

MaineHealth
Health Index

Cancer in Maine:
Using Data to Direct Actions
2018 Challenge Cancer Conference
May 1, 2018

Tim Cowan, MSPH
Director, Data Reporting and Evaluation
Center for Health Improvement
MaineHealth

All Cancer Mortality Rates- 2013-2015

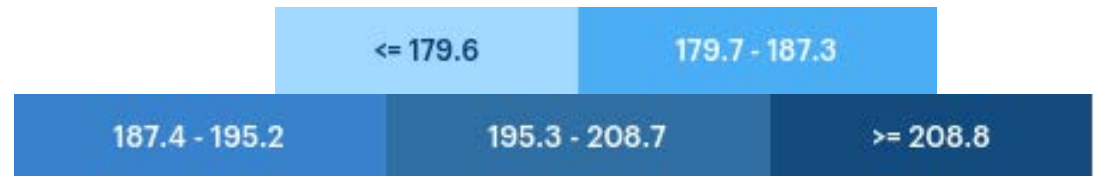
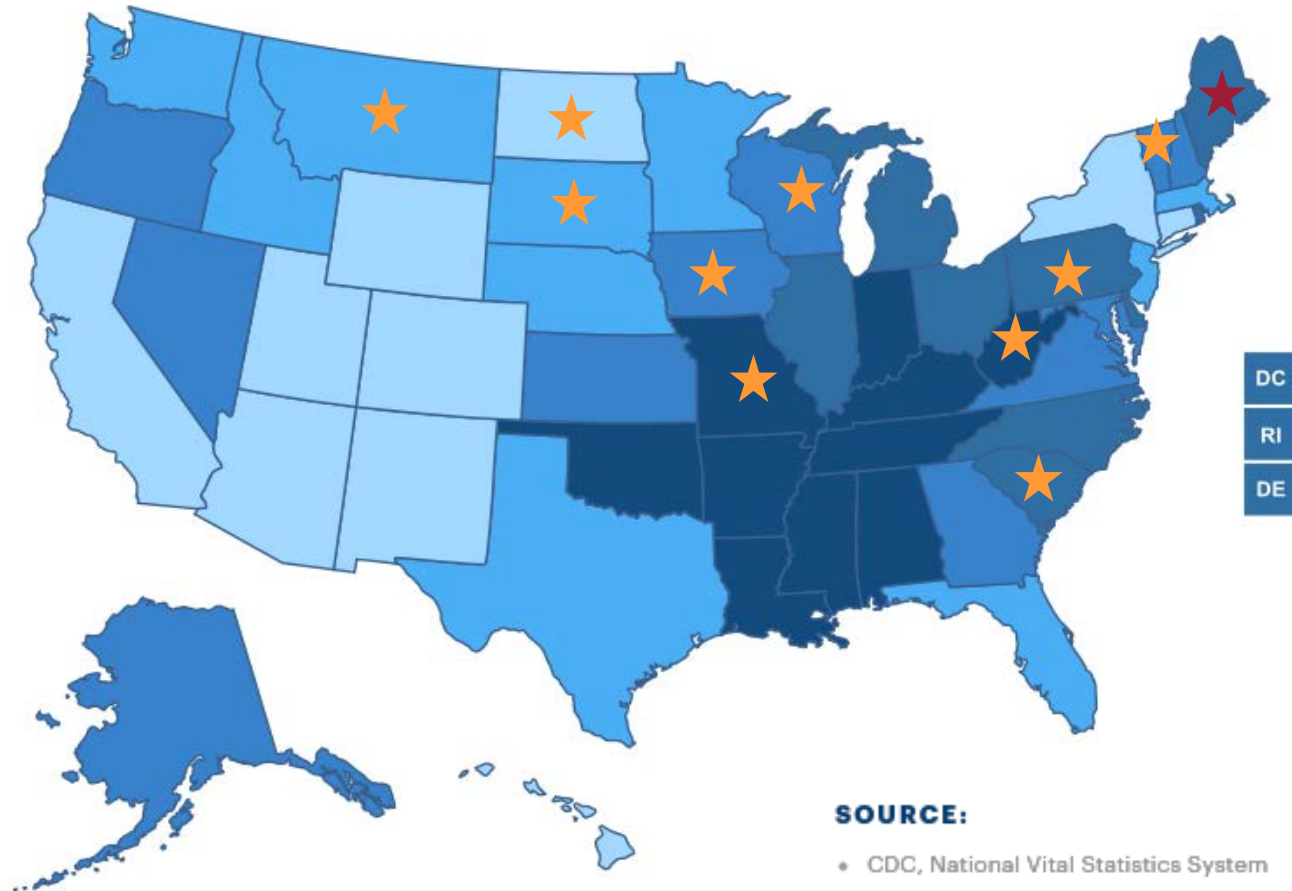
(Age-adjusted rates, using U.S. population in 2014 as standard population)

10 Peer States: ★

Identified Using Five
SES & Rurality Metrics

- Age-
 - 65+ yr. olds
- % Population Live in Rural Communities
- Education Attainment Among 25+ yr. olds-
 - % College (4 yrs.) or higher
- Living In Poverty-
 - % <18 yr. olds
- Median Household Income

Age-adjusted number of deaths due to all causes of cancer per 100,000 population



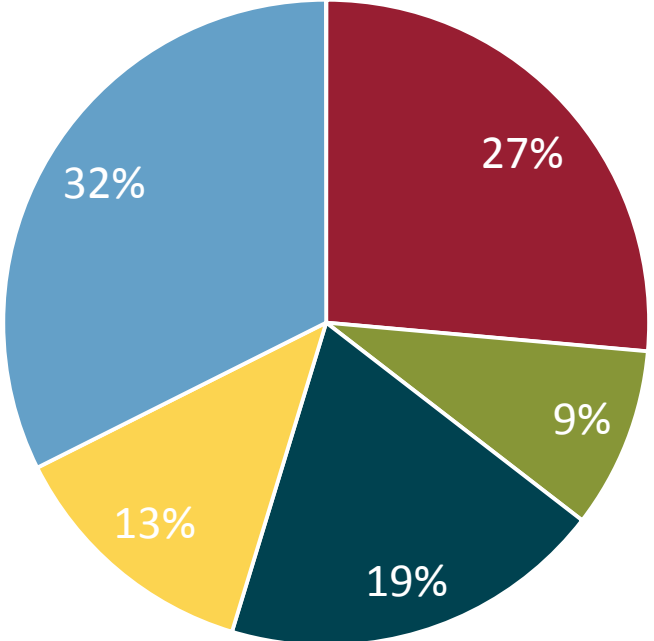
Health Behaviors That Can Reduce Risk of Cancers

Sources: Maine Cancer Surveillance Report- 2009 (produced by the Maine Cancer Consortium);
 Updates via Maine Cancer Registry (Molly Schwenn)- April 2018

	Avoid Tobacco	Maintain Healthy Weight	Be Physically Active	Eat Healthy Diet	Limit Alcohol	Get Appropriate Screenings	Avoid Excessive UV Exposure
Lung and Bronchus	•			•		•	
Colon and Rectum	•	•	•	•	•	•	
Breast (Females) (*=post menopause)		•*	•*	•	•	•	
Prostate (Males)				•		•	
Urinary Bladder	•			•			
Kidney & Renal Pelvis	•	•					
Pancreas	•	•		•			
Oral Cavity and Pharynx	•			•	•		•
Esophagus	•	•			•		
Liver/Intrahepatic Bile Duct	•	•			•		
Stomach	•			•			
Larynx	•				•		
Acute Myeloid Leukemia	•						
Cervix (Females)	•					•	
Uterus (Females)		•	•	•			
Gastric Cardia		•					
Gallbladder		•					
Multiple myeloma		•					
Ovary		•					
Meningioma		•					
Thyroid		•					
Melanoma							•

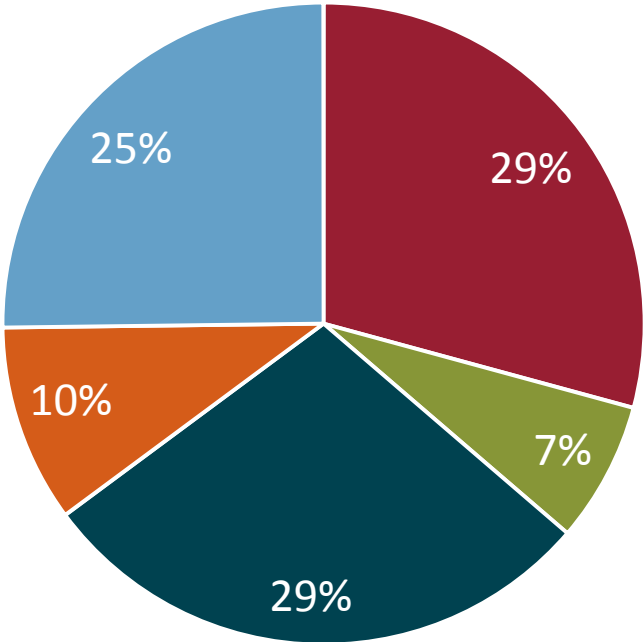
Leading Causes of Cancer Deaths in Maine (2016)

Among Females
(1,537 deaths)



- Lung/bronchus*
- Colon/rectum*
- Other Tobacco-related*
- Breast
- All other cancers

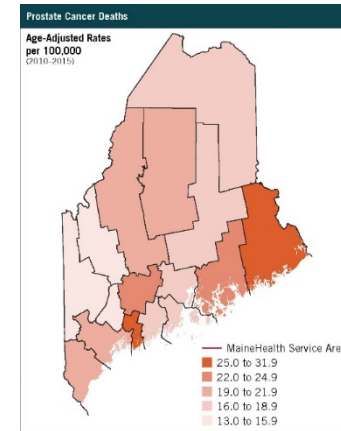
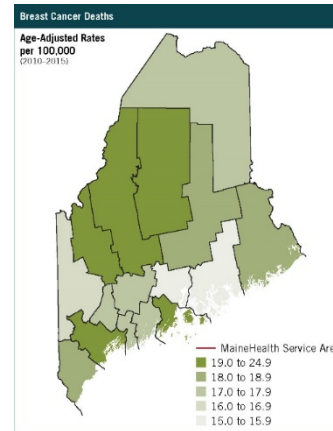
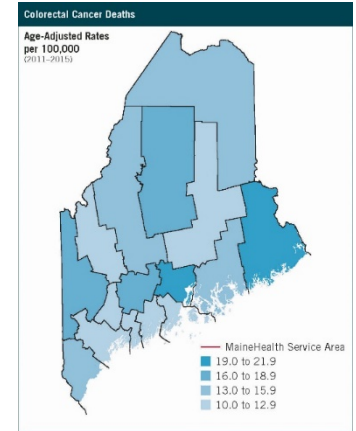
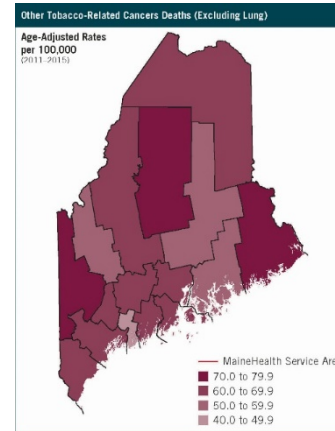
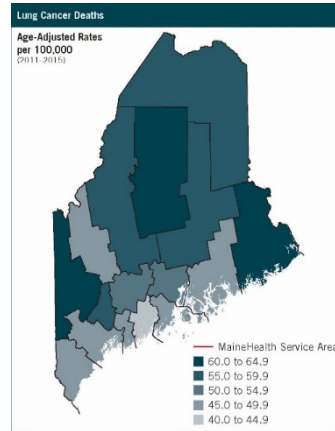
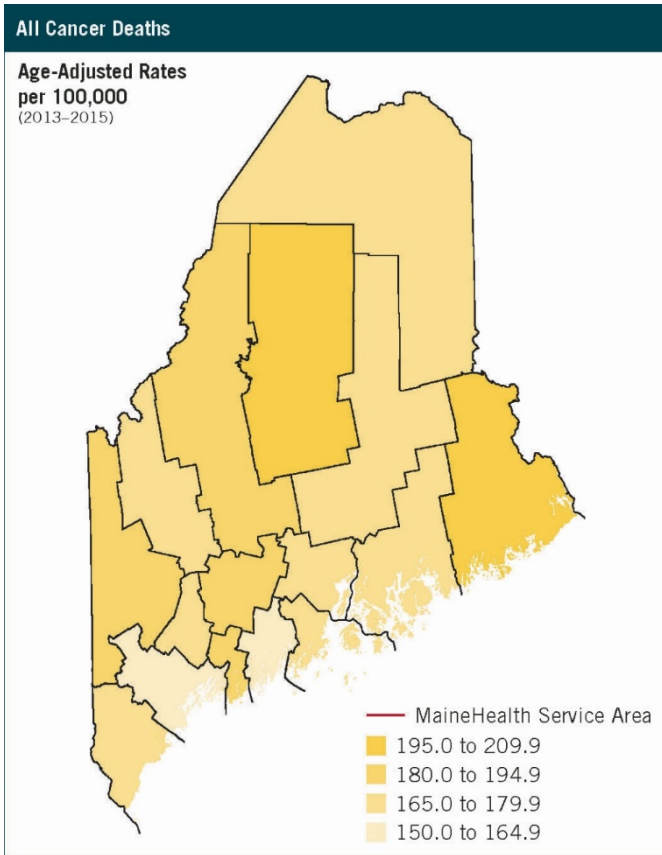
Among Males
(1,738 deaths)



- Lung/bronchus*
- Colon/Rectum*
- Other Tobacco-related*
- Prostate
- All other cancers

* Tobacco use can cause these cancers. The "Other Tobacco-related" cancers include: liver, laryngeal, oral cavity/pharynx, esophageal, stomach, pancreatic, kidney/renal pelvis, urinary bladder, cervical and acute myeloid leukemia.

Cancer Death Rates Compared Across Maine Counties



Mortality Due to All Types of Cancers Combined

Lowest Age-adjusted Mortality Rates in 2014-2016 were in:

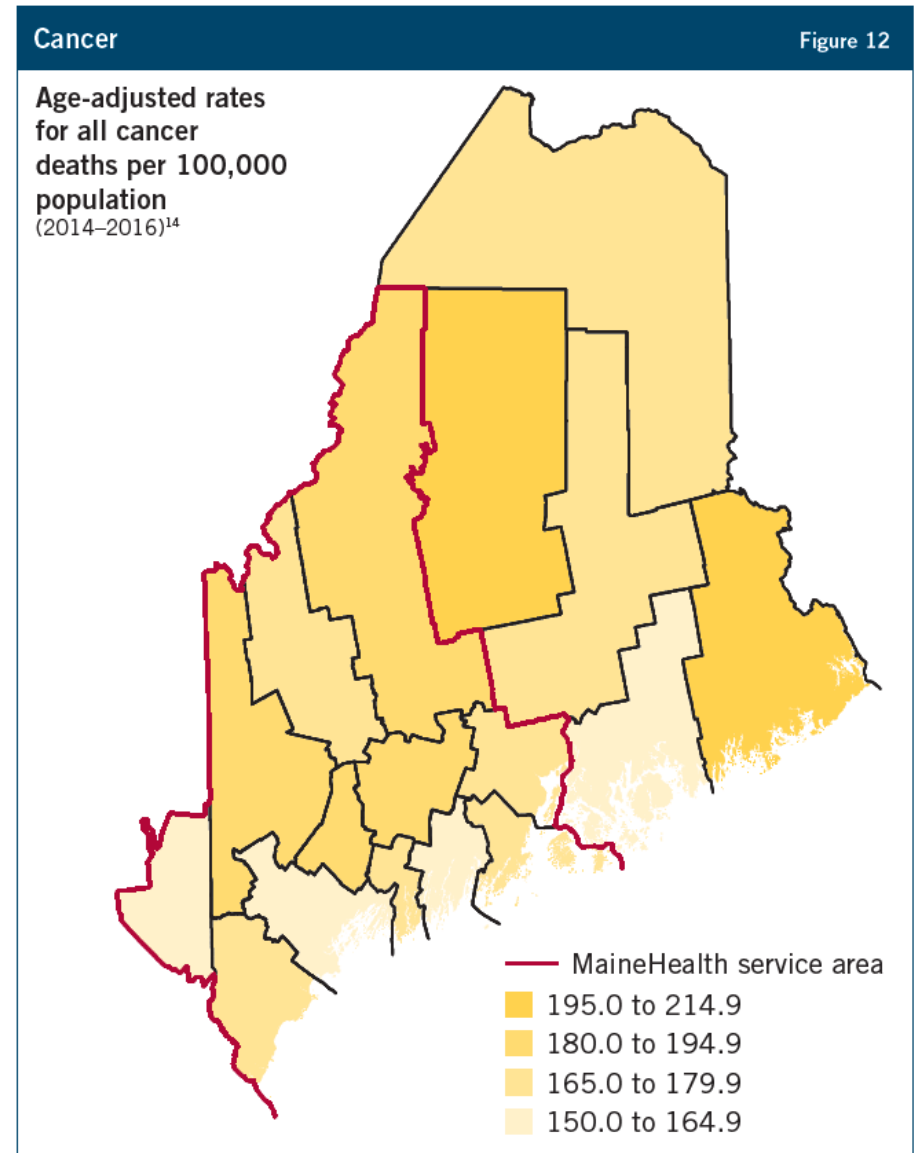
- Hancock County
- Cumberland County

Hancock County's rate is statistically significantly lower than rates in:

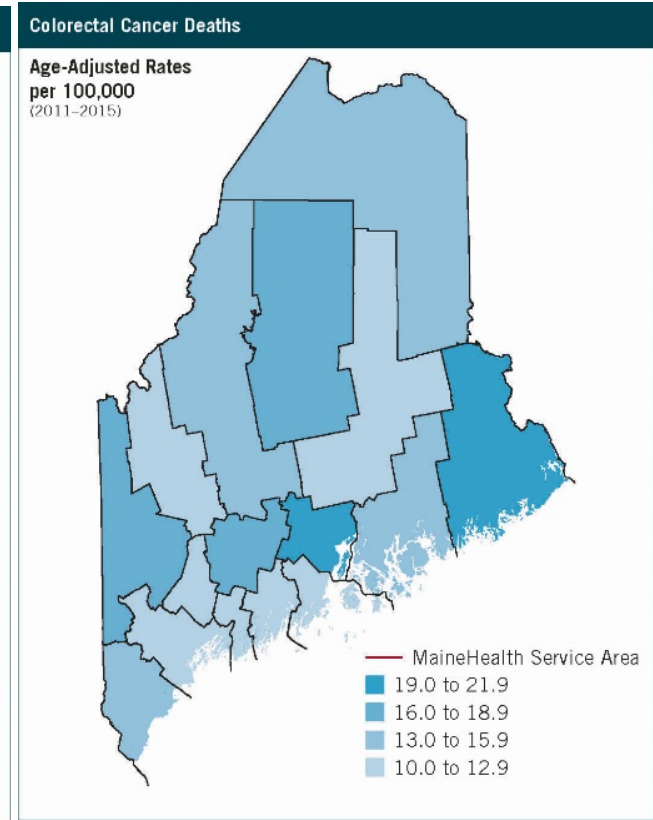
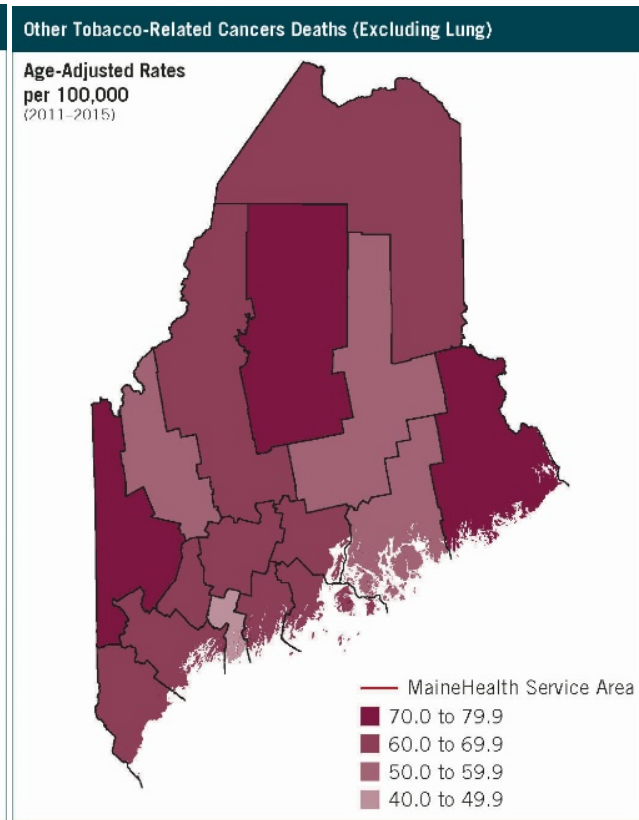
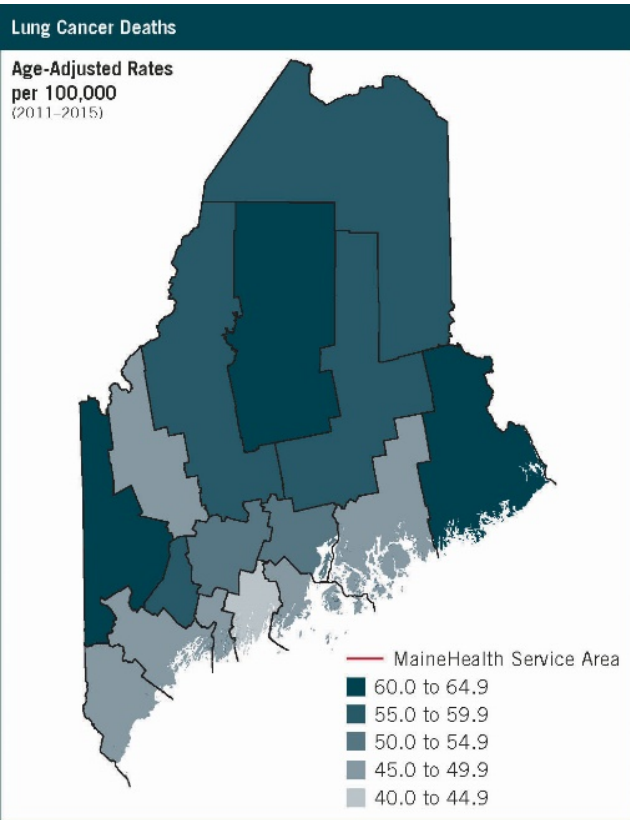
- Somerset County
- Piscataquis County
- Washington County

Cumberland County's rate is statistically significantly lower than rates in:

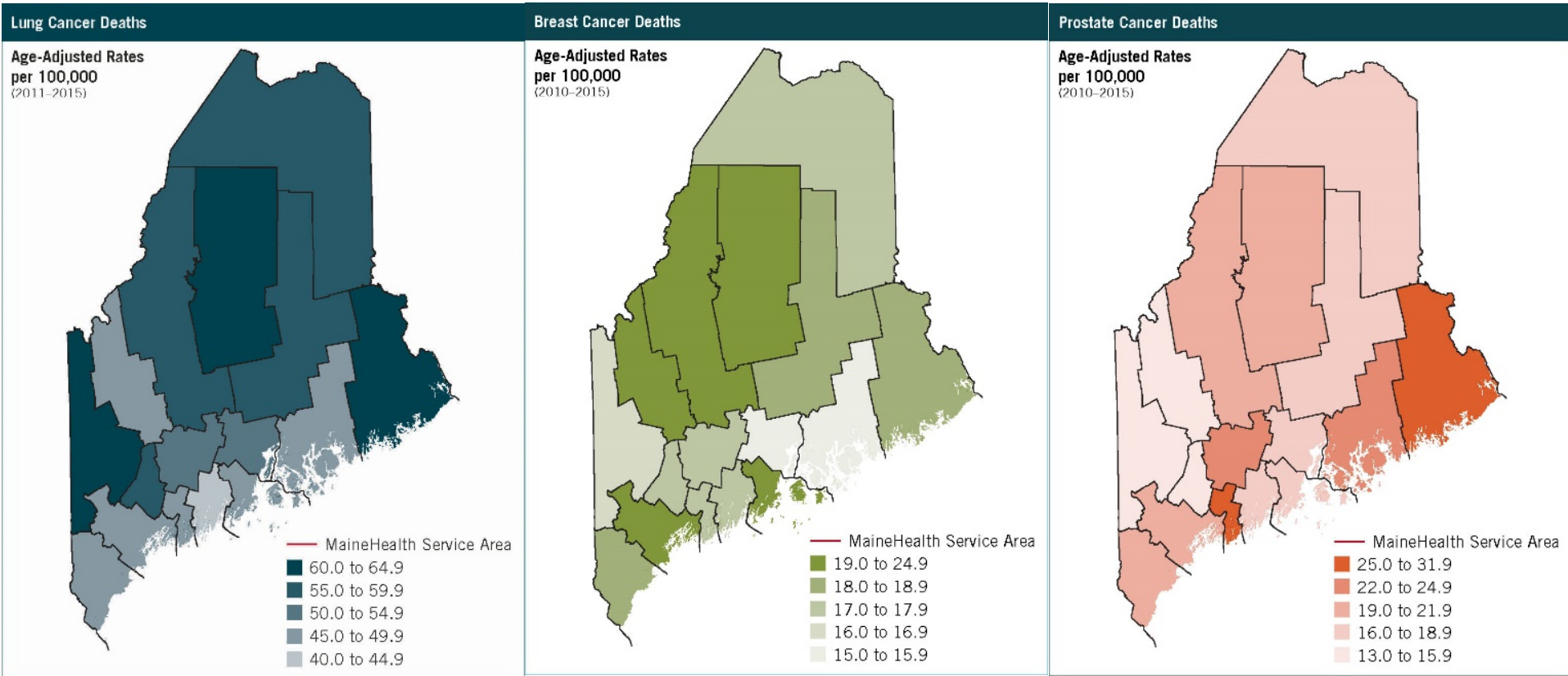
- Kennebec County
- Androscoggin County
- Oxford County
- Somerset County
- Piscataquis County
- Washington County
- Maine Statewide



Cancer Death Rates Compared Across Maine Counties



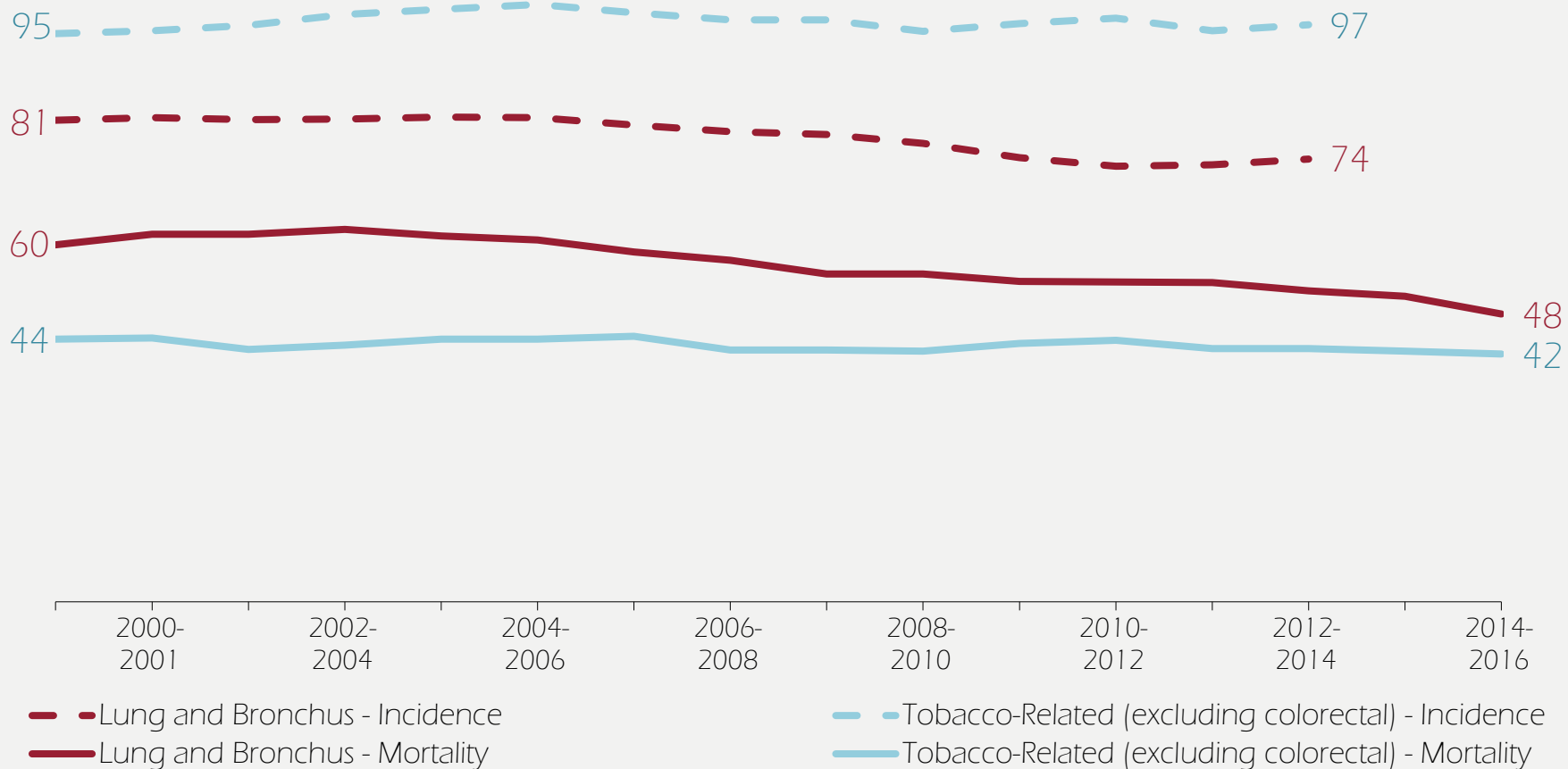
Cancer Death Rates Compared Across Maine Counties



Cancer Incidence and Mortality in Maine

Lung & Other Tobacco-Related Cancers*: 3-Year Rolling Averages

Age-Adjusted Rates per 100,000 Population



*Tobacco Related Cancers -excludes Lung/bronchus and Colorectal cancers, includes cancers of the Oral Cavity/Pharynx, Esophagus, Stomach, Pancreas, Larynx, Cervix , Urinary Bladder, Kidney and Renal Pelvis, Acute Myeloid Leukemia, Liver, and Bladder

Tobacco-Related Cancers, by site- 2014

Source: Maine CDC Cancer Registry (April 2018- Data not yet published)

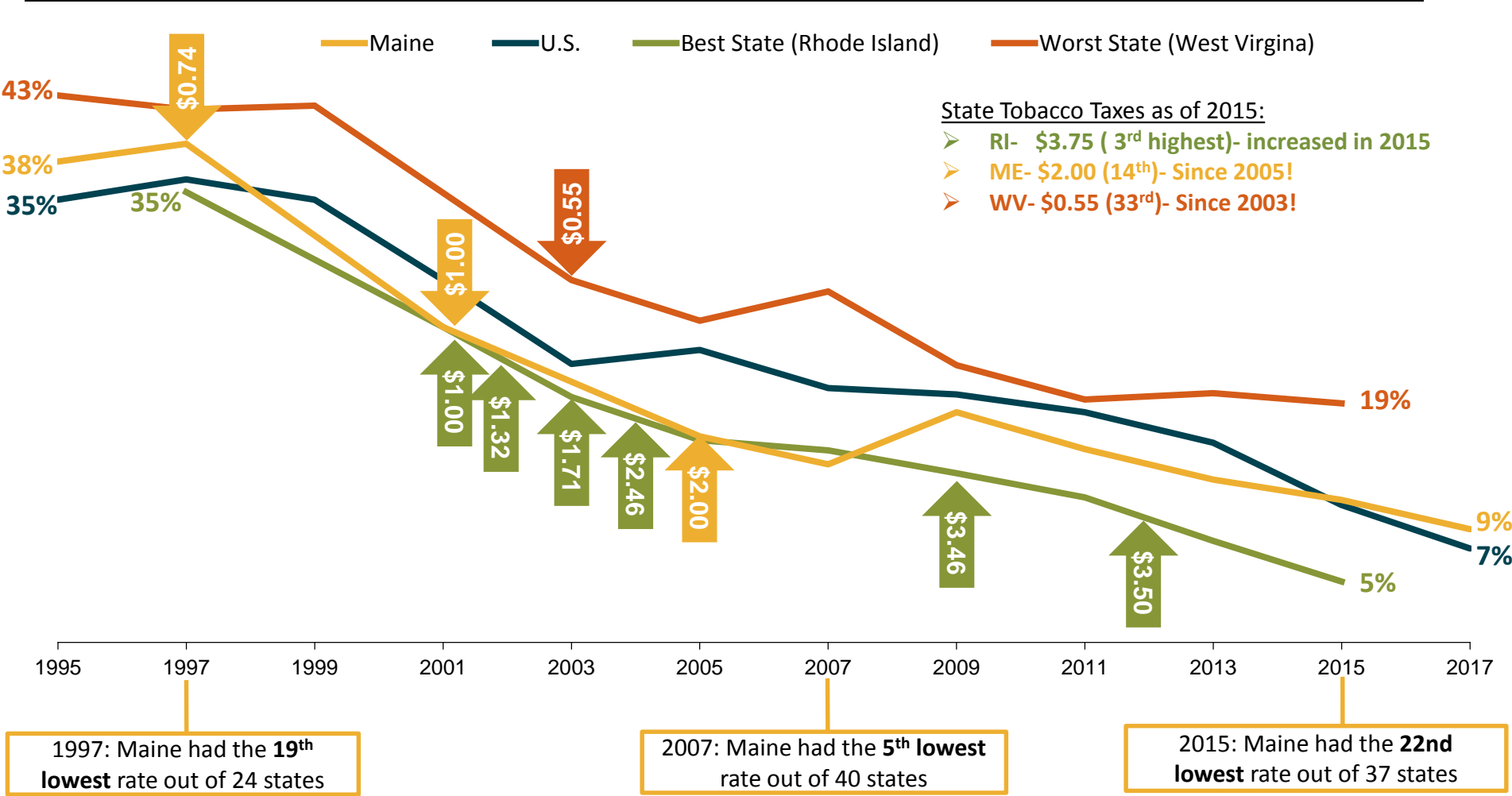
 Maine Rate Statistically
Significantly Higher Than U.S.

 Maine Rate Statistically
Significantly Lower Than U.S.

Tobacco-Related Cancers By site	Incidence Rate- 2014 (age-adjusted /100,000)		Mortality Rate- 2014 (age-adjusted/100,000)	
	Maine	U.S. Whites	Maine	U.S. Whites
Lung and Bronchus	72.1	59.5	47.7	43.0
Colon and Rectum	36.4	37.6	11.8	13.8
Urinary Bladder	29.0	21.0	6.1	4.6
Kidney and Renal Pelvis	17.2	16.4	4.3	3.9
Pancreas	13.2	12.3	9.6	10.9
Oral Cavity and Pharynx	12.3	12.0	2.5	2.5
Esophagus	7.1	4.7	6.3	4.2
Stomach	5.8	5.9	2.3	2.7
Liver and Intrahepatic Bile Duct	5.5	7.5	5.1	6.0
Acute Myeloid Leukemia	4.1	4.3	3.9	2.9
Larynx	3.9	3.2	1.0	1.0
Cervix	6.1	7.5	1.9	2.1

Cigarette Tax and Cigarette Use by High School Students

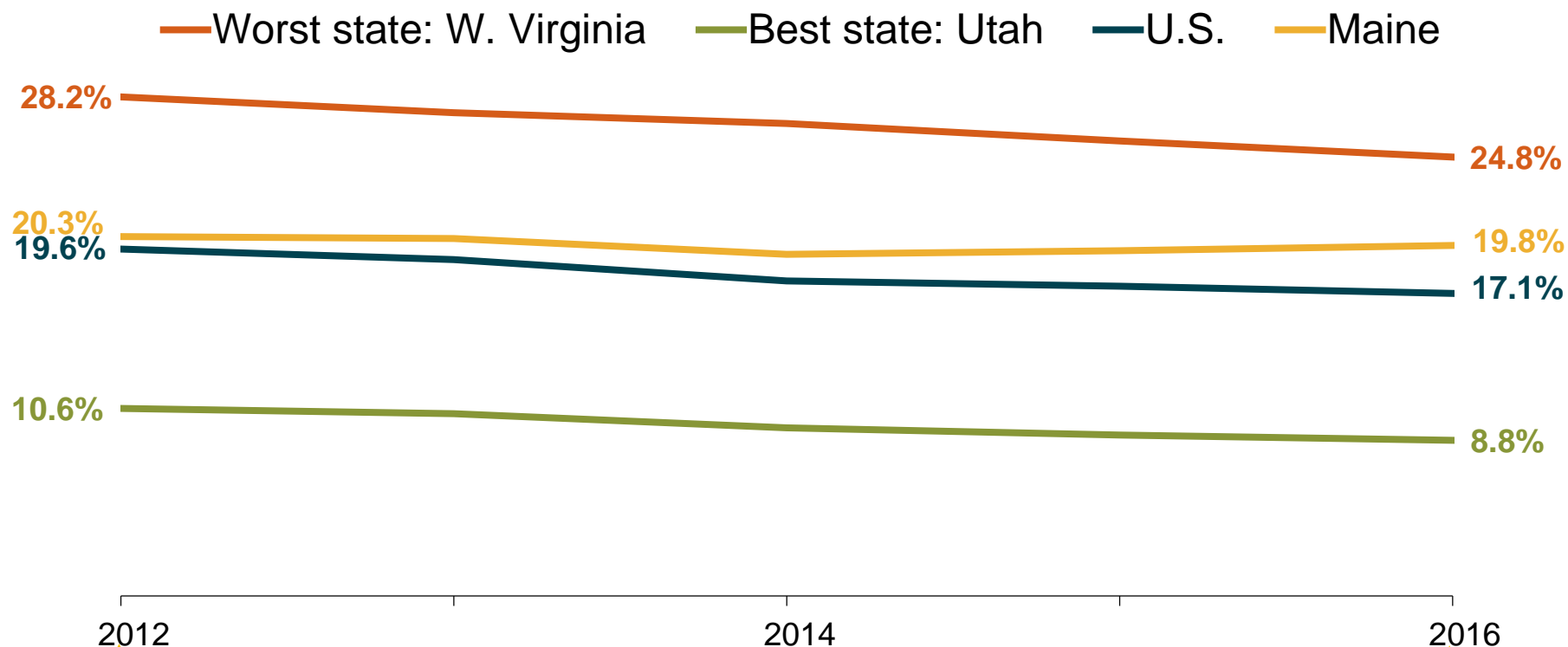
Percent Who Smoked Cigarettes on ≥1 Day During 30 Days Prior to Survey



Cigarette use among adults

% of 18+-year-olds who smoke daily or some days

Behavioral Risk Factor Surveillance System (2012–2016) *estimated percentage*

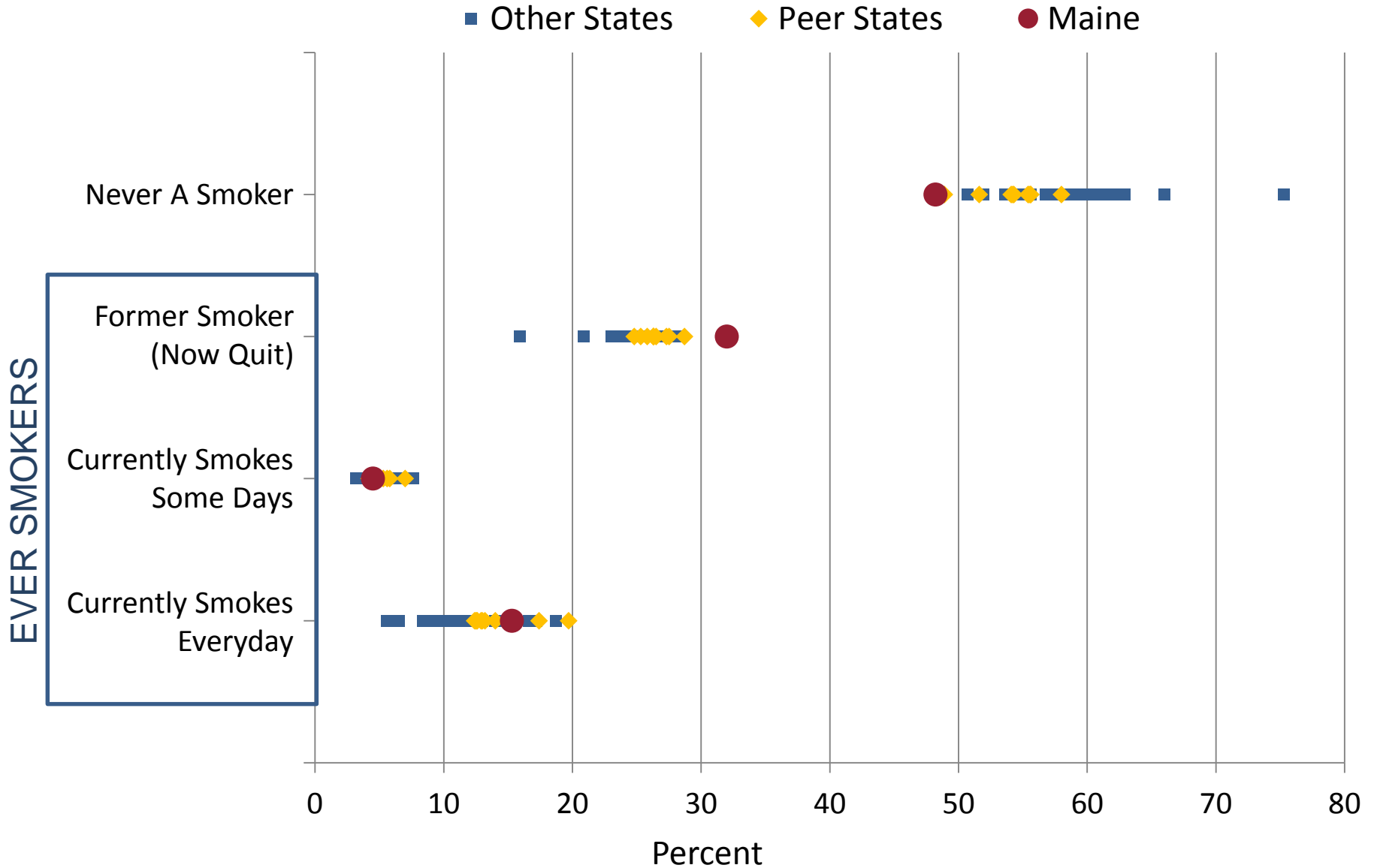


- 12 states significantly higher rates
- 16 states significantly lower rates

- 4 states significantly higher rates
- 24 states significantly lower rates

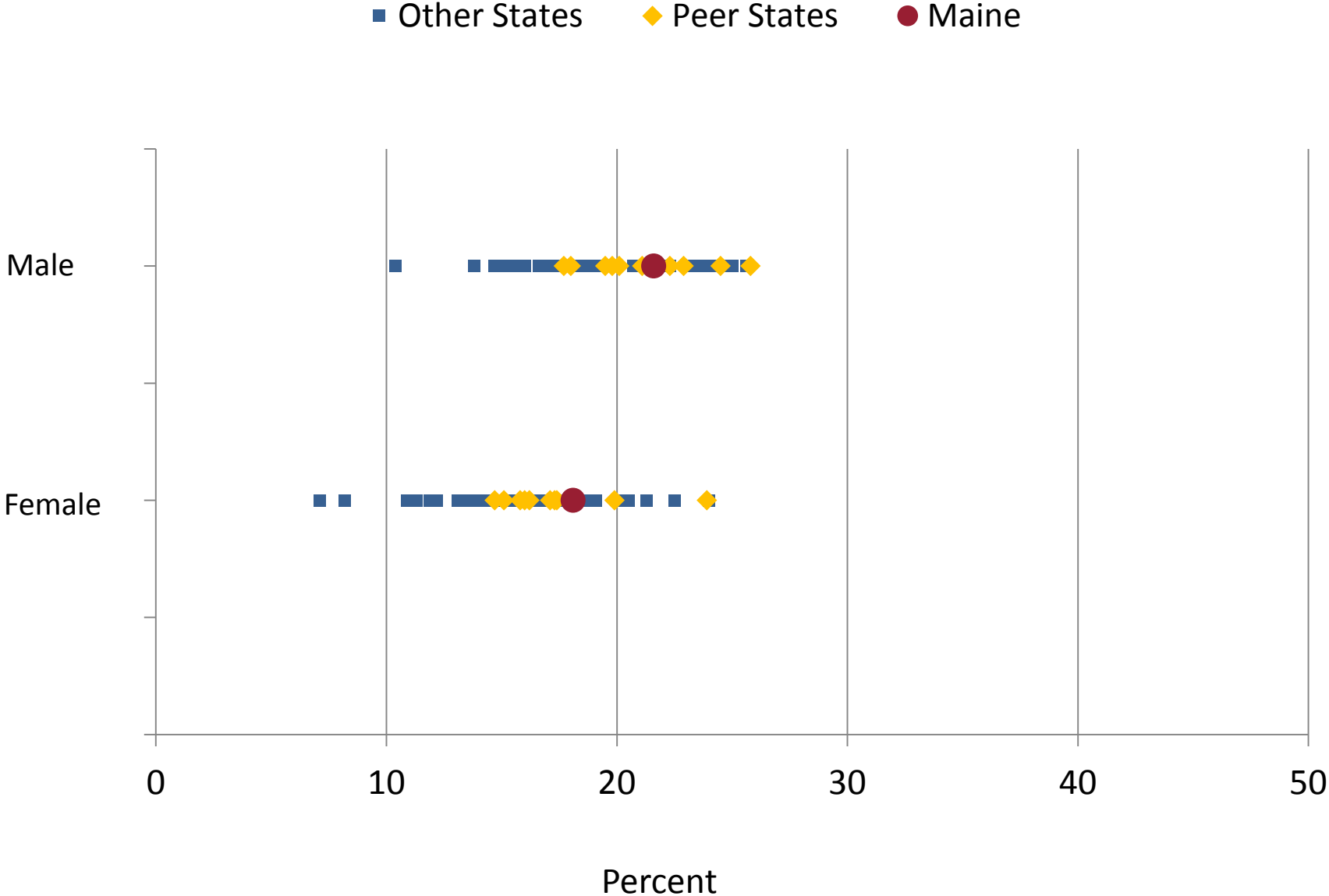
Smoking Status Among Adults in 50 States in 2016

Source: Behavioral Risk Factor Survey



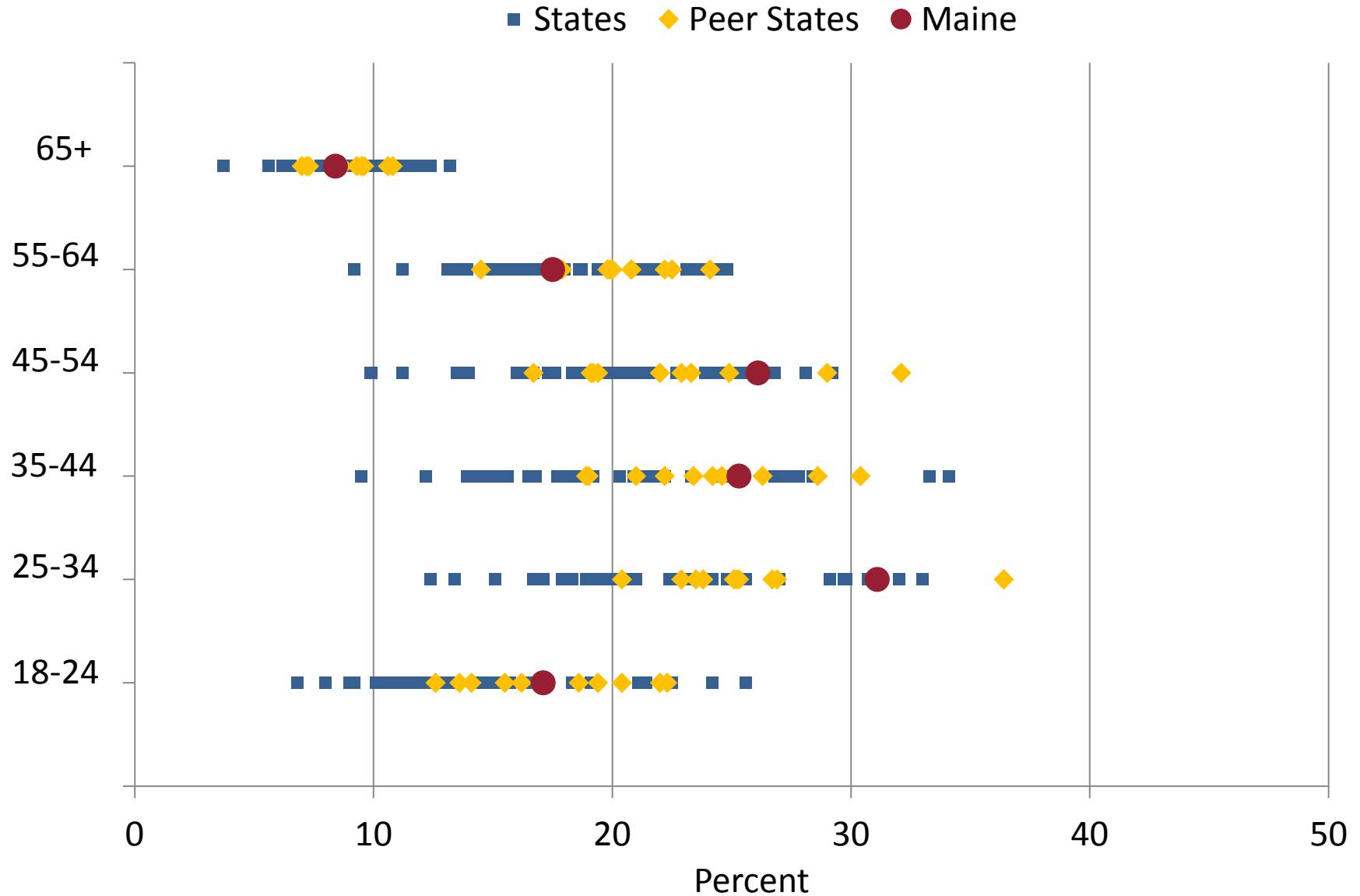
Adult Smokers by Gender in 50 States in 2016

Source: Behavioral Risk Factor Survey



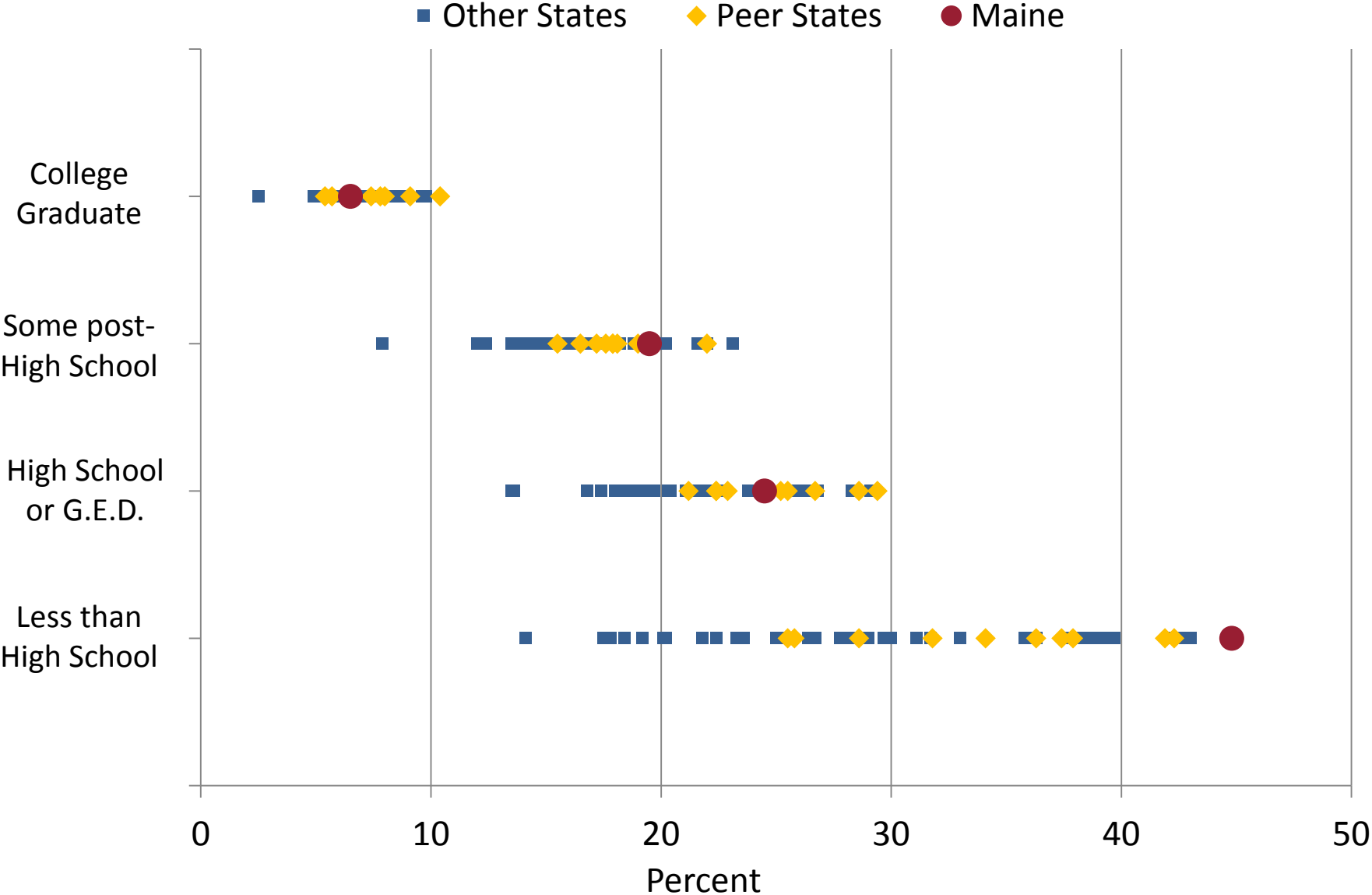
Adult Smokers by Age Group

Source: Behavioral Risk Factor Survey (2016)



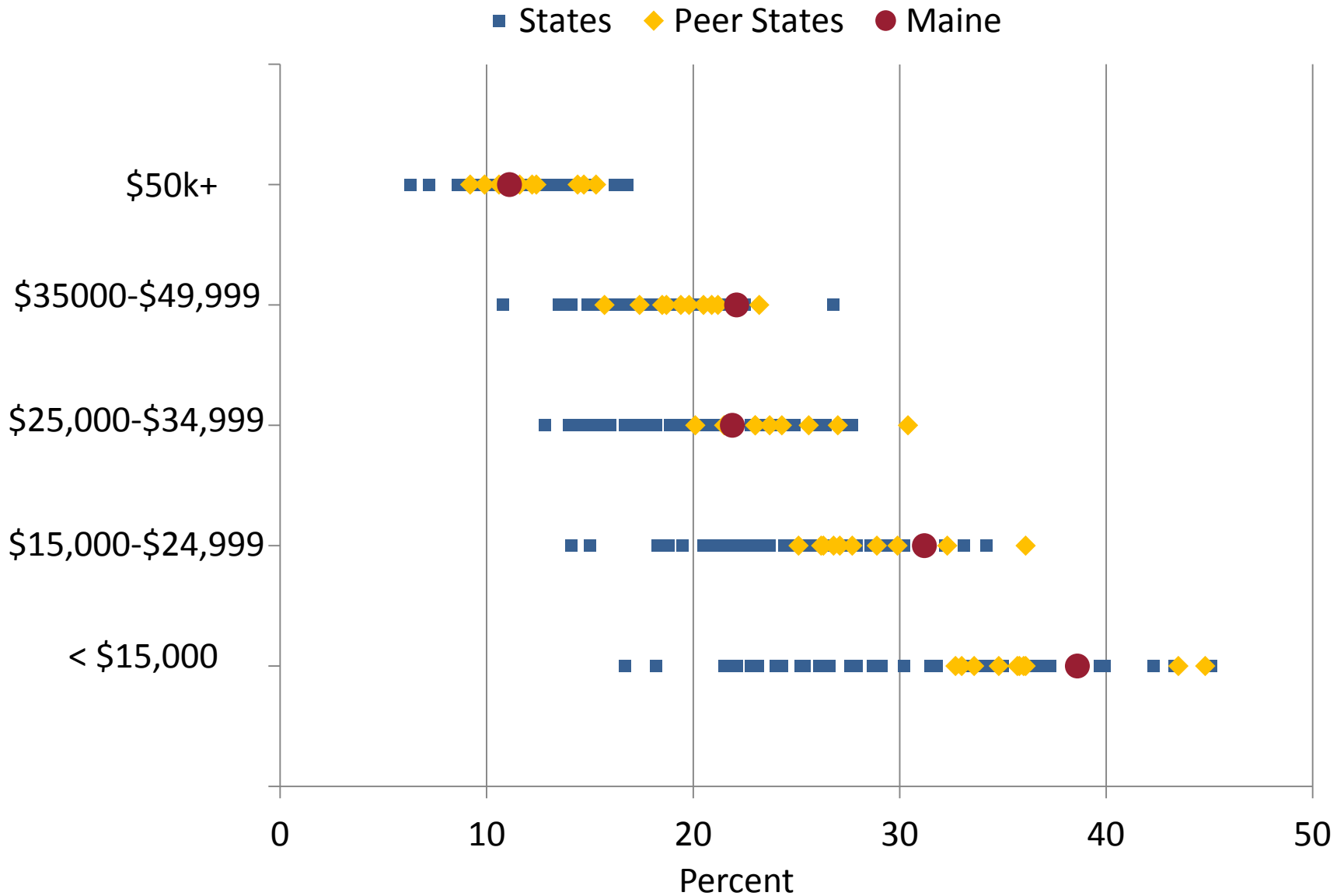
Adult Smokers by Education in 50 States in 2016

Source: Behavioral Risk Factor Survey



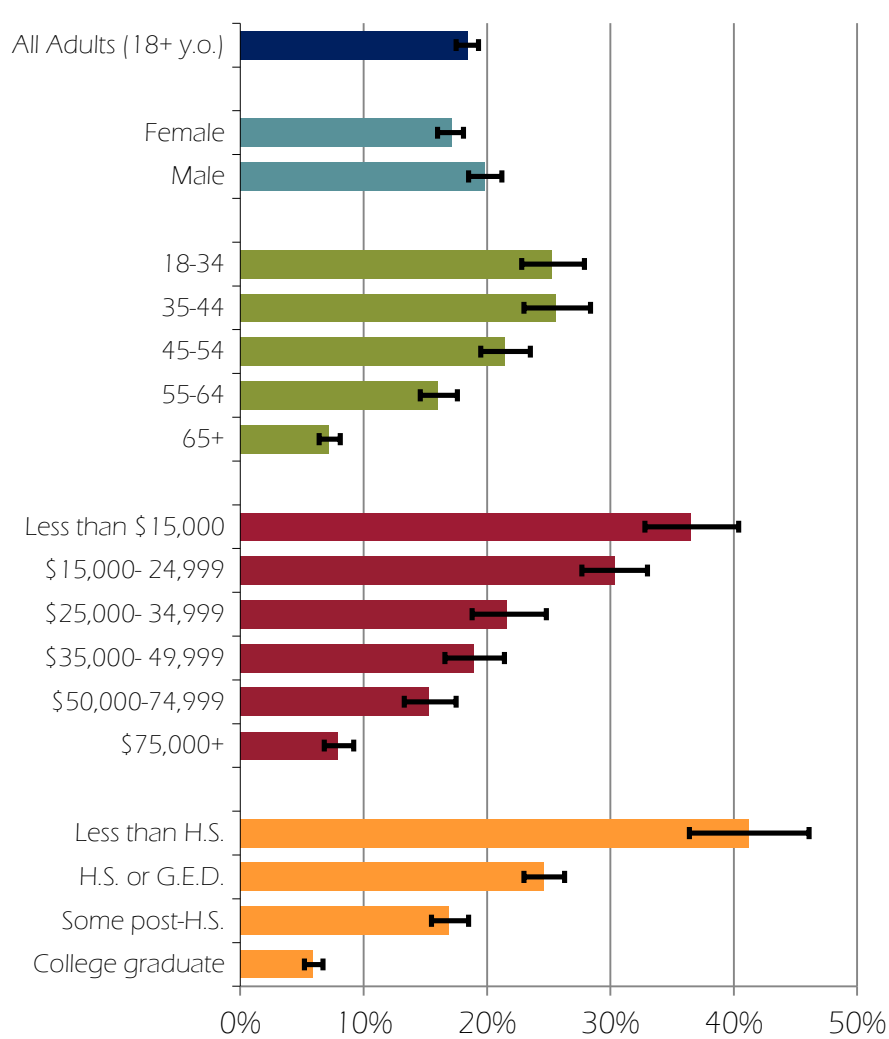
Adult Smokers by Income

Source: Behavioral Risk Factor Survey (2016)

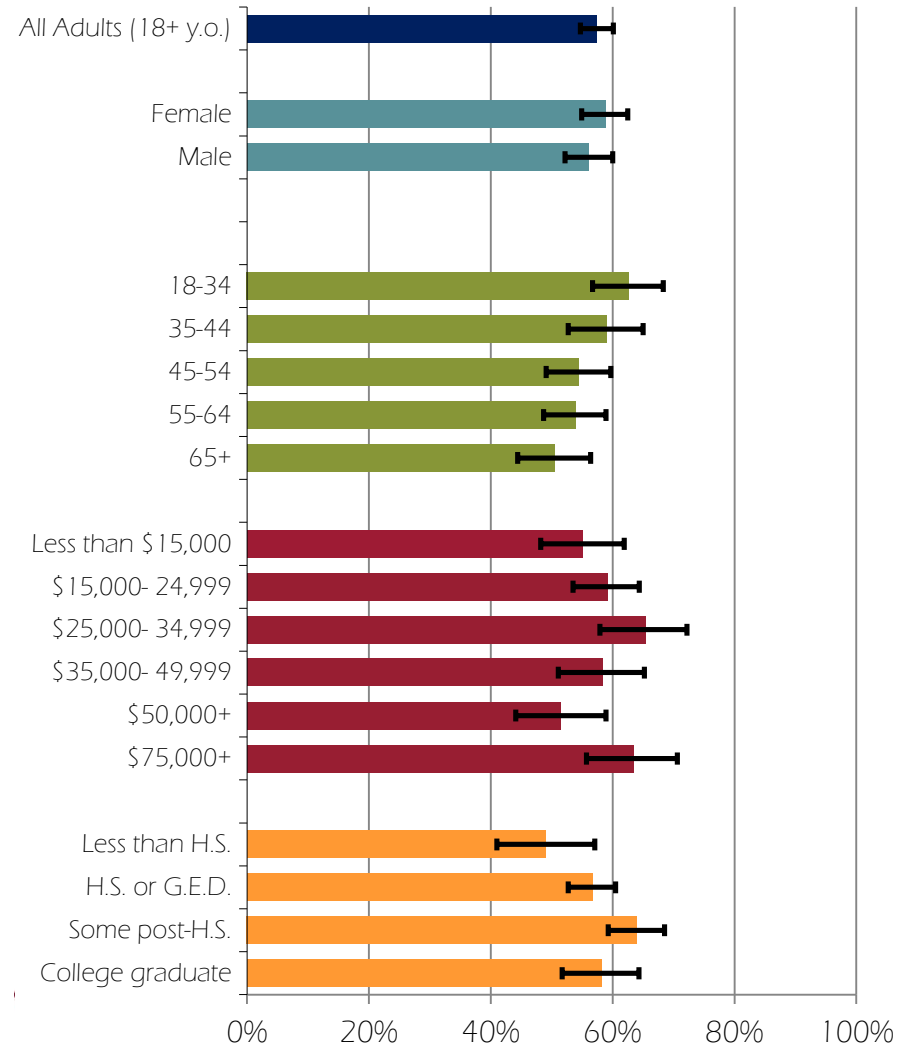


Patterns of Prevalence and Quitting Not Same

Adults Smoking Daily or Some Days
MaineHealth Service Area- 2014-2016



Made Quit Attempt in Past 12 Months
MaineHealth Service Area- 2014-2016

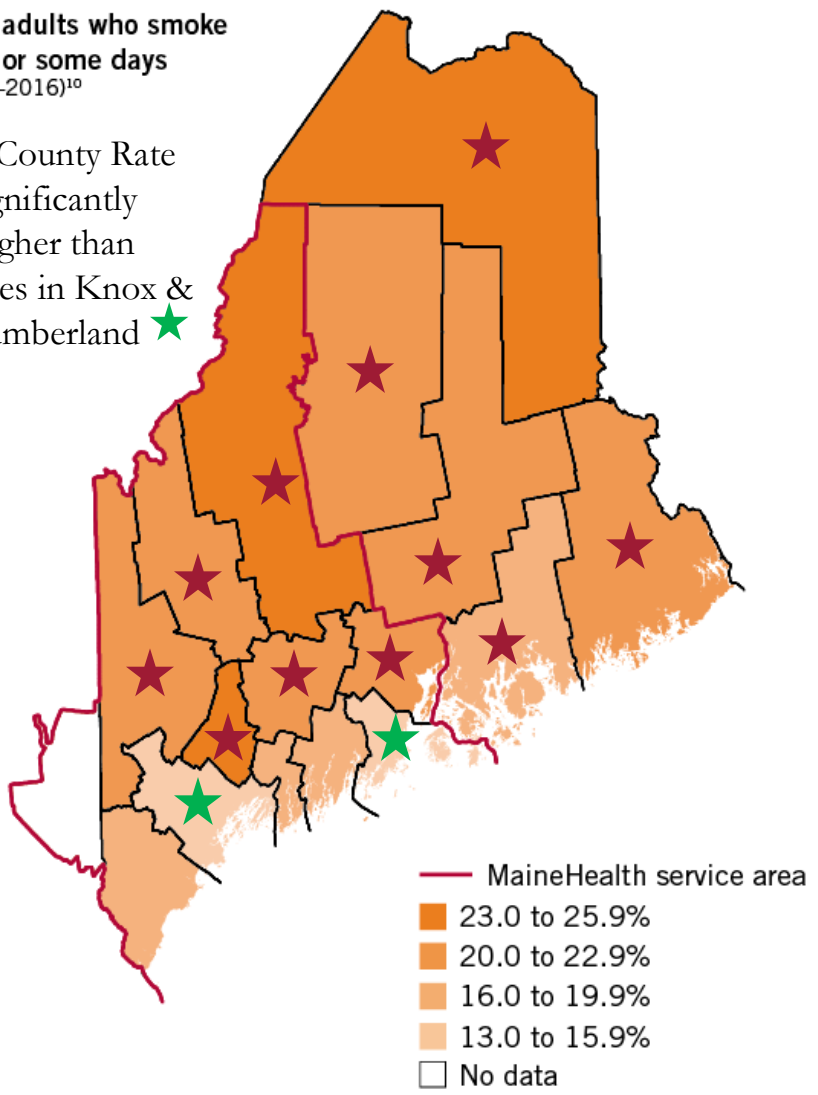


Patterns of Prevalence and Quitting Not Same

Tobacco Use

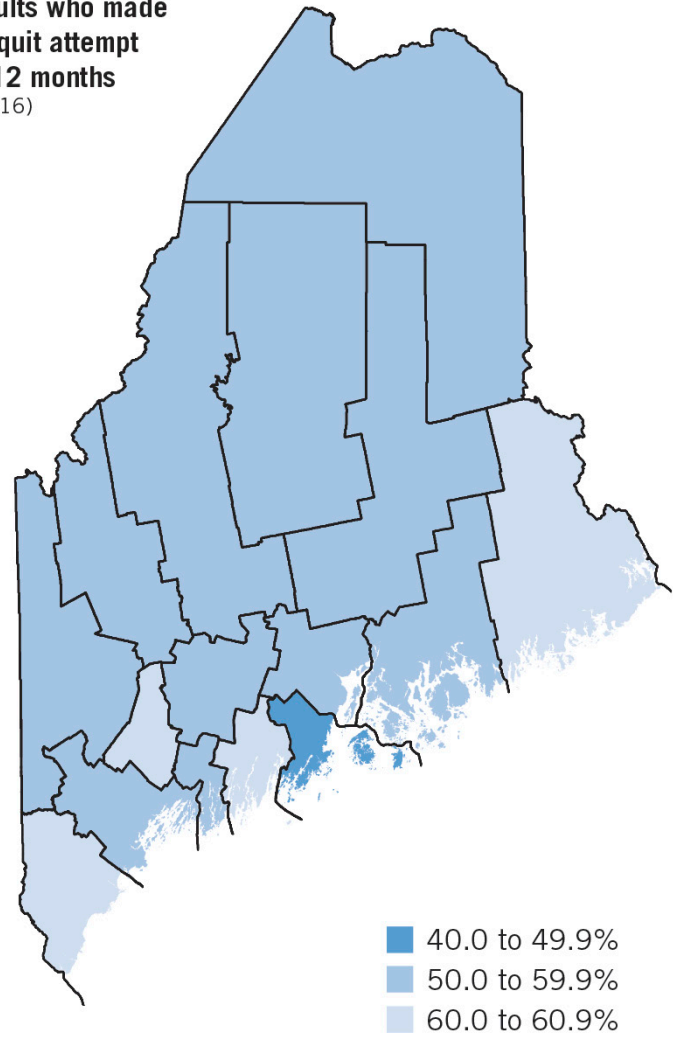
% of adults who smoke daily or some days (2014-2016)¹⁰

★ = County Rate Significantly Higher than rates in Knox & Cumberland ★

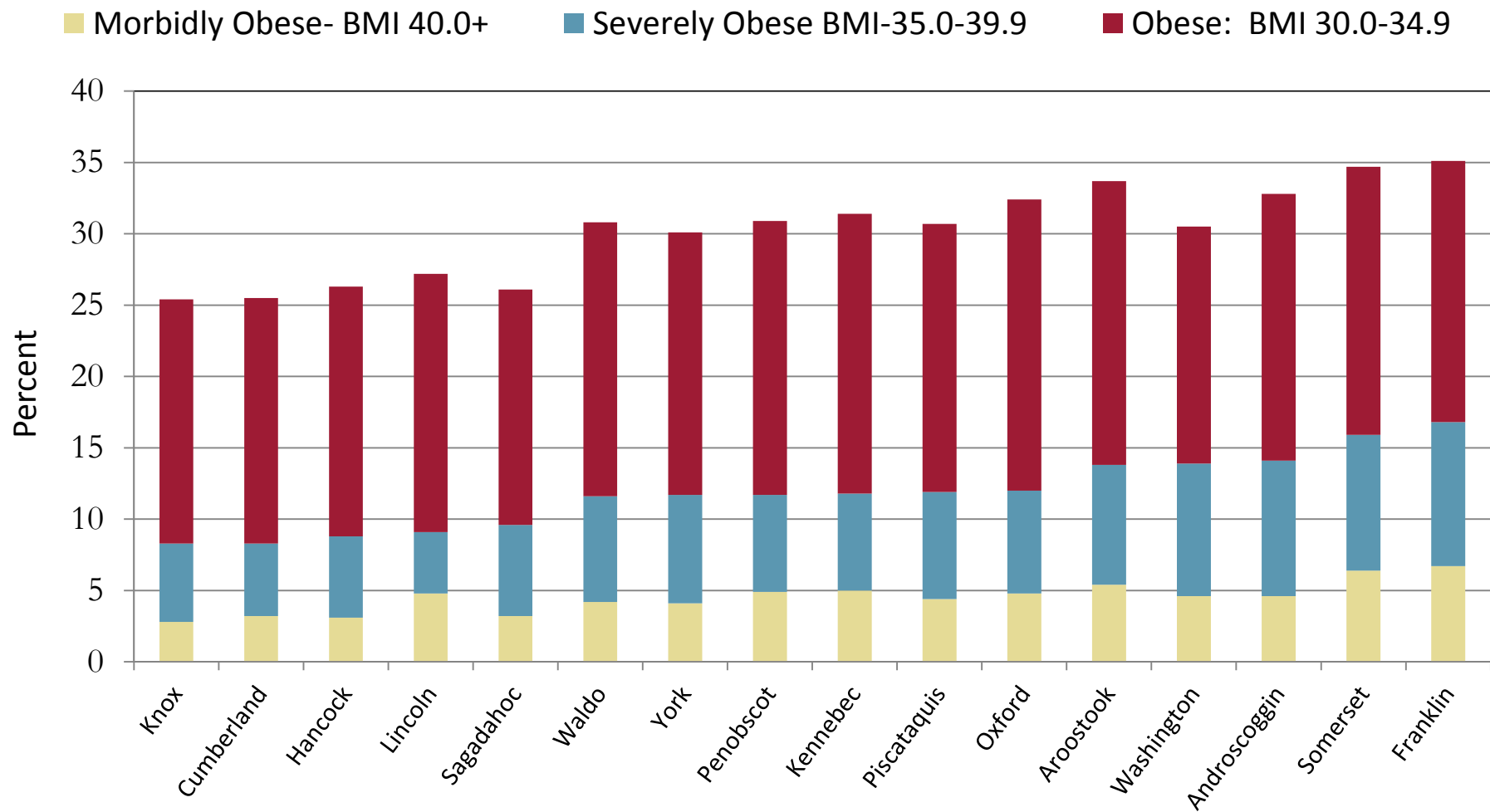


Tobacco use

% of adults who made serious quit attempt in past 12 months (2014-2016)



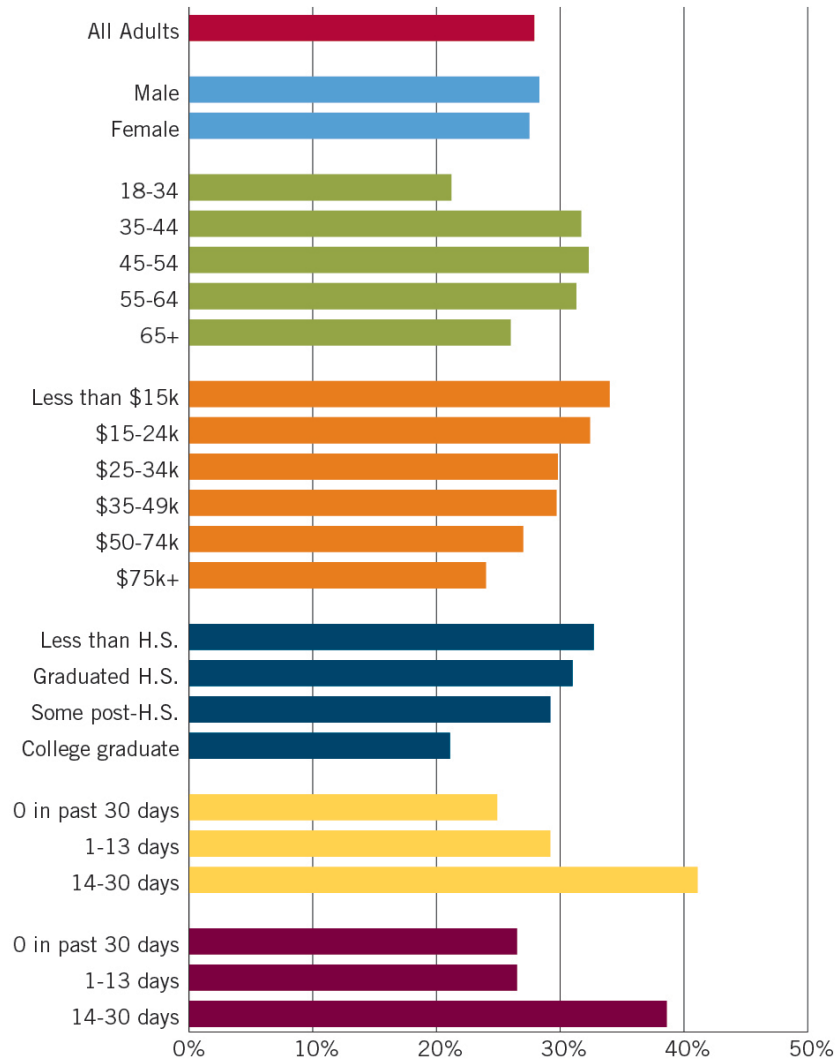
Percent of Adults Who Are Obese in Maine Counties by Body Mass Index Categories



Percent With Obesity

2012-2014

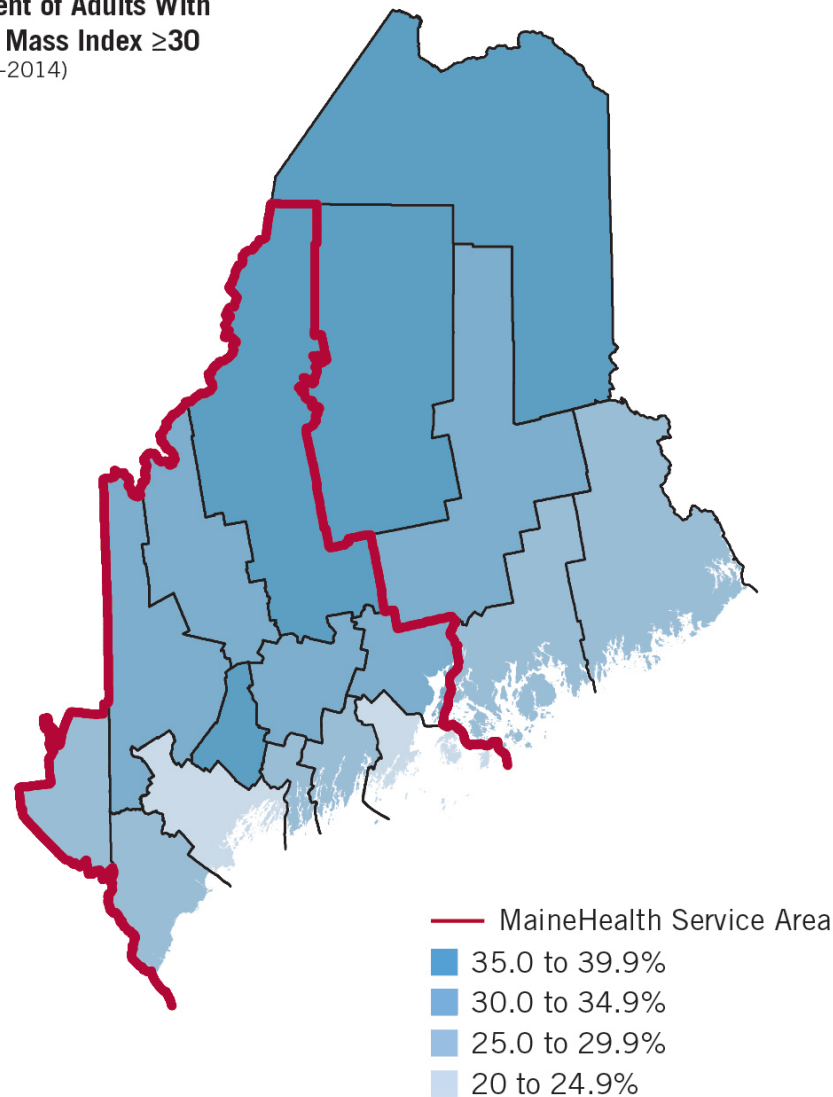
- Gender
- Age
- Income
- Education
- Days that physical health was not good
- Days that mental health was not good



Obesity^x

Percent of Adults With Body Mass Index ≥30

(2012-2014)

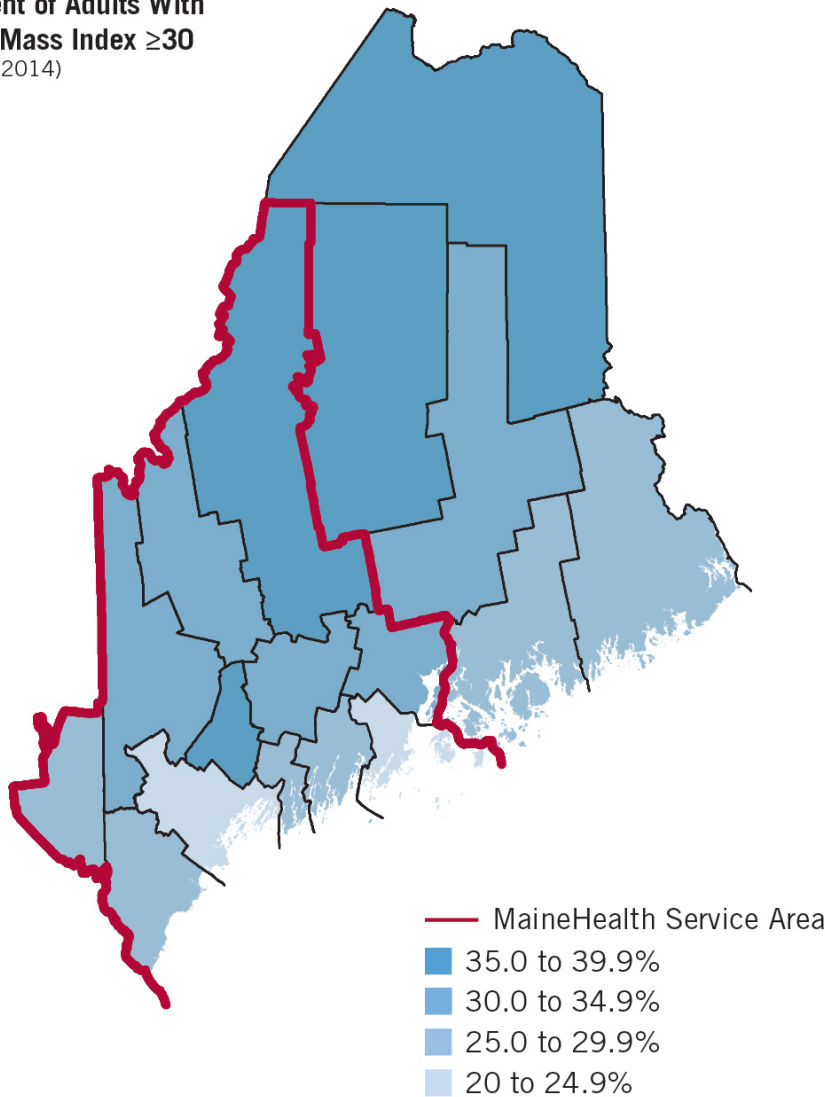


Obesity Prevalence- Adults and High School Students

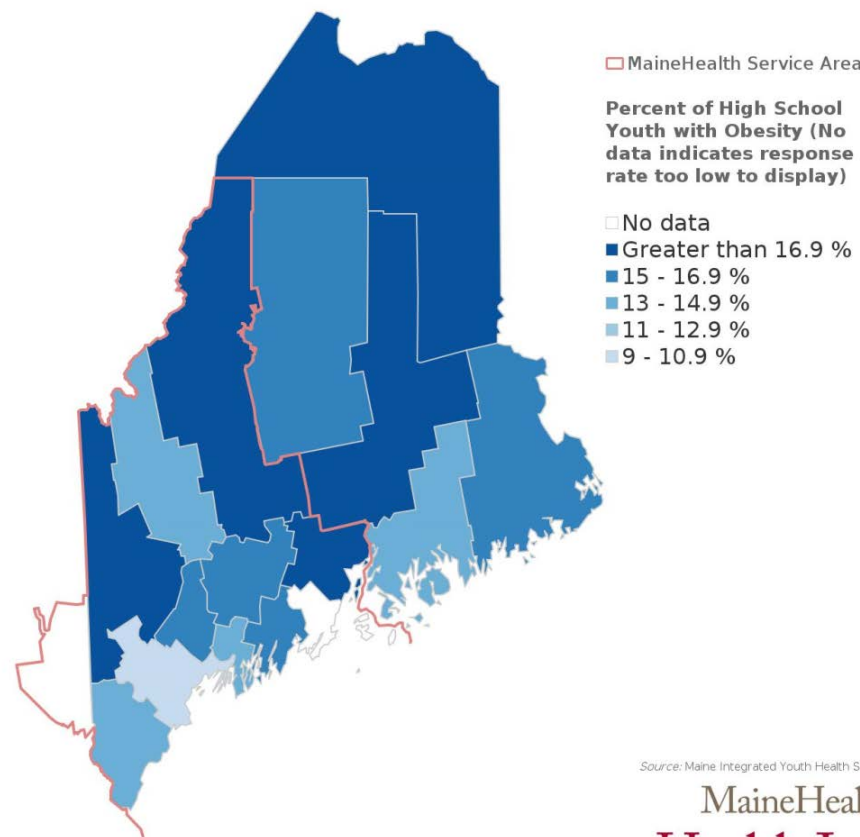
Obesity^x

Figure 10

Percent of Adults With
Body Mass Index ≥ 30
(2012-2014)



Youth Obesity - High School Youth With Obesity
(2015)



Source: Maine Integrated Youth Health Survey (MIYHS)

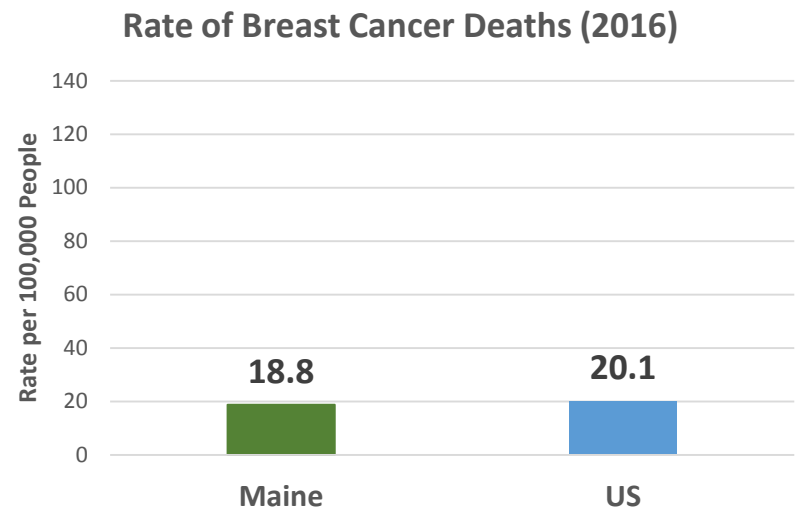
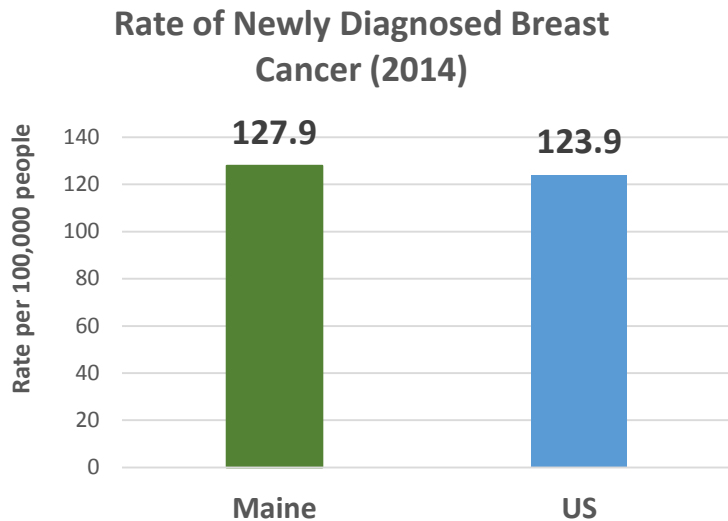
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Health Index

Breast Cancer Screening, Incidence, and Mortality

The percentage of women 40+ years old who have been **screened** for breast cancer in the past 2 years:

Maine: 75.8%

US: 72.5%

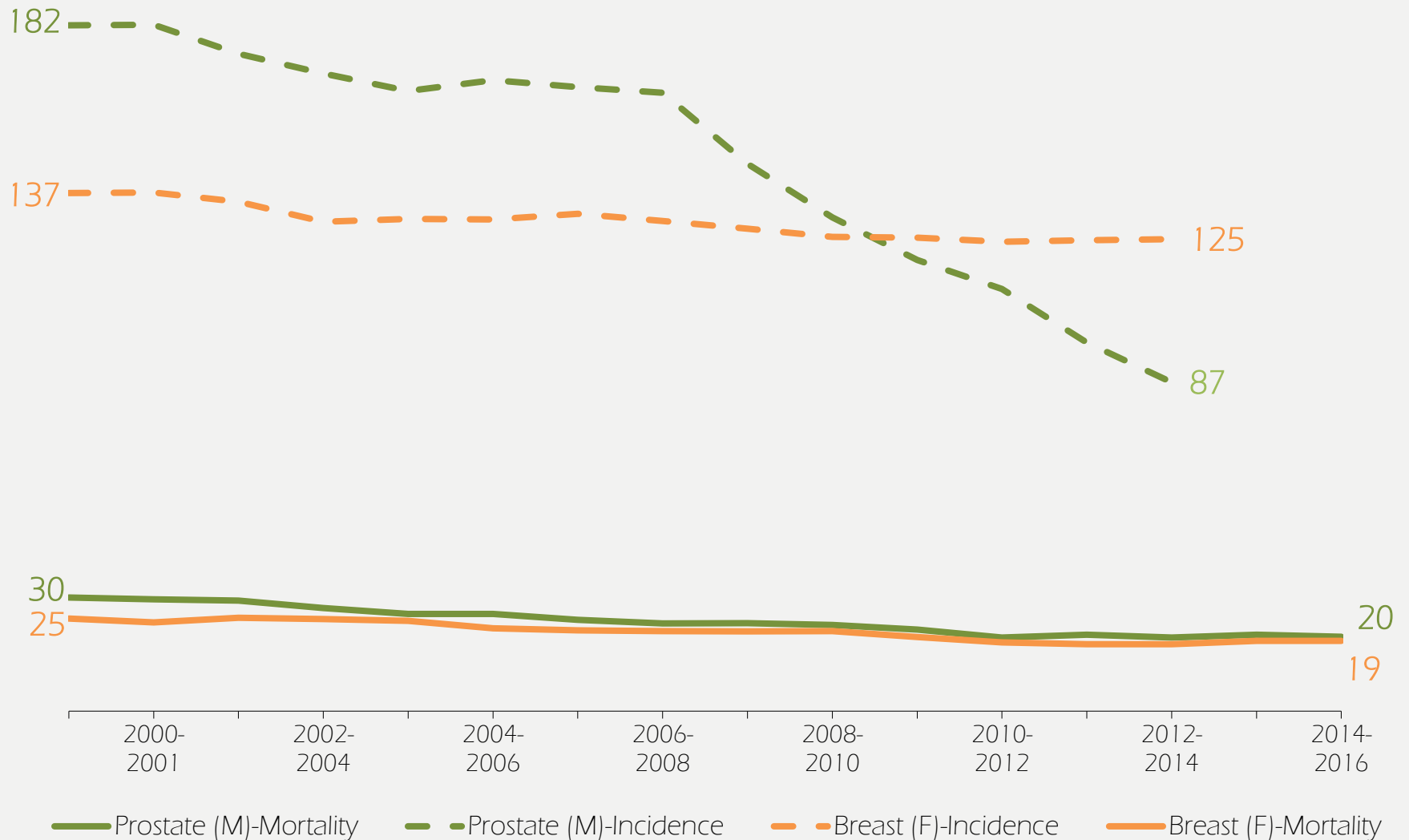


- Screening derived from Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health., BRFSS Prevalence & Trends Data [online]. 2015. [accessed Apr 24, 2018]. URL: <https://www.cdc.gov/brfss/brfssprevalence/>.
- Incidence and Mortality derived from the National Center for Health Statistics' CDC WONDER online database.

Cancer Incidence and Mortality in Maine

Prostate and Breast Cancers: 3-Year Rolling Averages

Age-Adjusted Rates per 100,000 Population



Five-year Relative Survival Rates, U.S. 2007-2013

Cancer Facts & Figures 2018

	All Stages	Local	Regional	Distant
Lung/Bronchus*	18	56	29	5
Colon/Rectum	65	90	71	14
Breast-Female	90	99	85	27
Uterine Cervix	67	92	57	17
Prostate	99	>99	>99	30

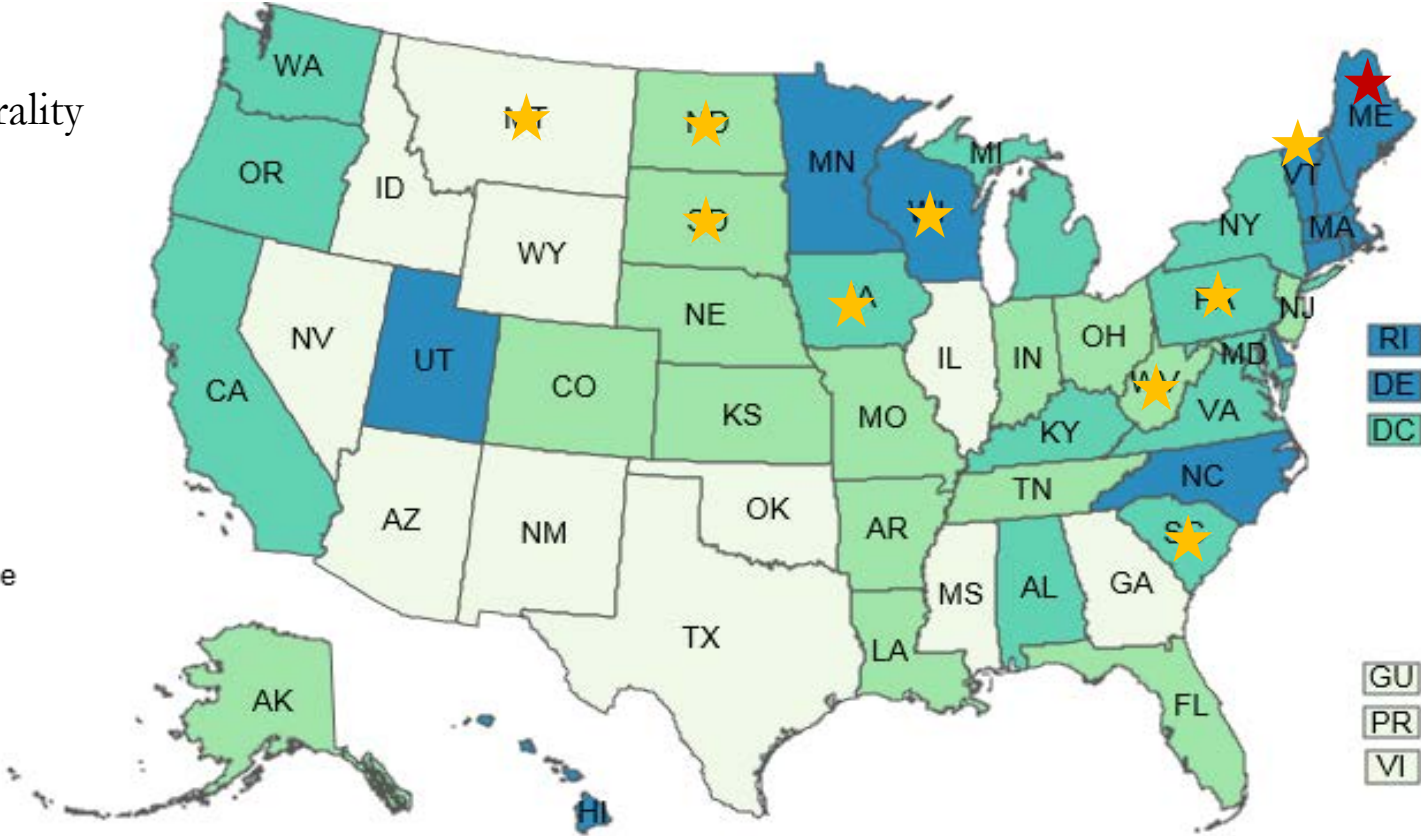
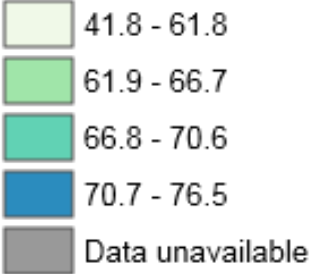
* screening test available only for those with high-risk

Colorectal Cancer Screening- 2016

% aged 50-75 met U.S. Preventive Services Task Force recommendations

Source: Behavioral Risk Factor Surveillance Survey

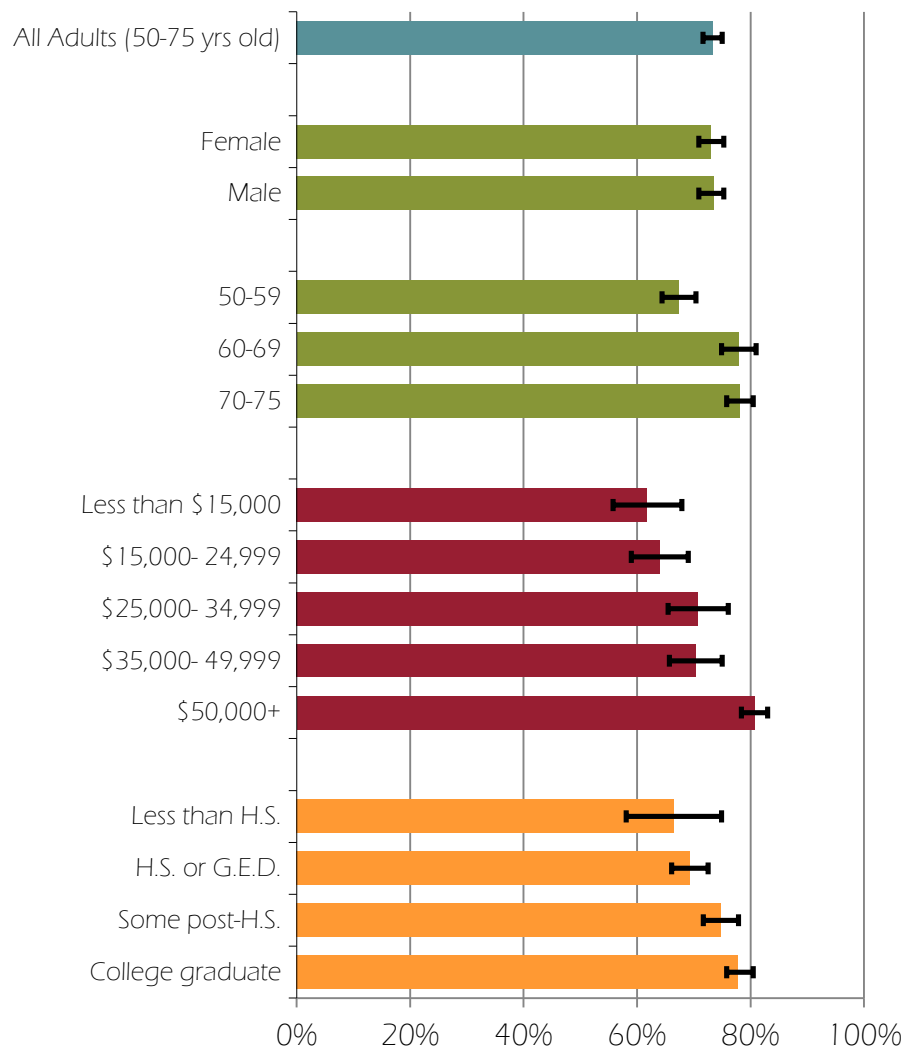
10 Peer States: ★
Based on SES & Rurality



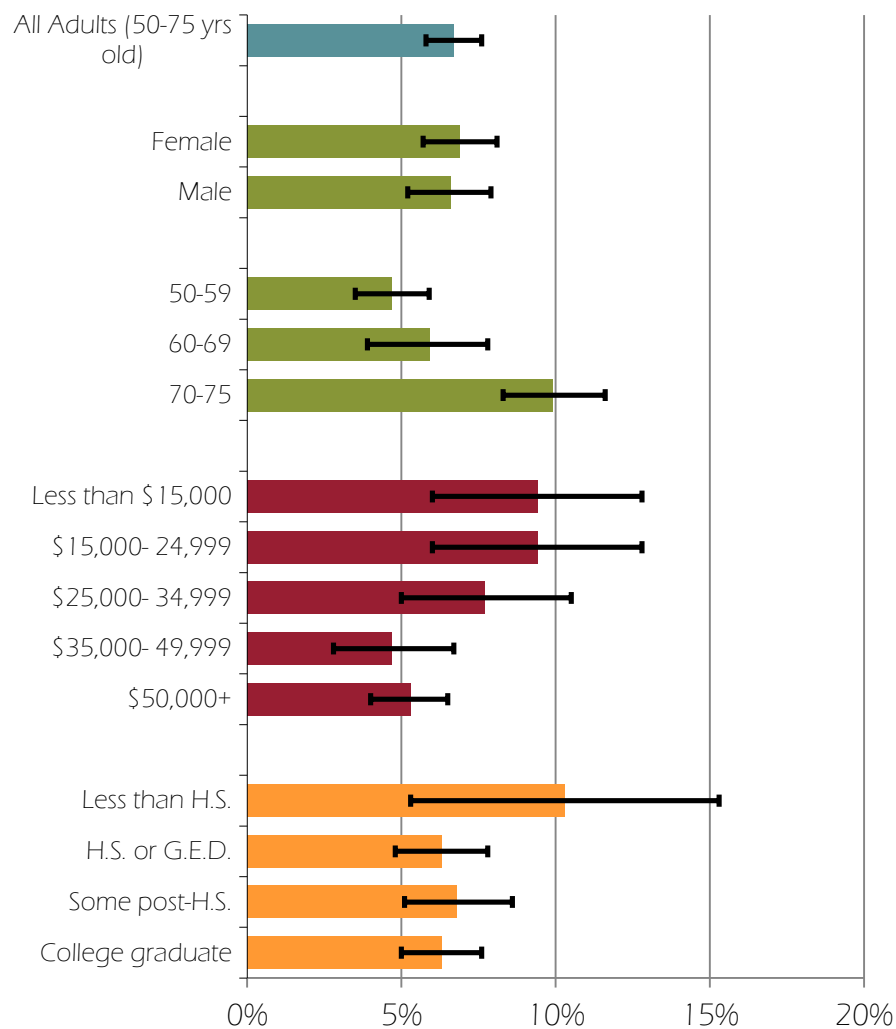
Colorectal Cancer Screening- 2016

Source: Behavioral Risk Factor Surveillance Survey

% Adults 50-75 yrs old who had colonoscopy in past 10 years

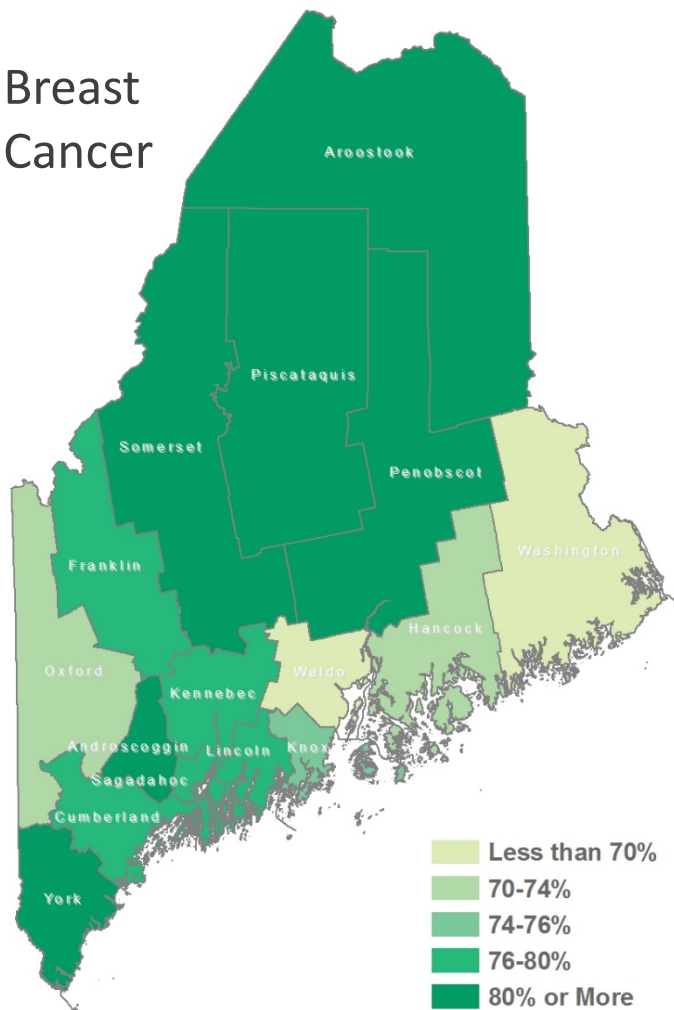


% Adults 50-75 yrs old who had blood stool test in past year

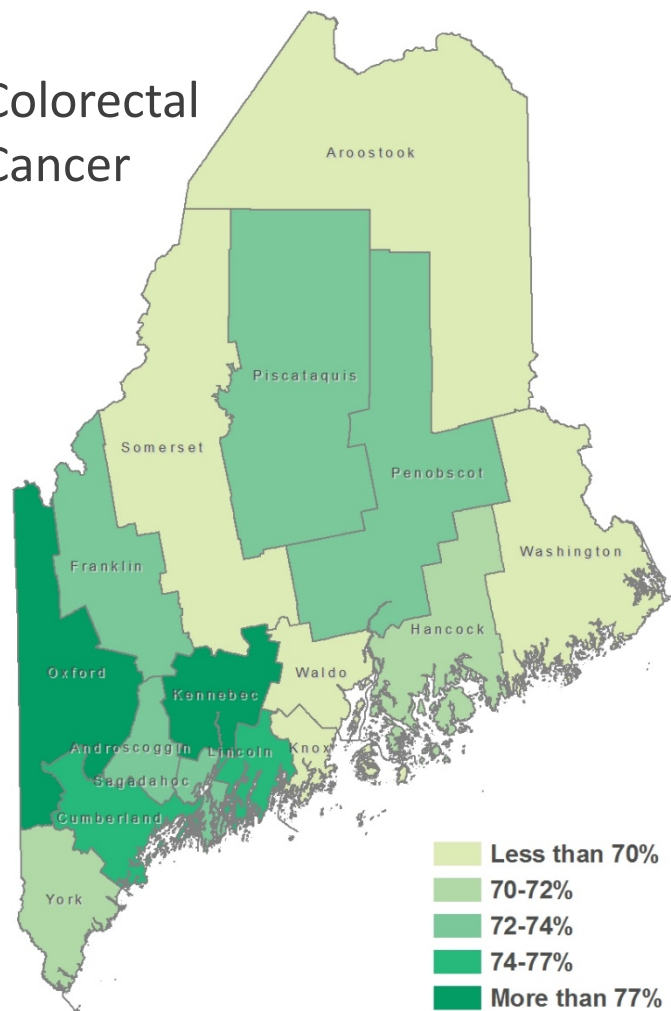


Cancer screening rates by county 2012-2014

Breast
Cancer

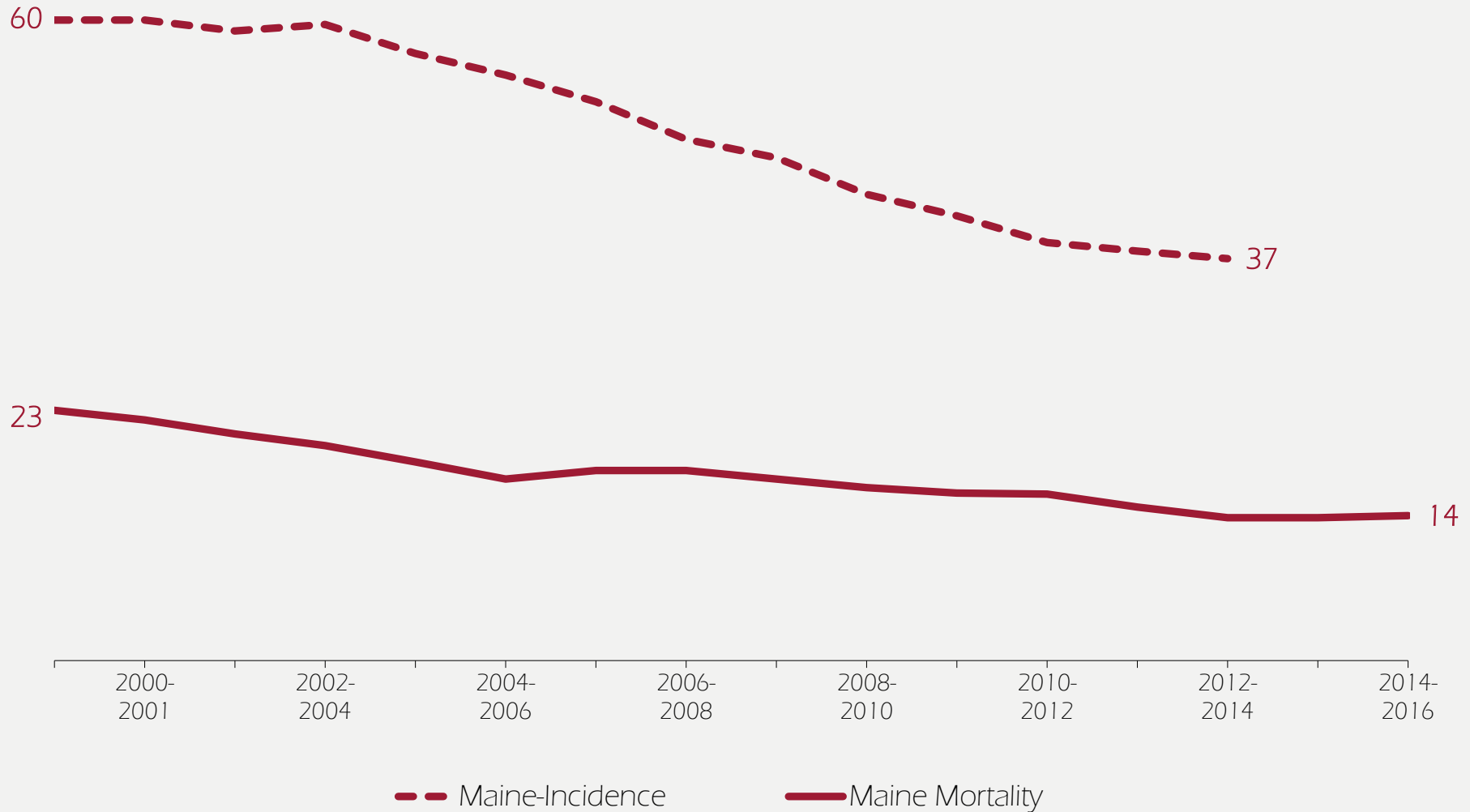


Colorectal
Cancer



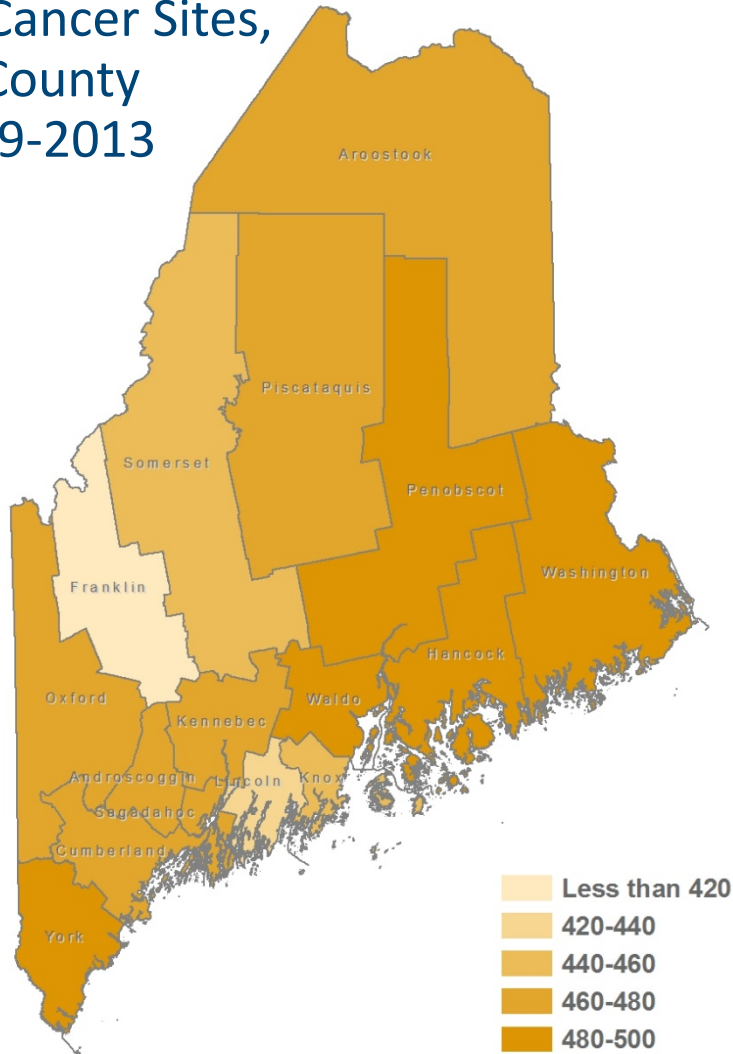
Cancer Incidence and Mortality in Maine

Colorectal Cancer: 3-Year Rolling Averages
Age-Adjusted Rates per 100,000 Population

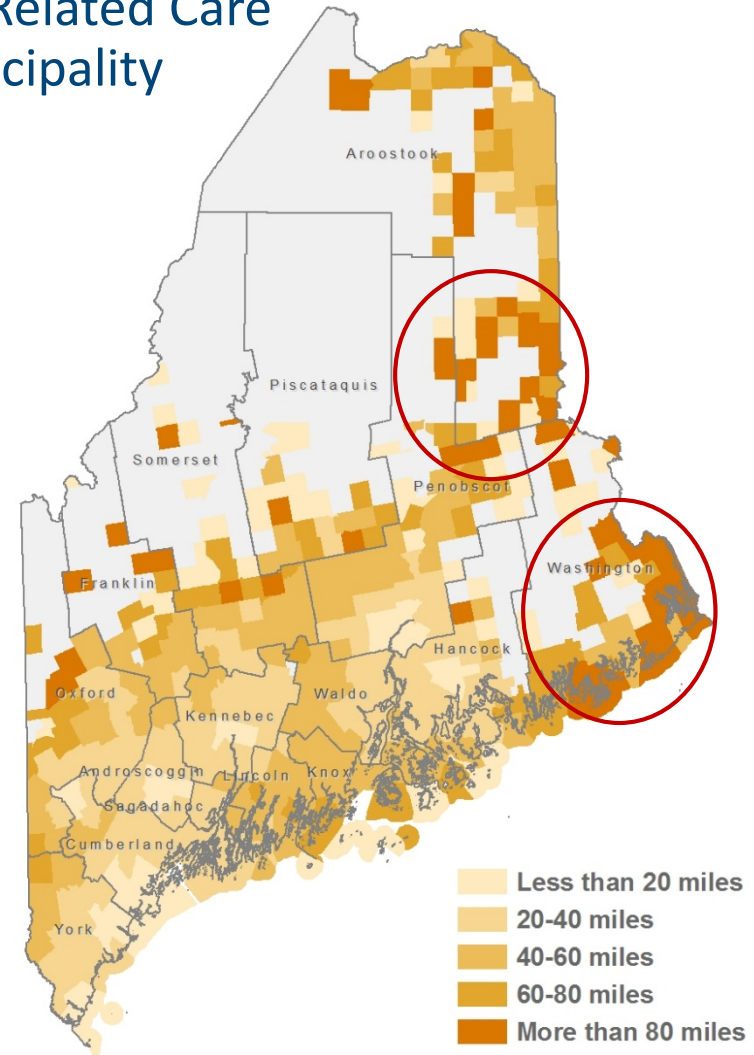


Where One Lives Matters

Age-Adjusted Incidence Rates
All Cancer Sites,
by County
2009-2013



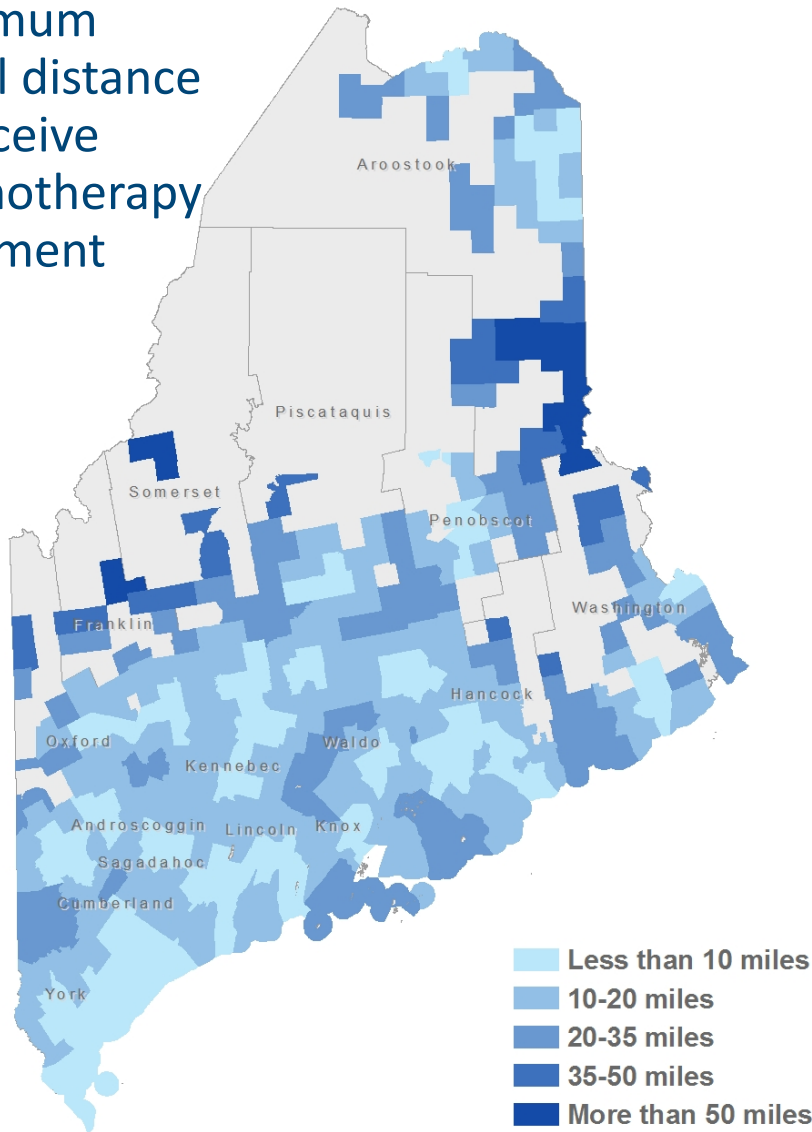
Average Round-Trip Distance For All
Cancer Related Care
by Municipality



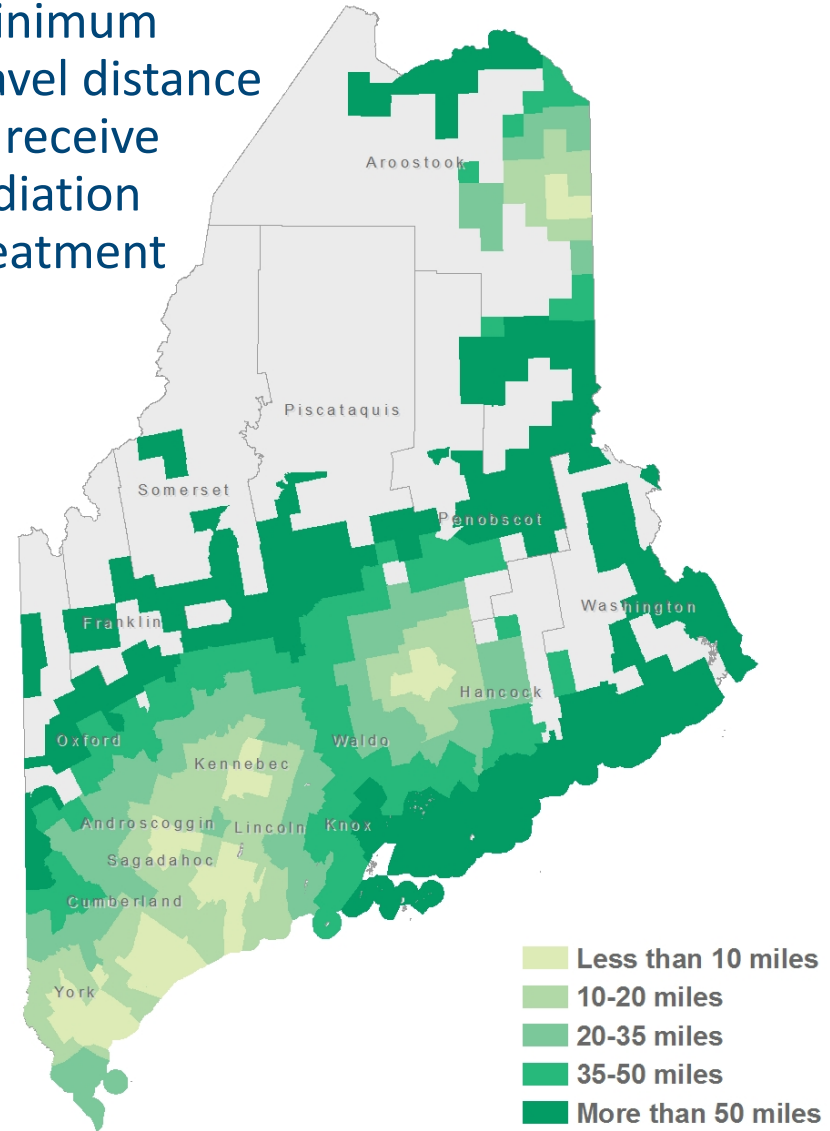
Madden, P., Charles, J. Maine Cancer Foundation Transportation Needs Assessment Summary Report. 2017, Sept. *Market Decisions*

Where One Lives Matters

Minimum travel distance to receive chemotherapy treatment

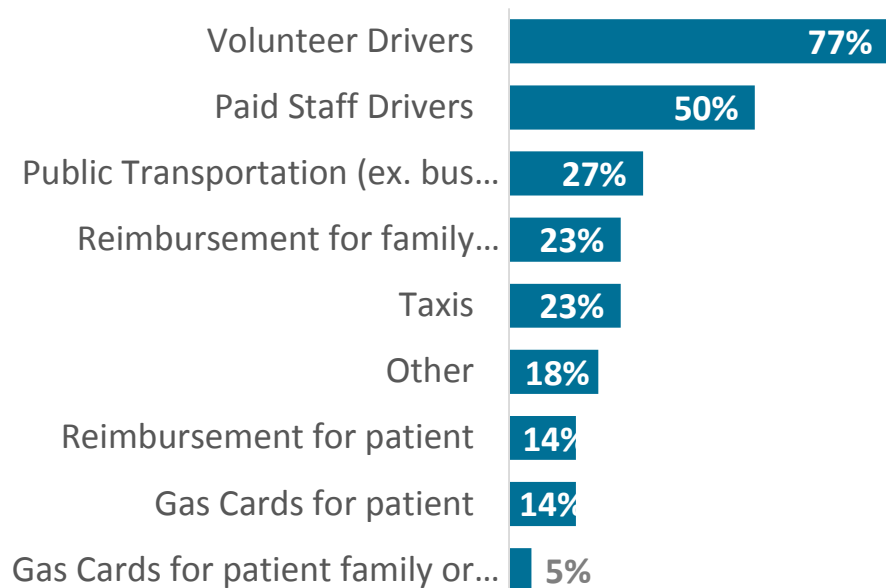


Minimum travel distance to receive radiation treatment



Three-quarters of organizations use volunteer drivers to provide rides

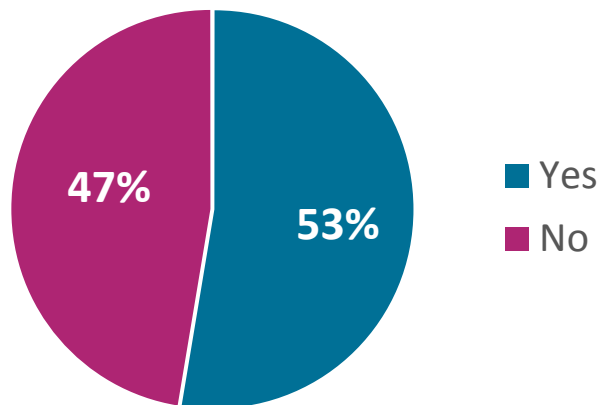
Services provided to cancer patients



While organizations provide many different types of services to patients, volunteer drivers make up the backbone of many transportation service providers in the state

Nearly half of the organizations surveyed could not meet the need in their area during the past year

Could you help every cancer patient who contacted your program in the past 12 months?



How are services advertised to patients

Given the high need for transportation, some organizations do not need to advertise their services and find that word of mouth is sufficient.

- Provider offices and hospitals
- Community outreach and education
- Referrals
- Local advertising

Cancer & Financial Toxicity

Having a cancer diagnosis is associated with a **2.65-times greater** likelihood of declaring personal bankruptcy.

A 2013 study found cancer patients who declared bankruptcy had a **79% greater** mortality risk than those who had not.

What Data is Missing for
Maine?

What Data Points do You
Wish You Knew?

MaineHealth

Questions and
comments?

cowant@mainehealth.org

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feedback is welcome & encouraged