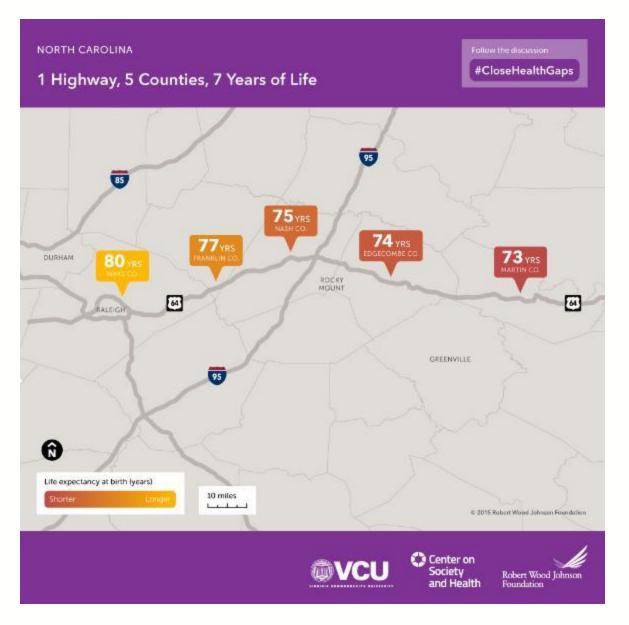


It Doesn't Have to be This Way

Lisa C. Richardson, MD, MPH Director, Division of Cancer Prevention and Control, CDC N.C. Public Health Leaders Conference January 23, 2020







Source: www.societyhealth.vcu.edu/work/the-projects/mapping-life-expectancy.html

Health Equity Challenges Rooted Nation's Past







PRESENTED BY: YOUSUF ZAFAR, MD, MHS, FASCO @yzafar

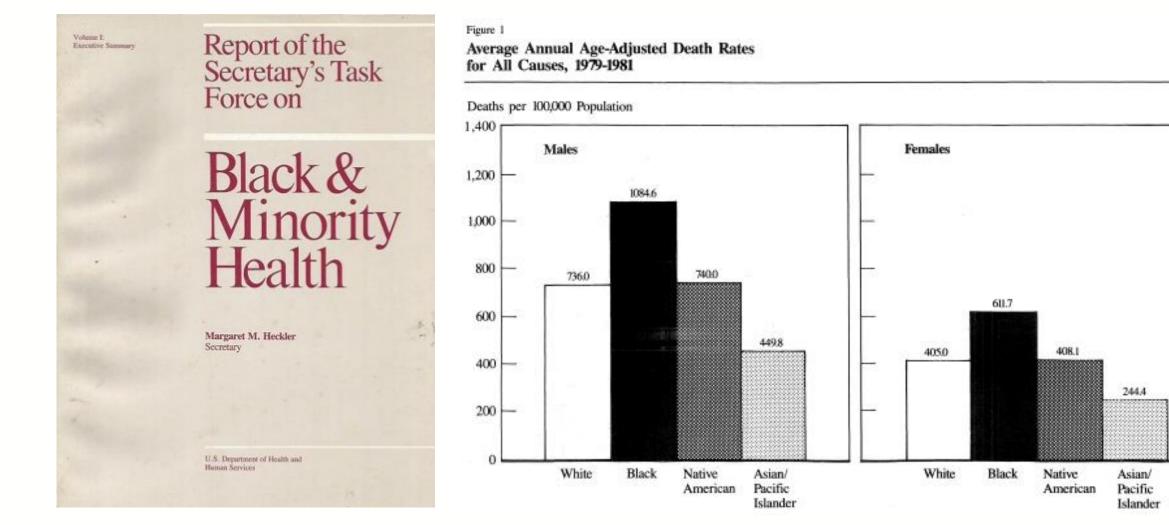
Sildes ore the property of the author, permission required for reuse.



PRESENTED BY: YOUSUF ZAFAR, MD, MHS, FASCO @yzafar

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Health Disparities Gain National Focus

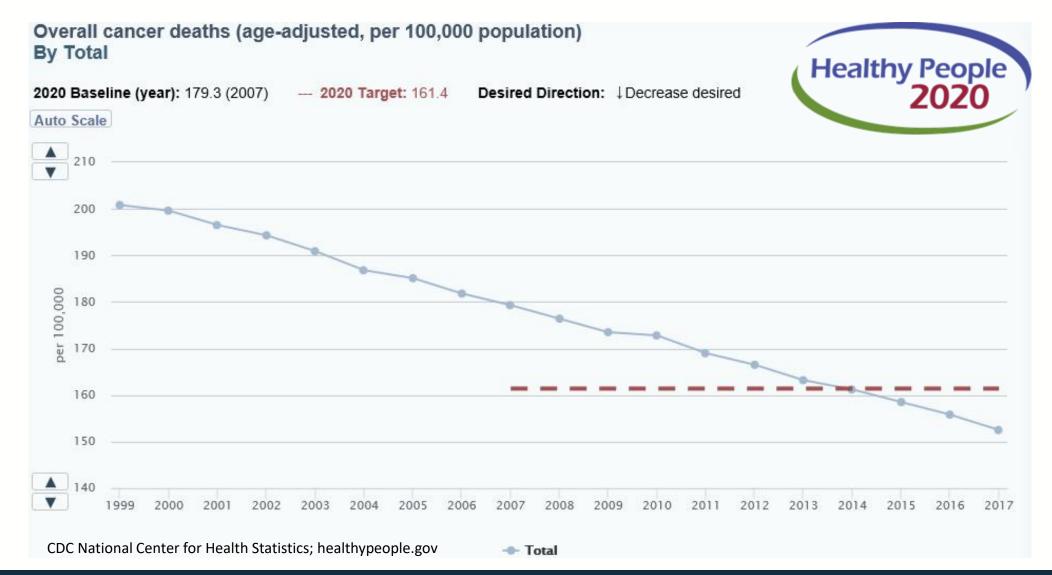


7 Division of Cancer Prevention and Control

Progress and Opportunities



Deaths from Cancer Continue to Decline



⁹ Division of Cancer Prevention and Control

Cancer Advances not Benefitting all Equally

Age-Adjusted Cancer Death Rates for Blacks and Whites, Selected Years 1950-2016

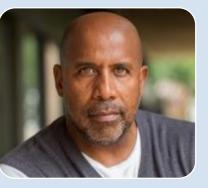
	1950	1960	1970	1980	1990	2000	2010	2016
White	194.6	193.1	196.7	204.2	211.6	197.2	172.4	156.6
Black	176.4	199.1	225.3	256.4	279.5	248.5	203.8	177.9
Difference	-18.2	6.0	28.6	52.2	67.9	51.3	31.4	21.3
Ratio	.9	1.0	1.2	1.3	1.3	1.3	1.2	1.1

SOURCE: National Center for Health Statistics, Health, United States 2017. NOTES: Deaths per 100,000 population, "Difference" is calculated as black death rates minus white deaths rates for each cause of death. "Ratio" refers to the ratio of black deaths to white deaths. Adapted from Williams & Jackson https://doi.org/10.1377/hlthaff.24.2.325

Despite Progress, Disparities Persist











African American Women are twice as likely as white women to be diagnosed with and die from triple negative breast cancer * Sexual minority cancer survivors have poorer care access quality of life than their heterosexual counterparts **

African American men die more often from prostate cancer than any other racial/ethnic group +

Women in rural areas have higher incidence and death from cervical cancer than women in metro areas ++ Asian and Pacific Islanders are more likely than any other racial/ethnic group to die from liver cancer +++

Cancer Health Disparities Defined

• NCI defines as:

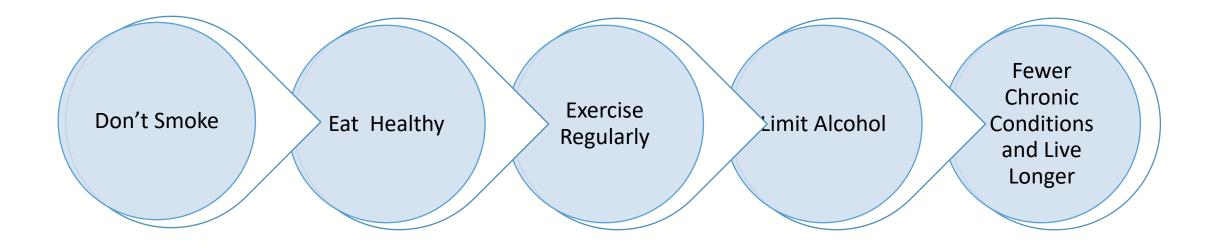
adverse differences in cancer incidence, prevalence, death, survivorship or burden of cancer or related health conditions that exist among **specific population groups** in the United States.

• Population groups:

- age,
- disability,
- education,
- ethnicity,
- gender,
- geographic location,
- income, or
- race.



Lifestyle Factors influence Health and Wellbeing



Ford et al, Am J Public Health. 2011;101:1922–1929. doi:10.2105/AJPH.2011.300167

What is "modifiable"

Non-modifiable

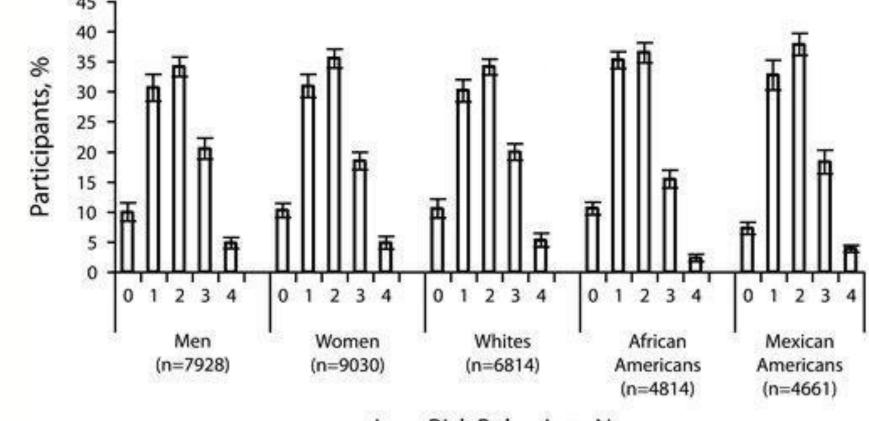
- Age
- Race/ethnicity
- Genetics
- Poverty

Potentially modifiable

- Factors that accelerate aging
- Policies that prohibit discrimination
- Gene expression (epi-genetics)
- Educational and economic opportunities

Impact of Low-risk Lifestyle Behaviors on Health

Distribution of low-risk lifestyle behaviors among participants aged 17 years or older at baseline: National Health and Nutrition Examination Survey III Mortality Study, United States, 1988–2006.



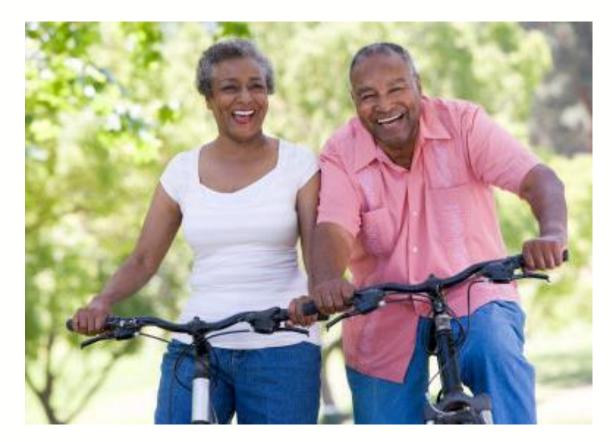
Bars represent 95% confidence interval.

Low-Risk Behaviors, No.

Ford et al. Am J Public Health. 2011;101:1922–1929. doi:10.2105/AJPH.2011.300167

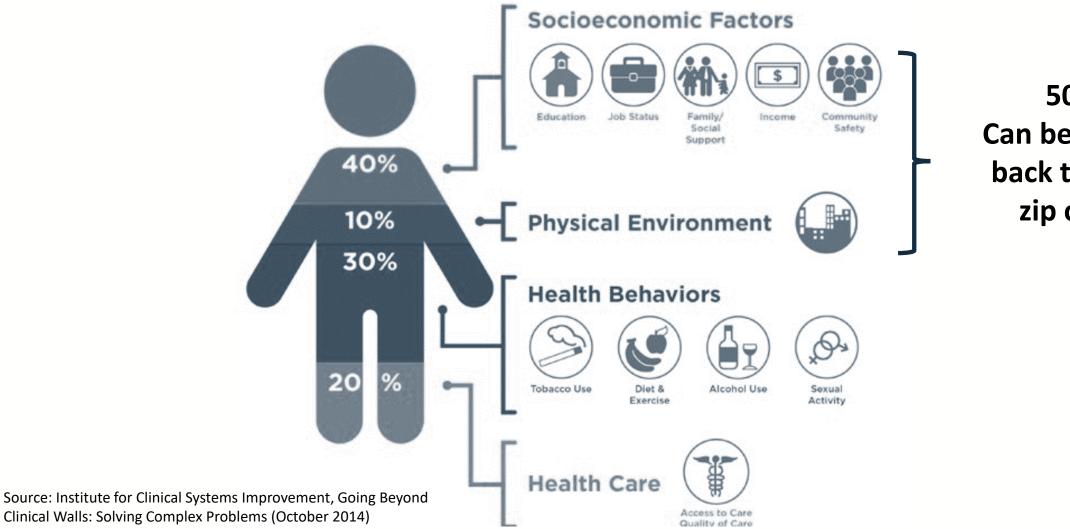
Powerful Benefit of Low Risk Lifestyle Factors

- Mortality from malignant neoplasms
 AHR=0.34; 95% CI=0.20, 0.56 [4 low risk factors versus none]
- 4 high risk lifestyle factors accounted for 14.4 years of chronological age for malignant neoplasms
- Population attributable fraction was 34% for mortality for malignant neoplasms (using the category of no high risk behaviors as referent)



Ford et al, Am J Public Health. 2011;101:1922–1929. doi:10.2105/AJPH.2011.300167

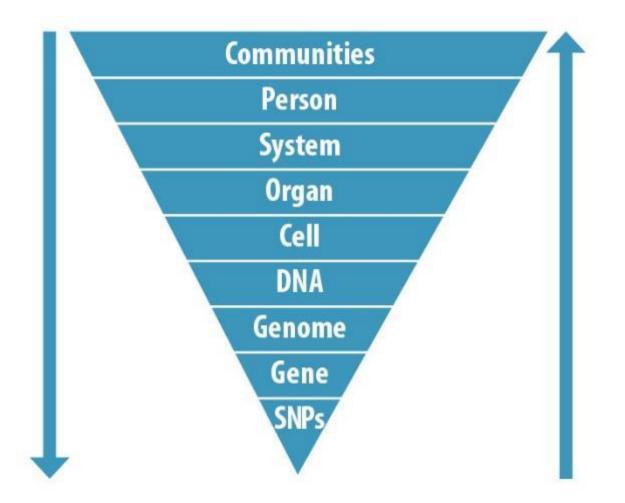
How Social Determinants Impact Health



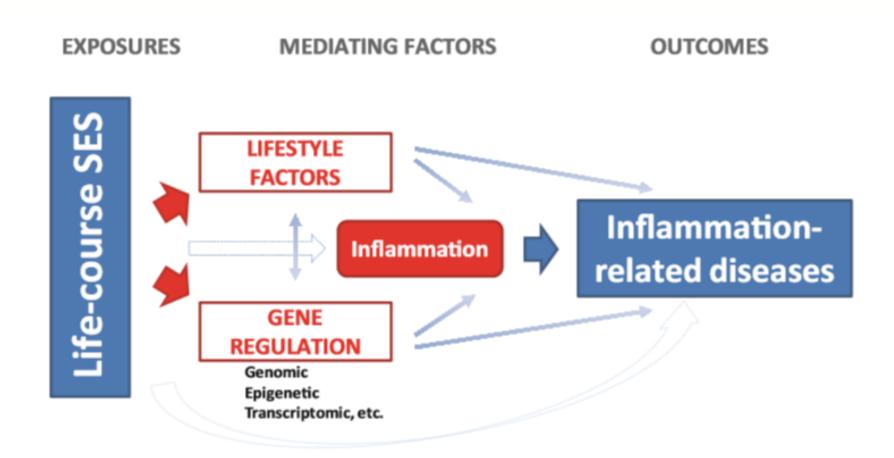
50% Can be traced back to your zip code

Division of Cancer Prevention and Control 17

Population-Based Approach to Individualized Care



Life-course Exposures Create Physiological Changes



Closing the Gaps with Population Impact

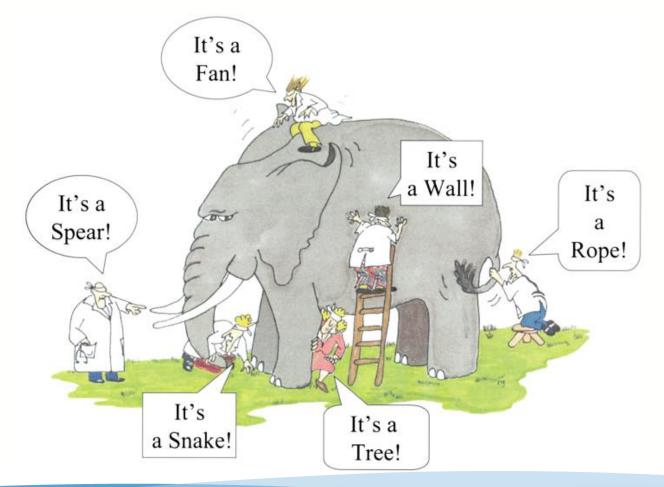
Health Outcomes Overall Still Less than Ideal

Unites States lags behind peer nations in efficiency, access, equity and outcomes

header	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	K
OVERALL RANKING	2	9	10	8	3	4	4	6	6	1	11	
Care Process +	2	6	9	8	4	3	10	11	7	1	5	
Access +	4	10	9	2	1	7	5	6	8	3	11	
Administrative Efficiency +	1	6	11	6	9	2	4	5	8	3	10	
Equity +	7	9	10	6	2	8	5	3	4	1	11	
Health Care Outcomes +	1	9	5	8	6	7	3	2	4	10	11	

Schneider, Eric C, et al. "Mirror, Mirror 2017: International Comparison Reflects Flaws and Opportunities for Better U.S. Health Care: Commonwealth Fund." Mirror, Mirror 2017: International Comparison, The Commonwealth Fund, https://www.commonwealthfund.org/publications/fund-reports/2017/jul/mirror-mirror-2017-international-comparison-reflects-flaws-and.

Population-Level Benefits of Prevention Require Multi-sector/disciplinary Collaborations



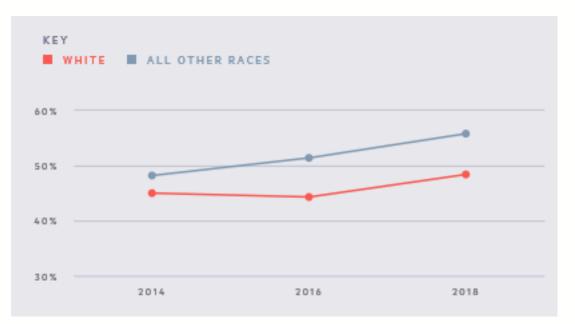
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Comprehensive Public Health Systems

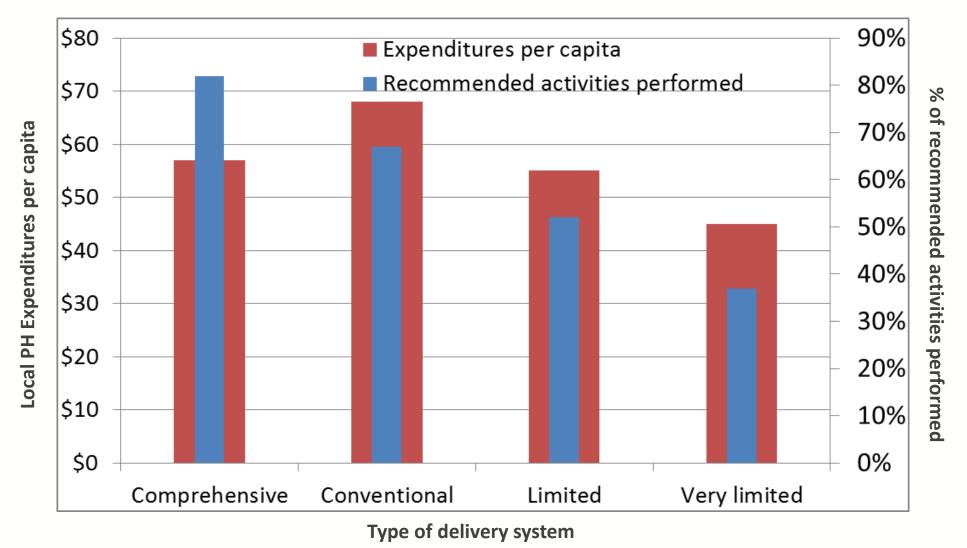
Robert Wood Johnson Foundation Culture of Health National Metrics:

- Implement a **broad scope** of population health activities
- Through **dense networks** of multi-sector relationships
- Including central actors to coordinate actions

51% of U.S. population served by a comprehensive public health system in 2018



Comprehensive Systems do More with Less



Mays GP, Hogg RA. Economic shocks and public health protections in US metropolitan areas. Am J Public Health. 2015;105 Suppl 2:S280-7.

Economic Effects Attributable to Multi-Sector Work

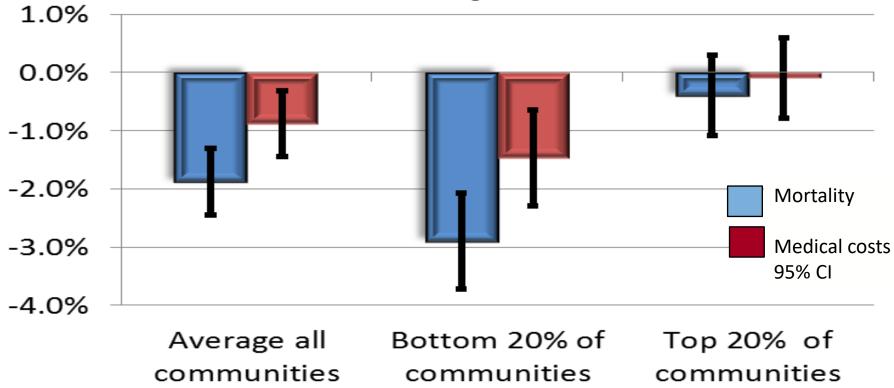
Impact of Comprehensive Systems on Life Expectancy by Income (Chetty), 2001-2014



Models also control for racial composition, unemployment, health insurance coverage, educational attainment, age composition, and state and year fixed effects. N=1019 community-years. Vertical lines are 95% confidence intervals

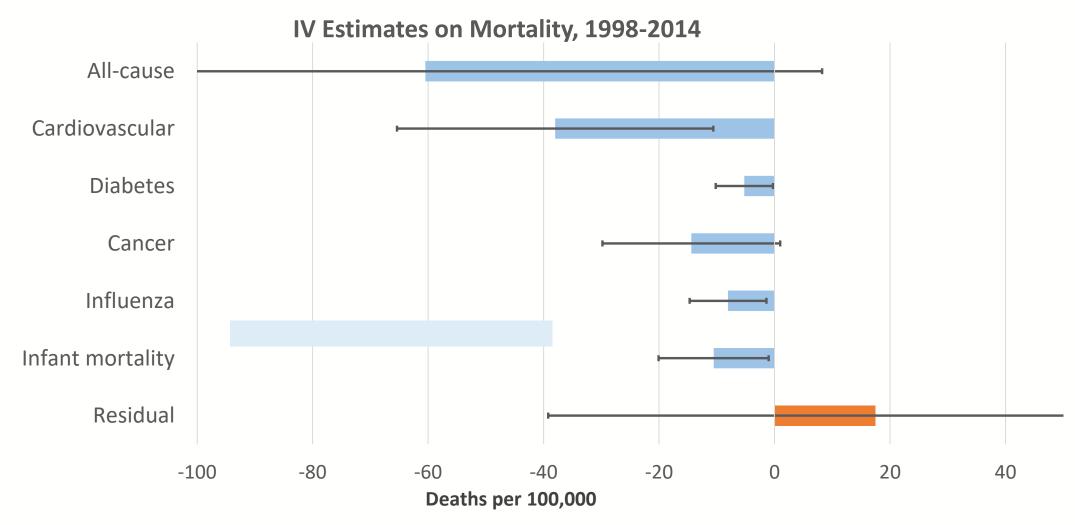
The Case for Equity: Larger Gains in Low-Resource Communities

Effects of Comprehensive Population Health Systems in Low-Income vs. High-Income Communities



Mays GP, Hogg RA. Economic shocks and public health protections in US metropolitan areas. Am J Public Health. 2015;105 Suppl 2:S280-7. Log IV regression estimates controlling for community-level and state-level characteristics

Impact of Comprehensive Systems on Health

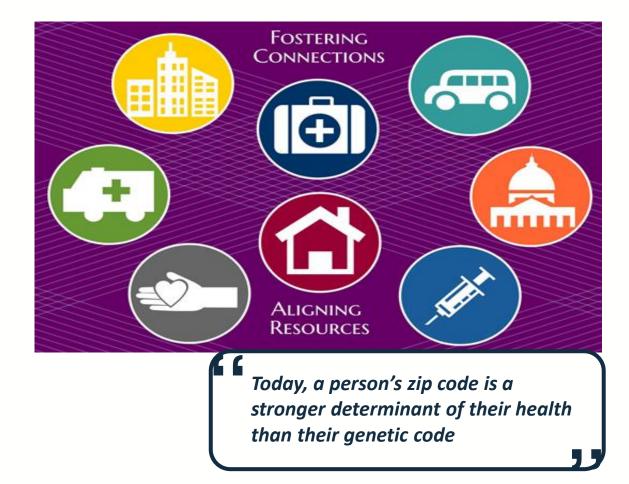


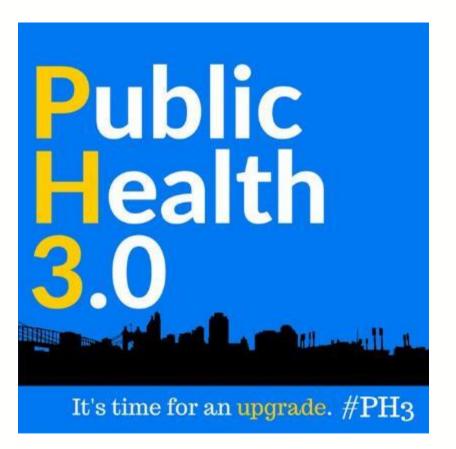
Mays GP, Hogg RA. Economic shocks and public health protections in US metropolitan areas. Am J Public Health. 2015;105 Suppl2:S280-7. Models also control for racial composition, unemployment, health insurance coverage, educational attainment, age composition, and state and year fixed effects. N=1019 community-years

What is CDC Doing?



Focusing on the Social Determinants of Health





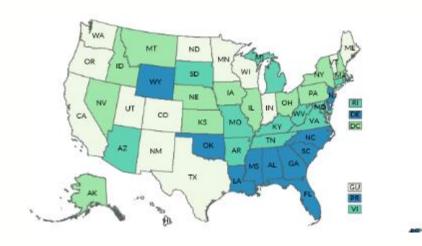
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Behavioral Risk Factor Surveillance System

Gaining Insight into the Health and Wellness of the LGBT Community

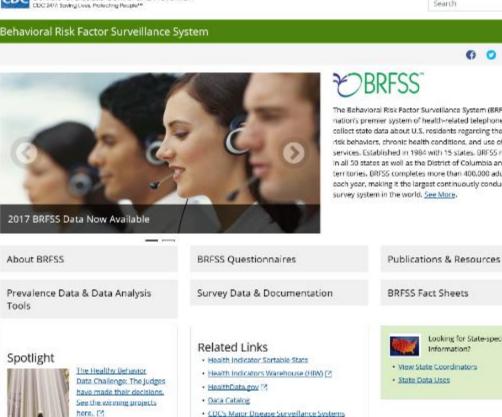
Prevalence Trends and Data

Men aged 40+ who have had a PSA test within the past two years (variable calculated from one or more BRFSS questions) (Crude Prevalence) View by: Overall **Response: Yes**



www.cdc.gov/brfss/index.html





Centers for Disease Control and Prevention

6 0 0 0 0

A-2 Index

Q

The Behavioral Risk Factor Surveillance System (BRFSS) is the nation's premier system of health-related telephone surveys that collect state data about U.S. residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services. Established in 1984 with 15 states. BRFS5 now collects data In all 50 states as well as the District of Columbia and three U.S. territories. BRFSS completes more than 400,000 adult interviews each year, making it the largest continuously conducted health survey system in the world. See More.

Looking for State-specific

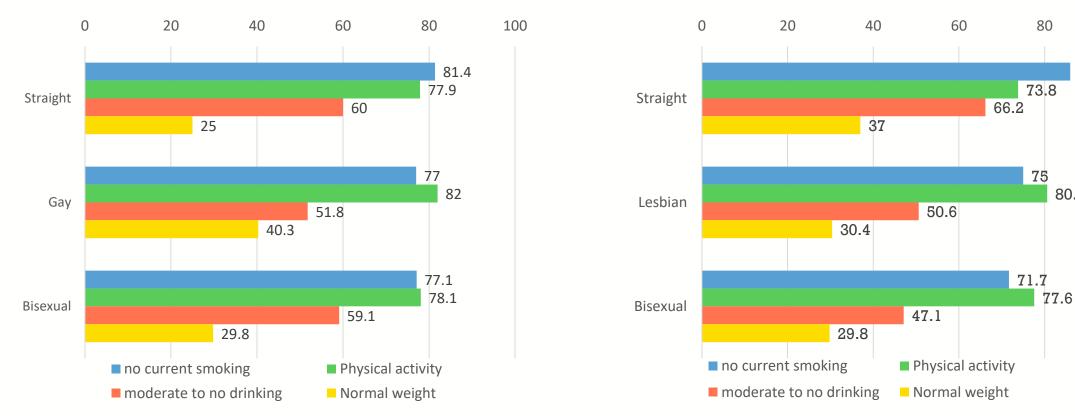
Information?

Search

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BRFSS Studies

Distribution of Health-related behaviors in men aged \geq 25 years, by sexual orientation



Cunningham TJ, Xu F, Town M. Prevalence of Five Health-Related Behaviors for Chronic Disease Prevention Among Sexual and Gender Minority Adults – 25 U.S. States and Guam, 2016. MMWR Morb Mortal Wkly Rep. 2018 Aug 17; 67(32): 888–893.

Division of Cancer Prevention and Control

31

Reliable. Trusted. Scientific.

Distribution of Health-related behaviors in women aged \geq 25 years, by sexual orientation

100

86

80.6

County-Level Data

Small Area Health Insurance Estimates (SAHIE) demographic, economic, and insurance insights aid surveillance efforts

- Highlights local variation
- Provides better understanding of cancer control efforts and impacts
- Enables more targeted interventions

census.gov/programs-surveys/sahie.html

Small Area Health Insurance Estimates: 2017

Small Area Estimates

Current Population Reports

By Lauren Bowen and Carolyn Gam PSD-05 Ages 2012

INTRODUCTION

This report provides a summary of the 2017 release of the U.S. Census Bulyeau's Small Area Health Insurance Estimates (SAHE) program. SAHE are the only source of data for single-year estimates of health insurance coverage status for all counties in the United States by selected economic and demographic characteristics (see text box "Small Area Health Insurance Estimates").*

The 1-year Amorican Community Survey (ACS) provides detailed estimates of health insurence coverage for counties with populations of 65,000 or more.* As a data anhancement to the ACS, the SAHIE model based estimates are a vital source of information for measuring year-to-year change in health insurance coverage at the county leet. The data presented in this report show changes in health insurance coverage between 2016 and 2017, as well as changes in health insurence coverage between 2013 and 2017. In addition, it presents results on the differences in coverage among selected demographic groups.

HIGHLIGHTS

- Among the population under ege 65, the estimated county unitaured rate in 2017 ranged trom 2.3 percent to 33.7 percent. The median county uninsured rate was 10.6 percent.
- In 2017, 38.4 percent of counties (1,206 counties) had an estimated uninsured rate at or below 10 percent for the population under age 65.
- From 2016 to 2017, for the population under age 65, over 91 percent of counties (2,879 counties) did not theve a statistically signifcant change in their uninsured rate. Among counties that experienced change in their uninsured rates, more saw an increase (183 counties) than a decrease (79 counties).

¹Plasse rater to the detailed definition of the insured population

at owwe person gos/programs-surveys/sahis/sboyt/fep.htmls.

OVERVIEW OF SAHLE

 The Cansus Rumer's Oscioeans Review Riserd and Discloser Anotherso Officians have moveed the date product for insudfraged discussor of contributes information and have approach to be actimates of health insurances coverage for both there are another to be under dates. The SAHE program releases timely, reli- able actimates of health insurances coverage for both there are another to be under dates. The SAHE program there are activates produced by the approximate program succes SAHE data to determine aligibility for public health services. In fact, the SAHE program there are advected to be under dates. Approximately 7.2 means of the single insurance coverage partially funded by the Centers for Disease Centrel and Prevention's (CDC) Division of Cancer Prevention's coverage.

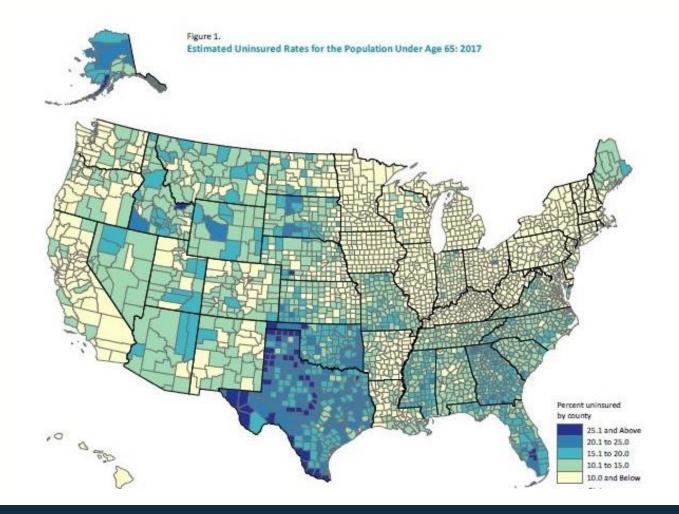
persons of the board 2.2, propulsion, it should be readed that the ACE releases 1 and registermental tables of health reacting conage estimates for geographic starts with populating generate them 20.000 to severe these tables do not previde the same economic and deverginghic detail as 20.015.



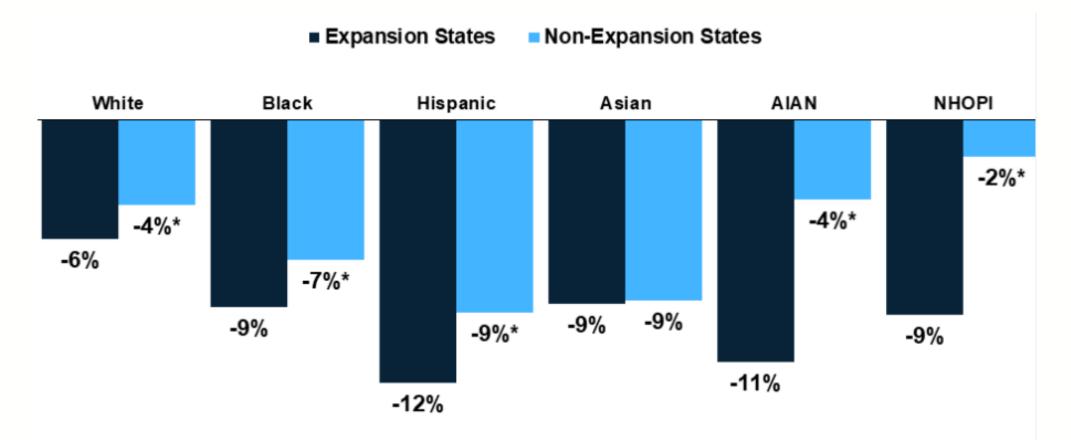
U.S. Department of Commerce Economics and Statistics Administration US, CENSUS BUREAU CONSUSSION

U.S. Census Bureau - Uninsured Population Age 65 Under

2017 Small Area Health Insurance Program

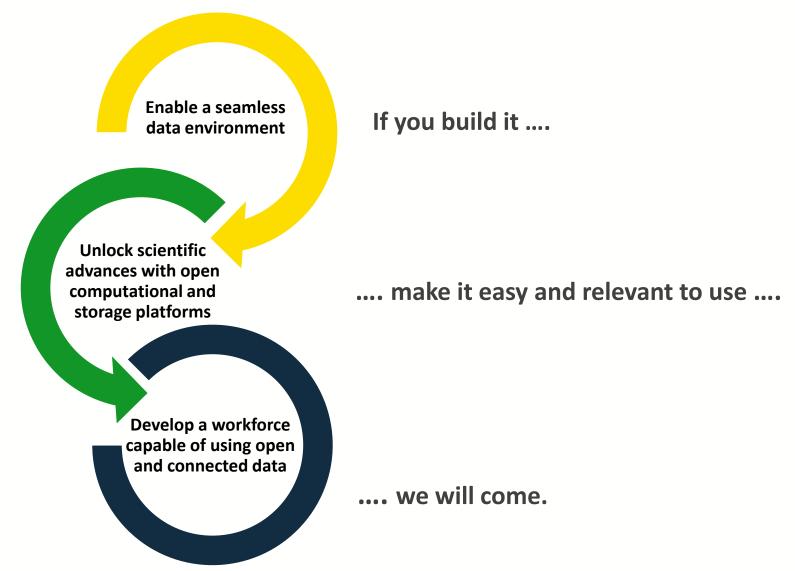


Change in Uninsured Rates by Race/Ethnicity and State Medicaid Expansion, 2013-2017

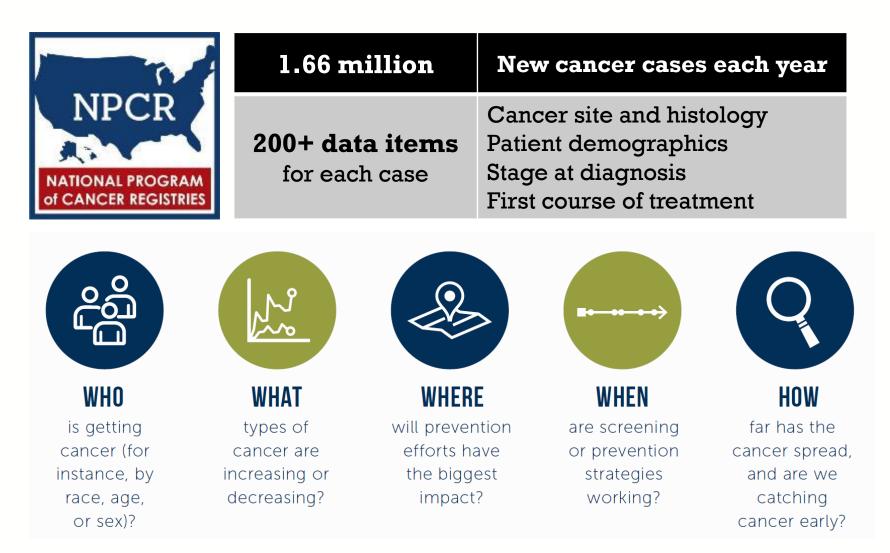


Kaiser Family Foundation, Changes in Health Coverage by Race and Ethnicity since Implementation of the ACA, 2013-2017

Unleashing the Power of Data

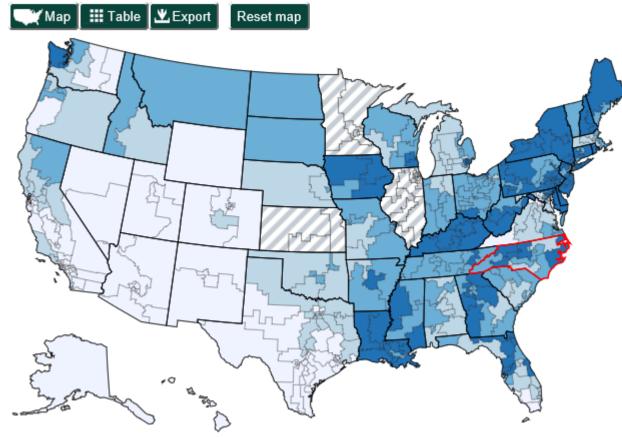


CDC's National Program of Cancer Registries

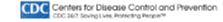


Making Data Accessible and Usable

All Types of Cancer, All Races/Ethnicities, Male and Female Estimated rate per 100,000 people

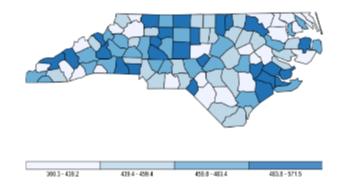


gis.cdc.gov/Cancer/USCS/DataViz.html



Rate of New Cancers in North Carolina

All Types of Cancer, All Ages, All Races/Ethnicities, Male and Female, 2012-2016

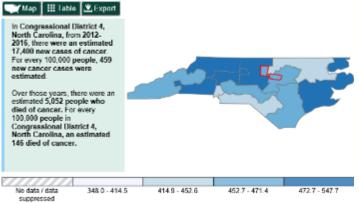


Rate per 100,000 people

Bata source – U.S. Cancer Statistics Working Group, U.S. Cancer Statistics Data Visualizations Tool, based on November 2018 wormholen data (1999-2006) U.S. Department of Health and Human Tervison, Derivan Holleware Control and Prevention and National Cancer Instrume. https://www.dc.g.pok/cancer/dotavic, Lune 2019.

North Carolina, Congressional District 4, All Types of Cancer, Male and Female, All Races/Ethnicities





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Understanding the AI/AN Cancer Burden

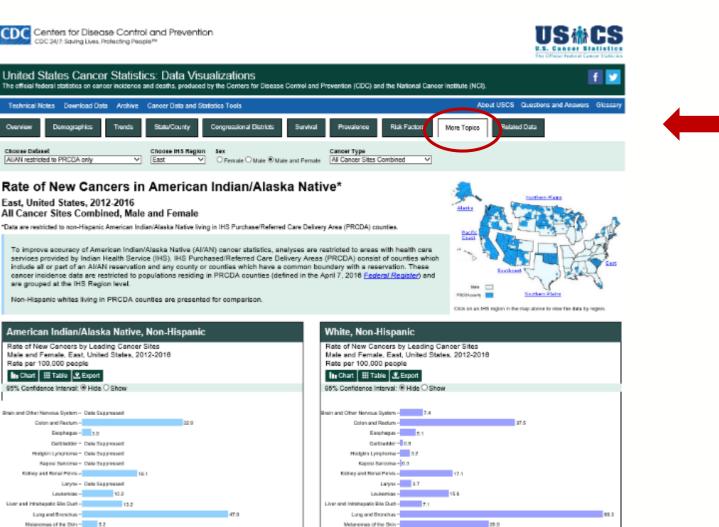
Select "AI/AN restricted to PRCDA" only

Choose IHS Region

All IHS Regions Alaska East Northern Plains Pacific Coast Southern Plains Southwest

New Cases (Incidence)

Rate of New Cases Number of New Cancers



Select "More Topics" tab

Cancer Type	
All Cancer Sites Combined	
Brain and Other Nervous Sy	stem
Cervix	
Colon and Rectum	
Corpus and Uterus, NOS	
Esophagus	
Female Breast	
Galbladder	
Hodgkin Lymphoma	
Kaposi Sarcoma	
Kidney and Renal Pelvis	
Larynx	
Leukemias	
Liver and Intrahepatic Bile D)uct
Lung and Bronchus	
Melanomas of the Skin	
Mesothelioma	
Myeloma	
Non-Hodgkin Lymphoma	
Oral Cavity and Pharynx	
Ovary	
Pancreas	
Prostate	
Stomach	
Testis	
Thyroid	
Urinary Bladder	

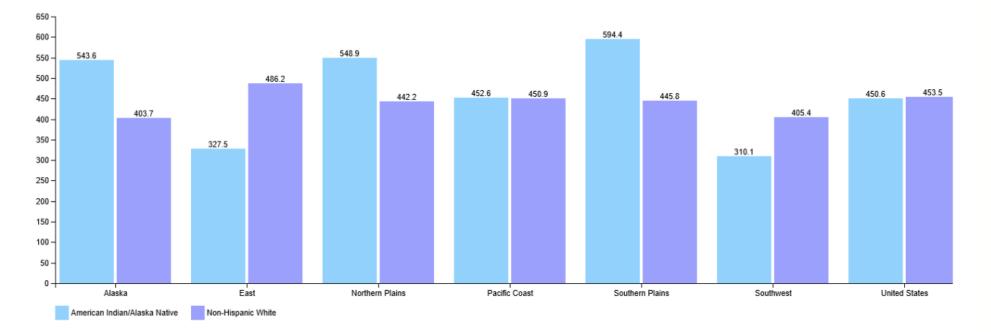
Incidence Rates by IHS Regions



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

American Indian/Alaska Native, Non-Hispanic, United States, 2012-2016

Rate of New Cancers by IHS Region and Sex



Rate per 100,000 people

Data source - U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on November 2018 submission data (1999-2016): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; https://www.cdc.gov/cancer/dataviz, June 2019.

Reliable, Trusted, Scientific,

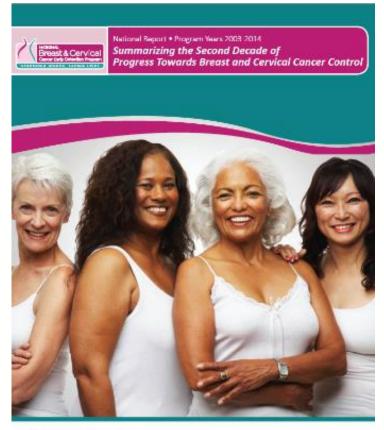
Scaling Proven Cancer Prevention and Control Strategies



NBCCEDP Clinical Services Delivered

Since 1991...

- 5.6 million women served
- 13.3 million screenings
- 68,486 breast cancers
- 21,852 premalignant breast lesions
- 4,720 invasive cervical cancers
- 214,652 premalignant cervical lesions





By the Numbers

NBCEDP PY2013-PY2018



70 grantees

System-level interventions

12,132 diagnosed breast cancers

560 diagnosed cervical cancers 6,436 high-grade precancerous lesions

Reliable. Trusted. Scientific.

1,253,859

Women Screened

Impact of the NBCCEDP Implementation in NM

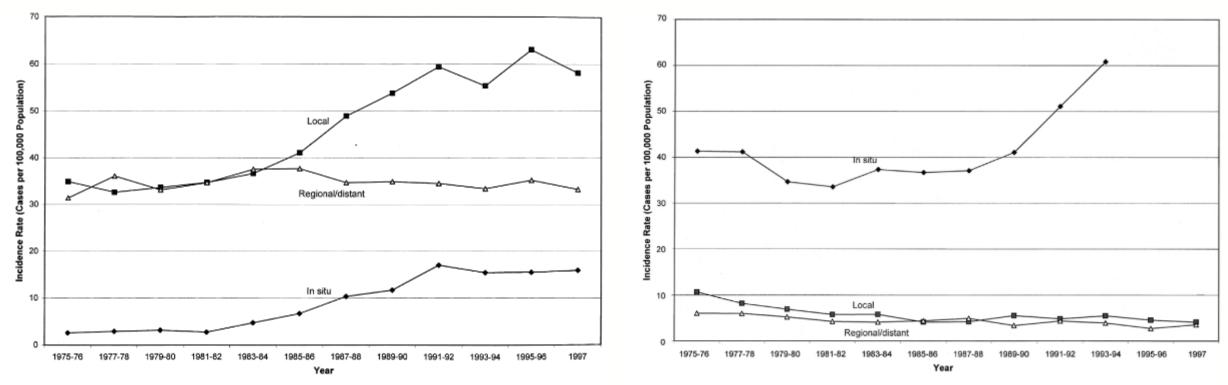


Fig. 1. Breast cancer incidence rate by stage, Surveillance Epidemiology, and End Results Program, New Mexico.



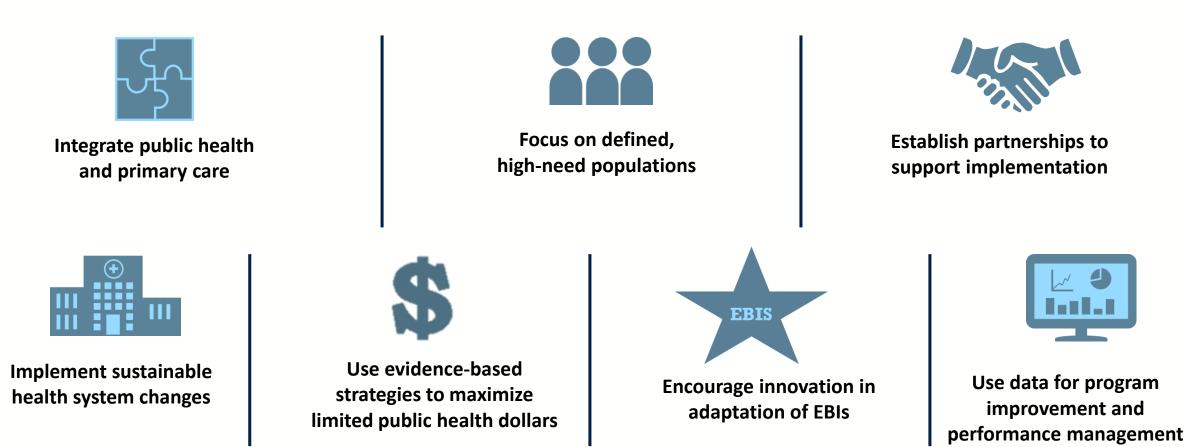
Escobedo et al., Cancer Causes and Control 13: 137–145, 2002.

Analyses of Life Years Gained From Select Population-based Prevention Programs

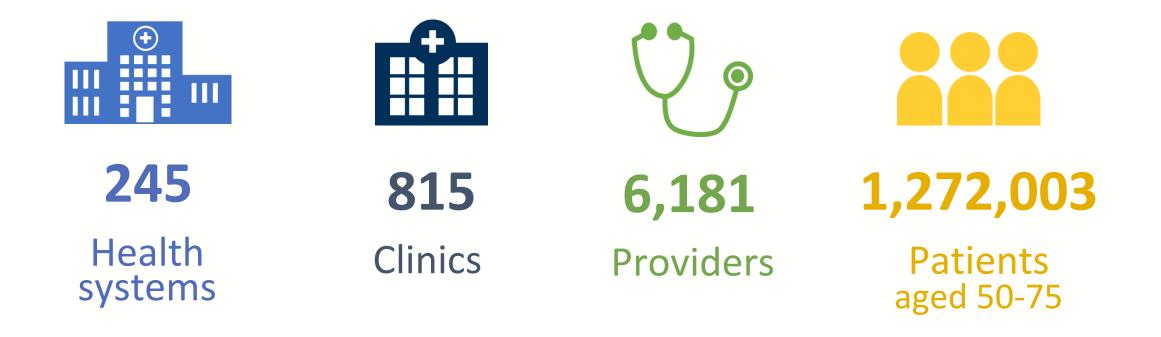
Intervention	Target Population	LYs saved per person/ year	Data sources, yr
Quitting cigarette smoking	35-year-olds	0.667–0.833	Wright JC, 1998
All childhood immunizations	<5 years old	0.1233	Maciosek MV, 2010
NBCCEDP–Breast cancer screening	40-64 years	0.056	Hoerger TJ, 2011
NBCCEDP—Cervical cancer screening	18-29 years	0.023	Ekwueme DU 2014
NBCCEDP—Cervical cancer screening	30-39 years	0.01	Ekwueme DU 2014
Measles vaccine	<5 years old	0.008	Wright JC, 1998
Rubella vaccine	<5 years old	0.008	Wright JC, 1998
NBCCEDP–Cervical cancer screening	18-64 years	0.006	Ekwueme DU 2014
Breast cancer screening	50+ year-old women	0.0045	Maciosek MV, 2010
Colorectal cancer screening	50 +years FOBT	0.0041	Maciosek MV, 2010
NBCCEDP–Cervical cancer screening	40-64 years	0.003	Ekwueme DU 2014
Influenza immunization	50 + years	0.0024	Maciosek MV, 2010
Cervical cancer screening	21+ years women	0.0002	Maciosek MV, 2010



Tenets of the CRCCP model

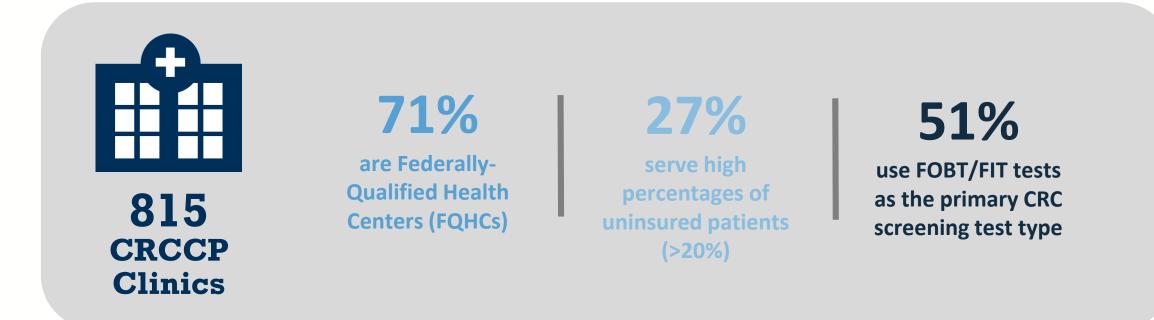


CRCCP Grantee Reach



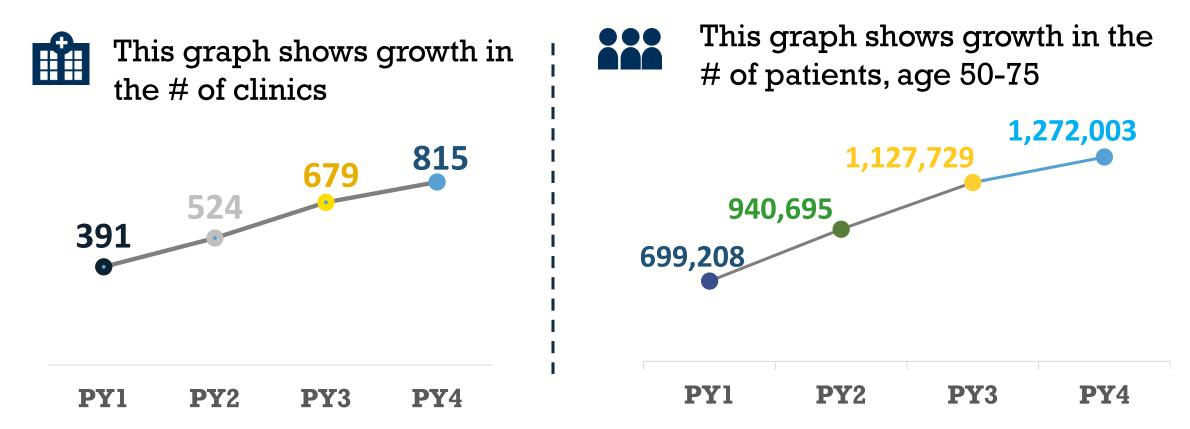
Source: Clinic data submission, Sep. 2019, (Includes clinics recruited in PYs 1-4)

A closer look at CRCCP clinics



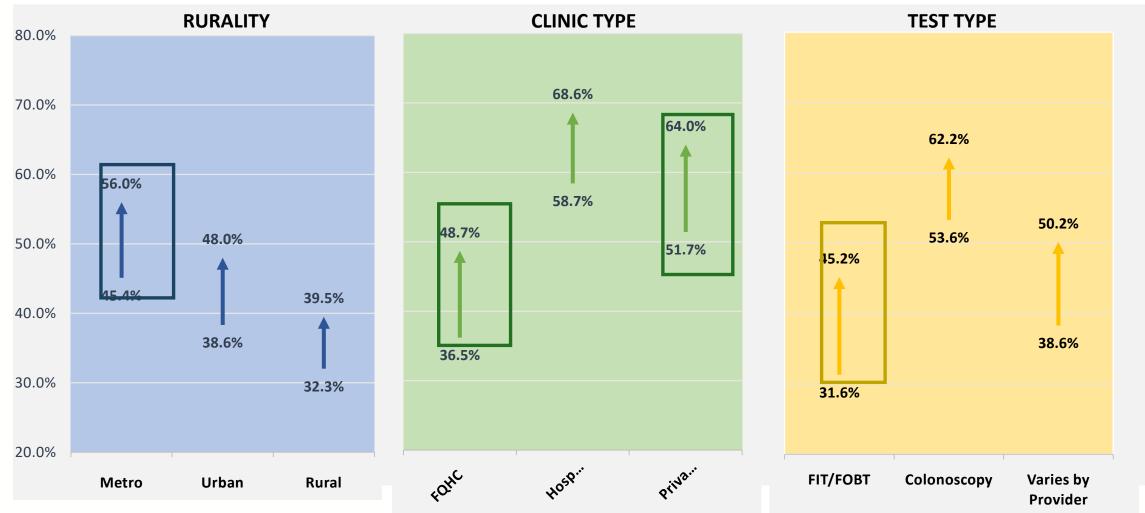
Source: Clinic data submission, Sep. 2019, (Includes clinics recruited in PYs 1-4)

Reach continues to grow as new clinics are recruited.



Source: Clinic data submission, Sep. 2019, (Includes clinics recruited in PYs 1-4)

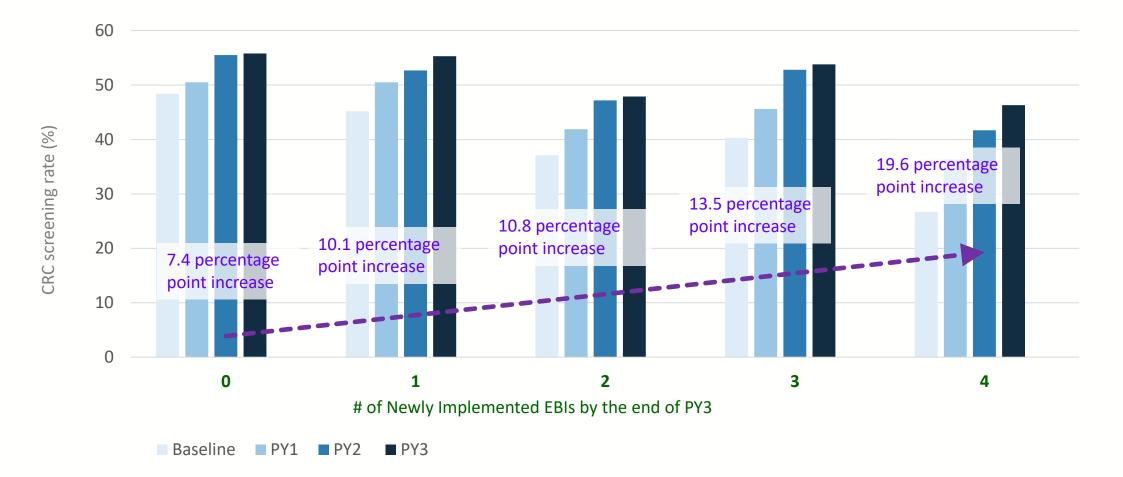
Screening rate increases from PY1 to PY3 vary by clinic characteristics



Source: CRCCP Clinic Data April, 2019 data submission. PY1 Clinics only; Years 1-3.

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CRC screening rates through PY3 increase with each newly implemented with EBI



Source: CRCCP Clinic Data April, 2019 data submission. PY1 Clinics only; Years 1-3.

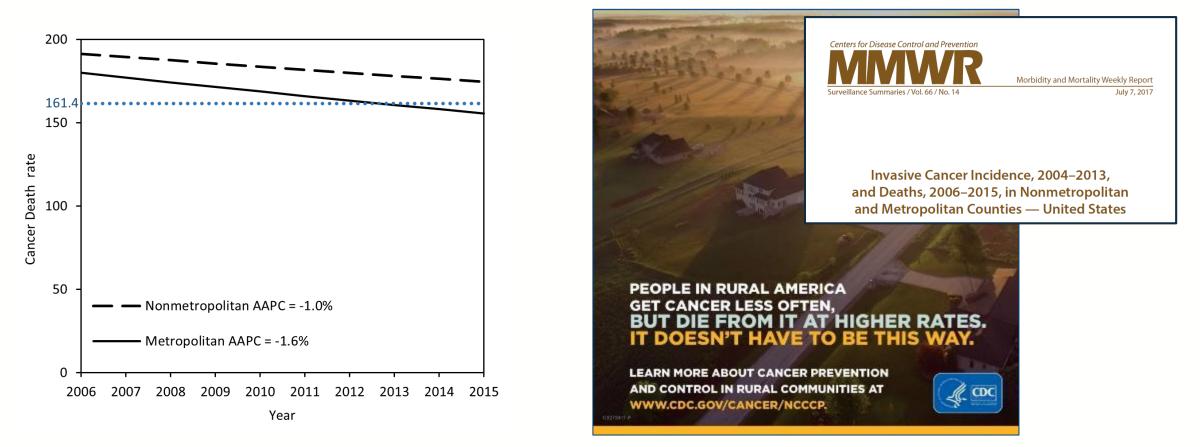
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Supporting Community Champions



CDC Rural Health Series

MMWR First to detail cancer differences and mortality gaps between rural and urban areas



Henley SJ, Anderson R, Thomas CC, Massetti GM, Peaker B, Richardson LC. Invasive cancer incidence, 2004–2013, and deaths, 2006–2015, in non-metropolitan and metropolitan counties — United States. MMWR Surveill Summ 2017;66:1–13

Addressing Research/Clinical Trial Enrollment Gaps

Rapid Case Ascertainment (RCA) of the North Carolina Central Cancer Registry Partnership

L CANCER



UNC LINEBERGER COMPREHENSIVE

By the Numbers

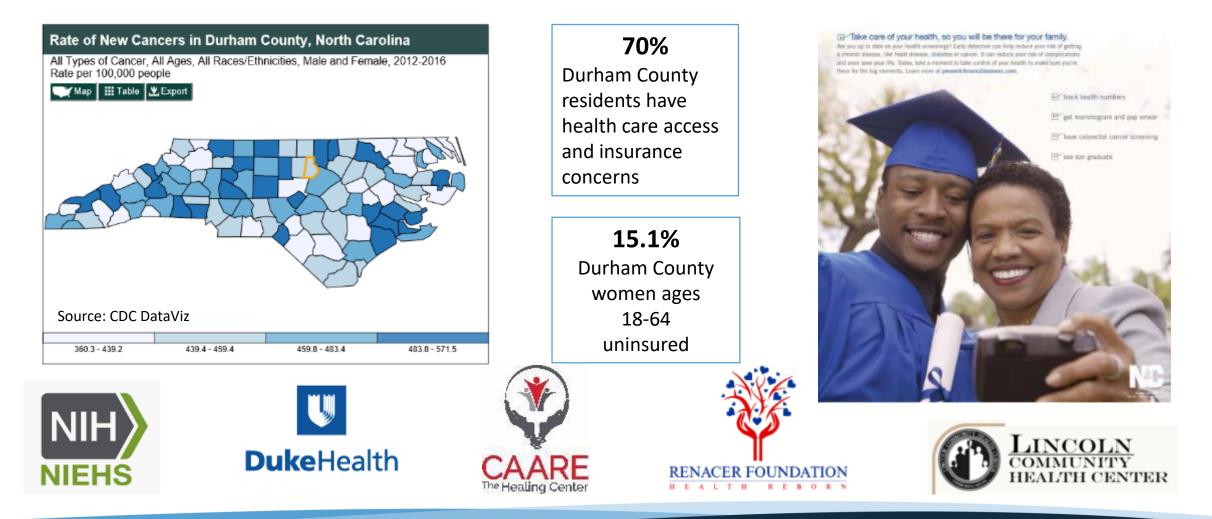
Since 1992:

- **20,000** patients enrolled in research studies in NC and nationwide
- 200,000 path reports reviewed/identified
- **30** studies spanning **15** cancer sites.
- Hospital report reimbursement reinvested in registry program education & improvements



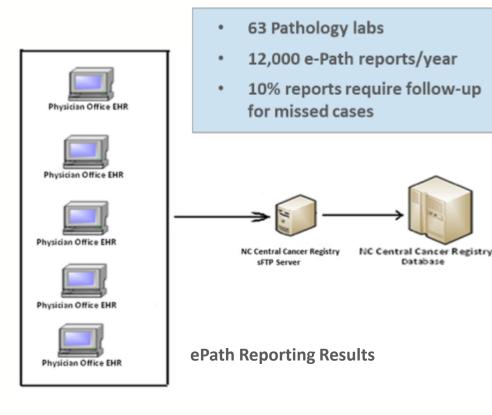
Linking Vulnerable Populations to Critical Services

Collaborating to navigate uninsured, minority women to local screening programs



Every Case Counts: Facilitating Efficient Electronic Reporting

Improving the completeness, timeliness, and quality of physician/clinic cancer data



Meaningful Use (MU) Reporting Results

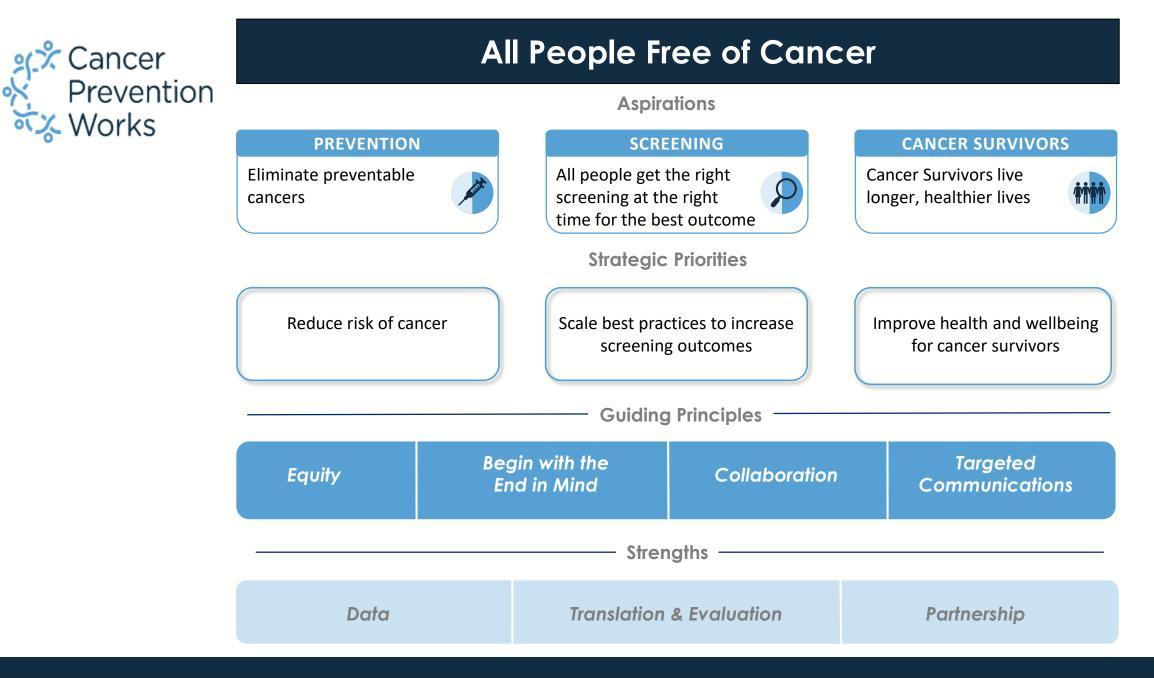
MU files received for 2014-2016 diagnoses 3,452		
Non-matches after linkage to regis	try database (cases	4,649
not reported by the practice)		
Cases with a non-reportable condi	tion	3
Multiple records combined into a single record for the		3,261
patient and tumor		
Cases loaded into the final registry database		1,385
MU files received for 2017 diagnoses		1,500
Cases with a non-reportable condition		1
Multiple records combined into a single record for the		338
patient and tumor		\frown
Cases loaded into the final registry	database	836
	835% increase	\sum
	over 2013 🗸	

Face Your Health



Planning for Success





oing
5

Thank you!

Go to the official federal source of cancer prevention information: www.cdc.gov/cancer



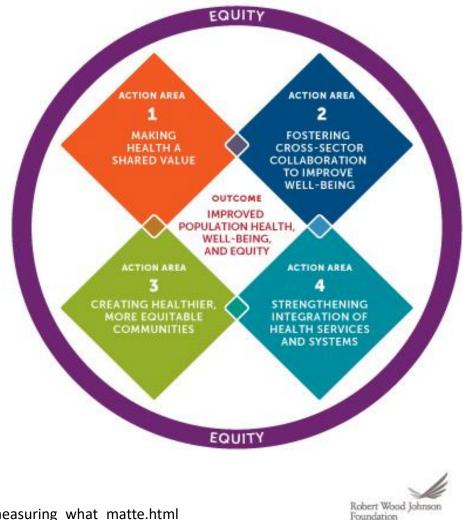


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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Building a Framework for a Culture of Health



Source: rwjf.org/en/culture-of-health/2015/11/measuring_what_matte.html