

Healthcare Innovation: The EMR and Beyond

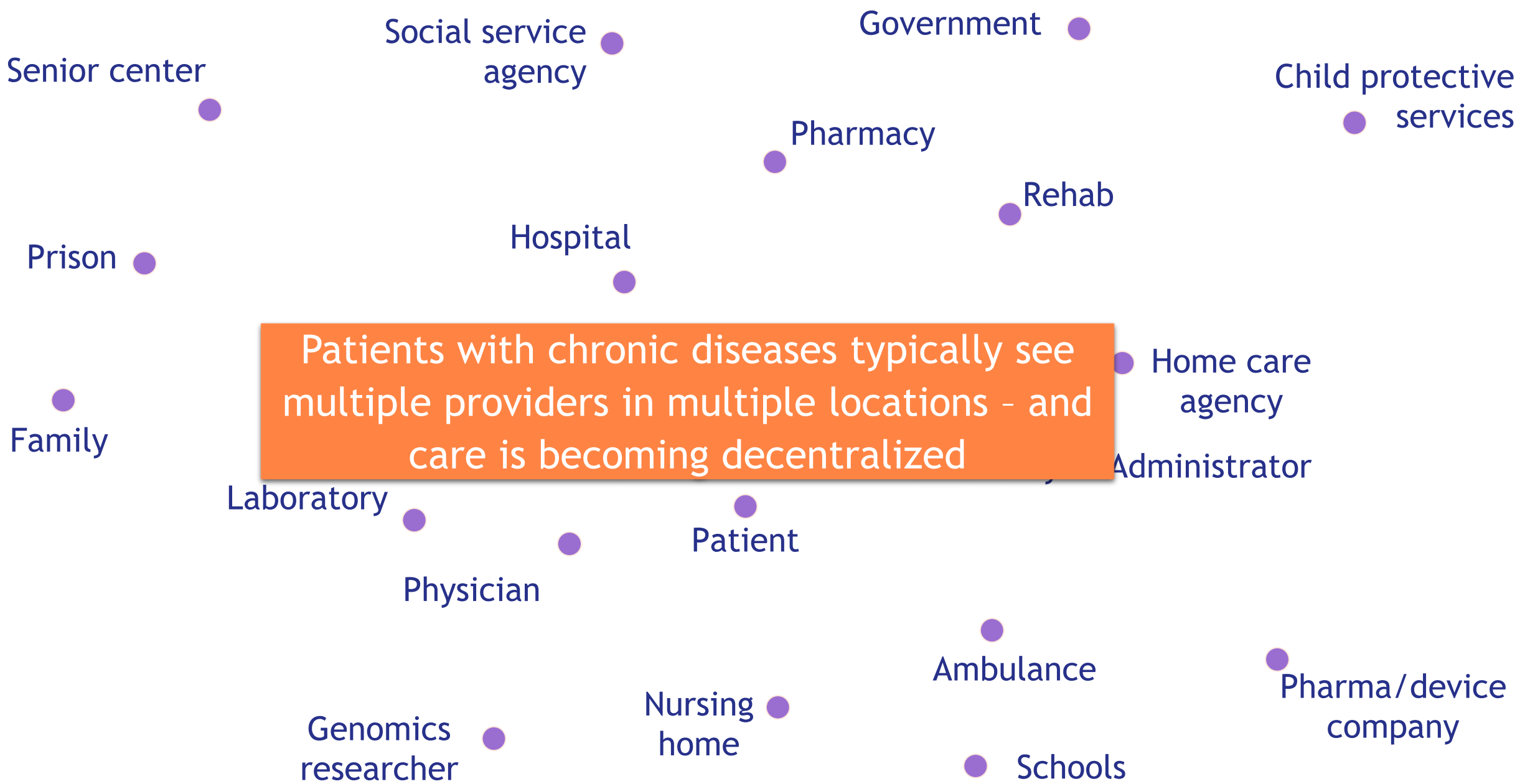
M Turner Billingsley MD FACEP

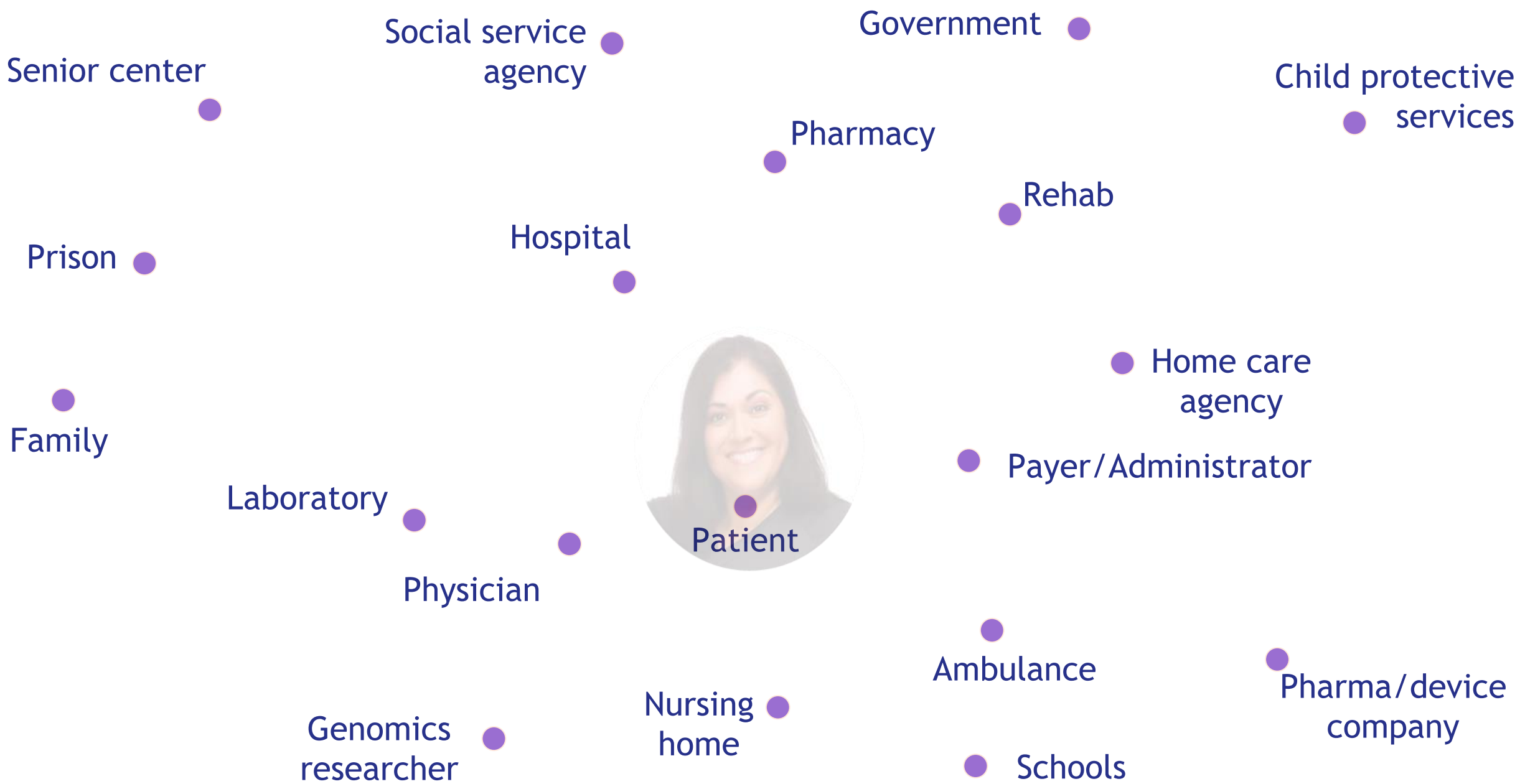


Inreasingly Distributed

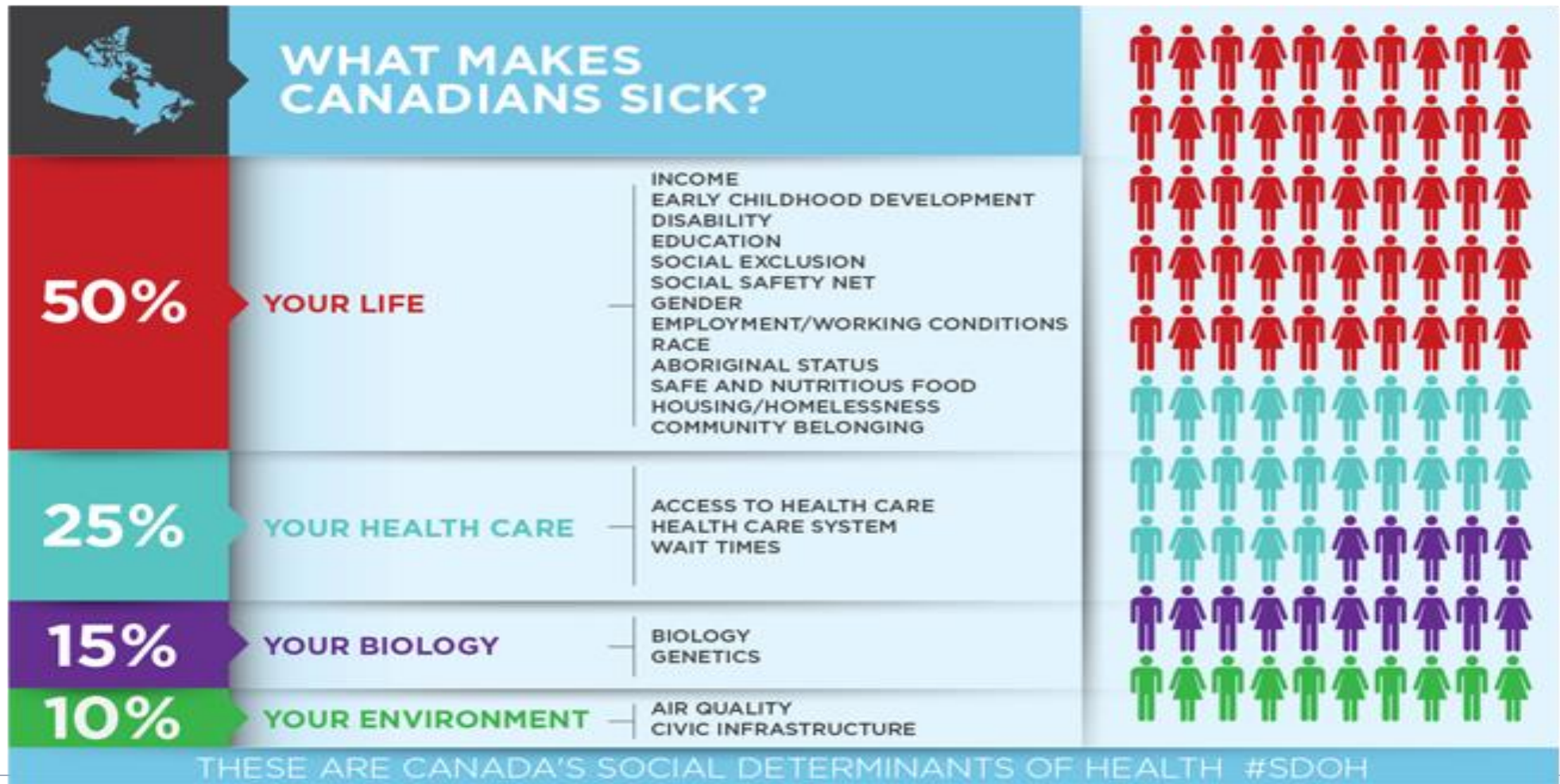
Patients with chronic diseases typically see multiple providers in multiple locations - and care is becoming decentralized





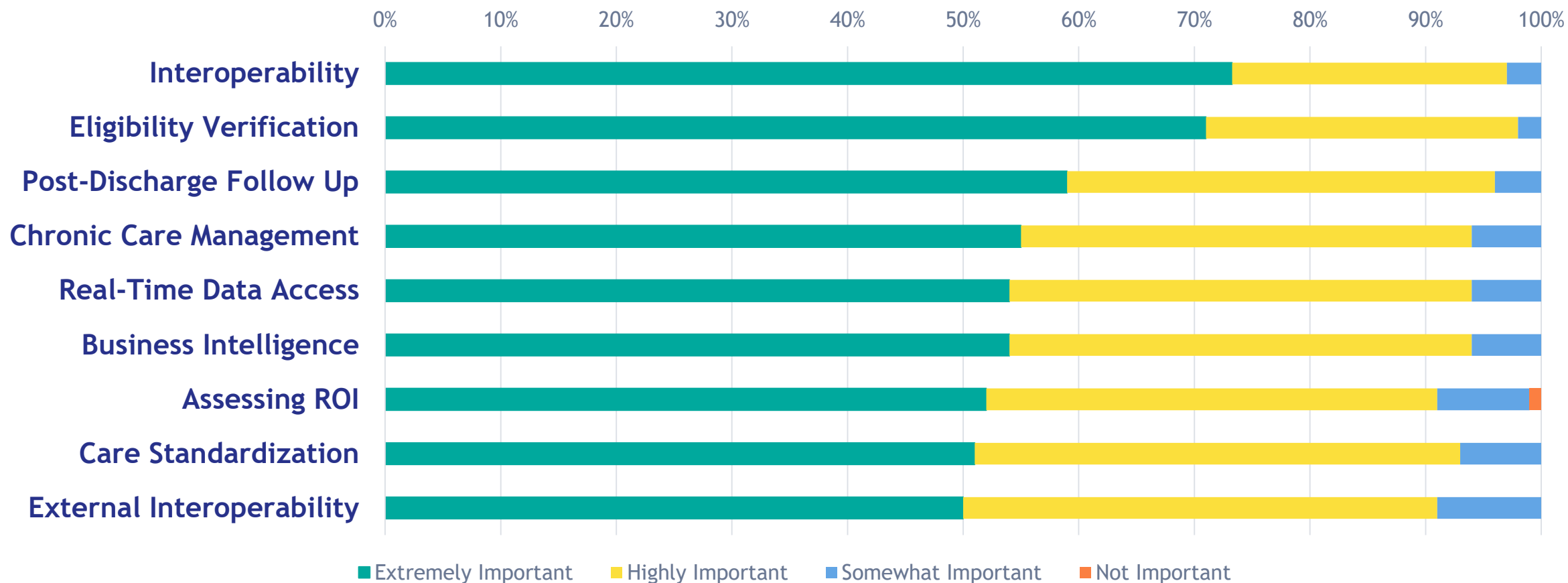


More Aware of Social Determinants

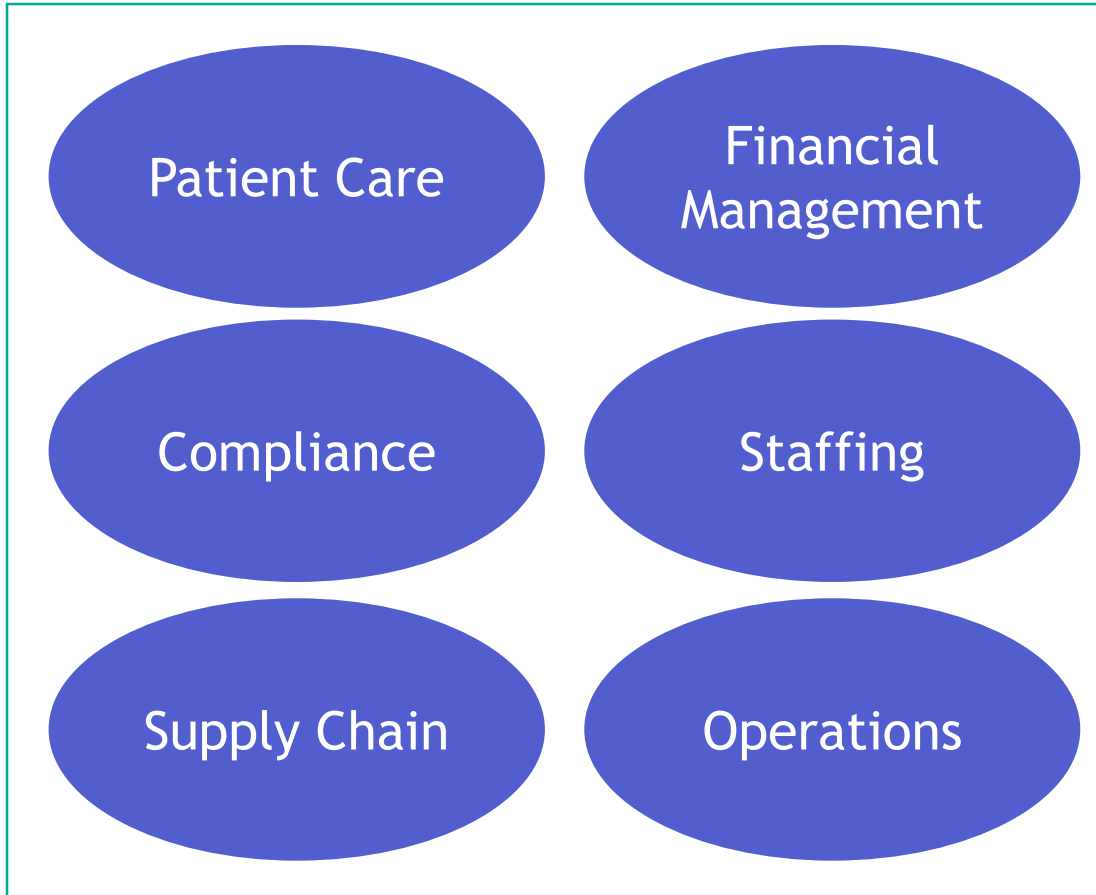


In Transition

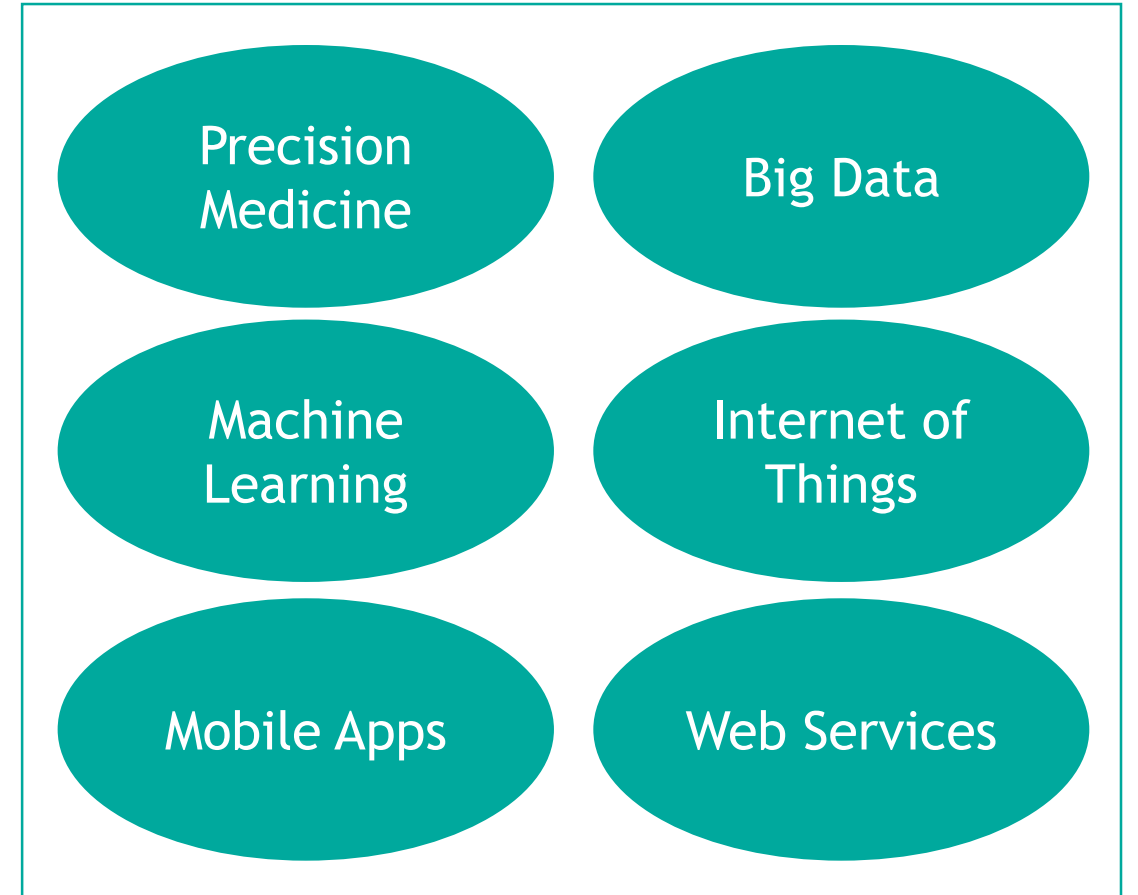
Most Important Capabilities for Value-Based Care in 3 Years



Balancing Today and the Future (Innovation)



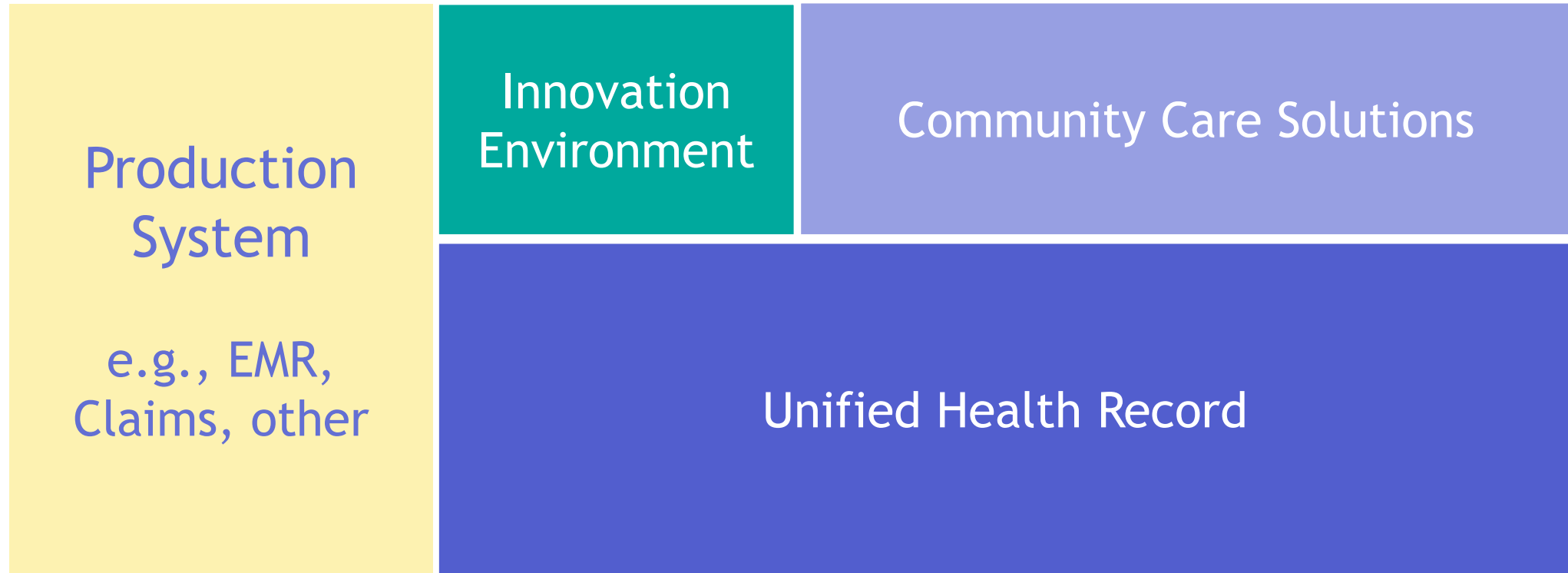
A need for stability, reliability, & gradual change



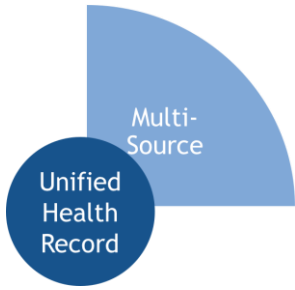
A need for continuous, rapid innovation



Bimodal Health IT



Doing What Matters



Creating Connected Care Communities Matters



9 Million Patients

300+ Unique Data Sources

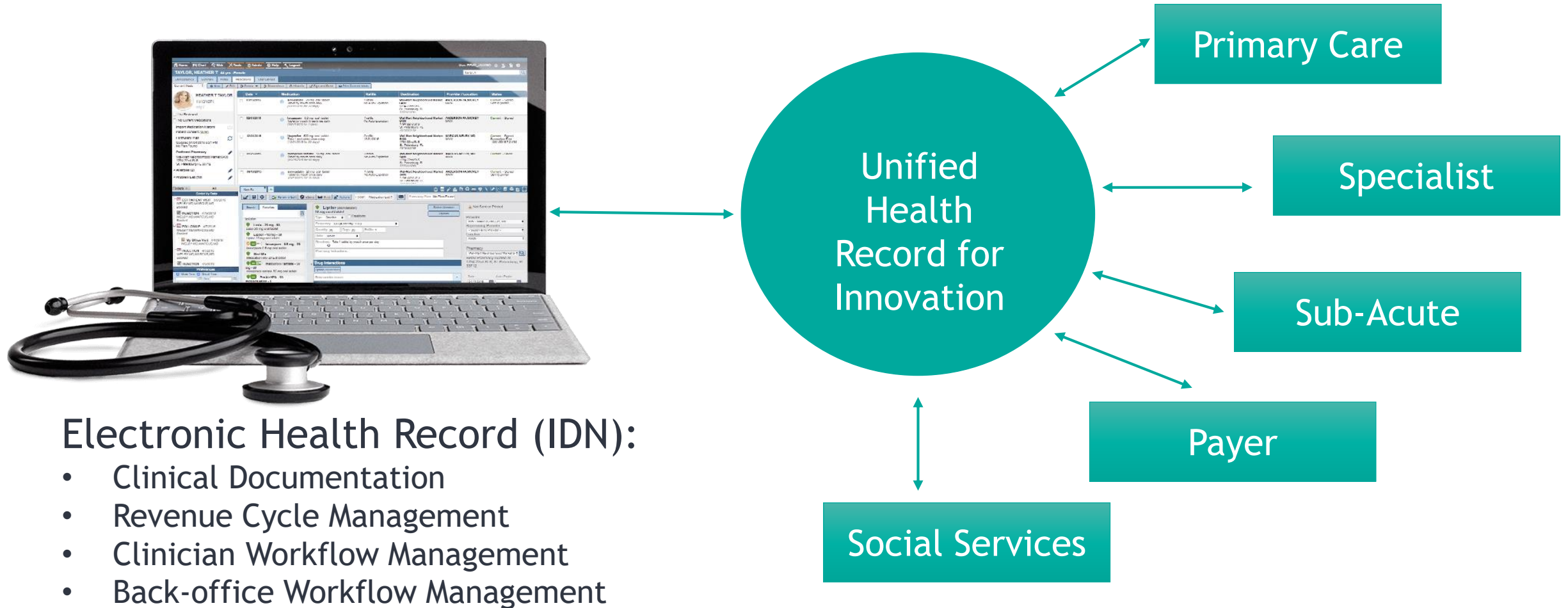
2500+ Contributing Providers

350+ Participating Entities

40+ Unique EHRs



The EHR and a unified health record work together



Clinically Integrated Network Provider Participation

90% With a Signed Participation Agreement

70% Contributing Encounter Data to the HIE

70% Contributing LabCorp and/or Quest Data to the HIE

60% Receiving Electronic Results and/or Sending Electronic Orders to/from the HIE

100%

with Access to ShareVue



ShareVue: Enhancing Clinical Value

St. Joseph Health | Covenant Health | PROVIDENCE Health & Services

CLINICAL, VIEWER DEMO | M | 03/26/1951 | 66 Years

- Summary
- Alerts
- Allergies
- Conditions/History
- Continuity of Care Docs
- Documents
- Diagnostics/Imaging
- Lab Results
- MIC/BBK/PTH Results
- Medications
- Vaccinations
- Vitals
- Encounters
- Care Team
- St Joseph Health

ALLERGIES (last 5 items)

Allergen	Nature Of Reaction	Last Updated
Acetaminophen	Hypertension	
Lactase	Coughing	
Unable to Obtain		
Wheat	Chest Pain	
Milk	Anaphylaxis	

MEDICATIONS (last 5 items)

Order Name	Details	Dose	Entered On
Cyanocobalamin 1000 MCG/ML Injection Solution			05/26/2016
50+ Adult Eye Health CAPS			03/20/2017
2nd Skin Moist Dressing Kit PADS			03/20/2017
Codeine sulfate 30 MG Oral Tablet		30	05/15/2017
Acetaminophen 325 MG / Hydrocodone Bitartrate 10 MG Oral Tab		1	05/15/2017

ACTIVE CONDITIONS (last 5 items)

Description	Last Updated
Tuberculosis of heart	2017-06-12
Chronic diastolic heart failure - Details: Chronic diastolic (congestive) he	2017-06-12
Mitral valve disorder - Details: Nonrheumatic mitral (valve) insufficiency	2017-06-12
Type I diabetes mellitus without complication - Details: Type 1 diabetes mel	2017-06-12

CONTINUITY OF CARE DOCUMENTS (CCDs) (last 5 items)

Document	Physician	Document Date
Patient Summary	HomeCommunity	07/11/2017 08:48
Patient Summary	HomeCommunity	07/11/2017 08:48
Summarization of Episode Note	Physician TestHIE MD	07/08/2017 00:06
Summarization of Episode Note	Physician TestHIE MD	07/06/2017 18:06
Summarization of Episode Note	Physician TestHIE MD	06/16/2017 22:50

LAB RESULTS (last 5 items)

Description	Details	Status	Collection Date
Surgical Pathology		Final	06/21/2017 00:00
Glucose Level		Final	05/30/2017 11:29
CBC w Differential		Final	05/30/2017 11:29
Protime		Final	05/30/2017 11:29
Surgical Report		Final	05/15/2017 14:03

DIAGNOSTICS/IMAGING (last 5 items)

Description	Details	Status	Order Start Date
BI SCREENING MAMMOGRAM DIGITAL BILAT		Final	06/21/2017 07:55
MR BRAIN WO CON JANSSEN		Preliminary	06/14/2017 13:53
Peripheral Vascular Lab Report		Final	05/15/2017 13:20
Cardiac Rehab Report		Final	05/15/2017 13:20
Electrophysiology Report		Final	05/15/2017 13:20

Access to the unified health record from anywhere

New features released quarterly, prioritized for clinical value and ease-of-use



From Proof-of-Concept to General Availability



Care managers in Texas receive **notifications** when insurance-attributed patients are admitted or registered at any Covenant facility



Diabetes and CHF **clinical pathways** are available to providers in ShareVue



6 diabetes **quality measures**, calculated using HIE clinical data and validated for HEDIS definitions, are being validated for use as leading indicators for performance improvement



Pre-op users streamline workflow and reduce duplicate testing through real-time access to HIE data in **ePreOp**



Improving Population Health Matters



- Nation's largest public HIE
- Share patient encounter records for 600+ organizations across thousands of NYC/Long Island locations
- Over 500K real-time clinical event notifications each month
- Risk prediction/stratification drives focused patient care before adverse events occur for chronic and high-risk patients



Knowing Where to Focus for Individual Care and Population Health

HBI predictive risk models



Intervention





GONZALEZ, MARLA

Female · 43 Years (1972-09-22) · 40 Great Pain Ave ,Chicago 60290 ·

Summary



- Summary
- Allergies & Alerts
- History
- Documents
- Lab Results
- Radiology Results
- Medications
- Vaccinations
- Conditions
- Procedures
- Discharge Summaries
- Physical Exams
- Plan
- Encounters
- Appointments
- Care Team
- Programs

PATIENT PROGRAMS

FITNESS CHALLENGE	EXERCISE TRACKING FOR OVERWEIGHT PATIENTS
HEART HEALTHY NUTRITION	NUTRITION INFO FOR HTN PATIENTS
HTN AND UNCONTROLLED BP	PATIENTS WITH HTN AND UNCONTROLLED BP

PATIENT RISK

Inpatient Admission	3
Emergency Visit	47
Diabetes	32
AMI	0

MEDICATIONS

Hydrochlorothiazide 25mg	...	1	11/23/2015
Lipitor 10mg	...	1	11/23/2015
Doxycycline	...	1	10/18/2015
Lisinopril-GA tablet 10mg [30]	...	1	05/04/2015
Multivitamin	...	1	07/20/2012

DOCUMENTS

ER Visit	...	ER Visit
Routine Visit	...	Clinic Visit
ER Visit	...	ER Visit
Discharge Summary	...	ER Discharge
Ortho Consult	...	Orthopedic Consult

LABORATORY RESULTS

Lipid Profile	...	02/21/2016 16:00
Fasting Plasma Glucose	...	02/21/2016 16:00
HgA1C	...	02/21/2016 16:00
Lipid Profile	...	11/23/2015 11:00
HgA1C	...	11/23/2015 11:00

DIAGNOSES

Acute	Viral illness
Chronic	Low back pain
Acute	Allergic Rhinitis
Chronic	Disorders of Lipid Metabolism
Acute	Chest pain





GONZALEZ, MARLA

Female · 43 Years (1972-09-22) · 40 Great Pain Ave , Chicago 60290 ·

Summary



Jul 2012

2013

2014

2015

Feb 2016

Select All
Deselect All
Preferences

- Summary
- Allergies & Alerts
- History
- Documents
- Lab Results
- Radiology Results
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PATIENT RISK

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MEASUREMENTS

- Elevated risks highlighted in red
 - 47% likelihood of ED visit in next 12 months
 - 32% likelihood developing diabetes in next 12 months

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End of Life Care Coordination

The screenshot shows the 'coordinate my care' patient portal. At the top, there is a navigation bar with the logo, search options ('Find a Patient', 'Help', 'Contact CMC'), and user information ('Kim Humby | ISC Health System'). Below this is a patient header for John (Walt) Smith, including his NHS number, DOB (4 March 1930, Age 85), Gender (Male), and Address (49 Featherstone St. London EC1Y 8SY). There are also icons for alerts, heart, and other services.

Urgent Summary

- Patient Preferences
- Urgent Care Action Plan
- Contacts
- Patient Information
- Social Details
- Medical History
- DNA CPR Details
- Clinical Events

Last Updated: David Gordon | ISC Health System | 4 May 2015 | 12:13
Last Viewed: Kim Humby | ISC Health System | 10 June 2015 | 8:48

Alerts

Alert	Correct as of	Comment
Dangerous dog at home	12 April 2014	
Self harm to patient	13 January 2013	Vestibulum consectetur nibh
Deafness	13 April 2012	Pellentesque nec aliquam nunc

CPR Status: Do Not Attempt

DNA CPR Location: Drawer in kitchen table

DNA CPR Details

Home Access

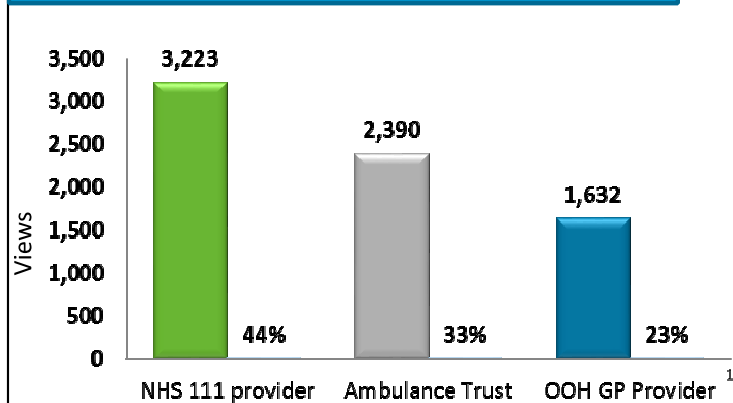
Living Condition	Lives Alone
Type of Accommodation	House
Key Code Details	Please contact Sue at 1555 855555

Personalized
care plan

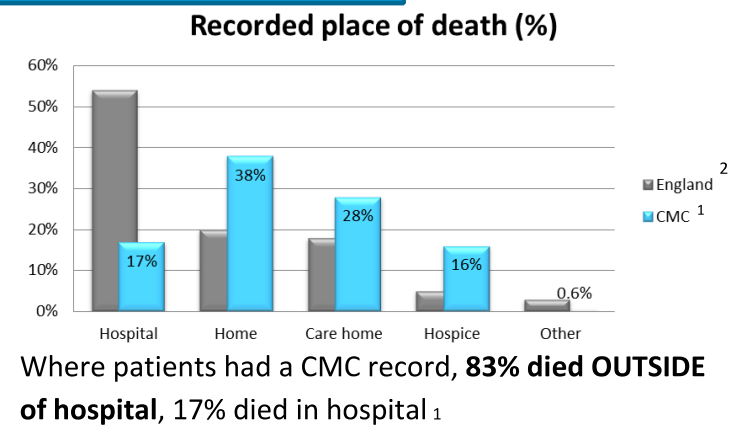


CMC Activity and Outcomes

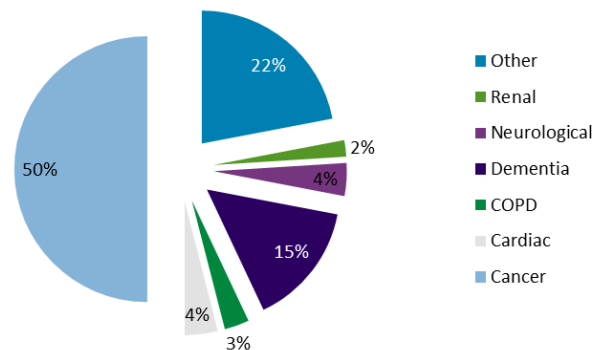
1. Access to CMC by urgent care providers



2. Actual place of death

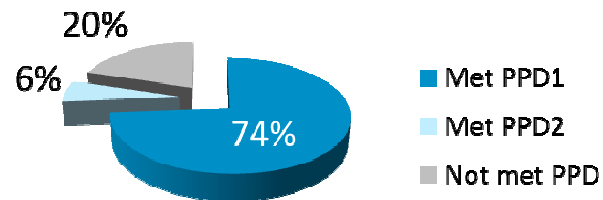


3. Recorded diagnosis



An increased trend of dementia as primary diagnosis³

4. Preferred place of death



80% of CMC patients have died in their preferred place³

³ Coordinate My Care | Data: 01.11.2014

¹ Apr 2013-Sept 2014

² NEOLCIN, 2008-10

³ May 2010 to Oct 2014



Innovating to support an ever changing complex health care environment matters





60 alert types

23 hospitals

6000 physicians

3.6M+ actionable alerts annually

650 outpatient facilities

14,000 clinical viewer users

2M+ patients seen annually

8M unique MPI records

Readmission reduction with LACE Index calculations

Improved enrollment in care management programs using clinician notifications

1 Billion+ discrete data elements



The power behind what matters.



Thank you.



Bring together the information that matters.

