THE EVOLUTION OF POPULATION HEALTH

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PI, The Practical Playbook

Nothing To Disclose

Department of Family Medicine & Community Health

More than 30 years of improving outcomes, lowering costs for diverse NC communities and across the U.S.

Goals

- Briefly review the drivers of the shift from health care to population health.
- Describe the rapid growth and types of collaborations now underway.
- Discuss the evolving partners and their roles
- Describe tools and strategies for health improvement

- **Population Health:** the health outcomes of a group of individuals, including the distribution of such outcomes within the group.

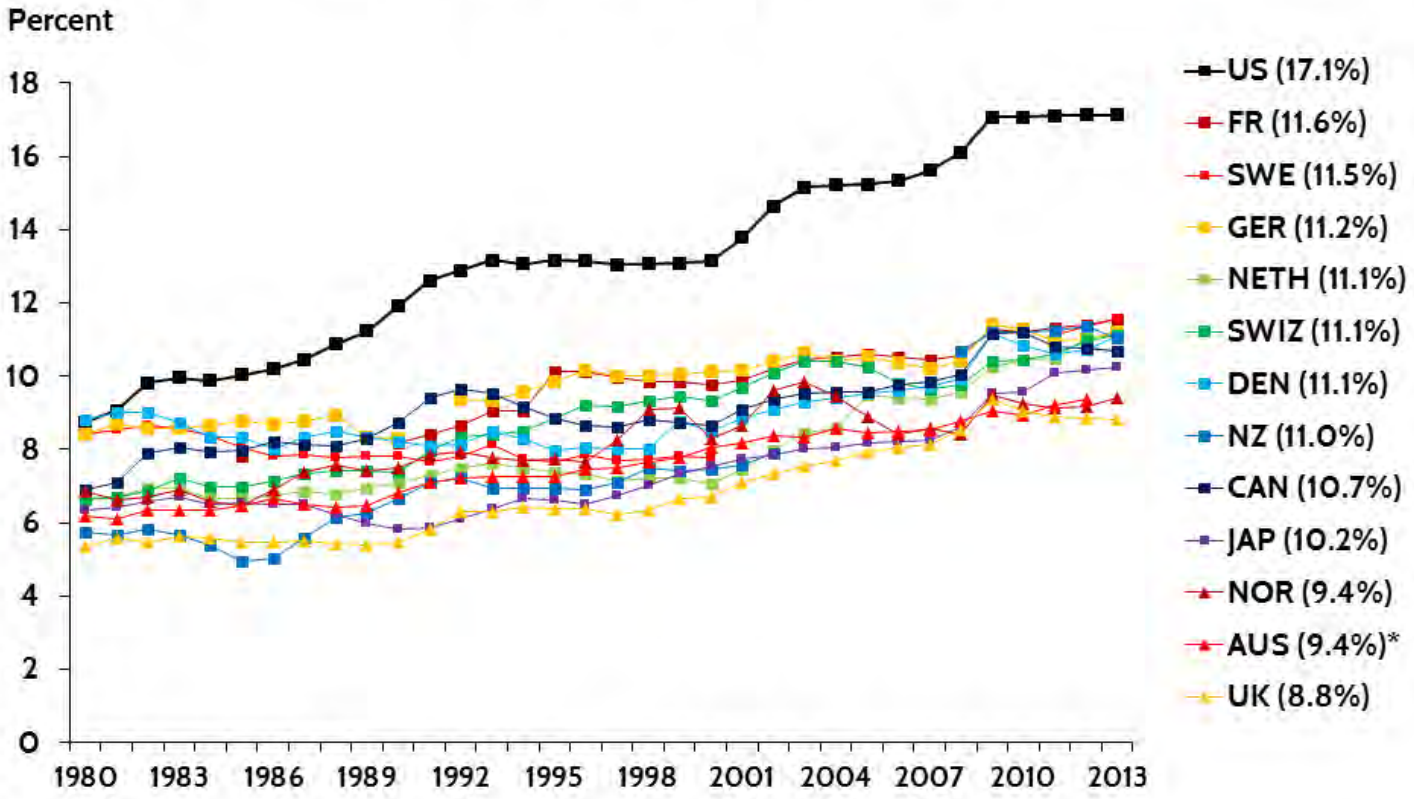
- Source: Kindig D, Stoddart G. What is Population Health?
- Am J of Public Health. 2003; 93(3): 380-383.

- **The Goal:** “from Health Care to Health”

I. Cost

Drivers:

Exhibit 1. Health Care Spending as a Percentage of GDP, 1980–2013

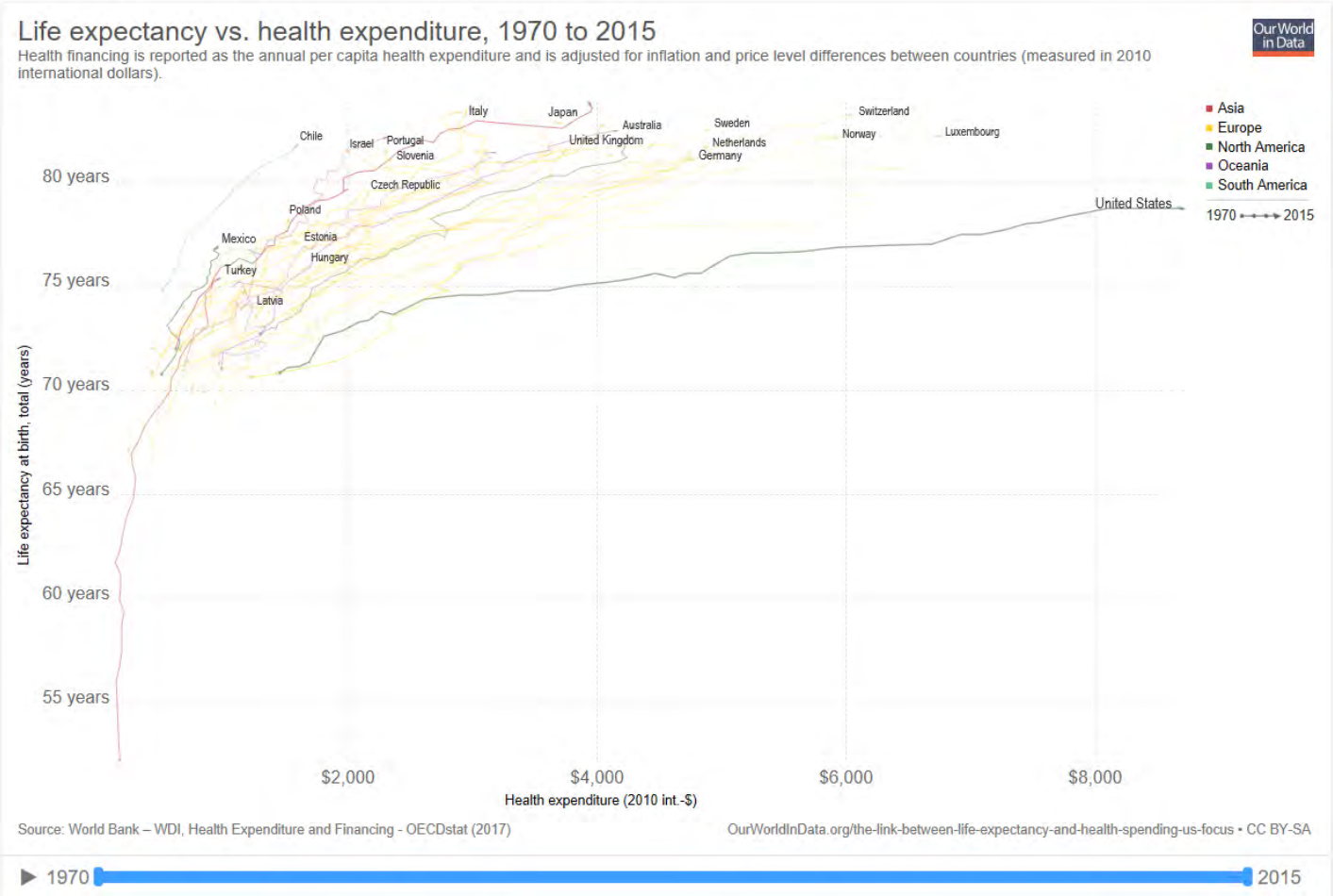


* 2012.

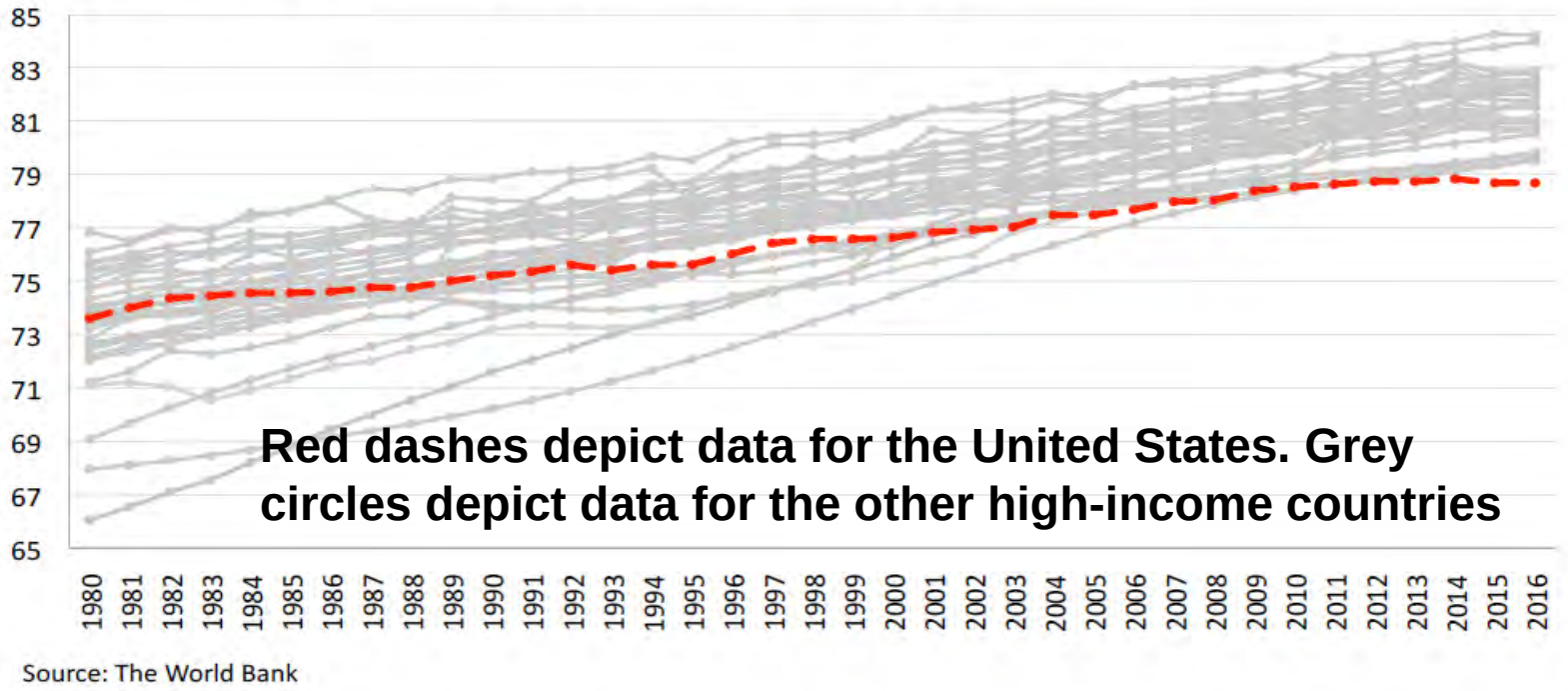
Notes: GDP refers to gross domestic product. Dutch and Swiss data are for current spending only, and exclude spending on capital formation of health care providers.

Source: OECD Health Data 2015.

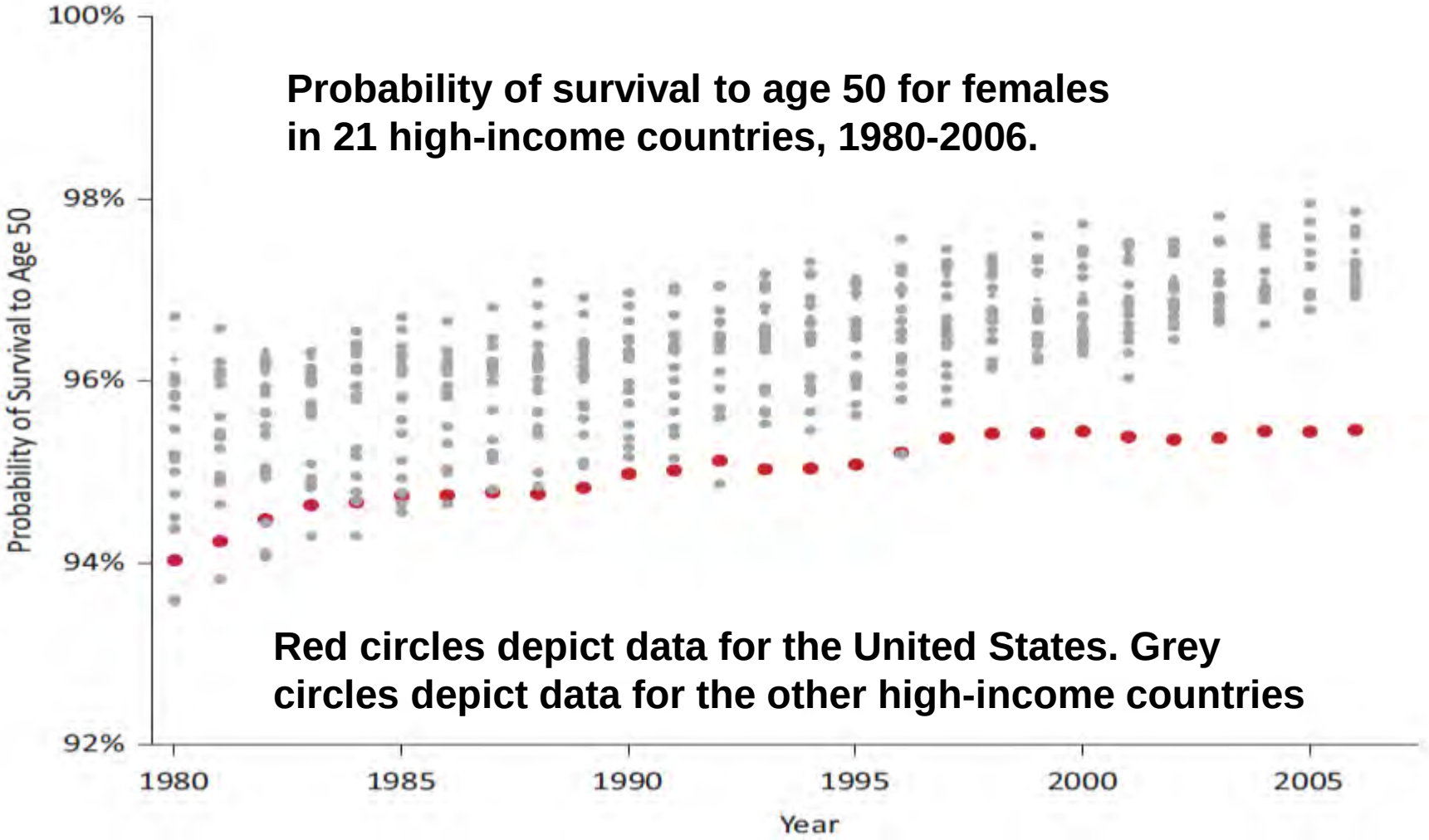
2. Value


Life expectancy vs. health expenditure, 1970 to 2015
Health financing is reported as the annual per capita health expenditure and is adjusted for inflation and price level differences between countries (measured in 2010 international dollars).
Our World in Data
Asia
Europe
North America
Oceania
South America
1970 2015
Italy
Japan
Australia
Sweden
Switzerland
Chile
Israel
Portugal
Slovenia
United Kingdom
Netherlands
Germany
Norway
Luxembourg
Czech Republic
Poland
United States
Mexico
Estonia
Hungary
Turkey
Latvia
80 years
75 years
70 years
65 years
60 years
55 years
Life expectancy at birth, total (years)
$2,000
$4,000
$6,000
$8,000
Health expenditure (2010 int.-$)
Source: World Bank – WDI, Health Expenditure and Financing - OECDstat (2017)
OurWorldInData.org/the-link-between-life-expectancy-and-health-spending-us-focus • CC BY-SA
1970
2015

Life Expectancy between **1980 and 2016** by Country: **US ranked 21st** in **1980** and **36th** in **2016**



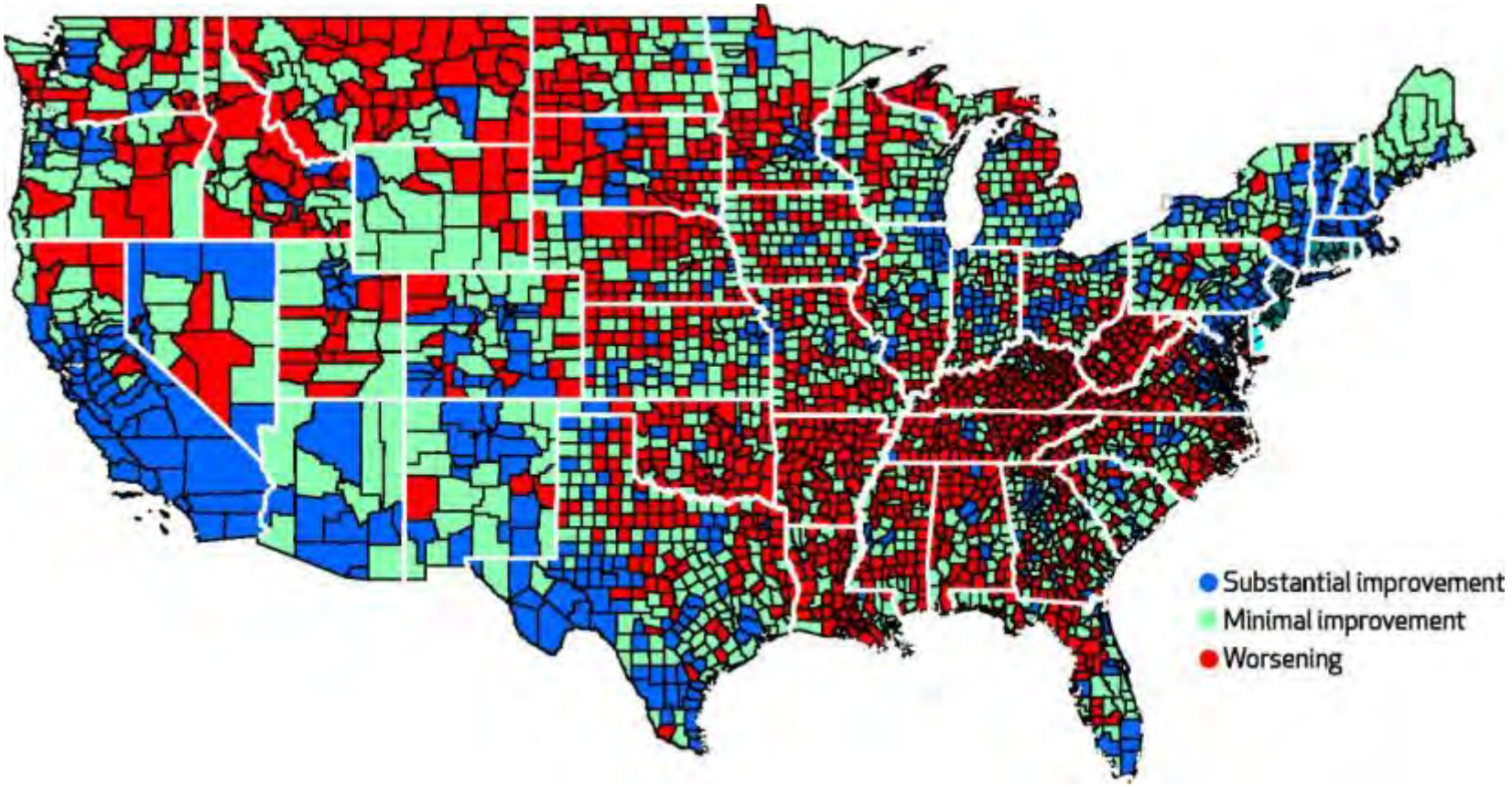
Source: The World Bank



Source: National Research Council, 2011

3. Availability of Actionable Data

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

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Duke University School of Medicine

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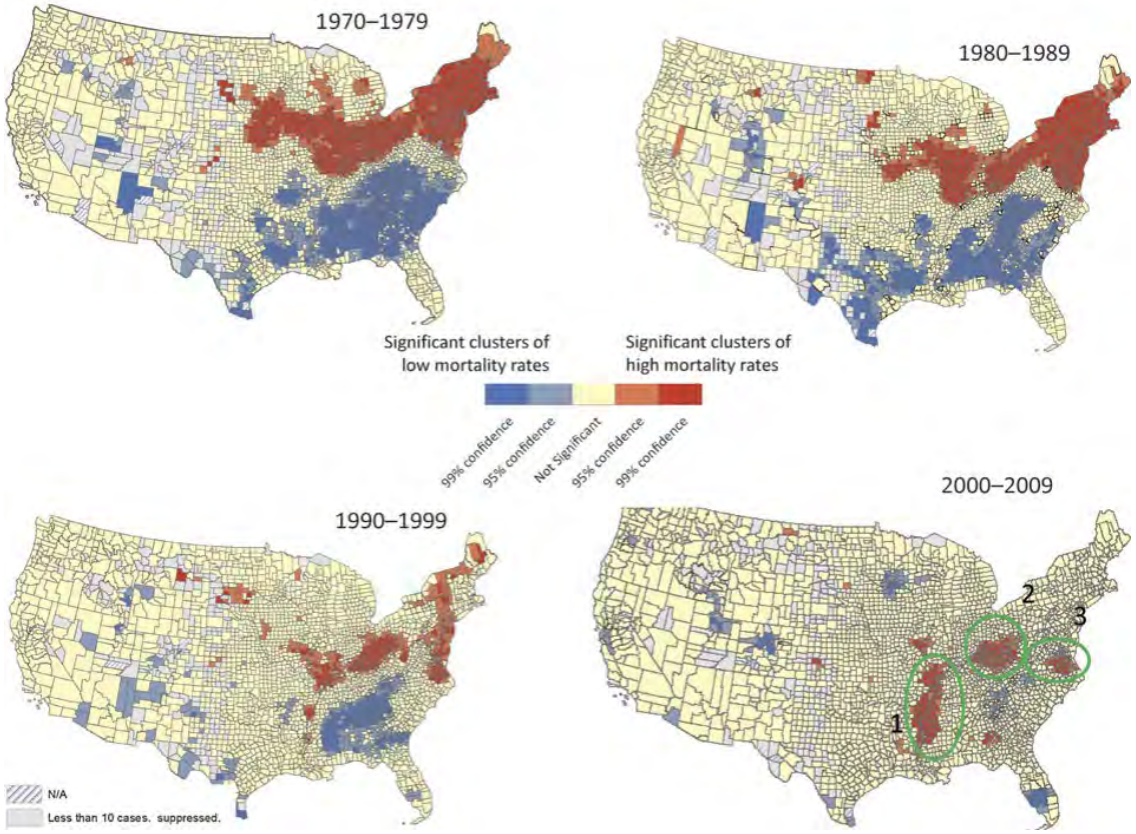
Where Can Colorectal Screening Have the Most Impact?

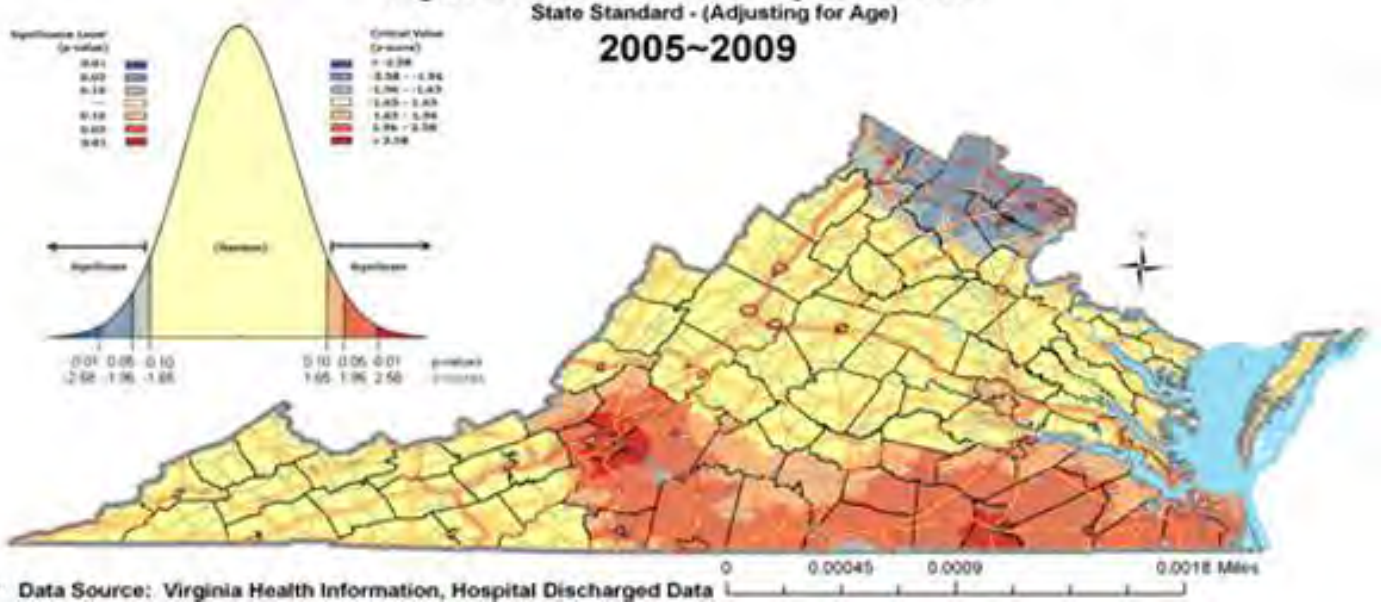


Published Online July 8, 2015: DOI: 10.1158/1055-9965.EPI-15-0082

Virginia

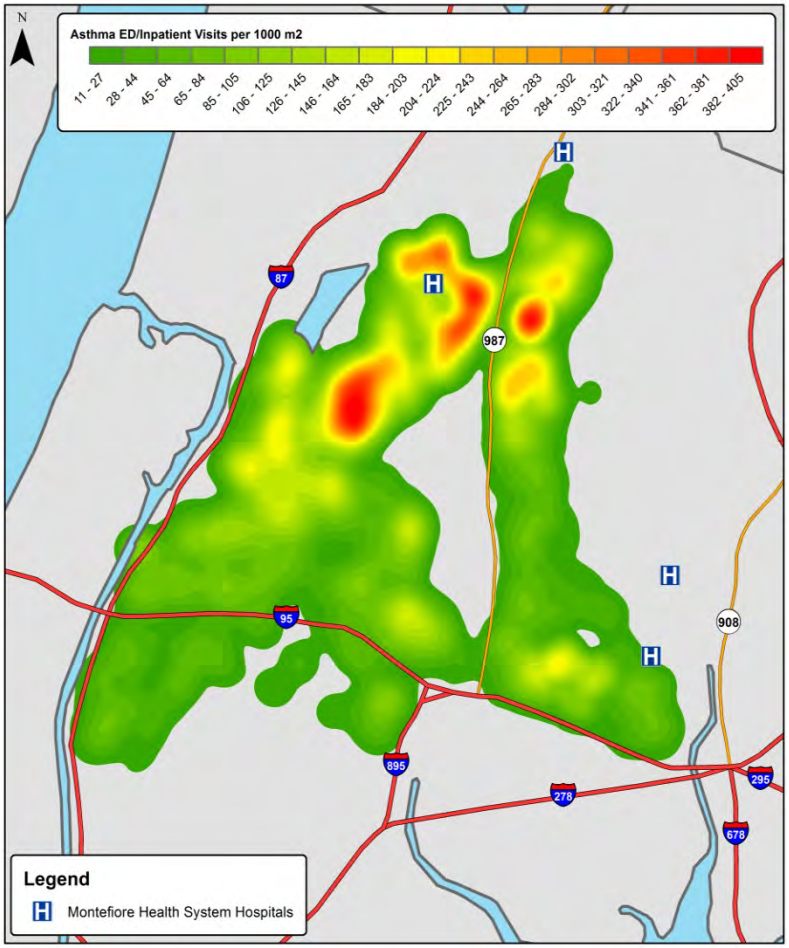
Hot Spot Analysis ~ Relative Risk
Arterial Ischemic Stroke (AIS)
Hospitalization (Primary Diagnosis) Discharged Data
Ages 35 Years & Over by ZIP Code
State Standard - (Adjusting for Age)

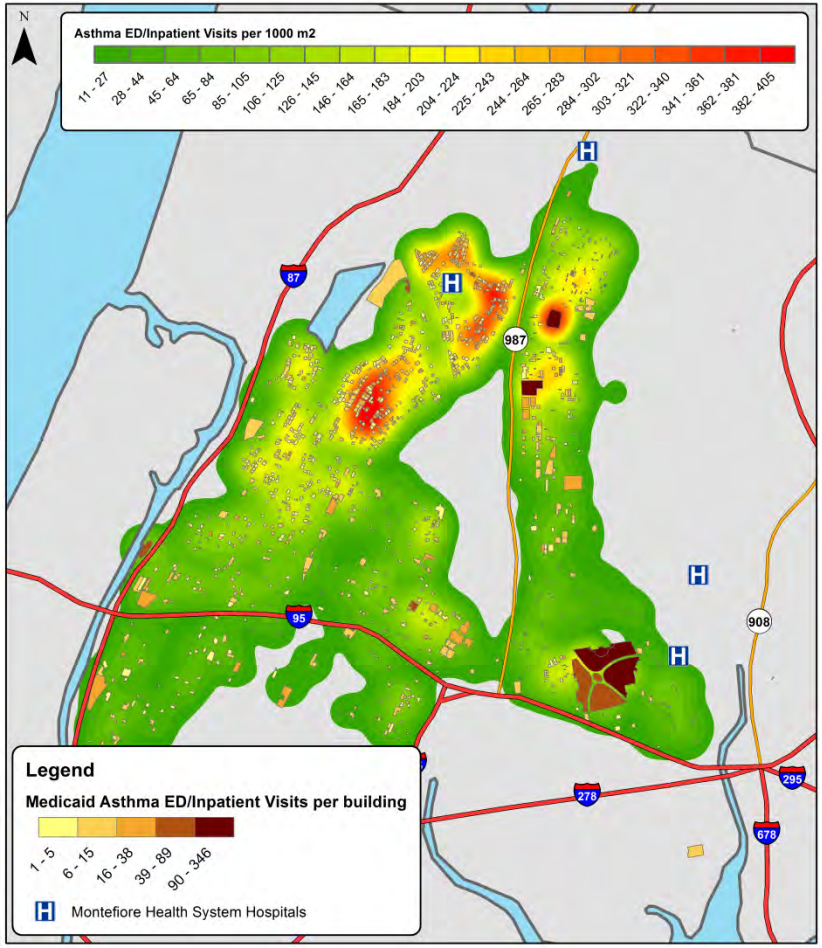
2005~2009



* Data Source: Virginia Health Information, Hospital Discharged Data

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.

Health outcomes and behavior data is now available for all urban communities

CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

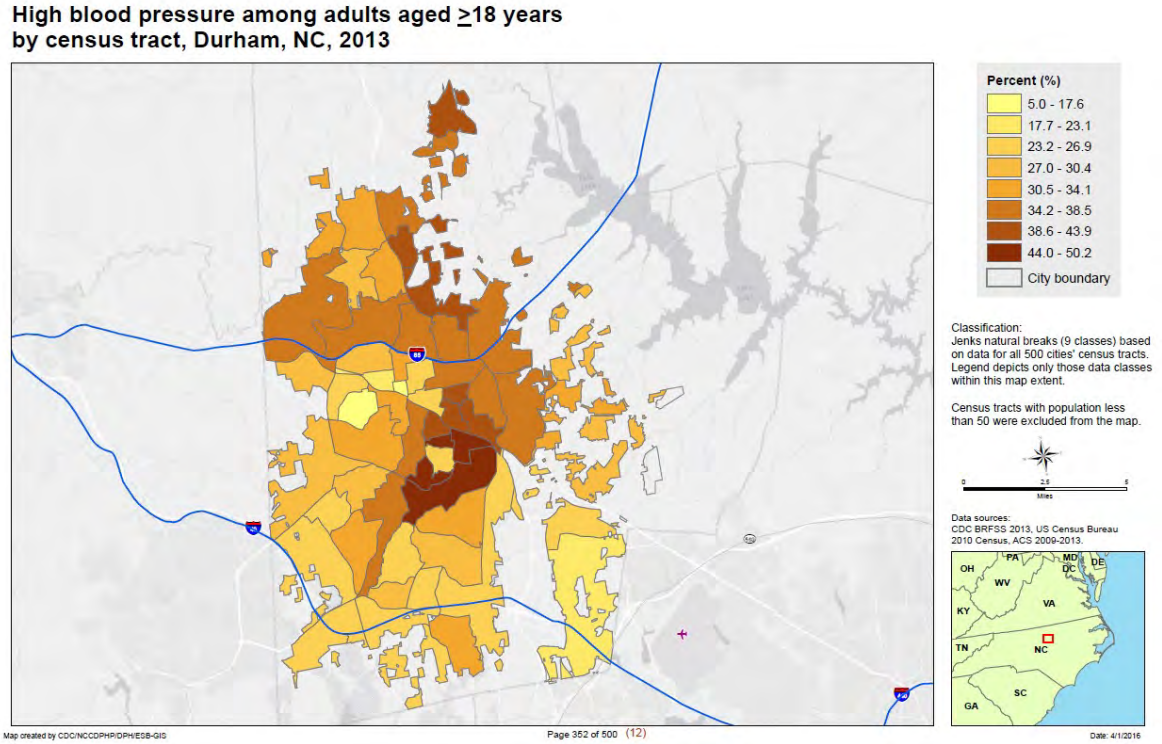
https://www.cdc.gov/500cities/

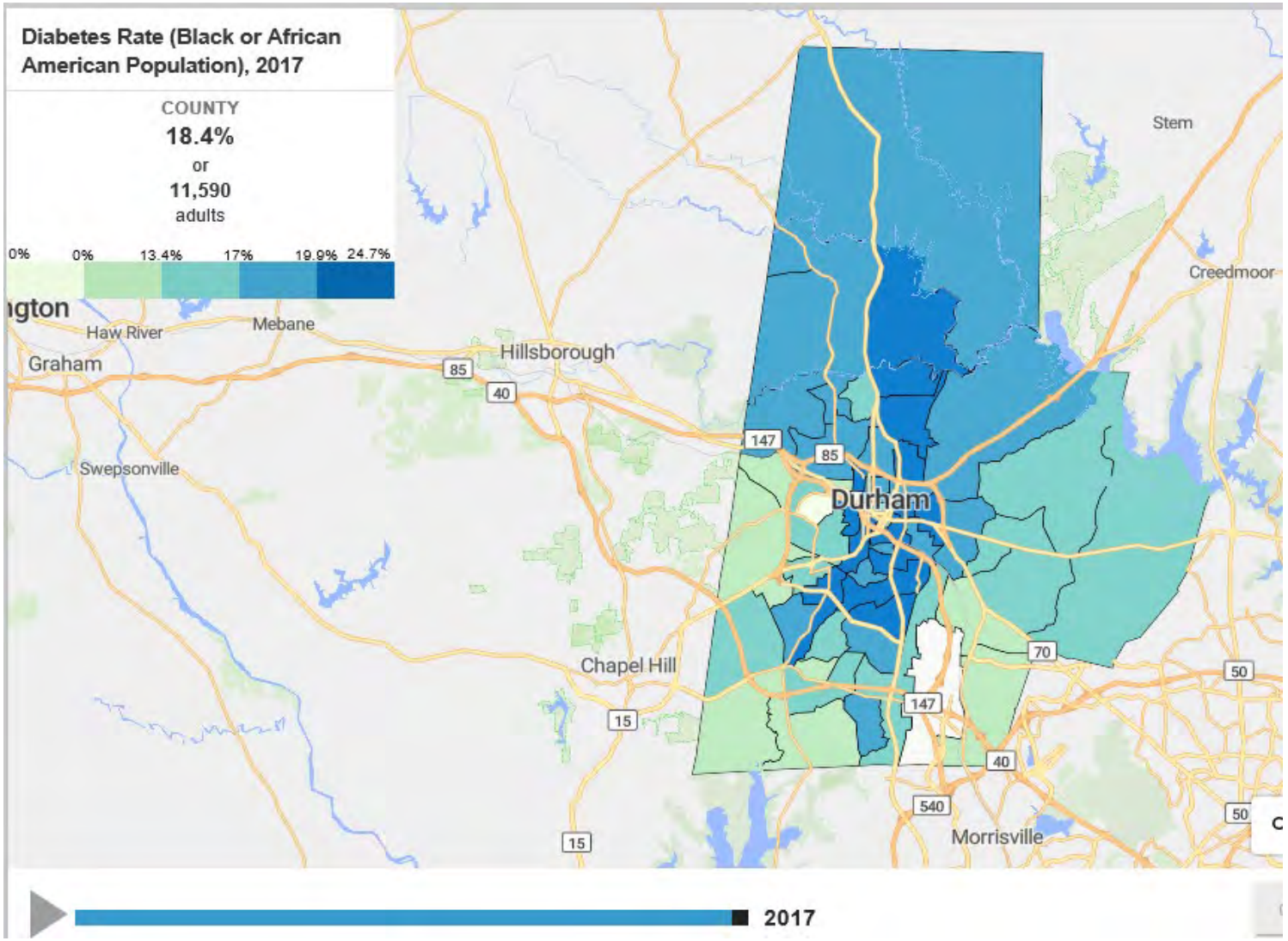
500 Cities: Local Data for Better Health

The 500 Cities project is a collaboration between CDC, the Robert Wood Johnson Foundation, and the CDC Foundation. The purpose of the 500 Cities Project is to provide city- and census tract-level small area estimates for chronic disease risk factors, health outcomes, and clinical preventive service use for the largest 500 cities in the United States. These small area estimates will allow cities and local health departments to better understand the burden and geographic distribution of health-related variables in their jurisdictions, and assist them in planning public health interventions. Learn more about the 500 Cities Project.

500 Cities: Local data for better health

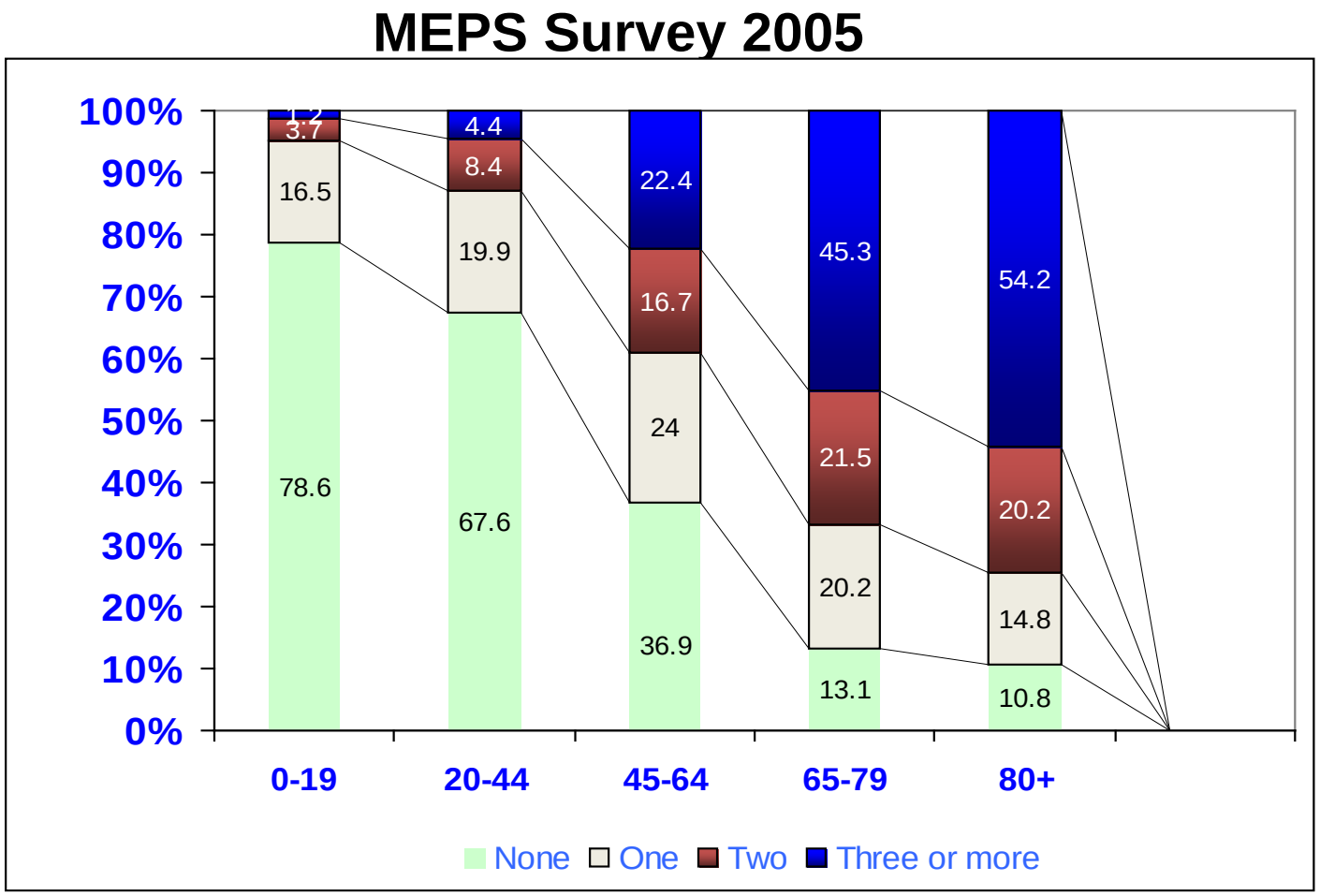
Data is Now Available for Targeted Interventions





Source: Duke Health and Lincoln Community Health Center

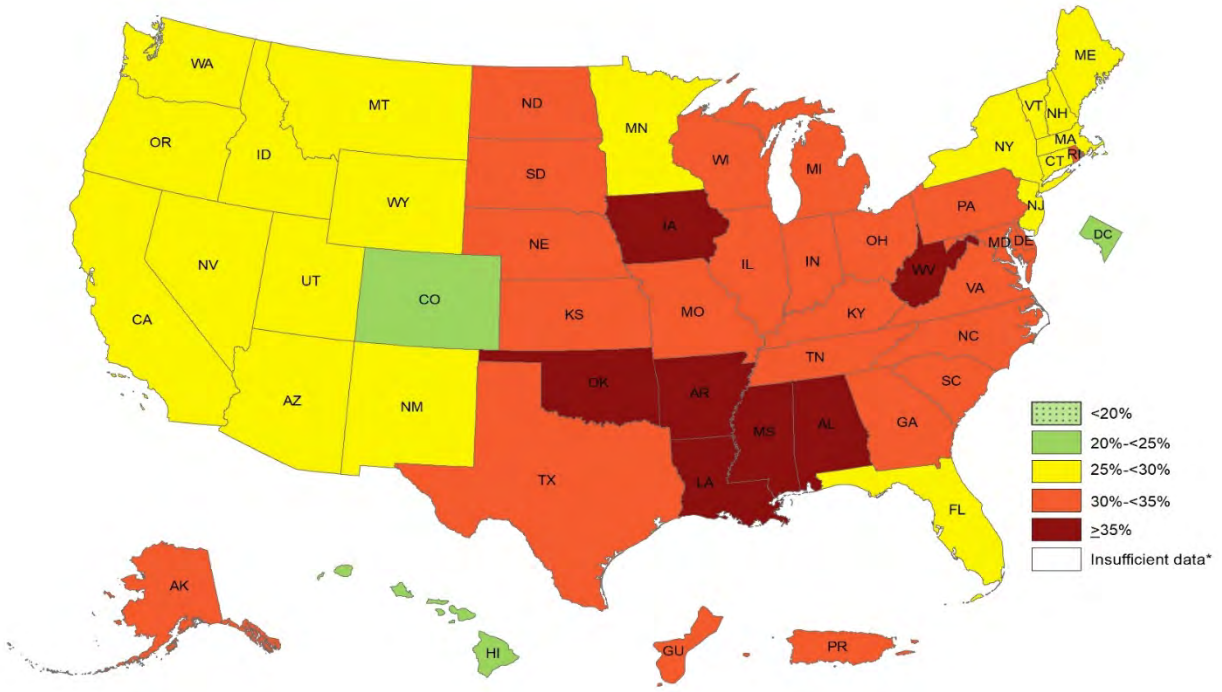
4. Things are going to get worse



*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.

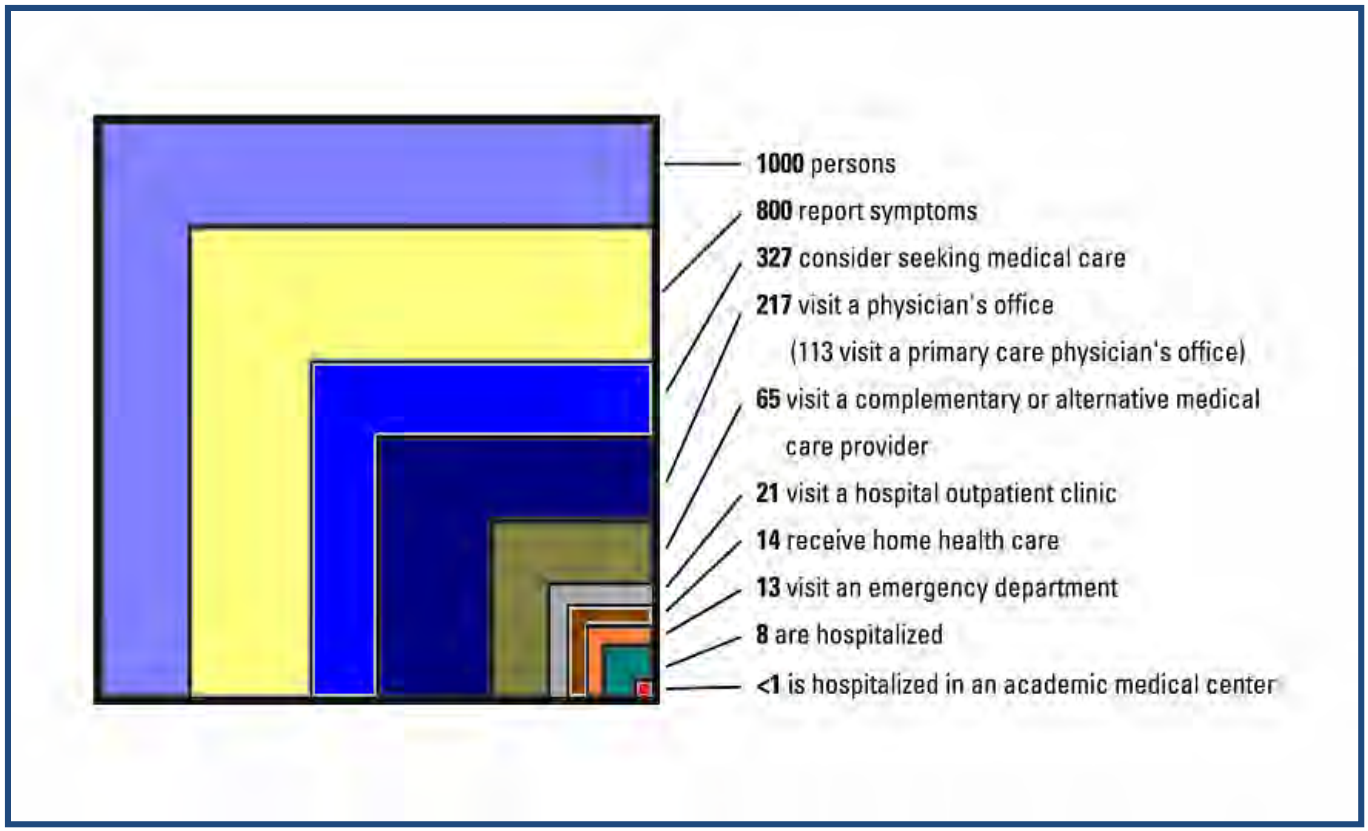
Prevalence¶ of Self-Reported Obesity Among U.S. Adults by State and Territory, BRFSS, 2017

¶ Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.



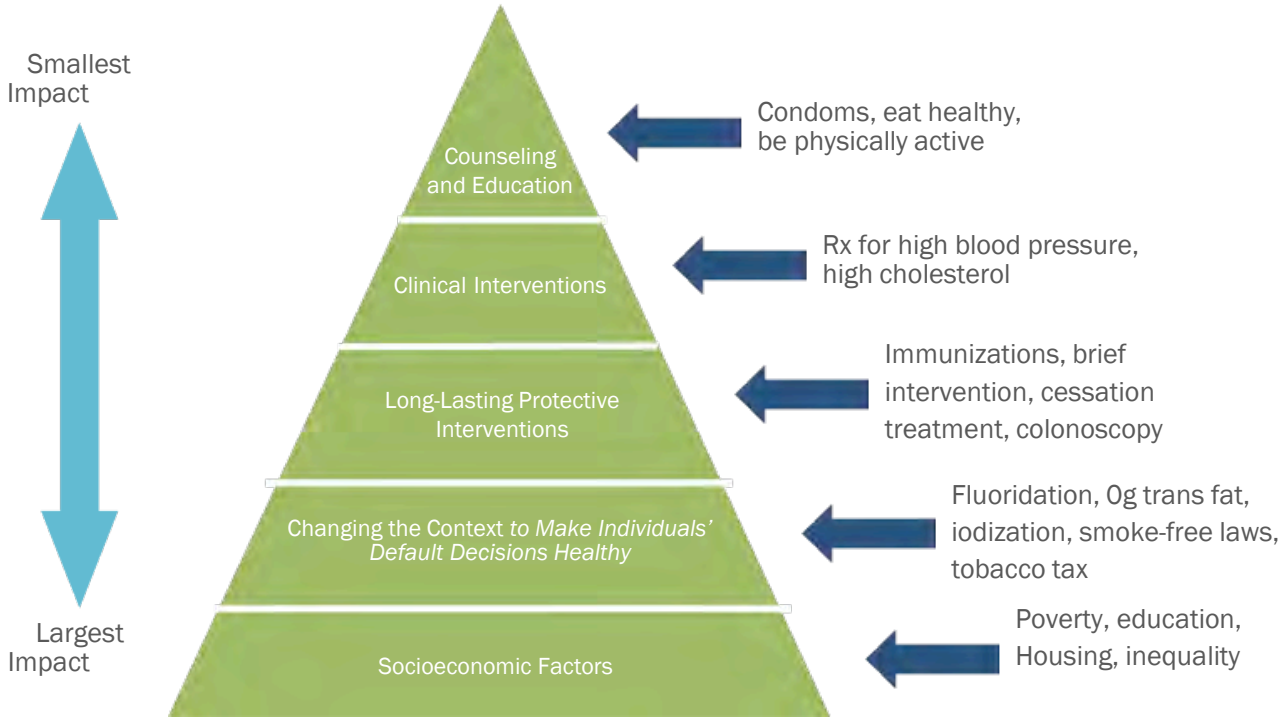
***Sample size <50 or the relative standard error (dividing the standard error by the prevalence) ≥ 30%.**

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.

Factors That Affect Health



Frieden TR. A framework for public health action. Am J Public Health. 2010;100(4):590–595.

Time for a new model of targeted data driven care that prevents progression of disease

Three Buckets of Prevention

Examples of Coalition Building-in Durham, NC

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

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

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 Medicine

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

Cook J, Michener JL, Lyn M, Lobach D, Johnson F. Practice Profile: Community Collaboration to Improve Care and Reduce Health Disparities. Health Affairs 29, No. 5 (2010):956-958

Boston Community Asthma Initiative

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

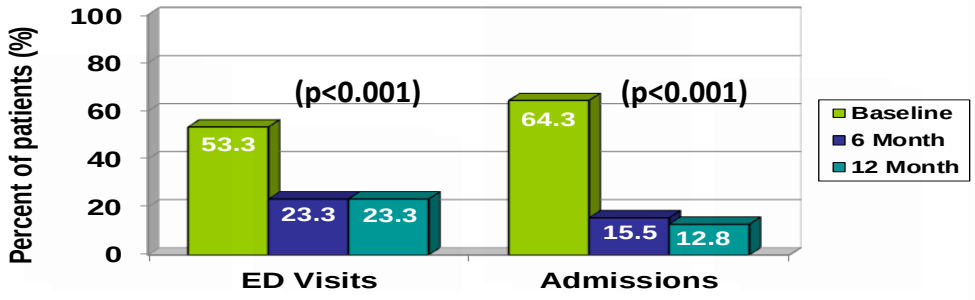
Boston Children's Hospital designed the program to focus on medical interventions rather than environmental influences.

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.

Moving Health Care Upstream

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



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

56% decrease at 12 Months

80% decrease at 12 Months

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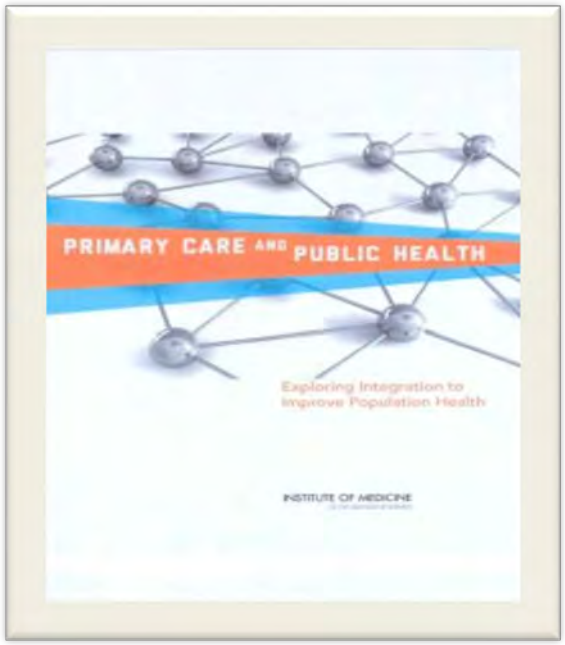
Scaling Up-IOM



2012

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

ww.iom.edu/primarycarepublichealth

Degrees of Integration:

Isolation — Mutual Awareness — Cooperation — Collaboration — Partnership — Merger

Principles of Partnerships Between Public Health and Health Care

- A shared goal of population health
- Community engagement
- Aligned leadership
- Sustainable systems
- Shared and collaborative use of data and analysis

The Model
Multi-Sector, Multi-Stakeholder Partnerships are Developed

Adapted from countyhealthrankings.org

NC Resource Platform

- A series of over 80 stakeholder interviews shed light on the **desire** to better connect the healthcare and human services sectors to better serve all North Carolinians, but also referenced numerous **barriers** to doing so.
- **The NC Resource Platform** is envisioned to provide the infrastructure needed to unite healthcare, human services and community-based organizations in a person-centered way.

NC Resource Platform Goals

- One statewide, shared public utility
  - Program of Foundation for Health Leadership and Innovation
  - Operationalized through NCCARE360
- Open to all communities, providers, care managers, social service agencies
- Across all players, systems, population health organizations
- Create a Coordinated Network to knit together healthcare and community services to create a Health System
- Initial Domains

  Food Security, Housing Stability, Transportation, Interpersonal Safety, Employment

---

Foundations are Supporting Local Coalitions

The BUILD HEALTH Challenge

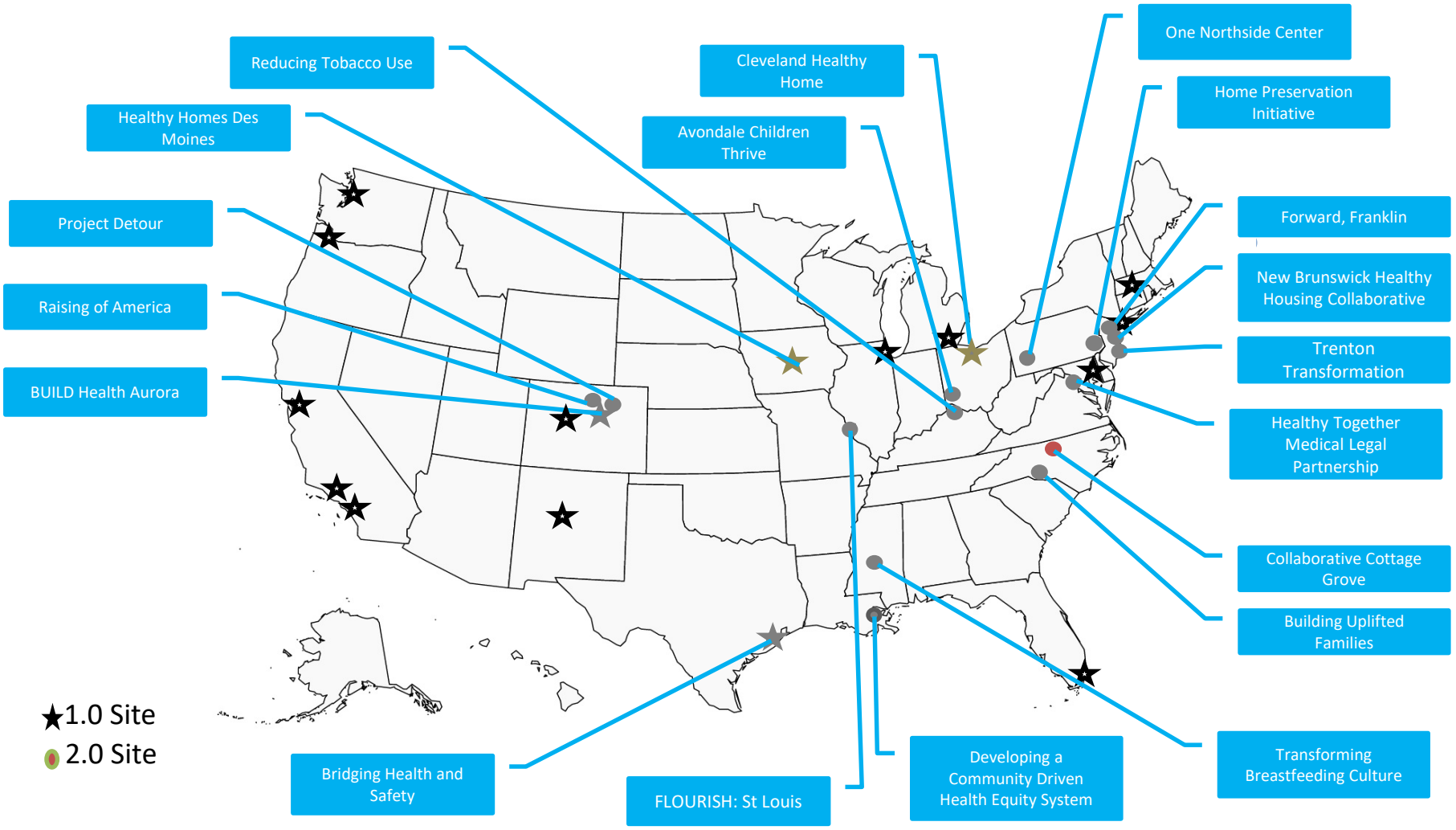
National awards program designed to support community collaborations in cities experiencing health disparities that are working to give everyone a fair chance to be healthy. BUILD 1.0 awarded **$8.5M** in August 2015 to support 18 community-driven projects, and has committed another **$5.25M** for a second cohort (BUILD 2.0) of 19 projects in September 2017. BUILD 3.0 community selections in process now.

Bold	Partnerships that aspire toward a fundamental shift beyond short-term programmatic work to **longer-term influences over policy, regulation, and systems-level change**
Upstream	Partnerships that focus on the **social, environmental and economic factors** that have the greatest influence on the health of a community, rather than on access or care delivery
Integrated	Partnerships that align the practices and perspectives of **communities, health systems and public health** under a shared vision, establishing new roles while continuing to draw upon the strengths of each partner
Local	Partnerships that engage **neighborhood residents and community leaders** as key voices and thought leaders throughout all stages of planning and implementation
Data-Driven	Partnerships that use **data from both clinical and community sources** as a tool to identify key needs, measure meaningful change, and facilitate transparency amongst stakeholders to generate actionable insights

Funders

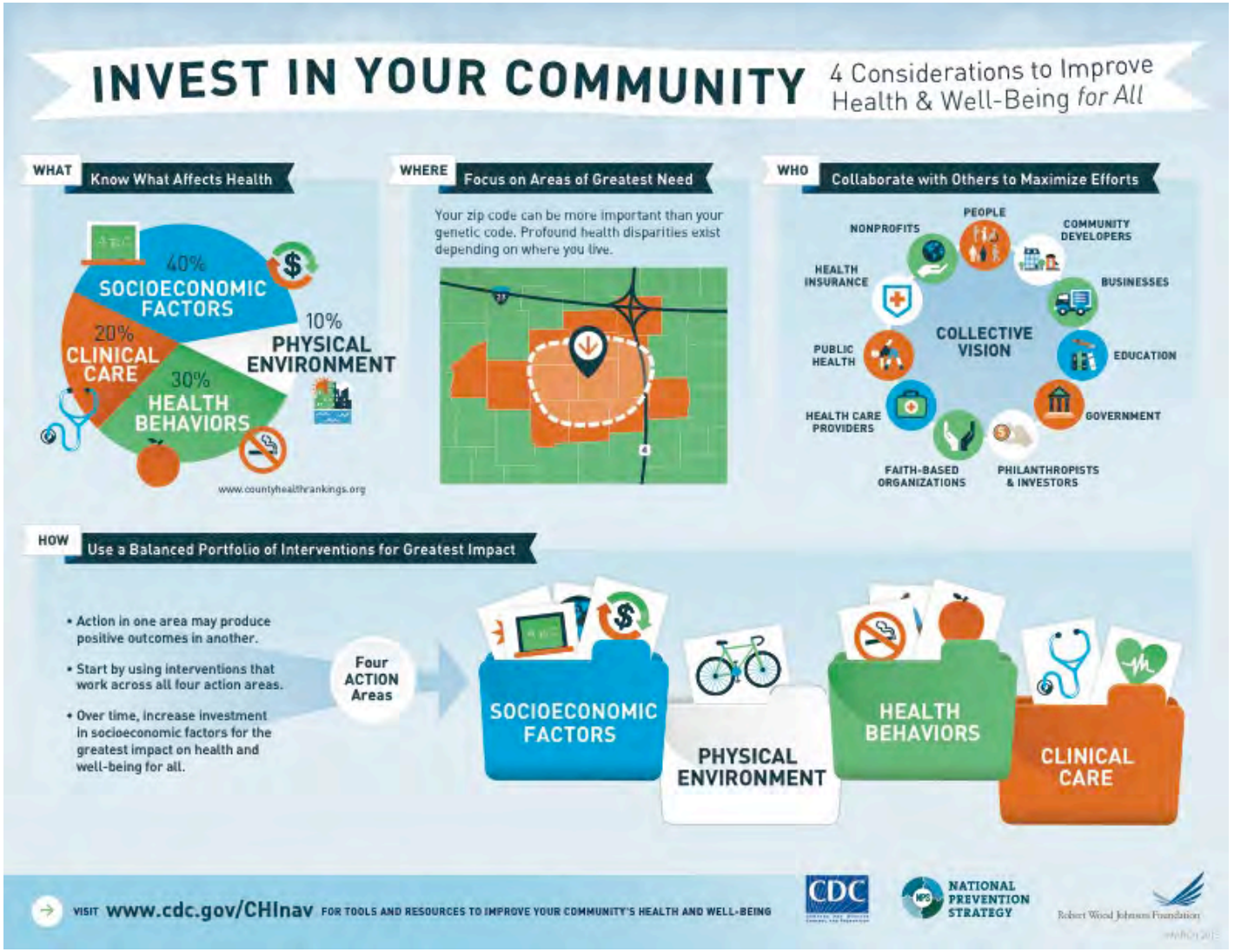
Technical Support:

BUILD 2.0 Awardee Map



A brief overview of all 19 award sites and their project will be shared in advance of the September convening.

Scaling Up-CDC



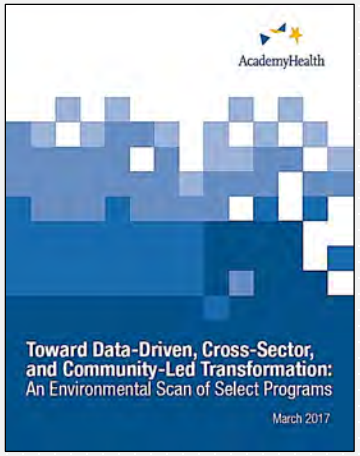
The movement is growing

A New "Movement": Nearly **600** local initiatives awarded or soon to be awarded

Program Duration: **8 months** to **5 years**

Spread and Scale: Neighborhoods, counties, Multicounty, cities

Find a Partnership:
www.practicalplaybook.org/page/find-partner

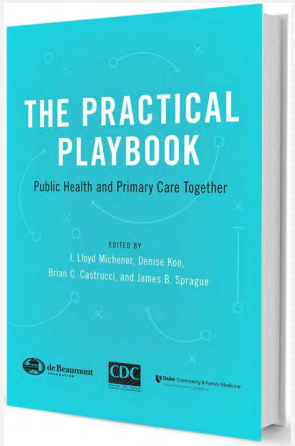


John D. and Catherine T. MacArthur Foundation

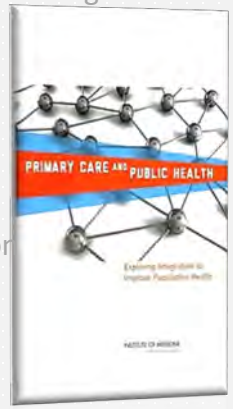
W.K. Kellogg Foundation

Robert Wood Johnson Foundation

The Kresge Foundation



Trinity Health

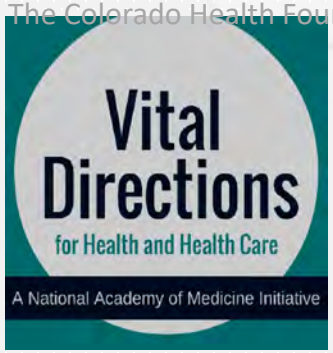


Rippel Foundation

The Pew Charitable Trusts

The Advisory Board Company

The Colorado Health Foundation



The BUILD HEALTH Challenge

Bloomberg Philanthropies

de Beaumont Foundation

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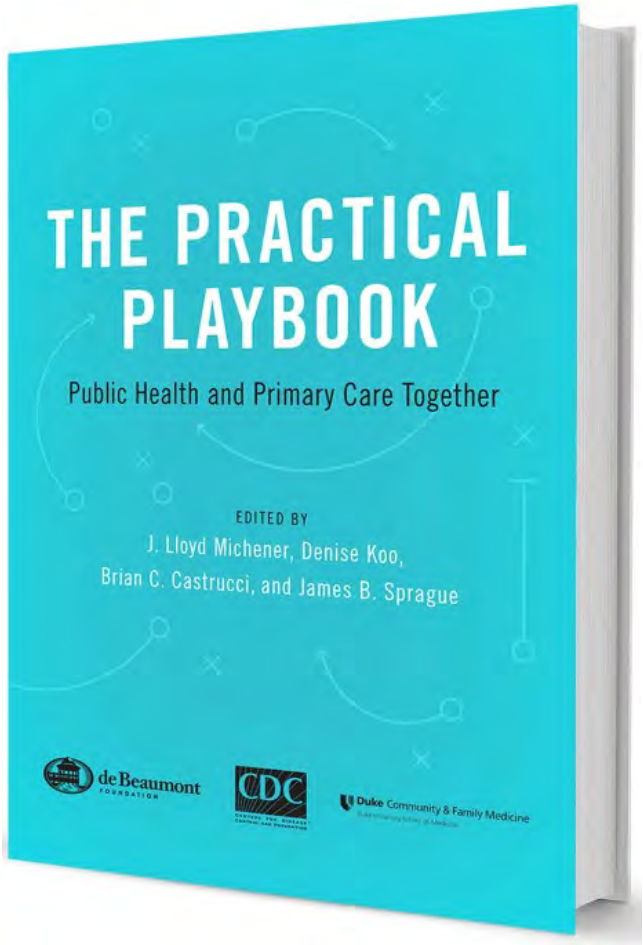

www.practicalplaybook.org

Users: 78,797 Pageviews: 358,877

Find a Partnership

www.practicalplaybook.org/page/find-partner

Order online at:
oup.com/us and enter promo code **ampromd9** at checkout to save 30%

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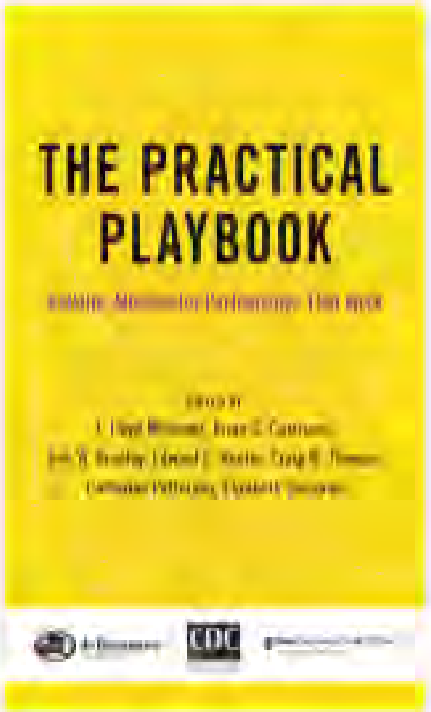
The Practical Playbook II: Making Multisector Partnerships that Work



- This new version focuses on cross sector partnerships that improve community health
- Authors contributed from a wide range of sectors: transportation, business, community organizations, education, etc.
- Available May 21, 2019

https://bit.ly/2CPKnpj

Discount code: AMPROMD9

The Practical Playbook - Content

1 . Introduction: Accelerating Partnerships for Health

(including roles of the different sectors)

2. Collaboration

(including role of PC in Pop Health, Accountable Health Communities)

3.Data

(including where to find it, how to use it)

4. Innovation

(including addressing SDOH in PC)

5. Sustainability & Finance

(including role of ties with business)

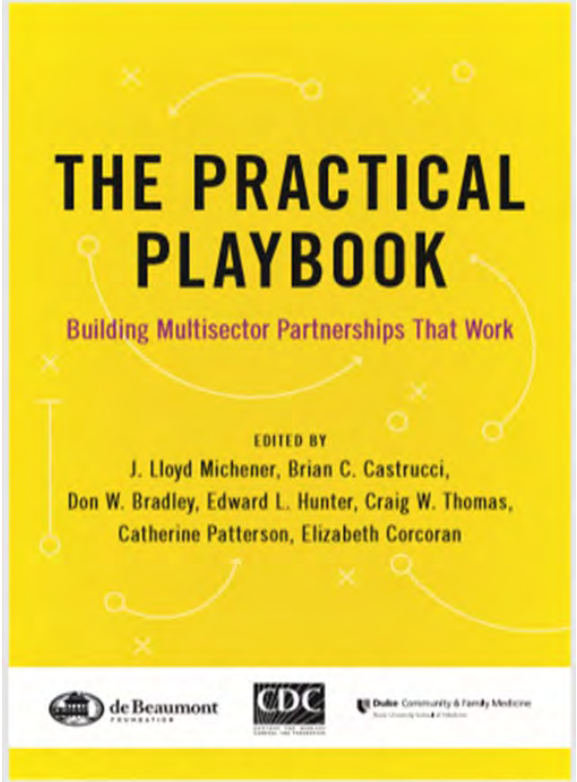
6. Policy

(including roles of PH and PC)

7. Training & Workforce

(including rural health, voices of the next generation)

8. Conclusion: The Next Steps Toward Population Health



All chapters will be online (and free) at www.practicalplaybook.org

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The End – and more!

For copies of the PPB II book, please contact PPBAdmin@dm.duke.edu

Faculty can also request inspection copies via the Oxford Press website

Thanks!!

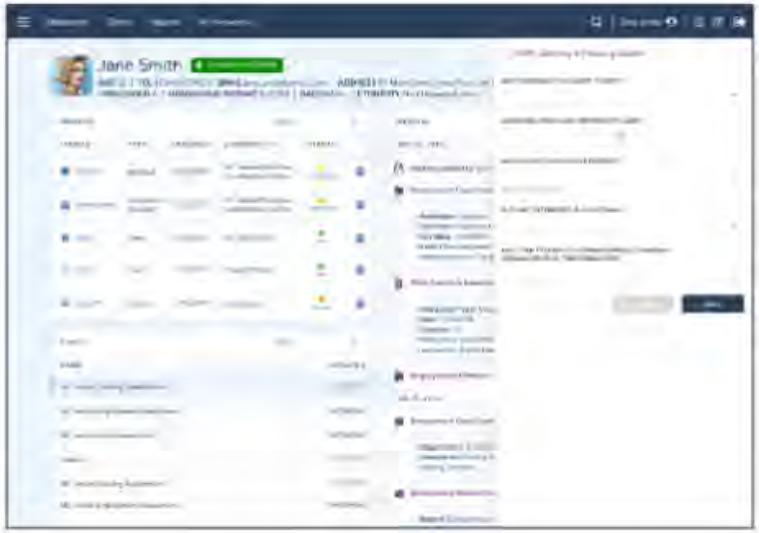
Additional slides about the NC Resource Platform

The NC Resource Platform Planning Group

- **NC DHHS**
- FHLI
- Blue Cross and Blue Shield of North Carolina Foundation
- Aetna Foundation
- United Health Group
- Gateway Health
- North Carolina Medical Society
- North Carolina Health Care Association
- North Carolina Community Health Center Association
- North Carolina Academy of Family Physicians
- North Carolina Pediatric Society
- Community Care of North Carolina
- North Carolina Association of Local Health Directors
- North Carolina Association of Free & Charitable Clinics
- No Kid Hungry NC, an initiative of the UNC Center for Health Promotion and Disease Prevention
- North Carolina Coalition to End Homelessness
- North Carolina Coalition Against Domestic Violence
- NC Alliance of YMCAs
- North Carolina Department of Health and Human Services

Who is missing?

Automated Workflows with Partners



- Configurable Screening
  - Will include statewide screening tool
  - Can add additional screening questions/ tools as needed
- Electronic Referral Management
  - Seamless referral workflow sends the right data to the right provider(s) to address specific needs
- Assessment/Care Plan Management
  - Custom care plans for each service that are attached to referrals so receiving providers get a head start
- Bi-Directional Communication/Alerts
  - Automated notifications keep all organizations up to date, while care team members can securely communicate with each other
- Outcomes
  - You get to know exactly what services were delivered, and the entire history for every intervention by your external partners

Screening Questions

- Goals
  - Routine identification of unmet health-related resource needs
  - Statewide collection of data
- Development
  - Technical Advisory Group
  - Released April 2018 for Public Comment
  - Field testing in 18 clinical sites
- Implementation
  - Recommended to be used across settings and populations
  - Launch of Managed Care: PHPs Required to Include in Care Needs Assessment

Health Screening

We believe everyone should have the opportunity for health. Some things like not having enough food or reliable transportation or a safe place to live can make it hard to be healthy. Please answer the following questions to help us better understand you and your current situation. We may not be able to find resources for all your needs, but we will try and help as much as we can.

Food

1. Within the past 12 months, did you worry that your food would run out before you got money to buy more? (Y/N)
2. Within the past 12 months, did the food you bought just not last and you didn't have money to get more? (Y/N)

Housing

3. Within the past 12 months, have you ever stayed: outside, in a car, in a tent, in an overnight shelter, or temporarily in someone else's home (i.e. couch-surfing)? (Y/N)
4. Are you worried about losing your housing? (Y/N)
5. Within the past 12 months, have you been unable to get utilities (heat, electricity) when it was really needed? (Y/N)

Transportation

6. Within the past 12 months, has a lack of transportation kept you from medical appointments or from doing things needed for daily living? (Y/N)

Interpersonal Safety

7. Do you feel physically and emotionally unsafe where you currently live? (Y/N)
8. Within the past 12 months, have you been hit, slapped, kicked or otherwise physically hurt by anyone? (Y/N)
9. Within the past 12 months, have you been humiliated or emotionally abused by anyone? (Y/N)