



Healthcare Consumerism

Converging Trends and Privacy Challenges

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US Healthcare is Ripe for Reform

Predicted healthcare spending uncontained

- Over \$3 trillion for 2014 (almost equal to Germany's entire GDP).
- Around \$4.5 trillion by 2020.

People living with chronic disease increasing

- Around 133 million in 2013.
- Around 157 million by 2020 (around half the population).
- Around 81 million will have multiple conditions.
- Proportion of aging population (60 yrs and older), expected to increase from 11% (2009) to 22% (2050), and would create additional demand for healthcare services

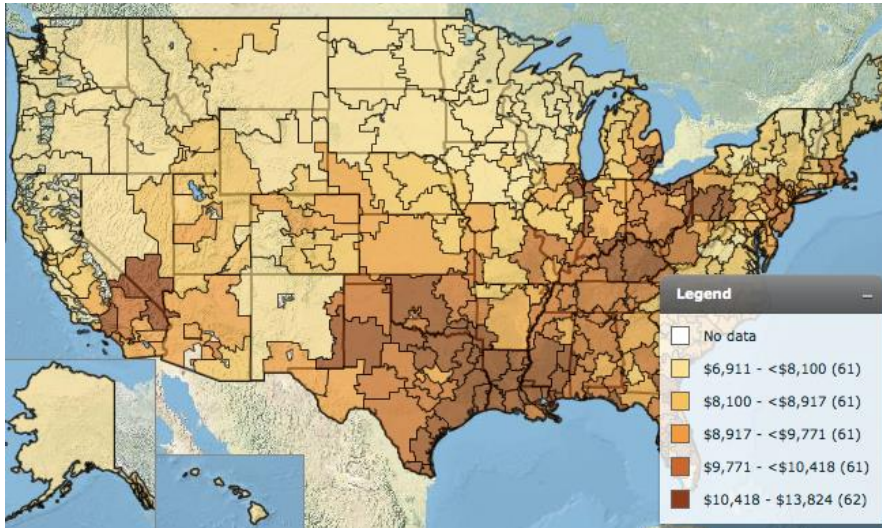
Primary care provider shortage worsening

- Nearly 52,000 additional primary care physicians needed by 2025, in comparison to 2010.
- If the system for delivering primary care in 2020 were to remain fundamentally the same as today, there will be a projected shortage of 20,400 primary care physicians.

Sources:

1. Annual U.S. Healthcare Spending Hits \$3.8 Trillion, Dan Munroe, Forbes.com, 2 Feb 2014.
2. The hidden costs of U.S. health care, Deloitte Center for Health Solutions, 2012.
3. About chronic diseases, National Health Council, 4 Nov 2013
4. World Population Ageing – Department of Economic and Social Affairs, United Nations.
5. Petterson SM, Liaw WR, Phillips RL, Rabin DL, Meyers DS, Bazemore AW. Projecting US Primary Care Physician Workforce Needs: 2010-2025. Annals of Family Medicine. 2012; 10(6): 503-509

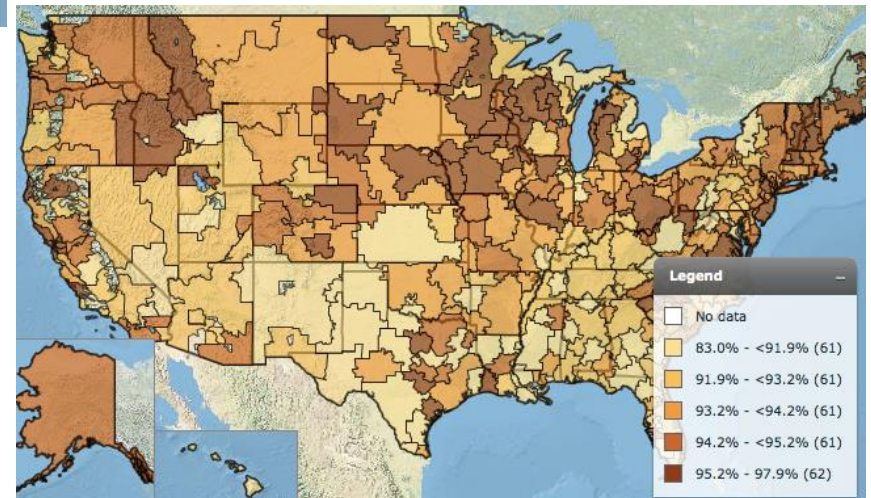
The Asymmetry of Healthcare Spending versus Quality



TOTAL MEDICARE REIMBURSEMENTS PER ENROLLEE, BY ADJUSTMENT TYPE (Adjustment Type: Price, Age, Sex & Race; Year: 2010; Region Level: HRR)

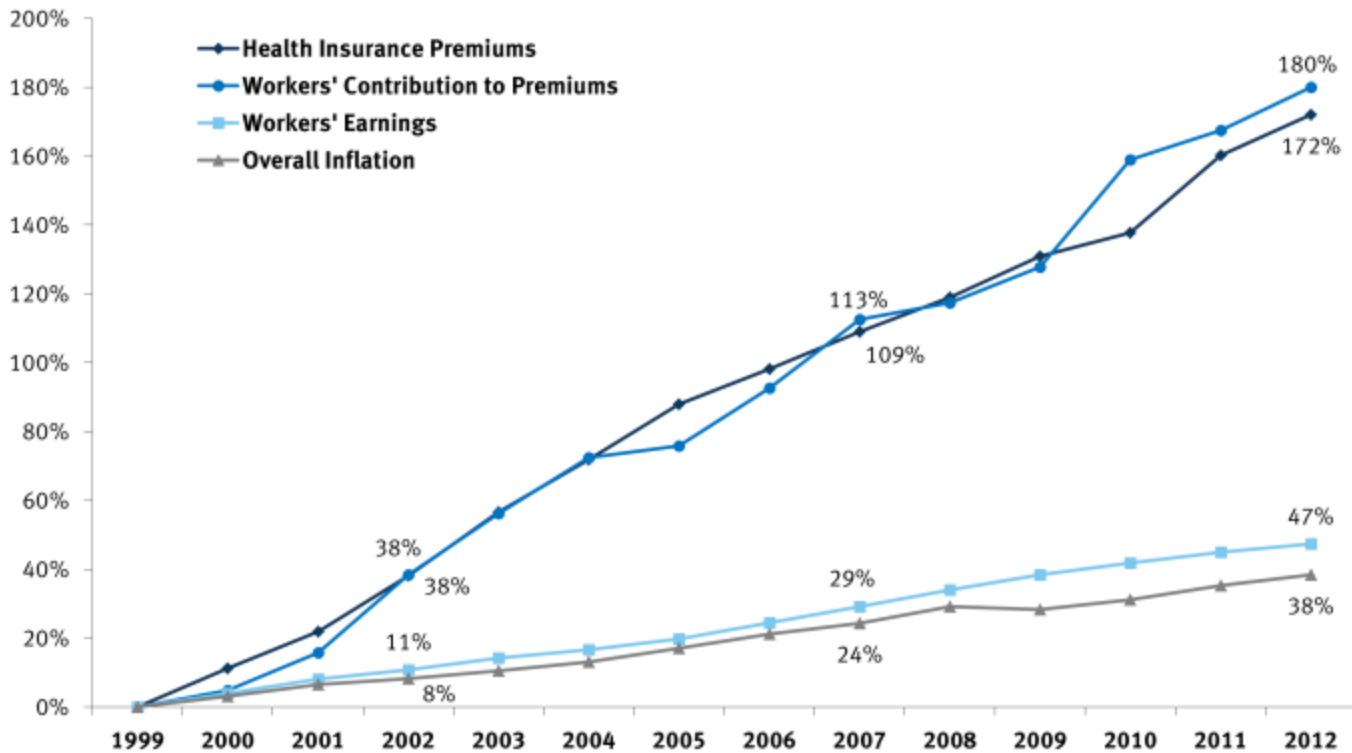
Source: The Dartmouth Atlas of Healthcare

CMS HOSPITAL COMPARE SUMMARY QUALITY SCORES, BY CONDITION (Condition: Overall; Year: 2007; Region Level: HRR)



Disproportionate Cost Burden on Individuals

Cumulative Increases in Health Insurance Premiums, Workers' Contributions to Premiums, Inflation, and Workers' Earnings, 1999-2012



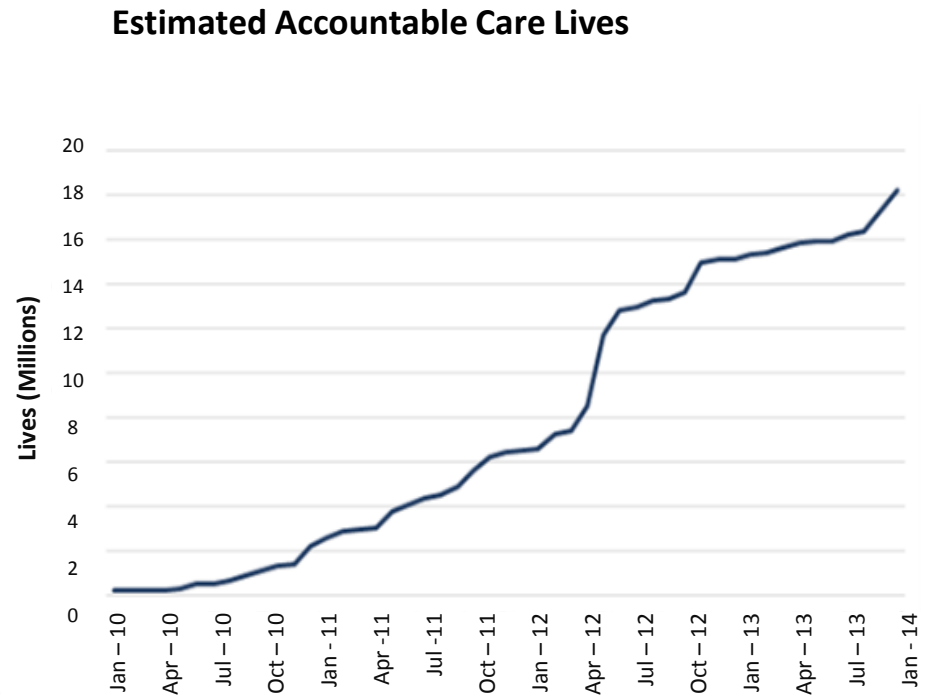
SOURCE: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2012. Bureau of Labor Statistics, Consumer Price Index, U.S. City Average of Annual Inflation (April to April), 1999-2012; Bureau of Labor Statistics, Seasonally Adjusted Data from the Current Employment Statistics Survey, 1999-2012 (April to April).



Clear and Steady Trend toward Value-Based Care

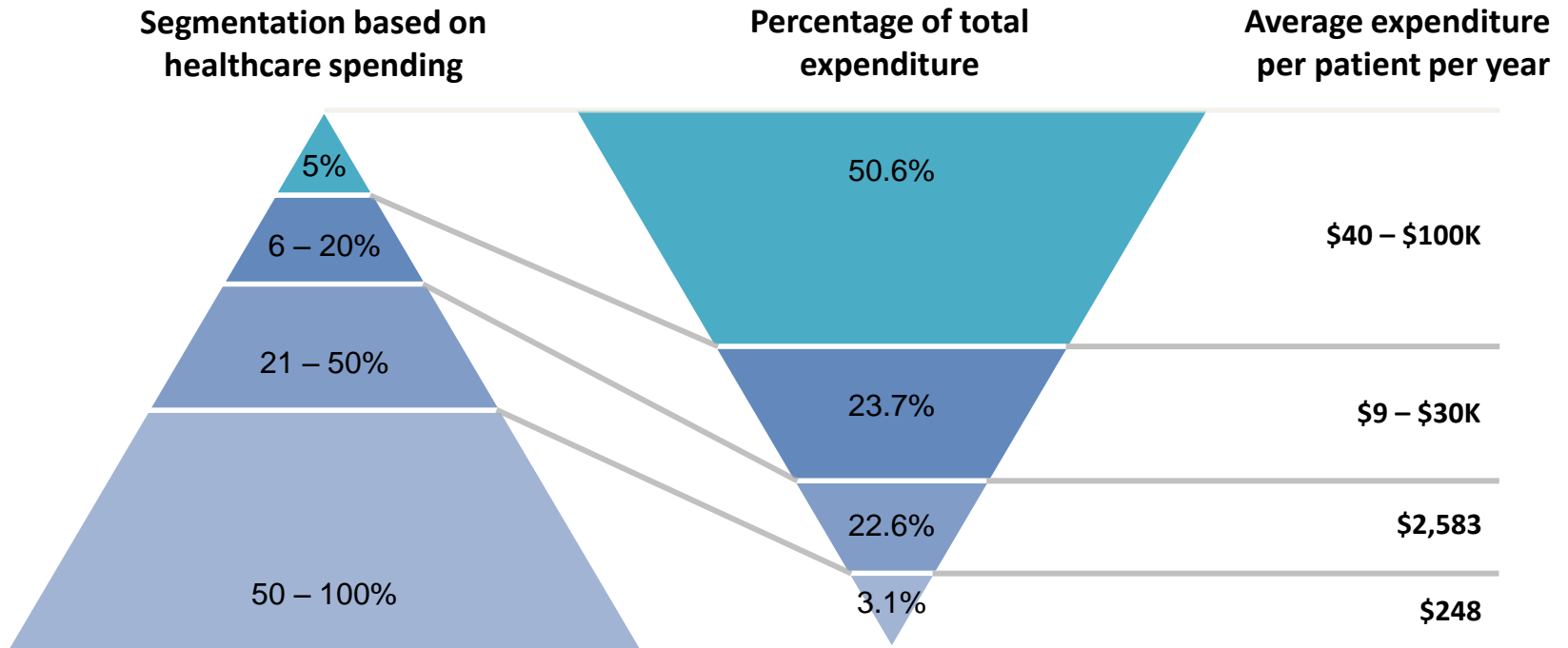
“Accountable Care Organizations are ... Providers who are jointly held accountable for achieving the measured quality improvements and reductions in the rate of spending growth.”

- Mark McClellan, MD, former Administrator for the Centers for Medicare and Medicaid Services



Source: Leavitt Partners Center for Accountable Care Intelligence

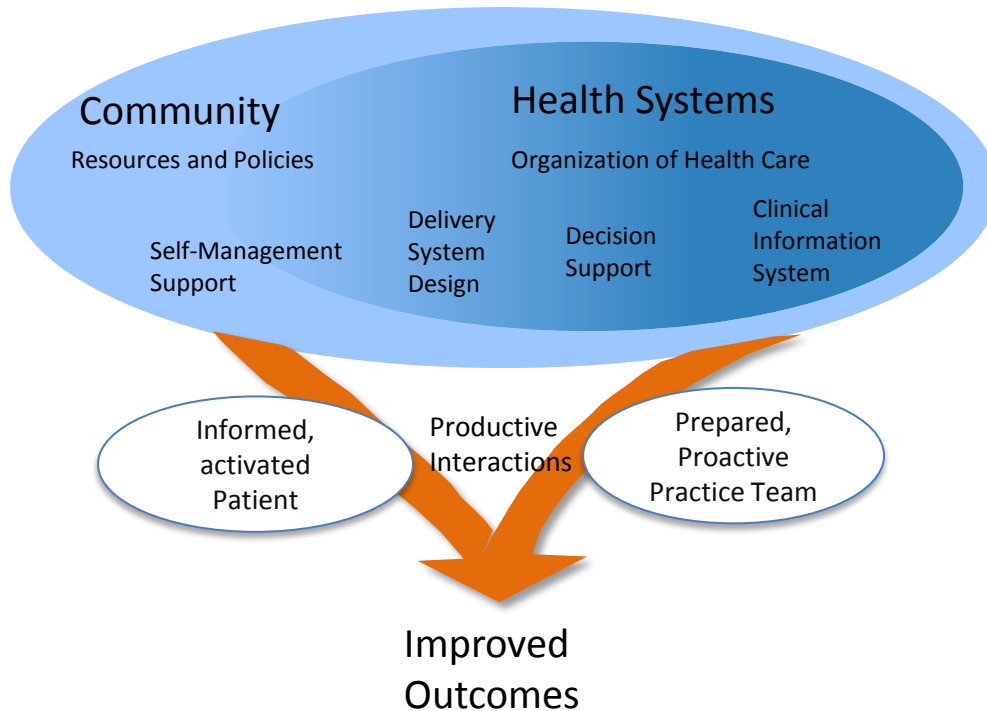
Consumer Segmentation by Healthcare Cost



People with functional limitations and chronic conditions were over four times as likely to be in the top 5 percent of spenders as the general population.

Source: <http://aspe.hhs.gov/daltcp/reports/2010/closerlook.htm#top>

Targeted Care Model and Realty Gaps



Source: The Chronic Care Model by The MacColl Institute for Healthcare Innovation

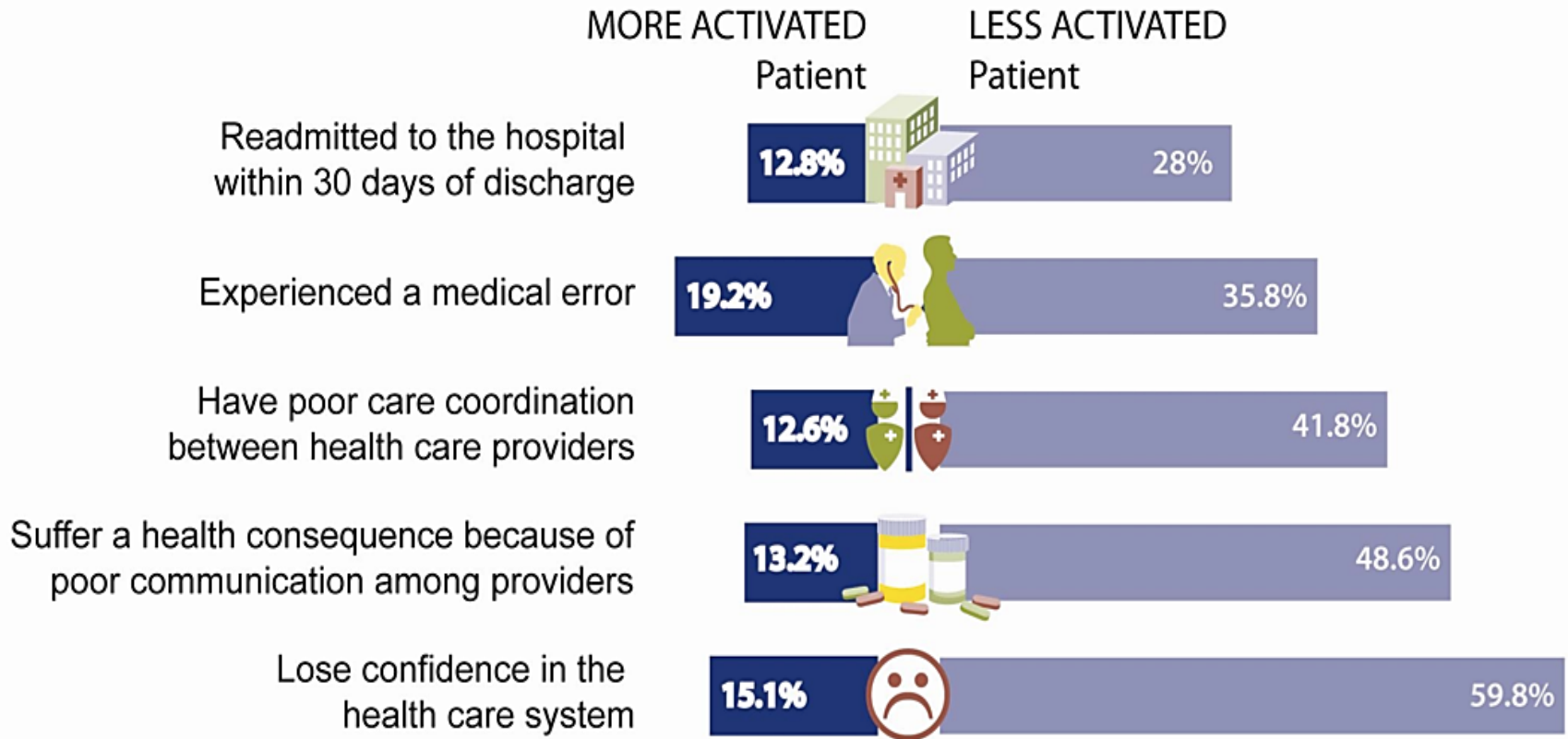
Facts:

- Fifty percent of Americans don't get the recommended preventive care and screening tests that science recommends.¹
- 60 percent of referrals go unscheduled² and 25% of scheduled appointments are missed.³
- 42 percent PCPs report not having enough time with their patients.⁴

Source:

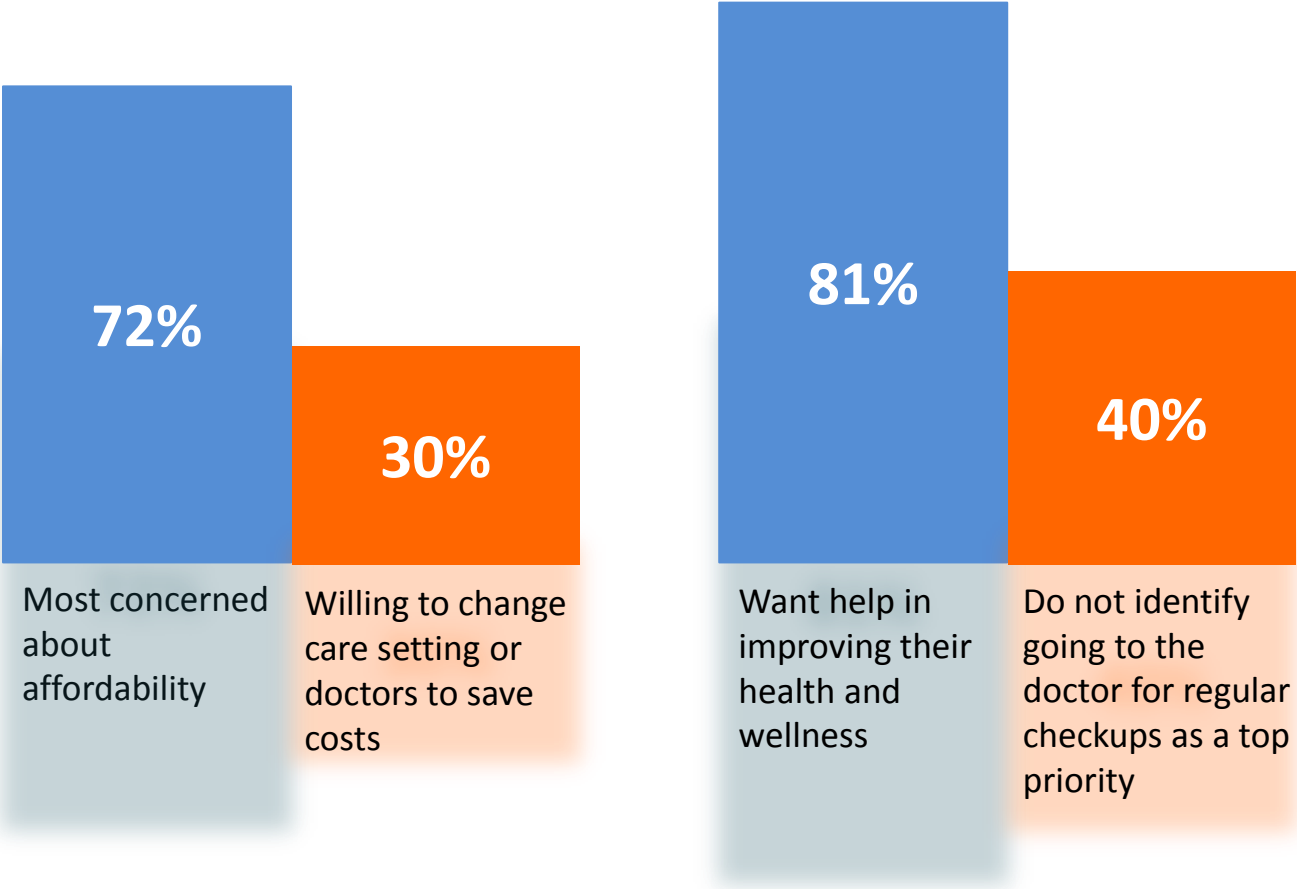
1. Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011
2. 2009 – 2011 Annals of Internal Medicine
3. <http://ahec.health.ufl.edu/chs/2002/Noshows.pdf#sthash.OChH25JI.dpuf>
4. <http://www.dhcs.ca.gov/provgovpart/Documents/BodenheimerWebinar3.pdf>

Higher Patient Activation Links to Better Care Outcome



Source: Patient Activation and Engagement for ACOs, Judith H. Hibbard, PhD, adapted from AARP's "Beyond 50.09" Patient Survey.

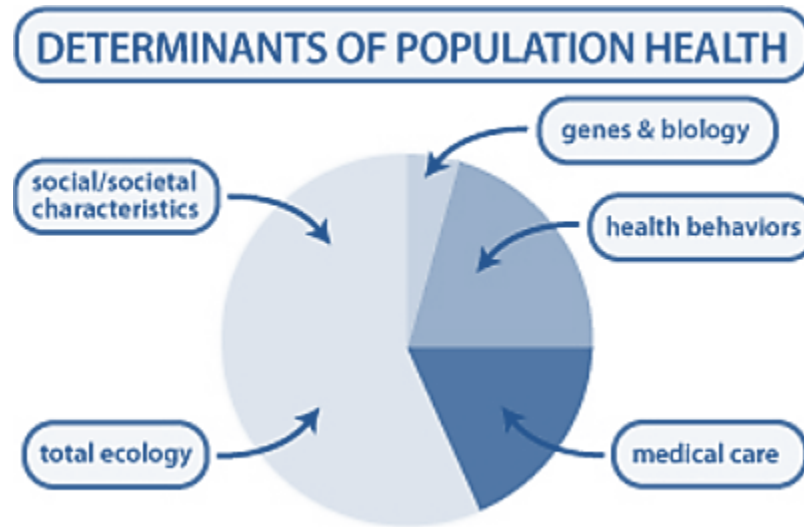
Behaviors of Healthcare Consumers State a Paradox



Source: 2012 Accenture Healthcare Consumer Survey

Lifestyle a Major Contributor to Health Status

The estimate to the left is presented by Center for Disease Control as an estimate, while the precise numbers remain unknown.



Source: <http://www.cdc.gov/socialdeterminants/faq.html>

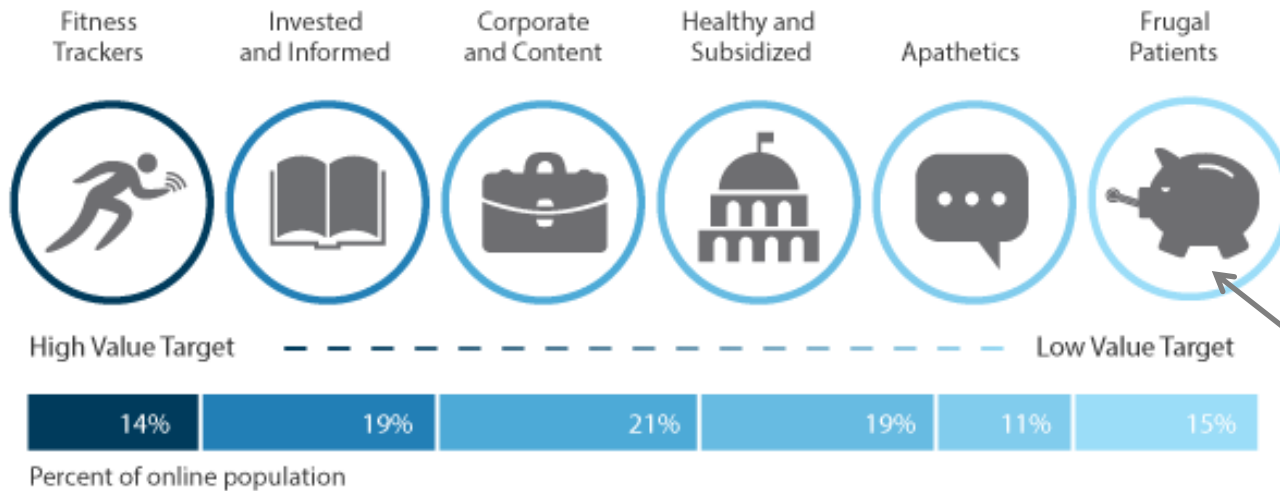
Patient to Consumer a Transformation Journey



Source: <http://epatientselfmanagement.tumblr.com/post/40503081648/why-outcomes-data-for-changes-in-health-behaviours-is>, with minor revision

On-line Consumer Segmentation by Market Value

Most in Need = Least Digitally Invested



Suffer from a serious or chronic condition; they are the segment most likely to be obese; and they are the oldest. They consume a lot of medical care: Not only have 92% visited a doctor's office in the past year, but 37% have been to the ER.

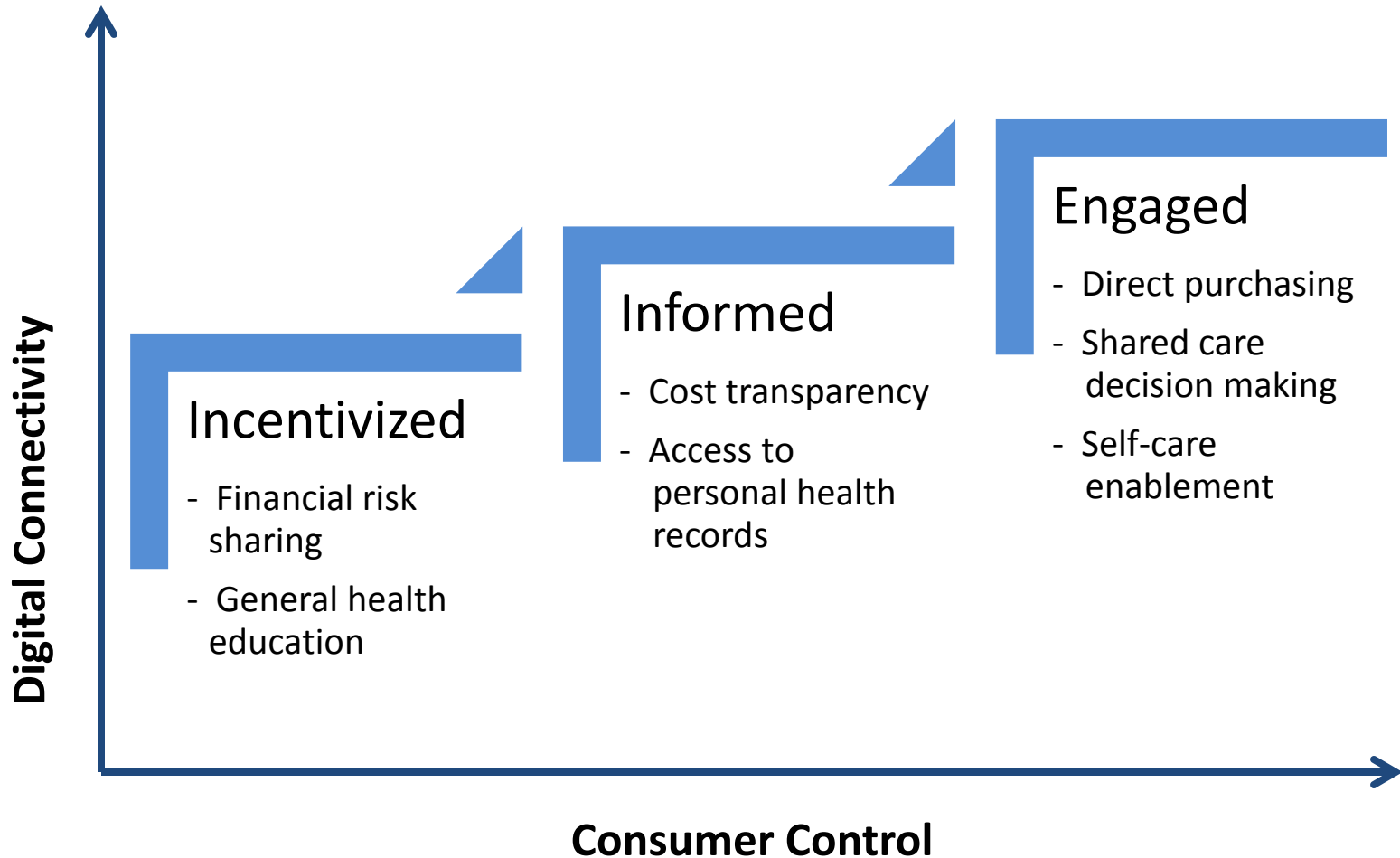
Base: 521 - 989 US online adults (18+) who are in the specified segment
 Source: Forrester's North American Consumer Technographics Healthcare Survey 1, 2014

Source: http://blogs.forrester.com/gina_fleming/14-07-11-the_data_digest_introducing_forresters_consumer_healthcare_segmentation

Consumerism – Bifurcated Definitions

- Health consumerism is a movement which advocates patients' involvement in their own health care decisions (Wikipedia).
- Healthcare Consumerism is ... about supplying the information and decision support tools (employees) need, along with financial incentives, rewards, and other benefits that encourage personal involvement in altering health and healthcare purchasing behaviors (The Institute for HealthCare Consumerism).

Maturity Levels of Healthcare Consumerism



Consumerism a Main Driver for Digital Health Growth

DRIVEN BY HEALTH REFORM

Top six trends of digital health (2014 YTD)



\$211M

PAYER ADMINISTRATION

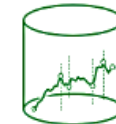
Management and administration tools for payers



DIGITAL MEDICAL DEVICES

\$206M

Software/hardware designed to treat a specific disease or condition



ANALYTICS AND BIG DATA

\$196M

Data aggregation and analysis to support a wide range of health-care use cases



\$193M

HEALTHCARE CONSUMER ENGAGEMENT

Consumer tools for the purchasing of healthcare services or health insurance (B2B and B2C)



POPULATION HEALTH MANAGEMENT

\$162M

Comprehensive platforms for managing the health of populations under the shift to risk-based payment models



PERSONALIZED MEDICINE

\$150M

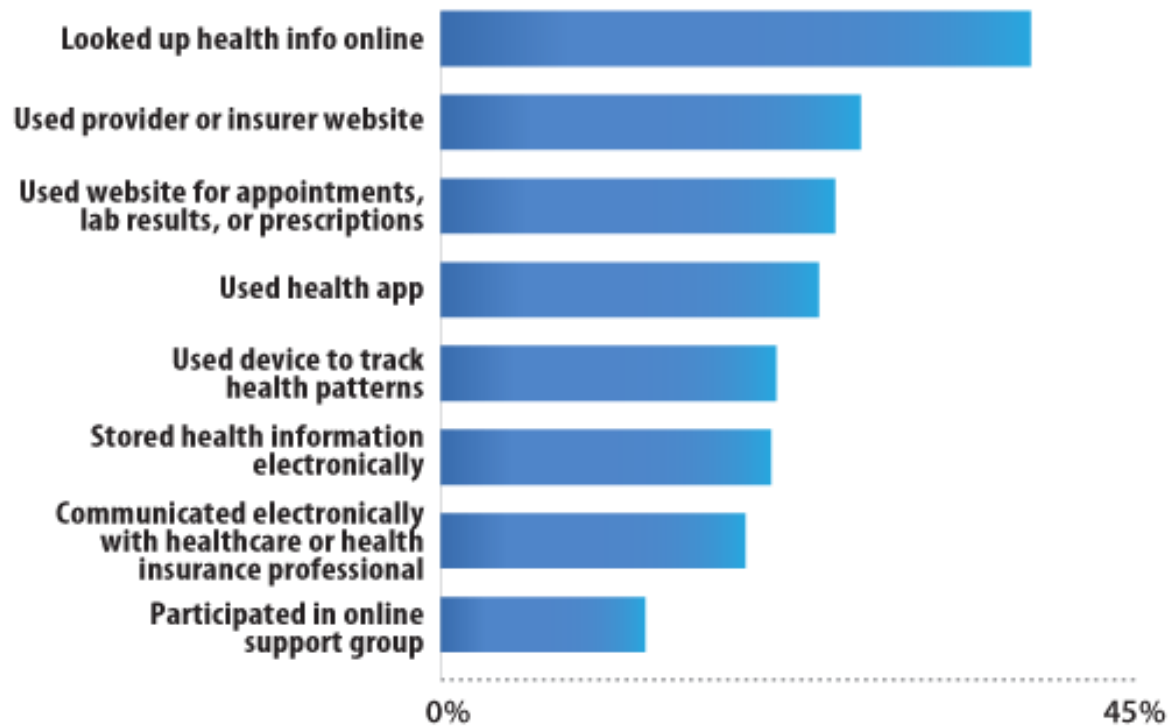
Software platforms to support the delivery of medicine customized to an individual's genetics

ROCK
HEALTH+

Consumer Access to Digital Health Information Becoming a Norm

Digital Health Activities over the last 12 Months

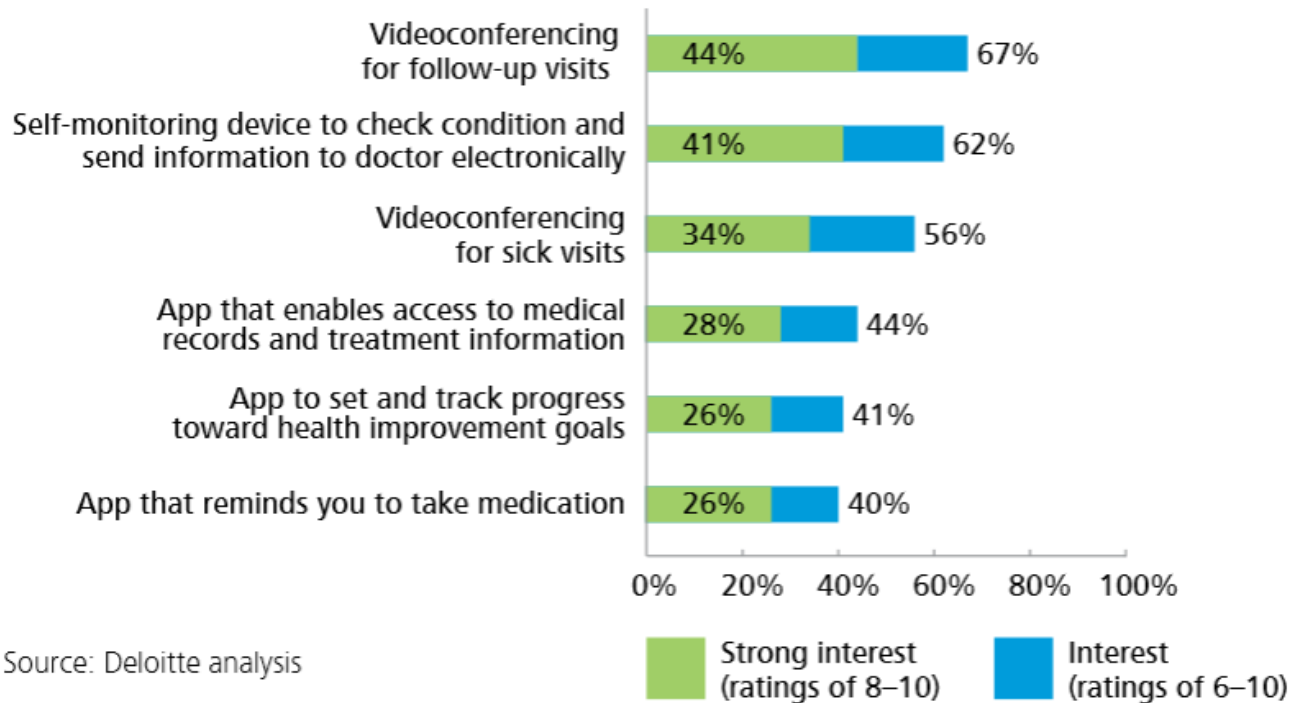
U.S. Broadband Households



© Parks Associates

Higher Level of Direct Care Participating is Desired

Consumer Interest in using innovative health information technologies, 2012



Source: http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/Deloitte%20Review/Deloitte%20Review%2011%20-%20Winter%202012/us_DR11_Consumerism_In_Health_Care_Jul12.pdf

Digital Ecosystem Supporting Healthcare Consumerism



Example systems and owners:

Managed by Providers

- EHR/Tethered PHR
- HIE
- Labs
- Telehealth & Home Monitoring
- Patient Portals

Managed by Payers

- Membership & Eligibility
- Claims
- Disease Management

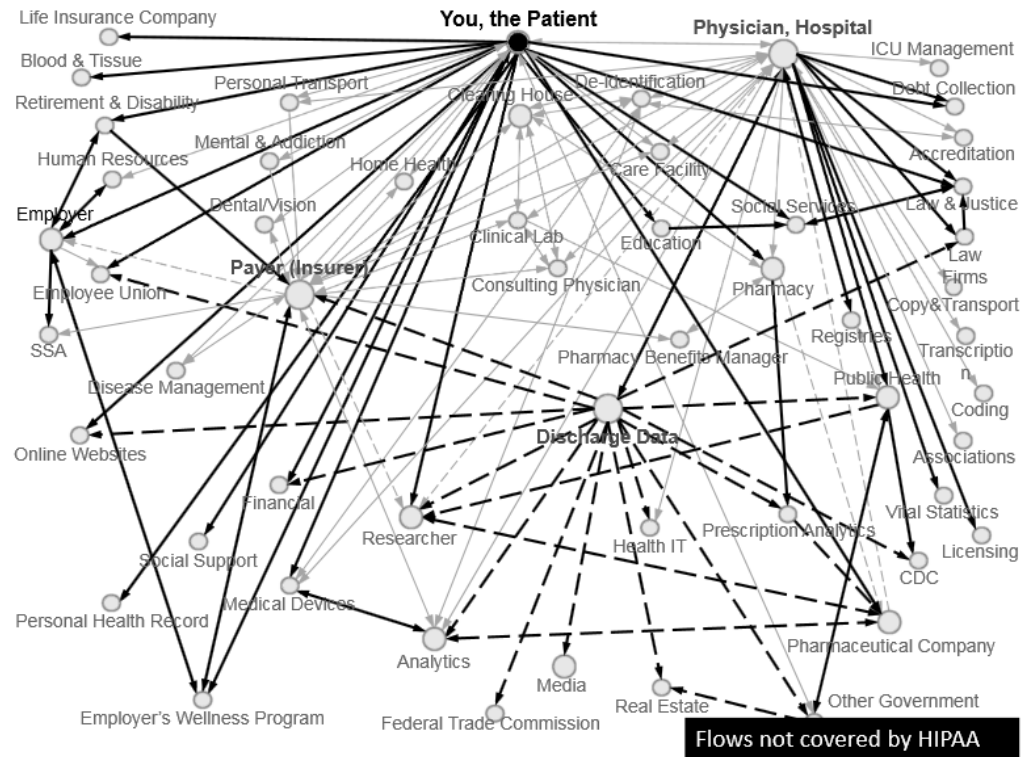
Managed by Employers

- HRAs
- Worker's Comp
- Group Benefit & HSA

Managed by Consumers

- Wellness Sensors & Tracker Apps
- Standalone PHRs

Complex Data Flow Under Complex and Uneven Regulatory Protection



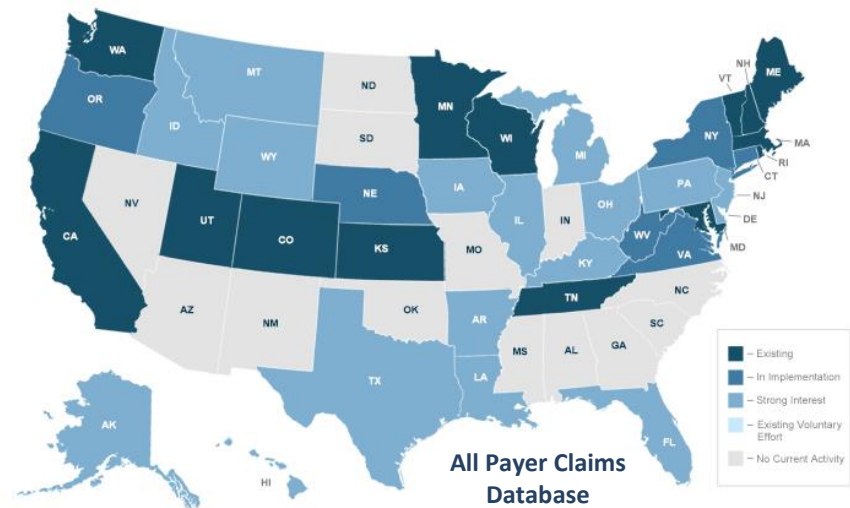
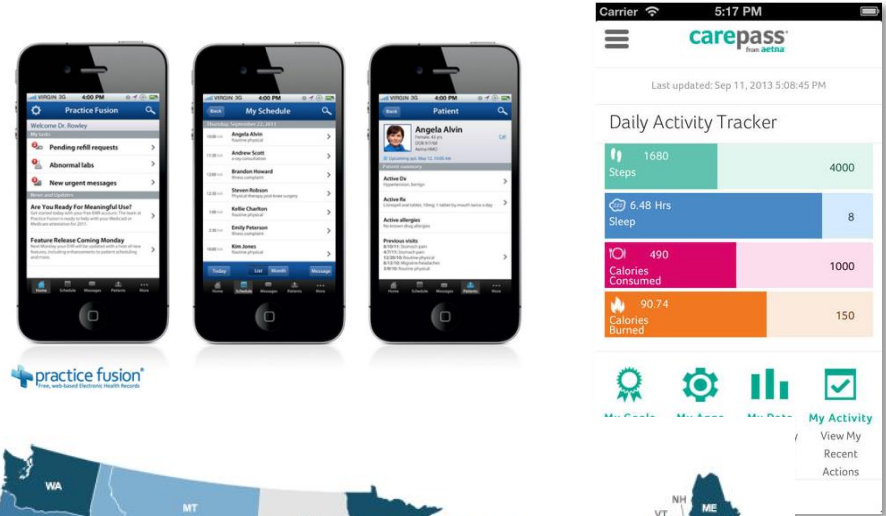
Non-Exhaustive List of Laws/Regulations

- Federal Privacy Act
- HIPAA & HITECH
- 42 CFR Part 2 regarding drug and alcohol program records
- Clinical Laboratory Improvement Amendments (CLIA)
- Genetic Information Nondiscrimination Act (GINA)
- FTC PHR Breach Notification
- State laws

Source: thedatamap.org via http://www.ftc.gov/system/files/documents/public_events/195411/consumer-health-data-webcast-slides.pdf

Secondary Data Use Boundary Blurred at Best

- Lack of legal clarity and regulatory uniformity
- Large flexibility given to information operators
- Mixed incentives seed distrust
- Market thirst for data mining



Data Segmentation for Privacy a Limited Promise

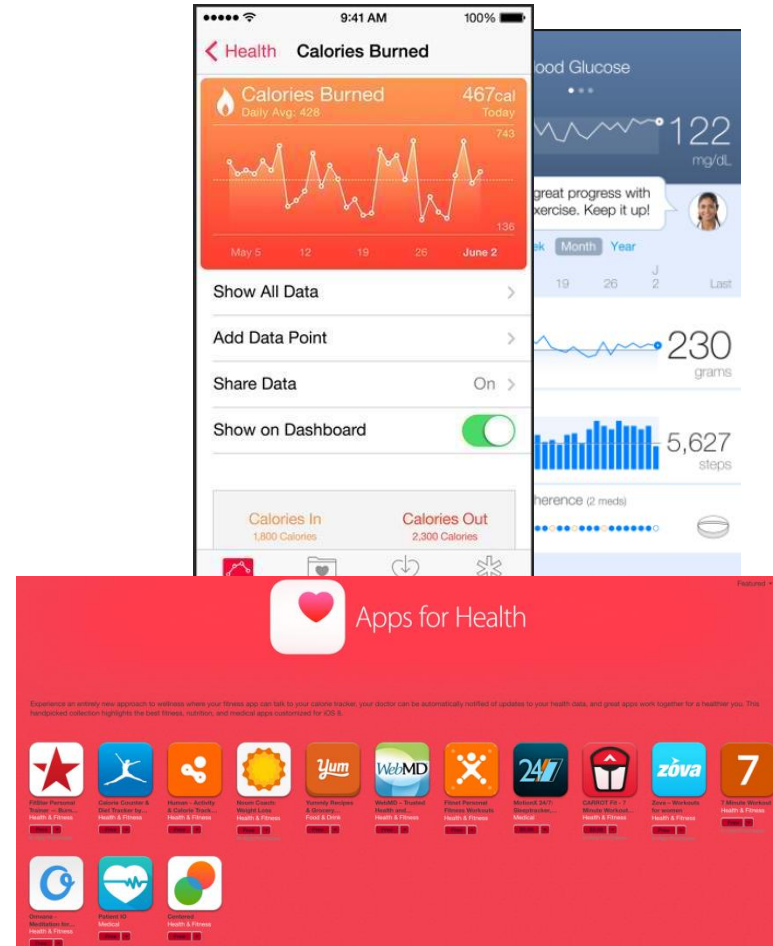
- DS4P project established to give more privacy control to patients
- Two-year initiative end in May 2014 with successful pilots
- Managed by the Office of the National Coordinator for Health IT to demonstrated how patient can granularly manage the sharing of sensitive patient data, such as mental health and substance abuse information.
- Use Industry standards to tag and manage access to structured data
- Access rules based on regulatory, organizational policies and individual preferences.

Not Addressed:

- Unstructured data difficult to manage
- Personal sensitivity varies greatly and challenging to uniformly tag
- The Swiss cheese EHR can be dangerous to patient safety

Exponentially Expanded Scope of Third-Party Management

- What and what consent is needed from consumers?
- How can the 3rd party privacy policy be enforced?
- What kind of disclosure transparency is available to consumers?
- What happens when that user consent is revoked?
- What can be expected for cooperation in event of data breach?



The Question

How will innovation enable healthcare consumers with tools that are affordable, intuitive to use, and effective with privacy protection?

About Me

- Currently a Principal of Philips Healthcare Transformation Services, a fully owned management consulting practice
- 18 years in Healthcare including clinical, technology and management consulting fields
- Formerly VP of Aetna Accountable Care Advisory Services, Health IT/Privacy Commercial Practice Lead at Booz Allen Hamilton, and Director of Care Delivery Information Security/Enterprise Architect at Kaiser Permanente
- Co-founder of Medical Device Innovation, Safety and Security Consortium
- Served as a member of the Advisory Committee to California Attorney General's Recommendations on Prevention, Detection, and Mitigation of Medical Identity Theft
- Served as a voting member of the Security Committee of the California Privacy and Security Advisory Board (CalPSAB.)
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