make accessing health care services easier and more convenient
- **76%** - Help me keep more informed about my health and/or the health of those I am caregiver for
- **74%** - Make the health case system more efficient
- **69%** - Allow me to take more control over my health and how it is managed

## Most Likely to be used: <sup>2</sup>

- **Make appointments with health care providers**
- **View information in health records**
- **View lab results**
- **Request prescription renewals**
- **View current prescriptions and medication history**

1. Zelmer, J. (2011). Ipsos Reid Survey. Health information solutions for consumers: Research and plans. *Healthcare Management Forum*, 24(3), 144-146.

2. Canada Health Infoway. (March 13, 2013). Ipsos Reid 2013 Public Opinion Tracking Survey DRAFT Report

# Evidence

Excelleris – **>350,000 subscribers** for Myehealth<sup>1</sup>

Sunnybrook – **>27,000 patients** using MyChart, online medical record<sup>2</sup>

Denmark – patient **on-line access** to health information since **2005**.<sup>3</sup>

Kaiser Permanente – **improvement** of 2.0 – 6.5 percentage points such as **HbA1c, cholesterol, and blood pressure** screening and control.<sup>4</sup>

RelayHealth – Impact on Navy patients: **40% reduction in ER visits**.<sup>5</sup>

California HealthCare Foundation – *"Americans who have access to their health information through personal health records (PHRs) report that they **know more** about their health, **ask more** questions, and **take better care of themselves** than when their health information was less accessible to them in paper records"* <sup>6</sup>

1. Excelleris, News & Info, July 3, 2013

2. Chung, K., Personal Communication, Aug, 2013

3. Protti, D. & Johansen, I. Issues in International Health Policy. Vol 80, March 2010.

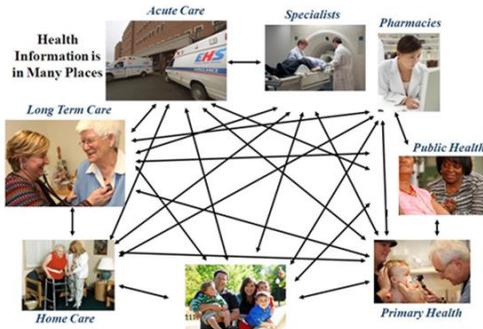
4. Health Affairs, July 2010

5. RelayHealth, source: HIMSS 2010 presentation, Navy Medicine National Capital Area and National Naval Medical Center

6. California HealthCare Foundation, April 13, 2010

# We believe a PHR will ...

## Current



- improve access to health services
- extend the reach of primary health care practices
- create efficiencies for practices (patients and providers)

- easier to communicate (patient ↔ physician)
- enables shared accountability for health/self managed care (as opposed to provider doing all)
- reminder systems (flu, immunization, appts)
- ↓ paper
- eReferrals

## Future



# Our Approach

# What we're doing ... differently



- 2 year demonstration to learn (ending March 2014)
- Non capital asset (new funding model)
- Web based solution (speed to market)
- Subscriber based (growth flex)
- Cost shared between Canada Health Infoway/DHW (75%/25%)
- Vendor is McKesson Canada; Solution is RelayHealth
- Recruitment target: 30 family physicians, 100 patients/physician
- Benefits evaluation will inform if provincial roll out is warranted

# How is this being promoted to patients?

## Our office is online!

*Good news, now you can...*



E-mail the Practice  
(over a secure network)



Get Your Test  
Results



Request  
Appointments



### It's Easy To Get Started

Just give your e-mail  
address to our staff.

**BetterCare  
Sooner**

  
**NOVA SCOTIA**

POWERED BY  RelayHealth

## Our office is online!



E-mail the Practice  
(over a secure network)



Get Your Test  
Results



Request  
Appointments

Provide us with your email address to start  
managing your healthcare from the Web.

Name \_\_\_\_\_  
(please write your name as it appears on your healthcard)

Email \_\_\_\_\_

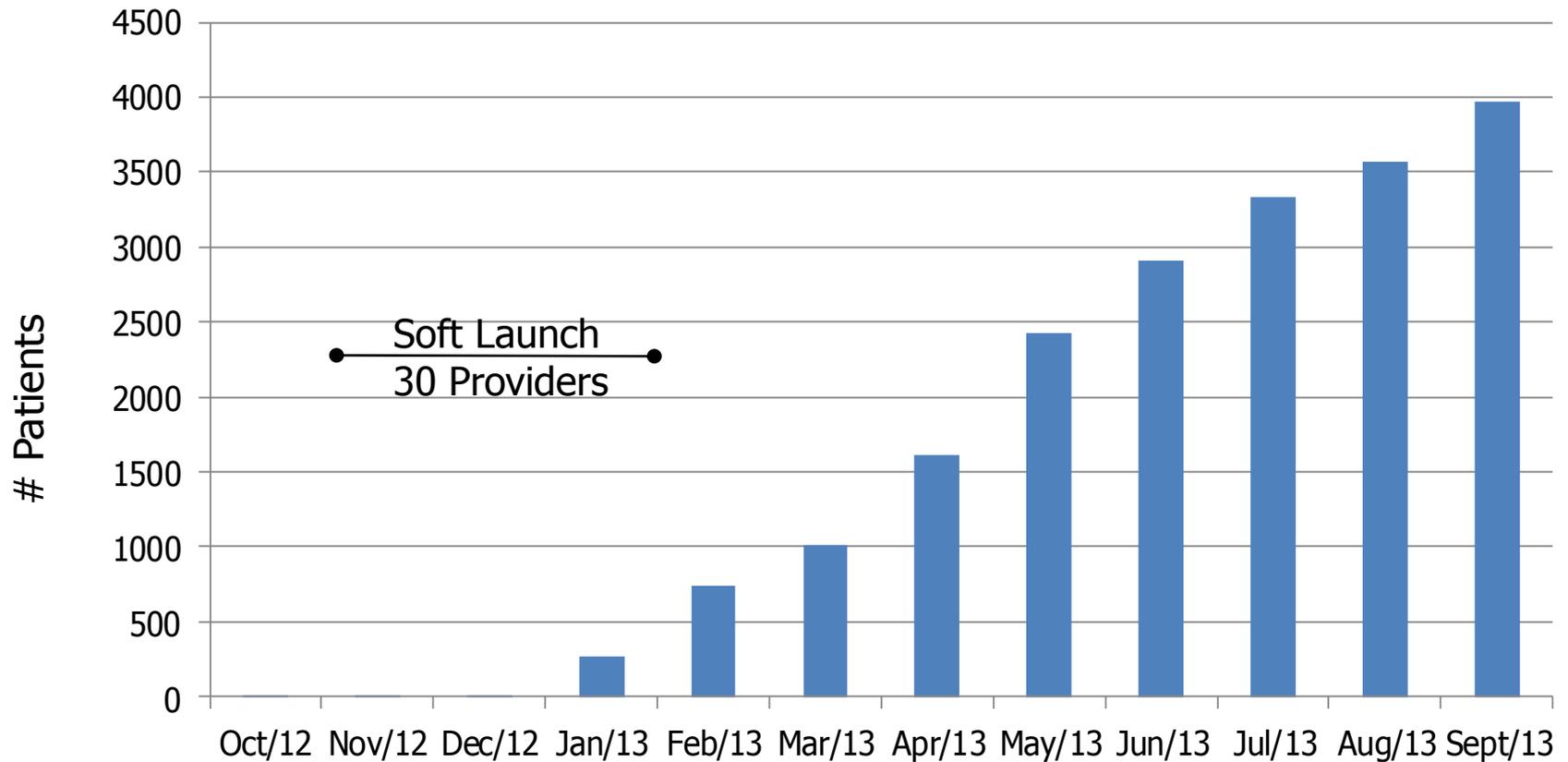
Doctor \_\_\_\_\_

We are collecting your email address to issue you an invitation to enroll in our online communication service. Enrollment is optional. In compliance with provincial privacy legislation we will only use your email address for this purpose and will not disclose it to others without your prior knowledge and consent.

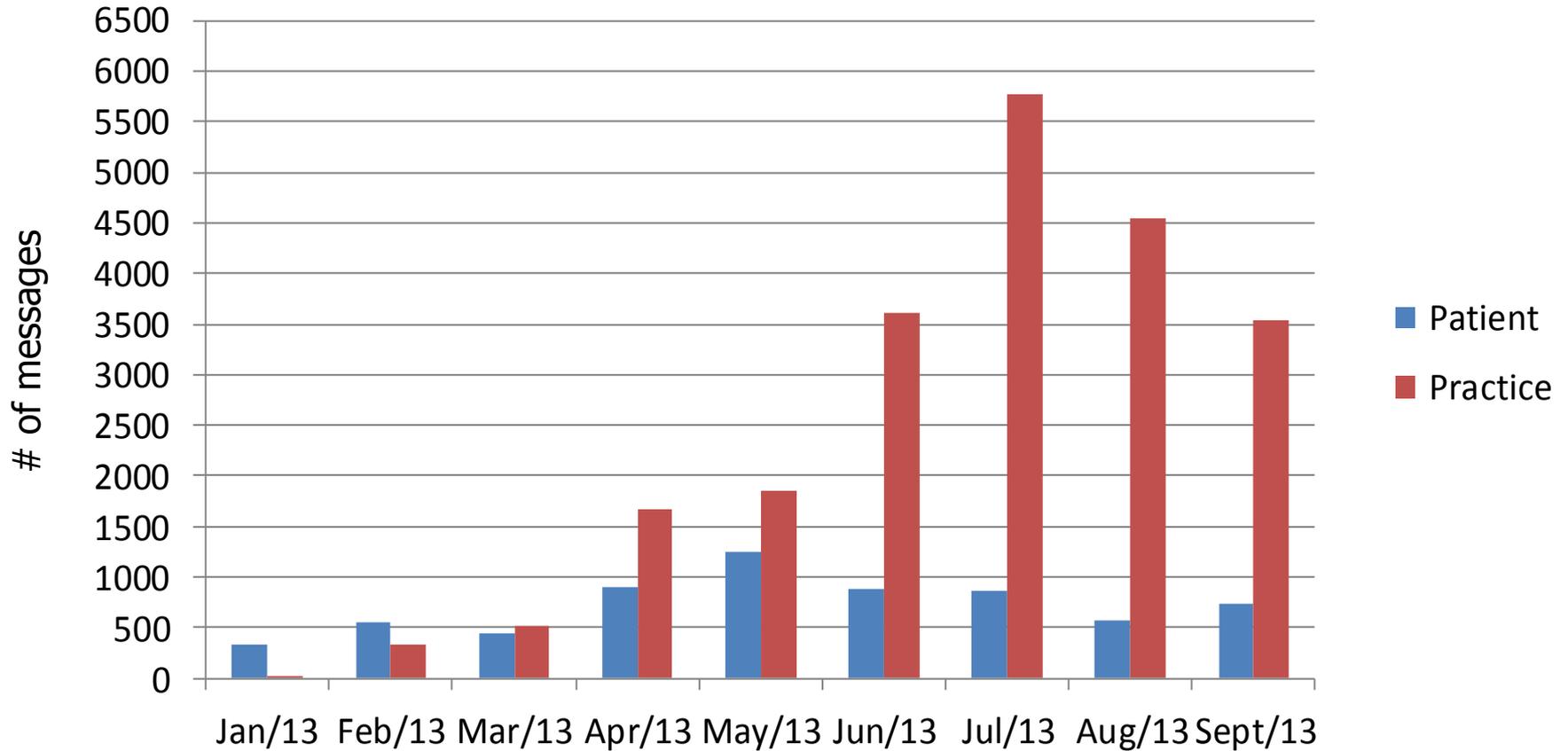
  
**NOVA SCOTIA**

**BetterCare  
Sooner**

# Patient adoption



# PHR utilization



# Change management

'Need to keep this conversation going'  
(physician)

Need to promote the 1-800 patient support line 'practice staff spending time helping patients' (physician)

'Much better than waiting on the phone'  
(patient)

'Want more frequent peer sharing meetings'  
(physician)

'Need to see more information in the PHR'  
(patient)

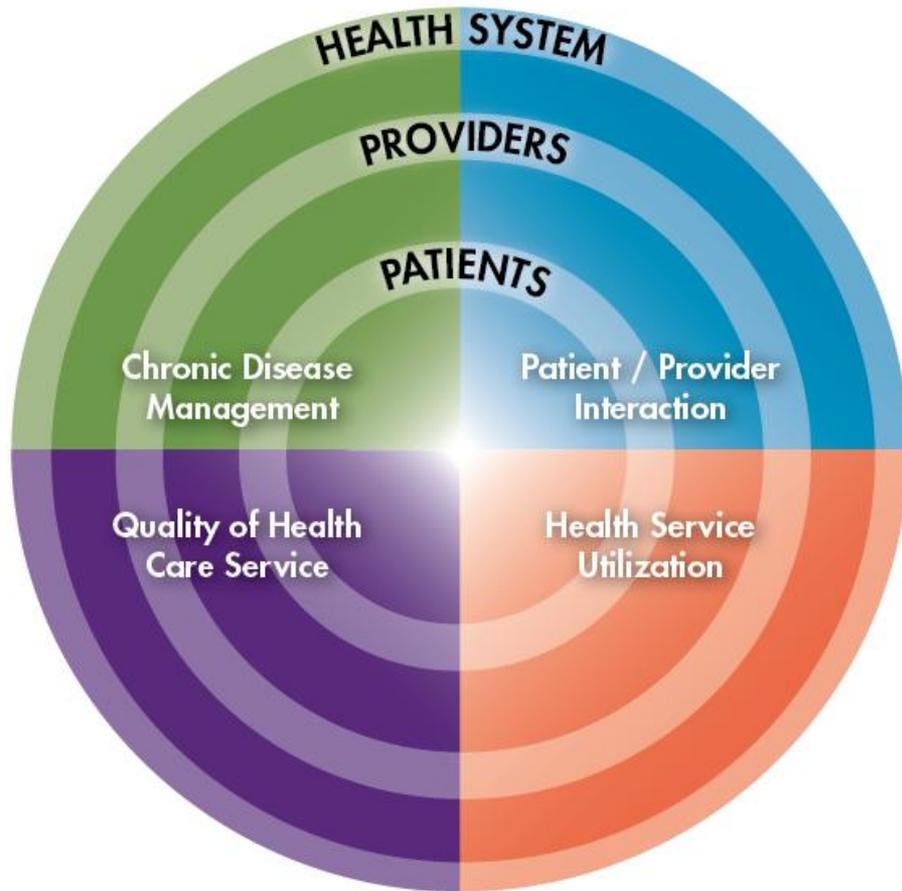
'Appointment booking and communication is wonderful'  
(patient)

'Great for my patients'  
(physician)

'Great design especially for those who are not computer literate'  
(patient)

'Didn't want to enter history as I may make it wrong'  
(patient)

# Benefits evaluation model

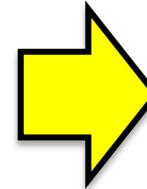


What are the benefits of the PHR to Nova Scotia patients, providers & system?

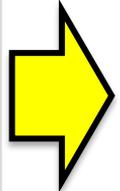
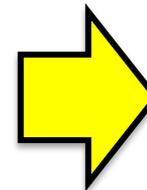
What are the lessons learned in the demonstration project that will inform a provincial rollout strategy?

# Anticipated benefits

DOMAIN	PATIENT	PROVIDER	HEALTH SYSTEM
<b>Chronic Disease Management</b>	<ul style="list-style-type: none"> <li>• ↑ participation in disease management (self managed health).</li> </ul>	<ul style="list-style-type: none"> <li>• ↑ volume of self-reported patient info for providers to use in advising on chronic disease management.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved adherence to CDM clinical practice guidelines.</li> </ul>
<b>Patient : Provider Interaction</b>	<ul style="list-style-type: none"> <li>• ↑ in direct communication from family practice.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved communication about N test results with patients.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved adherence to CDM clinical practice guidelines.</li> </ul>
<b>Health Service Utilization</b>	<ul style="list-style-type: none"> <li>• Better access by patients to their personal health info.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved provider capacity for patient education. Improved chronic disease management utilizing PHR visits between office visits. Improved clinical workflow.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved provider capacity for patient education and reinforcement of self-care. Improved chronic disease management utilizing PHR visits between office visits.</li> </ul>
<b>Quality of Health care Service</b>	<ul style="list-style-type: none"> <li>• ↑ in patient-centered access to health services.</li> </ul>	<ul style="list-style-type: none"> <li>• ↑ volume of self-reported patient info for providers to use in advising on care plans.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved health system coordination</li> </ul>

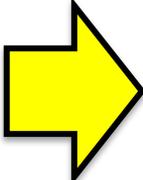
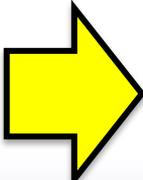


**Directional**  
(supported by literature review)



**Better health outcomes.**

# Draft indicators

	PATIENT	PROVIDER		HEALTH SYSTEM
<b>Chronic Disease Management</b>	<ul style="list-style-type: none"> <li>•% of self-reported diabetic patients who use PHR to log blood monitoring activity</li> </ul>	<ul style="list-style-type: none"> <li>•% of self-reported diabetic patients who report being counseled by their provider based on info they entered into their PHR</li> </ul>	 <b>Directional</b> (supported by literature review) 	<ul style="list-style-type: none"> <li>•% of self-reported diabetic patients using PHR who report being due for a foot assessment and having had a foot assessment</li> </ul>
<b>Patient : Provider Interaction</b>	<ul style="list-style-type: none"> <li>•% of patients with PHR who report having received flu shot message from provider through PHR</li> </ul>	<ul style="list-style-type: none"> <li>•% of PHR patients reporting having received e-notification of a N test result and not needing a follow up call or appt</li> </ul>		<ul style="list-style-type: none"> <li>•% of self-reported diabetic patients who used pre-visit information provided through their PHR to prepare for their foot assessment.</li> </ul>
<b>Health Service Utilization</b>	<ul style="list-style-type: none"> <li>•% of PHR patients who believe e-notification about N test results would mitigate further investigation of that health issue</li> </ul>	<ul style="list-style-type: none"> <li>•% of self-reported diabetic patients having PHR visit rather than office visit about HbA1c results</li> </ul>		<ul style="list-style-type: none"> <li>•% of self-reported diabetic patients having PHR visit rather than office visit about HbA1c results</li> </ul>
<b>Quality of Health care Service</b>	<ul style="list-style-type: none"> <li>•Level of patient satisfaction with e-booking appts with family practice (compared with pre-PHR scheduling processes).</li> </ul>	<ul style="list-style-type: none"> <li>•Level of provider use of self reported/patient-entered supplementary personal health information in PHR.</li> </ul>		<ul style="list-style-type: none"> <li>•% of patients willing to authorize other health providers involved in their care to access their PHR</li> </ul>

**Better health outcomes.**

# Challenges / Lessons Learned

# Challenges / Lessons Learned

## Sailing in uncharted waters...

- Green field – great opportunity to go to cloud and not build infrastructure
  - RFP process – an RFI may be helpful
  - Leadership – knowledge of health systems, the players & community (not just IT)
  - Steering Committee – broad representation
    - consumer co-lead (underscores philosophy of initiative)
  - PDSA – rapid deployment
  - Culture Shift – specialists bring them in early
    - support patients
    - start with the pluses
  - Systems are architected to get information into the hands of providers and hospitals (not patients)
- 

# Challenges / Lessons Learned

## Sailing in uncharted waters...

- Physicians listen to physicians
    - Enlist 1-2 physician champions to recruit other physicians
    - Establish community of physician colleagues for sharing ideas regarding PHR utilization
  - Compensation for e-work – begin discussions early
  - Admin staff – critical to success; must have a voice in early user feedback
  - PHR is not a stand alone project – integration with EMR is critical for success, find synergies with other e-projects
  - Patients without a regular family physician
  - Good legal advice
    - technology out pacing legislation
    - custodianship
  - Seek commitment as opposed to compliance – spend the time!
- 
- A background image of a sailboat on a blue sea under a blue sky with white clouds. The sailboat is a small white sailboat with a single mast and a white sail, sailing on a blue sea with white-capped waves. The sky is a clear blue with large, fluffy white clouds. The overall scene is bright and sunny.

# The Way Forward

# Next steps



- Integration with EMRs  
(NOD, Practimax, QHR)
- eReferral
- Benefits evaluation
- Link with other systems

... ? province wide rollout

# VISION

*One for every Nova Scotian  
&  
connected to providers*

## **Steering Committee**

College of Physicians and Surgeons of Nova Scotia

Chief, District Department of Family Practice

Dalhousie Family Medicine, family physician

Doctors Nova Scotia

CDHA Department of Radiology

Community Members (2)

DHW Chief Health Information Officer

DHW Director Monitoring and Evaluation,

Partnerships & Physician Services Branch

DHW Executive Director Primary Health Care &

Emergency Health Services

DHW PHR Project Director [Mary.Russell@gov.ns.ca](mailto:Mary.Russell@gov.ns.ca)

DHW PHR Project Manager

Change Management and Communications Consultant

McKesson Canada/RelayHealth

# First Voice

**“Use your health, even to the point of wearing it out. Spend all of it before you die; do not outlive yourself.” — *George Bernard Shaw***



# My story

- 15 years of pain
- 8-12 months of combined hospital/home care
- Taking charge of my health: changes in diet, exercise, personal attitude towards ageing
- How I was introduced to RelayHealth
- How I originally made use of the system
- How my confidence in and knowledge of the potential of the system grew

# The RelayHealth system 1

Access History

Forms Submitted

Tracking Results

Import/Export Health Data

Actions

Add New Family Member

Print This Record

<b>Title</b>	
<b>First Name</b>	Alexandra
<b>Middle Name</b>	Jane
<b>Last Name</b>	Thompson
<b>Former/Birth Name</b>	Gordon-Ingram
<b>DOB</b>	Jul 20, 1948
<b>Gender</b>	Female
<b>Height</b>	5'6"
<b>Weight</b>	220
<b>Preferred Language</b>	English
<b>Race</b>	White
<b>Ethnicity</b>	Not Hispanic or Latino
<b>Marital/Relationship Status</b>	Married
<b>Number of Children</b>	2
<b>Place of Birth</b>	Caterham, Surrey, England

## Previous Physicians

<b>Physician 1</b>	Dr. Javabarathan
--------------------	------------------

# The RelayHealth system 2

Clinical Data

Personal Information

Access History

Forms Submitted

Tracking Results

Import/Export Health Data

Actions

Add New Family Member

Print This Record

Keep your medical information up-to-date by periodically adding or changing information in your health history.

**Meds & Allergies**

Problems & Proc.

Results

Vitals

Family & Social History

Immunizations

Files

## Medications

[+ New Medication](#) | [Print Only Active](#) | [Print All Medications](#)

Drug	Medication and Insurance Coverage Details	Renew Medication	Currently Taking?	Source	Action
Amoxicillin	Oral Capsule 250 MG QTY: 0	<a href="#">Renew</a>	Yes	Patient	<a href="#">Edit</a>
iron supplement (300 mg)	QTY: 1 Capsule(s)		Yes	Patient	<a href="#">Edit</a>

## Allergies: Medication

[+ New](#)

No allergies specified. You may confirm this Patient has [no known medication allergies](#).

## Allergies: Environmental or Food

[+ New](#)

Allergy	First Occurrence	Reactions	Status	Source	Action
Lactose	Dec 12, 2012	Itching	Active	Patient	<a href="#">Enter details</a>
Leather, mould, dust	Jan 1995	Itching	Active	Patient	<a href="#">Enter details</a>

# The RelayHealth system 3

Alexandra Jane Thompson

View

- Clinical Data
- Personal Information
- Access History
- Forms Submitted
- Tracking Results
- Import/Export Health Data

Actions

- Add New Family Member
- Print This Record

**Alexandra Jane Thompson - Clinical Data** [Start the Update Wizard](#)

Keep your medical information up-to-date by periodically adding or changing information in your health history.

Meds & Allergies **Problems & Proc.** Results Vitals Family & Social History Immunizations Files

**Problems** [+ New Problem](#)

Show all problems

Problem	Start Date	Status	Source
<a href="#">Back pain (finding)</a>		Active	Patient
<a href="#">Iron deficiency</a>		Active	Patient

**Surgeries** [+ New](#)

No surgeries specified.

**Procedures** [+ New](#)

Type	Date	Source
<a href="#">Blood test</a>		Patient
<a href="#">Physiotherapy</a>		Patient

# The RelayHealth system 4

Alexandra Jane Thompson

View

- Clinical Data
- Personal Information
- Access History
- Forms Submitted
- Tracking Results
- Import/Export Health Data

Actions

- Add New Family Member
- Print This Record

## Alexandra Jane Thompson - Clinical Data

[Start the Update Wizard](#)

Keep your medical information up-to-date by periodically adding or changing information in your health history.

Meds & Allergies | Problems & Proc. | Results | **Vitals** | Family & Social History | Immunizations | Files

### Vitals

[View Growth Chart](#) | [New](#)

Date	Blood Pressure [mmHg]	Pulse [bpm]	BMI*	Height [ft.in]	Weight [lbs]	Temp [°C]	Source
<a href="#">Sep 07, 2013 01:46 PM</a>	110/88	72	31.1	5'4"	181	37	Patient
<a href="#">May 10, 2013 05:34 PM</a>			34.3	5'4"	200		Provider
<a href="#">May 10, 2013 02:34 PM</a>	133/87			5'4"			Patient

# The RelayHealth system 5

Meds & Allergies   Problems & Proc.   Results   Vitals   **Family & Social History**   Immunizations   Files

**Family Health History** [Edit Family Health History](#)

Condition	Family Member
Heart disease	Mother, Father, Sibling
Stroke	Cousin

**Tobacco Use** [Edit Social History](#)

Never smoked cigarettes (Recode value: 4)

No cigar or pipe use

No smokeless tobacco use

**Exposed to second hand smoke**

**Alcohol and Substance Use**

Does not use recreational drugs not prescribed by a doctor

Does not consume alcoholic drinks

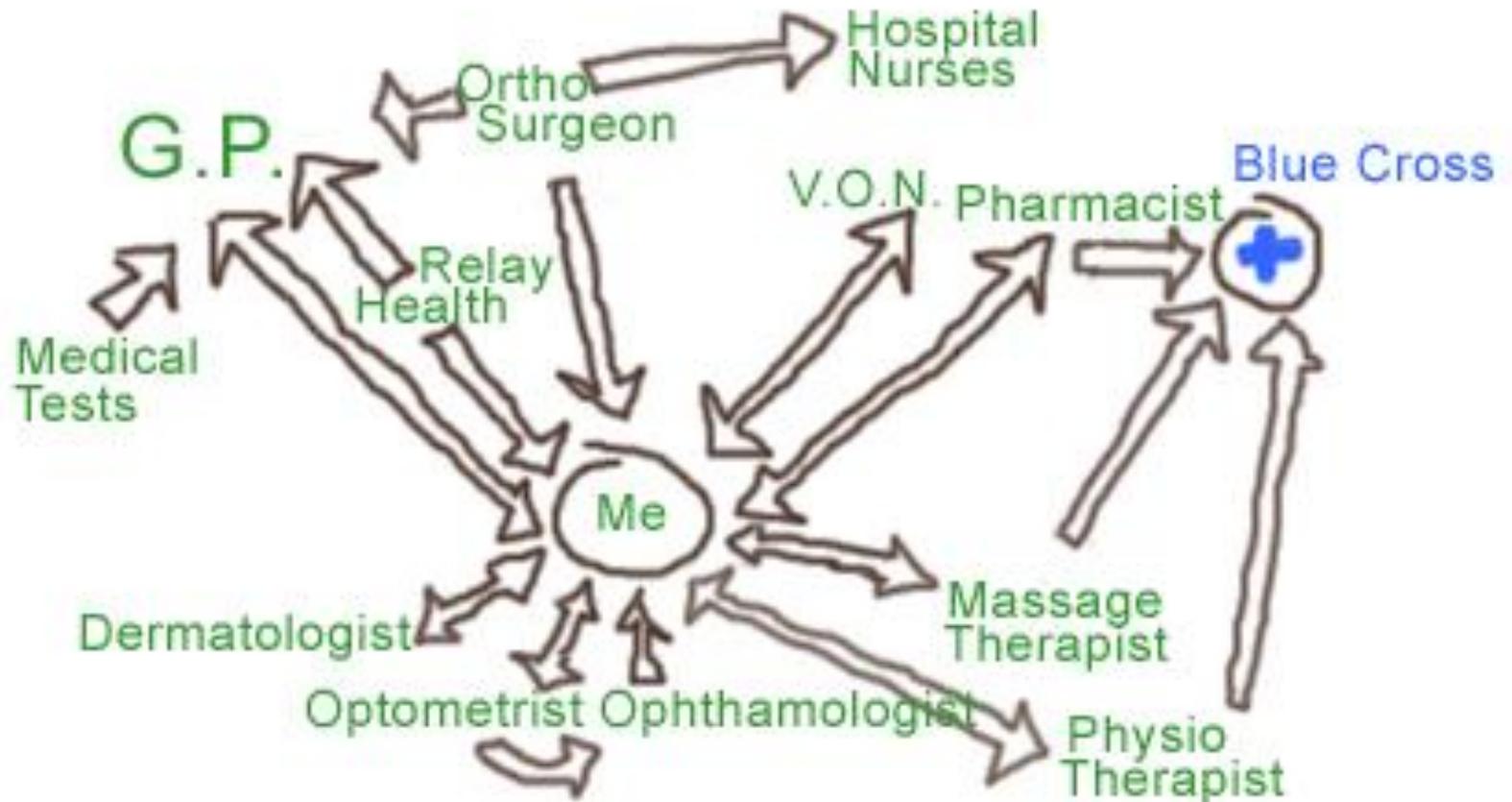
**Diet**

Consumes 2 servings of grains, 3 servings of vegetables, 4 servings of fruit, 0 servings of milk, 2 servings of meat and 2 servings of fats daily

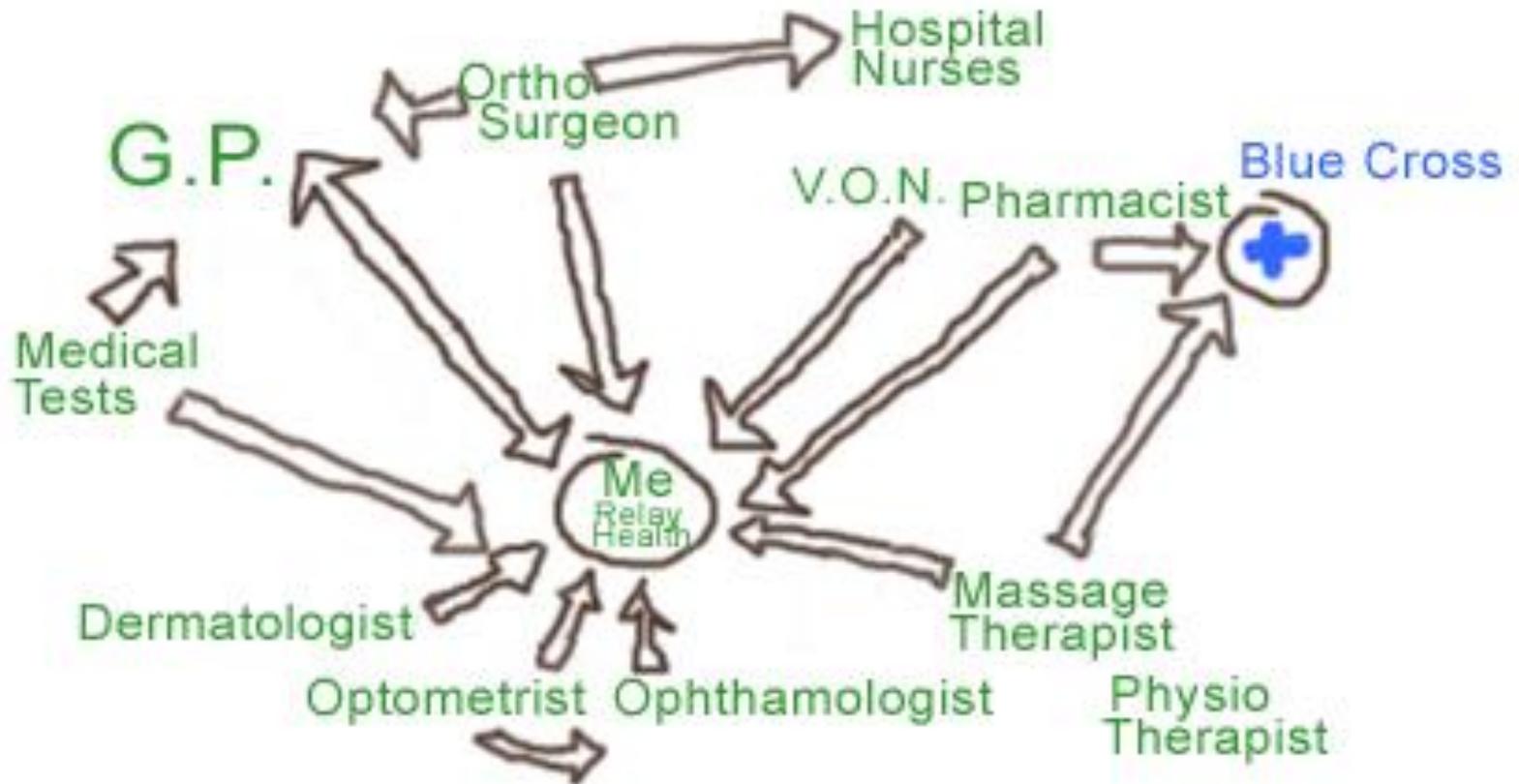
**Exercise**

Walks, swims, lifts wieghts, does yoga or stretching

# How I interact with my health care professionals today



# How I hope to interact in the future



# Other digital methods I use to take charge of my health

- APPS!
- To record daily calories, time and intensity of daily exercise
- To track my daily walking
- To keep check of health appointments, times to refill prescriptions
- To monitor results, such as physio weight-training or U.V. treatment for dermatitis

# First Voice

**Thank You**