Intermountain Healthcare at 40

Hospitals (1975)
- 22 Hospitals
- Hub and Spoke Strategy
- Low Average Age of Plant

SelectHealth (1983)
- 730,000 Members

Medical Group (1994)
- 1,200 Physicians
- 530 Advanced Practice Clinicians
- 185+ sites

Clinical Programs (1998)
- 10 Key Service Lines
- System-wide Approach
- Evidence-based Best Practices
- Advanced Data tracking
The national challenge of healthcare costs
The Federal Government has health programs for the poor and elderly, leaving the states to fill in gaps or expand what’s available. The result is a wide disparity in per-person spending across the country.

Per capita health spending:
- D.C. $8,295 (Highest)
- Utah $3,972 (Lowest)
- $4,000 - $7,000

Spends each health-care dollar:
- 12¢ Equipment
- 2¢ Research
- All other

Countries with highest per capita spending:
- Iceland $4,962
- Denmark $4,828
- France $4,056
- Canada $3,912
- Britain $3,361
- Japan $2,690
- Spain $2,263
- Portugal $1,830
- Israel $1,618
- Czech Republic $943
- Mexico $500
- Russia $369
Perspective on the cost of healthcare in the U.S.

“When you think of the budget deficit, think healthcare.”

“When you think of unemployment, think healthcare.”

“Our children’s futures depend on whether or not we can solve the healthcare cost problem in this country.”
INTERNATIONAL Mortality Amenable to Healthcare

People whose lives might have been saved with appropriate care

American Healthcare
Amazing Successes and Tragic Failures

Rescue Care VS Prevention and Effective Management of Chronic Conditions
“Every system is perfectly designed to obtain the results it gets.”  
*Paul Batalden, MD*
Can healthcare be better?

“We have learned to live in a world of mistakes and defective products as if they were necessary to life. It is time to adopt a new philosophy in America.”

W. EDWARDS DEMING
Healthcare choices: The prevailing opinion

QUALITY
ACCESS
AFFORDABILITY

“PICK ANY TWO”
A business case for quality in healthcare?

A LEAP OF FAITH

Cost and Quality are inseparably linked

Evidence-based best practice will produce higher quality at lower cost
Understand *systems* and *variation*

You can’t improve your performance on things you can’t objectively measure

- Actual cost of providing care for a set of services
- Actual clinical outcomes (short and long term)
The importance of data (medical informatics)

“The key to improvement lies in identifying the causes for variation, and then developing a theory to reduce that variation so that the entire system can be improved.”

Homer Warner, MD
Geographic variation in surgery
for non-cancerous enlargement of the prostate

- Idaho Falls: 9 per 1,000
- Ogden: 3 per 1,000
- Salt Lake: 6 per 1,000
- Provo: 7 per 1,000

Source: The Dartmouth Atlas circa 2002
Using information to improve performance

Knee replacement rates vary by more than 4-fold across countries and by more to 5-fold within some countries.

Knee replacement rates across and within a selected set of countries (2011 or latest year)

<table>
<thead>
<tr>
<th>Country</th>
<th>Standardised rates per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>210</td>
</tr>
<tr>
<td>Germany1</td>
<td>215</td>
</tr>
<tr>
<td>Czech Rep.</td>
<td>113</td>
</tr>
<tr>
<td>Germany2</td>
<td>215</td>
</tr>
<tr>
<td>Switzerland</td>
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<tr>
<td>Spain</td>
<td>106</td>
</tr>
<tr>
<td>Canada</td>
<td>193</td>
</tr>
<tr>
<td>Portugal</td>
<td>77</td>
</tr>
</tbody>
</table>

Std rate: 186, 194, 105, 209, 230, 213, 257, 135, 96, 56, 98, 213, 74
Coeff. of variation: 0.14, 0.15, 0.16, 0.17, 0.17, 0.18, 0.19, 0.19, 0.20, 0.28, 0.31, 0.32, 0.39

Source: OECD (2014), Geographic Variations in Health Care: What Do We Know and What Can Be Done to Improve Health System Performance?

Photo credit: Dartmouth University Slide source: OECD.net
A systems approach to improving healthcare quality

“I learned my most important lessons in quality theory from Dr. W. Edwards Deming, the father of quality improvement.”

- Brent S. James, MD
There is usually wide variation in clinical practice.

Objective data measurement will demonstrate opportunity for improvement.

Performance improves with systematic adoption of best practices.

Intermountain’s main physician engagement strategy: Optimal patient outcomes.
Clinical Programs at Intermountain

Surgical Services
Behavioral Health
Cardiovascular
Intensive Medicine
Oncology
Pediatrics
Primary Care
Women and Newborns
Musculoskeletal
Neurosciences
Percent of deliveries prior to 39 weeks
Percent of deliveries prior to 39 weeks
Evidence-based cardiac interventions

- Nuclear Stress Testing
- Angioplasty and Stents (PCI)
- Implantation of Permanent Pacemakers
- Implantation of Defibrillators

Clinical Outcomes:
- Remained Excellent

Costs to Community:
- Decreased by $15 million as compared to expected volume-adjusted charges

Source: Clinical Program
Moving to team-based care

“As economists have often pointed out, we pay doctors for quantity, not quality. As they point out less often, we also pay them as individuals, rather than as members of a team working together for their patients. Both practices have made for serious problems.”

Atul Gawande, MD
Surgeon, Author,
Public Health Researcher

Photo credit: Wikipedia     Source: Better: A surgeon’s notes on performance
Moving to team-based care

Mental Health Integration
Intermountain Primary Care Clinics

- Holistic approach to patient’s health
- Best practices in all clinical domains
- Team members work at the “top of their licenses”
- Established routine protocols and system-based care coordination
More effective utilization of healthcare services

ALWAYS DO THE RIGHT THING!

An investment of $22 per-member per-year (PMPY) decreased medical expenses by $115 PMPY

- 11% decrease in Emergency Visits
- 22% increase in PCP Visits
- 21% decrease in Urgent Care Visits
- 13% increase in Radiology Tests

ALWAYS DO THE RIGHT THING!
Obstacles to change

- Lack of evidence-based treatments and technologies
- Misaligned incentives rewarding volume not value
- Lack of shared accountability and shared decision-making
Has high tech become synonymous with clinical excellence?
Gizmo Idolatry¹

**gizmo**: “A mechanical device or procedure for which the clinical benefit in a specific clinical context is not clearly established.”

**gizmo idolatry**: “The general implicit conviction that a more technological approach is intrinsically better than one that is less technological unless, *or perhaps even if*, there is strong evidence to the contrary.”

¹Leff, B and Finucane, T. *JAMA* 299:15 (April 2008)
What causes Gizmo Idolatry?

1. Common sense appeal
2. Human love of bells and whistles
3. Exploits vs. uneventful diligence
4. Proof of competence
5. Proof against negligence
6. Channeling money
Technology adds cost – but does it add value by improving outcomes?

Options for the Definitive Treatment of Prostate Cancer
Technology adds cost – but does it add *value* by improving outcomes?

Options for the Definitive Treatment of Prostate Cancer

Surgical Removal of Prostate $
Technology adds cost – but does it add value by improving outcomes?

Options for the Definitive Treatment of Prostate Cancer

- Surgical Removal of Prostate  $
- Robotic Prostatectomy  $$
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- Surgical Removal of Prostate  $
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- Brachytherapy (seed implant)  $

$ Technology adds cost – but does it add value by improving outcomes?
Technology adds cost – but does it add *value* by improving outcomes?

Options for the Definitive Treatment of Prostate Cancer

- Surgical Removal of Prostate   
- Robotic Prostatectomy    
- Brachytherapy (seed implant)  
- Radiation Therapy  

*Equipment image*
Technology adds cost – but does it add value by improving outcomes?

Options for the Definitive Treatment of Prostate Cancer

- Surgical Removal of Prostate $
- Robotic Prostatectomy $$
- Brachytherapy (seed implant) $
- Radiation Therapy $$$
- Proton Beam Therapy $$$$$
“Experts all agree that we're wasting about 30 percent of U.S. health care spending on simple waste. It's wasted on fraud. It's wasted on overtreatment. It's wasted because we don't provide good care. And it's wasted because we have a fundamentally flawed payment system.”

Elliot Fisher, MD
Dartmouth Institute for Health Quality and Clinical Practice

Photo credit: Dartmouth Website
Source: “Sick in America” NPR
The fee-for-service dilemma

What FFS rewards
- High volume, high cost care
- Expensive new technologies, regardless of proven benefit
- Defensive medicine rather than shared decision-making
- Measuring processes rather than outcomes

What FFS doesn’t Reward
- Effective prevention of disease
- Effective management of chronic illness
- Choice of optimal diagnostic or therapeutic option
- Elimination of all unproven tests, procedures, and treatments that add only cost or risk
Making the Change: Aligning Incentives

Fee-for-service ➔ Pay-for-value
Challenge: Engage patients and help them make optimal choices
In the U.S. the number of people with chronic conditions is projected to increase steadily for the next 30 years.

**Prevalence of Chronic Disease in the U.S.**


![Graph showing the increase in prevalence of chronic disease in the U.S.](http://mpkb.org/home/pathogenesis/epidemiology)
1 aspirin 1/day
Allopurinol 300 mg
Enalapril 20 mg BID
+ HZ 10 mg daily
DOQ 0.75 mg, weekly
Furosemide 20 mg, 80 mg daily
Indomethacin 75 mg, BID
Potassium Citrate 20 mEq daily
Terazosin 2.5 mg TID
Tramadol 50 mg for pain
Verapamil ER 200 mg TID

IATOS
CP-4
00-1
DC-E
<table>
<thead>
<tr>
<th>QTY ITEM</th>
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<tbody>
<tr>
<td>5 Double Cheeseburger</td>
<td>7.45</td>
</tr>
<tr>
<td>1 L Sprite</td>
<td>1.00</td>
</tr>
</tbody>
</table>
We *can* change health behaviors

- **Drunk Driving Deaths**: Cut 50% since 1982
- **Seatbelt Use**: 14% in 1985, 85% in 2012
- **Teen Pregnancy**: Cut 50% since 1991
- **Teen Alcohol, Drug, Tobacco**: Trending down since 2002
- **High LDL Cholesterol**: 59% in 1976, 27% in 2010
- **Adult Smoking**: 45% of all adults in 1965, 15% in 2014

Photo credit: iStock Photos  Source: [www.cdc.gov/nchs/data/databriefs/db117.htm](http://www.cdc.gov/nchs/data/databriefs/db117.htm)
“Better is possible. It does not take genius. It takes diligence. It takes moral clarity. It takes ingenuity. And above all, it takes a willingness to try.”

Atul Gawande, MD
Surgeon, Author, Public Health Researcher

Clarifying the Aim

“The first step is clarification: Everyone in the organization must understand the aim of the system, and how to direct his or her efforts toward it.”

WHAT SHOULD THE AIM BE FOR HEALTHCARE?
Optimal Health at Sustainable Costs
“Excellence in the provision of healthcare services to communities in the Intermountain region”
Evolution of Intermountain’s Mission
“Helping people live the healthiest lives possible”
INTERNATIONAL Mortality Amenable to Healthcare

People whose lives may have been saved with appropriate care

Ethnic Disparity: Mortality Amenable to Healthcare

Per Capita Total Health Spending Among Insured People:
382 Metropolitan Areas

Provo (Bottom 10)
Salt Lake (Bottom 10)
Ogden (Lowest)
Bending the cost curve the Utah way

Affordability

Healthiness

X Axis: Health Ranking by State, Source: United Health Foundation
Y Axis: Health Care Expenditures by State of Residence, Source: Kaiser Family Foundation

Source: Algorithms for Innovation, 2014; Recreated for visibility by Intermountain.
Are we there yet?
What will we see in the next 40 years?

- Care will more often be based on evidence
- Care will be more personalized
- Patients will be more involved
- Incentives will be aligned with best outcomes
- Quality, Safety, Satisfaction, and Affordability will all improve