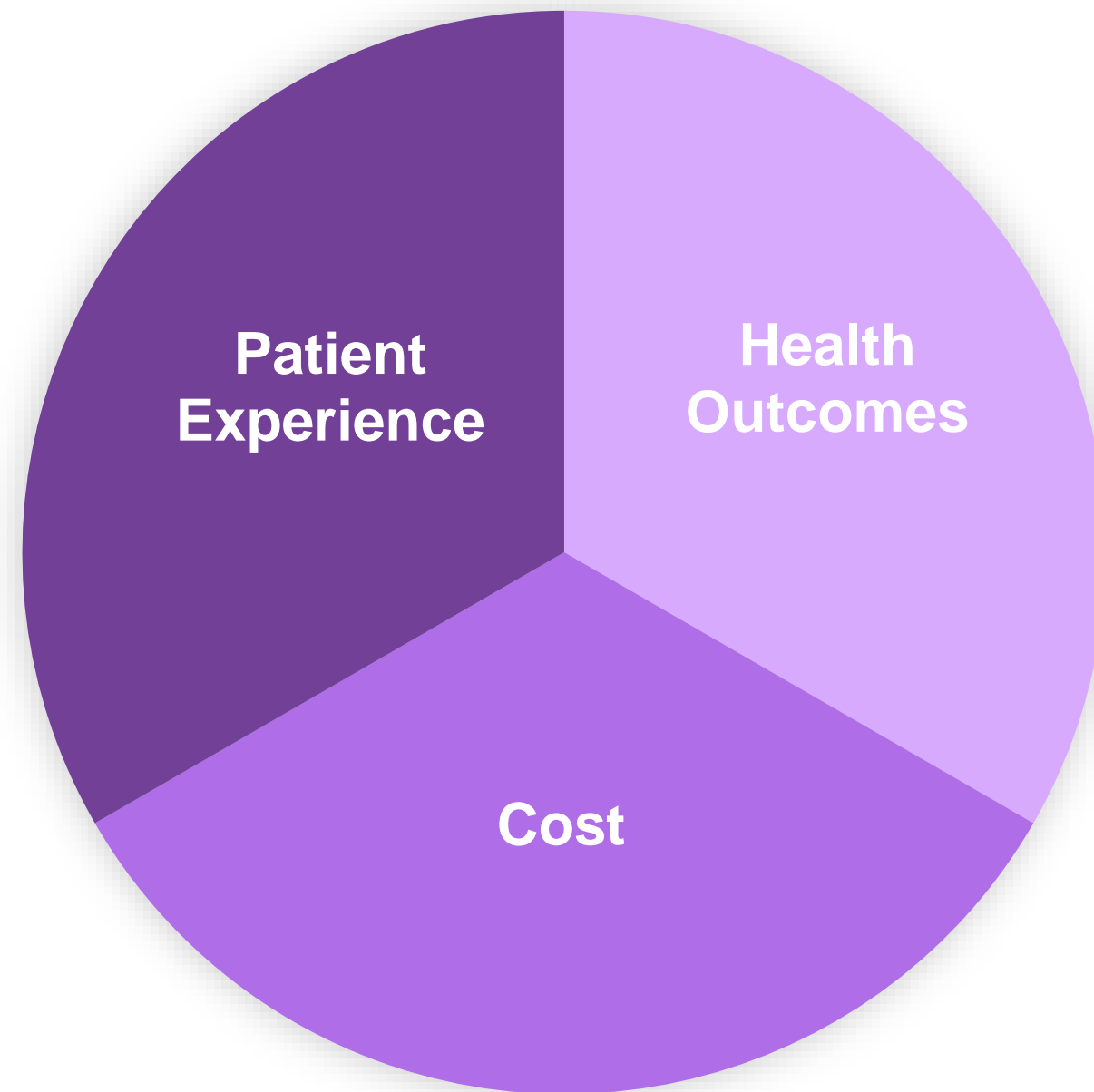


Moving Towards the Patient Medical Home: Developing a Pathway to Success

Lisa M. Latts, MD, MSPH, MPBA, FACP
Deputy Chief Health Officer
IBM Watson Health



The Triple Aim



The Triple Quadruple Aim



DOI: 10.1377/hlthaff.2012.0359
HEALTH AFFAIRS 31,
NO. 9 (2012): 2010-2017
©2012 Project HOPE—
The People-to-People Health
Foundation, Inc.

PATIENT-CENTERED MEDICAL HOMES

By Marjie G. Harbrecht and Lisa M. Latts

INNOVATION PROFILE

Colorado's Patient-Centered Medical Home Pilot Met Numerous Obstacles, Yet Saw Results Such As Reduced Hospital Admissions

SEPTEMBER 2012 VOL. 31 NO. 9

Published by Project HOPE

WEB FIRST

US Lags Europe in Deaths
Avoidable Through Health Care

NARRATIVE MATTERS

I Helped Create A Flawed Mental
Health System That Failed My Son

REPORT FROM THE FIELD

How Mitt Romney Embraced The
Individual Mandate In Massachusetts

AT THE INTERSECTION OF HEALTH, HEALTH CARE, AND POLICY

Health Affairs

Payment
Reform To
Achieve
Better
Health Care

Lessons From
Medicare's
Prospective
Payment
For Hospital
Bundled Payment

Stuart H. Altman

New Capitation
Models That
Balance Risk
For Providers
And Payers

Austin B. Frakt & Rick Mayes

Page 1923

Page 1951

Prospects For
Medicare's
Hospital Value-
Based Purchasing
Program

Rachel M. Werner &
R. Adams Dudley

Page 1932

Shared Savings
Pilots And
Early Adopters

Joel S. Weissman et al.

Plus Large Medical Groups
Need New Skills For Payment
Reform
Robert Mechanic &
Darren E. Zinner

Page 1959

Changes Needed
In Medicare
Physician
Payment As
Fee-For-Service
Continues

Paul B. Ginsburg

Page 1977

Payers Test
Reference Pricing
And Centers
Of Excellence

James C. Robinson &
Kimberly MacPherson

Page 2028

How Geisinger
Structures
Physician
Compensation

Thomas H. Lee, Albert Bothe &
Glenn D. Steele

Page 2068

PLUS:

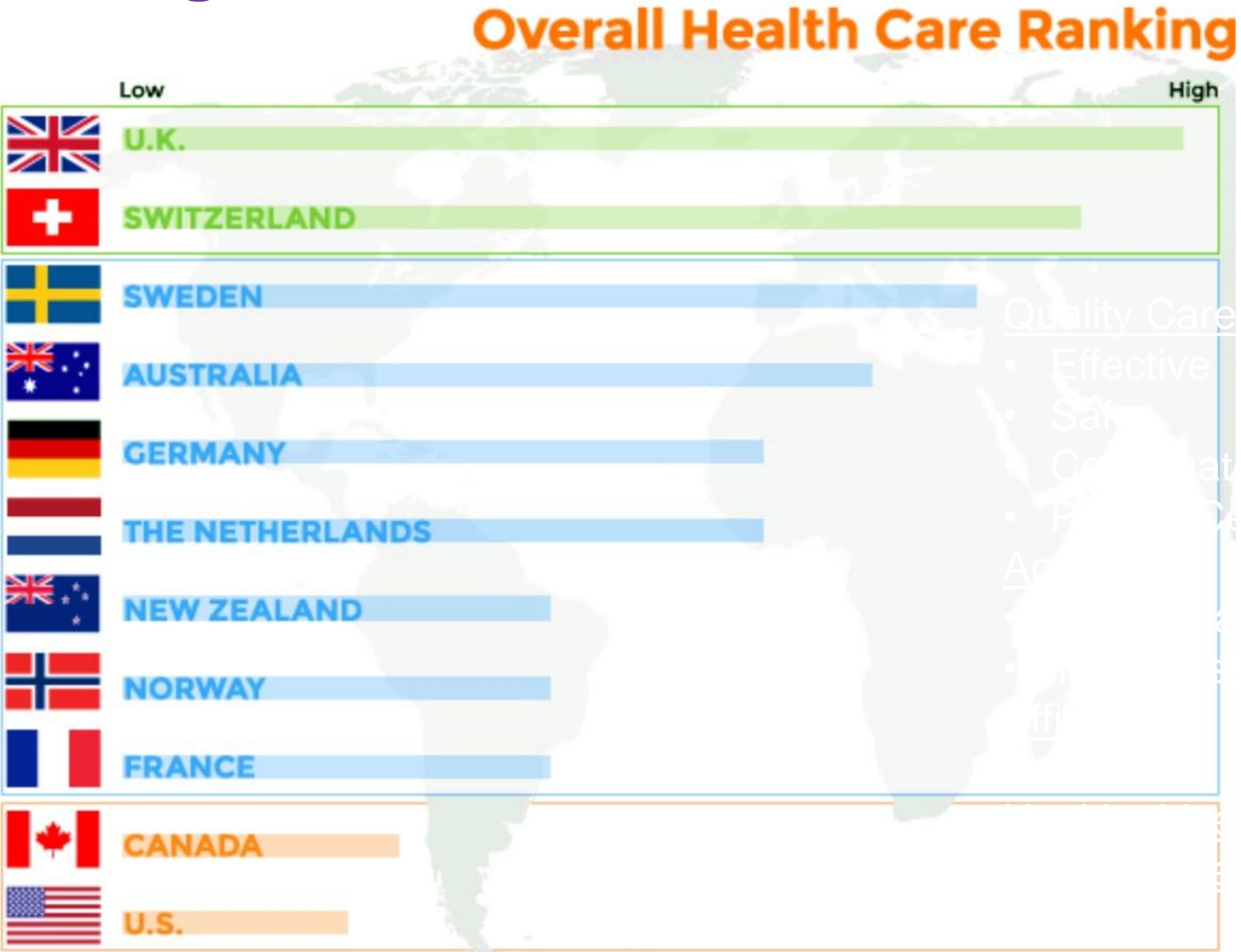
WellPoint's Patient-
Centered Medical
Home Pilots

Ruth S. Raskas et al.

Beyond Payment Changes
To Practice Transformation
Urvashi B. Patel et al.

WWW.HEALTHAFFAIRS.ORG

Where are we starting?



K. Davis, K. Stremikis, C. Schoen, and D. Squires, *Mirror, Mirror on the Wall, 2014 Update: How the U.S. Health Care System Compares Internationally*, The Commonwealth Fund, June 2014.

Global Health Problem List

- Healthcare lacks value and access
- Focus on healthcare
- Big data without insights
- Stakeholder fragmentation
- Patients are not empowered

By The Numbers



Every 73 days¹

The rate medical data is expected to double every by 2020

2 billion²

The number of people over the age of 60 by 2050

\$47 trillion³

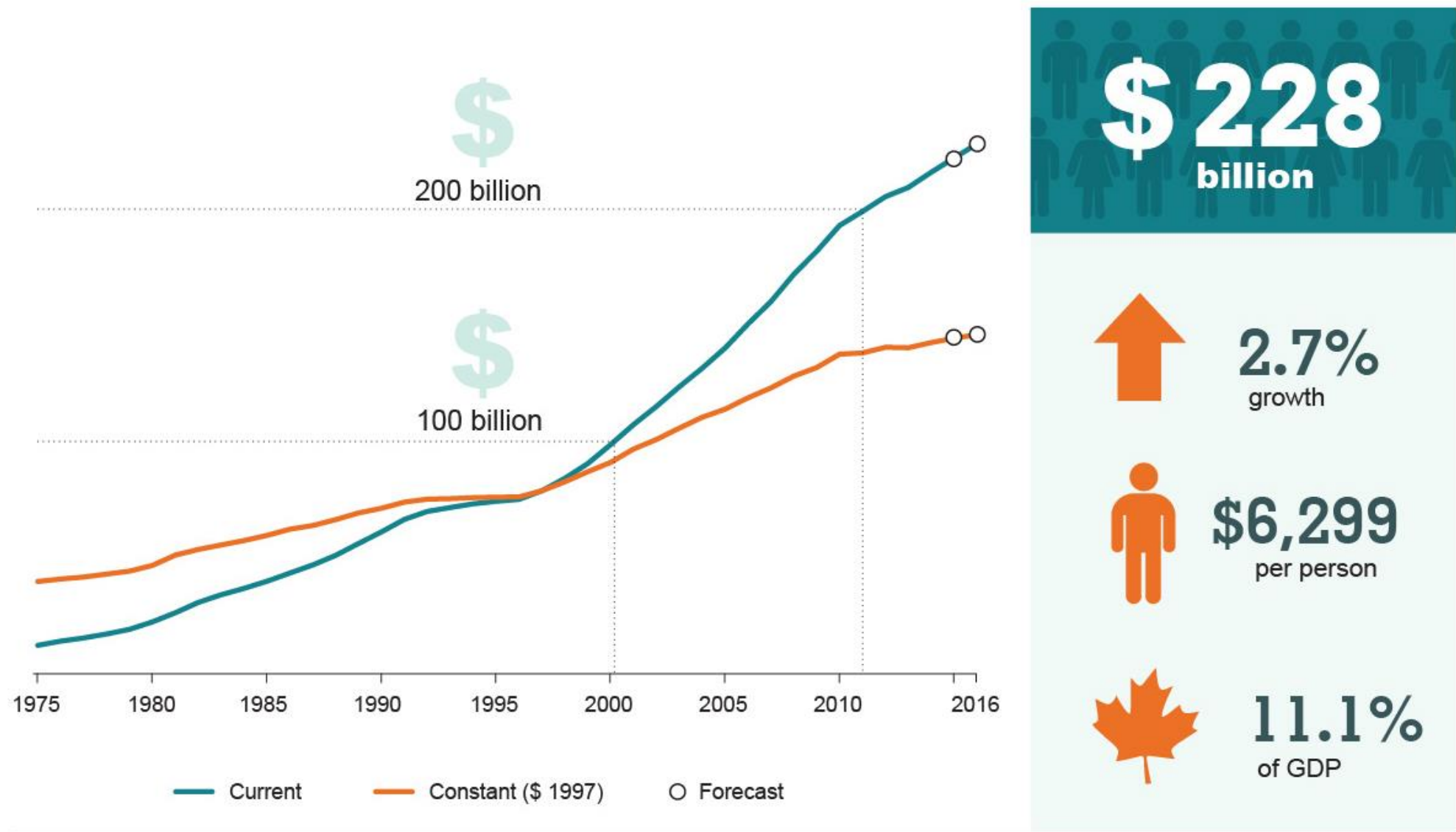
Cumulative estimated global economic impact of chronic disease between 2011 and 2030

12.9 million⁴

Global shortage of health-care workers by 2035

1. <https://www-03.ibm.com/press/us/en/photo/46588.wss>
2. http://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015_Report.pdf
3. http://www3.weforum.org/docs/WEF_Harvard_HE_GlobalEconomicBurdenNonCommunicableDiseases_2011.pdf
4. <http://www.who.int/mediacentre/news/releases/2013/health-workforce-shortage/en/>

Healthcare Spending Continues To Rise



Source
National Health Expenditure Database, Canadian Institute for Health Information.

© 2016 Canadian Institute for Health Information



There is a mismatch between what affects health and what we spend on health

What **Makes**
Us Healthy



What We **Spend**
On Being Healthy



Source: Bipartisan Policy Center, "F" as in Fat: How Obesity Threatens America's Future (TFAH/RWJF, Aug. 2013)

Physicians Are Not Happy

Physicians bearing heavy workloads as B.C. battles family doctor shortage

Number of graduating physicians in the province not enough to meet growing demand

Walk-in clinics getting slammed by doctor shortage, owner says

Young Canadians Are Suffering Through Canada's Family Doctor Shortage

EB EMILY BARON CARDIFF

Canada's doctor shortage will only worsen in the coming decade

A backlog of 176,000 British Columbians looking for a family physician in 2010 has grown to more than 200,000.



**Health Media Today**    

Betty

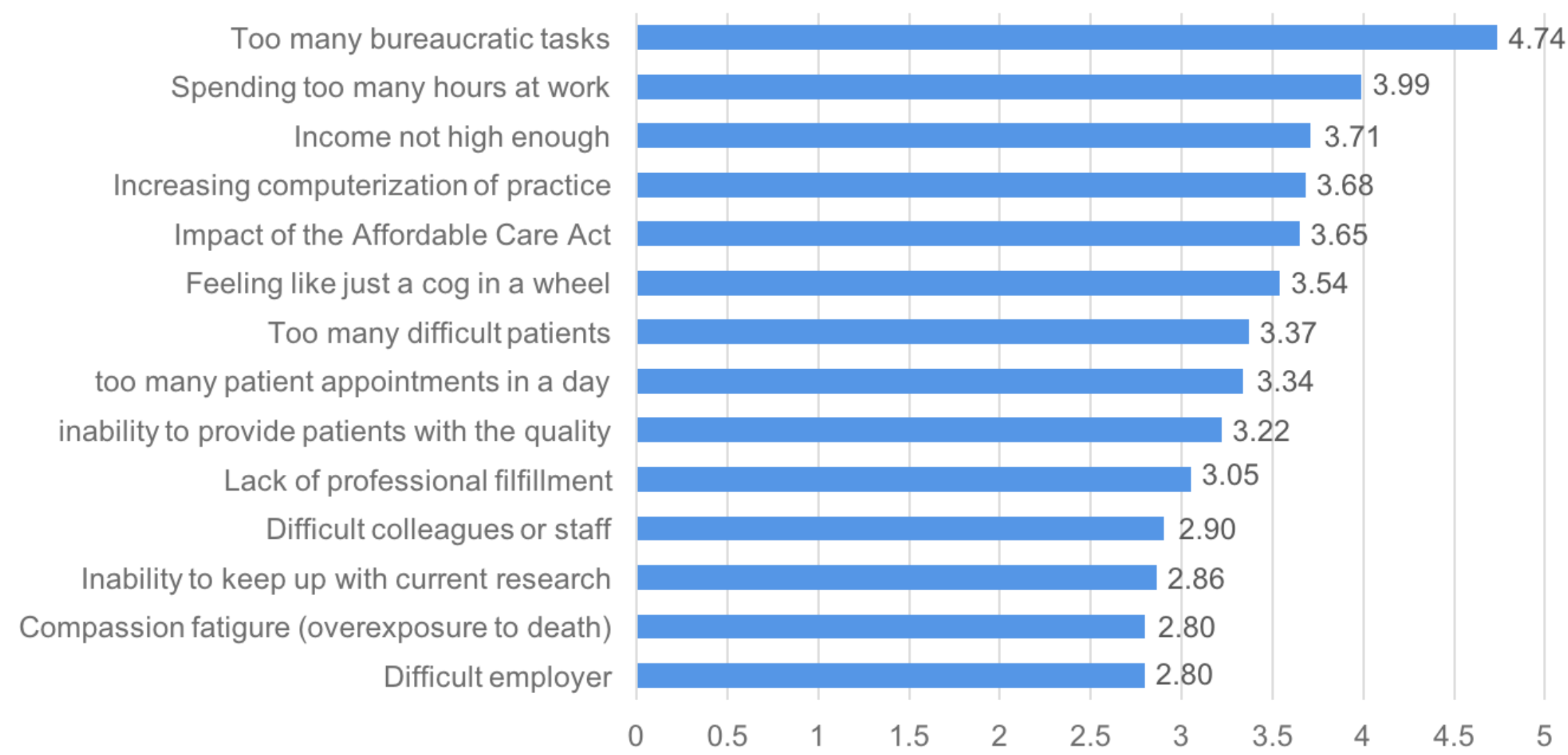
What's the Cure for Canada's Doctor Shortage?

Posted: 07/12/2013 5:25 pm EDT | Updated: 09/11/2013 5:12 am EDT

- http://www.huffingtonpost.ca/health-media-today/canada-doctor-shortage_b_3586754.html
- <https://www.fraserinstitute.org/article/canadas-doctor-shortage-will-only-worsen-coming-decade>
- https://www.vice.com/en_ca/article/young-canadians-are-suffering-through-canadas-family-doctor-shortage
- <http://www.vancouversun.com/health/family+doctor+shortage+worsening+despite+campaign+promise/11029139/story.html>
- <http://www.cbc.ca/news/canada/british-columbia/walk-in-clinics-patient-caps-1.3480377>
- <http://www.cbc.ca/news/canada/british-columbia/physicians-bearing-heavy-workloads-as-b-c-battles-family-doctor-shortage-1.3859680>

...Leading To Burnout

- 2/3 of Canadian physicians feel their workload is too demanding
- 1/2 feel that tiredness, exhaustion or sleep deprivation affects the care they deliver
- 1/2 feel that their family and personal lives have suffered

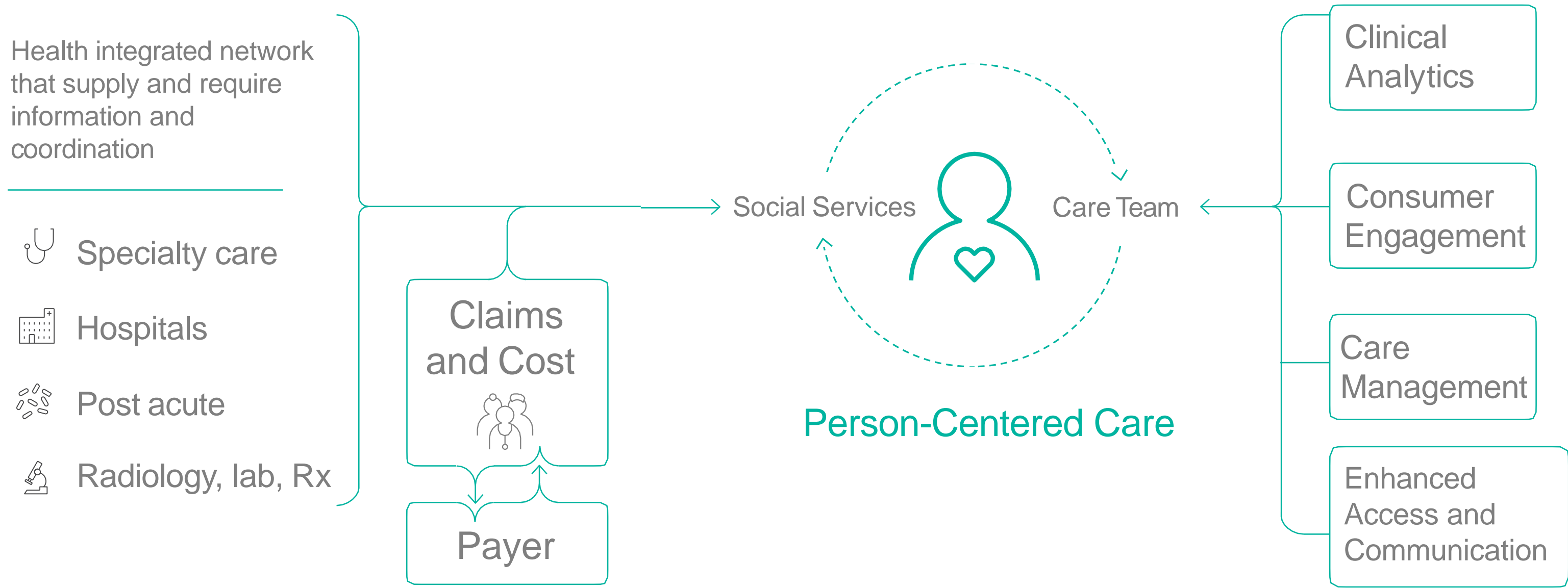


Michael Fralick MD, Ken Flegel. CMAJ 2014. DOI:10.1503/cmaj.140588
Physician Burnout: It Just Keeps Getting Worse - Medscape - Jan 26, 2015

So How Do We Fix It?

Move from a system that encourages and rewards **VOLUME** to one that focuses on **VALUE** and at its core: **Patient Medical Home**

A Person-Centered Care System



PCMH Results – State of Michigan BCBS Plan

- > 4,500 primary care doctors at 1,638 practices around the state in its seventh year of operation
- These practices care for more than 1.4 million BCBSM members



15% Decrease in adult ER visits

21.4% Decrease in adult ambulatory care sensitive inpatient stays

18.1% Decrease in adult primary care sensitive ER visits

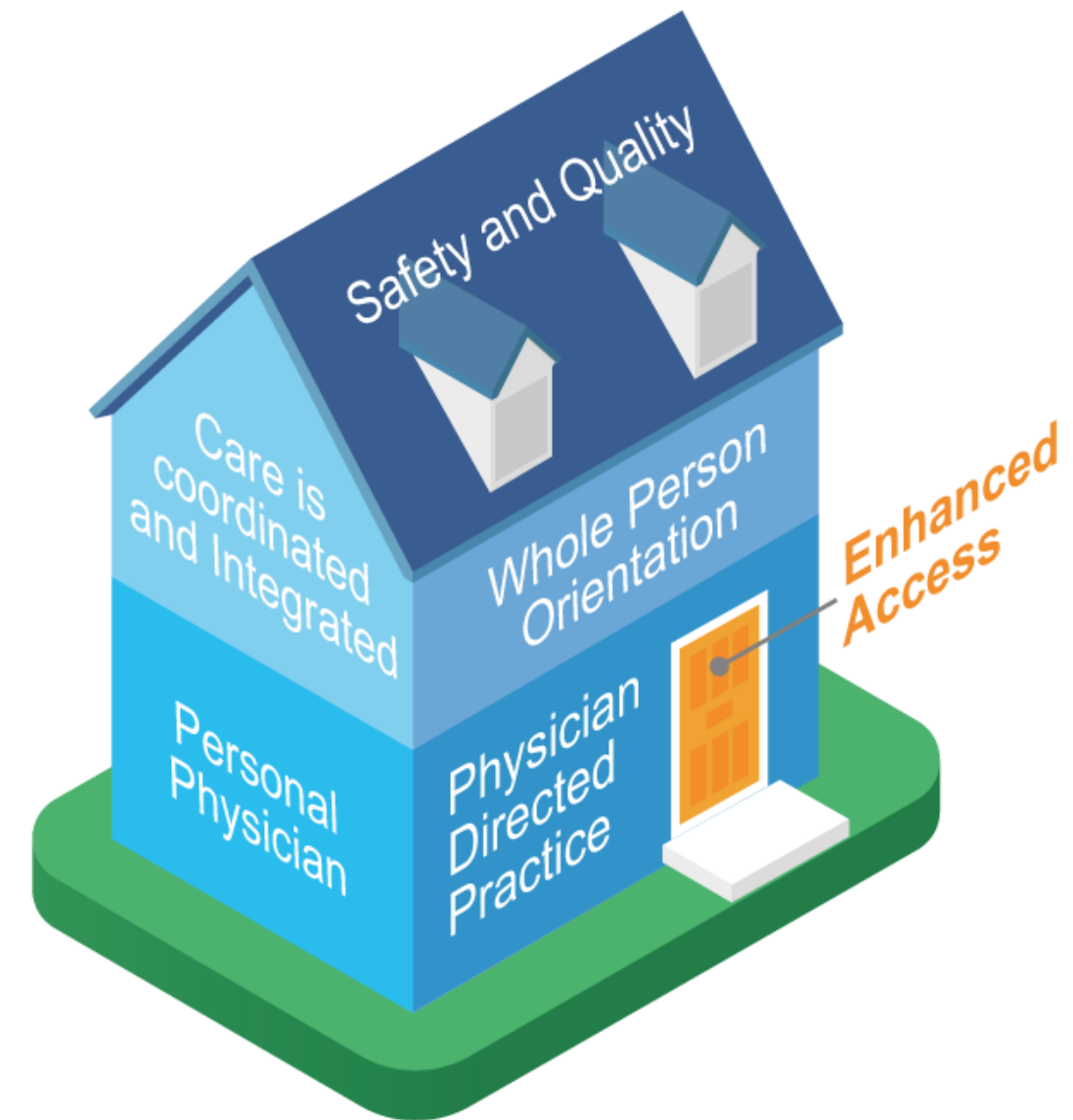
12.7% Decrease in adult high-tech radiology usage

17.2% Decrease in pediatric ER visits

22.7% Decrease in pediatric primary-care sensitive ER visits

In Prospective Studies, PMH Leads to Better Cost Outcomes

36.3	Drop in hospital days
32.2%	Drop in ER use
12.8%	Increase in chronic medication
-15.6%	Total cost
10.5%	Drop in inpatient specialty care costs
18.9%	Ancillary costs down
15.0%	Outpatient specialty down



Overall Evidence Review: PMH Gets Results



21 of 23

studies that reported
on cost measures found
reductions in one or
more measures

23 of 25

studies that reported on
utilization measures

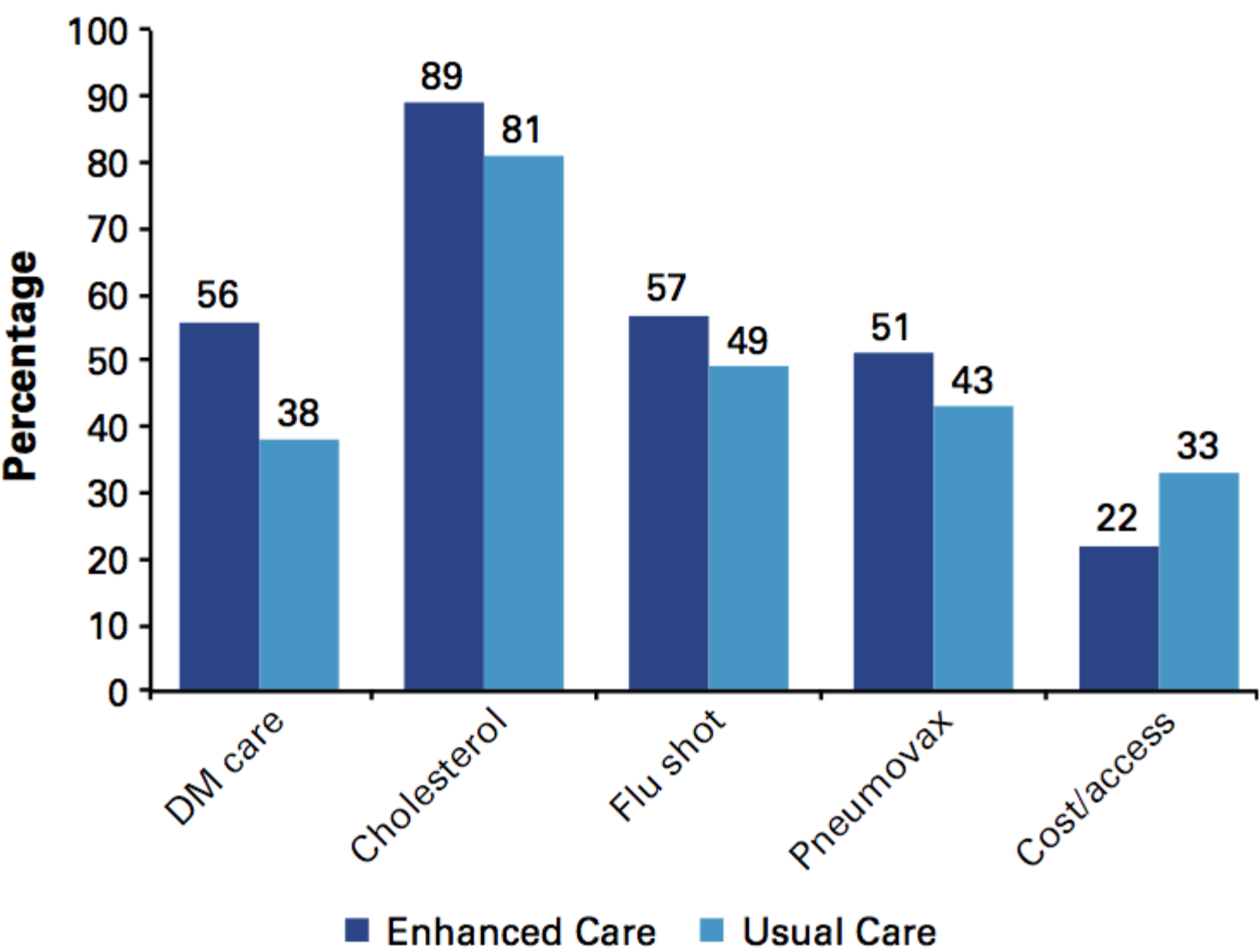


found reductions in
one or more measures

PCMH Effect on Quality

Massachusetts experience:

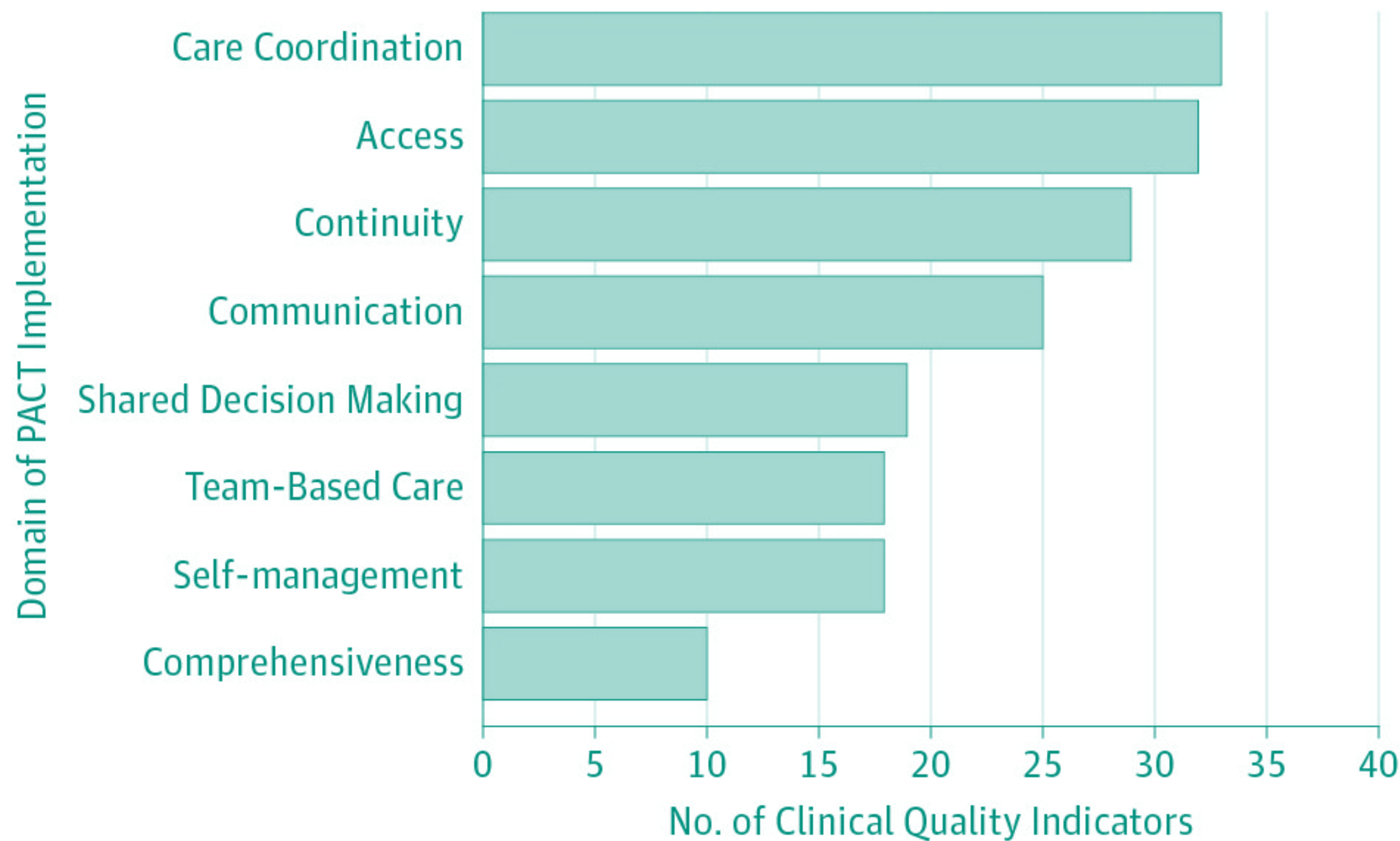
Comparing outcomes in primary care with EHR vs. practices with enhanced primary care.



Adjusted Rates for Quality Processes Controlling for Race, Sex, Income, Education, and Insurance Status

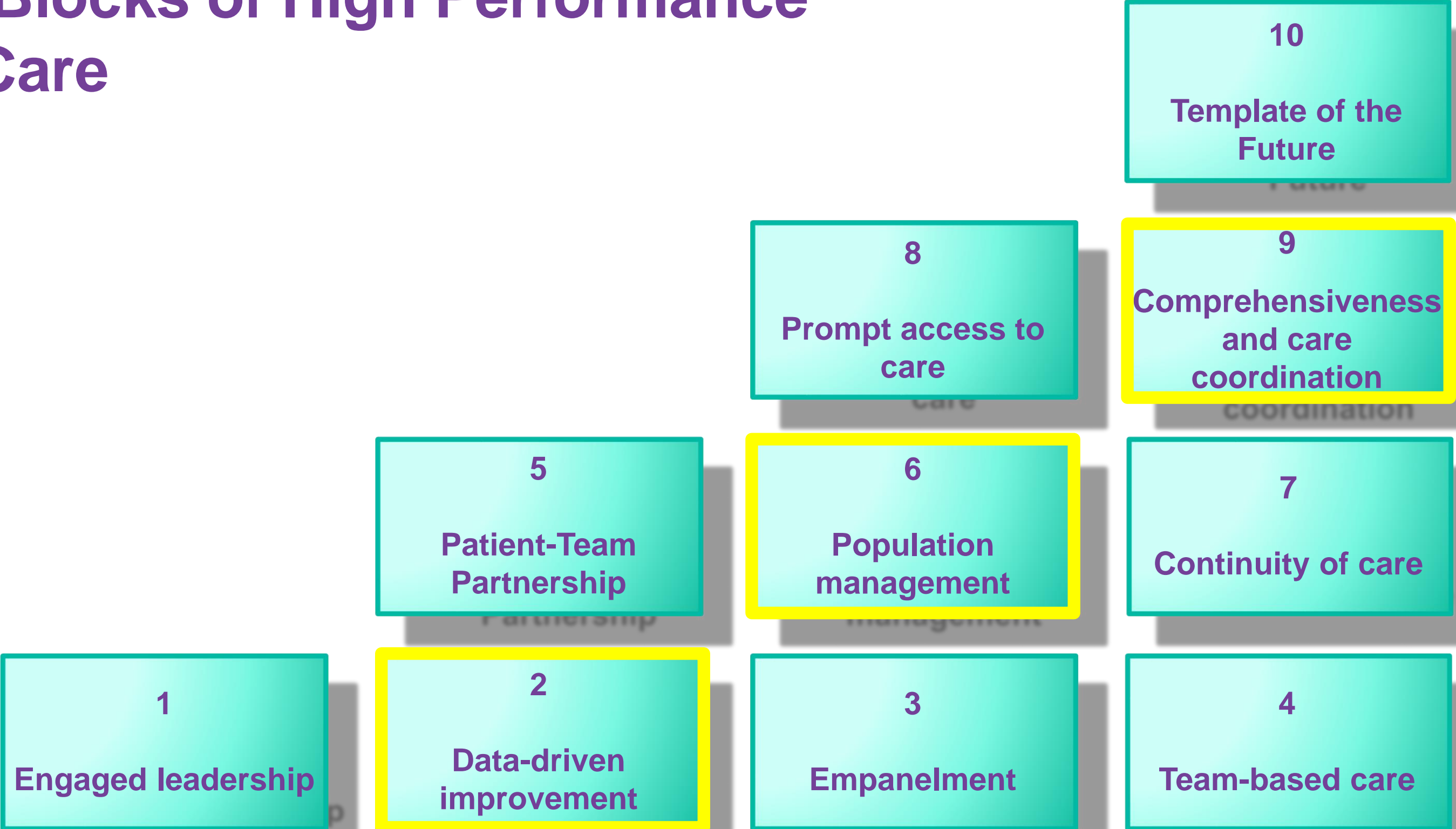
Britton et al. Enhanced Primary Care and Impact on Quality of Care in Massachusetts. *Am J Manag Care.* 2016;22(5):e169-e174

Components of the Medical Home Most Directly Tied to Quality



Clinical Quality and the Patient-Centered Medical Home. Karin Nelson, et al.
JAMA Intern Med. Published online May 1, 2017. doi:10.1001/jamainternmed.2017.0963

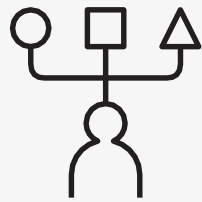
Building Blocks of High Performance Primary Care



Bodenheimer et al. Ann Fam Med March/April 2014 vol. 12 no. 2 166-171

Enabling Providers on Their Path to PMH

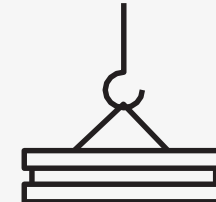
Close and Address Gaps in Care



Proactive Patient Outreach

- What is my population profile?
- Where are my gaps in care?
- Who should I engage?

Risk and Quality Analytics



Performance Management

- Who is at risk?
- How can we improve?
- What is my practice variation?

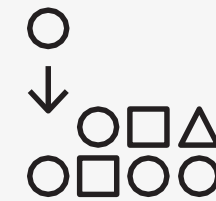
Enabling Providers & Patients to Work Together



Population Health

- How is my chronic care population?
- What is the health status over time?

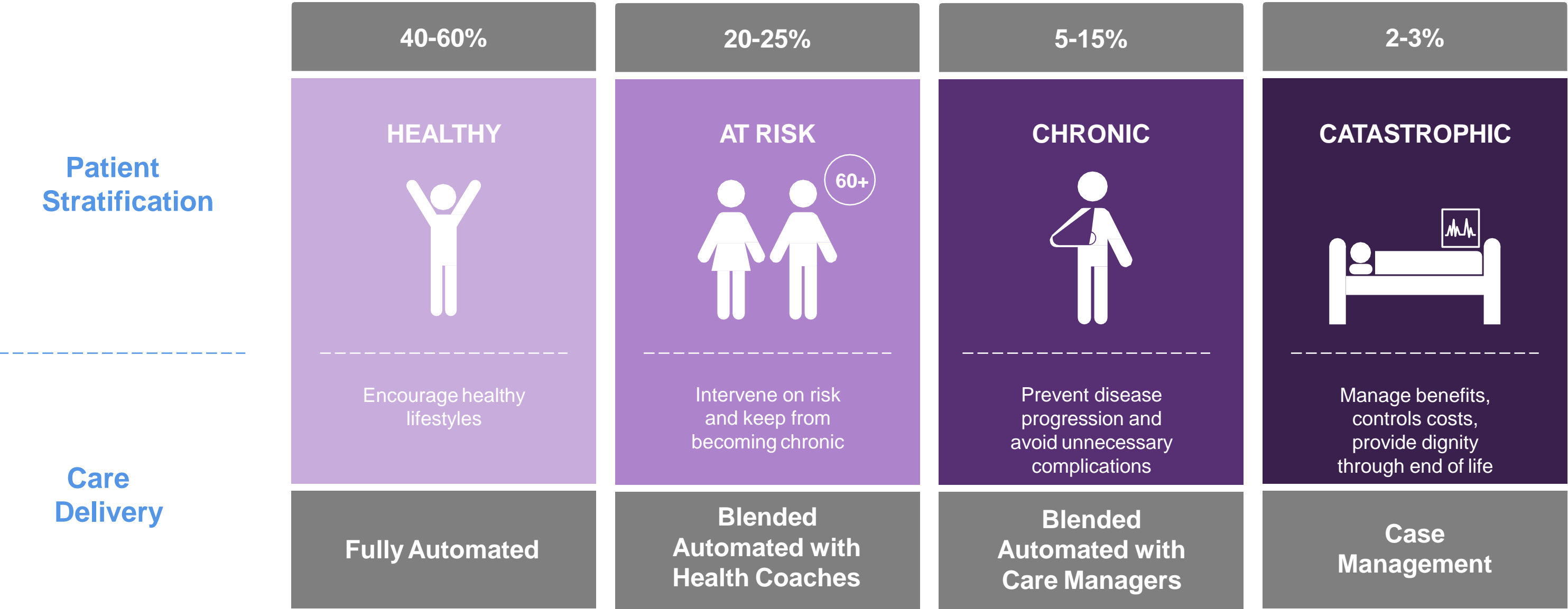
High-touch Care Management & Coordination



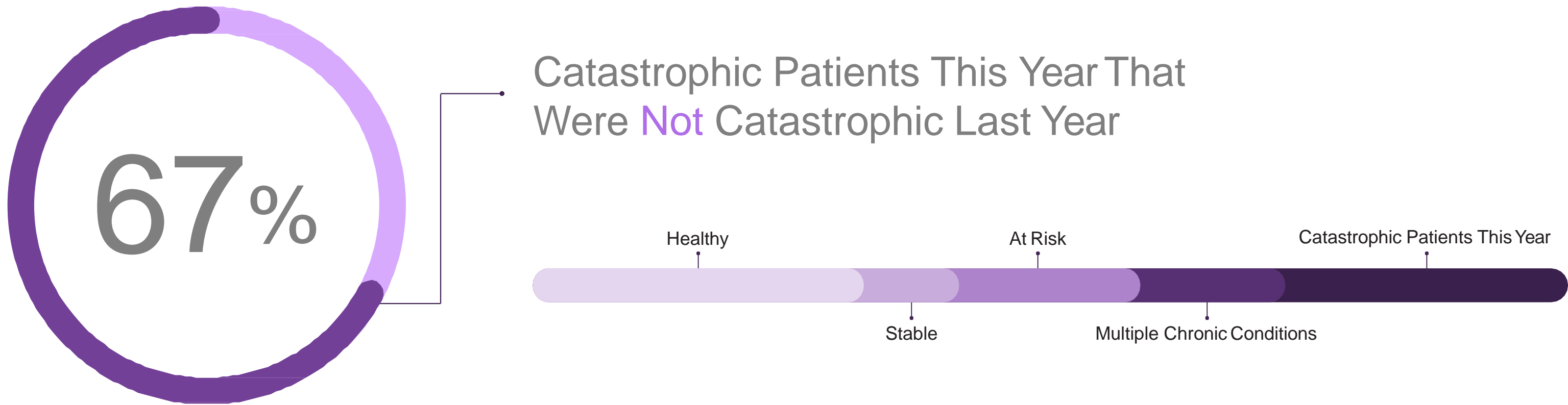
Care Management

- What care coordination activities should I take?
- What is the ideal care plan?
- What social determinants exist?

Using Data to Manage a Population



Intervening with the Right Patients at the Right Time



Source: Healthcare Risk Adjustment and Predictive Modeling by Ian Duncan

Data-Driven Improvement



Catastrophic

Individuals with >9 A1c and no office visits are sent a text message to call care manager



Chronic

Individuals with >9 and BMI >35 are sent an automated invitation to a group visit with diabetes dietician



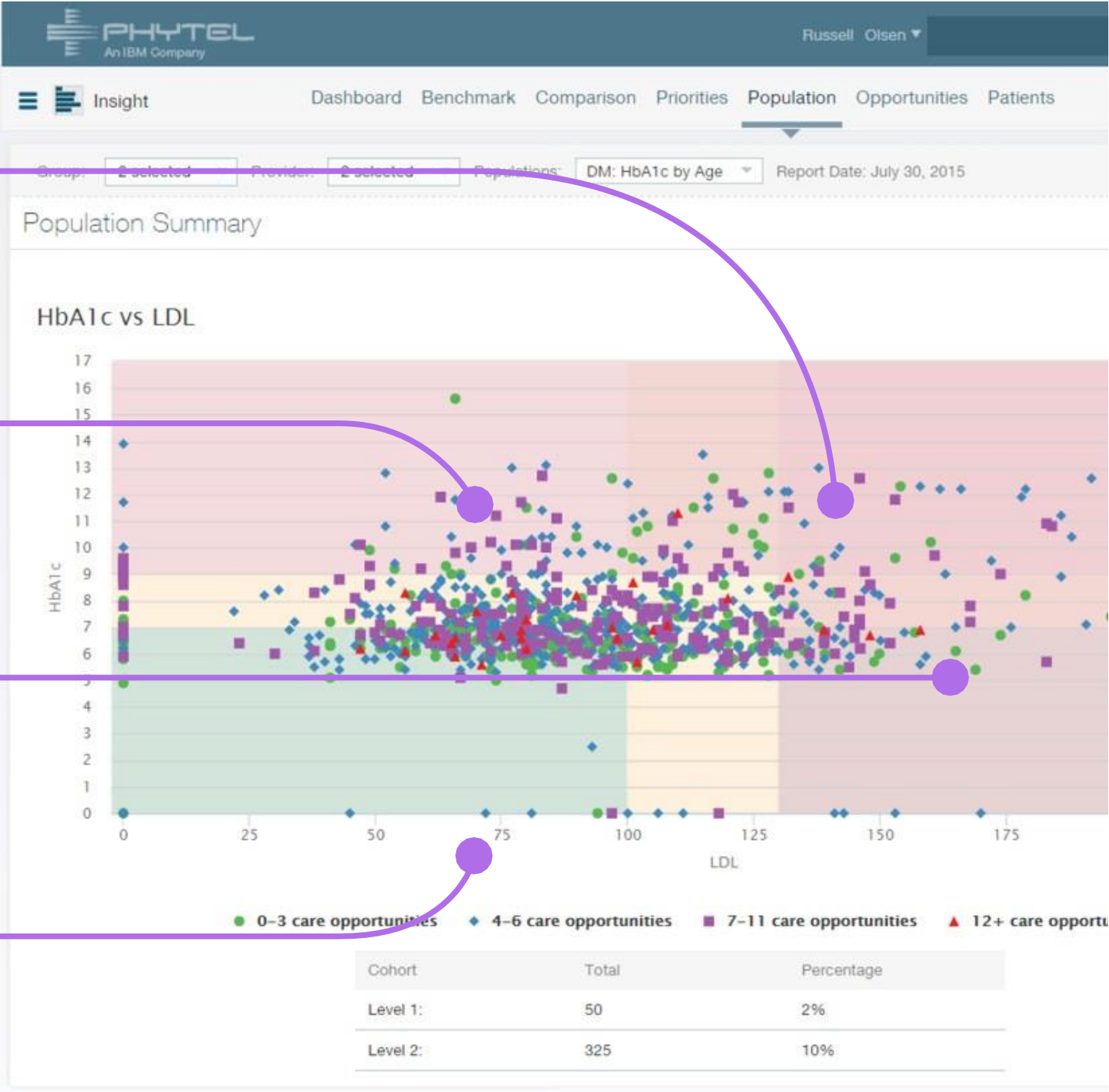
At risk

Individuals between A1c 7 and 9 are sent to an automated message to encourage enrollment in diabetes self-management courses



Healthy

Diabetics with <7.0 are sent an email message emphasizing the importance of nutrition and exercise to maintain low A1c levels with a link to a mobile app to track their progress



Population Health Management: Patient Engagement as an Enabler



Studies show that patients who are less engaged in their own health incurred **21% higher costs**¹



Aging population is growing
~**23%** of Canadians could be seniors by 2031²
Seniors now **outnumber** children in Canada³



Chronic conditions drive **75%** of national healthcare spending⁴
38% of the population has at least one chronic condition⁴



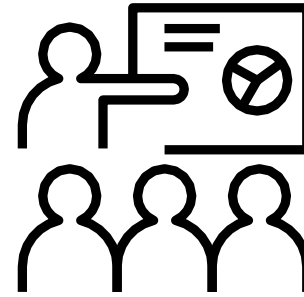
Impact on patient non-compliance
50% of patients are not getting recommended care⁵

1. <http://content.healthaffairs.org/content/32/2/216.full>
2. <http://www.cbc.ca/news/politics/2016-census-age-gender-1.4095360>
3. <http://www.phac-aspc.gc.ca/publicat/hpcdp-pspmc/36-8/assets/pdf/ar-04-eng.pdf>
3. http://www.aha.org/content/00-10/071204_H4L_HighestQualityCare.pdf
4. <https://www.brookings.edu/research/improving-quality-and-value-in-the-u-s-health-care-system/>
5. McGlynn, et al. N Engl J Med 2003; 348:2635-2645 June 26, 2003 DOI: 10.1056/NEJMsa022615

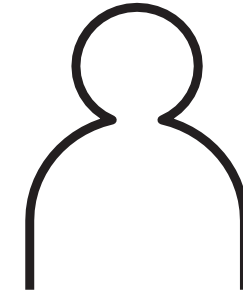
Biggest Obstacles to Patient Engagement at Provider Level



Overworked
Physicians



Insufficient Provider
Training



Clinical Information
Systems that Fail to
Adequately Track
Patients

Automated Patient Engagement

IBM

Admin SalesDemo

Search Patients

Go

Dashboard

Insight

Coordinate

Remind

Outreach

Transition

Patient

Reports

Admin

Select All

Asthma

Chronic Obstructive Pulmonary Disease (COPD)

Coronary Artery Disease

Diabetes

Diabetes-Uncontrolled

Heart Failure

High Cholesterol

Hypertension

Hypertension, Malignant

Medicare Advantage Wellness

Medicare Annual Wellness - First Visit

Medicare Annual Wellness - Subsequent Visit

Medicare Initial Preventive Physical Exam (IPPE)

Thyroid Disorder

Wellness

All Reasons

Providers: All Providers

Date: February 09, 2017

Update Results

Print

Reason	Phone	Provider	Facility
Hypertension W/2017 at 2:40 PM	(980) 555-0114	Stephenson MD, Haviva J.	Starview Clin
Diabetes 017 at 7:56 PM	(865) 555-0123	McCormick MD, Cadman	West Street
Diabetes 17 at 11:45 AM	(815) 555-0162	Craft MD, Keith	Center Street
Asthma 017 at 4:48 PM	(870) 555-0127	Morgan MD, Norman	West Street
Diabetes 17 at 11:04 AM	(928) 555-0155	Rivas MD, Denton	Downtown S
Bauer, Garrison High Cholesterol	(818) 555-0161	Craft MD, Keith	Center Street

Targeting Campaigns for Population Health Management

IBM

Admin SalesDemo

Search Patients

Go

Dashboard

Insight

Coordinate

Remind

Outreach

Transition

Patient

Reports

Admin

Patient Management

Campaigns

Saved Page Views: Very High HbA1c and LDL

Groups: All Groups

Providers: All Providers

Send Campaign

Actions

Patient Management

8 Columns

	✓	Patient Name	Patient ID	Date of Birth	Age	Phone	Email	Payor	Address
>	✓	Pickering, Wendell	000001	03/11/1960	56	(563)555-0111	wendellpickering20205@example.com	Aetna US Healthcare	921 Samson Court, Allen TX, 75002
>	✓	Valdez, Price	000011	07/02/1943	73	(614)555-0198	pricevaldez64800@example.com	Aetna US Healthcare	410-2883 Iaculis Rd., Princeton, TX, 75407
>	✓	Leonard, Echo G	000050	08/23/1952	64	(819)555-0195	echo		
>	✓	Summers, Brenden	000052	04/19/1955	62	(808)555-0163	bre		
>	✓	Haley, Drake	000054	02/28/1925	92	(935)555-0197	dra		

Page 1 of 1

Records per Page: 10

IBM

Admin SalesDemo

Search Patients

Go

Dashboard

Insight

Coordinate

Remind

Outreach

Transition

Patient

Reports

Admin

Patient Management

Campaigns

Campaign Name

1 Population ✓

2 Message

Library

Content

3 Delivery

4 Summary

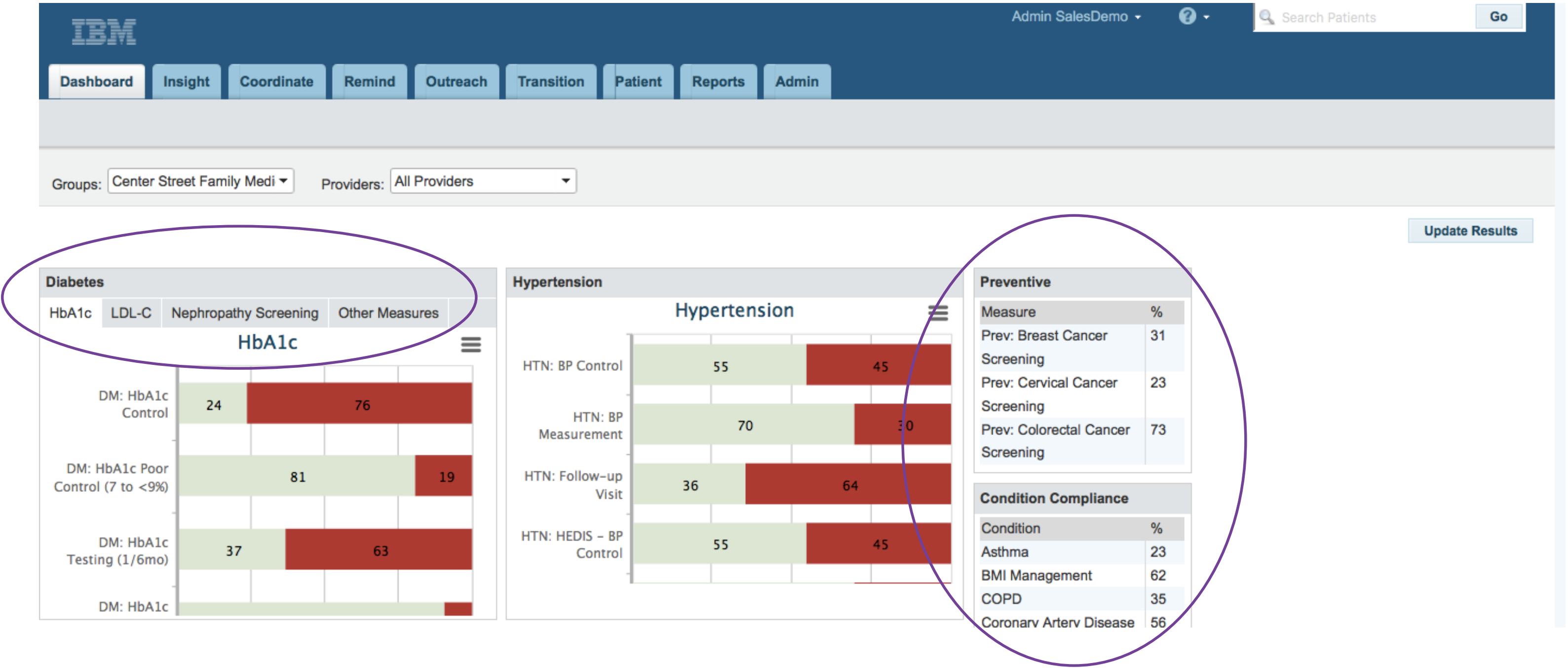
Content

Provider: Your Provider

Phone Number: () - -

Hello. This message is from [Provider Name] for [Patient Name]. We invite you to attend an upcoming diabetes group session here at the Whole Health clinic. At this session we will discuss tips and tricks to help you better manage your blood sugar. Bring your questions and be prepared to walk away with some new ideas. To reserve your seat or to ask questions, please call our office at [Provider Phone Number]. Thank you. Goodbye.

Visualize Quality Metrics



Comprehensiveness & Care Coordination

IBM

Dashboard

Insight

Coordinate

Remind

Outreach

Transition

Pa

Patient Management

Campaigns

Saved Page Views:

Visit Prep - Today

Groups:

All Groups

Patient Management

<input checked="" type="checkbox"/>	Appointment Date/Time	Patient Name	Date of Birth	Appointm
Appointment Provider: Wilcox MD, Adara				
>	<input checked="" type="checkbox"/>	2/9/2017 9:00:00 AM	Worsley, Agatha	02/12/1933 OFFICE V
>	<input checked="" type="checkbox"/>	2/9/2017 9:30:00 AM	Spire, Donald	09/23/1951 OFFICE V
>	<input checked="" type="checkbox"/>	2/9/2017 10:00:00 AM	Lee, Loretta	03/07/1941 OFFICE V
>	<input checked="" type="checkbox"/>	2/9/2017 11:15:00 AM	Valdez, Price	07/02/1943 NEW PATI
>	<input checked="" type="checkbox"/>	2/9/2017 12:15:00 PM	Sparks, Aurora	06/22/1961 OFFICE V
>	<input checked="" type="checkbox"/>	2/9/2017 1:15:00 PM	Joyner, Danielle	06/13/1951 PHYSICAL
Appointment Provider: Craft MD, Keith				
>	<input checked="" type="checkbox"/>	2/9/2017 10:00:00 AM	Reese, Amena	02/04/1965 NEW PATI
>	<input checked="" type="checkbox"/>	2/9/2017 1:00:00 PM	Gillespie, Lenore	01/24/1964 OFFICE V

Agatha Worsley

APPT DATE: 17/11/2016

APPT PROVIDER: Blitzer MD, Dalia

DOB: 12/02/1933

Language: English

PRIMARY INS: Medicare

PHONE: 817-555-0100

PCP: Blitzer MD, Dalia

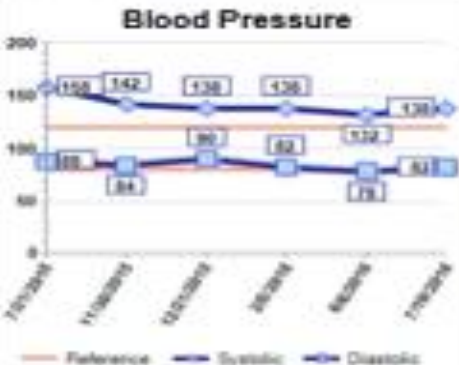
GENDER: Female

ETHNICITY: Caucasian

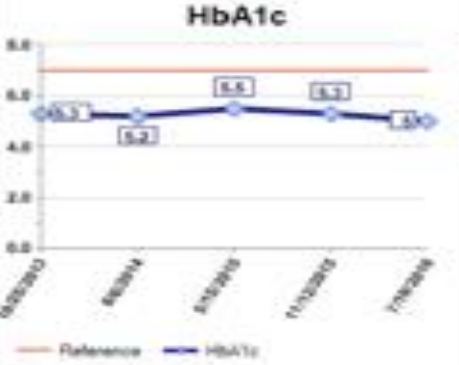
PATIENT ID: 0000000

ADDRESS: 1324 Master Drive, Fort Worth, TX

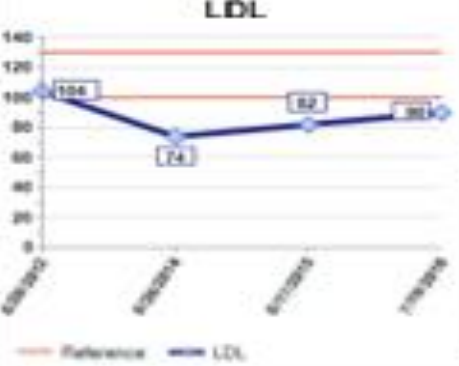
Blood Pressure




HbA1c



LDL



BMI



VITALS

BLOOD PRESSURE: 138/62 07/19/2016

HEART RATE: 87 bpm 07/19/2016

WEIGHT: 48.5 kg 05/27/2016

LABS

HbA1c: 5.0% 07/19/2016

TOTAL CHOL: 170 07/19/2016

LDL: 90 mg/dL 07/19/2016

PROBLEMS

Cataracts

Chronic obstructive pulmonary disease

GERD

Hypertension

Osteoporosis

ALLERGIES

Tetracycline

MEDICATIONS

Start Date	Start Date
MONTELUKAST SODIUM 10 MG TABS	05/16/2013
OPTIC-VITES TABS	03/07/2013
PLAVIX 75 MG TABS	01/17/2014
PRAVACHOL 40 MG TABS	05/11/2007
PRIOSEC 20 MG CPDR	10/31/2006
STRIPES FOR ONE TOUCH ULTRA MIN	02/21/2011
TOPROL XL 25 MG XR24H-TAB	06/08/2011
TYLENOL ARTHRITIS PAIN 650 MG CR-TABS	03/07/2013
ZOLOFT 50 MG TABS	09/26/2013

ALERTS

DM: Missing BMI Determination

DM: Missing BP Measurement

DM: Missing Eye Exam

DM: Missing Foot Exam

DM: Missing HbA1c Testing (1/6mo)

DM: Missing HbA1c Testing (1/yr)

DM: Missing LDL Testing

HTN: Missing BP Measurement

LDL: Missing Test (High Risk Pop)

HCC

RAF	Code-Description	Code Date
0.302	427.31 - Atrial fibrillation	06/06/14
0.121	250.00 - DMII w/comp nt sl uncntr	06/19/14
0.377	428.0 - CHF NOS	09/19/16

Benefits of Care Management

Admission/ Readmission

- Avg. Admissions decreased 20.6%
- Avg. Readmissions decreased 10%

Emergency Department Utilization

- Average ED utilization rates dropped 21.5%

Cost of Care

- Average per capita expenditures dropped 13.1%

Quality of Care

- “Mortality was 63% lower in the intervention group vs. controls”
- “Decreased body-mass index by 59.1%, improved HbA1c 66.7% and improved in LDL by 31.6%”

Provider Experience

- “86% of PCPs reported the program allowed them to provide more comprehensive care”
- “87% of practices reported improved chronic disease care”

Quality of Life/Patient Experience

- “SF-36 scores improved in four of eight scales”
- “SF12 physical functioning and mental functioning increased by 15% and 16%”



The
COMMONWEALTH
FUND

**Caring for High-Need, High-Cost Patients:
What Makes for a Successful Care Management
Program?**

Clemens S. Hong, Allison L. Siegel, and Timothy G. Ferris

http://www.commonwealthfund.org/~media/files/publications/issue-brief/2014/aug/1764_hong_caring_for_high_need_high_cost_patients_ccm_ib.pdf



Intelligent Care Management

Orlando Health – saving time for care managers

Orlando Health Physician Associates’ Care Coordination Team faced a number of challenges in providing care to patients transitioning out of hospital:

- Care Managers had to access multiple systems to see the relevant information for a patient
- Workflow was cumbersome, with no guidance on steps to follow
- Led to more time preparing for and conducting outreach calls and assessments



“Using [this solution] has helped us Lean our process and **eliminate unnecessary waste**. The unintended outcome is that after using the product **for 2 months** we have seen an **increase in productivity** of our Care Managers and it has actually given them back **2 hours of their day**.”

Suzanne Gruszka, RN
Sr. Director, Health Services
Orlando Health Physician Associates



Our Mission

We, Watson Health, aspire to improve lives and give hope by delivering innovation to address the world's most pressing health challenges through data and cognitive insights.



Thank you



@DrLisaLatts
@IBMWatsonHealth



Lisa Latts MD

www.ibm.com/watson/health/



Watson Health™

Table 1. The 10 Goals of the Patient Medical Home Model

1. Patient centered	Provide services that are responsive to patients' and their families' feelings, preferences, and expectations
2. Personal family physician	The most responsible provider of a given patient's medical care Every person in Canada should have a personal family physician
3. Team-based care	Offer a broad scope of services carried out by teams or networks of clinicians; inclusive of nurses, peer physicians, and others
4. Timely access	Timely access to appointments in the practice Advocate for and coordinate timely appointments with other health and medical services required
5. Comprehensive care	Provide a comprehensive scope of family practice services by working collaboratively with other professionals Address public health needs Taking population health effects into account
6. Continuity	Offer continuous care over time and in different settings Advocate on the patients' behalf for continuity of care throughout the health care system Preserve constant relationships and continuous medical information for patients
7. Electronic records and health information	Maintain electronic medical records
8. Education, training, and research	Serve as a model place for training students, residents, and other health professionals Carry out and/or encourage staff to be involved in primary care research
9. Evaluation	Carry out ongoing evaluation as part of the commitment to continuous quality improvement
10. System support	Internal support through governance and management structures External support by stakeholders, the public, and other medical and health professionals and their organizations across Canada

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