POPULATION HEALTH: WHAT IS IT? WHY IS IT IMPORTANT?

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Objectives:

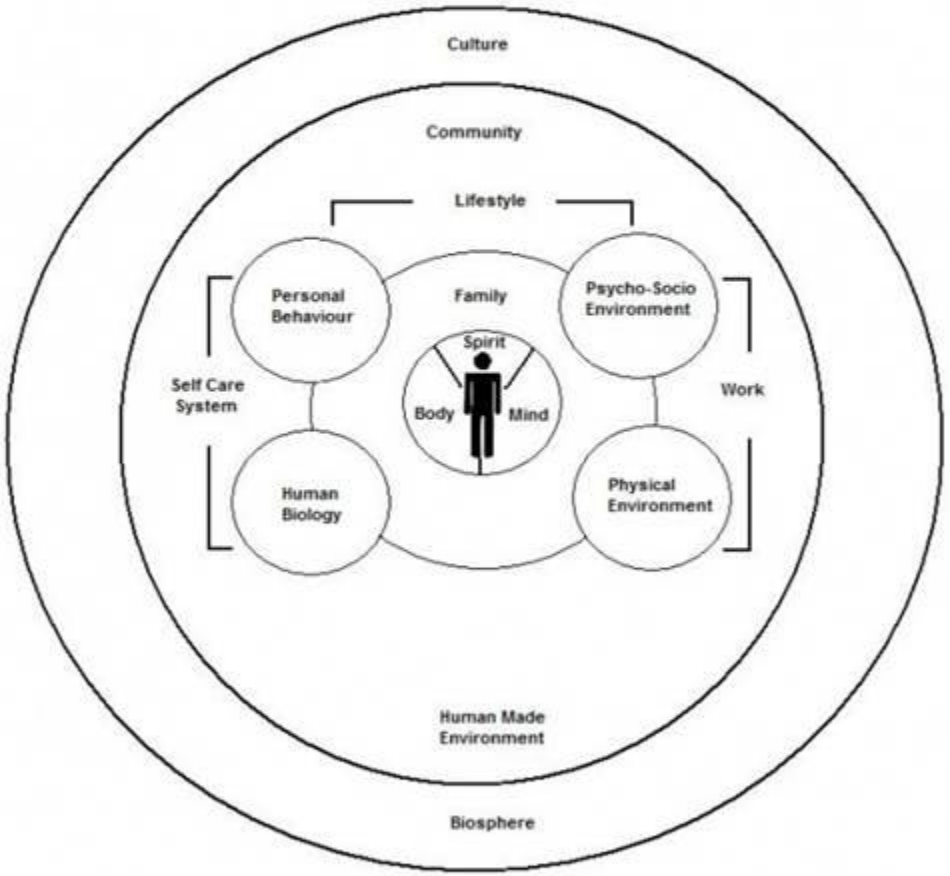
- By the end of this session, participants will be able to:
- Identify the basic elements and definitions of population health,
- Discuss successful population health initiatives, and
- Learn strategies for implementing and testing population health initiatives


LANO CA
MILANO

World Health Organization

Definition of Health

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.



Source: Health Mandala described by Trevor Hancock in 1993 in Health, human development and the community ecosystem: three ecological models Health Promot. Int. (1993) 8 (1): 41-47. doi: 10.1093/heapro/8.1.41

What is “Population Health?”

The health outcomes of a group of individuals, including the distribution of such outcomes within the group.

Sources: Kindig, DA, Stoddart G. (2003). What is population health? *American Journal of Public Health*, 93, 366-369; Kindig DA. (2007). Understanding Population Health Terminology. *Milbank Quarterly*, 85(1), 139-161.

What "Health Outcomes" are we Interested In Most?

- Mortality (early death)
- Morbidity (illness)
  - **Chronic** diseases (diabetes, cancer, heart disease, stroke, kidney disease, etc.)
  - **Acute** diseases (pneumonia, influenza, hepatitis, sexually transmitted diseases, sepsis, etc.)
- Quality of Care/Quality of Life
- Excess Health Care Costs (Hospital Readmission)

What ”Groups” are We Interested in Most?

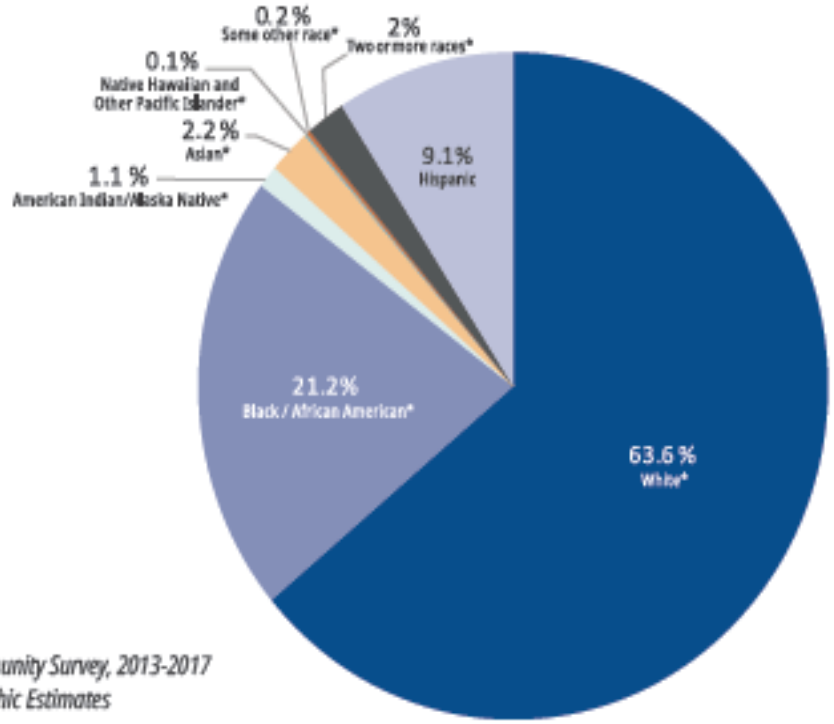
- Racial/ethnic groups
- Geographic groups (urban/rural, cities, counties, states, nations)
- Gender groups
- Socioeconomic status groups
- Age Groups

How do we Consider the “Distribution of Health Outcomes?”

- Descriptive Epidemiology
- Calculation of rates (e.g., deaths per 100,000 population) of deaths and/or diseases in a population from state/national databases
- Per patient health care costs from electronic health records
- GIS mapping of health outcomes

Start with Demographic of NC

North Carolina by Race/Ethnicity, 2013-2017 Estimate



*non-Hispanic

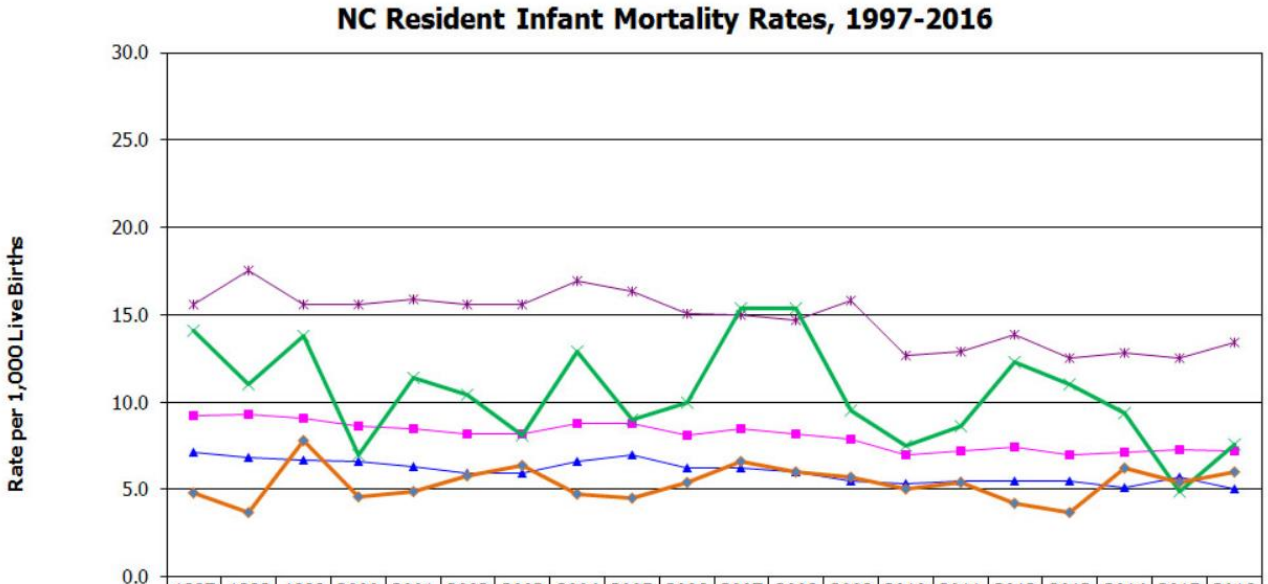
Source: American Community Survey, 2013-2017 Comparative Demographic Estimates

Other North Carolina Demographics

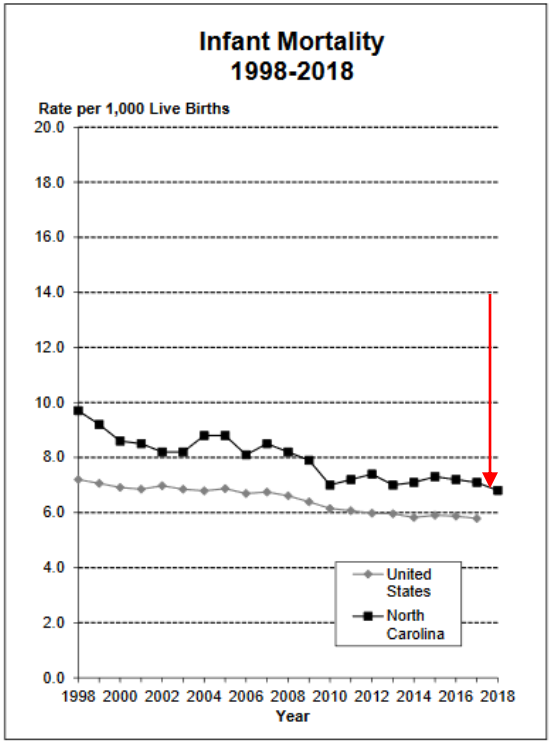
TOTAL POPULATION[1]	
10,052,564	
GEOGRAPHY[2]	
Urban	66%
Rural	34%
AGE GROUP[1]	
Under 18	22.8%
18-64	62.1%
65 and older	15.1%

[1]2013-2017 American Community Survey 5-Year Estimates: Age and Sex
22010 Census

Infant Mortality



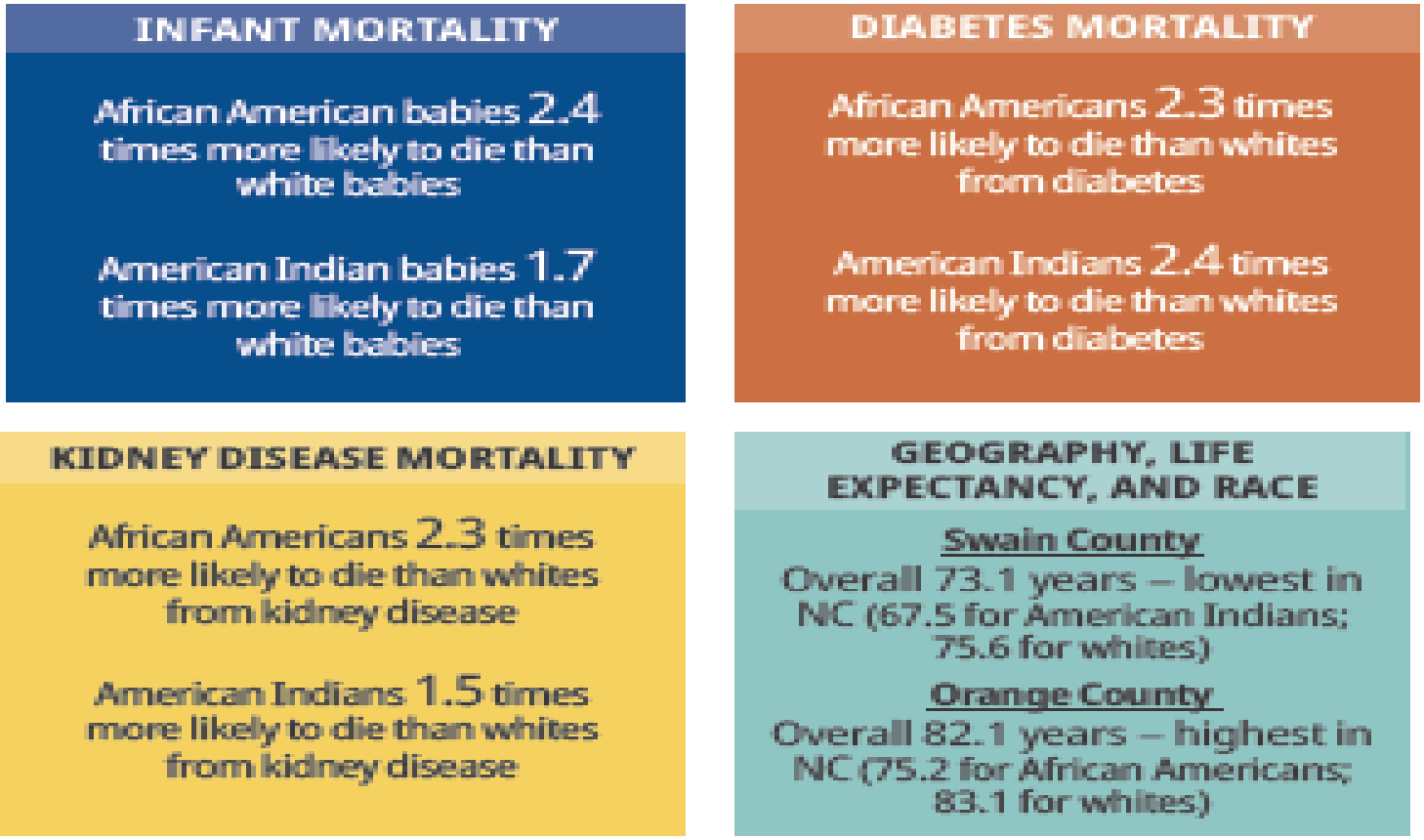
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total	9.2	9.3	9.1	8.6	8.5	8.2	8.2	8.8	8.8	8.1	8.5	8.2	7.9	7.0	7.2	7.4	7.0	7.1	7.3	7.2
White NH	7.1	6.8	6.7	6.6	6.3	5.9	5.9	6.6	7.0	6.2	6.2	6.0	5.5	5.3	5.5	5.5	5.5	5.1	5.7	5
Af. Am. NH	15.6	17.5	15.6	15.6	15.9	15.6	15.6	16.9	16.3	15.1	15.0	14.7	15.8	12.7	12.9	13.9	12.5	12.8	12.5	13.4
Am. Ind. NH	14.1	11.0	13.8	7.0	11.4	10.4	8.1	12.9	9.0	10.0	15.4	15.4	9.5	7.5	8.6	12.3	11.0	9.4	4.9	7.6
Hispanic	4.8	3.7	7.8	4.6	4.9	5.8	6.4	4.7	4.5	5.4	6.6	6.0	5.7	5.0	5.4	4.2	3.7	6.2	5.4	6



U.S. 2016 – IMR 5.9 vs NC 7.2

FIGURE 4

Examples of Health Disparities in North Carolina



Sources: NC DHHS, Health Equity Report, 2018; NC DHHS, Life Expectancy, 2016-2018

North Carolina Resident Population Health Data by Race and Ethnicity

Mortality Rates, 2014-2018[2]	Total	White, Non-Hispanic	African American, Non-Hispanic		American Indian, Non-Hispanic		Other Races, Non-Hispanic		Hispanic/Latino	
	Rate	Rate	Rate	Disparity Ratio	Rate	Disparity Ratio	Rate	Disparity Ratio	Rate	Disparity Ratio
Total Deaths, All Causes	781.8	777.0	888.5	*1.1*	856.9	*1.1*	426.0	*0.5*	359.8	*0.5*
Heart disease	158.0	155.9	182.2	*1.2*	176.9	*1.1*	76.9	*0.5*	61.8	*0.4*
- Acute Myocardial Infarction	28.4	28.3	32.5	*1.1*	43.0	*1.5*	13.2	*0.5*	10.3	*0.4*
- Other Ischemic Heart Disease	59.4	60.3	61.5	*1.0*	70.0	*1.2*	25.9	*0.4*	21.1	*0.3*
Cerebrovascular disease (Stroke)	43.0	40.7	55.1	*1.4*	39.0	*1.0*	35.2	*0.9*	23.2	*0.6*
Total Cancer	161.3	160.2	183.0	*1.1*	153.4	*1.0*	102.6	*0.6*	82.0	*0.5*
- Colon, Rectum, and Anus	13.6	13.0	17.8	*1.4*	14.6	*1.1*	8.2	*0.6*	6.9	*0.5*
- Pancreas	11.0	10.6	13.6	*1.3*	11.2	*1.1*	7.3	*0.7*	6.6	*0.6*
- Trachea, Bronchus, and Lung	44.1	45.9	42.3	*0.9*	50.6	*1.1*	22.0	*0.5*	14.1	*0.3*
- Breast	20.9	19.7	27.0	*1.4*	20.5	*1.0*	12.4	*0.6*	11.4	*0.6*
- Prostate	19.7	16.7	39.1	*2.3*	23.1	*1.4*	7.2	*0.4*	9.1	*0.5*
Diabetes	23.7	19.6	44.0	*2.2*	40.4	*2.1*	14.3	*0.7*	12.1	*0.6*
Pneumonia/Influenza	17.4	17.8	17.1	*1.0*	17.3	*1.0*	11.4	*0.6*	7.2	*0.4*
Chronic lower respiratory diseases	44.7	49.8	28.0	*0.6*	45.5	*0.9*	12.6	*0.3*	8.5	*0.2*
Septicemia	12.8	12.0	18.0	*1.5*	14.6	*1.2*	6.5	*0.5*	6.1	*0.5*
Chronic liver disease/cirrhosis	10.4	11.6	7.6	*0.7*	16.8	*1.4*	3.9	*0.3*	7.1	*0.6*
Nephritis, nephrosis, and nephrotic syndrome	16.4	13.4	31.3	*2.3*	19.3	*1.4*	12.0	*0.9*	8.4	*0.6*
Alzheimer's Disease	35.7	36.7	33.1	*0.9*	52.7	*1.4*	15.2	*0.4*	19.3	*0.5*
HIV Disease	1.9	0.7	6.4	*9.1*	1.3*	*1.1*	*0.3**	*0.4*	0.9	*1.3*
Unintentional motor vehicle injury	14.5	14.0	16.8	*1.2*	30.6	*2.2*	6.1	*0.4*	12.2	*0.9*
Other Unintentional injuries	37.0	43.6	25.5	*0.6*	45.2	*1.0*	14.8	*0.3*	14.6	*0.3*
Suicide	13.5	17.3	5.5	*0.3*	12.4	*0.7*	8.2	*0.5*	5.6	*0.3*
Homicide	6.5	3.0	17.0	*5.7*	18.0	*6.0*	2.8	*0.9*	3.5	*1.2*

N.C. 2018 Ranked Leading Causes of Death

All Ages

Rank	Cause	Number
1	Cancer	19,693
2	Diseases of the heart	19,254
3	Chronic lower respiratory diseases	5,367
4	Cerebrovascular disease	5,072
5	Alzheimer's disease	4,502
6	Other Unintentional injuries	4,478
7	Diabetes mellitus	3,021
8	Pneumonia and influenza	2,067
9	Nephritis, nephrotic syndrome and nephrosis	1,936
10	Motor vehicle injuries	1,591
	All other causes (Residual)	27,024
	Total Deaths—All Causes	**94,005**

15–24 Years

Rank	Cause	Number
1	Motor vehicle injuries	248
2	Other unintentional injuries	239
3	Suicide	185
4	Homicide	163
5	Cancer	43
6	Diseases of the heart	29
7	Chronic lower respiratory diseases	7
7	Congenital anomalies (birth defects)	7
9	Cerebrovascular disease	5
9	Pneumonia and influenza	5
9	Diabetes mellitus	5
9	Septicemia	5
	All other causes (Residual)	121
	Total Deaths—All Causes	**1,062**

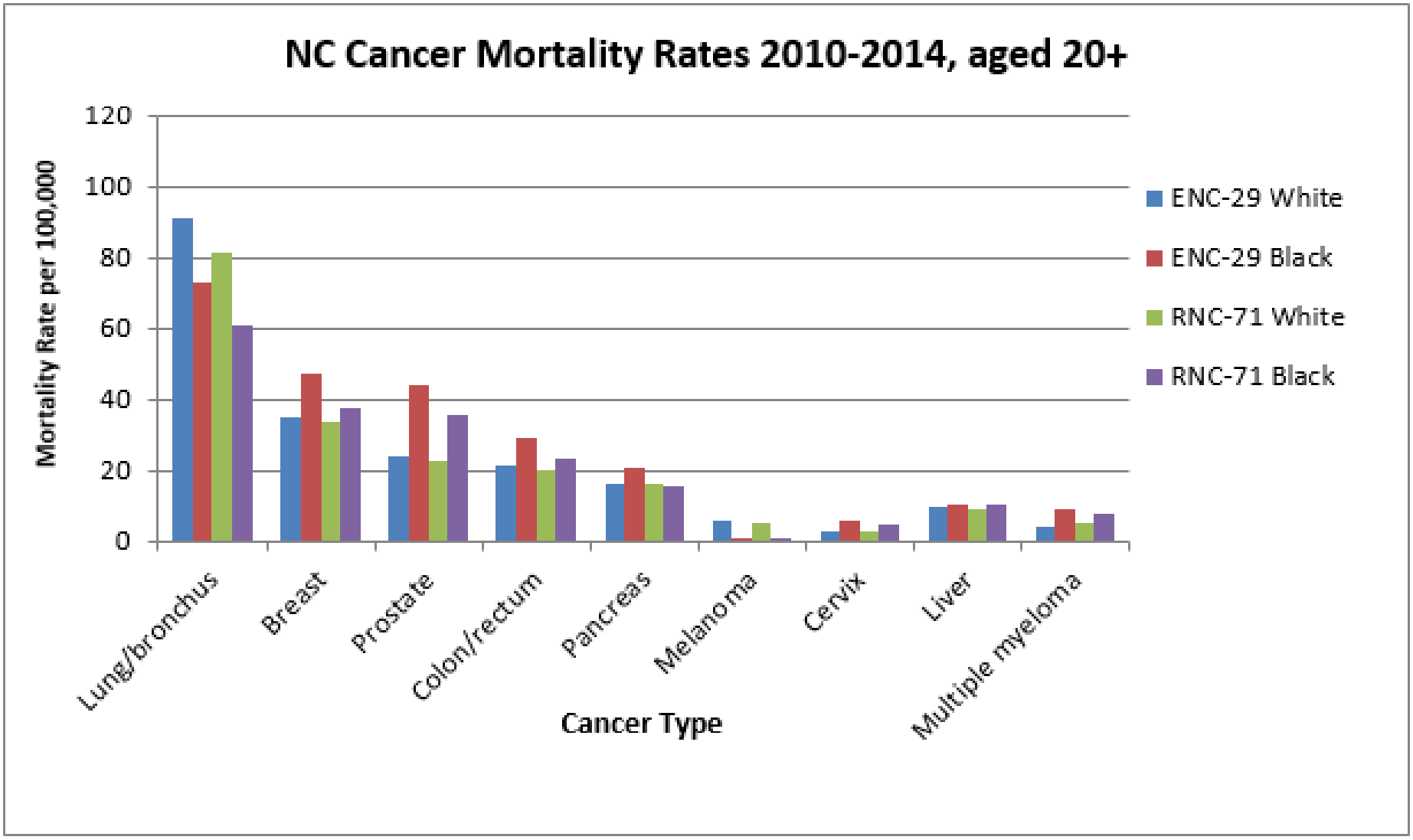

NC Cancer Mortality Rates 2010-2014, aged 20+
Mortality Rate per 100,000
120
100
80
60
40
20
0
Lung/bronchus
Breast
Prostate
Colon/rectum
Pancreas
Melanoma
Cervix
Liver
Multiple myeloma
Cancer Type
ENC-29 White
ENC-29 Black
RNC-71 White
RNC-71 Black

Figure 1. Life expectancy at selected ages, by sex: United States, 2017 and 2018

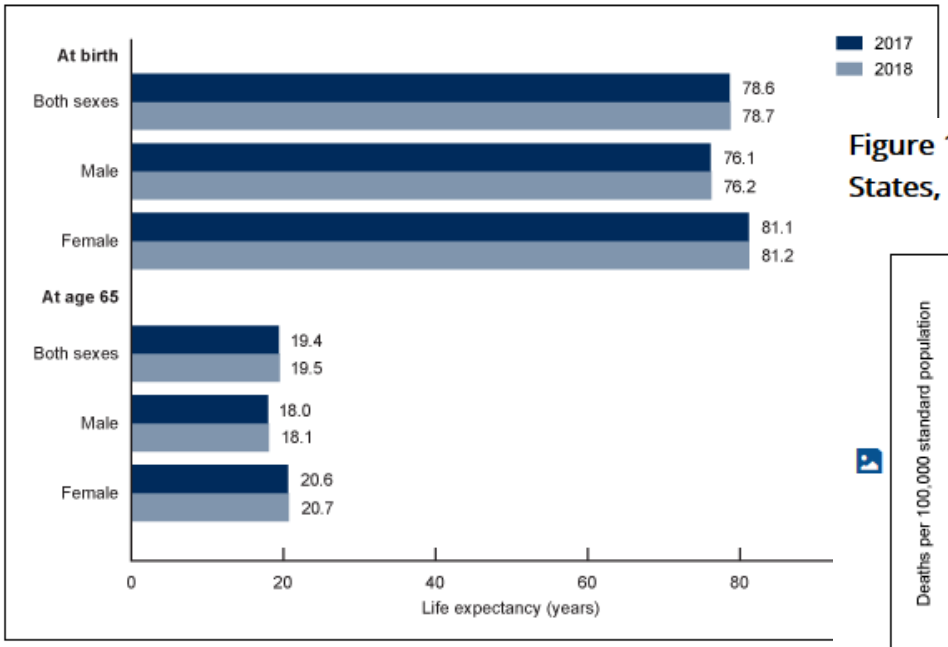
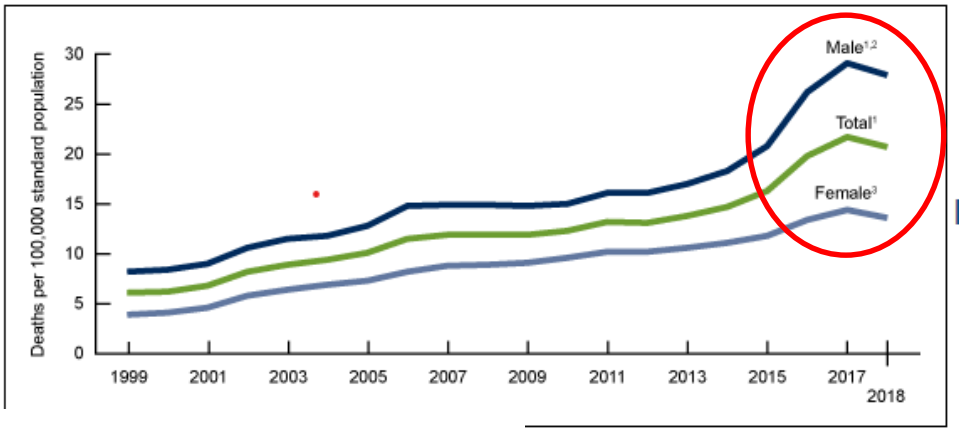
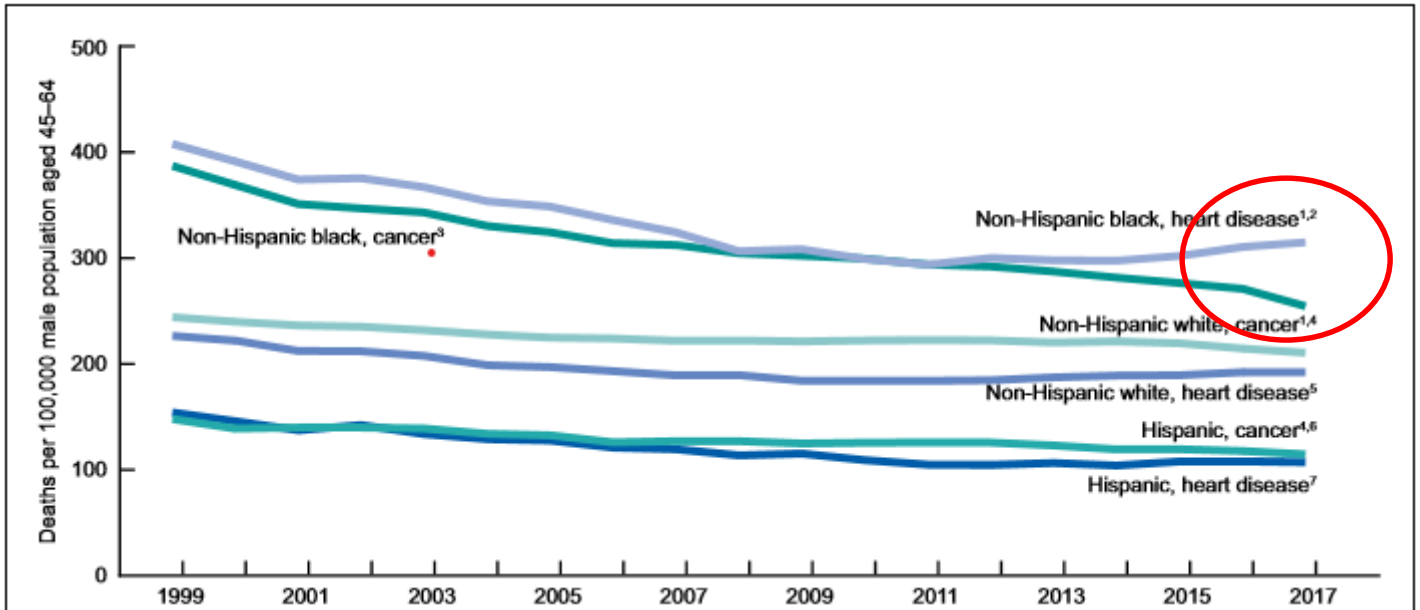
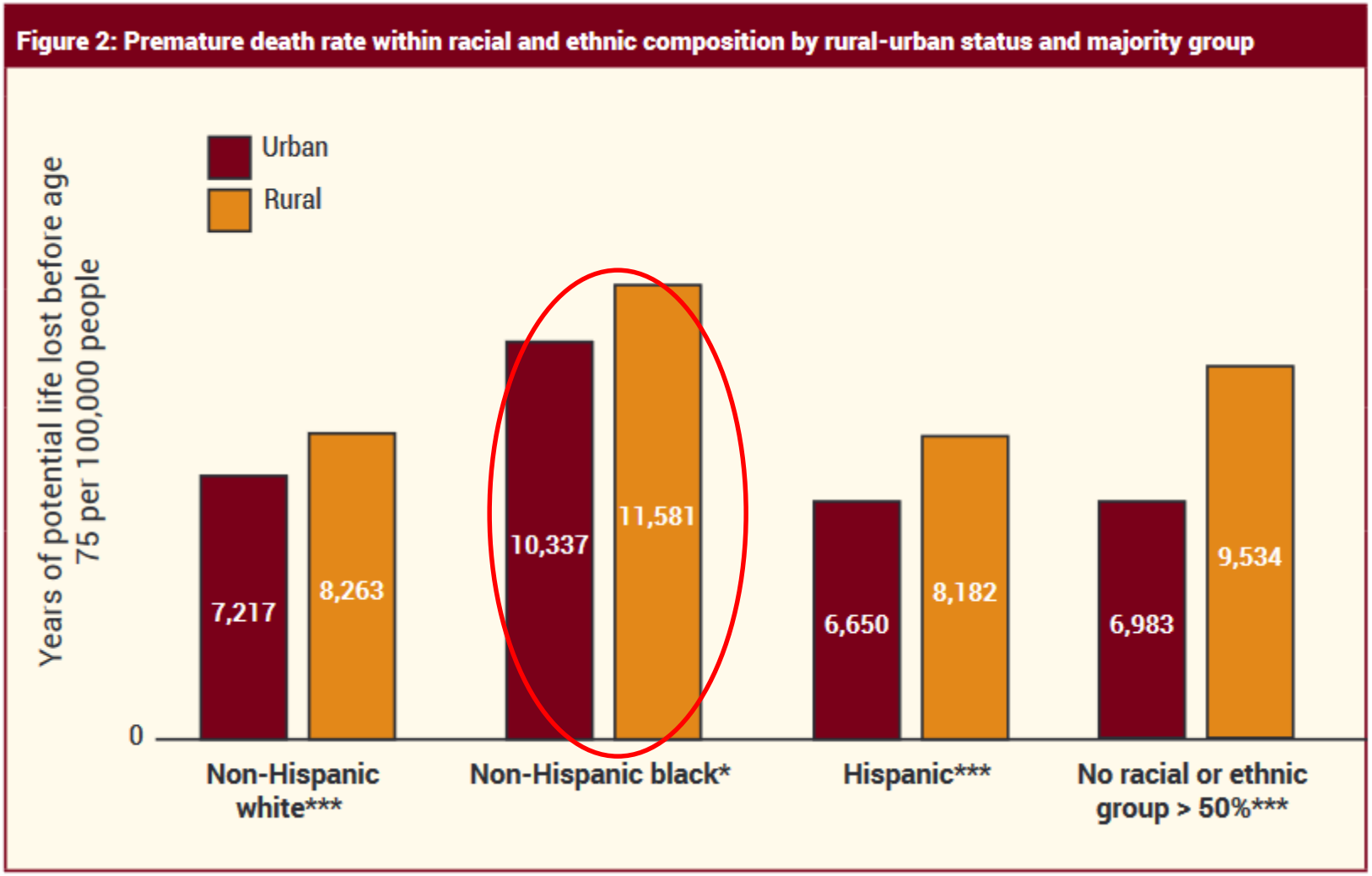


Figure 1. Age-adjusted drug overdose death rates, by sex: United States, 1999–2018



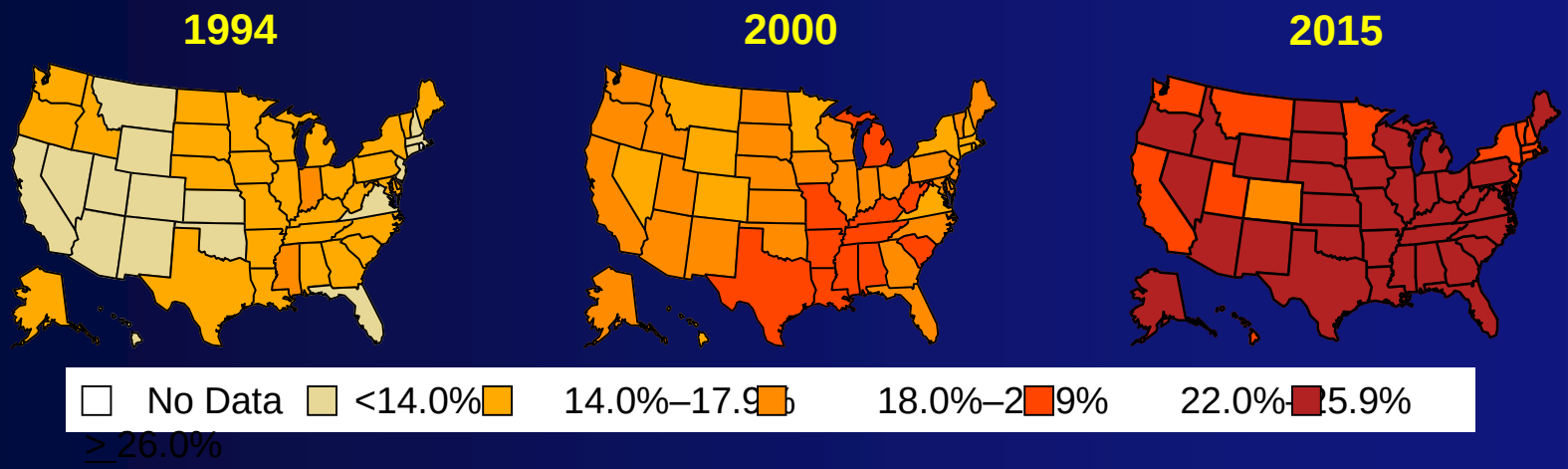


U.S. Years of Potential Life Lost before age 75

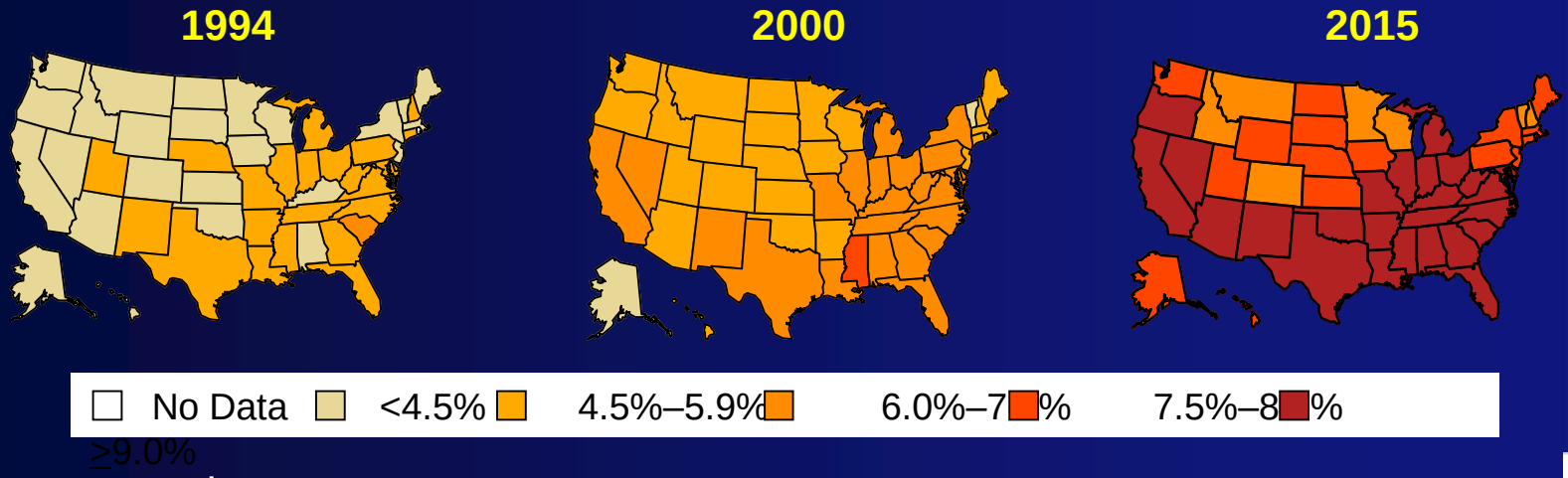


Age-adjusted Prevalence of Obesity and Diagnosed Diabetes Among US Adults

Obesity (BMI ≥30 kg/m^2)

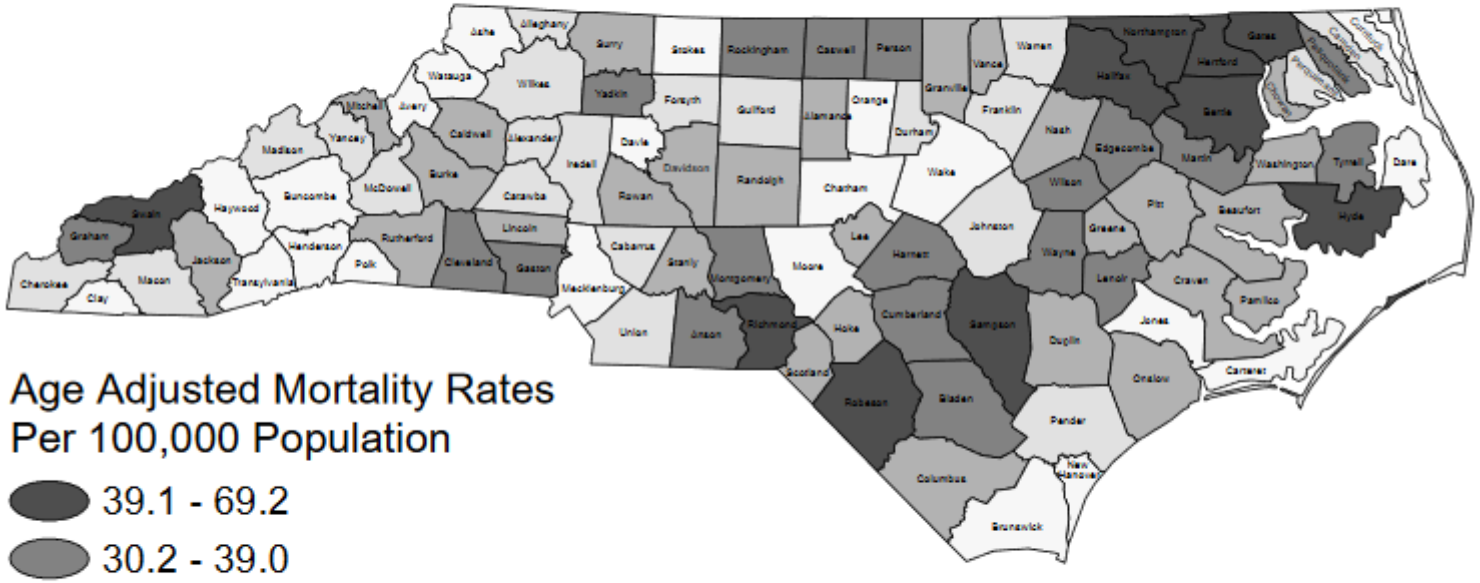


Diabetes



CDC's Division of Diabetes Translation. United States Surveillance System available at http://www.cdc.gov/diabetes/data

Diabetes Mellitus



Age Adjusted Mortality Rates
Per 100,000 Population

- 39.1 - 69.2
- 30.2 - 39.0
- 23.8 - 30.1
- 18.6 - 23.7
- 8.4 - 18.5

North Carolina
Resident Data
2014-2018

THE STAGGERING COSTS OF DIABETES

More than
30 MILLION
Americans
have diabetes

Health care costs for Americans with diabetes are
2.3X greater than those without diabetes

Diagnosed diabetes costs America
$327 BILLION
per year

84 MILLION
Americans have prediabetes

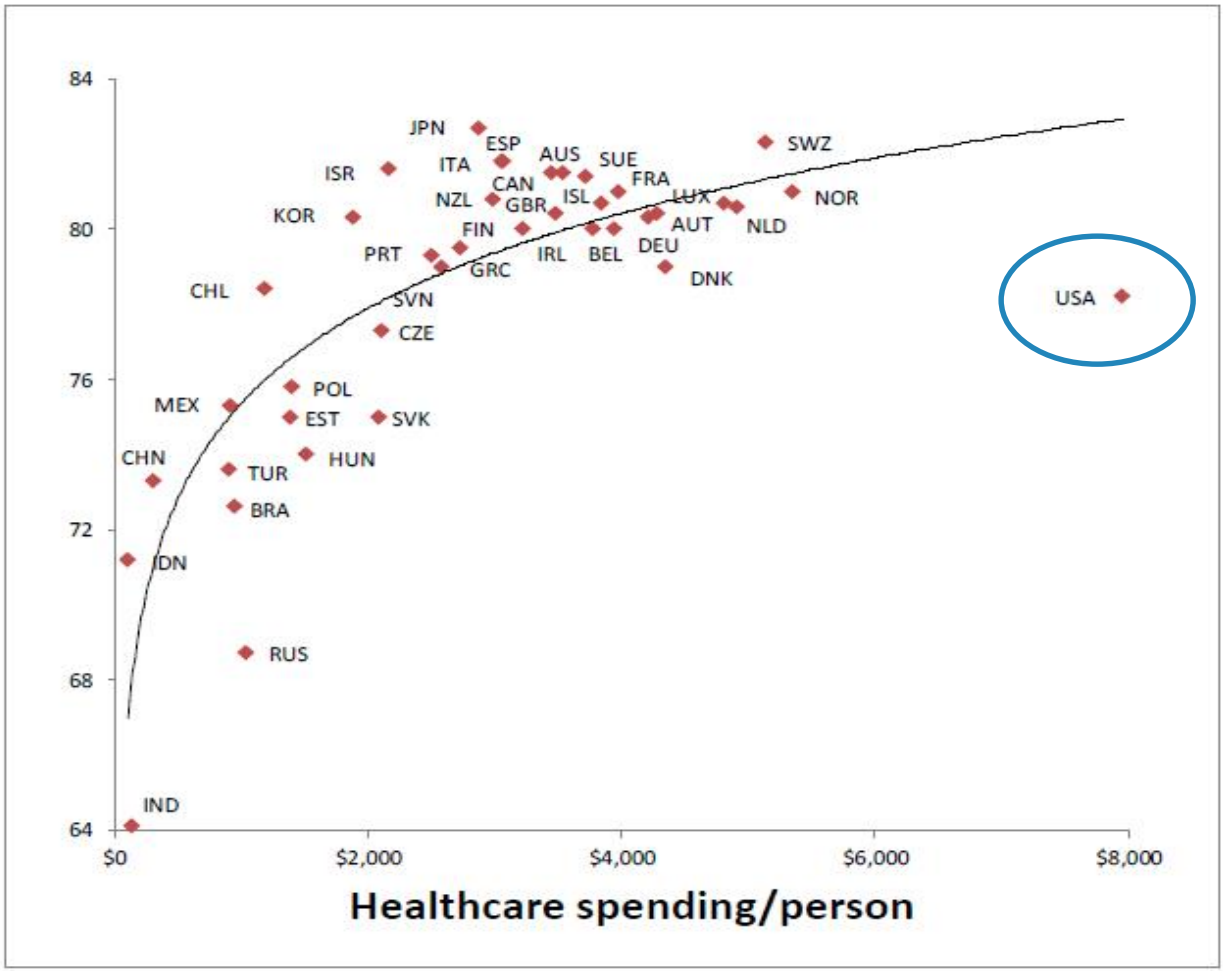
$1 IN $7
Health care dollars is spent treating diabetes and its complications

Today, **4,110** Americans will be diagnosed with diabetes. Additionally, diabetes will cause **295** Americans to undergo an amputation and **137** will enter end-stage kidney disease treatment.

Learn how to fight this costly disease at **diabetes.org/congress**

American Diabetes Association®

Life expectancy and health spending



Source: The UC Atlas of Global Inequality (http://ucatlas.ucsc.edu/spend.php

“Population Health” is also a framework

- ‘Population health’ aligns components of the health system.
- Integrates with care delivery and
- Social systems that contribute to health.

Medicaid and Public Health Partnership Learning Series

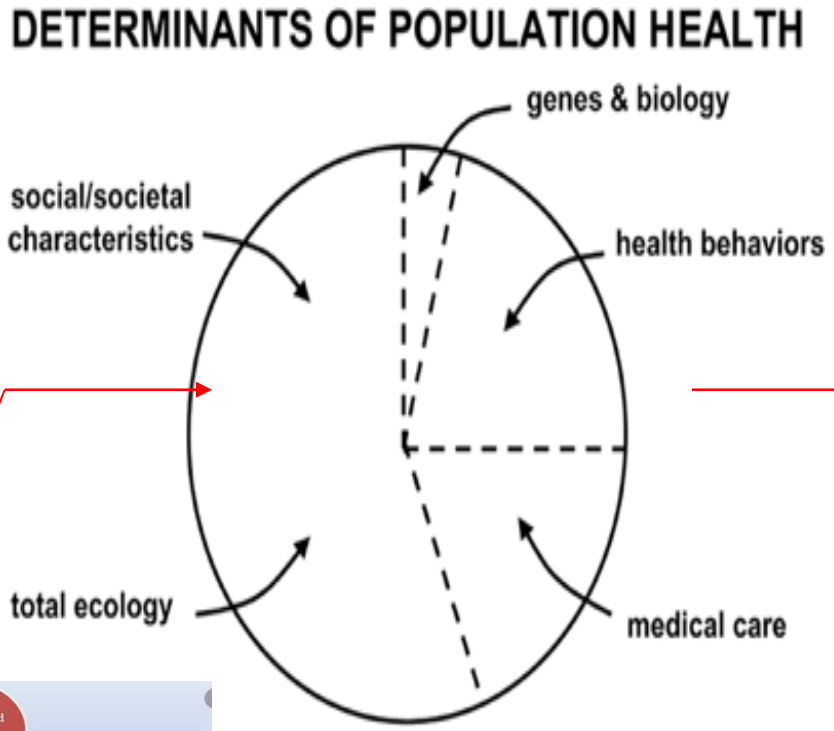
Public Health and Population Health 101

- “Population health” is more than outcomes of care in the care delivery system because includes:
  - Determinants of health
  - Activities that improve population health

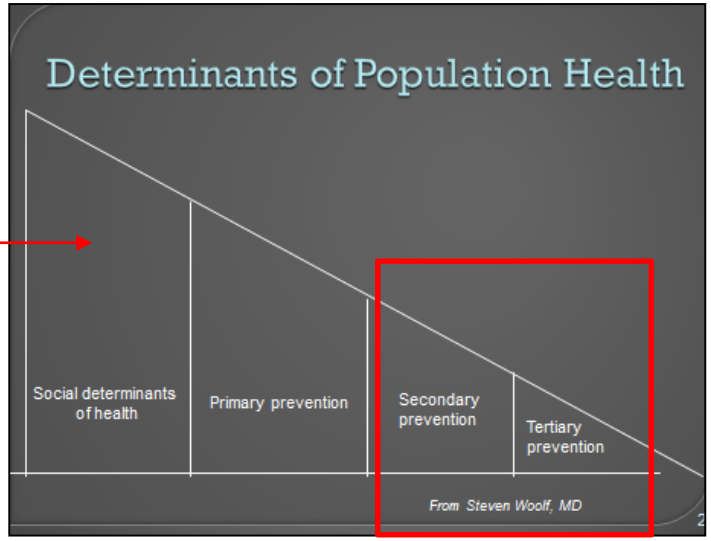
- Aligns with Triple Aim – excellent quality care, lower costs, improving health of the population.

Population Health as Framework

"Determinants of Health"



Healthcare System



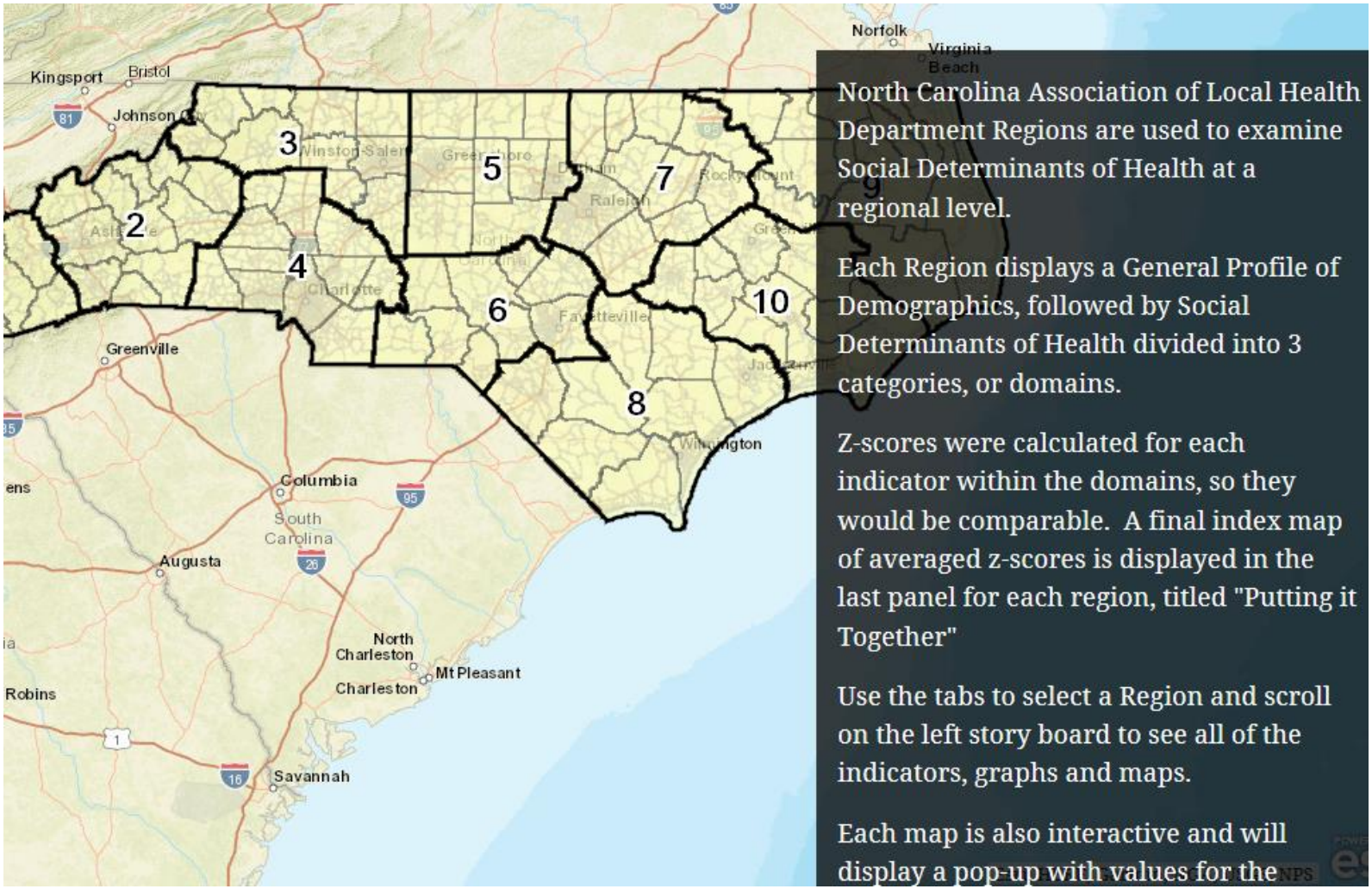
Social Determinants of Health

- The World Health Organization defines the social determinants of health as:

"the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness.

These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics."

North Carolina Social Determinants of Health by Regions



North Carolina Association of Local Health Department Regions are used to examine Social Determinants of Health at a regional level.

Each Region displays a General Profile of Demographics, followed by Social Determinants of Health divided into 3 categories, or domains.

Z-scores were calculated for each indicator within the domains, so they would be comparable. A final index map of averaged z-scores is displayed in the last panel for each region, titled "Putting it Together"

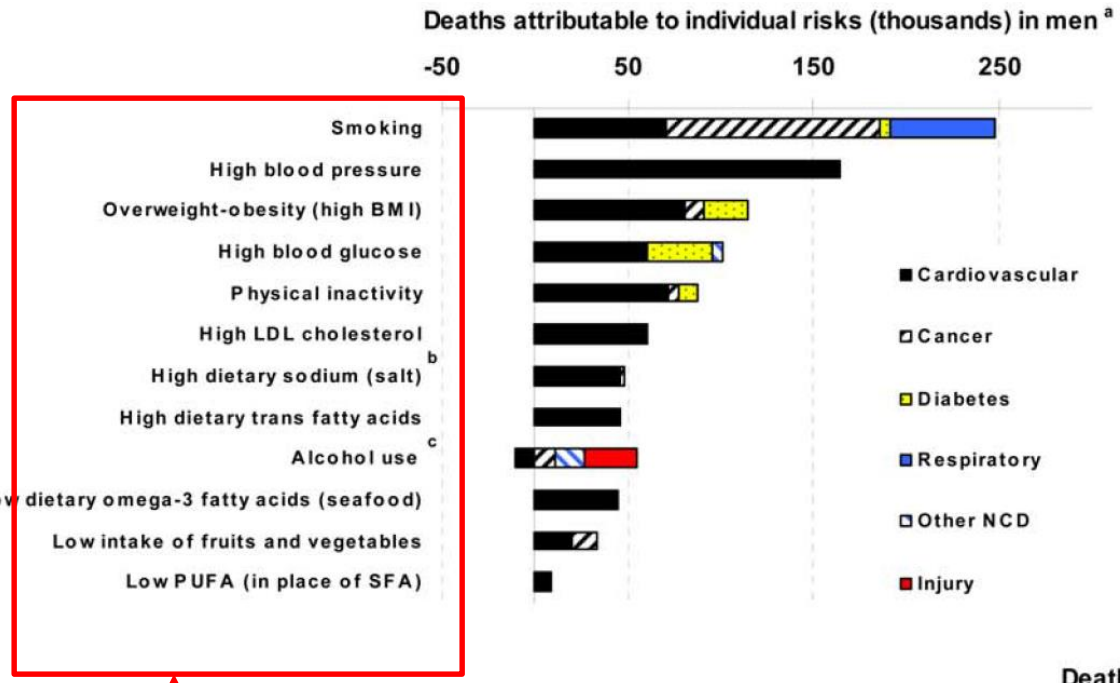
Use the tabs to select a Region and scroll on the left story board to see all of the indicators, graphs and maps.

Each map is also interactive and will display a pop-up with values for the

Population Health as Framework:

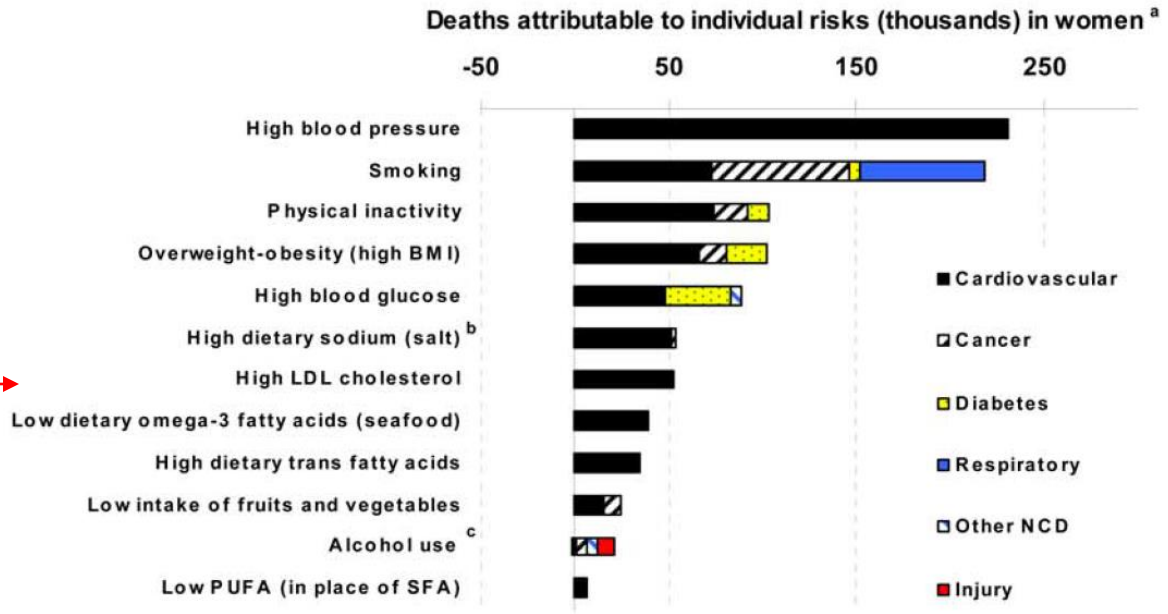
"Activities that improve the health of populations"

- Linked to the primary enterprise of public health:
  - Establish conditions in communities where people live healthy lives
- Public health activities promote healthy lifestyles through:
  - Health education
  - Protecting against environmental hazards
  - Controlling infectious diseases
  - Preparing for and responding to disasters
  - Promoting healthcare equity, quality, and access.



Activities that harm health of populations. Let's improve these!

Factors we can intervene on!



How to get to Population Health Improvement?

- Collaborate with agencies that have the power to shape the environment, influence behaviors in the target population, and influence policy.
- From a healthcare system perspective, collaborate with the public health system.
  - Support prevention and wellness –Pitt Partners for Health
  - Implement community-based team approaches to coordinate healthcare and other community resources – NCCARES360
  - NC Healthy People 2030
- Invest in education, economic, and workforce development
- Produce long-term health care savings/

What is Public Health?

- **The science of protecting and improving the health of families and communities through**
  - **promotion of healthy lifestyles**
  - **research for disease and injury prevention**
  - **detection and control of infectious diseases.**

Public Health System

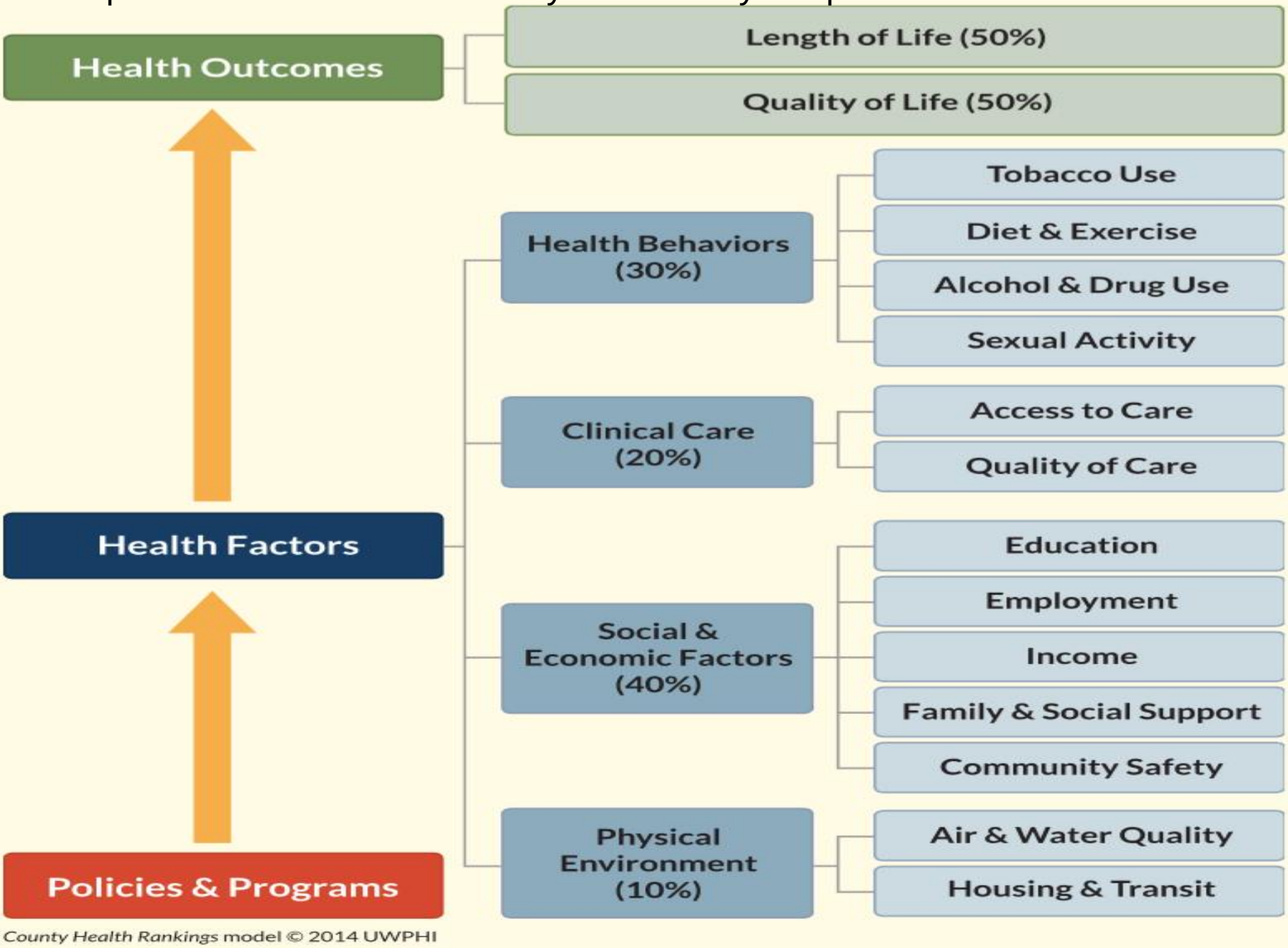
Source: Public Health Practice Program Office, Centers for Disease Control and Prevention , National Public Health Performance Standards Program, User Guide (first edition), 2002. (Current version available at www.cdc.gov/nphpsp)

NC Healthy People 2030

- US DHHS since 1990
- NC version Healthy People 2030 –
- NC DHHS, Division of Public Health

Long-term sustainable improvements in the health and well-being of North Carolinians will only occur by addressing the social, economic, and place-based challenges that keep people from achieving optimal health. National and state public health leaders are focusing on health equity by shifting focus from individual health topics to overall drivers of health outcomes, including social and economic factors, physical environment, health behaviors, and clinical care.

Population Health Model used by NC Healthy People 2030 NC



Task Groups prioritized Health Equity –

Indicators related to Health Disparities

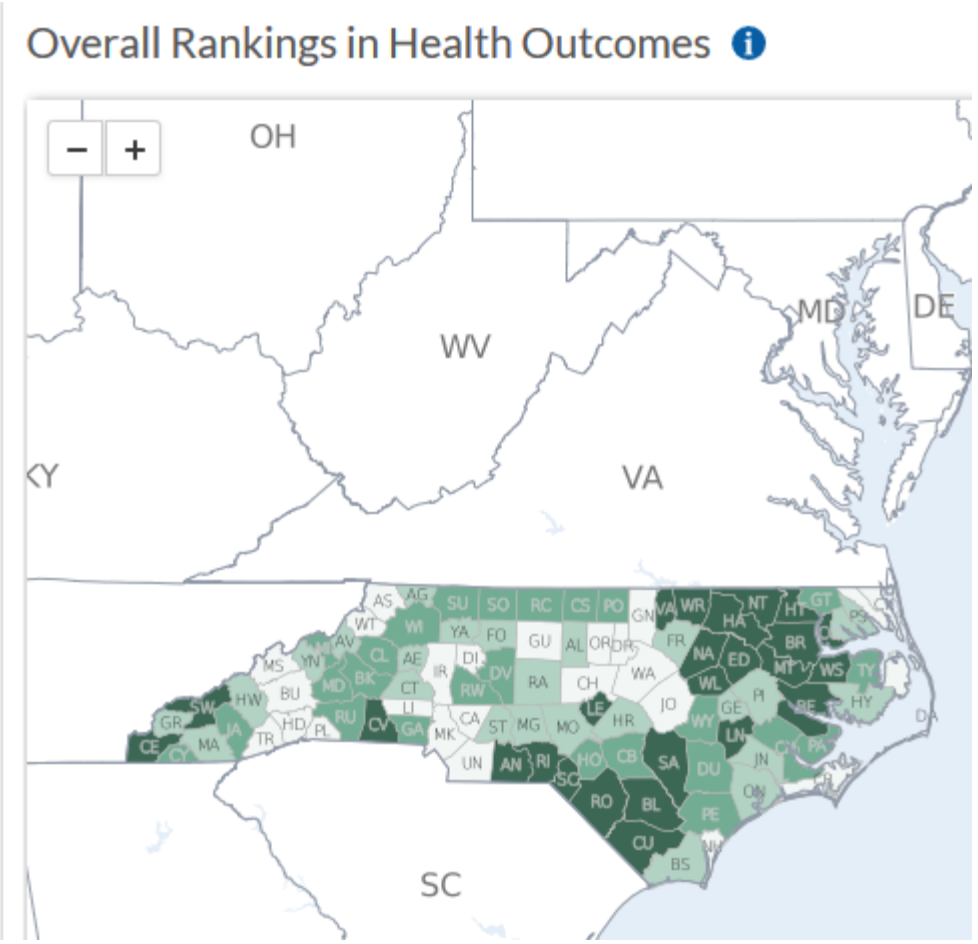
HEALTH INDICATORS AND DATA

(TOTAL NC POPULATION, 2030 TARGET, AND DATA BY RACE/ETHNICITY, SEX, AND POVERTY LEVEL)

	HEALTH INDICATOR	DESIRED RESULT	TOTAL POPULATION CURRENT (YEAR)	TOTAL POPULATION 2030 TARGET
1	INDIVIDUALS BELOW 200% FPL	Decrease the number of people living in poverty	36.8% (2013-17)	27.0%
2	UNEMPLOYMENT	Increase economic security	7.2% (2013-17)	Reduce unemployment disparity ratio between white and other populations to 1.7 or lower
3	SHORT-TERM SUSPENSIONS (PER 10 STUDENTS)	Dismantle structural racism	1.39 (2017-18)	0.80
4	INCARCERATION RATE (PER 100,000 POPULATION)		341 (2017)	150
5	ADVERSE CHILDHOOD EXPERIENCES	Improve child well-being	23.6% (2016-17)	18.0%
6	THIRD GRADE READING PROFICIENCY	Improve third grade reading proficiency	56.8% (2018-19)	80.0%
7	ACCESS TO EXERCISE OPPORTUNITIES	Increase physical activity	73% (2010/18)	92%
8	LIMITED ACCESS TO HEALTHY FOOD	Improve access to healthy food	7% (2015)	5%
9	SEVERE HOUSING PROBLEMS	Improve housing quality	16.1% (2011-15)	14.0%
10	DRUG OVERDOSE DEATHS (PER 100,000 POPULATION)	Decrease drug overdose deaths	20.4 (2018)	18.0
11	TOBACCO USE	Decrease tobacco use	YOUTH 19.8% (2017) ADULT 23.8% (2018)	9.0% 15.0%
12	EXCESSIVE DRINKING	Decrease excessive drinking	16.0% (2018)	12.0%
13	SUGAR-SWEETENED BEVERAGE CONSUMPTION	Reduce overweight and obesity	YOUTH 33.6% (2017) ADULT 34.2% (2017)	17.0% 20.0%
14	HIV DIAGNOSIS (PER 100,000 POPULATION)	Improve sexual health	13.9 (2018)	6.0
15	TEEN BIRTH RATE (PER 1,000 POPULATION)		18.7 (2018)	10.0
16	UNINSURED	Decrease the uninsured population	13% (2017)	8%
17	PRIMARY CARE CLINICIANS (COUNTIES AT OR BELOW 1:1,500 PROVIDERS TO POPULATION)	Increase the primary care workforce	62 (2017)	25% decrease for counties above 1:1,500 providers to population
18	EARLY PRENATAL CARE	Improve birth outcomes	68.0% (2018)	80.0%
19	SUICIDE RATE (PER 100,000 POPULATION)	Improve access and treatment for mental health needs	13.8 (2018)	11.1
20	INFANT MORTALITY (PER 1,000 BIRTHS)	Decrease infant mortality	6.8 (2018) Black/white disparity ratio = 2.4	6.0 Black/white disparity ratio = 1.5
21	LIFE EXPECTANCY (YEARS)	Increase life expectancy	77.6 (2018)	82.0

County Health Rankings

- www.countyhealthrankings.org



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- Events

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Pitt Partners For Health shared a link.
January 30 at 7:19 AM

Live Webinar

No Rating Yet

Community

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About

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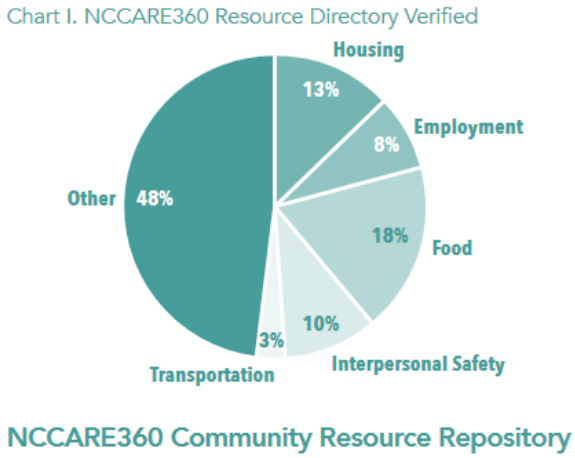
Health ENC

Working Together for a Healthier Eastern North Carolina

- Health ENC coordinates a regional Community Health Needs Assessment in 33 counties of eastern North Carolina.
- 22 hospitals, 23 local health departments/districts
- Initiated in 2015 by the Office of Health Access in the Brody School of Medicine at East Carolina University.
- Health ENC grew out of conversations with health care leaders about improving the CHNA process in eastern North Carolina.
- Data!!
- https://www.healthenc.org/

NCCARES360

- Statewide platform
- Coordinate with non-medical drivers of health
- Closes loop on referrals made
- Reports outcomes
- Resource directory using 2-1-1
- Providers only send a referral through the system to other organizations also using NCCARE360.



NCCARE360

N Engl J Med. 2019 Jan 10;380(2):113-115. doi: 10.1056/NEJMp1809451.

Focusing on Population Health at Scale — Joining Policy and Technology to Improve Health

Aaron McKethan, Ph.D., Seth A. Berkowitz, M.D., M.P.H., and Mandy Cohen, M.D., M.P.H.

I. OVERVIEW

NCCARE360 is the first statewide coordinated care network that will serve as the core infrastructure for North Carolina as it moves to whole person health and health system transformation. There is growing recognition that better coordination and investment in the non-medical drivers of health, like access to healthy food, safe and affordable housing and well-paying jobs, can improve health and decrease health care costs.

Public Health and QI

Focus Areas

- Performance Management
- Quality Improvement
  - Quality Improvement Programs
  - Quality Improvement Resources
  - Quality Improvement Training
  - Accreditation Preparation and Support

Quality Improvement in Public Health

Overview

Definition of quality improvement in public health:

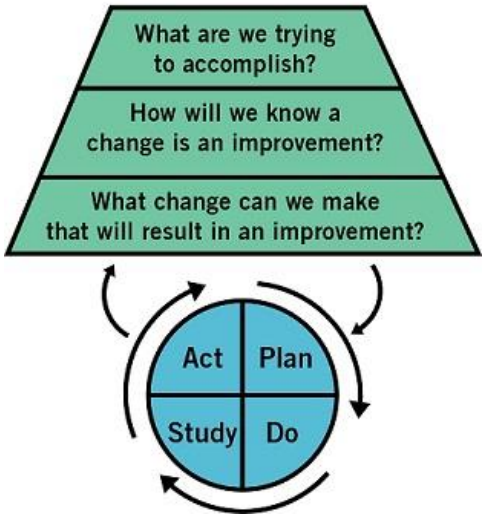
"Quality improvement in public health is the use of a deliberate and defined improvement process, such as Plan-Do-Check-Act, which is focused on activities that are responsive to community needs and improving population health. It refers to a continuous and ongoing effort to achieve measureable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality in services or processes which achieve equity and improve the health of the community"[1]

Quality improvement is useful for professionals, teams, and organizations to improve

PHF Online Store

TRAIN

Model for Improvement



Using Quality Improvement to Promote Breast-feeding in a Local Health Department

Sarah S. Wright, MA; C. Suzanne Lea, PhD; Roxanne Holloman, MA; Amanda Cornett, MPH; Lisa Macon Harrison, MPH; Greg D. Randolph, MD, MPH

POPULATION HEALTH IMPROVEMENT PARTNERS

TABLE 2 ● Example of a Series of Plan-Do-Study-Act Cycles to Test Change Ideas by Telephoning New Mothers About Breast-feeding

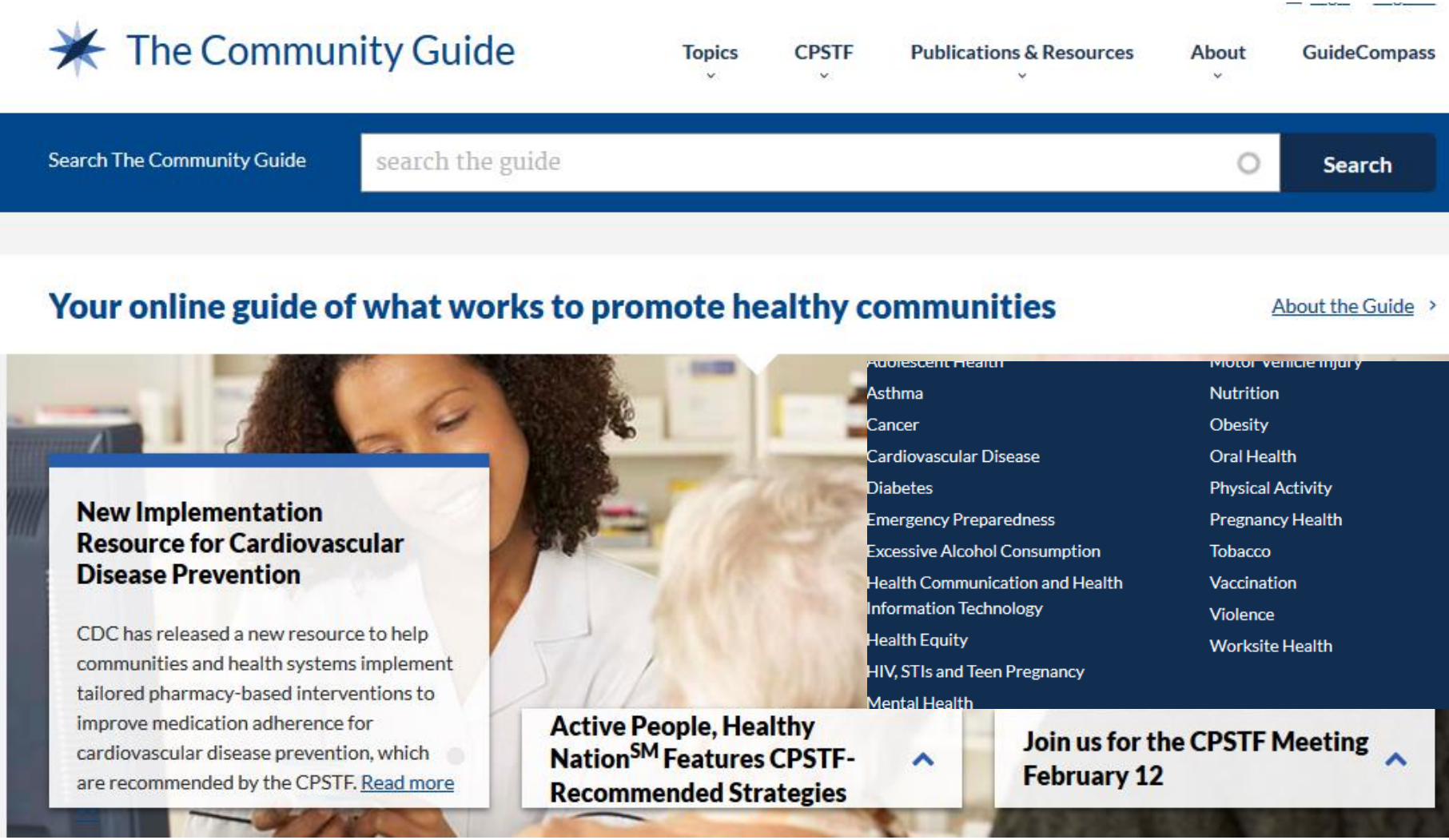
	Action Step	Cycle 1	Cycle 2	Cycle 3
Objective:		Test follow-up call script on new mothers.	Learn if conducting follow-up calls is beneficial and feasible.	Learn if conducting follow-up calls is beneficial and feasible.
Specific questions to address:		Are we asking the right questions? Are there additional things to include in script?	Are calls helpful and supportive? Are calls too time intensive?	Are calls helpful and supportive? Are calls too time intensive? Will the WIC director and nutritionist feel comfortable making the calls?
Prediction or Hypothesis:		Script will need to be tweaked. Overall, will provide correct information. Easy to use.	Mothers will find calls helpful and will not be time intensive.	Mothers will find calls helpful and will not be time intensive.
Plan	For change or test (who, what, when, how, where):	Team coordinator (TC) will develop the script. Give to WIC Director and breast-feeding coordinator (BC) to review by next Wednesday.	BC will conduct follow-up calls with 3-4 breast-feeding WIC clients who recently gave birth by 8/13.	Nutritionist and WIC director will conduct follow-up calls with 3-4 breast-feeding WIC clients who recently gave birth by 8/25.
	For data collection (who, what, when, how, how long):	TC will obtain feedback.	BC will document length of time to conduct calls and inquire if calls are helpful. TC will meet with BC to review data on 8/15.	Nutritionist and WIC director will document length of time to conduct calls and inquire if calls are helpful. TC will follow up with both to review data by 8/28.
Do	Carry out the change test:	Feedback obtained.	BC conducted a call, but felt uncomfortable calling clients. Cycle stopped.	Calls were conducted.
Study	Analyze and summarize data:	Feedback affirmed script had correct information but tweaked script based on all feedback.	BC conducted 1 call, but thought it was useful.	Calls overall went well—were not too time intensive. Clients happy to learn about support offered.
Act	Document what was learned and plan next cycle:	Script will be tested on a few new breast-feeding mothers to assess usefulness.	WIC director and nutritionist will conduct calls for next cycle.	Continue to do calls. Next cycle will test if WIC director will be responsible for calls instead of QI team.

Abbreviations: BC, breast-feeding coordinator; TC, team coordinator; WIC, Women, Infants and Children

Research VS QI – Is change and Improvement?

	Research	Quality Improvement
Purpose	Proof of effectiveness	Sustained improvement
Data Collection	Gather enough data to authoritatively study for effect and control for all known confounders	Gather just enough data to inform improvement, and only collect data on 1–2 confounders as needed (i.e., balancing measures)
Method	One large test with a fixed hypothesis; control bias as much as possible	Rapid sequential tests with a hypothesis that changes as learning takes place; no effort to control bias
Results Evaluation	Pre- and post-assessment	Regular assessment with run charts

How do you know change is an improvement?



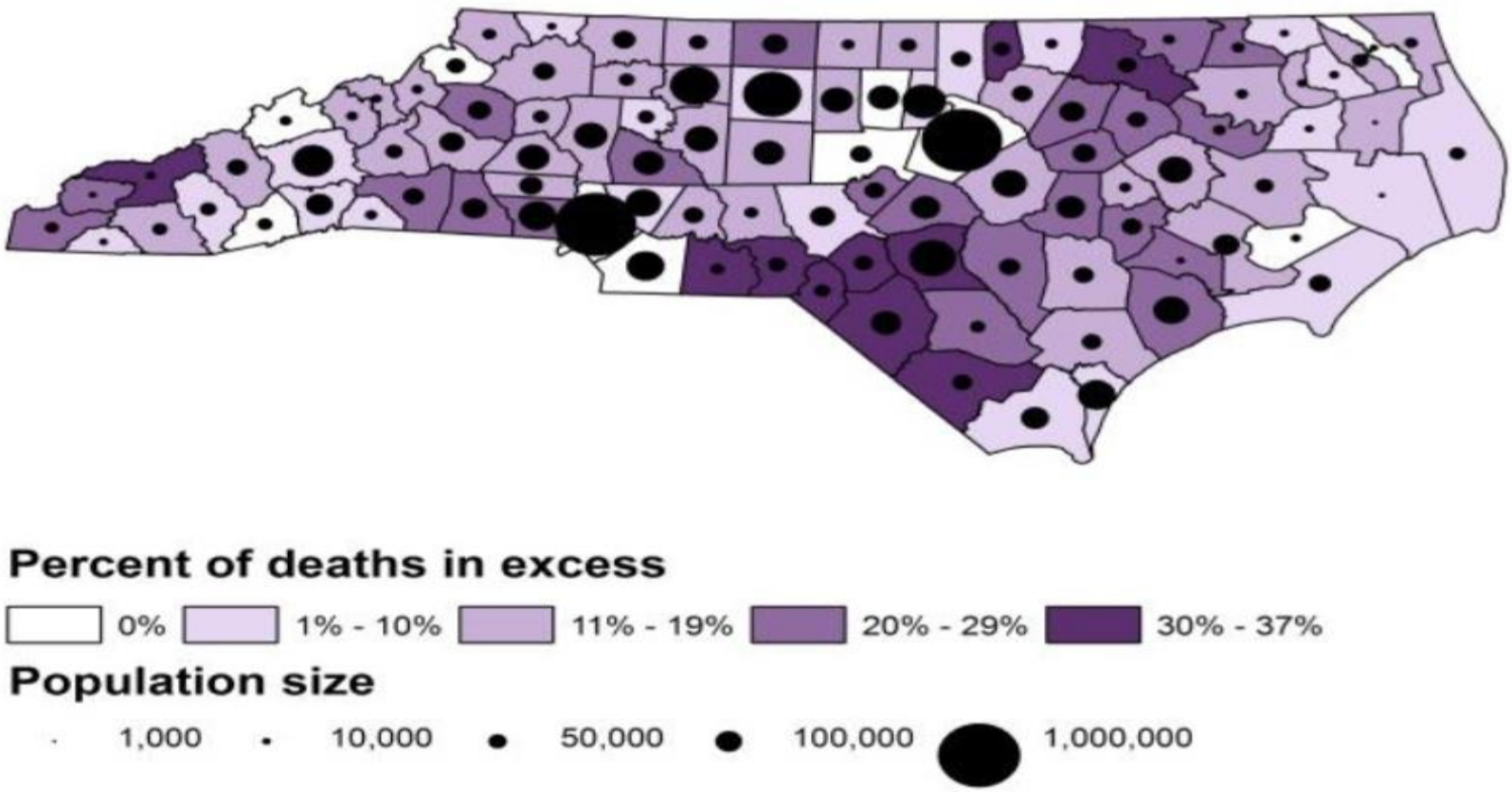
Healthiest Cities & Counties Challenge

Request for Proposals

The Opportunity

Through this Request for Proposals, the Challenge partners invite city- and county-level teams[1] to apply to join this effort. The Challenge, which is part of CVS Health's Building Healthier Communities commitment, aims to accelerate systems-level approaches to improving community health. The Challenge is seeking applications from cross-sector teams that will use upstream approaches to address the program's two priority topics: (1) increased access to foods that support healthy eating patterns; and (2) improved access to health services. Teams are encouraged to focus on either one or both topic areas in their applications.

Every year, **over 5,500 deaths in North Carolina could be avoided** if all residents in the state had a fair chance to be healthy.



RECOMMENDATIONS TO ADDRESS HEALTH GAPS IN NORTH CAROLINA

- Tobacco prevention/cessation policies
  - Proactive quitlines
  - Smoke-free policies for indoor areas
  - Restrictions on tobacco marketing
  - Increasing tobacco taxing or point-of-sale fees
- Vaping and E-cigarette use in Youth

RECOMMENDATIONS TO ADDRESS HEALTH GAPS IN NORTH CAROLINA

- Sexual health programs
  - Condom availability programs
  - Partner counseling services
  - School-based reproductive health clinics
  - Comprehensive sexual education risk reduction programs

RECOMMENDATIONS TO ADDRESS HEALTH GAPS IN NORTH CAROLINA

- Access to health care
  - Federally qualified health centers
  - Health insurance enrollment and outreach
  - Telemedicine programs
  - Community health workers

RECOMMENDATIONS TO ADDRESS HEALTH GAPS IN NORTH CAROLINA

- Education
  - Community schools
  - Dropout prevention programs
  - Targeted truancy interventions
  - Universal pre-K programs

RECOMMENDATIONS TO ADDRESS HEALTH GAPS IN NORTH CAROLINA

- Employment/Income
  - Unemployment insurance
  - Vocational training for adults
  - Earned income tax credits
  - Funding for child care subsidies
  - Living wage laws
  - Paid family leave

What is the Difference between Population Health and Public Health?

https://www.youtube.com/watch?v=GDWDb_G7Hvs&feature=youtu.be

FIGURE 3

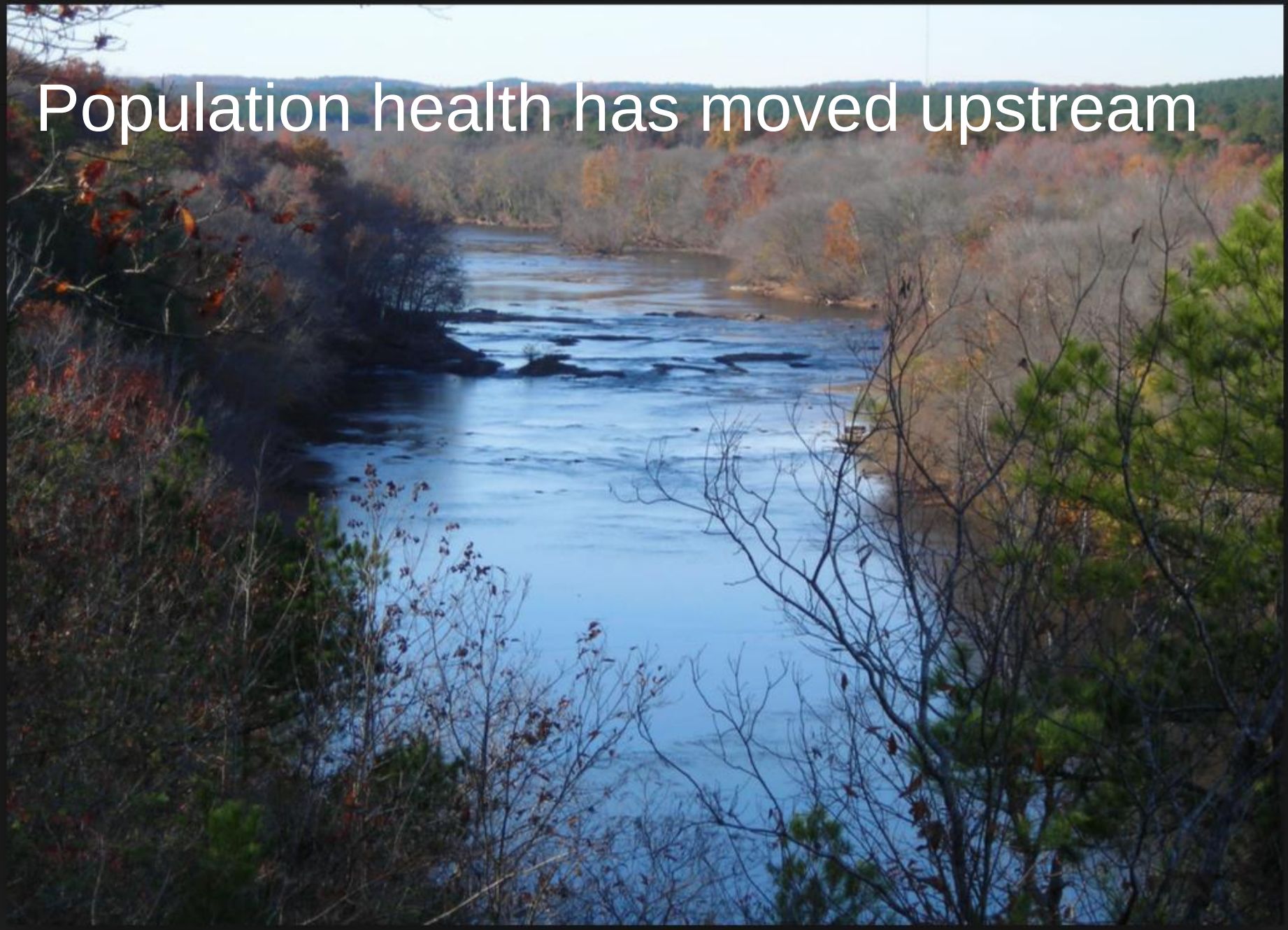
Health Status Successes and Challenges in North Carolina

2018 NC OVERALL HEALTH RANK AMONG 50 STATES:

33RD

SUCCESSES	↑ Graduation Rate - 85.9% (National Avg. 84.1%, 2015-16) ↓ Violent Crime - 364 per 100,000 (National Avg. 394 per 100,000, 2017)
IMPROVEMENTS, STILL ABOVE AVERAGE	↓ Infant Mortality - 7.1 per 1,00 live births (National Avg. 5.8 per 1,00 live births, 2017) ↓ Adult Smoking - 17.2% (National Avg. 17.1%, 2017) ↓ Children Living in Poverty - 21.2% (National Avg. 18.4%, 2017) ↓ Uninsured - 13% (National Avg. 8.7%, 2017)
GROWING CHALLENGES	↑ Drug Overdose Deaths - 16.2 per 100,000 (National Avg. 16.9, 2014-16) ↑ Obesity - 32.1% (National Avg. 31.3%, 2017) ↑ Youth Tobacco Use - 19.8% (National Avg. 12.6%, 2017)

Sources: America's Health Rankings (https://www.americashealthrankings.org/explore/annual); Kaiser Family Foundation State Health Facts (https://www.kff.org/other/state-indicator/nonelderly-0-)64/?currentTimeframe=0&selectedDistributions=uninsured&selectedRows=%7B%22wrapups%22:%7B%22united-states%22:%7B%7D%7D,%22states%22:-%7B%22all%22:%7B%7D%7D%7D&sortModel=%7B%22colId%22:%22Uninsured%22,%22sort%22:%22asc%22%7D; NC DHHS NC Tobacco Prevention and Control Branch analysis of Youth Tobacco Survey Note: Data presented in this graphic are the most recent available to compare to national average.


Population health has moved upstream

Thank you!

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Case Studies