Chapter 5 Mortality Rates

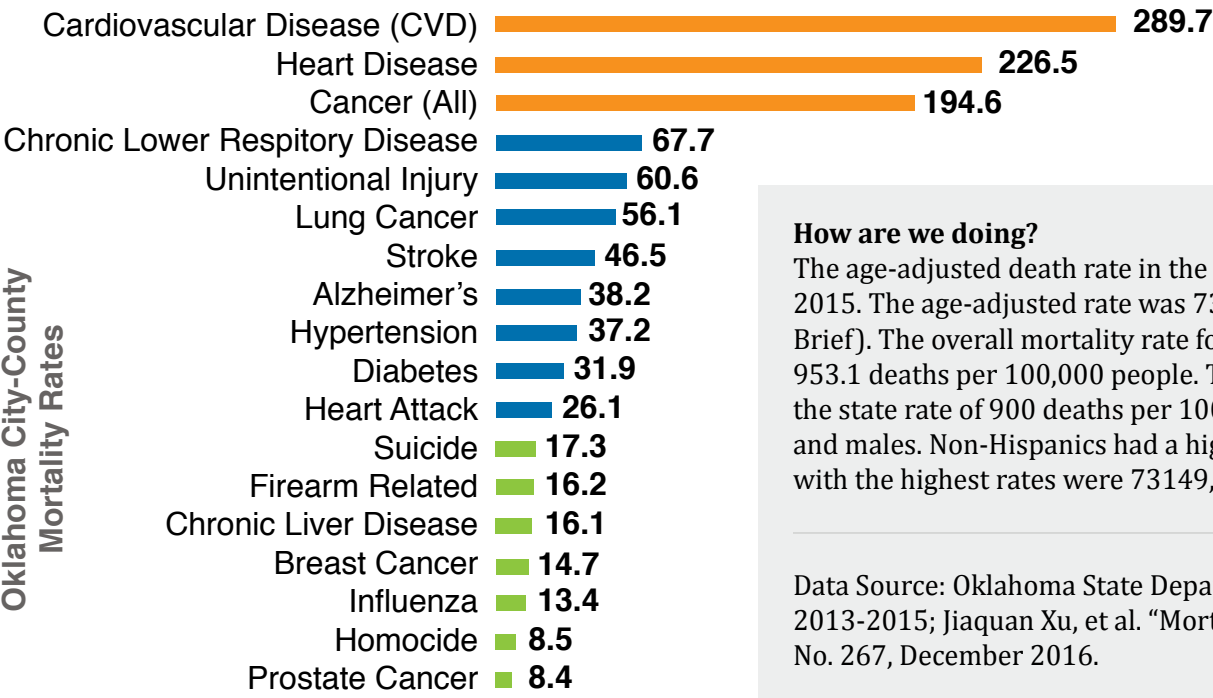## VARIABLES

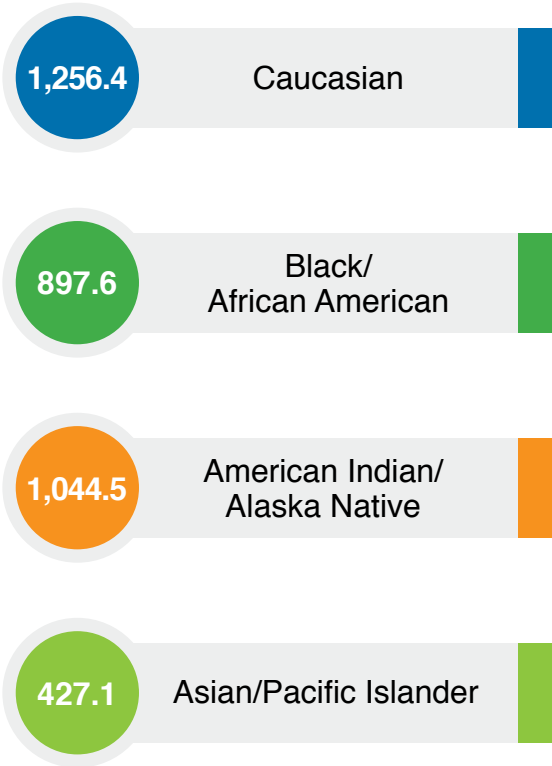| Analysis	Data Source
1. Age-adjusted Cardiovascular Disease Mortality Rate	
2. Age-adjusted Stroke Mortality Rate	
3. Age-adjusted Heart Attack Mortality Rate	
4. Age-adjusted Diabetes Mortality Rate	
4. Age-adjusted Hypertension Mortality Rate	
5. Age-adjusted Chronic Lower Respiratory Disease Mortality Rate	
6. Age-adjusted Chronic Liver Disease Mortality Rate	Oklahoma State Department of Health Vital Statistics Death Records 2013-2015
7. Age-adjusted Cancer Mortality Rate	
8. Age-adjusted Breast Cancer Mortality Rate	
9. Age-adjusted Lung Cancer Mortality Rate	
10. Age-adjusted Prostate Cancer Mortality Rate	
11. Age-adjusted Alzheimer's Mortality Rate	
12. Age-adjusted Influenza and Pneumonia Mortality Rate	
13. Age-adjusted Unintentional Injury Mortality Rate	

ALL CAUSE MORTALITY

All Cause Mortality is the total number of deaths that occurred in Oklahoma County between 2013-2015. This information highlights the overall burden of disease within the community. Mortality rates were age adjusted using the 2000 U.S. Census standard population. The overall mortality rate for Oklahoma County from 2013-2015 was 953.1 deaths per 100,000 people. The zip codes with the highest rates were 73149, 73179, 73141, 73151 and 73007

Why is it important?

Chronic Disease Mortality demonstrates the burden of chronic disease within our community. This provides a baseline measurement for improving health outcomes and supports providers in making informed decisions for the development of general health and well-being programs, services and policies. The 10 leading causes of death in 2015 in the United States were heart disease, cancer, chronic lower respiratory diseases, unintentional injuries (accidents), stroke, Alzheimer's disease, diabetes, influenza, pneumonia, kidney disease and suicide. These 10 causes accounted for more than 74 percent of all deaths in the United States. The measure of overall mortality helps to provide the context for health and well-being of the individual, the family and the community. This statistic can support the local public health system to mobilize and advocate for general health improvement policies, programs, and services, and serve as a reminder that there is still work to be done.

Age-Adjusted All Cause Mortality Rates by Race
Oklahoma City-County

Rate	Race
1,256.4	Caucasian
897.6	Black/African American
1,044.5	American Indian/Alaska Native
427.1	Asian/Pacific Islander

Oklahoma City-County Mortality Rates

| Cause	Rate
Cardiovascular Disease (CVD)	289.7
Heart Disease	226.5
Cancer (All)	194.6
Chronic Lower Respitory Disease	67.7
Unintentional Injury	60.6
Lung Cancer	56.1
Stroke	46.5
Alzheimer's	38.2
Hypertension	37.2
Diabetes	31.9
Heart Attack	26.1
Suicide	17.3
Firearm Related	16.2
Chronic Liver Disease	16.1
Breast Cancer	14.7
Influenza	13.4
Homocide	8.5
Prostate Cancer	8.4

How are we doing?

The age-adjusted death rate in the United States increased 1.2 percent from 2014 to 2015. The age-adjusted rate was 733.1 deaths per 100,000 population (NCHS Data Brief). The overall mortality rate for Oklahoma City-County from 2013-2015 was 953.1 deaths per 100,000 people. This is higher than the national rate of 733.1 and the state rate of 900 deaths per 100,000. Mortality rates were highest among whites and males. Non-Hispanics had a higher mortality rate than Hispanics. The zip codes with the highest rates were 73149, 73179, 73141, 73151 and 73007.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015; Jiaquan Xu, et al. "Mortality in the United States, 2015". NCHS Data Brief, No. 267, December 2016.

ALL CAUSE MORTALITY RATES
Oklahoma City-County, 2013-2015

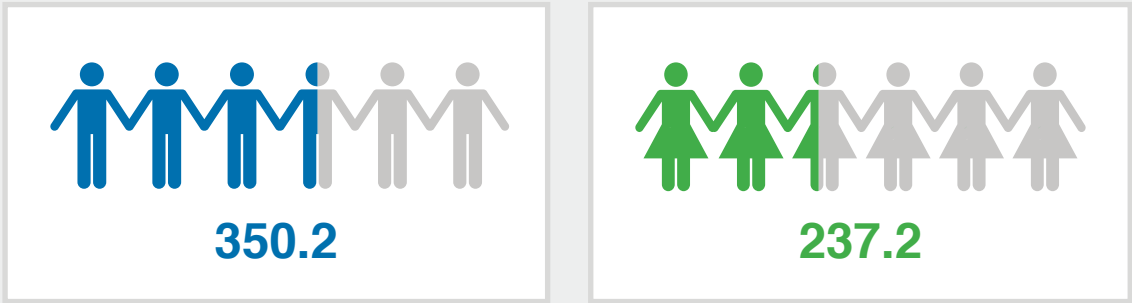Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

Lowest ▢▢▢▢▢ Highest   ▢ N/A
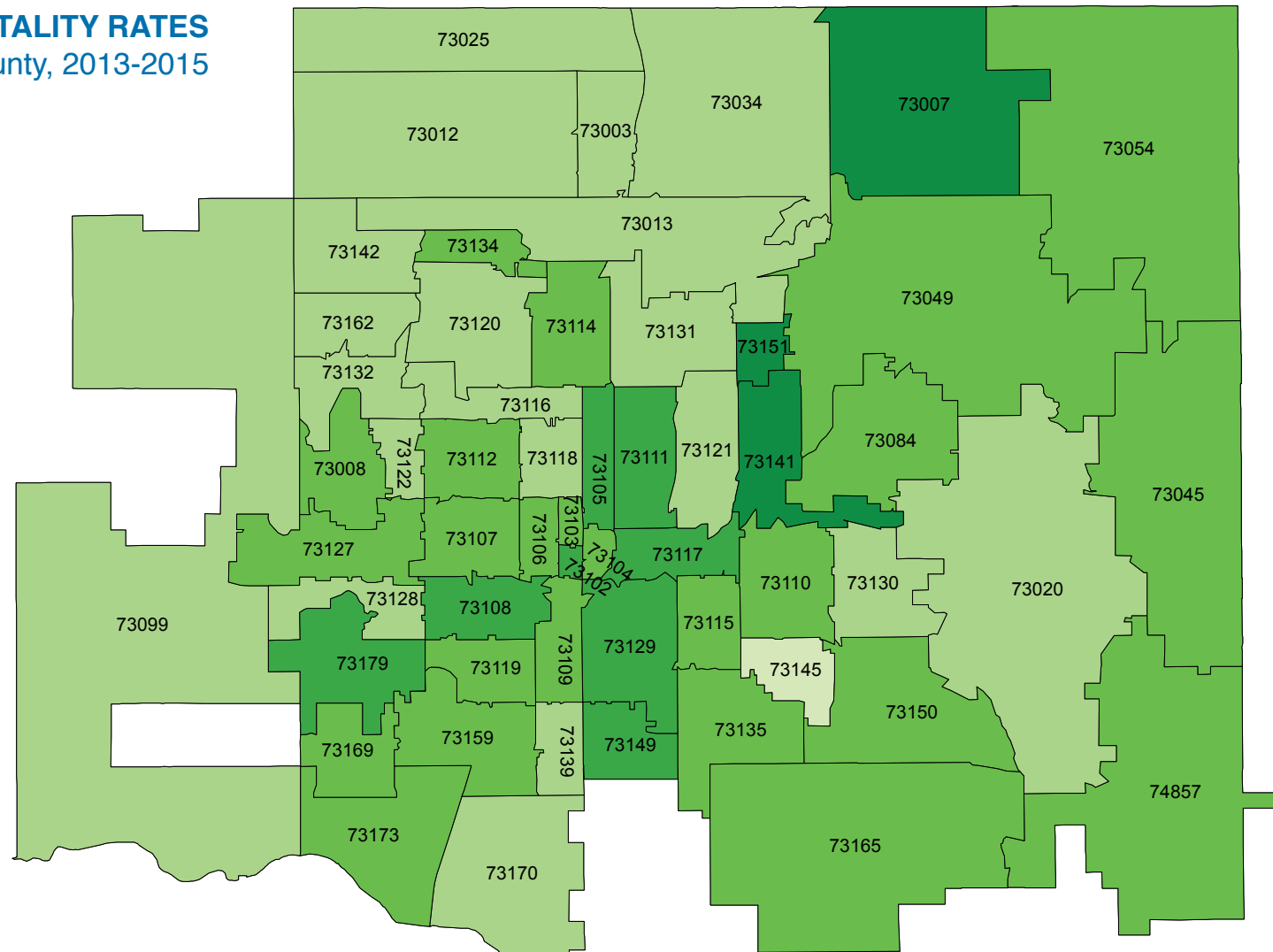
*No data available

73003	736.4	73054	1042.9								
73007	2344.9	73084	1248.0	73109	1203.3	73119	1241.6	73132	918.3	73151	2220.0
73008	1072.8	73099	849.1	73110	1079.0	73120	839.8	73134	1066.2	73159	1048.6
73012	690.7	73102	1462.3	73111	1372.1	73121	846.6	73135	1153.1	73162	785.8
73013	699.7	73103	1060.0	73112	992.4	73122	935.7	73139	951.9	73165	1152.4
73020	837.1	73104	1152.4	73114	1224.8	73127	1123.0	73141	1867.9	73169	1110.1
73025	*	73105	1284.6	73115	1129.5	73128	879.3	73142	816.4	73170	947.1
73034	790.0	73106	1105.7	73116	*	73129	1383.7	73145	*	73173	1165.4
73045	1109.4	73107	1165.0	73117	1388.4	73130	938.8	73149	1491.1	73179	1568.4
73049	1146.9	73108	1284.1	73118	782.9	73131	*	73150	1115.1	74857	1101.1

CARDIOVASCULAR DISEASE MORTALITY

Cardiovascular disease (CVD) impacts the heart and blood vessels and includes multiple condition - some directly related to plaque buildup in the arteries. CVD is the leading cause of death in the United States for both men and women, and the leading cause of death in Oklahoma City-County. Types of cardiovascular disease include heart attack, hypertension, heart disease, stroke, heart valve problems, abnormal rhythm of the heart (arrhythmia) and diabetes. This indicator characterizes the number of deaths from cardiovascular disease per 100,000 population during 2013-2015. The rates were age adjusted to account for differences in age distributions among our community.

Why is it important?

The risk for developing cardiovascular disease increases with a variety of unhealthy lifestyle and behavioral factors. Major risk factors include smoking, physical inactivity, diabetes, high cholesterol and hypertension - all of which can be modified. High rates may indicate areas for diet, smoking or physical activity for interventions, or areas with low access to regular medical care or healthy foods. The local public health system should focus on developing or advocating for programs, services, and policies that coordinate care and resources to improve community awareness and education.

Age-Adjusted CVD Mortality Rates by Race
Oklahoma City-County

Caucasian	Black/ African American	American Indian/ Alaska Native	Asian/ Pacific Islander
377.4	294.2	250.3	124.0

Age Adjusted CVD Mortality Rates by Gender
Oklahoma City-County

350.2

237.2

Age-Adjusted Heart Disease Mortality Rate Comparison

226.5 Oklahoma City-County

290.6 Oklahoma State

168.5 United States
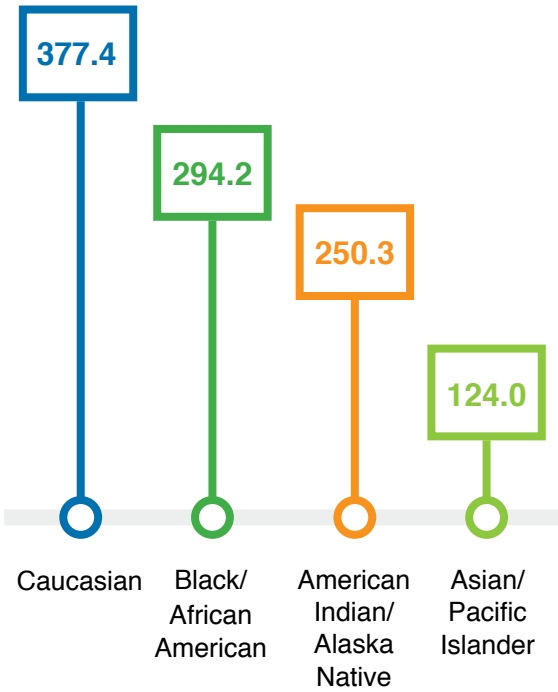
How are we doing?

The Oklahoma-City County mortality rate was 289.7 deaths per 100,000, making cardiovascular disease the leading cause of death in Oklahoma City-County. The heart disease mortality rate in Oklahoma County was 226.5 deaths per 100,000. CVD and heart disease mortality rates were higher than the national and state rates. Mortality rates were highest among whites. Males had higher rates than females.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015; National Center for Health Statistics, Centers for Disease Control and Prevention (NVSS)

Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015
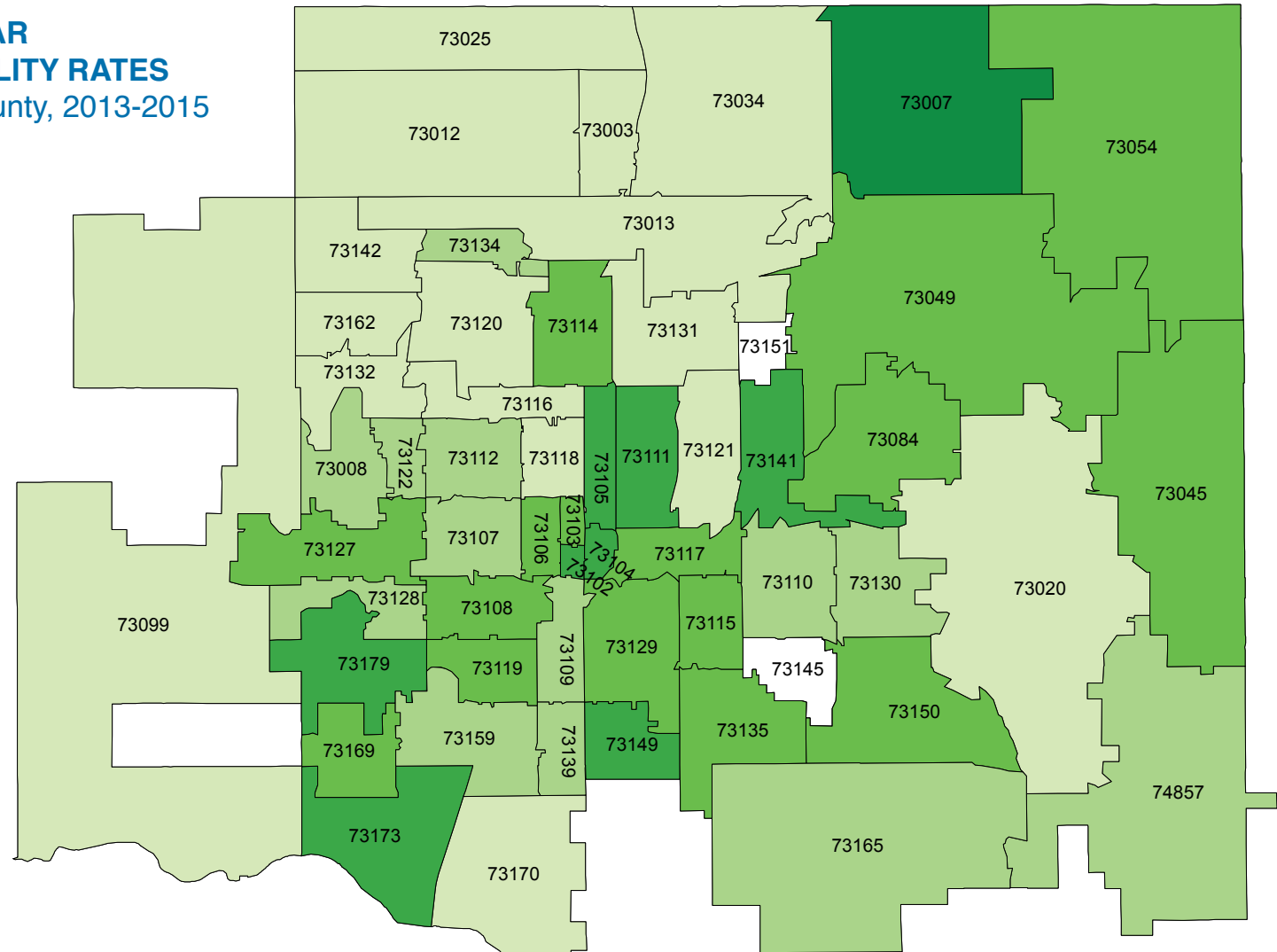
**Data too low to count/compare

Lowest ▢▢▢▢▢ Highest   ▢ N/A

73003	242.3	73054	398.8								
73007	945.0	73084	348.5	73109	332.2	73119	376.6	73132	235.6	73151	**
73008	312.3	73099	259.5	73110	333.0	73120	247.7	73134	313.4	73159	306.3
73012	206.3	73102	503.5	73111	476.0	73121	205.9	73135	361.7	73162	248.2
73013	205.8	73103	407.7	73112	298.1	73122	309.0	73139	276.0	73165	327.0
73020	243.8	73104	473.4	73114	403.9	73127	388.2	73141	655.7	73169	393.8
73025	214.6	73105	504.1	73115	373.6	73128	272.9	73142	208.4	73170	245.5
73034	247.3	73106	400.4	73116	242.9	73129	443.5	73145	**	73173	468.6
73045	352.3	73107	315.5	73117	427.4	73130	291.7	73149	560.8	73179	558.1
73049	394.3	73108	386.6	73118	219.9	73131	140.1	73150	348.0	74857	276.9

STROKE MORTALITY

Stroke is the fifth leading cause of death in the United States accounting for 1 out of every 20 deaths (American Stroke Association). This indicator is presented as the number of deaths due to Cerebrovascular Disease (stroke) per 100,000 population over the years 2013-2015. The rates were age-adjusted to account for differences in age distributions among our community. The mortality rate for stroke in Oklahoma City-County was 46.5 deaths per 100,000 population.
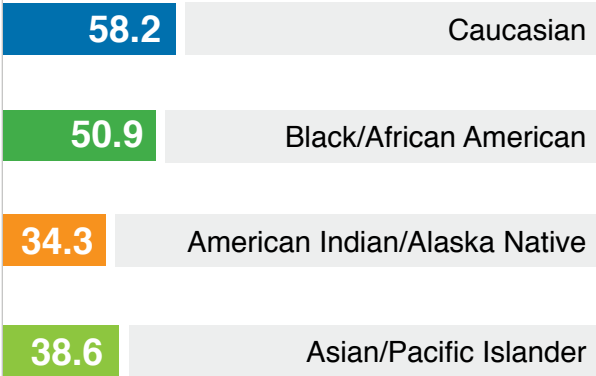
Why is it important?

Stroke is a rapid loss of brain function due to disturbances in the blood supply of the brain. Approximately 130,000 people in the United States die from a stroke and approximately 795,000 people have a stroke event every year (American Stroke Association). Strokes are a leading cause of serious long-term disability. The most powerful modifiable risk factor for stroke is hypertension or high blood pressure. Smoking, high cholesterol and obesity are also major risk factors - all of which can be modified through lifestyle changes. The local public health system should align policies and practices in an effort to improve access to care and recognition of the early signs of stroke. Public health education, outreach and awareness provides the community tools for recognizing stroke and reducing the burden of stroke.
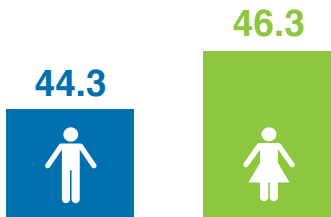
How are we doing?

The mortality rate for the Oklahoma City-County for stroke was 46.5 deaths per 100,000 population over the years 2013-2015. This was slightly lower than the Oklahoma rate of 50 (2014) but higher than the United States rate of 36.5 deaths per 100,000 population. Females had slightly higher mortality rates compared to males at 46.3 and 44.3 deaths per 100,000, respectively. Zip codes with the highest stroke mortality rates were 73105, 73111, 73149, 73106 and 73135.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015 and Centers for Disease Control and Prevention
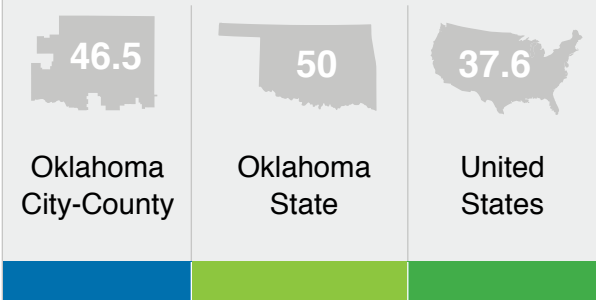
Age-Adjusted Stroke Mortality Rates by Race
Oklahoma City-County

Rate	Race
58.2	Caucasian
50.9	Black/African American
34.3	American Indian/Alaska Native
38.6	Asian/Pacific Islander

Mortality Rates by Gender
Oklahoma City-County

44.3	46.3

Mortality Rate Comparison

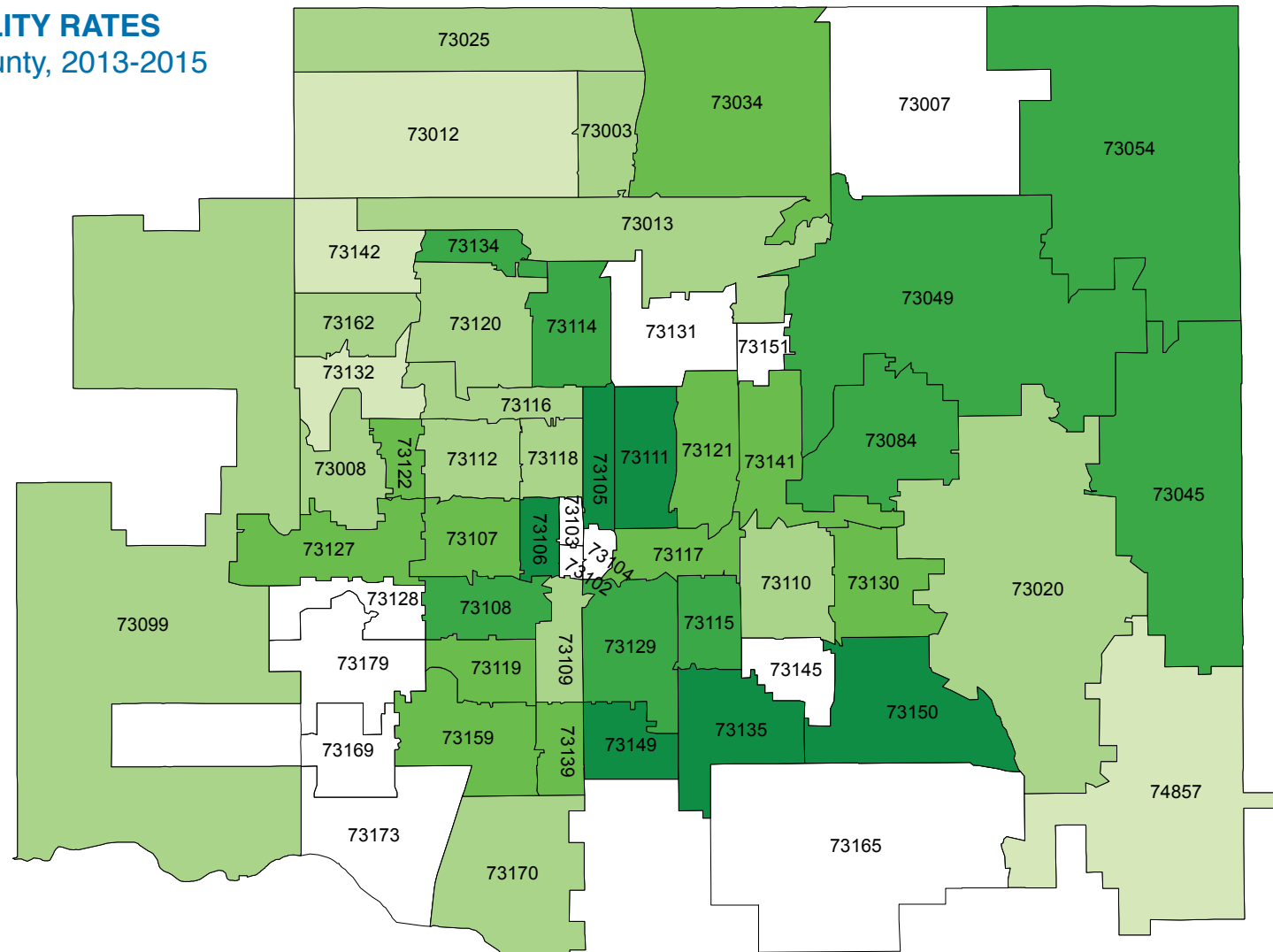| 46.5	50	37.6
Oklahoma City-County	Oklahoma State	United States

STROKE MORTALITY RATES
Oklahoma City-County, 2013-2015

Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

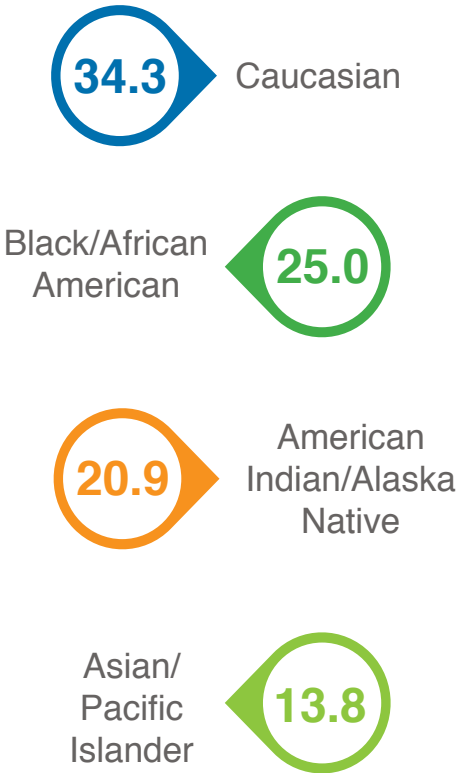*No date available
**Data too low to count/compare

Lowest ▮▮▮▮▮ Highest   ☐ N/A

73003	35.6	73054	74.1								
73007	**	73084	74.7	73109	35.5	73119	49.9	73132	31.3	73151	*
73008	39.3	73099	41.3	73110	43.1	73120	42.4	73134	74.7	73159	54.8
73012	28.2	73102	**	73111	85.6	73121	50.5	73135	81.9	73162	39.7
73013	35.9	73103	**	73112	45.6	73122	47.6	73139	55.2	73165	**
73020	40.2	73104	**	73114	70.2	73127	53.4	73141	60.6	73169	**
73025	40.8	73105	107.2	73115	67.1	73128	**	73142	17.6	73170	45.1
73034	49.4	73106	82.8	73116	36.7	73129	63.6	73145	*	73173	**
73045	65.0	73107	49.2	73117	57.0	73130	56.4	73149	84.0	73179	**
73049	63.9	73108	77.5	73118	41.9	73131	*	73150	79.9	74857	29.2

HEART ATTACK MORTALITY

This indicator represents the number of deaths from heart attack per 100,000 population over the years 2013-2015. The rates were age adjusted to account for differences in age distributions among our community. The age-adjusted mortality rate due to heart attack was 26.1 deaths per 100,000 in Oklahoma City-County during 2013-2015.

Age-Adjusted Heart Attack Mortality Rates by Race
Oklahoma City-County, 2013-2015

34.3 Caucasian

Black/African American **25.0**

20.9 American Indian/Alaska Native

Asian/Pacific Islander **13.8**

Shante Fenner, BA
Director of Multicultural Initiatives, American Heart Association

"Having access to the Oklahoma County Wellness Score is critical to the work that we do. It helps us to prioritize what areas we provide services to and defines what type of outreach is needed in particular communities."

Mortality Rates by Gender
Oklahoma City-County, 2013-2015

34.1
Male

19.7
Female

Why is it important?

Preventing heart attack occurrence depends on controlling Cardiovascular Disease and its underlying causes, such as hypertension, obesity and physical inactivity. More than 735,000 people reportedly experience a heart attack every year in the United States, and the Behavioral Risk Factor Survey (BRFSS) resulted in nearly 6 percent of the State reporting previous heart attack diagnosis during the years 2013-2015. The local public health system should align policies and practices with local health and wellness efforts focused on addressing the root cause of heart attack occurrence. Policies, programs, and services that seek to address environmental, social and behavioral norms, combined with physical health and wellness, will have the greatest impact.

How are we doing?

There were 642 deaths due to heart attack in Oklahoma City-County from 2013-2015, and the age-adjusted mortality rate was 26.1 deaths per 100,000. This was lower than the national rate of 31 deaths per 100,000. Mortality rates were highest among white individuals and males. The zip codes with the highest heart attack mortality rates were 73150, 73119, 73111, 73117 and 73141.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015, Oklahoma State Department of Health OK2Share 2013-2015

HEART ATTACK MORTALITY RATES
Oklahoma City-County, 2013-2015

Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015
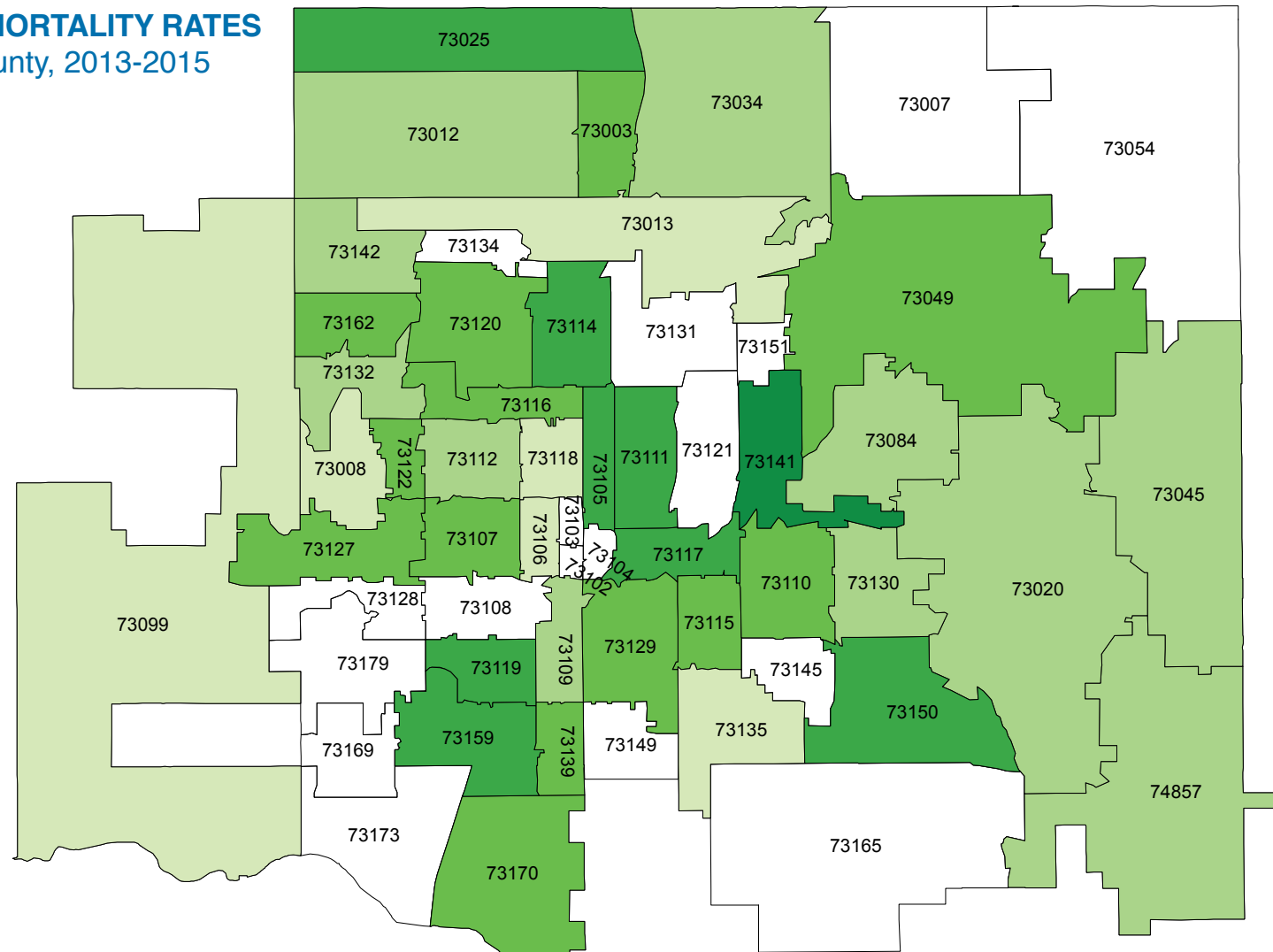
*No date available
**Data too low to count/compare

Lowest ▢▢▢▢▢ Highest   ▢ N/A

73003	30.4	73054	**								
73007	**	73084	21.2	73109	20.5	73119	43.1	73132	22.6	73151	**
73008	16.8	73099	15.4	73110	27.2	73120	31.2	73134	**	73159	40.4
73012	20.4	73102	*	73111	43.7	73121	**	73135	12.5	73162	32.7
73013	14.9	73103	**	73112	22.8	73122	27.3	73139	35.0	73165	**
73020	21.8	73104	**	73114	39.4	73127	30.3	73141	83.8	73169	**
73025	38.8	73105	39.3	73115	27.4	73128	**	73142	23.9	73170	30.9
73034	25.2	73106	14.8	73116	27.2	73129	35.5	73145	*	73173	**
73045	19.5	73107	29.4	73117	50.1	73130	19.3	73149	**	73179	**
73049	30.1	73108	**	73118	16.0	73131	*	73150	41.9	74857	21.6

DIABETES MORTALITY

This indicator signifies the number of deaths from diabetes per 100,000 population over the years 2013-2015. The rates were age adjusted to account for differences in age distributions among our community. The age-adjusted mortality rate due to diabetes was 31.9 deaths per 100,000 in Oklahoma City-County during 2013-2015.

Why is it important?
Diabetes is an increasing cause of death nationally and in Oklahoma City-County. Risk factors for diabetes include physical inactivity and a bad quality diet. Diabetes is a risk factor for other diseases, such as cardiovascular disease. The local public health system can use this data to influence outreach and education efforts around the dangers of uncontrolled diabetes, the need for improved access to nutritious foods, and adequate community infrastructure for physical activity.

How are we doing?
The mortality rate for Oklahoma City-County was 31.9 deaths per 100,000 making diabetes a top 10 cause of death in Oklahoma City-County. This was higher than the national rate of 20.9 deaths per 100,000 and slightly higher than the state rate of 30.4 deaths per 100,000. Mortality rates were highest among American Indian/Alaska Natives and males. Zip codes with the highest diabetes mortality rate were 73141, 73117, 73106, 73111 and 73179.
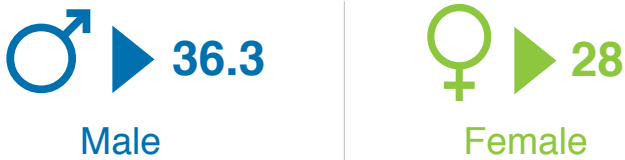
Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015 and Centers for Disease Control and Prevention

 *It's important to note that zips 73141 and 73179 had at least 5 events due to accidents but the number of deaths attributable to accidents are still very low compared to the other zip codes, so this rate is to be utilized with caution.

Age-Adjusted Diabetes Mortality Rates by Race
Oklahoma City-County

36.9	47.6	55.1	24.8
Caucasian	Black/ African American	American Indian/Alaska Native	Asian/ Pacific Islander

Mortality Rates by Gender
Oklahoma City-County

Male ▶ 36.3

Female ▶ 28

Age-Adjusted Diabetes Mortality Rates Comparison
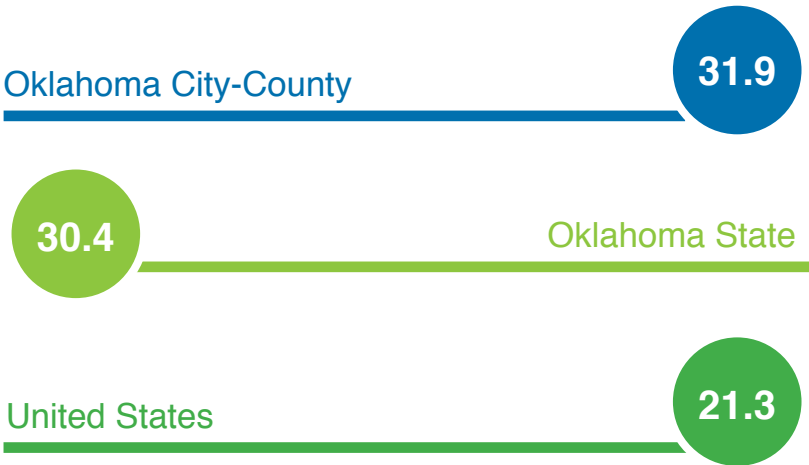
Oklahoma City-County — 31.9

30.4 — Oklahoma State

United States — 21.3

DIABETES MORTALITY RATES
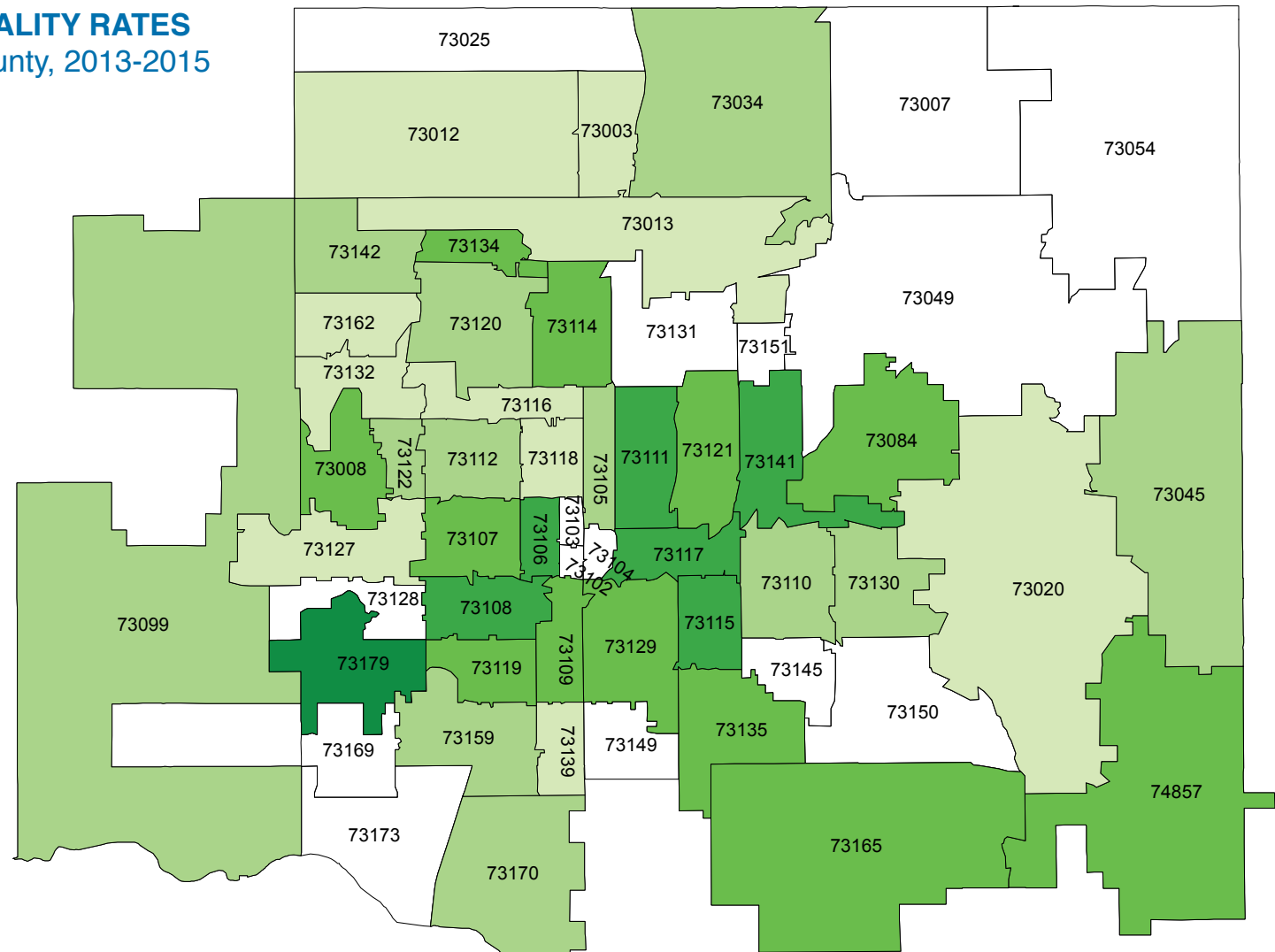## Oklahoma City-County, 2013-2015

Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

*No date available
**Data too low to count/compare

Lowest ▢▢▢▢▢ Highest   ▢ N/A

73003	14.5	73054	**								
73007	**	73084	40.2	73109	52.8	73119	47.4	73132	24.2	73151	*
73008	48.5	73099	30.8	73110	34.0	73120	28.0	73134	40.1	73159	32.7
73012	12.6	73102	**	73111	79.6	73121	39.4	73135	41.3	73162	16.5
73013	18.4	73103	**	73112	34.4	73122	33.2	73139	18.6	73165	50.5
73020	23.0	73104	**	73114	43.5	73127	23.5	73141	63.5	73169	**
73025	**	73105	28.3	73115	60.0	73128	**	73142	35.1	73170	33.9
73034	26.2	73106	71.0	73116	14.6	73129	45.7	73145	*	73173	*
73045	32.4	73107	42.5	73117	70.1	73130	36.8	73149	**	73179	136.8
73049	**	73108	57.8	73118	14.8	73131	**	73150	**	74857	43.1

93

HYPERTENSION MORTALITY

This indicator is presented as the number of deaths from hypertension per 100,000 population over the years 2013-2015. The rates were age adjusted to account for differences in age distributions among our community. The age-adjusted hypertension mortality rate was 37.2 deaths per 100,000 in Oklahoma City-County during 2013-2015. Smaller than 5 percent of the deaths in the city-county were categorized as hypertension, so this rate was created from a small sample size and is to be utilized with caution.
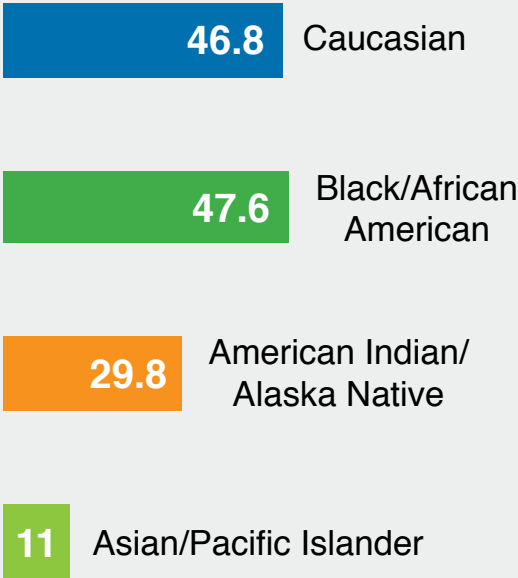
Why is it important?
Hypertension deaths include death due to hypertensive heart disease, hypertensive heart and renal disease, or essential hypertension and hypertensive renal disease. These are preventable and manageable conditions. Prevention strategies include a well-balanced diet, exercise and lowering salt intake. It can be managed by similar means as well as by medication. Death due to hypertension may indicate lack of access to nutritious foods or exercise opportunities, lack of education about personal risk and lack of access to care. The local public health systems should use this data to advocate for programs, policies, and services that can influence a variety of social and underlying risks. Community education and access to services, for example, could greatly impact management of hypertension. Continuing to link issues of access to health disparities will be critical in improving health for the community.
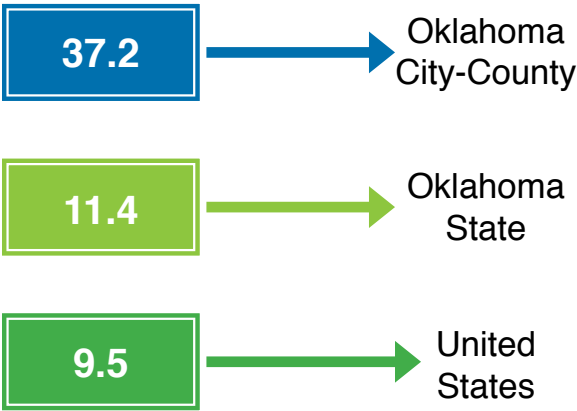
Age-Adjusted Hypertension Mortality Rates by Gender
Oklahoma City-County

🧍 **39.9**   🧍 **33.6**

Mortality Rates by Race
Oklahoma City-County

46.8	Caucasian
47.6	Black/African American
29.8	American Indian/ Alaska Native
11	Asian/Pacific Islander

Rate Comparison (per 100,000)

| **37.2** | → | Oklahoma City-County |
| **11.4** | → | Oklahoma State |
| **9.5** | → | United States |

How are we doing?
There were 918 hypertension deaths reported in Oklahoma City-County during 2013-2015. The age-adjusted mortality rate due to hypertension was 37.2 deaths per 100,000 in Oklahoma City-County during 2013-2015. Smaller than 5 percent of the deaths in the city-county were categorized as hypertension, so this rate was created from a small sample size and is to be utilized with caution. The hypertension mortality rate were highest among Black/African Americans and males. The zip codes with the highest rates were 73141, 73105, 73111, 73117 and 73104.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015 and Centers for Disease Control and Prevention

HYPERTENSION MORTALITY RATES
Oklahoma City-County, 2013-2015
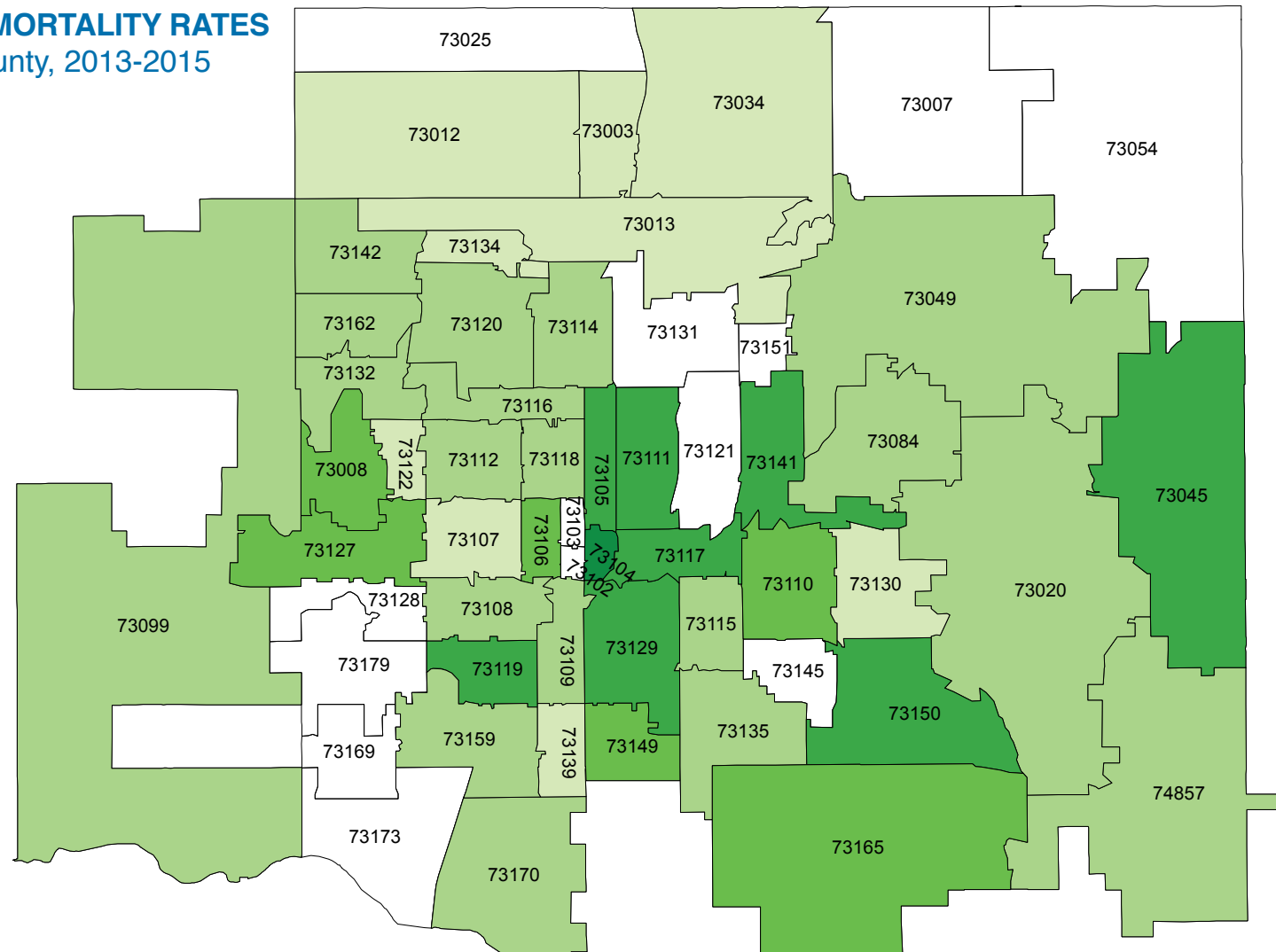
Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

Lowest ▢▢▢▢▢ Highest   ▢ N/A

*No date available
**Data too low to count/compare

73003	28.6	73054	**								
73007	**	73084	37.0	73109	39.4	73119	63.5	73132	31.4	73151	*
73008	50.3	73099	37.8	73110	47.1	73120	34.0	73134	27.8	73159	42.5
73012	23.8	73102	**	73111	80.4	73121	**	73135	38.6	73162	31.4
73013	22.4	73103	**	73112	38.6	73122	24.4	73139	24.4	73165	49.5
73020	33.2	73104	141.2	73114	39.3	73127	47.2	73141	69.6	73169	*
73025	**	73105	75.4	73115	37.6	73128	**	73142	31.6	73170	34.3
73034	24.7	73106	46.1	73116	33.8	73129	62.8	73145	*	73173	*
73045	63.2	73107	28.8	73117	81.8	73130	27.4	73149	55.6	73179	**
73049	41.3	73108	41.6	73118	36.5	73131	**	73150	61.7	74857	32.9

CHRONIC LOWER RESPIRATORY DISEASE MORTALITY

This indicator represents the number of deaths due to chronic lower respiratory disease per 100,000 population over the years 2013-2015. The rates were age adjusted to account for differences in age distributions among our community. The age-adjusted chronic lower respiratory disease death rate in Oklahoma City-County was 67.7 deaths per 100,000 population.
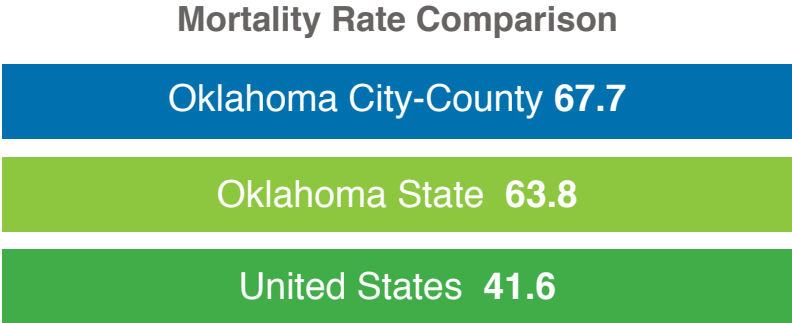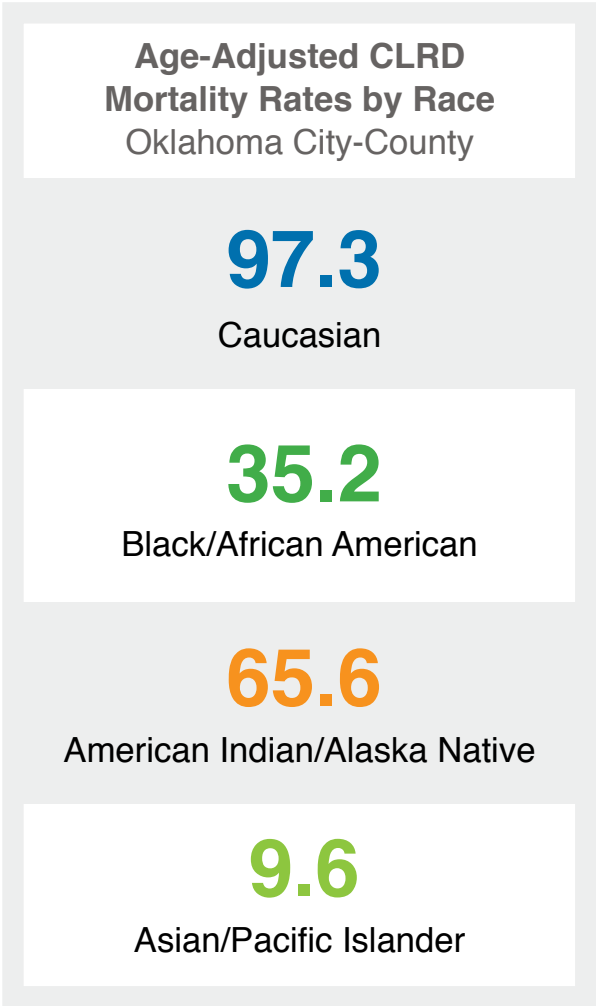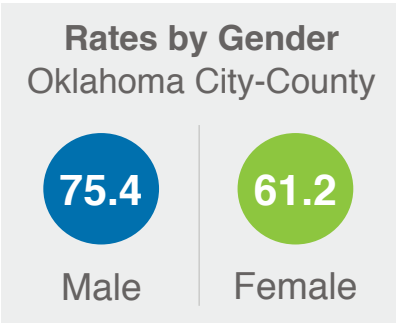
Why is it important?
Chronic lower respiratory disease (CLRD) is another leading cause of mortality in Oklahoma City-County and nationally. It is comprised of a variety of conditions - primarily chronic bronchitis, asthma, and emphysema. Some of these conditions can be prevented by behavioral modification, such as not smoking. Others may be indicative of environmental conditions, such as bad air quality. The local public health system can use this information to inform decisions and policy making for air quality and environmental protection. This data can also be used to develop strategies for improving awareness, providing patient education, and improving standards of care and knowledge around CLRD.

How are we doing?
From 2013-2015, the age-adjusted death rate due to chronic lower respiratory disease in Oklahoma County was 67.7 deaths per 100,000 population. This is higher than the most recent state and national rates of 63.8 and 40.5. There was a total of 1,670 deaths attributable to chronic lower respiratory disease during this time. Rates were highest among whites and males. The zip codes with the highest overall chronic lower respiratory disease death rates were 73129, 73149, 73119, 73106 and 73141.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015 and Centers for Disease Control and Prevention

Age-Adjusted CLRD Mortality Rates by Race
Oklahoma City-County

97.3
Caucasian

35.2
Black/African American

65.6
American Indian/Alaska Native

9.6
Asian/Pacific Islander

Rates by Gender
Oklahoma City-County

75.4 Male

61.2 Female

Mortality Rate Comparison

Oklahoma City-County **67.7**

Oklahoma State **63.8**

United States **41.6**

CHRONIC LOWER RESPIRATORY DISEASE MORTALITY RATES
Oklahoma City-County, 2013-2015
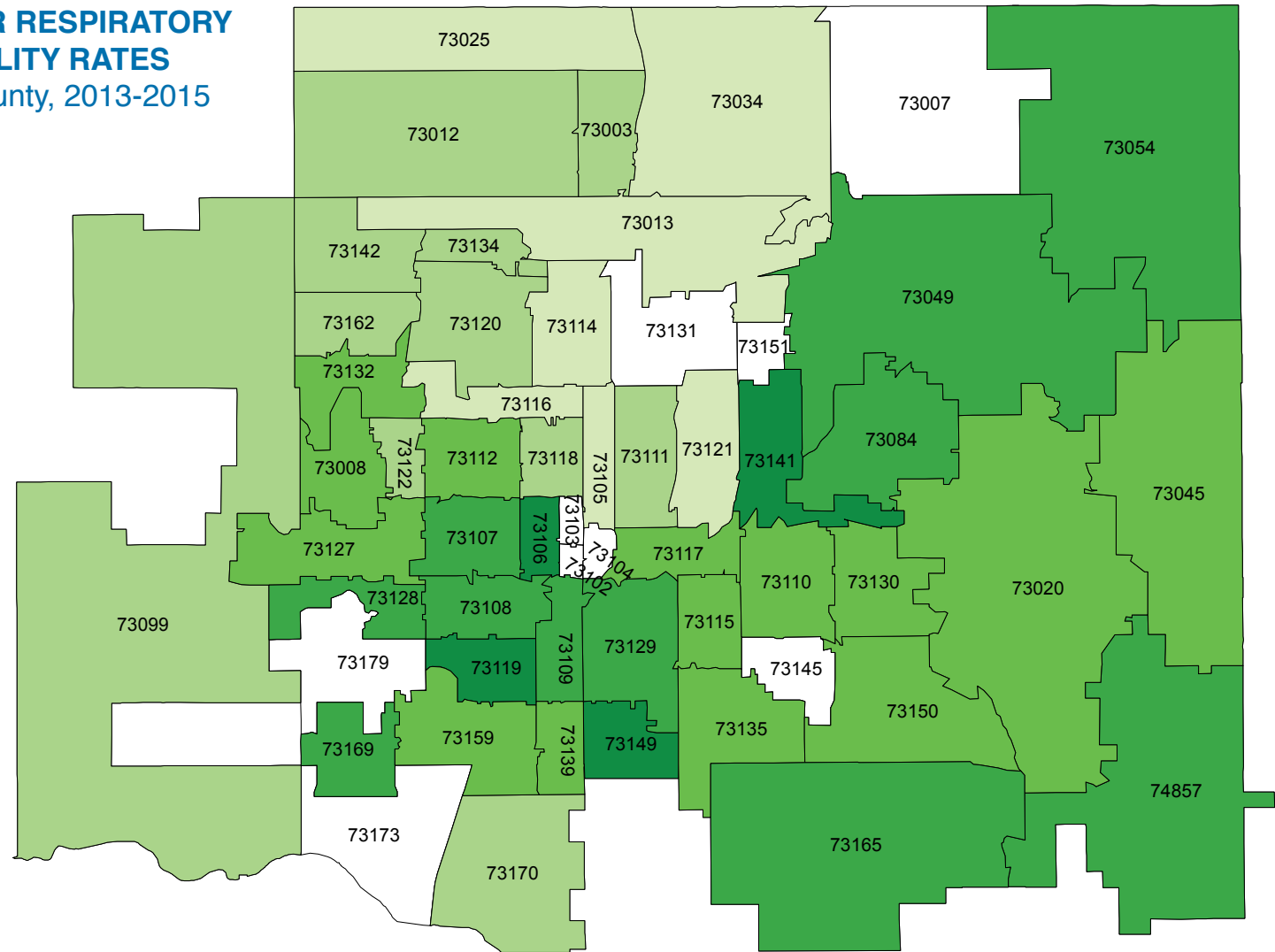
Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

**Data too low to count/compare

Lowest ▢ Highest   N/A

73003	54.5	73054	110.9								
73007	**	73084	118.3	73109	103.3	73119	136.4	73132	68.9	73151	**
73008	66.9	73099	62.6	73110	77.3	73120	58.0	73134	51.7	73159	74.1
73012	56.9	73102	**	73111	54.7	73121	43.3	73135	81.9	73162	53.1
73013	36.0	73103	**	73112	66.8	73122	58.7	73139	83.3	73165	121.3
73020	70.9	73104	**	73114	47.0	73127	85.5	73141	177.5	73169	110.1
73025	37.7	73105	41.7	73115	71.1	73128	108.7	73142	60.4	73170	53.2
73034	44.4	73106	141.9	73116	44.5	73129	124.1	73145	**	73173	**
73045	83.1	73107	117.1	73117	86.0	73130	72.0	73149	135.2	73179	**
73049	114.1	73108	112.3	73118	52.0	73131	**	73150	68.7	74857	105.1

97

CHRONIC LIVER DISEASE AND CIRRHOSIS MORTALITY

This indicator represents the number of deaths due to either chronic liver disease or cirrhosis per 100,000 population over the years 2013-2015. The rates were age adjusted to account for differences in age distributions among our community.

Why is it important?

Chronic liver disease is categorized by the destruction of liver tissues over time and includes cirrhosis. Cirrhosis is a chronic liver disease in which scar tissue replaces the healthy tissue in the liver, resulting in abnormal liver function. Behaviors such as alcohol abuse, obesity, high cholesterol and high blood pressure can contribute to the development of cirrhosis. The local public health system should focus on developing or advocating for programs, services, and policies that coordinate care and resources to improve community awareness and education.

How are we doing?

There were 410 deaths due to chronic liver disease or cirrhosis in Oklahoma City-County during 2013-2016, resulting in an age-adjusted rate of 16.1 deaths per 100,000 population. The zip codes with the highest overall chronic liver disease and cirrhosis death rates were 73104, 73129 and 73109.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015 and Centers for Disease Control and Prevention
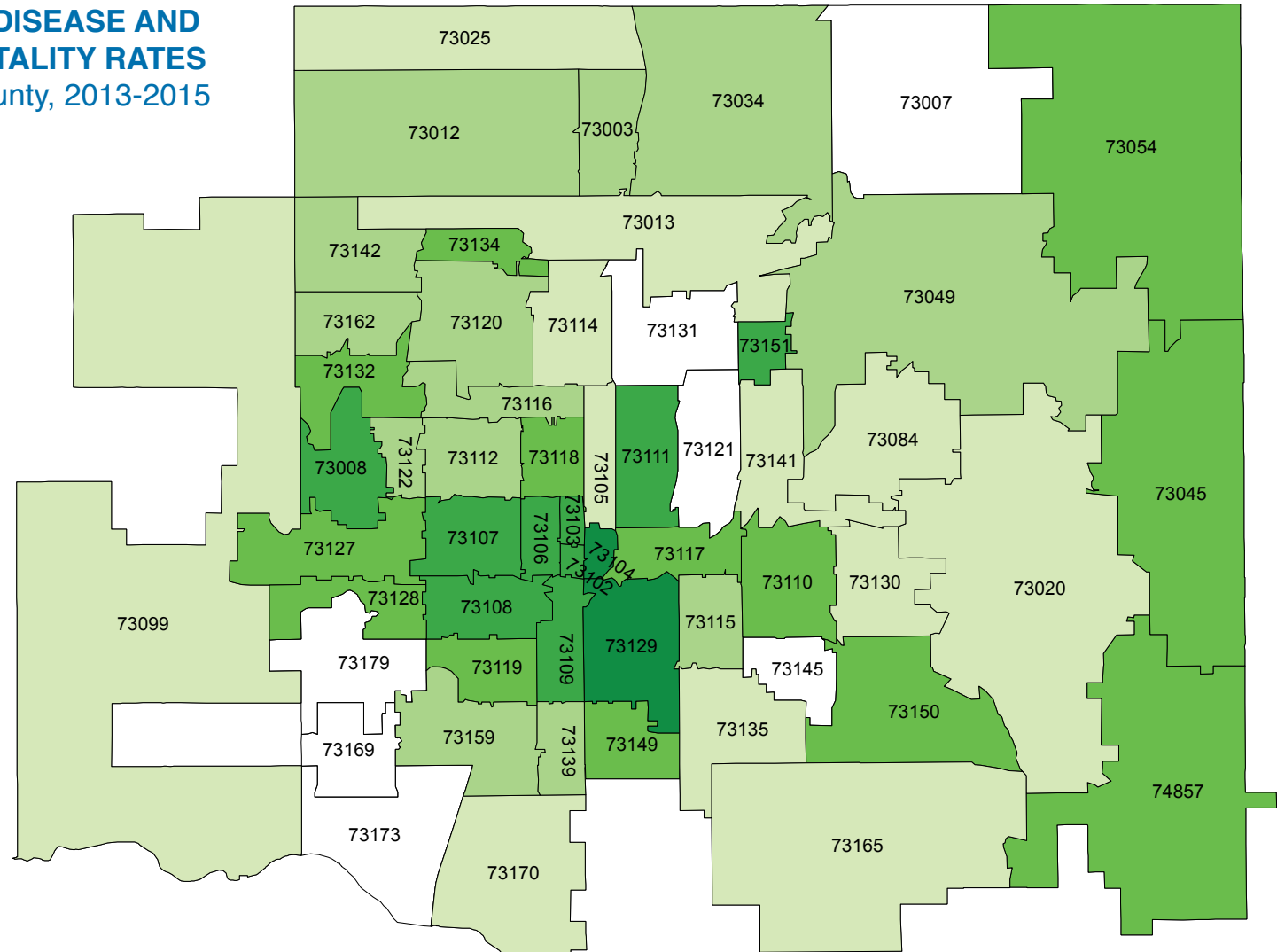
Obesity

Alcohol Abuse

HIGH

Cholesterol

High Blood Pressure

Age-Adjusted Mortality Rate Due to Liver Disease and Cirrhosis	Oklahoma City-County	Oklahoma State	United States
	16.1	13.7	10.4

CHRONIC LIVER DISEASE AND CIRRHOSIS MORTALITY RATES
Oklahoma City-County, 2013-2015

Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

*No data available
**Data too low to count/compare

Lowest ▭▭▭▭▭ Highest   ▭ N/A

73003	12.7	73054	**								
73007	*	73084	**	73109	34.4	73119	21.4	73132	20.6	73151	**
73008	26.1	73099	9.4	73110	23.4	73120	17.0	73134	**	73159	17.5
73012	12.3	73102	**	73111	27.0	73121	*	73135	**	73162	14.1
73013	7.9	73103	**	73112	14.2	73122	15.8	73139	13.0	73165	**
73020	9.3	73104	**	73114	10.8	73127	25.3	73141	**	73169	*
73025	**	73105	**	73115	14.6	73128	**	73142	16.3	73170	5.4
73034	11.9	73106	26.6	73116	**	73129	49.9	73145	*	73173	*
73045	18.6	73107	31.0	73117	**	73130	10.6	73149	**	73179	*
73049	**	73108	29.1	73118	20.7	73131	*	73150	**	74857	18.7

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CANCER MORTALITY

Cancer is a common term used for diseases in which abnormal cells uncontrollably divide and may invade other tissues resulting in more than 100 different types of diagnoses. (CDC) This indicator is presented as the number of deaths from all cancers per 100,000 population over the years 2013-2015. The rates were age adjusted to account for differences in age distributions among our community.
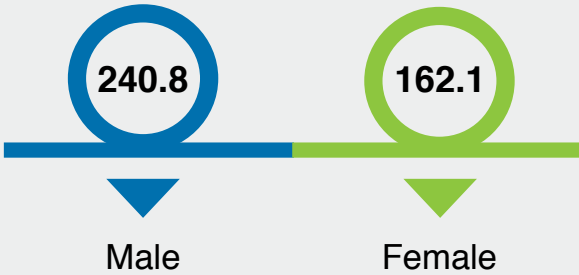
Why is it important?
Cancer was the second leading cause of death in Oklahoma City-County during 2013-2015. An individual's risk can be lowered through adoption of healthy lifestyles, including reducing in tobacco and alcohol use, protecting skin, eating a healthy diet and engaging in physical activity. (CDC). Additionally, access to timely and affordable screening and immunization programs improves treatment options. The local public health system should advocate for policies, programs, and services that increase access to screening and improve awareness in the general community. Education opportunities should be tailored to high-risk areas to improve understanding of early detection mechanisms, prevention tools and resources available for all community members.
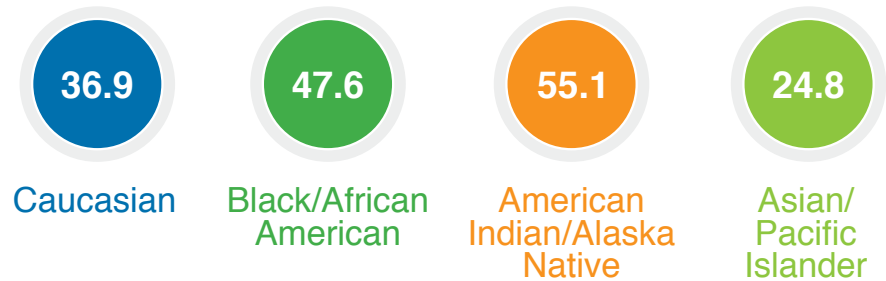
How are we doing?
There were 4,864 Oklahoma County deaths attributable to cancer, and the mortality rate for all cancers was 194.6 deaths per 100,000 in 2013-2015. This was higher than the national and state rates. Rates were highest among American Indian/Alaska Native and males. The zip codes with the highest rates were 73141, 73129 and 73179.

Age-Adjusted All Cancer Mortality Rates by Gender
Oklahoma City-County

240.8 Male

162.1 Female

Mortality Rates by Race
Oklahoma City-County

36.9	47.6	55.1	24.8
Caucasian	Black/African American	American Indian/Alaska Native	Asian/Pacific Islander

Mortality Rate Comparison

194.6	183.2	158.5
Oklahoma City-County	Oklahoma State	United States
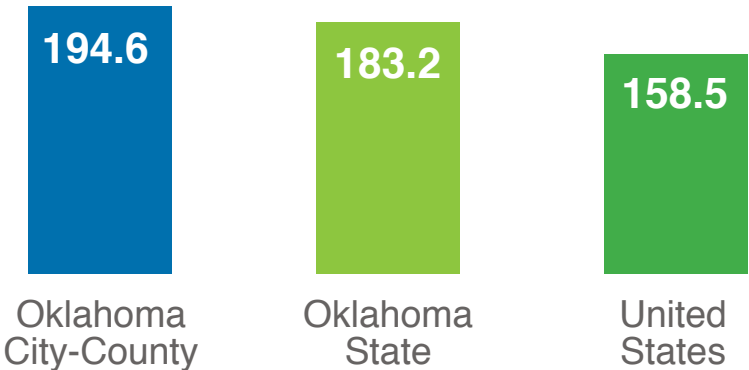
Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015, Centers for Disease Control and Prevention.

CANCER MORTALITY RATES
Oklahoma City-County, 2013-2015

Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

*No data available
**Data too low to count/compare

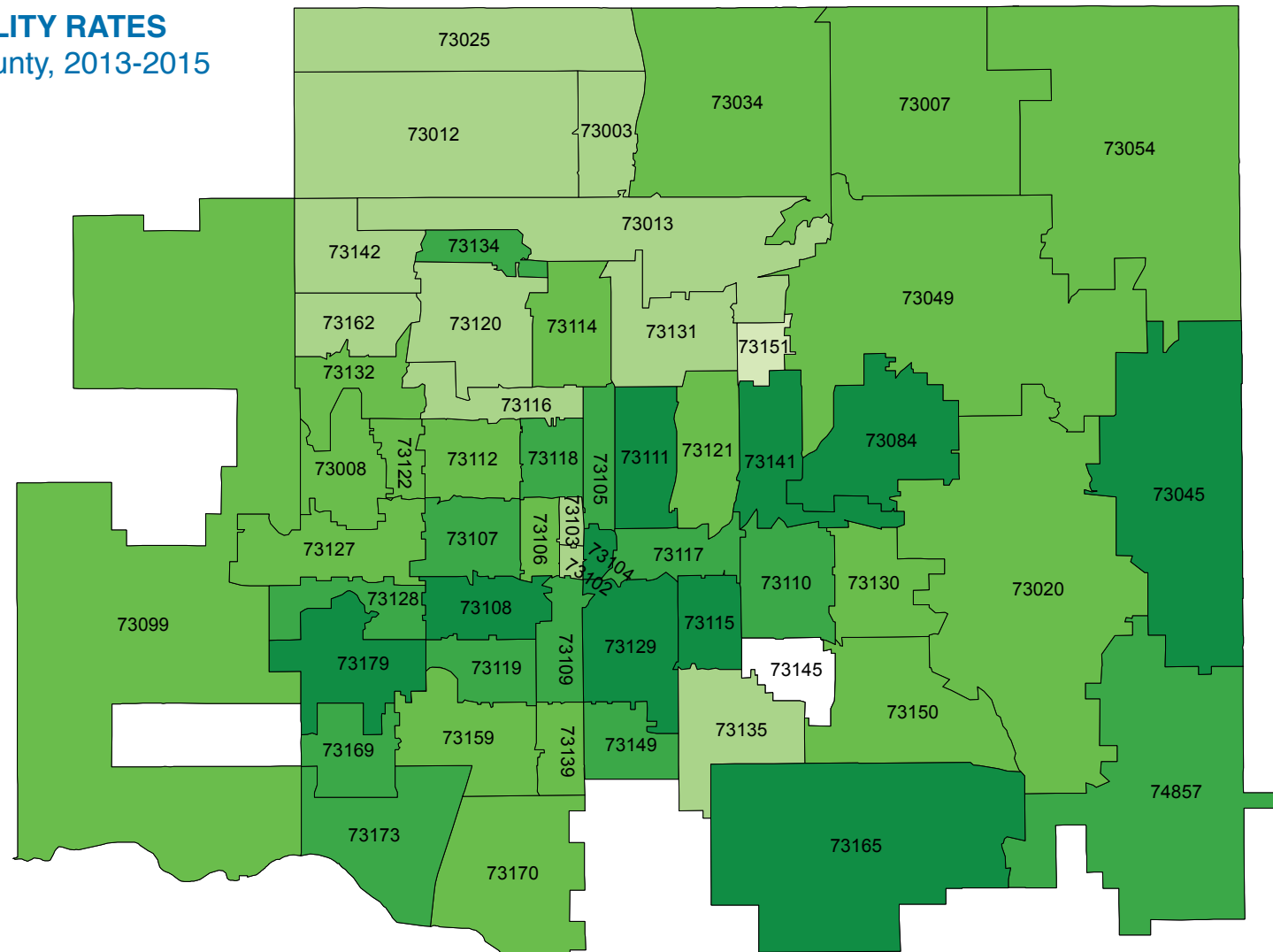Lowest ▢▢▢▢▢ Highest   ▢ N/A

73003	145.5	73054	200.6								
73007	191.1	73084	282.8	73109	227.7	73119	218.2	73132	184.1	73151	**
73008	210.2	73099	190.1	73110	219.8	73120	154.6	73134	235.5	73159	209.4
73012	168.1	73102	111.1	73111	263.2	73121	202.3	73135	156.3	73162	151.2
73013	163.0	73103	162.1	73112	196.9	73122	193.8	73139	178.9	73165	254.6
73020	208.3	73104	279.9	73114	201.3	73127	187.9	73141	310.2	73169	236.9
73025	146.5	73105	245.9	73115	262.2	73128	219.6	73142	155.7	73170	199.1
73034	179.5	73106	187.8	73116	158.7	73129	292.9	73145	*	73173	249.3
73045	253.8	73107	225.8	73117	226.6	73130	204.9	73149	227.0	73179	291.7
73049	191.4	73108	257.1	73118	223.1	73131	124.7	73150	208.6	74857	226.9

BREAST CANCER MORTALITY

Next to skin cancer, breast cancer is the next common cancer affecting women in the United States and around the globe. (CDC) This indicator signifies the number of breast cancer deaths per 100,000 women over the years 2013-2015. The rates were age adjusted to account for differences in age distributions among our community. Early detection is key as it can identify breast cancer in the early stages when it is easier to treat.
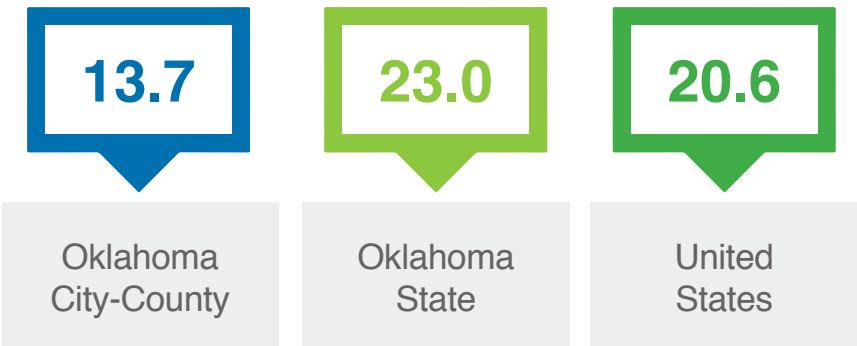
Why is it important?
Providing comprehensive prevention methods, opportunities for early detection and control of breast cancer risk factors, such as health diet, physical activity, and healthy behaviors, could decrease long-term incidence of breast cancer. (WHO) Identifying clinics, hospitals and doctor offices where community members can be screened for breast cancer can improve early detection in our community. (CDC) Through local public health efforts, the local public health system can collaborate with community stakeholders to work on developing policies and practices to address breast cancer within the community. Additionally, enhancing education efforts throughout the communities can improve for breast self-awareness and self-exam rates in order to aid in early detection.
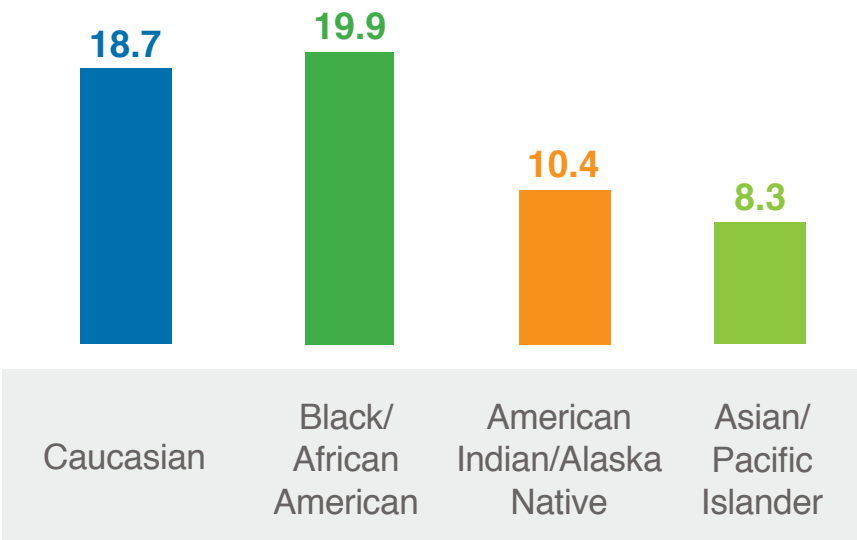
How are we doing?
There were 370 deaths attributable to breast cancer in 2013-2015. The mortality for breast cancer in Oklahoma City-County was 14.7 deaths per 100,000 women. Rates were highest among African Americans. The zip codes with the highest rates were 73179, 73141 and 73007.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015 and Centers for Disease Control and Prevention

Age-Adjusted Breast Cancer Mortality Rates Comparison

13.7	23.0	20.6
Oklahoma City-County	Oklahoma State	United States

Age-Adjusted Breast Cancer Mortality Rates by Race
Oklahoma City-County

Caucasian	Black/ African American	American Indian/Alaska Native	Asian/ Pacific Islander
18.7	19.9	10.4	8.3

BREAST CANCER MORTALITY RATES
Oklahoma City-County, 2013-2015
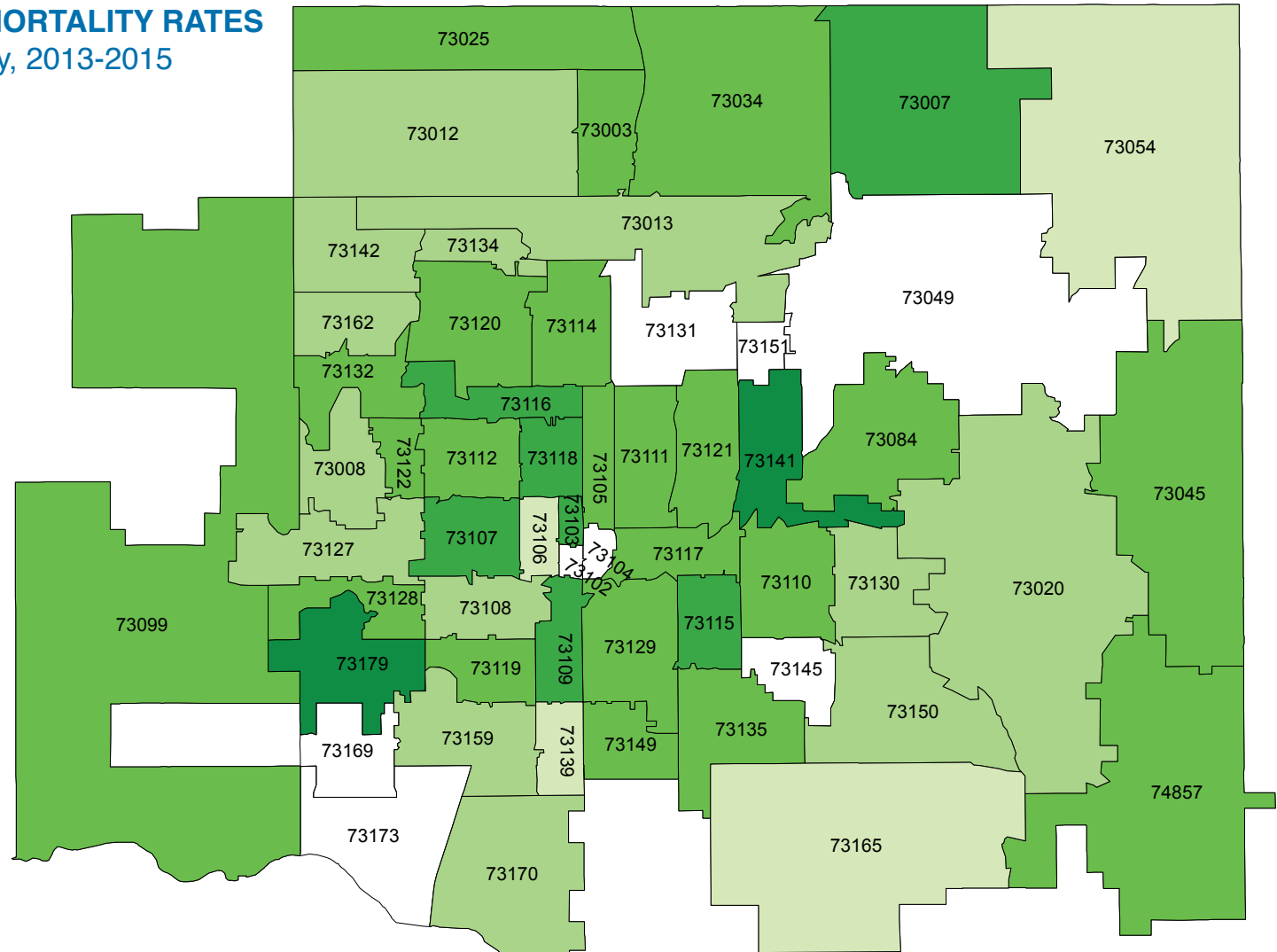
Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

Lowest — Highest   N/A

*No data available
**Data too low to count/compare

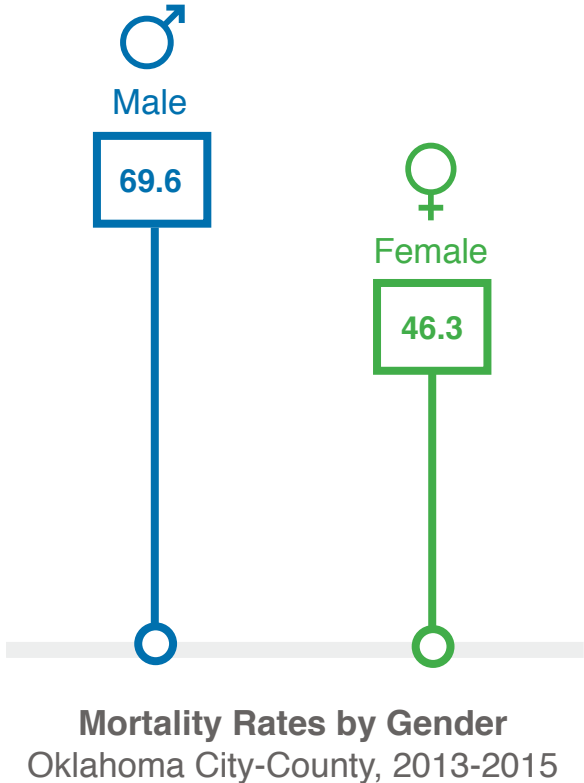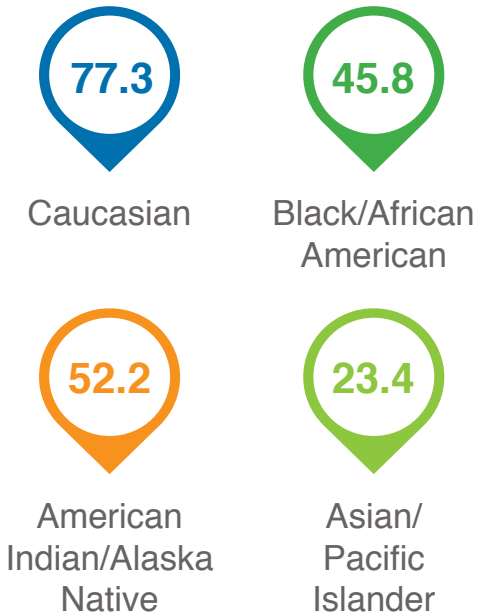|											
73003	15.8	73054	**								
73007	**	73084	**	73109	24.9	73119	18.3	73132	23.0	73151	*
73008	8.4	73099	14.3	73110	15.9	73120	14.9	73134	**	73159	7.7
73012	12.2	73102	*	73111	20.3	73121	**	73135	15.0	73162	11.9
73013	10.3	73103	**	73112	18.3	73122	17.1	73139	**	73165	**
73020	8.8	73104	*	73114	14.7	73127	7.7	73141	**	73169	*
73025	**	73105	**	73115	31.3	73128	**	73142	**	73170	10.9
73034	15.6	73106	**	73116	32.3	73129	17.8	73145	*	73173	*
73045	16.3	73107	26.5	73117	**	73130	9.6	73149	**	73179	**
73049	*	73108	**	73118	26.7	73131	*	73150	**	74857	**

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LUNG CANCER MORTALITY

Lung cancer is the leading cause of cancer deaths in Oklahoma County. This indicator is presented as the number of deaths from lung cancer per 100,000 population over the years 2013-2015. The rates were age adjusted to account for differences in age distributions among our community. The mortality rate for lung cancer in Oklahoma City-County was 56.1 deaths per 100,000 population.

Why is it important?
The majority of lung cancer cases are caused by smoking. It is the leading cause of cancer deaths in Oklahoma County and the United States. Current treatments do not cure most of the lung cancer cases (Lung.org). Through local public health efforts such as the Tobacco Settlement Endowment Trust (TSET) and OCCHD's Wellness Now Coalition, the local public health system can collaborate with community stakeholders to work on developing policies and practices to address lung cancer within the community, including aligning policies and practices with Wellness Now and public health efforts. As a community, advocating for programs, policies, and services that reduce tobacco use and exposure to secondhand smoke is critical to reducing lung cancer mortality.

Age-Adjusted Lung Cancer Mortality Rates by Race
Oklahoma City-County, 2013-2015

77.3 Caucasian

45.8 Black/African American

52.2 American Indian/Alaska Native

23.4 Asian/Pacific Islander

♂ Male **69.6**

♀ Female **46.3**

Mortality Rates by Gender
Oklahoma City-County, 2013-2015

Lung Cancer Mortality Rates Comparison 2013-2014	Oklahoma City-County	Oklahoma State	United States
	56.1	56.8	42.1

How are we doing?
There were 1,403 deaths due to lung cancer in Oklahoma City and County during 2013-2015, accounting for 29 percent of all cancer deaths. The mortality rate for lung cancer in Oklahoma City-County was 56.1 deaths per 100,000 population, similar to the state rate of 56.8 but higher than the United States rate of 42.1 deaths per 100,000 population. Rates were highest among whites and males. The zip codes with the highest rates were 73149, 73141, 73129, 73108 and 73115.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015 and Centers for Disease Control and Prevention

LUNG CANCER MORTALITY RATES
Oklahoma City-County, 2013-2015

Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015
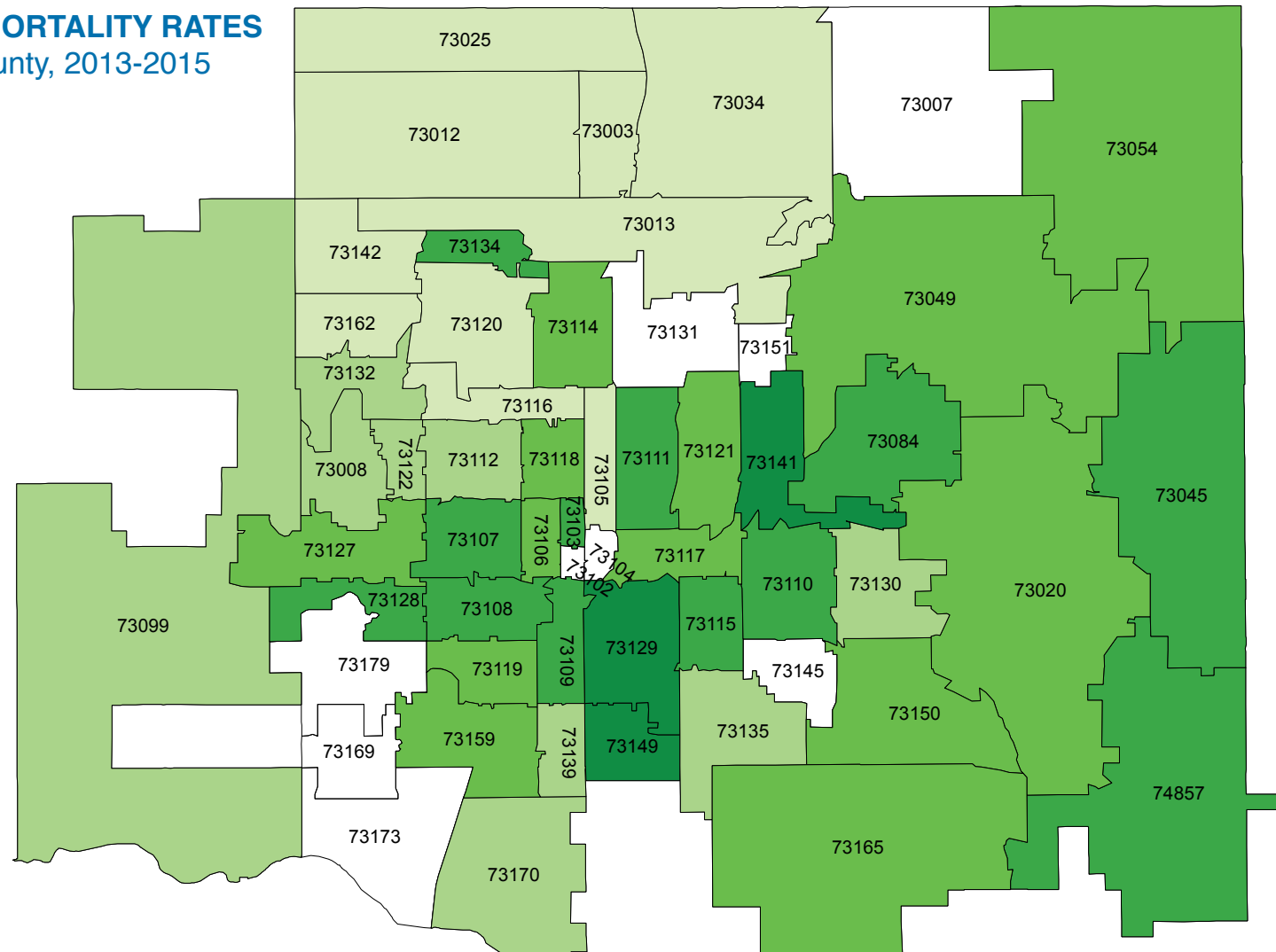
*No data available
**Data too low to count/compare

Lowest ▢▢▢▢▢ Highest   N/A

73003	32.1	73054	64.4								
73007	**	73084	80.2	73109	76.0	73119	69.8	73132	54.7	73151	**
73008	56.3	73099	54.1	73110	73.5	73120	35.0	73134	75.8	73159	67.2
73012	32.3	73102	**	73111	82.9	73121	66.1	73135	46.7	73162	35.1
73013	37.1	73103	78.1	73112	57.9	73122	55.8	73139	53.6	73165	59.7
73020	68.9	73104	**	73114	63.1	73127	64.4	73141	103.7	73169	**
73025	34.4	73105	39.0	73115	83.3	73128	82.5	73142	33.7	73170	47.6
73034	42.9	73106	63.9	73116	36.4	73129	101.3	73145	*	73173	**
73045	77.9	73107	78.0	73117	59.7	73130	51.1	73149	122.6	73179	**
73049	71.6	73108	88.0	73118	67.6	73131	**	73150	66.3	74857	79.4

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PROSTATE CANCER MORTALITY

This indicator signifies the number of deaths from prostate cancer per 100,000 men over the years 2013-2015. The rates were age adjusted to account for differences in age distributions among our community. The prostate cancer mortality rate in Oklahoma City-County was 8.4 deaths per 100,000 men.

Why is it important?
Prostate cancer is the most common cause of death from cancer among White, Black, American Indian, and Hispanic men, and fourth most common cause of death from cancer among Asian/Pacific Islander men. The highest risk factors include those that are older and have a family history of prostate cancer. It is most common in African-American men compared to other races (CDC).
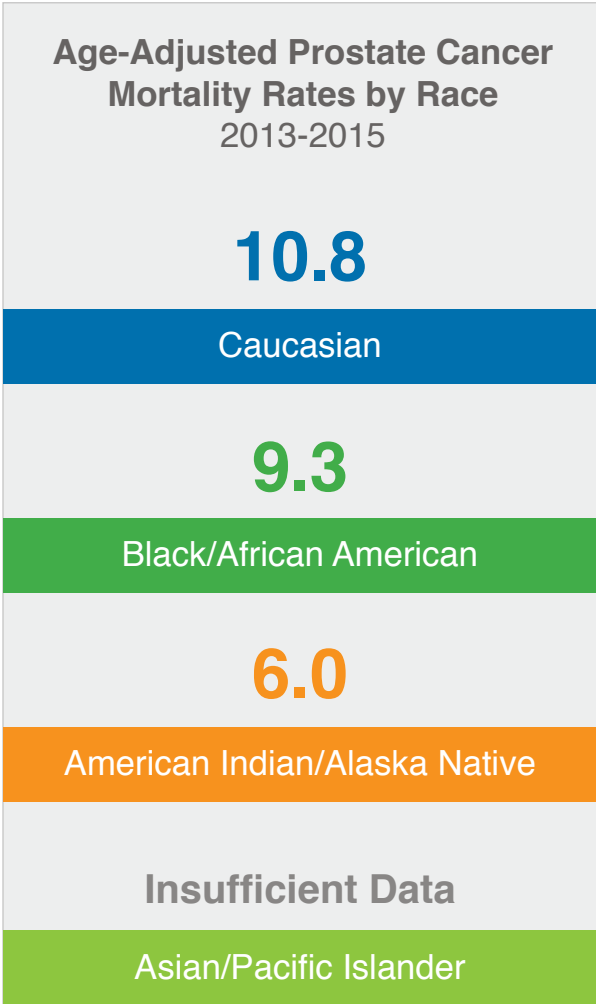
How are we doing?
There were 205 prostate cancer deaths in Oklahoma City and County during 2013-2015. The mortality rate for prostate cancer in Oklahoma City-County was 8.4 deaths per 100,000 men. Rates were highest among white men. The zip codes with the highest rates were 73013, 73122, 73115, 73111 and 73170.

Due to the small sample size, a fair comparison cannot be made to the state and national rates. It is appropriate, however, to compare to the previous mortality rate in 2010-2012. In Oklahoma City-County, there was nearly a 10 percent decrease in the prostate cancer mortality rate from 2010-2012 to 2013-2015.
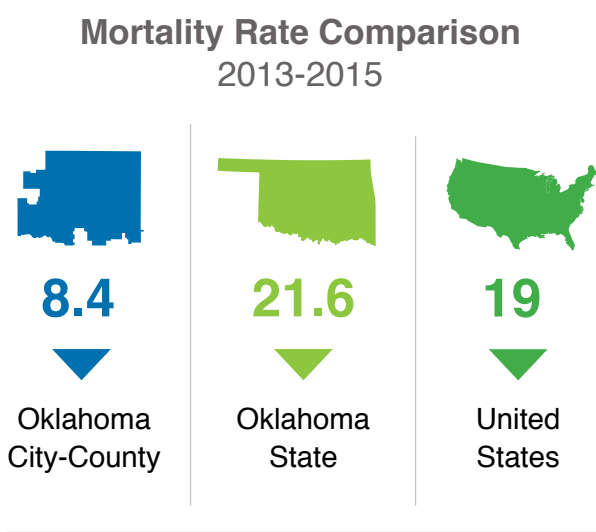
Mortality Rate Comparison
2013-2015

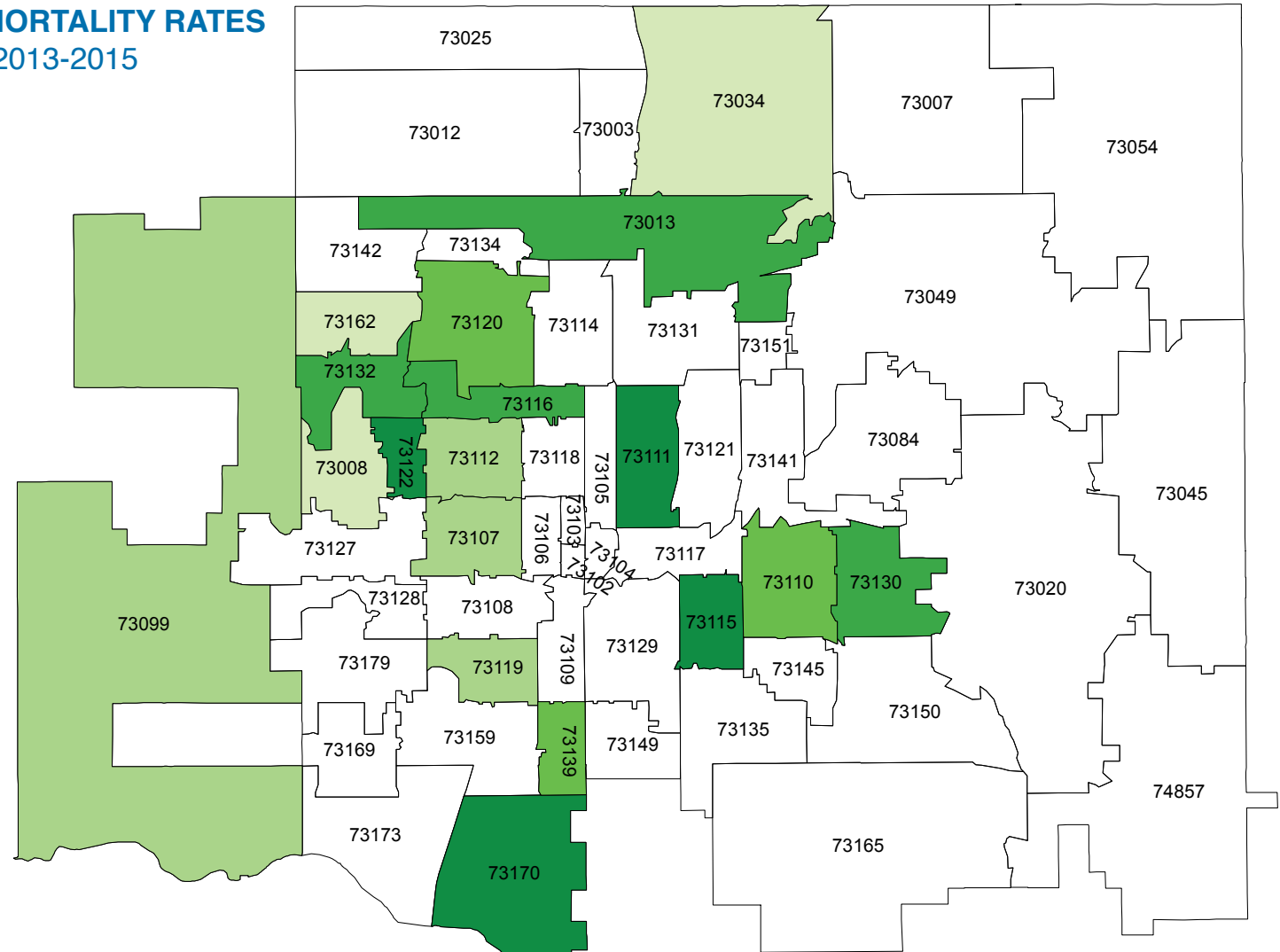| Oklahoma City-County	Oklahoma State	United States
8.4 ▼	**21.6** ▼	**19** ▼

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015 and Centers for Disease Control and Prevention

Age-Adjusted Prostate Cancer Mortality Rates by Race
2013-2015

10.8
Caucasian

9.3
Black/African American

6.0
American Indian/Alaska Native

Insufficient Data
Asian/Pacific Islander

PROSTATE CANCER MORTALITY RATES
Oklahoma City-County, 2013-2015

Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

*No data available
**Data too low to count/compare

Lowest ▢▢▢▢▢ Highest   ▢ N/A

73003	**	73054	**								
73007	*	73084	**	73109	**	73119	7.3	73132	11.2	73151	*
73008	6.7	73099	7.1	73110	9.3	73120	9.6	73134	*	73159	**
73012	*	73102	*	73111	13.7	73121	**	73135	*	73162	5.6
73013	12.1	73103	*	73112	8.4	73122	12.9	73139	9.9	73165	*
73020	**	73104	*	73114	**	73127	**	73141	**	73169	**
73025	**	73105	**	73115	13.0	73128	**	73142	*	73170	15.0
73034	5.9	73106	**	73116	11.5	73129	**	73145	*	73173	*
73045	**	73107	7.6	73117	**	73130	11.2	73149	**	73179	*
73049	**	73108	*	73118	**	73131	**	73150	**	74857	**

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ALZHEIMER'S MORTALITY

Alzheimer's was one of the top 10 leading causes of death in the United States in 2015. This indicator represents the number of deaths due to Alzheimer's disease per 100,000 population between 2013-2015. The rates were age adjusted to account for differences in age distributions among our community.

Why is it important?
Approximately 5 million Americans were living with Alzheimer's disease in 2013. Alzheimer's is a disease that starts with mild memory loss and can eventually lead to serious life-altering impacts by affecting the part of the brain controlling thought, memory and language. Alzheimer's research is ongoing, and the disease is projected to increase by three-fold in 2050. Currently, the majority of individuals with Alzheimer's are cared for by family members. (CDC) Thus, understanding the prevalence in our community is crucial in developing and sustaining services for those living with, and impacted by, this disease.

How are we doing?
From 2013-2015, the age-adjusted Oklahoma County death rate due to Alzheimer's disease was 38.2 deaths per 100,000 population, higher than both the state and national age-adjusted Alzheimer's mortality rates. There were a total of 911 deaths attributable to Alzheimer's during this time period. Rates were highest among whites and females. The zip codes with the highest overall Alzheimer's death rates were 73134, 73165, 73135, 73114 and 73045.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

Age-Adjusted Alzheimer's Mortality Rate, 2013-2015

53.7	Caucasian
19.0	Black/African American
16.4	American Indian/ Alaska Native
13.8	Asian/Pacific Islander

Age-Adjusted Alzheimer's Mortality Rate, 2013-2015

38.2 ▶ Oklahoma County

30.5 ▶ Oklahoma State

29.4 ▶ United States

Mortality Rates by Gender
2013-2015

29.9   41

ALZHEIMER'S MORTALITY RATES
Oklahoma City-County, 2013-2015

Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015
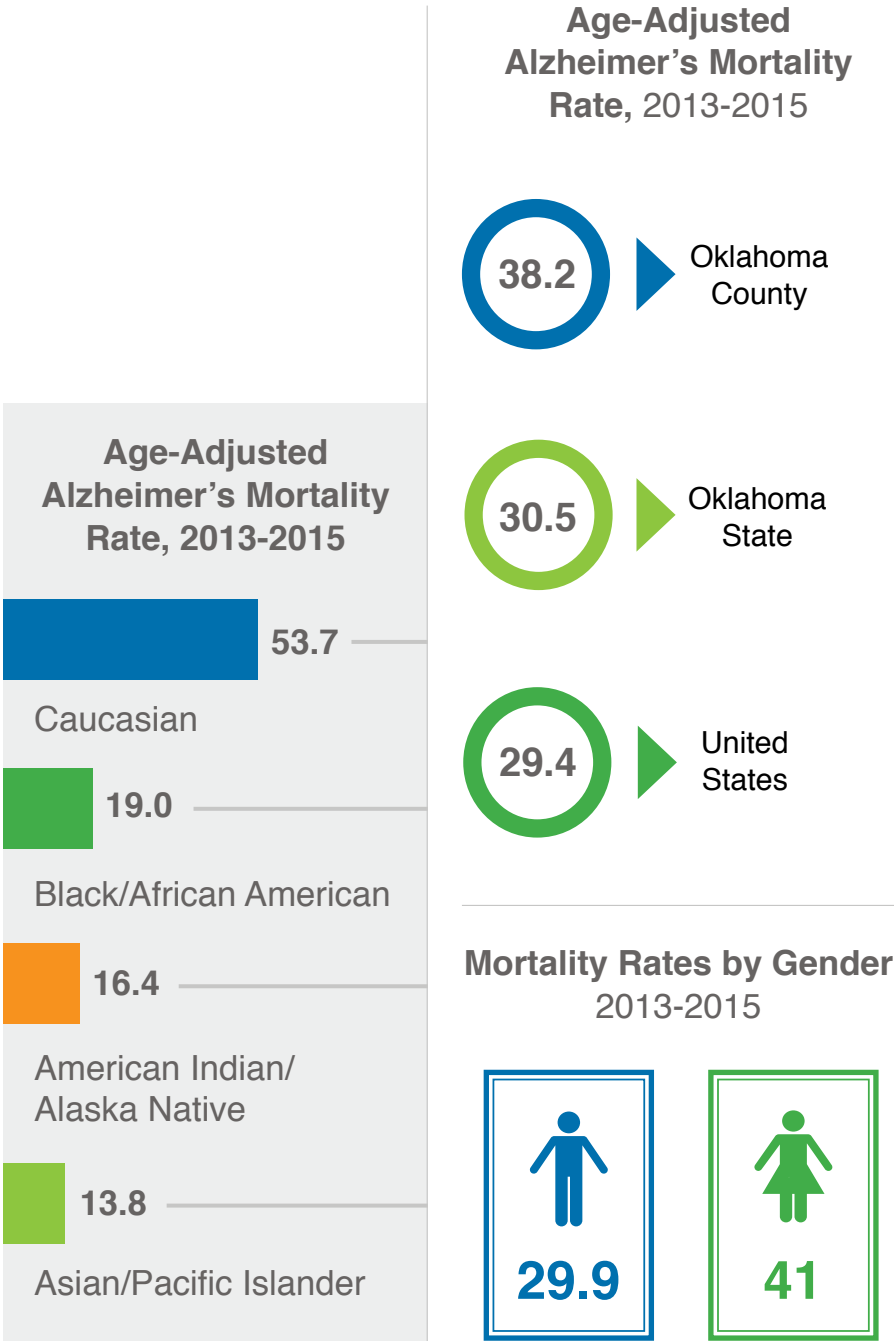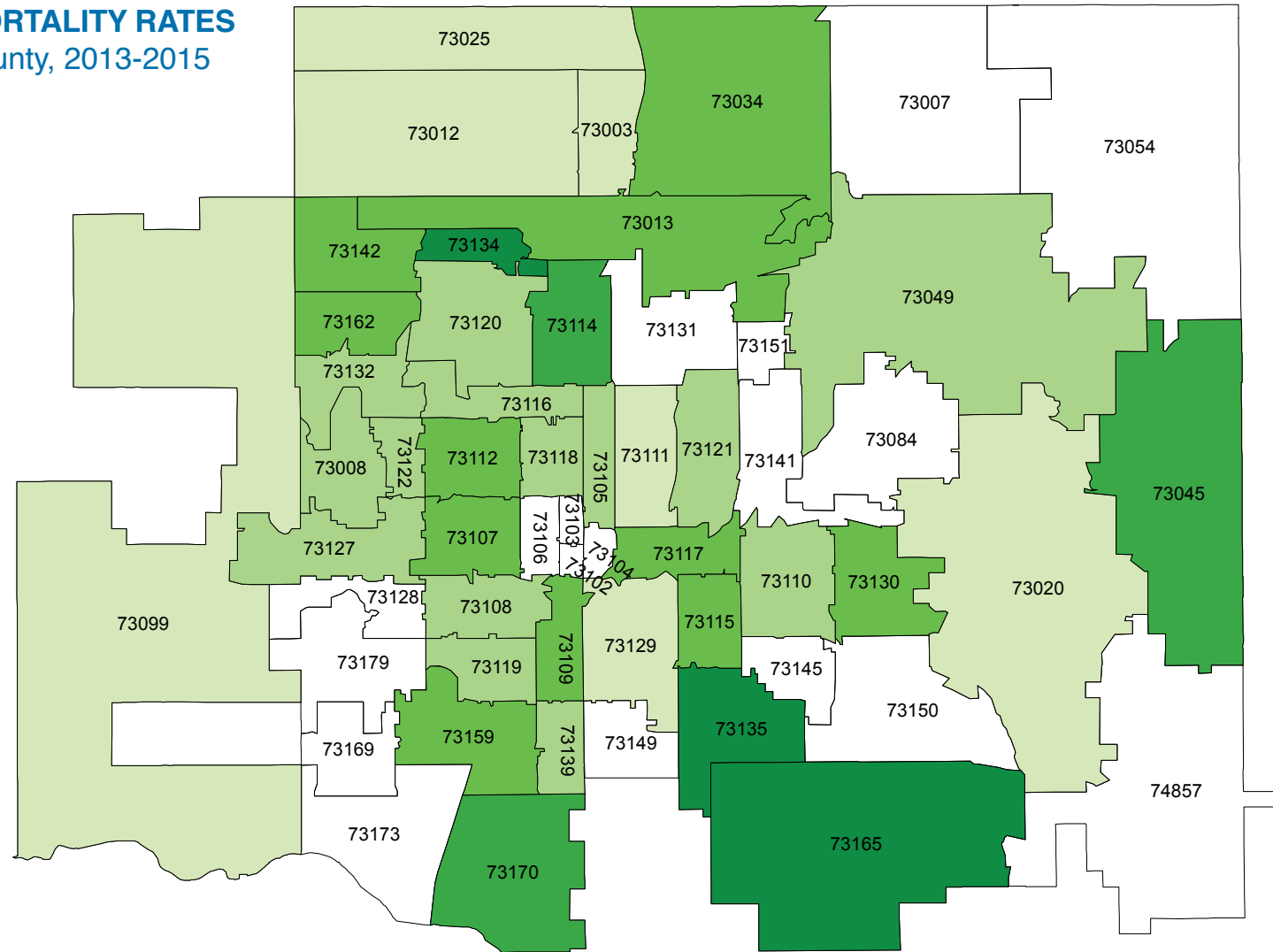
Lowest ▢▢▢▢▢ Highest   ▢ N/A

*No data available
**Data too low to count/compare

73003	24.9	73054	**								
73007	**	73084	**	73109	40.1	73119	35.1	73132	33.8	73151	**
73008	35.9	73099	29.2	73110	33.9	73120	37.1	73134	92.9	73159	46.8
73012	21.1	73102	*	73111	25.7	73121	32.2	73135	81.8	73162	44.1
73013	42.9	73103	**	73112	39.1	73122	33.3	73139	34.1	73165	91.8
73020	25.8	73104	**	73114	68.1	73127	36.9	73141	**	73169	**
73025	24.3	73105	34.6	73115	50.3	73128	*	73142	42.4	73170	60.9
73034	39.9	73106	*	73116	33.1	73129	26.9	73145	*	73173	*
73045	61.7	73107	44.8	73117	45.7	73130	45.0	73149	**	73179	*
73049	35.1	73108	31.1	73118	29.9	73131	**	73150	**	74857	**

INFLUENZA AND PNEUMONIA MORTALITY

This indicator signifies the number of deaths from influenza and/or pneumonia per 100,000 population from 2013-2015. The rates were age adjusted to account for differences in age distributions among our community. The age-adjusted mortality rate due to influenza and/or pneumonia was 13.4 deaths per 100,000 in Oklahoma City-County during 2013-2015.

Why is it important?
Influenza is a typically mild infection characterized by fever and respiratory symptoms, such as a cough. Pneumonia is a more severe infection of the lungs and can be a complication of influenza. Those most at risk for severe infection and death are the very young or the very old. The annual flu vaccine can protect individuals from developing influenza. These vaccines are widely available throughout the flu season, which is typically early October into the spring and spikes January and February in Oklahoma County. Local public health efforts aim to prevent the spread of infectious disease and protect the community. With local public health efforts, such as epidemiological investigation and immunization services, providers and the community have an opportunity to work with and assist in the identification of gaps in vaccine standards, and prevention policies to inform decision making around influenza and pneumonia. Providers can also work on developing policies and procedures to impact disease rates in the county through mitigation strategies and vaccine support.

How are we doing?
The mortality rate due to influenza and pneumonia for Oklahoma City-County jurisdiction was 13.4 deaths per 100,000 population. This was lower than the state rate of 17 and the United States rate of 15.1. Rates were higher in American Indian and Alaska Native and non-Hispanic populations. The zip codes with the highest rates were 73084, 73049, 73108, 73109, and 73105.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

Age-Adjusted Influenza and Pneumonia Mortality Rates
2013-2015

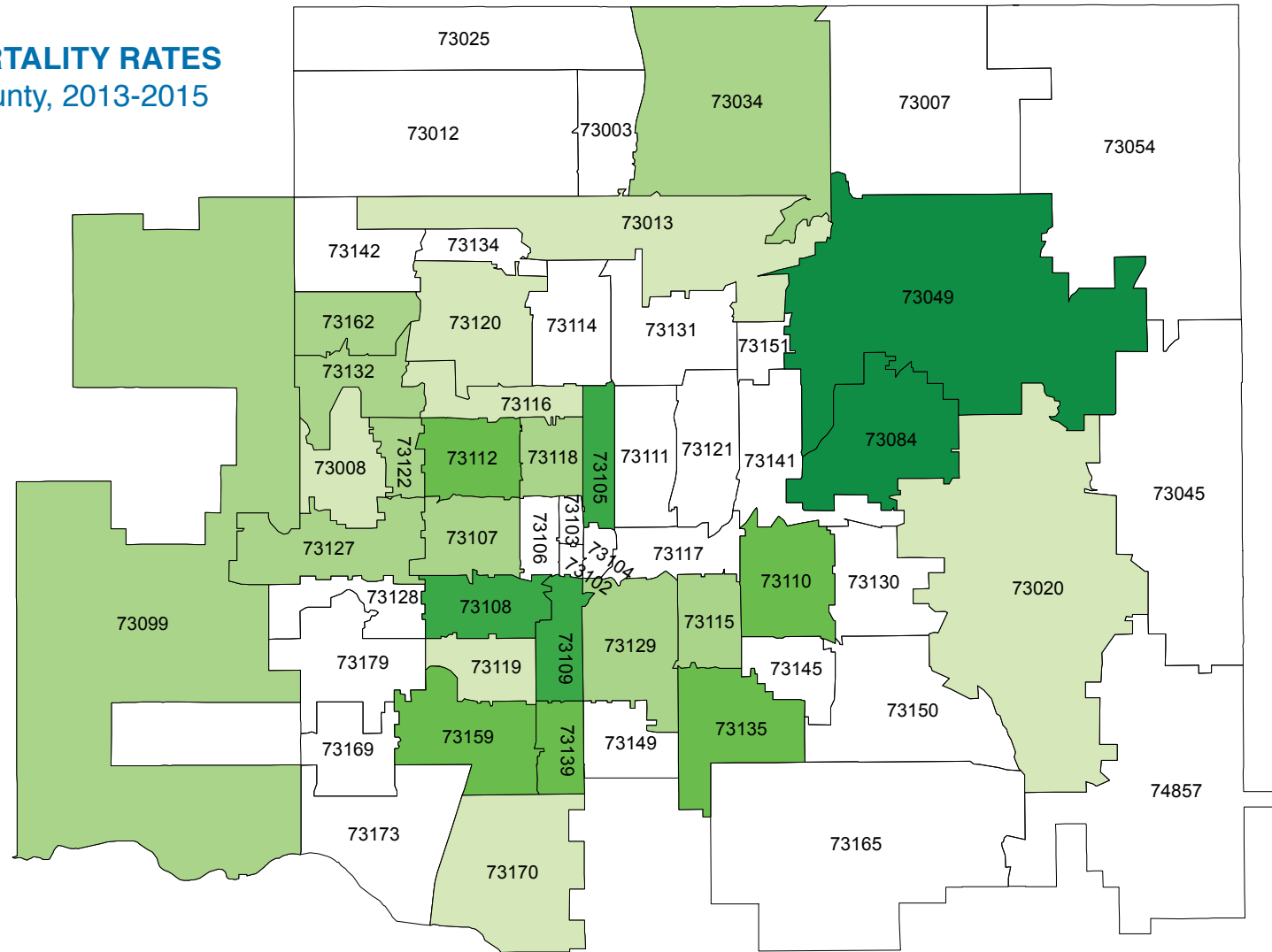| Rate	Location
13.4	Oklahoma City-County
17	Oklahoma State
15.2	United States

INFLUENZA AND PNEUMONIA MORTALITY RATES
Oklahoma City-County, 2013-2015

Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

*No data available
**Data too low to count/compare

Lowest ▢▢▢▢▢ Highest   N/A

73003	**	73054	*								
73007	*	73084	44.1	73109	26.1	73119	9.0	73132	13.3	73151	*
73008	8.3	73099	14.9	73110	18.1	73120	8.7	73134	**	73159	19.9
73012	**	73102	**	73111	**	73121	**	73135	17.0	73162	14.2
73013	9.3	73103	**	73112	18.4	73122	14.1	73139	16.9	73165	**
73020	11.1	73104	*	73114	**	73127	13.0	73141	**	73169	*
73025	**	73105	24.8	73115	15.6	73128	*	73142	**	73170	11.6
73034	13.9	73106	**	73116	11.6	73129	14.7	73145	*	73173	*
73045	**	73107	15.8	73117	**	73130	**	73149	**	73179	**
73049	38.6	73108	29.8	73118	15.1	73131	**	73150	**	74857	**

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DEATHS FROM UNINTENTIONAL INJURY

Injury contributes to the leading cause of death among persons 1-44 years of age in addition to violence. Unintentional injuries include motor vehicle accidents, accidental falls, drownings, fires and poisonings. This indicator is presented as the number of deaths from unintentional injury per 100,000 population during 2013-2015. The rates were age adjusted to account for differences in age distributions among our community.

Why is it important?

More than 33,700 people died from motor-vehicle crashes in the United States in 2014, and opioid overdoses have quadrupled since the start of the millennium (CDC). Accidents were the leading cause of death in Oklahoma City-County in 2013-2015. Healthy People 2020 compiled injury and violence prevention objectives to adequately address these indicators to improve the health of the United States. Approximately 1 in 10 sustains a nonfatal injury that is serious enough to be treated in the emergency department (HP 2020). The community and local public health system can tailor education efforts by better understanding trends in the Oklahoma City-County area in order to reduce health burden of accidents and injuries.

How are we doing?

There were 1,546 deaths due to unintentional injuries in Oklahoma County from 2013-2015. The average annual mortality rate was 60.6 deaths per 100,000 population. In 2014, all injury deaths in the United States occurred at a rate of 62.6 deaths per 100,000 population (CDC). The unintentional injury mortality rates were highest among American Indian/Alaska Natives and males. Non-Hispanics had a higher mortality rate due to unintentional injuries compared to Hispanics - 75.8 per 100,000 population and 33.3 per 100,000 population, respectively. The zip codes with the highest number of deaths due to unintentional injuries were 73007, 7312, 73179, 73117 and 73141.

Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015 and Centers for Disease Control and Prevention National Center for Health Statistics Health, United States, 2015 Report

Age-Adjusted Mortality Rates From to Unintentional Injury
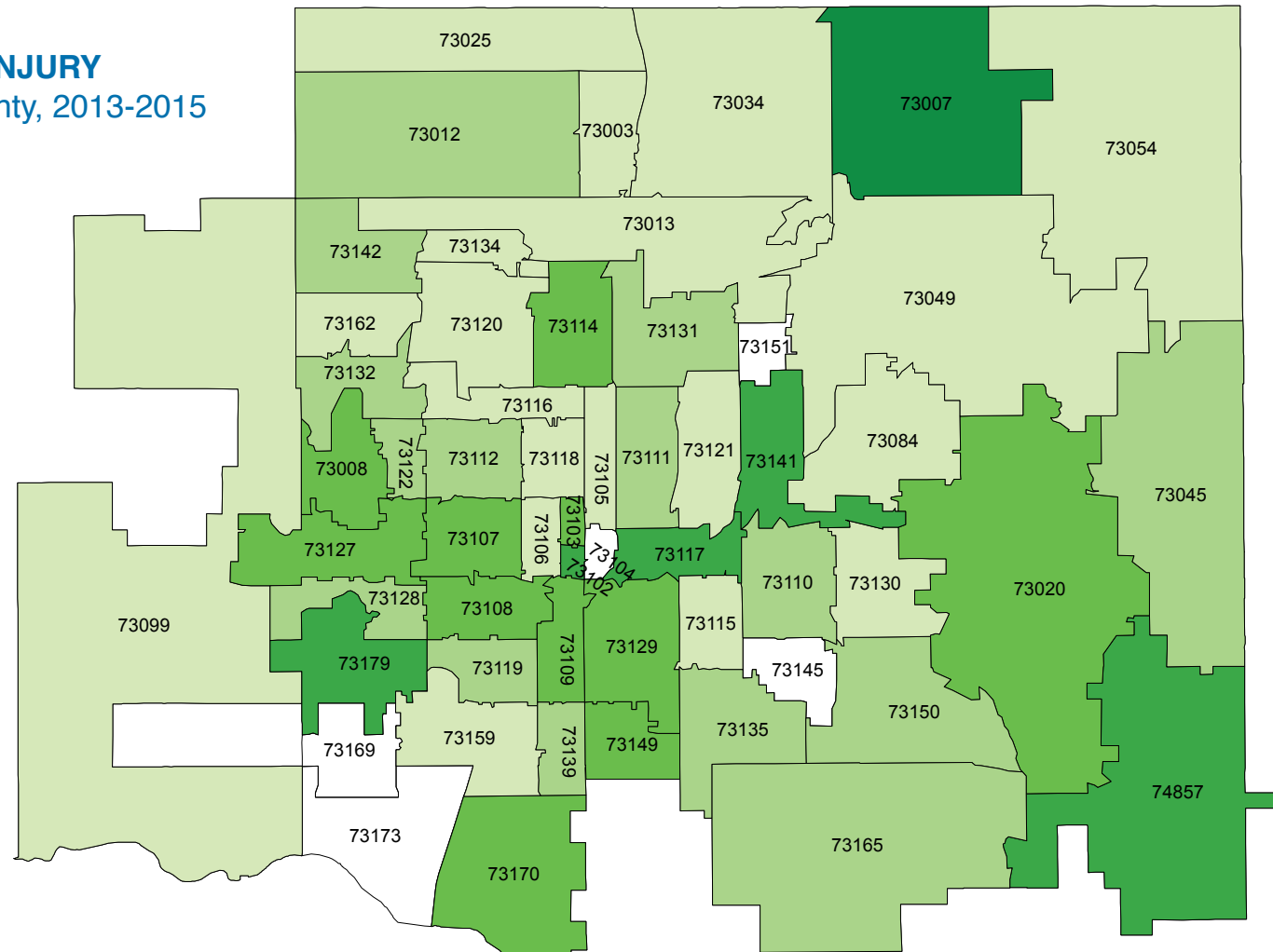### 2013-2015

60.6	**60.8**	**62.6**
Oklahoma City-County	Oklahoma State	United States

Mortality Rates by Gender
Oklahoma City-County, 2013-2015

80.5	**43.2**
Male	**Female**
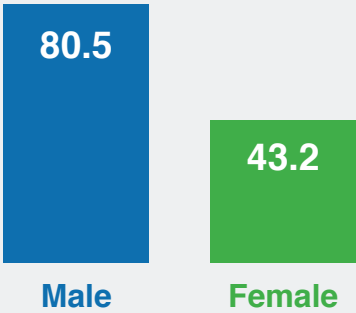
Mortality Rates by Race
Oklahoma City-County, 2013-2015

Caucasian	Black/ African American	American Indian/Alaska Native	Asian/ Pacific Islander
80.9	**49.4**	**98.3**	**23.4**

DEATHS DUE TO UNINTENTIONAL INJURY
Oklahoma City-County, 2013-2015

Rate per 100,000 population. Data Source: Oklahoma State Department of Health Vital Statistics Death Records 2013-2015

**Data too low to count/compare

Lowest ▢▢▢▢▢ Highest   ▢ N/A

73003	46.4	73054	47.6								
73007	231.1	73084	54.5	73109	94.6	73119	64.9	73132	62.0	73151	**
73008	97.7	73099	47.2	73110	71.1	73120	51.0	73134	45.8	73159	55.1
73012	56.1	73102	168.2	73111	70.2	73121	34.4	73135	64.7	73162	45.2
73013	40.4	73103	105.5	73112	63.0	73122	61.3	73139	72.4	73165	61.5
73020	77.4	73104	**	73114	78.8	73127	78.1	73141	117.9	73169	**
73025	42.8	73105	42.3	73115	52.5	73128	62.7	73142	56.9	73170	78.7
73034	48.6	73106	42.9	73116	43.9	73129	92.8	73145	**	73173	**
73045	66.1	73107	84.8	73117	120.9	73130	47.6	73149	93.3	73179	133.4
73049	50.5	73108	81.6	73118	48.5	73131	71.3	73150	68.8	74857	112.7

It's important to note that zips 73102 and 73007 had at least five events due to accidents, but the number of deaths attributable to unintentional injuries were still low compared to the other zip codes, so this rate is to be utilized with caution.

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