

# Advancing Knowledge and Population Health in a Rural Primary Care Research Network

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FOR HEALTH POLICY & CLINICAL PRACTICE

*Where Knowledge Informs Change™*



# Disclosures

- NIMH
  - CDC
  - HRSA
  - AHRQ
  - CMS
- 
- Consultant:
    - National Council of Behavioral Health Care





# Goals for this Session

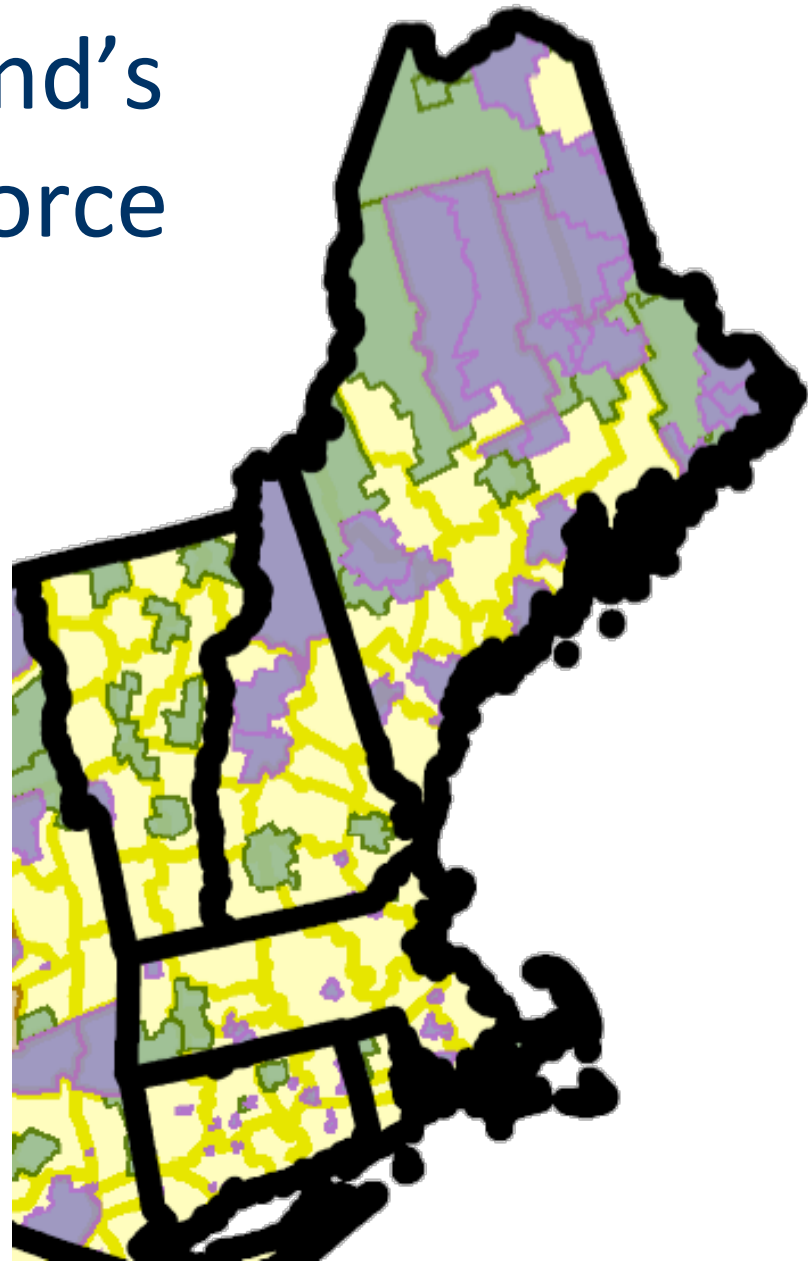
- Overview of the problem and the opportunity
- Case example of an established rural primary care research practice network: the CO-OP
- Population Health and Innovation
- Case example of an Academic Health Center PRN: The Population Health Collaboratory at Dartmouth Hitchcock
- The Learning Academic Health System
- Northern New England as a Rural Health Learning Laboratory

# Problem (or opportunity?): Northern New England's Primary Care Workforce

## Legend

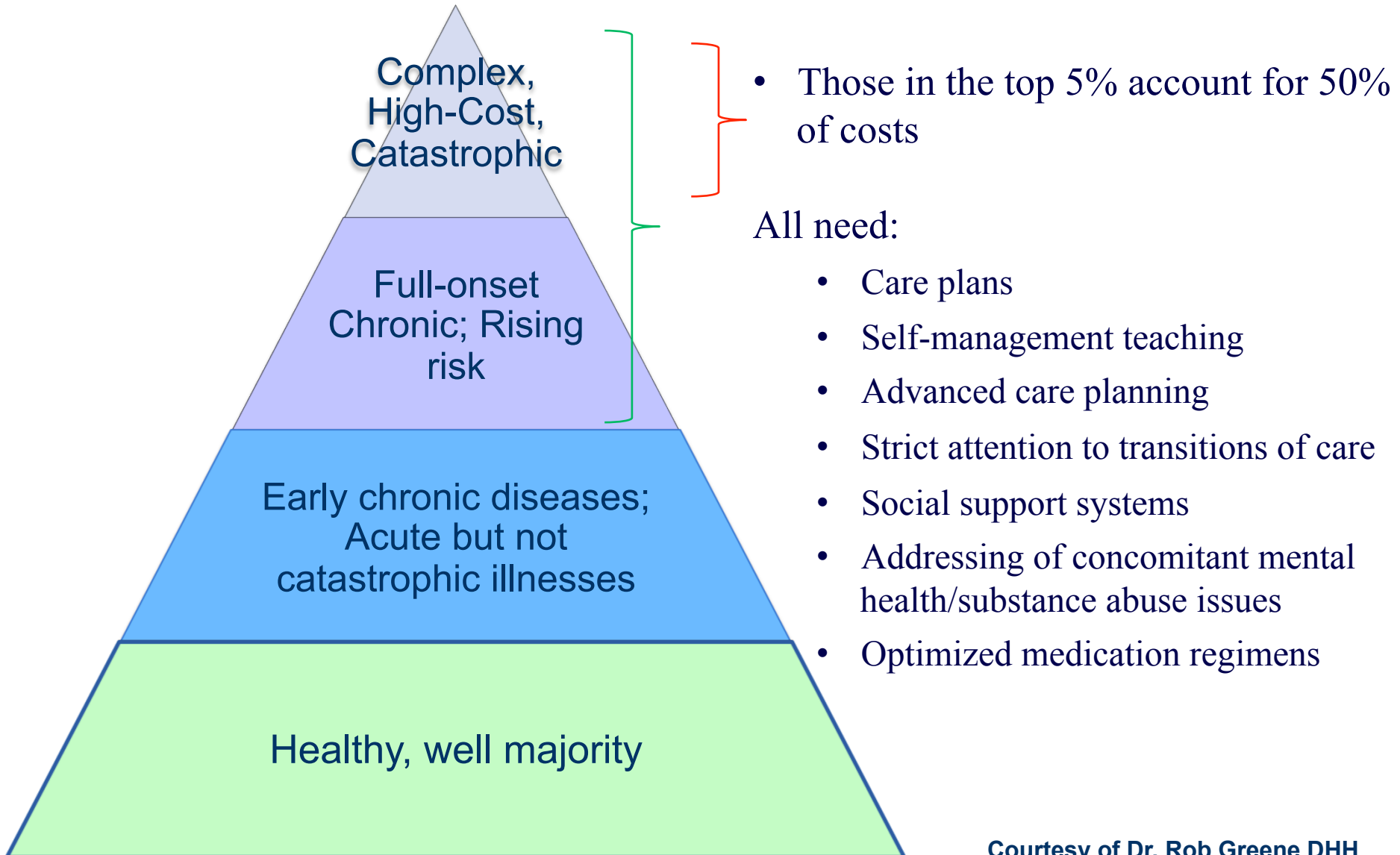
### Health Professional Shortage Areas - Primary Care

-  Geographical Area
-  Population Group
-  Single County
-  Not Primary Care HPSA



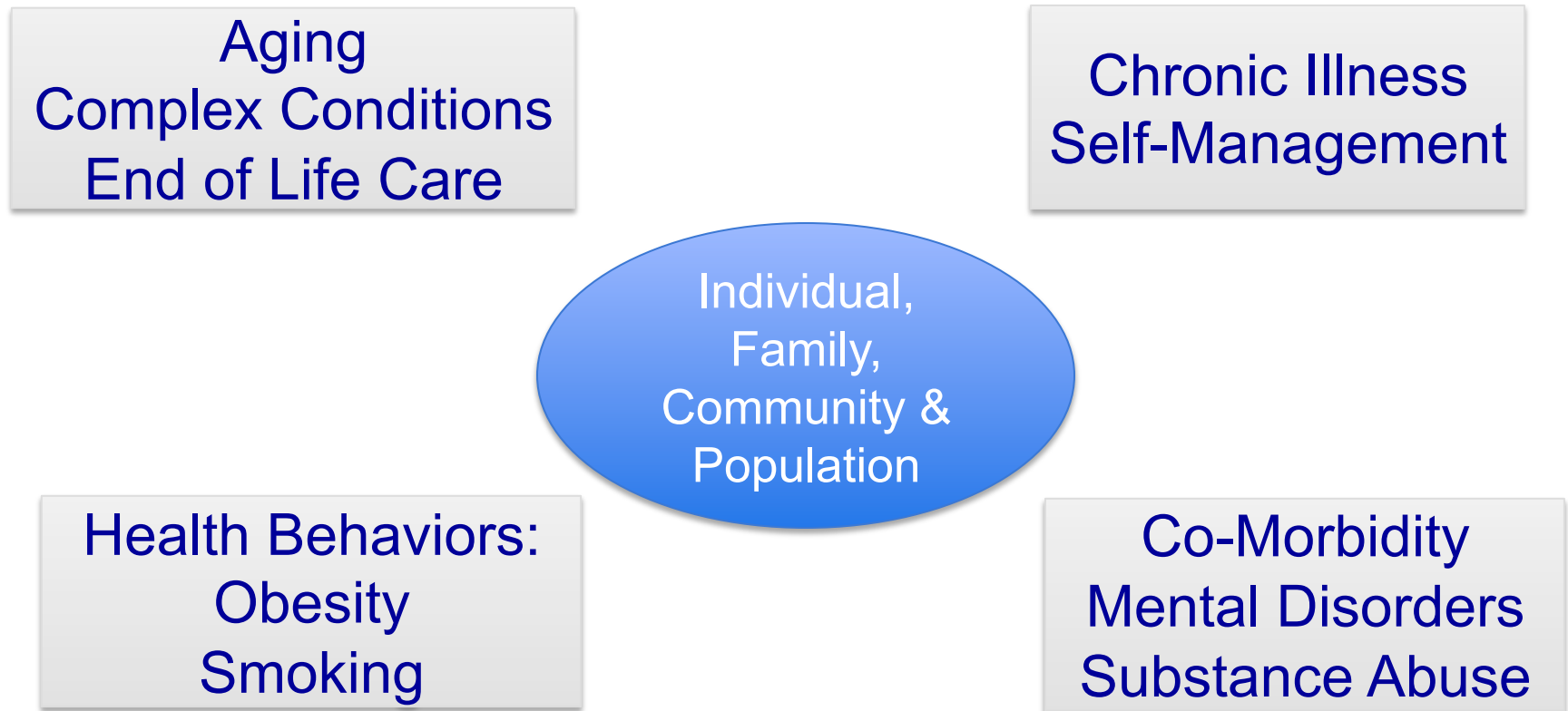


# Problem (or opportunity?): Preventing and Managing Chronic Complex Health Conditions



# Where Should We Look for Change?

## Patient-based Health Care Drivers



*Future Service Delivery Drivers:* health promotion and prevention, self-management, mHealth/telehealth, health informatics, value (not volume)

# Problem (or opportunity?)

## How Do We Know:

- That we are addressing the needs of the right set of patients?
- That our interventions are accomplishing what patients want and need?
- That we are implementing best practices most effectively?
- That we are leveraging the innovative potential of our academic and community partnerships?

# Can Conventional Academic Research Help?

- Majority of research tested programs do not translate into real world settings
- Those that do, often take an inordinately long period of time to so



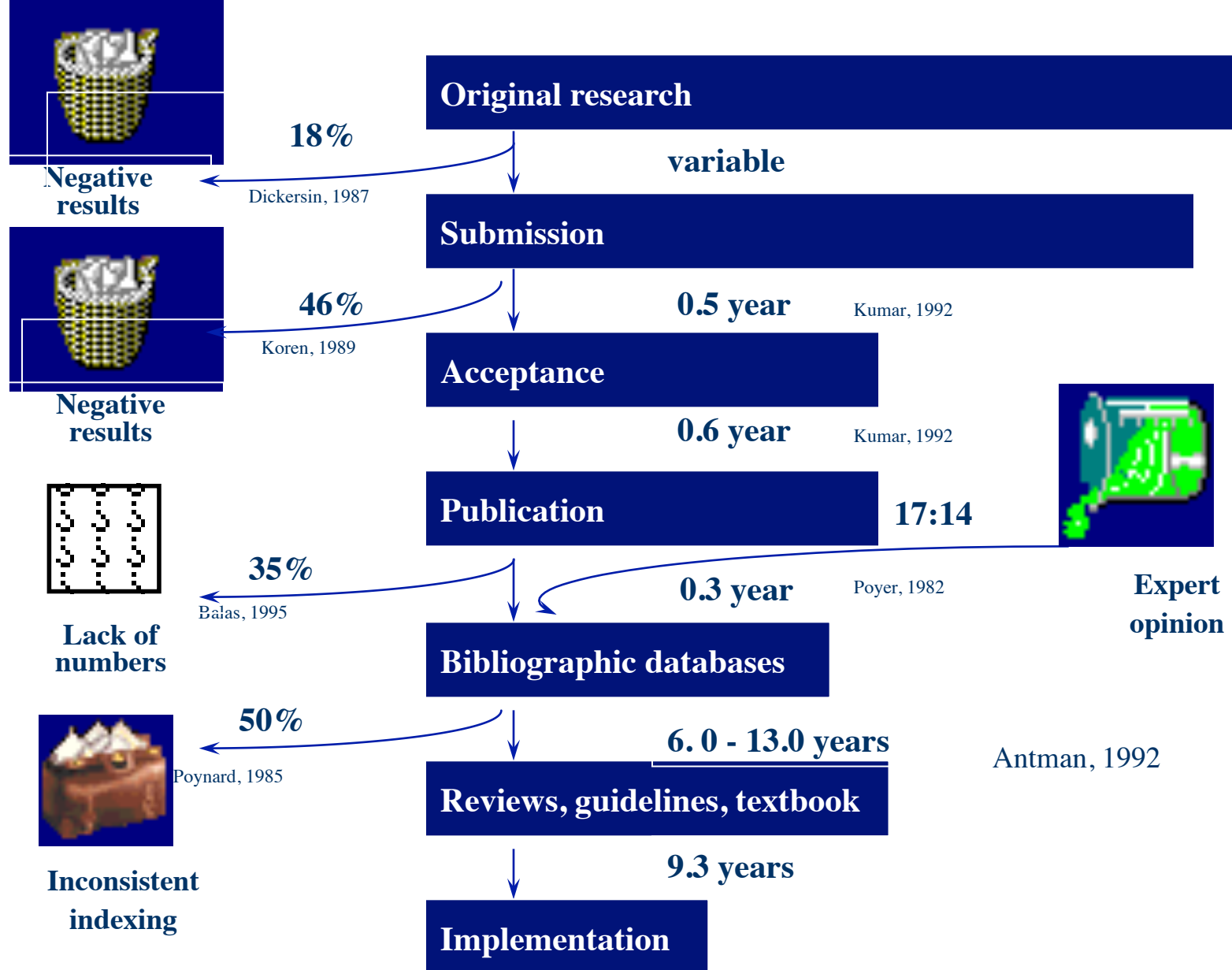
# Conventional Academic Medical Intervention Research

**Bench to Bedside  
& Community**

**Or**

**Bench to  
Bookshelf?**





**It takes about 17 years to turn 14 % of original research to benefit patient care**

From Kirsh and Aron (2009)

Is there a better way to rapidly  
advance innovation, practical  
knowledge, and  
clinical practice ?

# Microsystem Case Example: The Dartmouth CO-OP Primary Care Research Network

- A voluntary and cooperative network of primary care clinicians and other health professions in NH, VT, ME and Upstate NY.



- Coordinated and supported by the Department of Community & Family Medicine of Dartmouth Geisel School of Medicine
- Established 1972: the oldest primary care practice-based research network in the country.



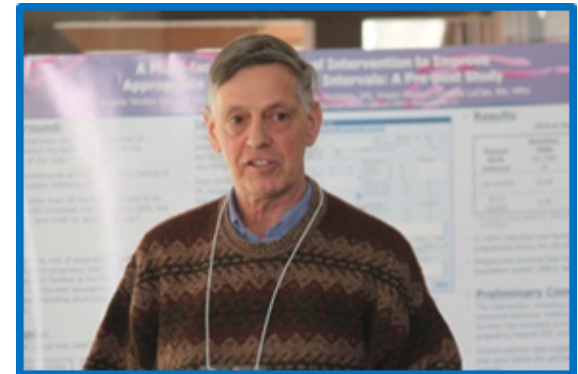
# CO-OP Mission

1. **Generate research and publish results to support the practice of evidence-based medicine and improved care outcomes.**
2. **Provide opportunities for clinicians, other health professionals, and health professions students to develop research skills.**
3. **Partner with primary care clinicians, their patients and the communities they serve to improve health care delivery and patient outcomes.**
4. **Translational research using the expertise of clinicians to guide research and extending the expertise of researchers to support clinicians.**



# Why Does It Matter?

- Research at the front line of health care delivery can improve knowledge and skills used in daily practice and is often more relevant than the tertiary care studies that dominate medical research.
- Networks of practices serve as valuable laboratories for primary



# CO-OP Projects That Have Influenced Practice

## Optimizing the Patient Visit:

- Assessing Function: Does it Really Make a Difference: The CO-OP Charts

**PHYSICAL FITNESS**

During the past 4 weeks...  
What was the hardest physical activity you could do for at least 2 minutes?

Very heavy for example • Run, fast pace • Carry a heavy load upstairs or uphill (25 lbs/10kg)		1
Heavy for example • Jog, slow pace • Climb stairs or a hill moderate pace		2
		3
Moderate for example • Walk, medium pace • Carry a heavy load level ground (25 lbs/10kg)		4
		5
Light for example • Walk, medium pace • Carry light load on level ground (10 lbs/5kg)		6
		7
Very light for example • Walk, slow pace • Wash dishes		8
		9
		10

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Support provided by the Henry J. Kaiser Family Foundation  
Revised 2010

**THE RELATIONSHIPS CHART**

During the past 4 weeks, how often have problems in your household led to:

- Insulting or Swearing?
- Yelling?
- Threatening?
- Hitting or Pushing?

None of the Time		1
A Little of the Time		2
Some of the Time		3
Most of the Time		4
All of the Time		5

Dartmouth COOP Functional Assessment Charts/MCNCA  
Copyright © Trustees of Dartmouth College/COOP Project 2009

**DAILY ACTIVITIES**

During the past 4 weeks...  
How much difficulty have you had doing your usual activities or task, both inside and outside the house because of your physical and emotional health?

No difficulty at all		1
A little bit of difficulty		2
		3
Some difficulty		4
		5
Much difficulty		6
		7
Could not do		8
		9
		10

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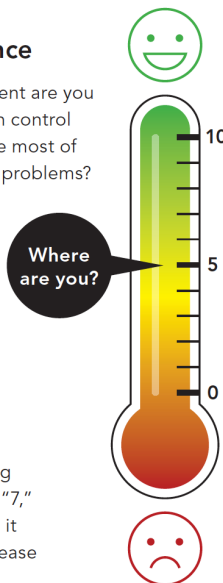
## Health Confidence

### MY HEALTH CONFIDENCE

What number best describes you:

#### Health confidence

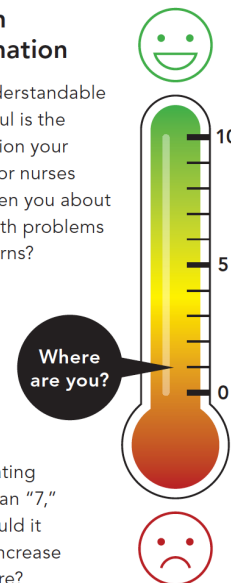
How confident are you that you can control and manage most of your health problems?



If your rating is less than "7," what would it take to increase your score?

#### Health information

How understandable and useful is the information your doctors or nurses have given you about your health problems or concerns?



If your rating is less than "7," what would it take to increase your score?

Family Practice Management™

Developed by John Wasson, MD, for HealthConfidence.org. Copyright © 2014 Trustees of Dartmouth College and FNX Corp. Used with permission. Physicians may duplicate for use in their own practices; all other rights reserved. <http://www.aafp.org/fpm/2014/0900/p8.html>.

## CO-OP Projects That Have Influenced Practice (continued)

### *Practical Interventions for Primary Care:*

- Methods for Managing Pain in Primary Care Patients With Co-Occurring Psychosocial Problems
- Integrated behavioral health
- Ideal Micro Practices
- Tools, Teamwork, and Tenacity: Elements of a Cancer Control Office System for Primary Care
- Smoking Cessation



# CO-OP Medical Students & Residents

## First and Second Year Medical Students

- Mobile Medical Clinics to VT/NH dairy farms for migrant workers
- Dental Health for Migrant Dairy Farm Workers
- Behavioral Health & Substance Use Issues for Migrant Dairy Farm Workers
  - Work has resulted in 2016 Excellence in Public Health Award



## Rural and Urban Health Scholars

- Summer projects resulting in abstract presentations, manuscript submission and publication

Dartmouth Medical Students receive the 2016 Excellence in Public Health Award from the U.S. Public Health Service Physician Professional Advisory Committee

## Leadership Preventive Medicine Residents

- Develop research/QI ideas
- 2014/2015 Quarterly Research Seminars



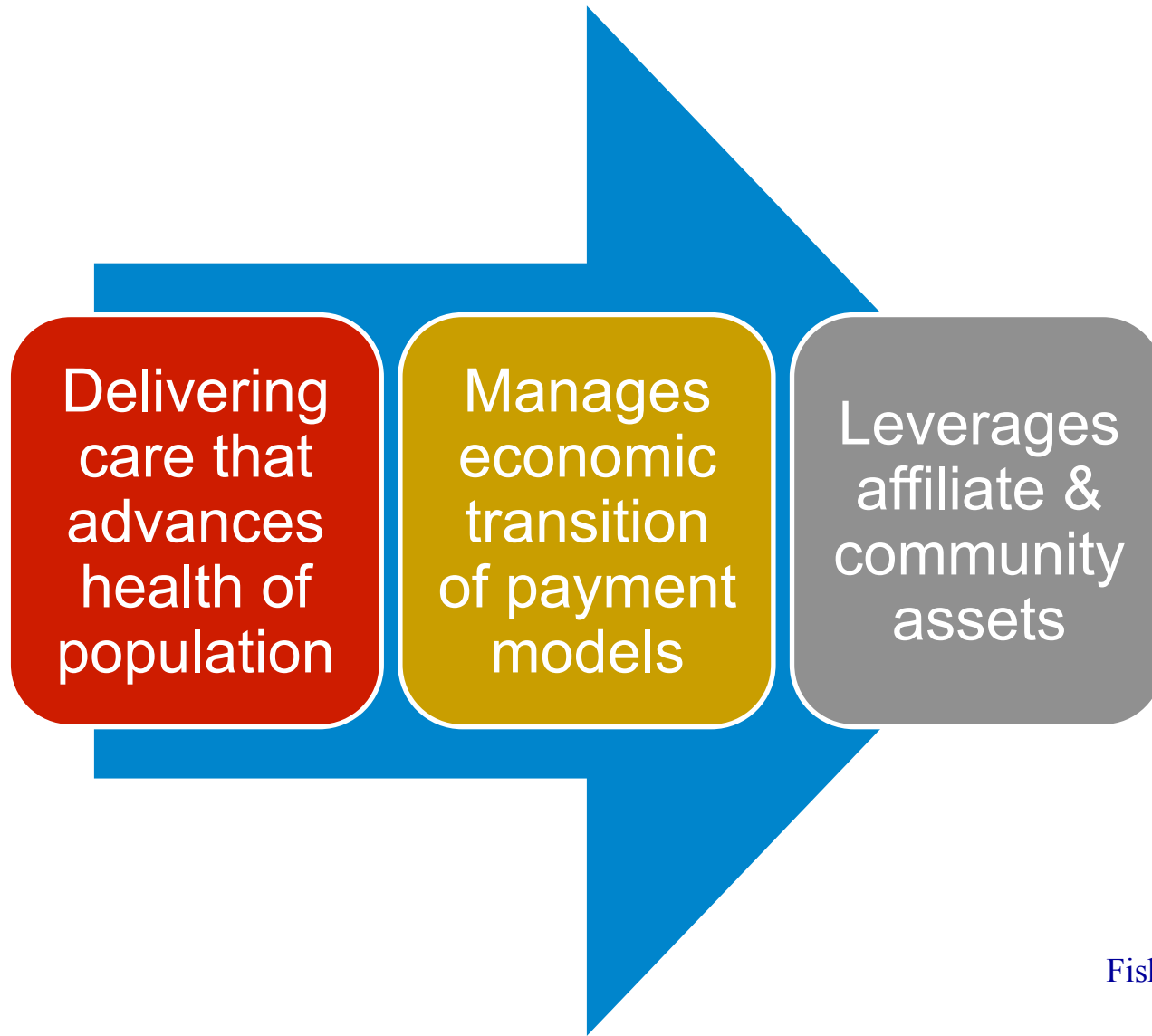
Dartmouth  
GEISEL SCHOOL OF  
MEDICINE



# CO-OP Practice-based Research Network Practice Sites



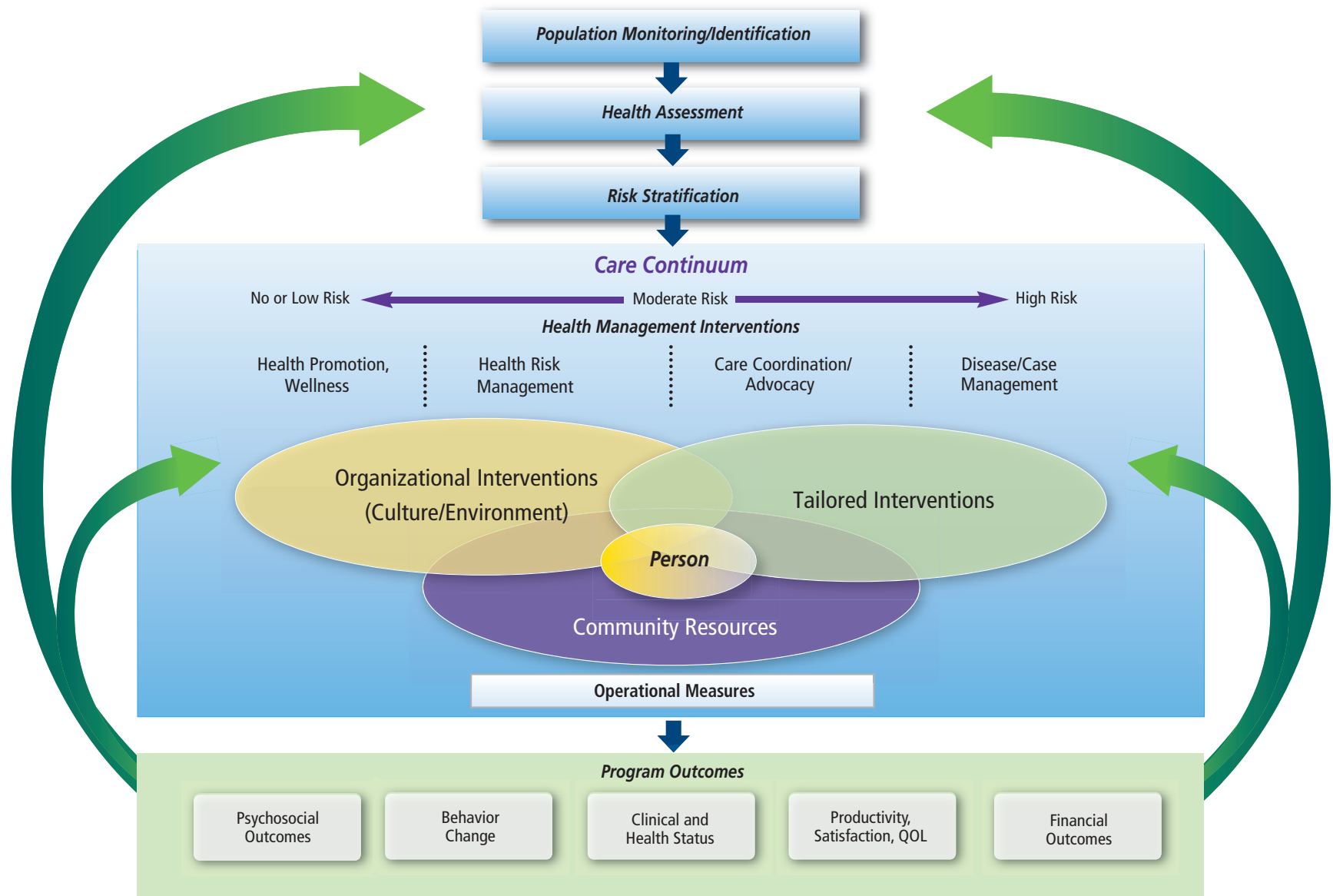
# From Microsystem to Macrosystem Population Health Management



**Figure 1.**

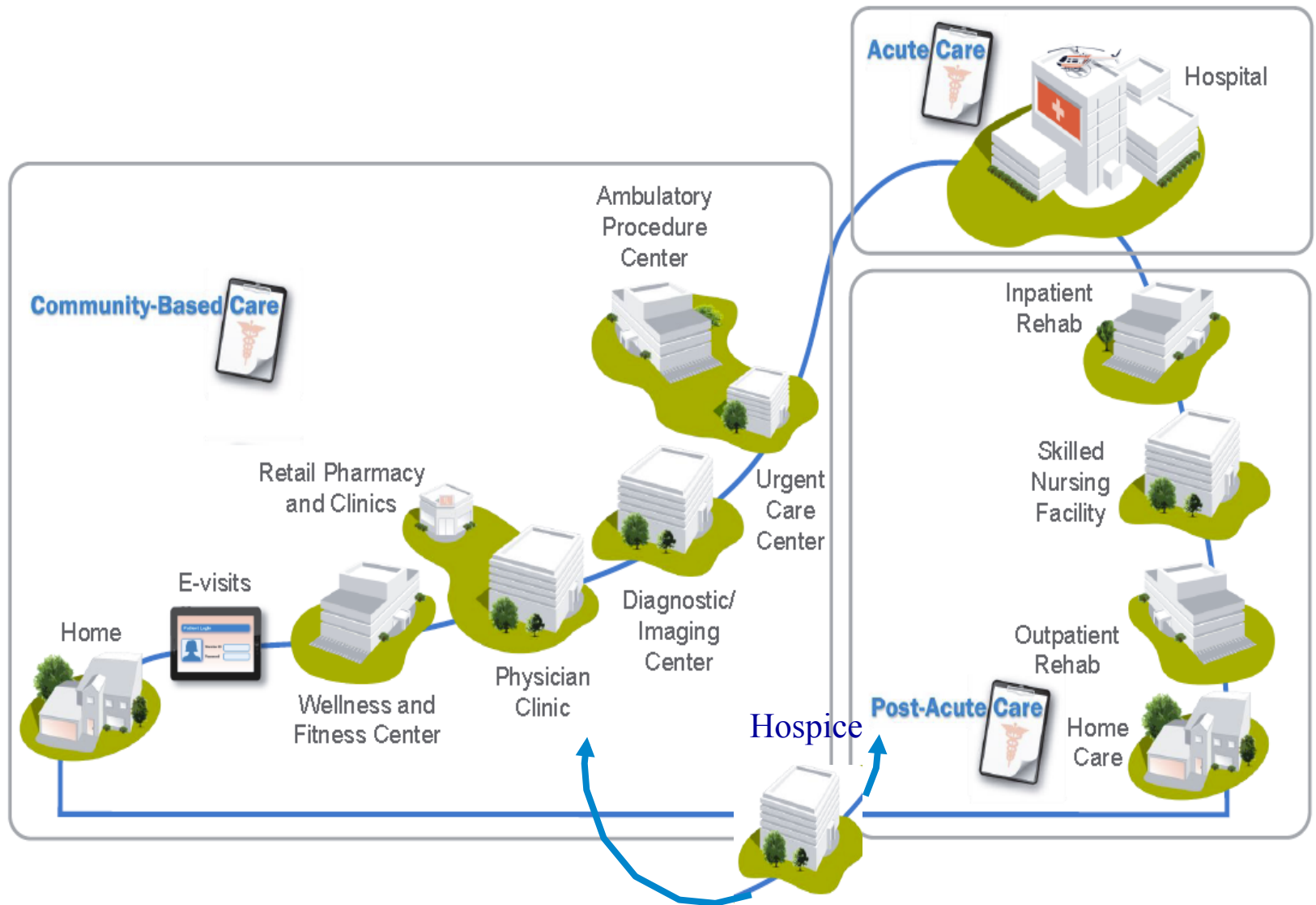
Conceptual PHM Framework

# Population Health Management





# Care across the Care Continuum



# Health Systems Quality Improvement: Why Not Focus on Improving What We Do Best?



# Research-based Approaches to Accelerating Change and Improving Care

	Improvement	Innovation
Process	Making every task and process as effective, efficient, repeatable, and predictable as possible	Building and testing something new that is non-routine for which knowledge is uncertain
Final Goal	<b>Better outcomes, Better Patient Experience, Lower cost, and Improved Clinician Experience</b>	

# What Does it Take to Innovate?







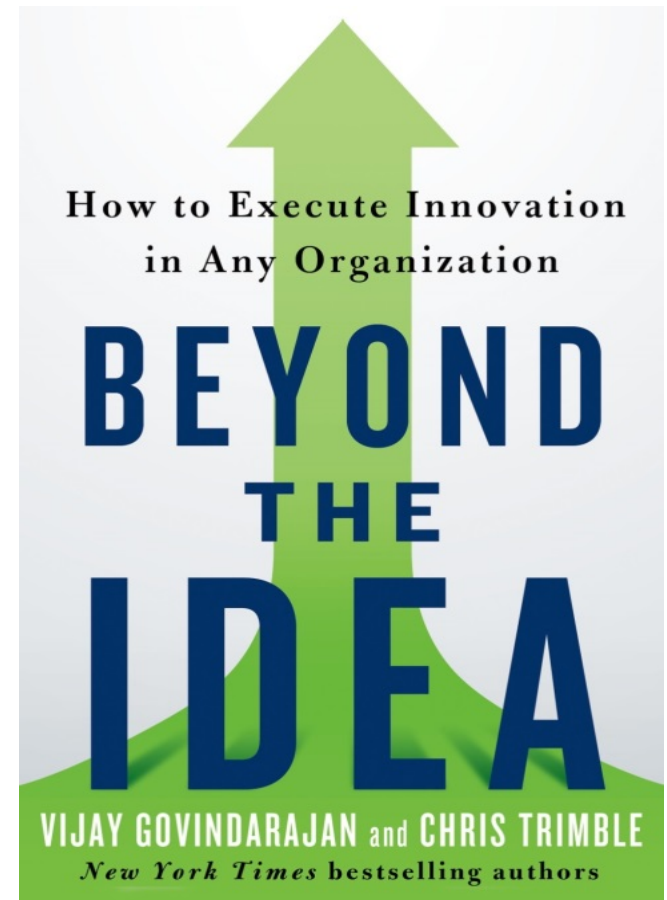
CHRIS  
TRIMBLE



VIJAY  
GOVINDARAJAN



# What's Wrong with This Picture?



# Innovation is a two Part Challenge

IDEAS  
EXECUTION

# An Exception to the Rule

	IDEAS	EXECUTION
Biosciences Driven Innovation	REALLY HARD	HARD
Innovation in Health Care Delivery	REALLY EASY	HARD



What does it take to engage in  
innovation and research in  
primary care?





# Dartmouth Hitchcock Population Health (Clinical and Research Services)

Primary Care  
Service Line

Community &  
Family  
Medicine

General Internal  
Medicine  
Primary Care

Pediatric  
Primary Care

Behavioral  
Health

Community  
Health

ImagineCare  
DH

The Population Health Collaboratory at DH  
Implementation, Improvement, and Innovation  
Science

## **Population Health Collaboratory Vision:**

Creation of population health, knowledge and training within an academic health care system;

Leveraging the creativity and innovation of patients, families, clinicians, social service providers, students, and researchers in a primary care and community-based living laboratory.

# Population Health Collaboratory Focus

**Prevention and management of *complex health conditions* in *primary care and in communities* by developing, testing & implementing:**

- **New models of care**
- **Novel uses of technology**
- **Patient-reported outcome measures & predictive analytics**

## **Population Health Priorities**

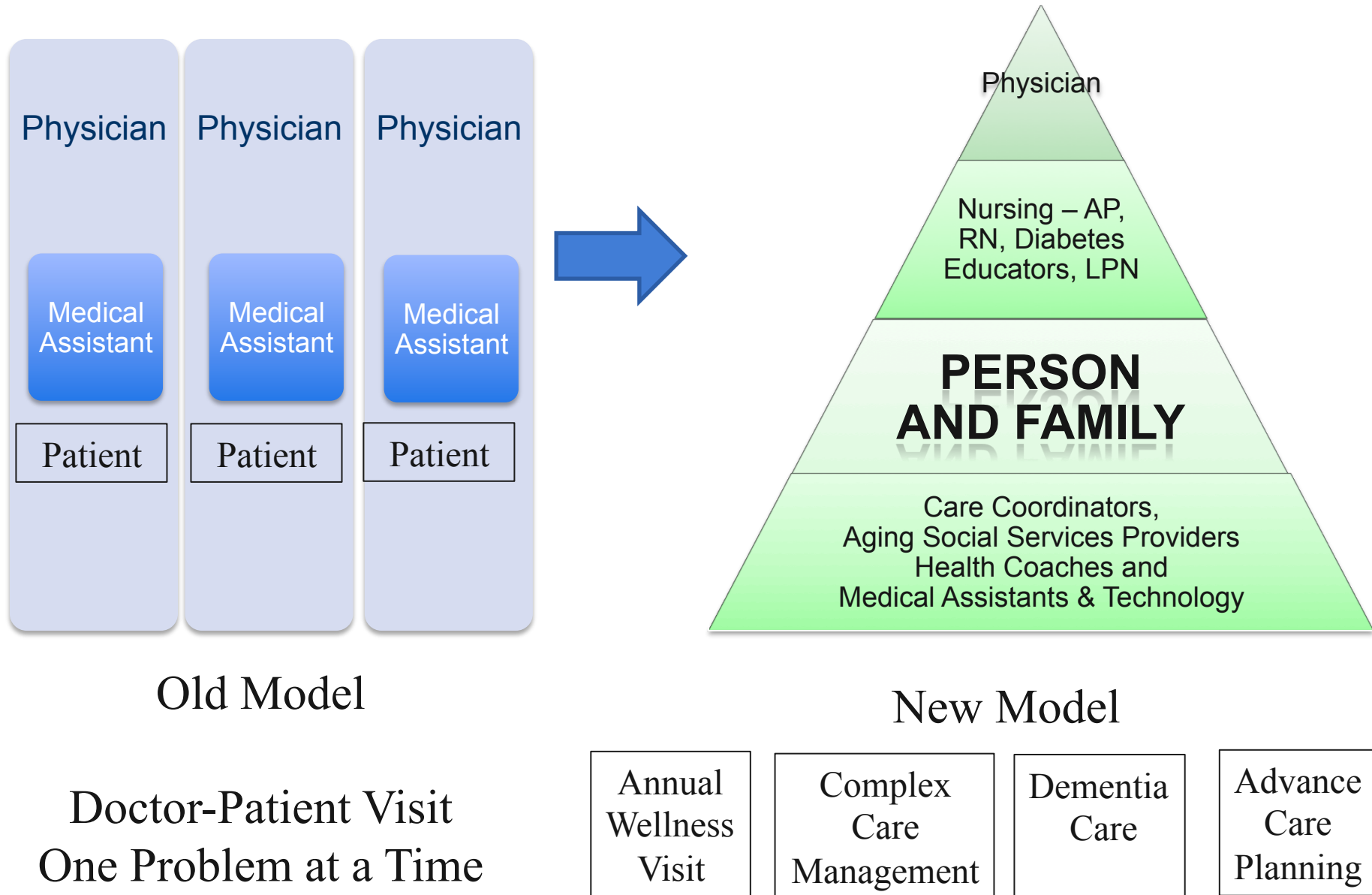
- **Integrated mental health and substance abuse care models**
- **Frail elderly and healthy aging in community**
- **Improving access through new care models, workforce transformation & technology**

# The Population Health Collaboratory

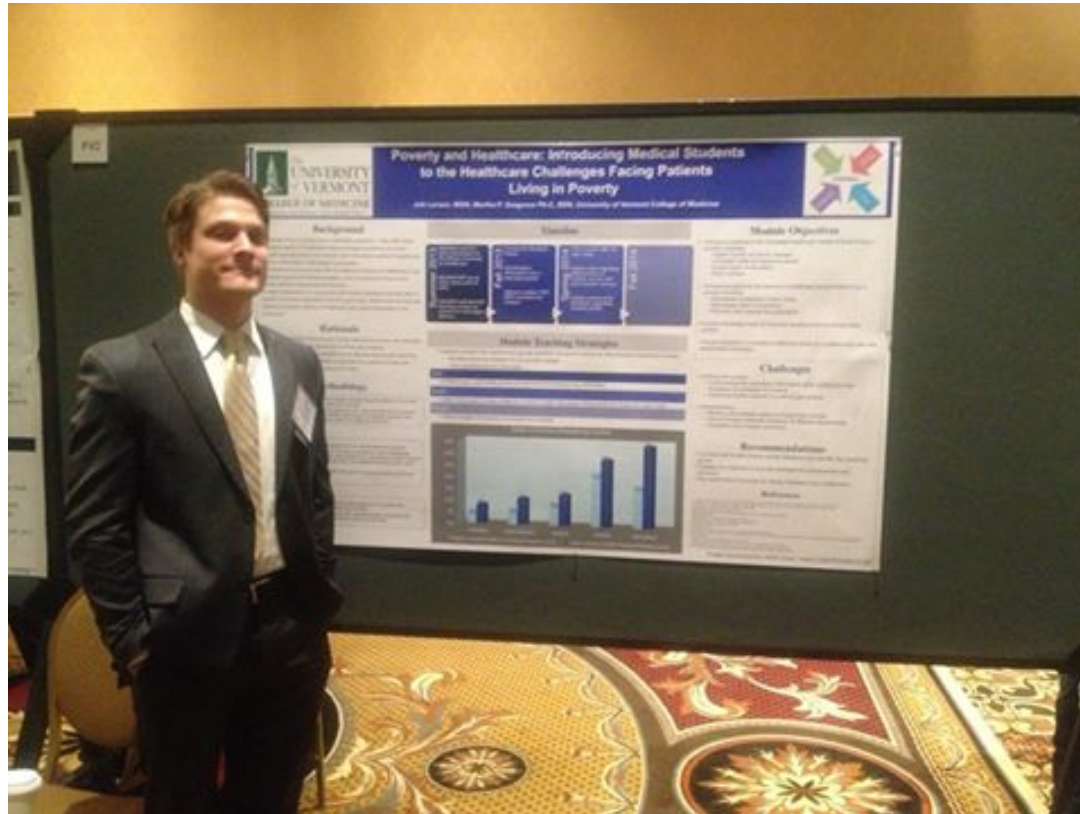
- Bringing together
  - Patients
  - Communities
  - Researchers
  - A regional primary care network
  - A working population health management organization with accountable care contracts
- In a real world, living laboratory setting
- Supporting clinicians, patients, and community partners to acquire the skills and capacity to co-create knowledge and health for generations to come

# First Major Project:

## HRSA Grant: Geriatric Primary Care Transformation



# Supporting Primary Care Creativity, Innovation, and Scholarship



**How to Write a Research Paper**

Pretend you are a reporter working on a story. If you were reading a news article, what would you want to know about the subject? What facts would you most want to learn? With a little imagination, you might find that you can make research fun.

**Step 1.** Decide on your topic. What do you want to teach your students? If you're writing a paper for school, what are your teacher's requirements?

**Step 2.** Create a schedule. How long will it take you to find your sources? How long will it take you to write your first draft? Marking these days on a calendar can help you stay on schedule and complete your assignment on time.

**Step 3.** Select your sources. You'll want to use a variety of reliable sources. Aim for at least three of these:

- Non-fiction books. You can find these at your local library.
- Periodicals. These are publications like news magazines and journals.
- Reference sources. Books like encyclopedias, dictionaries, and almanacs.
- Online sources. Internet encyclopedias, dictionaries, or other websites.
- Interviews. Questions you ask of experts on the subject.

**Step 4.** Write a rough draft. To make it easier, you might want to create an outline first. Write your topic at the top of the page, then list the points you will cover. Under each heading, write a few notes about your ideas and sources.

**Step 5.** Editing. Make sure your writing is clear, your grammar and punctuation are correct, and you've covered all the facts. Have a friend or parent proofread your paper and offer suggestions.

You can keep track of your sources here:

Source #1: \_\_\_\_\_

Source #2: \_\_\_\_\_

Source #3: \_\_\_\_\_

Source #4: \_\_\_\_\_

Source #5: \_\_\_\_\_

Start brainstorming topics and sources on the back of this worksheet.

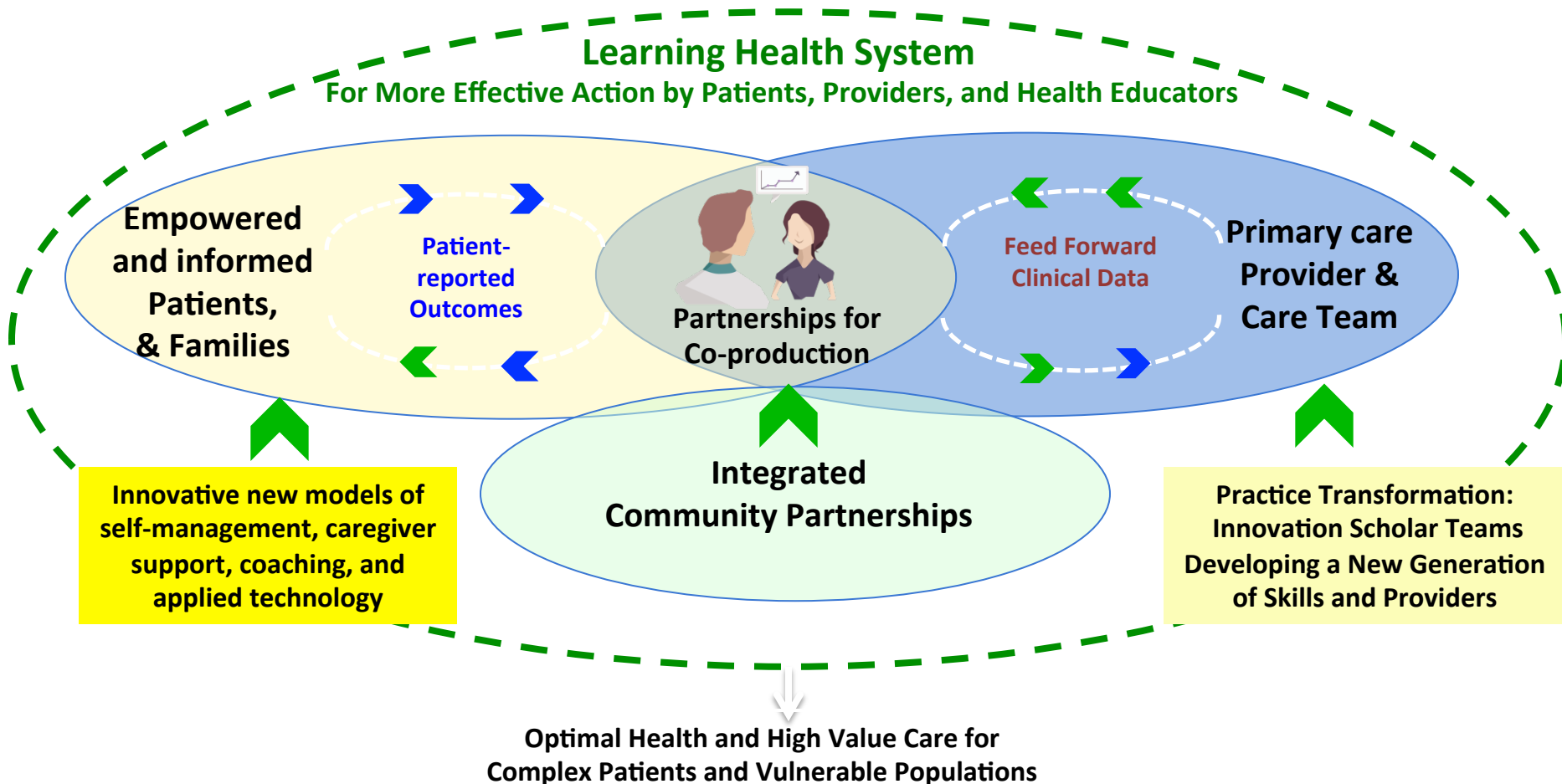
The Quadruple Aim? Improving Health, Reducing Cost,  
Improving Patient Experience  
.....and Improving Provider Experience?





# Co-Creation of Health and Knowledge

*A learning health system for patient-centered innovation and implementation*



# Opportunity: Northern New England as a Rural Population Health Learning Laboratory

