Opportunities for Transformational Change in State GME

2017 GME States Initiatives Summit
Albuquerque, NM
January 23, 2017

J. Lloyd Michener, MD
Professor and Chair
Department of Community and Family Medicine
Duke University Medical Center

No Disclosures

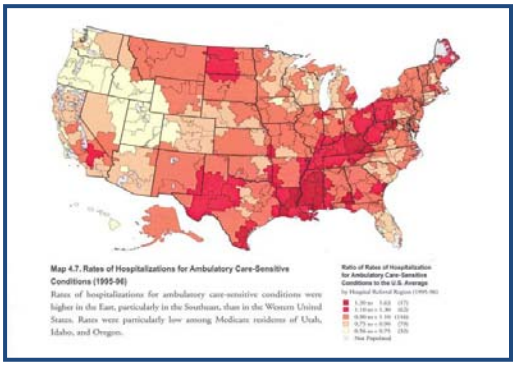
While I have been a participant in the discussions cited, the conclusion and summaries are mine, and have not been endorsed by the sponsoring organizations.

No financial relationships with any commercial interests.

Bottom Line:

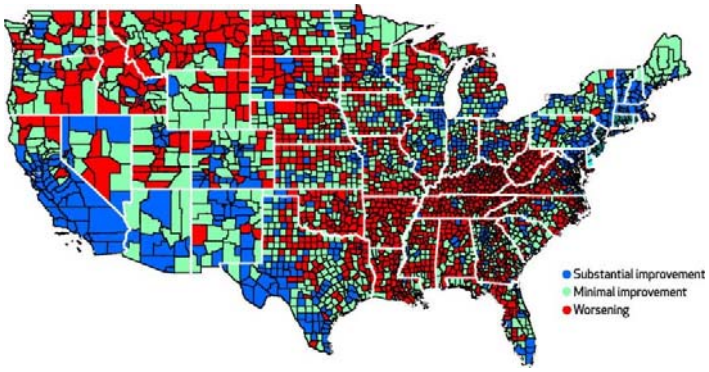
- **Health care utilization and outcomes vary enormously within and across states**
- **EHR data allows targeted opportunities for intervention that produce rapid change in outcomes.**
- **Successful interventions require partnerships with public health and those in the community**

Disease Burden/Practice Patterns Vary



Source: The Quality of Medical Care in the United States: A Report on the Medicare Program. The Dartmouth Atlas of Health Care 1999. The Center for the Evaluative Clinical Sciences Dartmouth Medical School

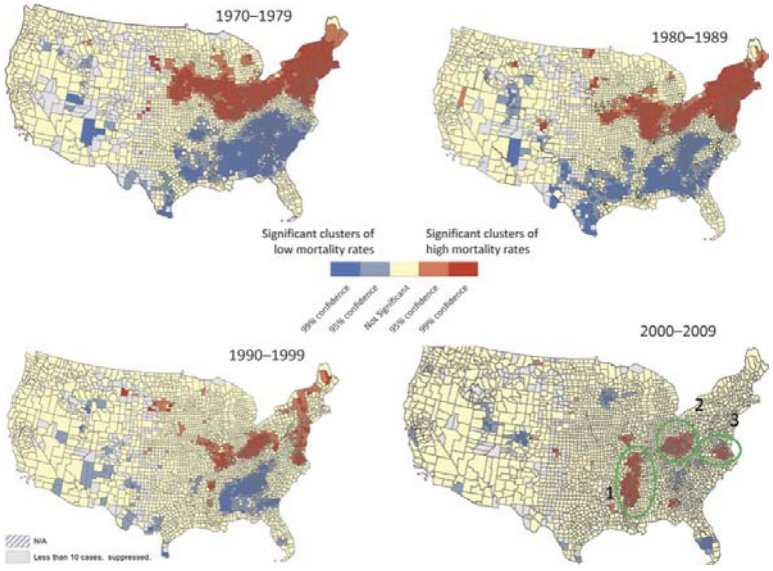
Change In Female Mortality Rates From 1992–96 To 2002–06 In US Counties



Kindig D A , and Cheng E R Health Aff
2013;32:451-458

HealthAffairs

Where Can Colorectal Screening Have the Most Impact?

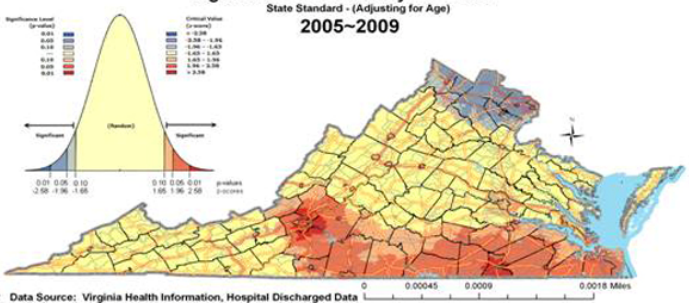


Published OnlineFirst July 8, 2015: DOI: 10.1158/1055-9965.EPI-15-0082

Virginia

Hot Spot Analysis ~ Relative Risk
Arterial Ischemic Stroke (AIS)
Hospitalization (Primary Diagnosis) Discharged Data
Ages 35 Years & Over by ZIP Code
State Standard - (Adjusting for Age)

2005~2009

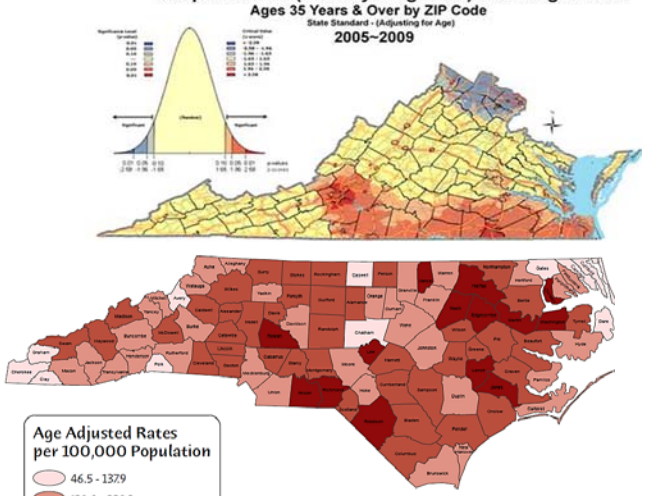


* Data Source: Virginia Health Information, Hospital Discharged Data

Virginia

Hot Spot Analysis ~ Relative Risk
Arterial Ischemic Stroke (AIS)
Hospitalization (Primary Diagnosis) Discharged Data
Ages 35 Years & Over by ZIP Code
State Standard - (Adjusting for Age)

2005~2009

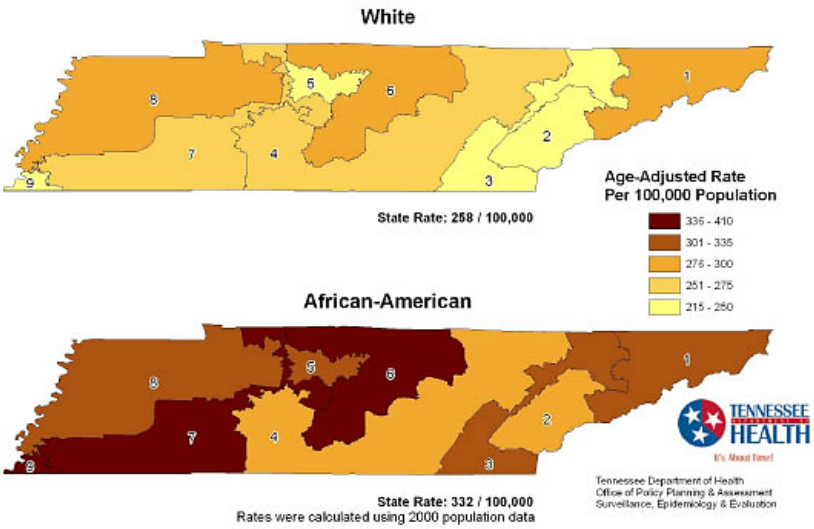


Age Adjusted Rates
per 100,000 Population

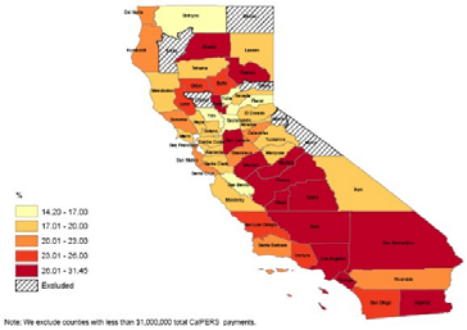
- 46.5 - 137.9
- 138.0 - 238.2
- 238.3 - 319.7
- 319.8 - 434.6

*ICD-9CM Codes 430-438
Note: Provisional North Carolina Hospital Discharget Data includes only residents served in NC Hospitals. Rates shown here may be smaller than the actual hospital use for counties that border other states.

Diseases of the Heart Mortality Rates by Congressional Districts By Race, Tennessee, 2005 - 2007

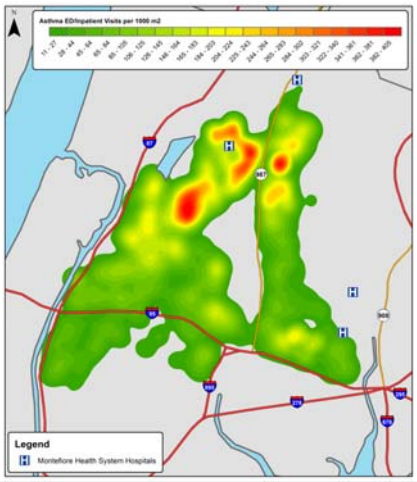


CalPERS Excess Medical Spending attributable to selected preventable conditions by county (2008)

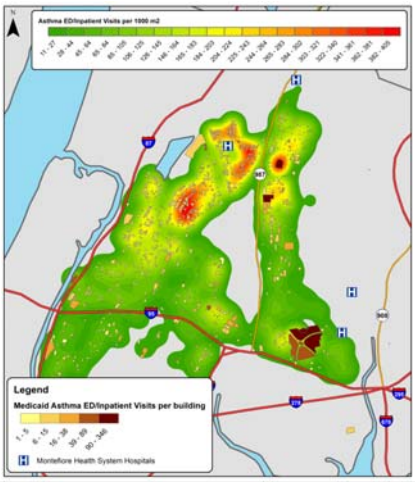


THE URBAN INSTITUTE

Density of asthma visits among Medicaid patients in catchment area



More red areas have higher density of asthma visits

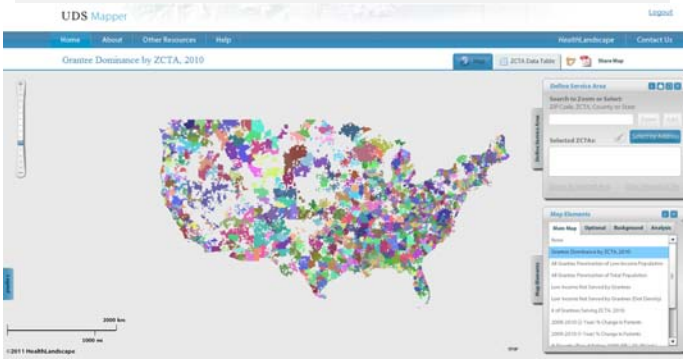


Some mismatch between "areas" with more asthma visits and "buildings" with most asthma

Notes: Visits are from 2012-7/2016. Does not include visits to non-Bronx Montefiore Health System locations.

Montefiore

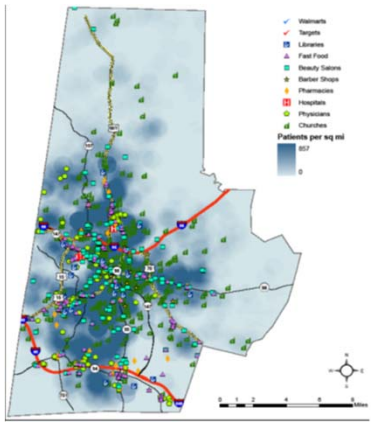
UDS Mapper



2011 Best Web-Based Application
ESRI International Users Conference

Interventions

Hypertension in Durham



Note: *density plots depict ACTUAL patients and respective blood pressures in Durham County*

Source: DSR data from 1/1/06-5/1/09; patients seen at DUHS

DUKE CONNECTED CARE

Walltown and Lyon Park Clinics

Duke-Durham Neighborhood Partnership

- Population: African-American, new Latino population, low-income, transient, uninsured
- High ED use, high-risk health behaviors, substance abuse, depression/anxiety
- 37% of patients surveyed would have gone to ED
- High patient satisfaction – 4.7/5.0

Community Partners

Calvary Baptist Ministries
Walltown Neighborhood Association
PAC-2
PAC-3
Lincoln Community Health Center
Planned Parenthood of Central NC

Practice Partners

Community and Family Life and Recreation
Center of the West End, Inc
Self-Help, Inc
Duke Community Affairs
Duke Community Relations
Duke University Hospital
Community & Family Medicine Department

DUKE CONNECTED CARE

Just For Us

- 350 patients since 2000
- Average age 70, multiple chronic conditions
- 44% have mental illness
- All are home-bound
- 84% African-American; many with low to no family support
- Low literacy or illiterate

Annual Income $7,000 − 25% Rent = $5,250/Year

Community Partners

City of Durham, Housing Authority
Lincoln Community Health Center
Durham Council on Seniors
Area Mental Health Agency
Durham County Health Department
Durham County Department of Social Services

Practice Partners

Duke CFM, SON, DUH, DRH,
Center for Aging,
Department of Psychiatry

DUKE CONNECTED CARE

Just For Us

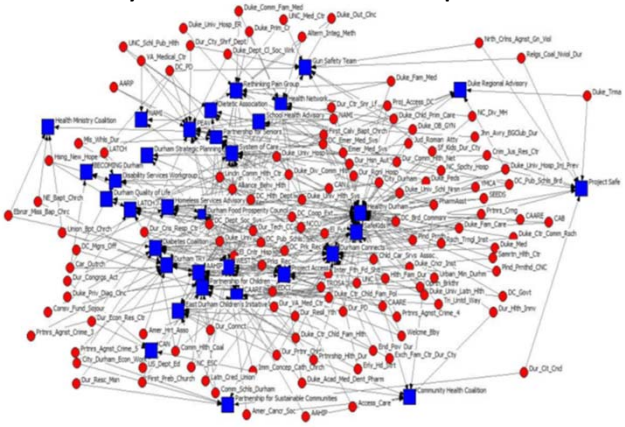
Outcomes

- Ambulance costs ↓ 49%
- ER costs ↓ 41%
- Inpatient costs ↓ 68%
- Prescription costs ↑ 25%
- Home health costs ↑ 52%

All patients with hypertension 79% ≤ 140/90
Diabetics with hypertension 84% ≤ 140/90

DUKE CONNECTED CARE

Durham County Connections Across Partnerships

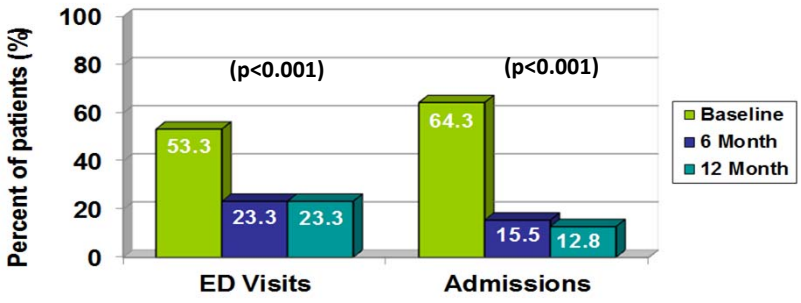


1) Blue squares represent partnerships
2) Red circles represent organizations
3) The closer partnerships are located together on the map – the more members they share in common
4) The farther partnerships are from each other – the less of a connection they have through shared members
5) Organizations in the center of the map bridge across multiple partnerships

healthydurham.org

But, can you scale or replicate this?

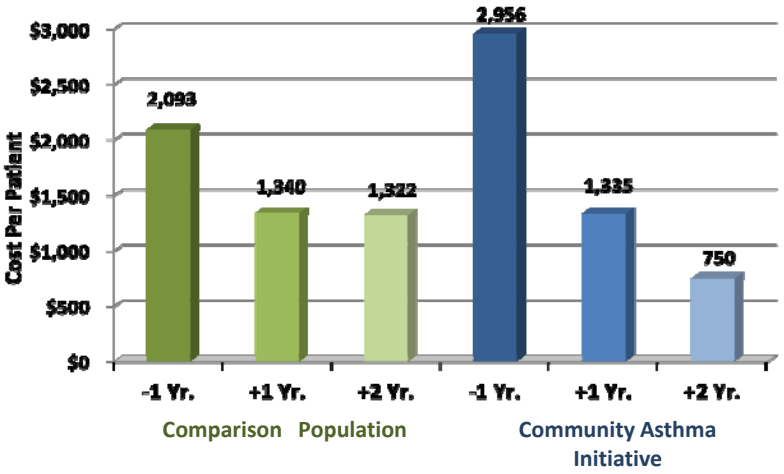
CAI Outcomes:
Decrease in % patients with any ED Visits or Admissions due to Asthma
N=1470 (through March 31, 2015)



56% decrease at 12 Months **80% decrease at 12 Months**

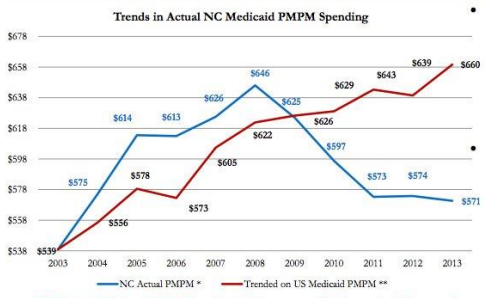
Woods, ER et al. Community Asthma Initiative: Evaluation of a Quality Improvement Program for Comprehensive Asthma Care. *Pediatrics*, 2012;129:465-472.

CAI Total Cost Per Patient (2006, N=102)
ED Visits and Admissions
Return on Investment = 1.46
Social Return on Investment = 1.73



Woods ER, et al. Community Asthma Initiative: Evaluation of a Quality Improvement Program for Comprehensive Asthma Care. *Pediatrics*, 2012;129:465-472.

Comparison of Actual Claims Trends



- *NC Actual Claims PMPM's adjusted to remove the impact of changes in DSH accounting and Hospital GAP and UNC/ECU UPL plans*

** *Trended on US Medicaid PMPM trends applied to NC 2003 Base PMPM*

Source: CMS Office of the Actuary and NC Office of State Controller

- NC Medicaid enrollment transitioning to higher proportion of **non**-Aged, Blind, Disabled populations than US trends
- North Carolina appears to have been more aggressive/effective than other States implementing initiatives to control spending beginning in FY 2008-09
- Variations in enrollment mix make a sole national comparison misleading

Massachusetts Improves Quality of Life for Children with Asthma

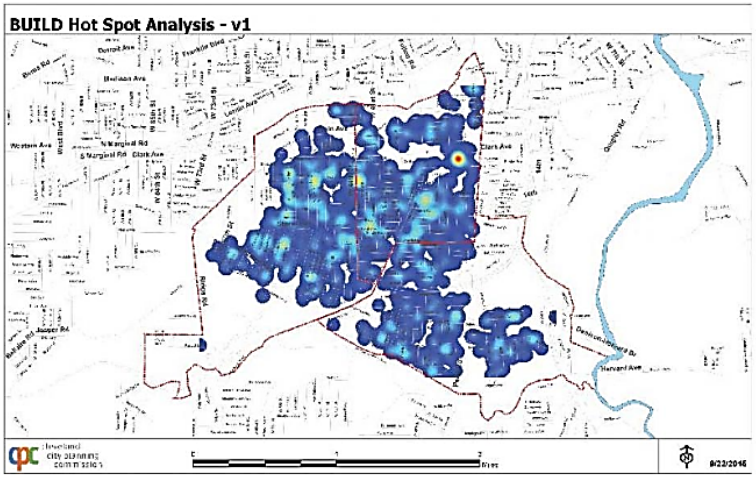
The Community Asthma Initiative works to improve the health and quality of life for children with asthma.

Boston Children's Hospital designed the program to focus on medical interventions rather than environmental influences.

Since its establishment, the program has worked in tandem with partners at every level, including the individual, family, and larger community.

As a result, the Community Asthma Initiative helped reduce the percent of emergency department visits by 58 percent, the number of asthma-related hospitalizations, the number of school absences for children, and the number of work absences for their parents.

CAI helped reduce the number of asthma-related hospitalizations by 80 percent.



Houses that had open violations within the last 5 years. Source: Cleveland City Planning Commission

The BUILD HEALTH Challenge

Cleveland, Ohio

Engaging the Community in New Approaches to Health Housing in Cleveland, Ohio is:
- Creating a Healthy Homes Zone
- Enacting prevention-based housing maintenance
- Determining feasibility of HMO reimbursements for asthma home visits

Key Partners
- Environmental Health Watch
- The MetroHealth System
- Cleveland Department of Public Health

In partnership with:
- Stockyards Clark-Fulton Brooklyn Center
- The Cleveland Building and Housing Department
- The Hispanic Alliance and Spanish American Community
- Cuyahoga Place Matters Team
- HIP-C (a consortium of 50 partners)

Action Plan:
ECNAHH seeks to improve asthma and lead poisoning outcomes related to unhealthy housing, as well as COPD and injury prevention.

Many Poor Asthma Sufferers Stuck in Settings That Make Their Disease Worse

Amy Norton HealthDay Reporter

HealthDay

WEDNESDAY, Jan. 4, 2017 (HealthDay News) -- Poor Americans with asthma face constant challenges in managing their respiratory disease -- from dilapidated housing to neighborhood violence to depression, new research shows.

The study offers a snapshot of the lives of asthma patients living in inner-city Philadelphia, from the point of view of community health workers who visited them at home.

It's a bleak picture, and asthma experts called it "eye-opening."

How much can health care providers do?

For one, they can help connect low-income patients with social workers or local services that could help them, according to Dr. Tyra Bryant-Stephens, who led the study.

She said there's also a role for community health workers, like those who were involved in the study.

ISSUE BRIEF

Focusing on the Common Problem of Improving Population Health

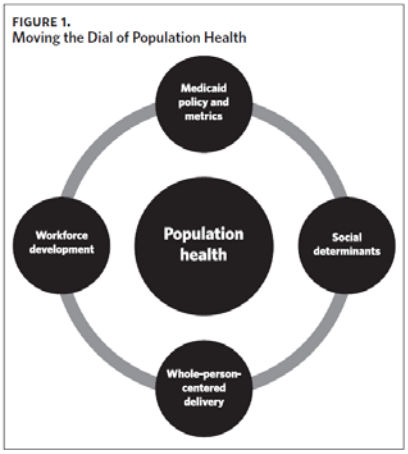
Rick Brajer

To move the dial and drive the factors that impact 70% of health outcomes, we need a health and social services system that has the capacity and flexibility to address social determinants, and we need to better engage individuals in taking ownership of the factors they can control. The foundational elements that will then have the greatest impact on improving North Carolina's population health—when integrated—are Medicaid policy and metrics, social determinants, whole-person–centered models of care, and workforce development.

Rick Brajer former secretary, North Carolina Department of Health and Human Services, Raleigh, North Carolina.

NCMJ Vol. 78, No. 1
NCMEDICALJOURNAL.COM

FIGURE 1.
Moving the Dial of Population Health



What Works: Multi-Sector, Multi-Stakeholder Partnerships

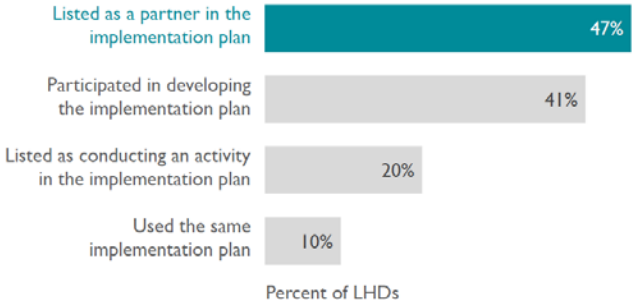
Adapted from countyhealthrankings.org

www.healthypeople.gov/ph3

PRACTICAL PLAYBOOK

Almost half of LHDs were listed as a partner in a non-profit hospital's implementation plan

Few used the same implementation plan

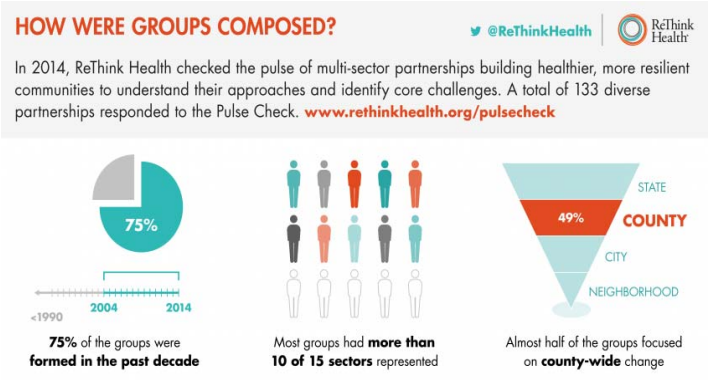


n=402

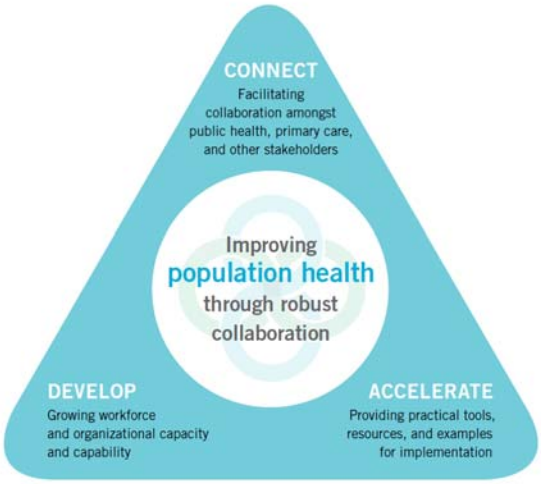
Among LHDs with a non-profit hospital serving their jurisdiction and who knew how their LHD was involved in a non-profit hospital's implementation plan.

NACCHO PROFILE

Community Coalitions are Forming



The Practical Playbook



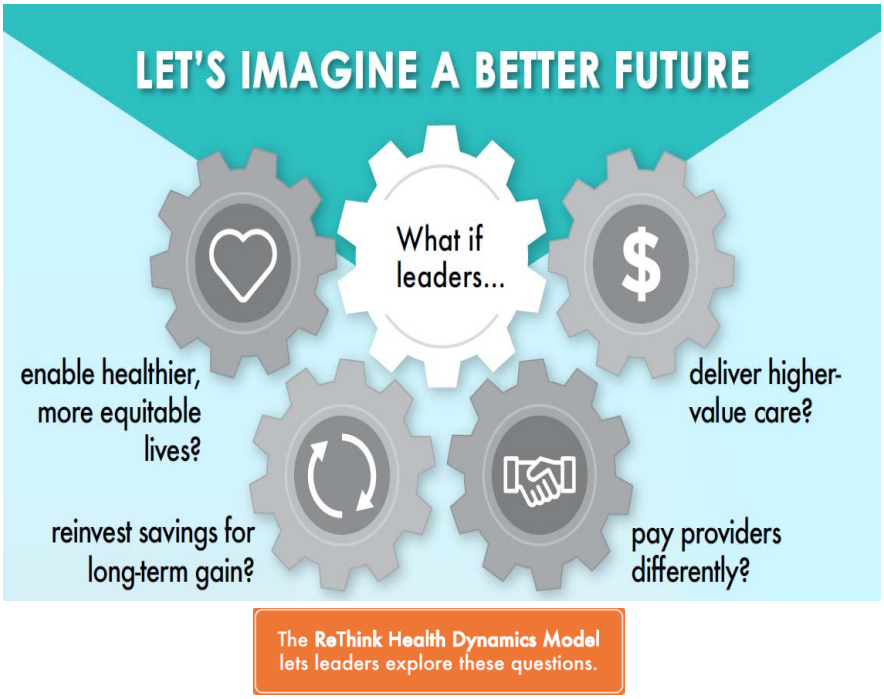
The Practical Playbook (PPB)

MISSION

- Advance **collaboration** between **public health, primary care, and others** to **improve population health**. We do this by providing practical implementation tools, guidance, and resources.

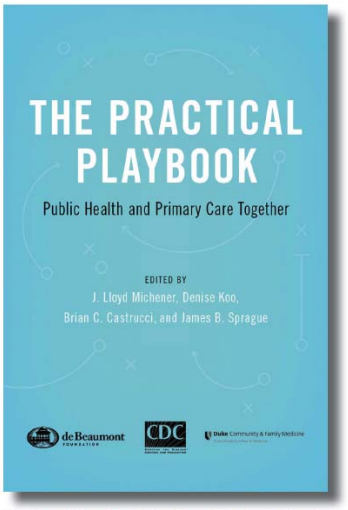
What we do:

- Practical Playbook website
- Practical Playbook print version
- Build connections through social media communications
- Provide technical assistance
- Initiate/develop workforce training and organizational capacity innovations
- Develop partnerships
- Share success stories
- Convene like-minded organizations and individuals



Bottom Line:

- **Health care utilization and outcomes varies enormously within and across states**
- **EHR data allows targeted opportunities for intervention that produce rapid change in outcomes.**
- **Successful interventions require partnerships with public health and those in the community**



SAVE 30%
with promo code
AMPROMD9

October 2015 • 400 pp. • Paperback
9780190222147 • ~~$27.95~~/**$19.50**

OXFORD
UNIVERSITY PRESS

ORDER ONLINE AT **OUP.COM/US** AND ENTER
PROMO CODE **AMPROMD9** AT CHECK OUT TO **SAVE 30%**

Improving the health of populations requires that:

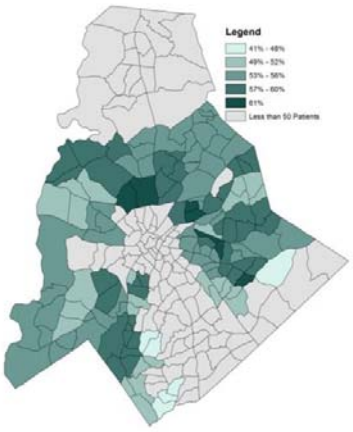
1. **Physicians need to do what only they can do**
   - Complex care
   - Unknown illnesses
   - System redesign
2. **We need more than doctors**

   PAs, NPs, nurses
   Psychologists
   PharmDs
   Social workers
   Dietitians
   Physical therapists
   Case managers
   Health educators
   IT designers
3. **Public Health is Key**
4. **We need to start now**

DUKE CONNECTED CARE

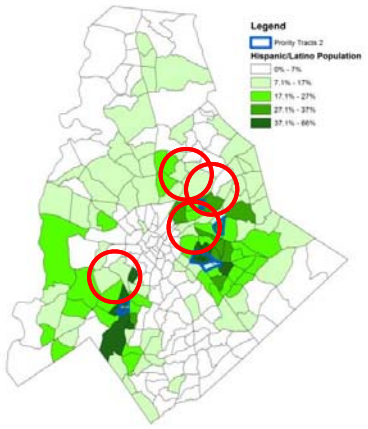
Neighborhoods Matter

Emergency Department Utilization for Primary Care

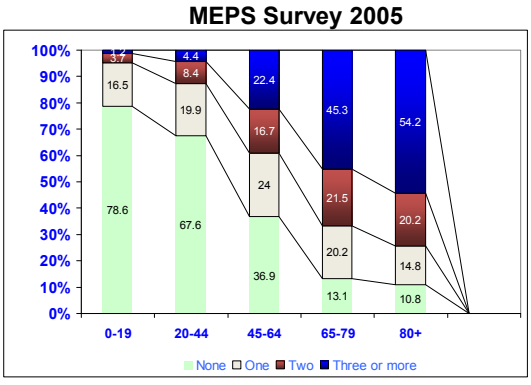


Neighborhoods Matter

High Risk Neighborhoods

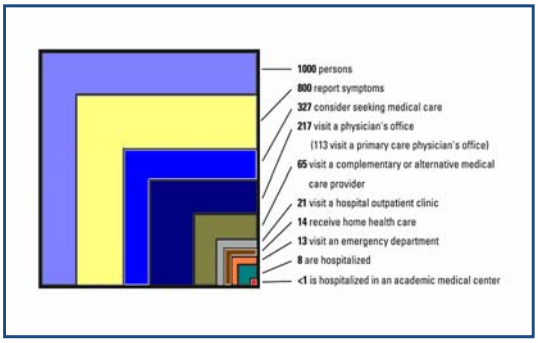


Most Illness is Chronic



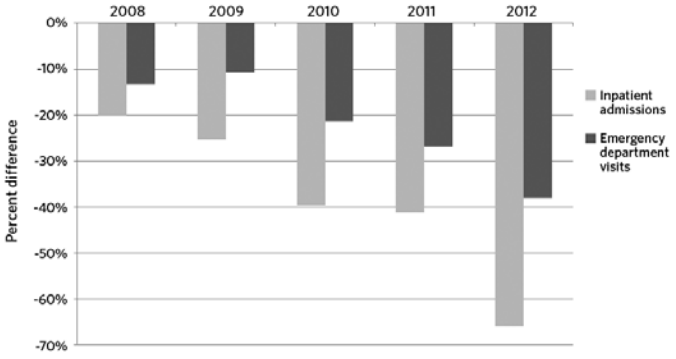
*Source: Paez KA, Zhao L, Hwang W. Rising out of pocket spending for chronic conditions: A ten year trend. Health Affairs, Vol 28, Number 1, pp 15-23.

Most illness and care occurs in the community



Green LA, Fryer GE Jr, Yawn BP, Lanier D, and Dovey SM.
Ecology of Medical Care Revisited. NEJM 344:2021-205. June 28, 2001.

Percent Difference Between Medicaid Recipients Enrolled in CCNC and Those Not Enrolled in CCNC, for Rates of Asthma-Related Emergency Department Visits and Inpatient Admissions, 2008–2012



Note. CCNC, Community Care of North Carolina. NCMJ September/October 2013, Volume 74, Number 5

Oregon's Health System Transformation: CCO Metrics 2015 Final Report

June 2016

ALL-CAUSE READMISSIONS

All-cause readmissions

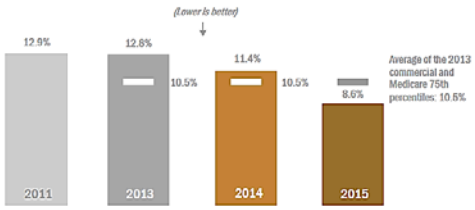
Percentage of adult members (ages 18 and older) who had a hospital stay and were readmitted for any reason within 30 days of discharge. A lower score for this measure is better.

2015 data (n=29,075)

Statewide change since 2014: **-24%** (lower is better)

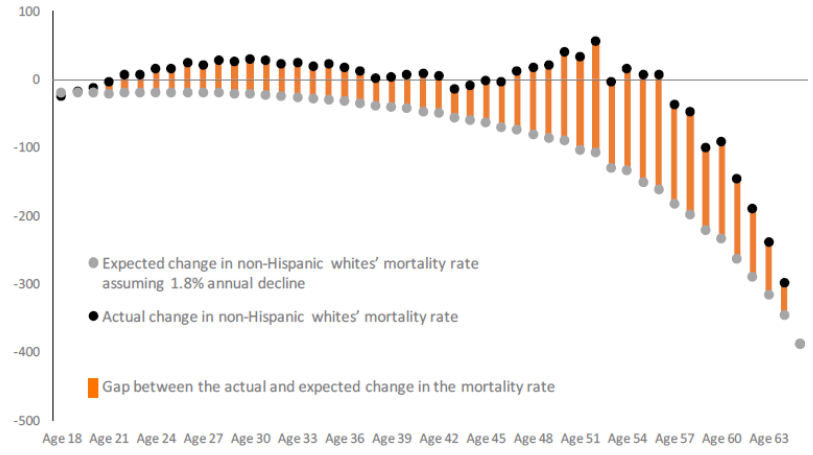
Number of CCOs that improved: **13**

All-cause readmissions, statewide.
Data source: Administrative (billing) claims



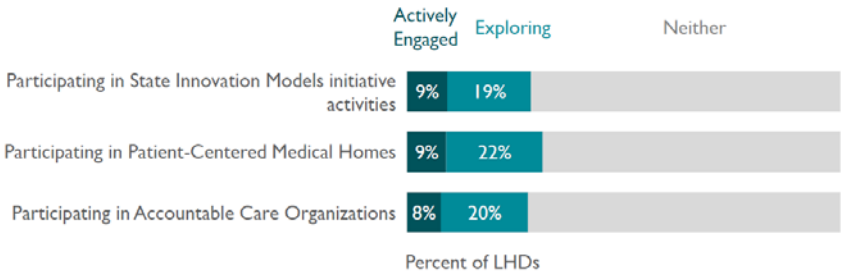
The "Mortality Gap" for Whites Spanned All Working-Age Years, But Was Most Severe at Middle Age

Change in deaths per 100,000 people between 1999 and 2014



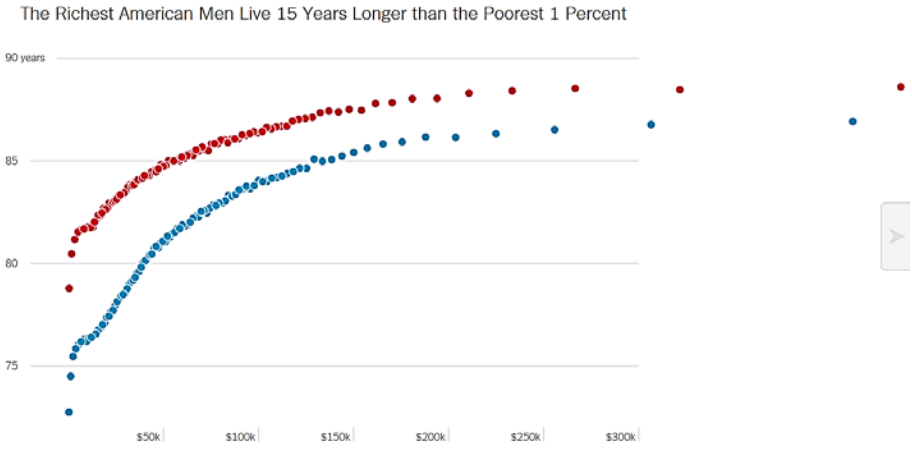
Source: CDC WONDER Online Database.

Few LHDs were engaged or exploring new systems of care

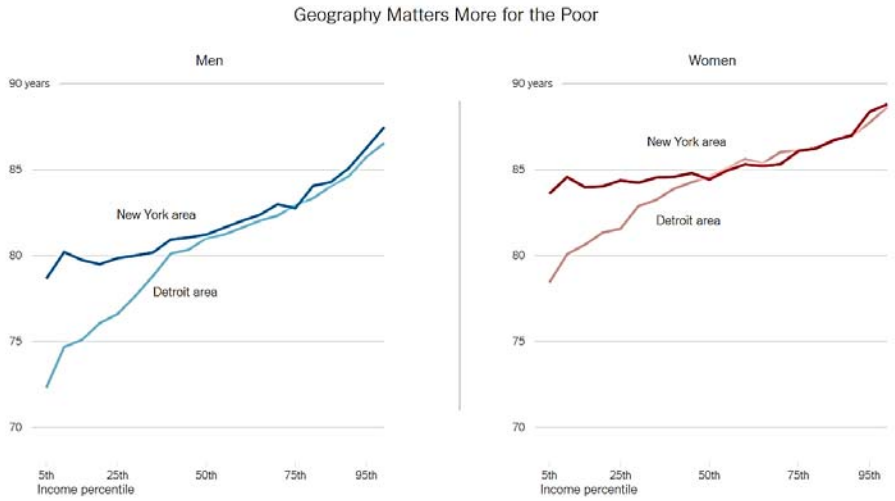


n=657-659

NACCHO PROFILE



Source: Neil Irwin, Quoctrung Bui, **THE NEW YORK TIMES**, April 11, 2016



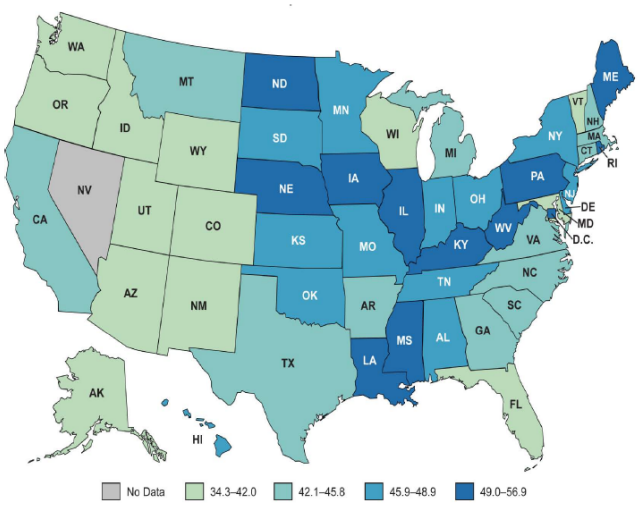
Source: Neil Irwin, Quoctrung Bui, **THE NEW YORK TIMES**, April 11, 2016

PPB VALUES

- **Strong public health and primary care** are essential for an effective health/wellness system
- To achieve maximum impact on health, **underlying [upstream] factors** that affect health must be addressed
- **Community engagement** is critical for success
- **Multidisciplinary, multi-sector teams** are most likely to drive improved health behaviors and health
- **Evidence, data, and evaluation** must drive prioritization of resources and efforts
- **Collaboration** is hard, takes energy and time, but is worth the effort

PRACTICAL PLAYBOOK

Colorectal Cancer Incidence Rates,* by State, 2007†



*Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population.

†*Source:* U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999–2007 Incidence and Mortality Web-based Report.* Atlanta (GA): Department of Health and Human Services, Centers for Disease Control and Prevention, and National Cancer Institute; 2010. Available at: http://www.cdc.gov/uscs.