

DEMYSTIFYING ELECTRONIC HEALTH



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Regional Chief Information Officer
Central Ontario LHINs

- ❑ What is eHealth?
- ❑ What is an Electronic Health System?
- ❑ EHR, EMR and PHR / CIS/HIS
- ❑ Where does the electronic information come from?
- ❑ What role does the data contributor play in the electronic health record?
- ❑ EHR: Consumers, Care Providers, and LHINs
- ❑ Population Health Management

eHealth is an overarching term used today to describe the application of information and communications technologies in the health sector.

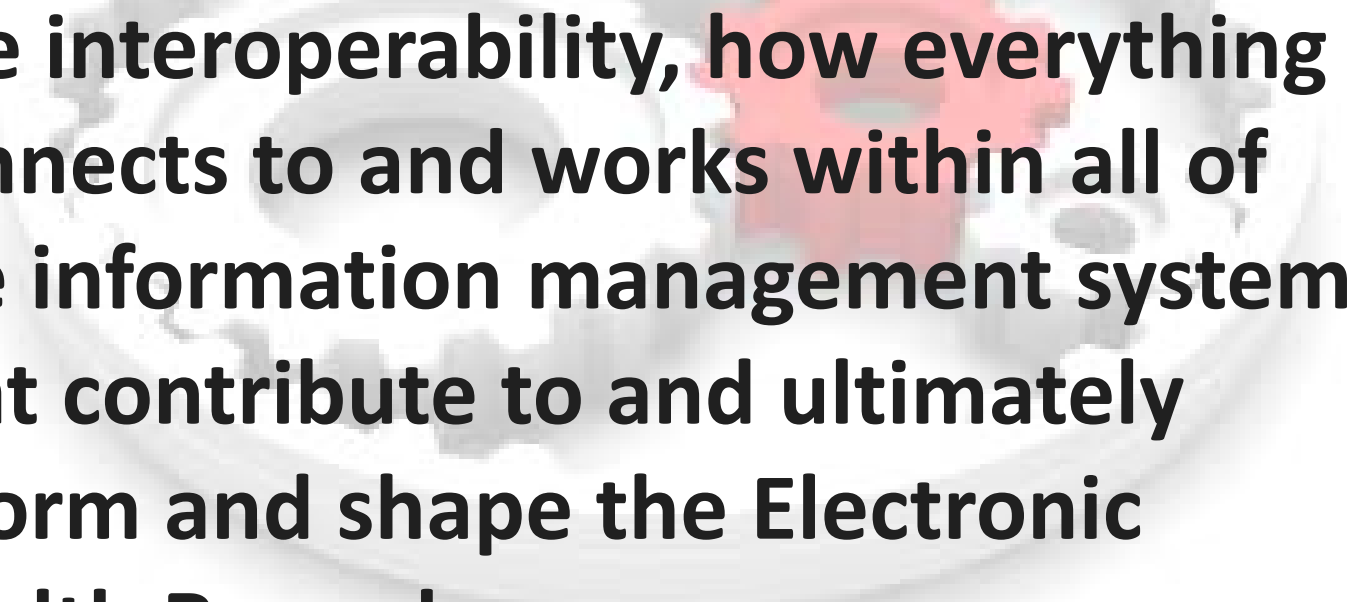
It encompasses a whole range of purposes from purely administrative through to health care delivery.

For example:

- ✓ Within the **hospital care** setting, eHealth refers to electronic patient administration systems; laboratory and radiology information systems; electronic messaging systems; and, telemedicine -- teleconsults, to name a few.

- ✓ Within the **home care** setting, examples include teleconsults and remote vital signs monitoring systems used for diabetes medicine, asthma monitoring and home dialysis systems

- ✓ Within the **primary care** setting, eHealth can refer to the use of computer systems by general practitioners and pharmacists for patient management, medical records and electronic prescribing.



The interoperability, how everything connects to and works within all of the information management systems that contribute to and ultimately inform and shape the Electronic Health Record.

Electronic Health Record (EHR)

- a systematic **collection of electronic/digital health information** about individual patients or populations.
- designed to contain and share information from **all providers** involved in a patient's care
- may include demographics, medical history, medication and allergies, immunization status, laboratory test results, radiology images, vital signs, personal statistics like age, weight and **broader social determinants of health.**

Electronic Medical Record (EMR)

- a **digital version of a paper chart** that contains a patient's medical history from **one** practice/organization.
- used by healthcare practitioners **to document, monitor, and manage health care delivery** within a care delivery organization.
- **Electronic Health Records (EHRs) are reliant on Electronic Medical Records (EMRs) being in place**, and EMRs will never reach their full potential without interoperable EHRs in place.
- Do not confuse **EMR** with a **CIS** - Clinical Information System

Electronic Patient Record (EPR)

- A **hospital or clinical organizations** record of a patient.
- May be **both paper and electronic**
- used by healthcare practitioners **to document, monitor, and manage health care delivery** within a care delivery organization for a period of time.
- There may be **multiple versions** varying from organization to organization
- **Not** a complete record.

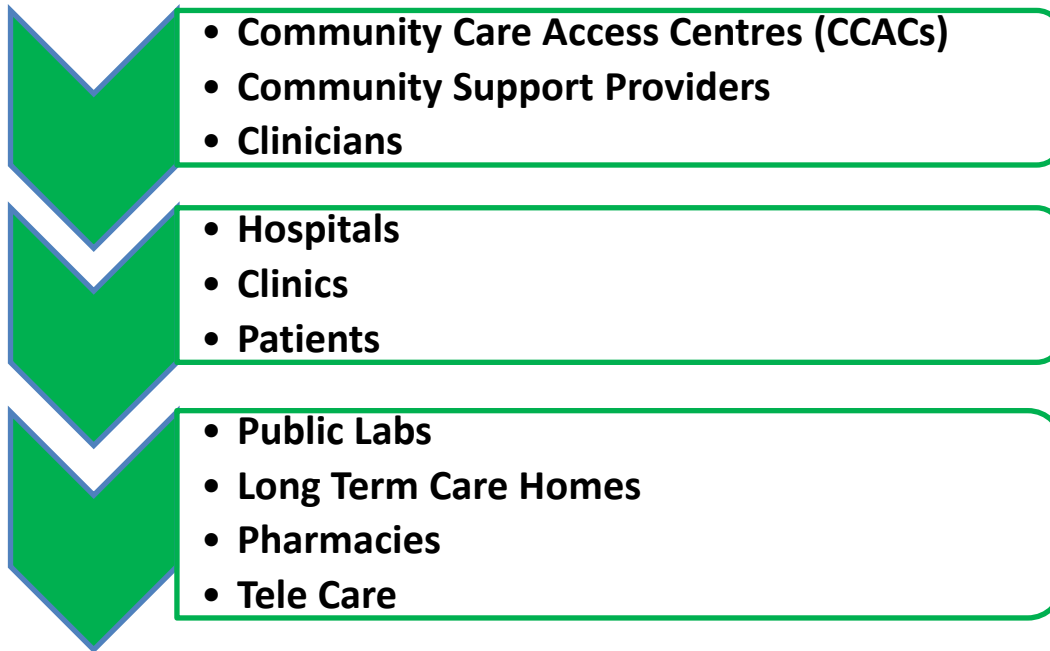
Personal Health Record (PHR)

- a health record where health data and information related to the care of a patient is **maintained by the patient**.
- intention of a PHR is **to provide a complete and accurate summary** of an individual's medical history which is accessible online.
- a PHR could include allergies and adverse drug reactions, chronic diseases, family history, illnesses and hospitalizations, imaging reports, lab test results, medications and dosing, prescription record, surgeries and other procedures, vaccinations and, observations of daily living.

Clinical or Hospital Info System (CIS/HIS)

- **Clinical information system** is a technology based system applied at the point of care and designed to support the acquisition and process of information as well as providing storage and processing capabilities. It includes a collection of various information technology applications that provide a central repository of information related to patient care across distributed locations
- A **Hospital information system** is a comprehensive, integrated information system designed to manage all the aspects of a hospital operation, such as medical, administrative, financial, legal and the corresponding service processing. Traditional approaches encompass paper-based information processing as well as resident work position and mobile data acquisition and presentation.
- CIS / HIS **includes the patient information** as well as the connectivity to other systems related to the delivery of care (incoming and outgoing)

Data Contributors:



Electronic Health Record





Patient



Care
Provider/Organization



Health Sys Planners



Identity Management

Integration Layer

- Hospital
- Clinicians
- Clinics
- Patients

- Public lab
- CCAC

- Pharmacy
- Housing
- Public Health

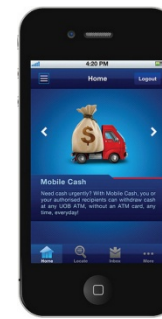
- Tele Care
- Community Support Providers

- Ministry of Children and Youth, Justice and Employment

- Long Term Care
- Other Sectors

Health Information Custodians (HICs)

For Discussion Purposes Only



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Warrant info

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- Shopping
- Living & leisure
- Other special offer
- home&away Privilege Programme
- Octopus Automatic Add-Value Service

MasterCard SecureCode Register Maintenance

Identity Management

Integration Layer

- Chequing
- Savings
- TFSA

- Visa
- MasterCard
- Amex

- Home Ins
- Life Ins

- RRSP
- RESP
- Stocks

- Reuters
- Tax Advise
- Investment Tools

- Education
- Tool Kits
- General Information



Patient



Care
Provider/Organization



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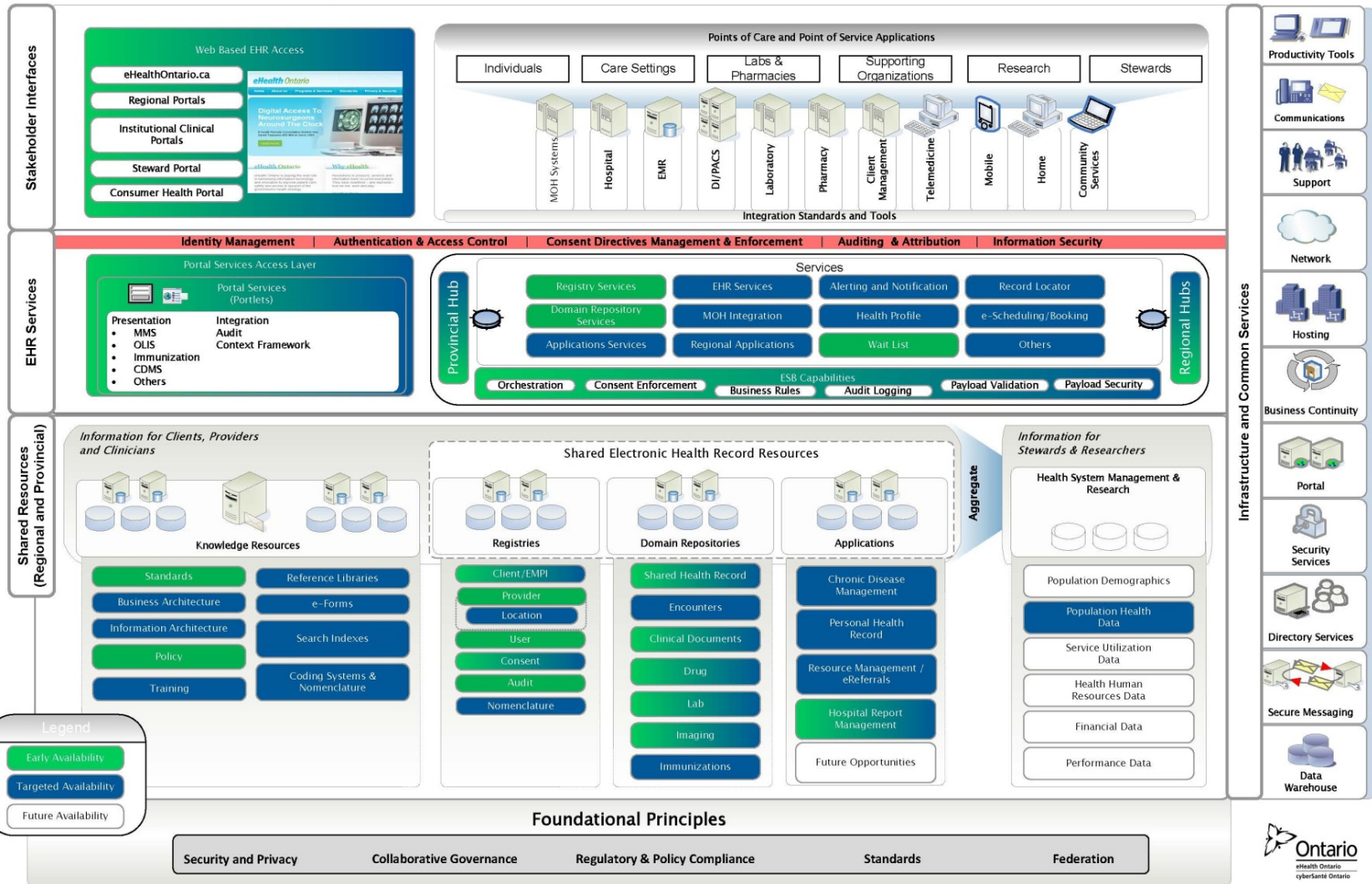
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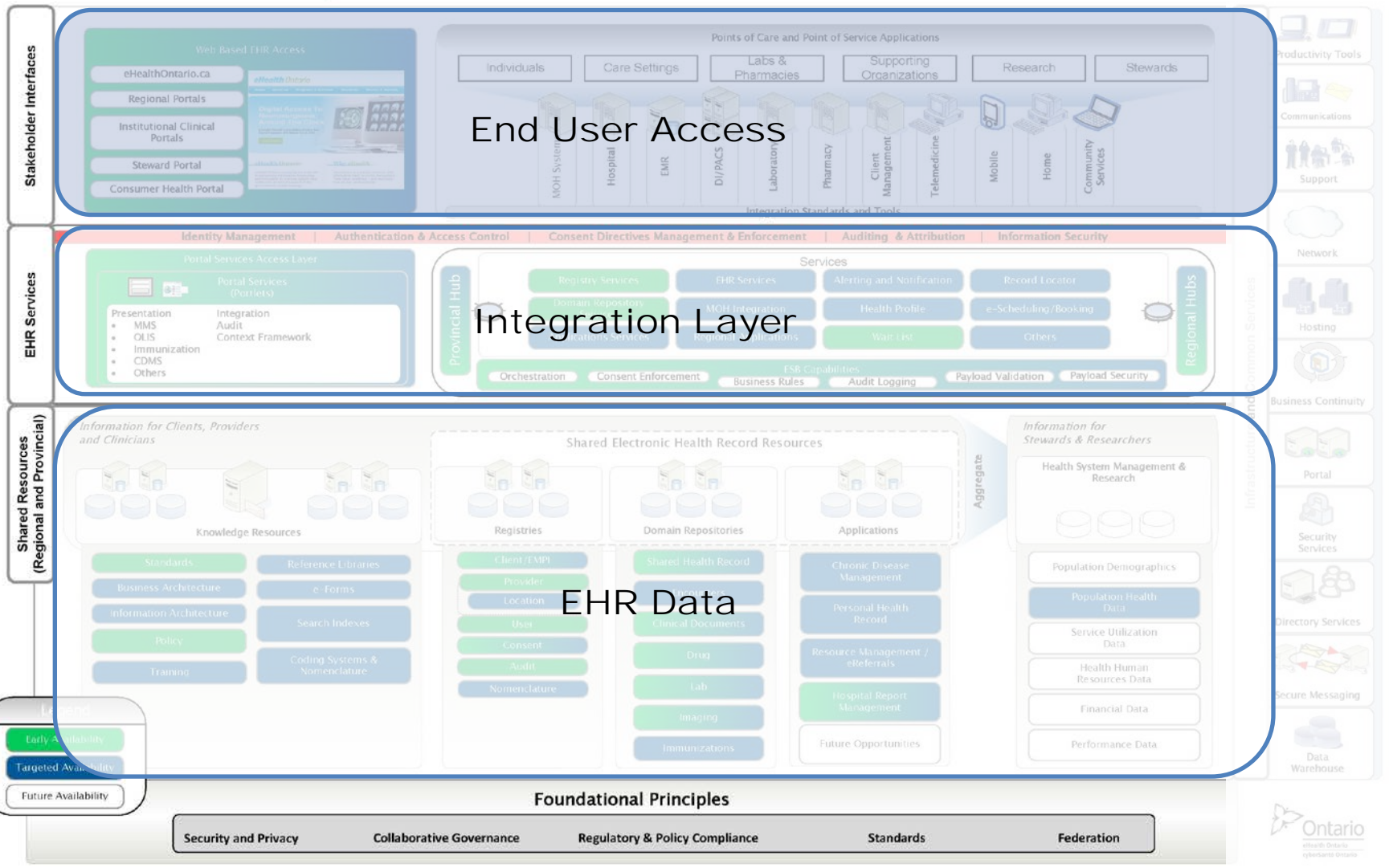
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Patient



Health History

Symptoms - Review of Systems | **Pain Scale** | Past Medical History | Family History | Habits

Click the **NEW PAIN** button and then click the area where you are experiencing pain:

Pain Area	Level	Pain Type
Lower Back	8	Burning, Constant, Dull Ache
Left Heel	6	Burning, Sharp
Back Head	8	Dull Ache, Sharp

No Pain **Worst Possible Pain**

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10

Type of Pain

Burning Constant Dull Ache
 Numbness Sharp Stabbing
 Intermittent



Electronic Health Record



Care Provider/Organization

WISTA Imaging Display - IMAGPatient, One [win-imagpatient] in use by...

File Options View Reports System Manager Help

Patient: **IMAGPatient, One** 12 of 13 Images match Filter: "All"

06/03/04 666-60-8711 NON-VETERAN (OTHER)

S/LC Patient: IMAGPATIENT, ONE

Image Window: IMAGPatient, One

File Options Tools Help

Clinical All #All 6 min #All 2 yr #All #Add Directives #Admin 10-18E2 All #D

12 of 13 Images m

Item	Site	Date/Time	Pr...	Procedure	#Imag	Short Desc
1	S/LC	ADVANC...	07...	ADVANCE DIRECT...	1	ADVANC...
2	S/LC		11...	PHOTO ID	1	PHOTO ID...

WISTA CPMS in use by: IMAGProvider, One

File Edit View Tools Help

IMAGPatient, One 666-60-8800 1804 (74) Visit Not Selected Provider: IMAGProviderOne Primary Care Team Unassigned

Lab Results Laboratory Results - Worksheet - All Results

Most Recent Cumulative All Tests by Date Selected Tests by Date Worksheet

Microbiology Anatomic Pathology Blood Bank

Date/Time	Specimen	HCT	HGB	HCV	PLT	WBC
06/18/99 09:00	Blood	29.3L	11.8 L		276	7.1
01/23/99 09:00	Blood	34.6L	11.6L	90.4	276	8.1
01/23/99 09:00	Blood	34.6L	11.6L	90.8	292	8.1
08/17/97 09:00	Blood	34.1 L	11.3 L	90	549 H	13.7 H
08/15/97 09:00	Blood	33.9L	11.4L	89.2	605 H*	15.2 H
08/15/97 09:00	Blood	30.8L	10.4L	89	559 H	14.5 H
08/14/97 09:00	Blood	30.7L	10.2L	90.7	544 H	19 H
08/13/97 09:38	Blood	30.7L	10.3L	89.1	538 H	21.5 H
08/13/97 04:06	Blood	25.7L*	8.4L	90	589 H	20.1 H
08/12/97 04:44	Blood	29.4L	10L	89.7	596 H	21.5 H

Other Tests: Hct (Blood), Hgb (Blood), Hcv (Blood), Plt (Blood), Wbc (Blood)

Date Range: Today, One Week, Two Weeks, One Month, Six Months, One Year, Two Years, All Results

Graph: Hct (Blood) - Ret Low #1 - Ret High #1

KEY: "L" = Abnormal Low, "H" = Abnormal High, "*" = Critical Value, "" = Comments on Specimen

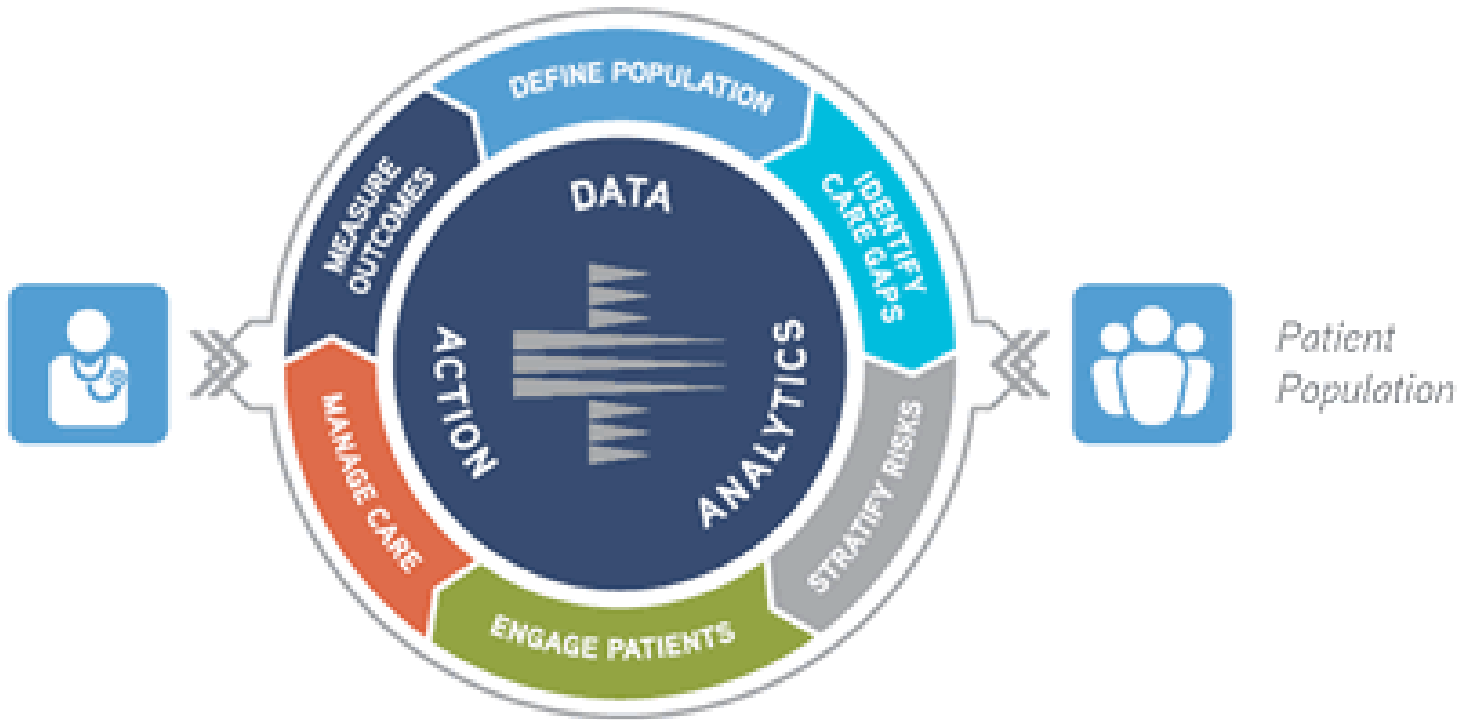
Cover Sheet / Problems / Meds / Orders / Notes / Consults / CXR Summ / Labs / Reports /



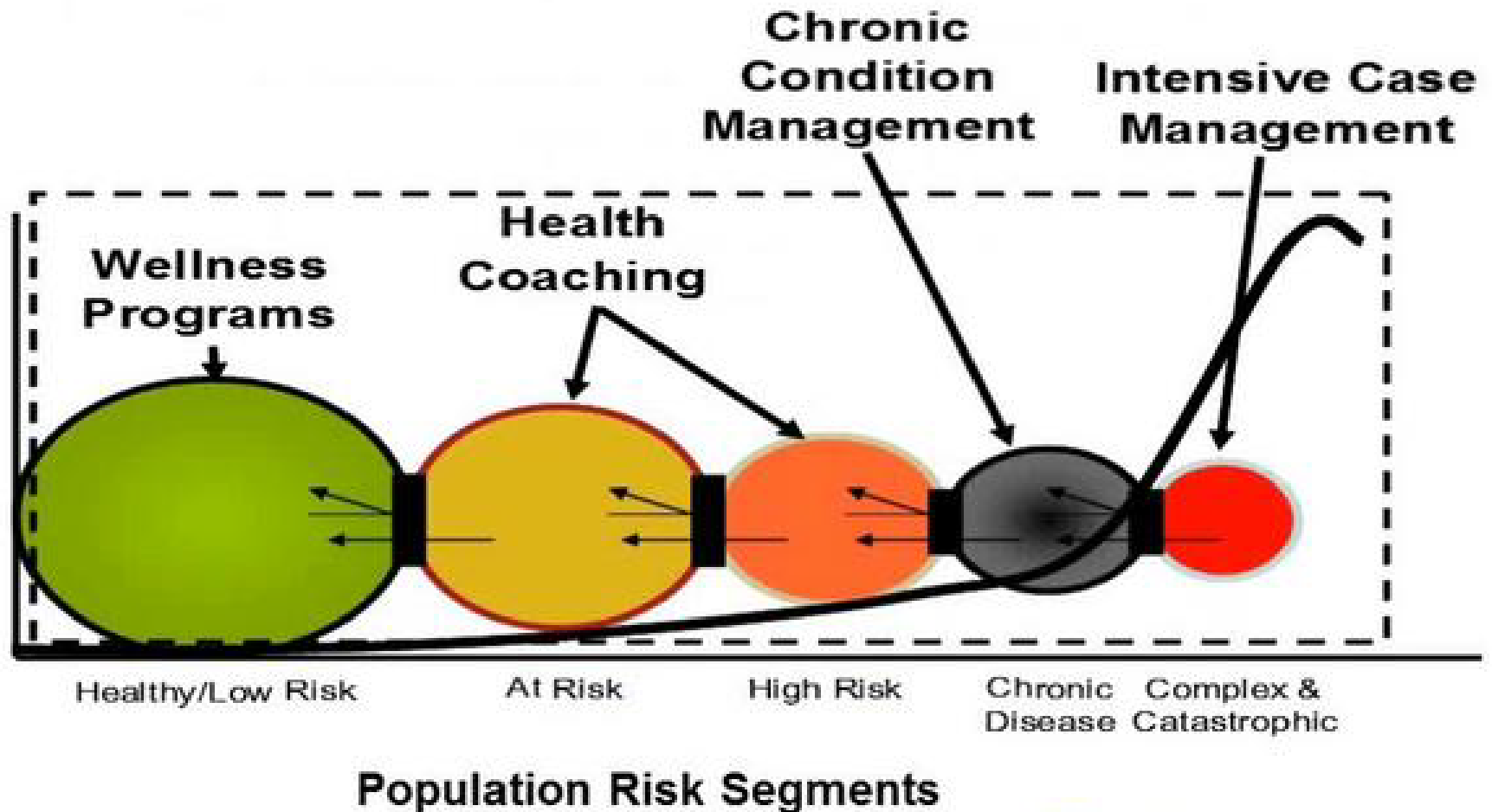
Health Sys Planners



*Doctors,
Hospitals
and Care
Providers*



Population Health Management Along the Care Continuum



Thank
you

