Agenda for Today

• Engaging U.S. health reform as a sociotechnical challenge
• Stories of innovators in context
• Simulating scenarios using the ReThink Health Dynamics model

Dialogue and interaction at any point
“Public health is probably the most successful system of science and technology combined, as well as social policy, that has ever been devised...It is, I think, a paradigmatic model for how you do concerned, humane, directed science.”

-- Richard Rhodes

How is it directed?
How to spark and sustain changes over time?
Poised for Transformation...

- **America has a national health shortage**: we pay the most for health care, yet suffer comparatively poor health.
- The disadvantaged fare worse.
- Over 75% think the current **system** needs fundamental change.
- Strategies that focus narrowly on parts of the system, without examining connections, often miss the potential for **policy resistance**.

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Altman DE, Levitt L. The sad history of health care cost containment as told in one chart. Health Affairs 2002;Web Exclusive:hlthaff.w2.83.
Policy Resistance is...

“The tendency for interventions to be delayed, diluted, or defeated by the response of the system to the intervention itself.”

-- Meadows, Richardson & Bruckmann

Caused by...

- Partial goals
- Neglected data
- Narrow mental models
- Defensive routines
- Failure to foresee
- Inability to enact higher leverage policies

Roots of ReThink Health

- Better health, better care, lower costs, greater equity, and wider prosperity
- Systems thinking with leaders across boundaries
- National purpose, local action
- Cultures and capacities to sustain change in context
The Volume of Evidence and Recommendations for Health Action is Expanding...Very Quickly

...Raising Many Practical, Strategic, Ethical Questions

- Which to prioritize?
- How to pay...and sustain?
- Consequences and tradeoffs?
- Who decides?
- Etc...

Relevant Methodologies
- Decision science
- Comparative effectiveness research
- Health impact assessment
- Integration & implementation sciences
- Dynamic policy modeling
Simulating Local Health System Dynamics

- Realistic yet simplified representation of a local health system (N=8 to date)
- Place-based, wide-angle view; diverse scenario options; scores of metrics to trace changes over decades
- Anchored to evidence from dozens of datasets, rendered in a common—testable—framework
- Tool for open, experiential learning with diverse stakeholders
- Not a prediction, but a way for diverse stakeholders to see and feel how their local health system could change under different conditions

Improving Upon the Unaided Mind

Consider Many Pathways

Engage in Deeper Dialogue

Anticipate Consequences and Plausible Futures
Regional Differences

Variations in Health and Risks

*The County Health Rankings*

Variations in Practice and Spending

*The Dartmouth Atlas of Health Care*

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2012 County Health Rankings - Premature Death

2013 Variations in Care for Advanced Cancer
Build Capacity for Sustained, Regional Impact

- Problem Identification
- Evidence, Examples, Ideas
- Measures
- Sustain System-Wide Changes in Context
Stewardship to Sustain Shared Resources

**Challenge:** Few regions have sturdy multi-stakeholder teams to negotiate agreements and serve as stewards of their common health system.


Sustaining Common Resources

Ostrom’s Design Principles

1. Clearly defined boundaries
2. Rules adapted to local conditions
3. Collective-choice arrangements that allow participation in the decision-making process
4. Effective monitoring by those related to the monitored
5. Graduated sanctions for violating community rules
6. Mechanisms of conflict resolution that are cheap and easy
7. Self-determination recognized by higher-level authorities
8. Organization in multiple layers of nested enterprises


Emerging Regional Endeavors
ReThink Health

*Learning with Innovators in Context*

Anytown, USA

- Regional Pilots (2010-2013)
- Formal Models (N=8)
Pueblo Triple Aim Coalition

Population = 160,000
Uninsured = 15%
Poverty = 40%
County Health Rank = 57th out of 59
Primary Care Providers = 7 per 10,000
Healthcare expenditures = $1B/year

Core Members (N=15)
• Health Department and Board of Health
• Community Health Center
• Medical Centers and Hospitals
• Mental Health Center
• Kaiser Permanente

Wider Area Stakeholders (N=30+)
• Commerce, Schools, University, Local Government, Philanthropy, Community Organizations
Pueblo Triple Aim Coalition

“Most Triple Aim projects start with a project and build up from there.”

ReThink Health Dynamics

- How is the health system structured?
- How and when does it change (or resist change)?
- Where is the greatest leverage?
- What trade-offs are involved?

-- Donald Moore, CEO Pueblo Community Health Center


Kindig D, Milstein B. From ACOs to Accountable Health Communities: Delivering on Population Health in the Triple Aim. Institute for Clinical Systems Improvement Reinertsen Lecture. October 25, 2012; Minneapolis, MN. Available at https://www.icsi.org/education_services/reinertsen_lecture/
Most parts of the health system are connected, even if by intricate, indirect pathways.

Capture Cost Savings (as negotiated with payers)

Innovation Fund for Early Investments

Funds Available for Initiatives

Provider Support for Initiatives

Per-capita (vs. fee-for-service) payment scheme

Share captured savings with providers

Prevent Hospital-Acquired Infections

Acute Episodes

Health Status (physical, mental)

Mortality

Health Care Costs

Specialist & Hospital Net Income

Improve Hospital Efficiency

“Supply-Push” Responses to Reduced Income

Cost per Acute Episode

Cost of Routine Care

Use of ER for minor episodes

Use of Specialists for Routine Care

Medical Home

Adequacy of Primary Care Capacity

Provider Support for Initiatives

Insurance Coverage

Redesign Practices for Efficiency

Recruit General PCPs

Recruit FQHC PCPs

Share captured savings with providers

More Use of Hospice

Post-Discharge Care (to reduce readmission)

Prevent Hospital-Acquired Infections

Health Status (physical, mental)

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Post-Discharge Care (to reduce readmission)
Combining Information Into a Single Testable Framework
Positioning for System-wide Impact

- **Strategic Priorities**
  - Coordinate care
  - Post-discharge planning
  - Support adherence
  - Recruit safety net PCPs
  - Healthier behaviors
  - Pathways to advantage
  - Capture and reinvest savings
  - Share savings with providers

- **Backbone Organization**
- **Shared Measurement System**
- **Sustainable Funding**
- **Governance & Communications**

**Health care costs, per capita age std**

**Favorite**

**The Colorado Health Foundation**

$742,000 investment
Some Features of System Stewardship

- Committed team of actors in key positions
- People who engage others and build greater capacities to do more over time
- Patient, strategic look at current efforts and how they might be better aligned
- Unswerving focus on how to sustain high-leverage initiatives over time
- Power to generate savings and a negotiated framework to capture and reinvest a fair share
- True stewardship: broad-based endeavor to steer the whole system toward shared aspirations
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Looking Through the Macroscope

“A symbolic instrument made of a number of methods and techniques borrowed from very different disciplines...The macroscope filters details and amplifies that which links things together. It is not used to make things larger or smaller but to observe what is at once too great, too slow, and too complex for our eyes.”

-- Joël de Rosnay

ReThink Health Model -- Overview

Selected Geographic Focus

Productivity & Equity

Risk → Health → Care → Cost

Capacity

Initiatives

Captured Savings

Innovation Funds

Payment Scheme

Aging

Other Trends

- Insurance eligibility
- Economic conditions
- Health care inflation
- Primary care slots

Population tracked separately in 10 segments by age, insurance, and income
History of the ReThink Health Dynamics Model

- **2008-2011: HealthBound**
  - US health reform strategy
  - Sponsor: CDC
  - Publications: HA 2011; AJPH 2010

- **2003-present: Diabetes; Obesity; PRISM**
  - Multiple chronic diseases, US & 60+ sites
  - Sponsors: CDC and NIH

- **2005-2006: US Health Economy**
  - Growth of US health sector, 1960-2010
  - Sponsor: CDC
  - Publications: SDR 2006

- **1995-1997: Health Care Microworld**
  - Local health, health care, social policy
  - Sponsors: NEHA and Innovation Associates, Dartmouth-Hitchcock
  - Publications: SDR 1999

- **1993: Transition to Capitation**
  - Local healthcare financing
  - Sponsor: Healthcare Forum
  - Publication: Health Forum J 1994

**Selected Awards**
- 2013 Society for Health Education, Article of the Year
- 2012 AcademyHealth, Public Health Systems Research Article of the Year
- 2011 System Dynamics Society Best Application of SD Modeling
- 2009; CDC Honor Awards for 2005 Excellence in Innovation
- 2008 ASysT Institute, Applied Systems Thinking Prize

Refs: [http://tinyurl.com/RTH-Related-Models](http://tinyurl.com/RTH-Related-Models)
Replicating History

The ReThink Health model closely matches 26 historical data time series (2000-2010), by population segment, including those from the Census, Vital Statistics, National Health Expenditure Accounts (NHE), and the American Hospital Association (AHA/ASH). For example....

NHE Data

Simulated

NHE healthcare costs per capita 2000-2010

Simulated healthcare costs per capita 2000-2010

Hospital  Physician and Lab  Other Professionals  Self-care Products  Nursing Facilities  Home Health and Hospice
Exploring Stewardship Strategies

Challenge: How far can you improve the Anytown health system?

- Improve health
- Enhance care
- Lower health care costs
- Achieve equity
- Boost productivity
## Initiative Options

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## CARE

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## CAPACITY

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## COST

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## FUNDING

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Exploring Alternative Paths

What to do...?

How to pay for it...?

Under what conditions is it possible to alter
- Direction?
- Timing?
- Magnitude?

How proud would you be...?
What Do You Anticipate…

Beginning in 2012, what will be the
• Direction?
• Timing?
• Magnitude?
Dialogue
Common Pitfalls for Health System Ventures

- Unsustainable program financing
- Spreading resources over too many initiatives
- Lopsided investments downstream or upstream
- Triggering “supply push” responses to declining utilization
- Exacerbating capacity bottlenecks
- Perpetuating inequity
- Neglecting or focusing only on disadvantaged, children, or seniors
- Pursuing narrow goals and short-term impacts
- Concentrating only on small sub-systems
Some Policy Insights from the Model

Most compelling scenarios feature

- Sustainable financing, probably via a mix of investments and reinvestments

- “Cost” and “Care” initiatives for fast, focused impact, but also “Risk” initiatives for broad progress on health, cost, equity, and productivity

- A global payment scheme, replacing fee-for-service, to ensure provider cooperation with “Cost” and “Care” initiatives

- Broad application of initiatives across the whole population, not limited only to high-risk subgroups (e.g., by age or income)

- Selection of “Care” and “Risk” initiatives based on cost-effectiveness, to avoid spreading limited funds too thinly

- Some interventions included based on the particulars of place (e.g., poverty level, environmental hazards, and crime)
A Common Predicament

- Form a serious regional collaborative
- Gather and assess quantitative data
- Gather and assess qualitative data
- Set priorities with diverse stakeholders?
- Enact high-leverage strategies
- Etc….
Challenge: Craft a scenario that ought to work well: *a vision for Atlanta you might be proud to enact*

Some Tips

- Discuss what you value and how to achieve it
- Consider both actions and funding
- Limit = 5 initiatives + any financing options

### Summary of ARCHI Scenarios

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**Summary:**

- Evaluate different scenarios focusing on various aspects of community health.
- Consider the balance between initiatives and available funding.

**Key Points:**

- Discuss personal values and strategic goals.
- Emphasize the importance of comprehensive planning and resource management.
- Ensure scenarios are within the 5 initiatives limit, allowing for the exploration of financing options.
Exploring Consequences & Weighing Trade-offs

- **Death rate, age standardized**
- **Adequacy of preventive and chronic care**
- **Health care costs, per capita age std**

- **Disadvantaged fraction of deaths**
- **Value of productivity**
Which scenario offers the strongest foundation?

1. Far-Reaching
2. Atlanta Transformation
3. Better Health Atlanta
4. Promote Health Today

N = 70 respondents at ARCHI Workshop (November 14, 2012)
Atlanta Transformation

- Enabling Healthy Behaviors
- Family Pathways
- Coordinated Care
- Global Payment
- Capture and Reinvest
- Expand Insurance
- Innovation Fund
Shifting Priorities in Pre/Post Assessments

Which are the five most critical strategies for Atlanta?

- Improve Post-Discharge Care
- Improve Care for Mental Illness
- Recruit Primary Care Providers (General)
- Share Savings with Providers
- Support Self Care

N = 29 respondents at ARCHI Workshop (November 14, 2012)
ARCHI Playbook

ARCHI Regional Economic Impacts

Guiding Questions

How can we…

• Catalyze effective action in regional health systems?
• Refine practical tools based on proven processes for large-scale system change?
• Learn about the conditions for effective action, track changes over time, and share insights to shape a richer national dialogue?
• Strengthen individual, group, and institutional capacities in others, and in ourselves?
For Further Information

www.ReThinkHealth.org