

# DIABETES IN THE CITY OF CLEVELAND

CLEVELAND DEPARTMENT OF PUBLIC HEALTH OFFICE OF MINORITY HEALTH

## What is Diabetes Mellitus

*Diabetes mellitus* (diabetes) is a disease that affects blood sugar levels, making them outside the normal range. There are two main types of diabetes: Type 1, also known as insulin-dependent diabetes, and Type 2, also known as insulin-independent diabetes. For patients with diabetes, the pancreas either does not make enough insulin to process the glucose ingested with food, or the body does not utilize its own insulin as well as it should; this causes the sugar from the glucose to build up in the body. Currently, diabetes is the seventh leading cause of death in the United States (CDC, 2015).



## Types of Diabetes

Type 1 diabetes is a form in which the patient is dependent on insulin to process glucose. Often, this form of diabetes manifests in adolescents. Type 1 normally accounts for 5% of all diabetes cases (CDC, 2015). The other prominent type of diabetes, Type 2, is often considered to be adult-onset diabetes. In this form of diabetes, the body does not utilize the available glucose properly. Type 2 cases account for 90-95% of all diabetes cases (CDC, 2015). A third, less common form of diabetes is Gestational Diabetes. This form only occurs in pregnant women and usually disappears after pregnancy; it accounts for 2-10% of all diabetes cases (CDC, 2015). Other forms of diabetes, such as those from genetic syndrome, those induced by drugs or surgery, or caused by other illnesses, only account for 1-5% of all diabetes cases (CDC, 2015).

## Signs and Symptoms

- **Frequent urination**
- **Excessive thirst**
- **Unexplained weight loss**
- **Extreme hunger**
- **Sudden vision changes**
- **Tingling or numbness in the hands or feet**
- **Feeling very tired much of the time**
- **Very dry skin**
- **Sores that are slow to heal**
- **More infections than usual**

## Common Risk Factors

Some common risk factors for Type 2 diabetes are older age, obesity, a family history of Type 2 diabetes, a personal history of gestational diabetes, low glucose tolerance, physical inactivity, and race/ethnicity. Many minority populations have a high risk for developing Type 2 diabetes, especially individuals who are African American, Hispanic/Latino Americans, American Indians, Asian Americans, and Pacific Islanders (CDC, 2015). Risk factors for Type 1 diabetes are not known as well, but may include autoimmune, genetic, and environmental factors. Gestational diabetes typically occurs more often in African Americans, Hispanic/Latino Americans, American Indians, and individuals who have a family history of Type 2 diabetes (CDC, 2015). Being obese also increases the risk for a woman to develop gestational diabetes. Women who develop gestational diabetes also have a 35-60% increased risk of developing diabetes in the future. (CDC, 2015).



## Treatment

Treatment for Type 1 diabetes includes healthy eating, physical activity, and insulin injections according to the amount of food ingested and the level of physical activity. Individuals with Type 1 diabetes must closely monitor their blood glucose levels through home testing. Type 2 diabetes can also be managed by healthy eating, physical activity, and blood glucose testing. Some individuals with Type 2 diabetes may require an oral medication or insulin injections in more severe cases. In both types of diabetes, it is the patient's responsibility to monitor and control their blood sugar levels on a day-to-day basis. When diabetes is uncontrolled, it can cause serious complications, such as blindness, kidney failure, heart disease, and the loss of appendages, such as toes, feet, and even legs. (ODH, 2014).

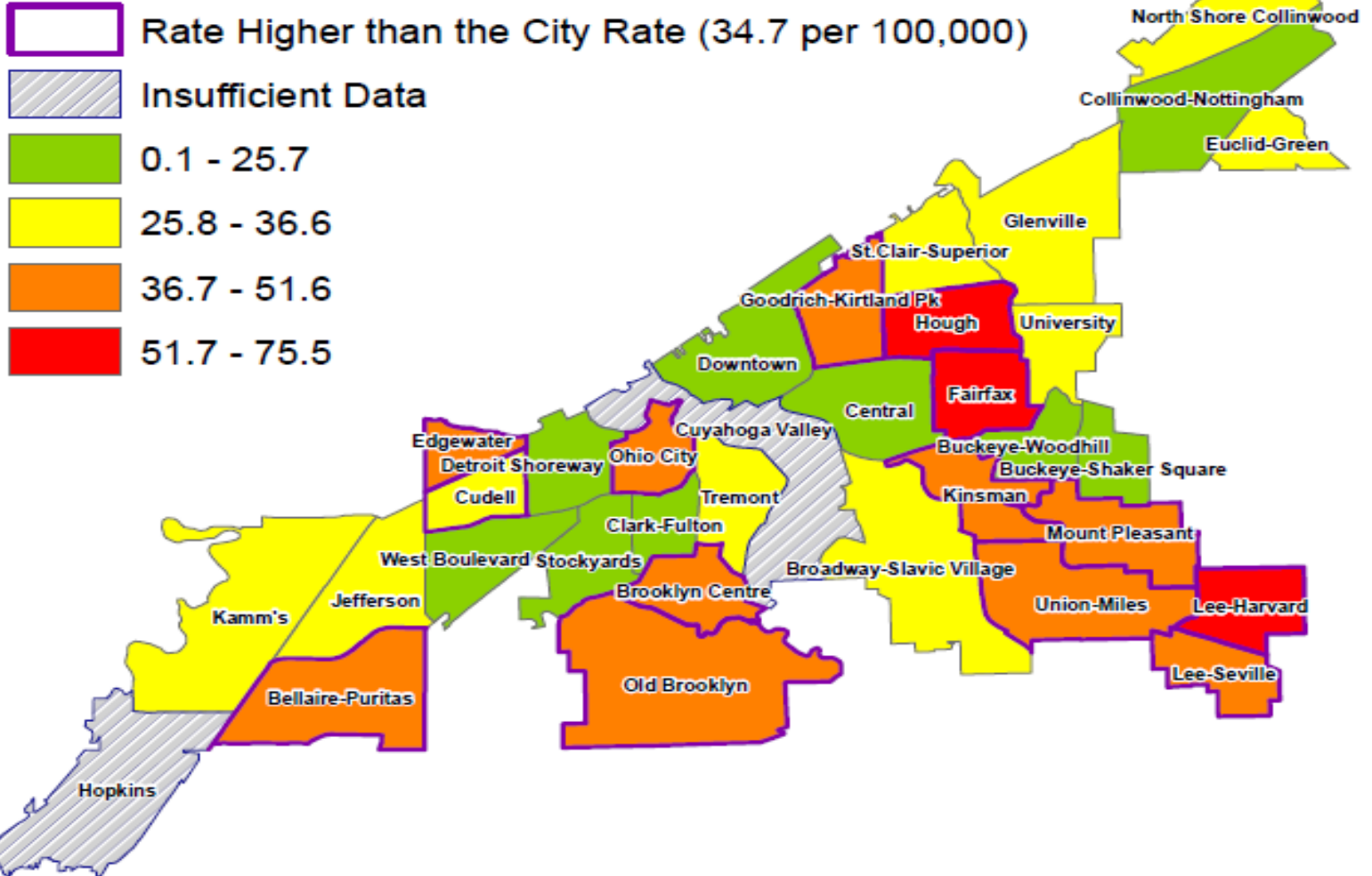
## Prevention

Unfortunately, research has yet to identify any genetic triggers that may predispose an individual to develop Type 1 diabetes, so prevention efforts cannot be described at this time. On the other hand, Type 2 diabetes can be prevented by engaging in regular physical activity and monitoring of diet and body weight. Currently, there is no cure for diabetes. There are several procedures currently under investigation to possibly provide a cure for diabetes; these include pancreas transplant, islet cell transplantation (the cells that produce insulin), artificial pancreas development, and genetic manipulation of fat or muscle cells to insert the human insulin gene..

While diabetes is a serious disease, it can mostly be controlled or almost diminished (in the case of Type 2) with healthy eating and regular exercise. If an individual is experiencing any symptoms associated with diabetes and they have one or all of the risk factors, they should see their doctor to discuss their options and begin a treatment plan if diagnosed.

**Which Neighborhoods had the Highest Rates of Diabetes Deaths?**

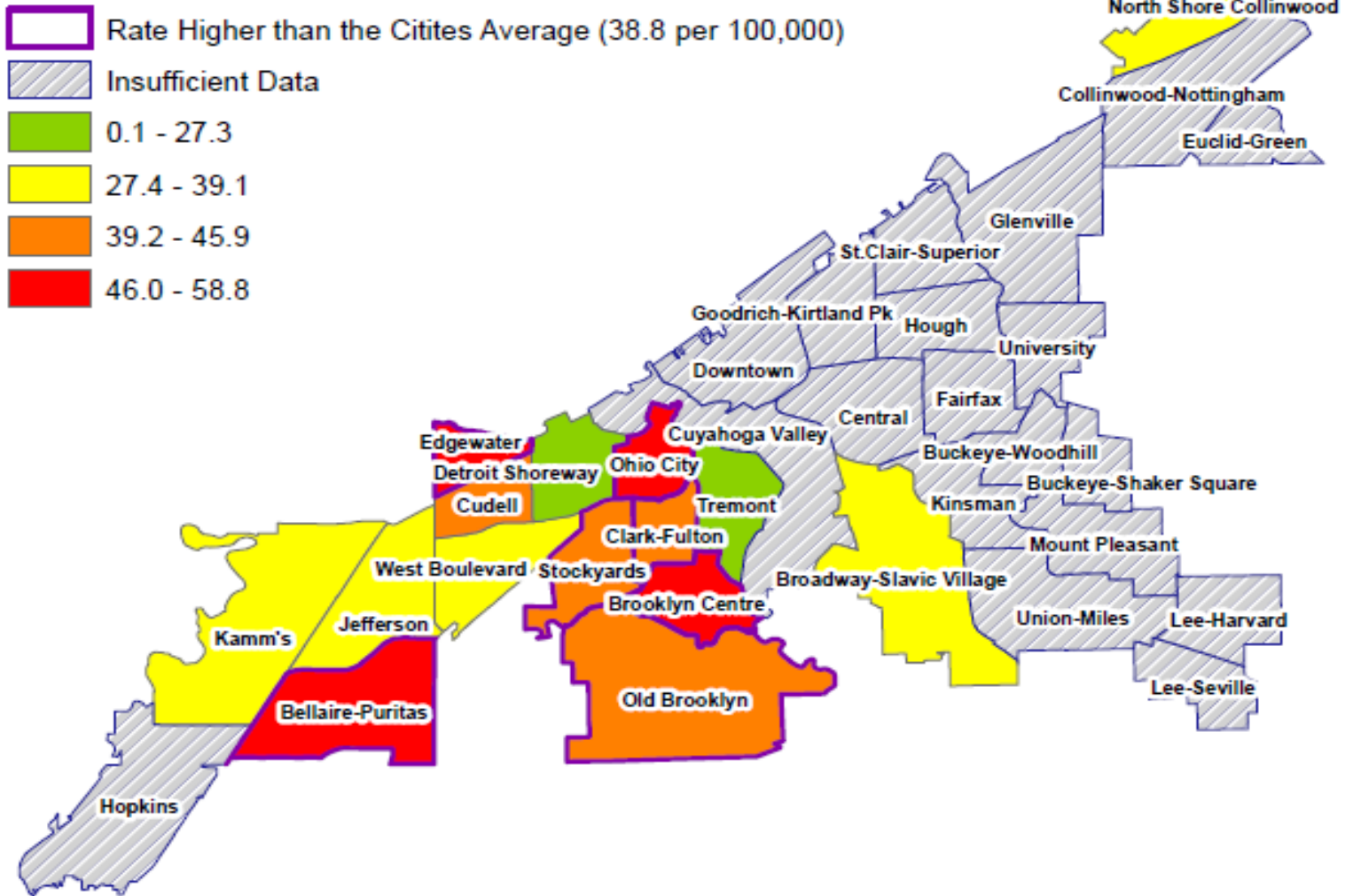
**Crude Rate of Diabetes Mortality, 2010-2014**



The 14 neighborhoods outlined in purple have higher rates than the city average of 34.7 per 100,000. Lee-Harvard have the highest diabetes mortality rate of 75.5, persons per 100,000.

Neighborhood	Rate	Neighborhood	Rate	Neighborhood	Rate
Bellaire-Puritas	47.9	Edgewater	37.6	Mount Pleasant	38.1
Broadway-Slavic Village	26.7	Euclid-Green	32.5	North Shore Collinwood	29.2
Brooklyn Centre	42.4	Fairfax	54.5	Ohio City	43.5
Buckeye-Shaker Square	25.7	Glenville	33.0	Old Brooklyn	37.5
Buckeye-Woodhill	24.0	Goodrich-Kirtland Pk	42.5	St.Clair-Superior	32.0
Central	19.5	Hough	57.5	Stockyards	23.1
Clark-Fulton	23.4	Jefferson	29.0	Tremont	27.7
Collinwood-Nottingham	24.3	Kamm's	33.4	Union-Miles	51.6
Cudell	36.6	Kinsman	42.9	University	27.8
Detroit Shoreway	19.0	Lee-Harvard	75.5	West Boulevard	23.3
Downtown	14.8	Lee-Seville	48.9	Cleveland Total	34.4

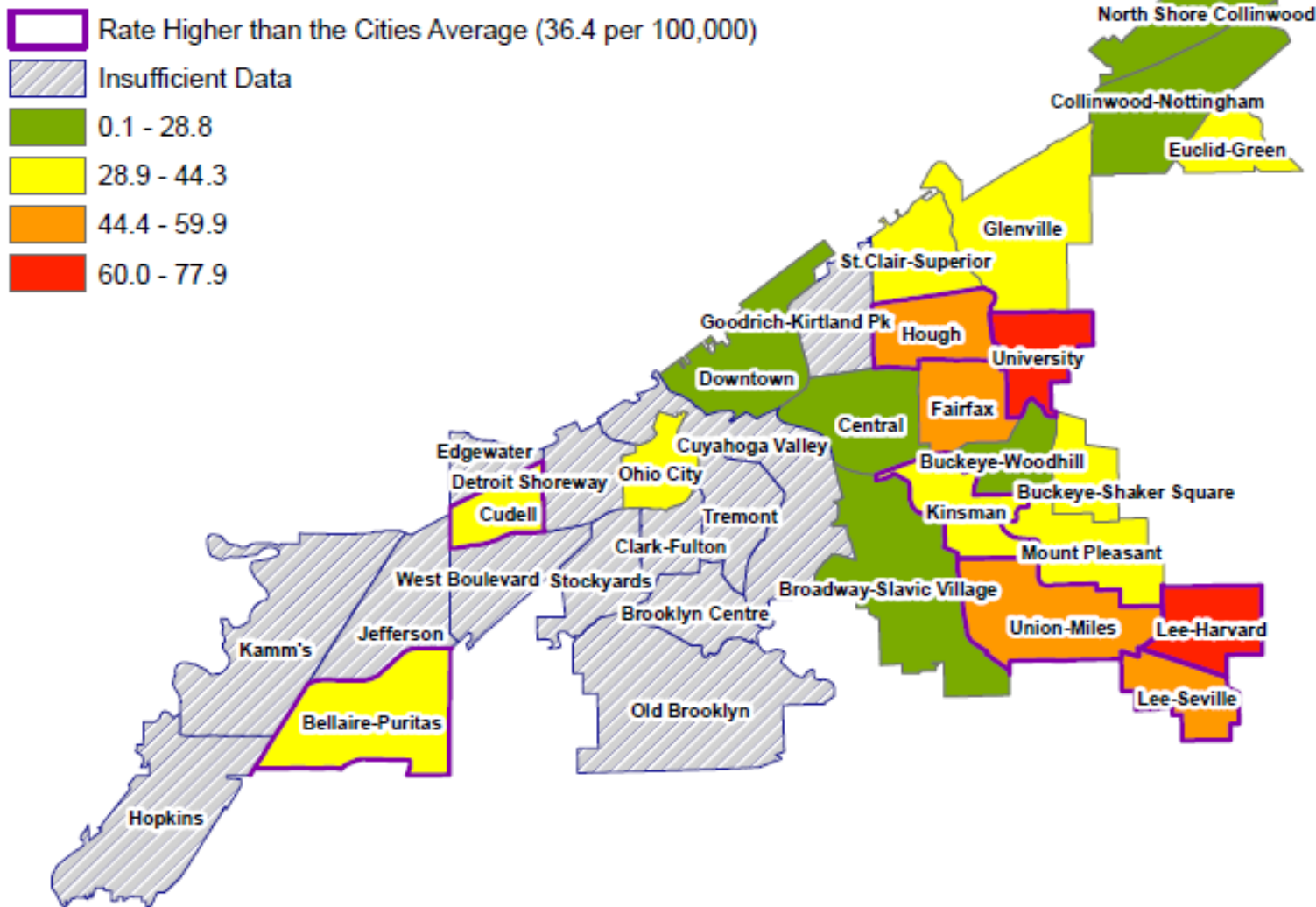
### Crude Rate of Diabetes Mortality in Caucasians, 2010-2014



The 7 neighborhoods outlined in purple have a higher heart disease mortality rate among Caucasians than the city average among Caucasians of 38.8 per 100,000. Brooklyn Centre had the highest rate of 58.8 persons per 100,000.

Neighborhood	Rate	Neighborhood	Rate
Bellaire-Puritas	56.4	Kamm's	36.3
Broadway-Slavic Village	39.1	North Shore Collinwood	36.8
Brooklyn Centre	58.8	Ohio City	53.9
Clark-Fulton	45.9	Old Brooklyn	43.4
Cudell	40.4	Stockyards	41.3
Detroit Shoreway	27.3	Tremont	25.2
Edgewater	53.7	West Boulevard	34.7
Jefferson	34.5	Cleveland Total	40.7

### Crude Rate of Diabetes Mortality in African Americans, 2010-2014

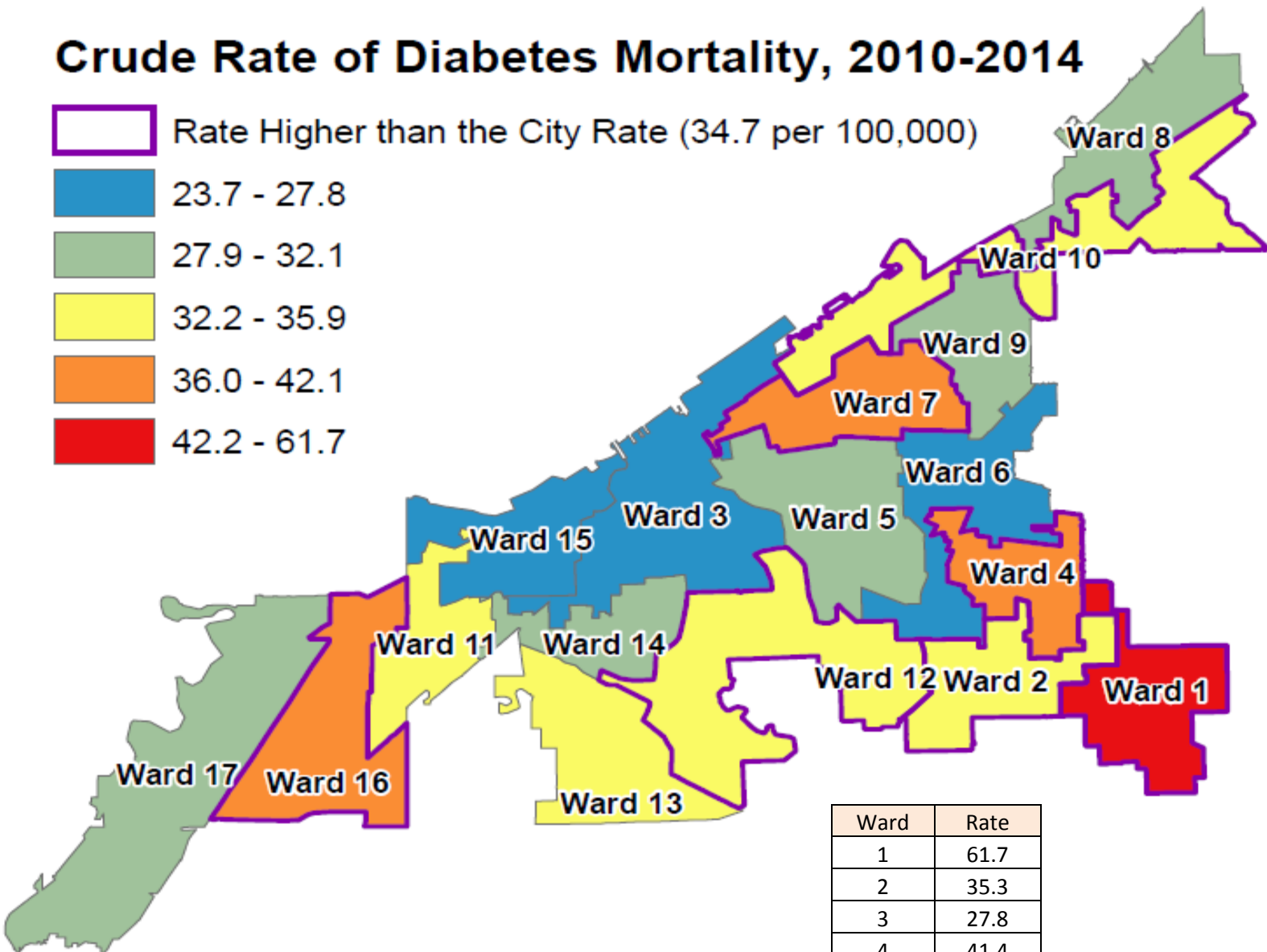
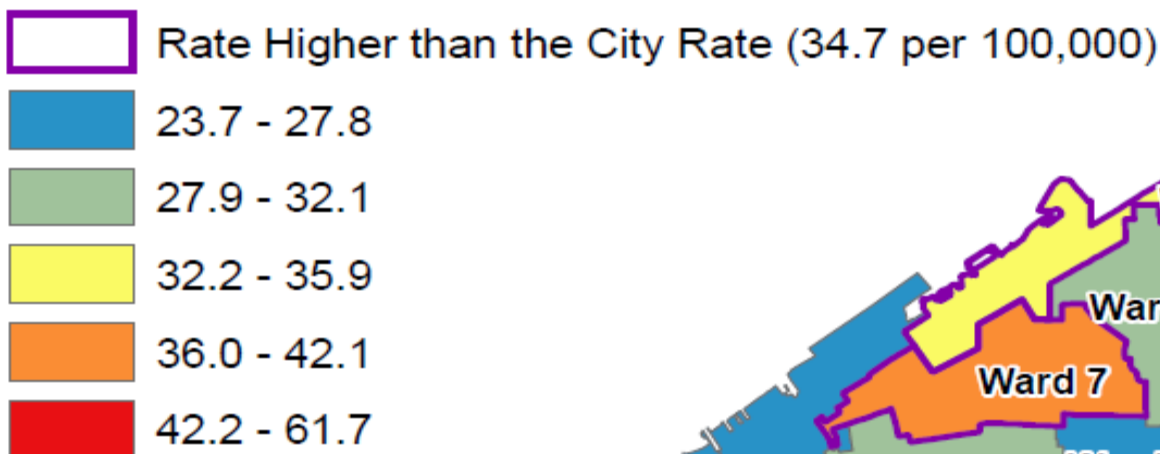


The 8 neighborhoods outlined in purple have higher heart disease mortality rates among African Americans than the city average of 36.4 per 100,000 for African Americans. Lee-Harvard had the highest rate of 77.9 persons per 100,000.

Neighborhood	Rate	Neighborhood	Rate	Neighborhood	Rate
Bellaire-Puritas	40.3	Downtown	28.8	Lee-Seville	50.4
Broadway-Slavic Village	18.9	Euclid-Green	35.4	Mount Pleasant	37.7
Buckeye-Shaker Square	31.7	Fairfax	54	North Shore Collinwood	26.9
Buckeye-Woodhill	21.9	Glenville	32.5	Ohio City	32.7
Central	20.7	Hough	59.9	St.Clair-Superior	33.1
Collinwood-Nottingham	25.9	Kinsman	41.3	Union-Miles	49.9
Cudell	44.3	Lee-Harvard	77.9	University	76.8
				Cleveland Total	38.7

## Which Wards had the Highest Rates of Diabetes?

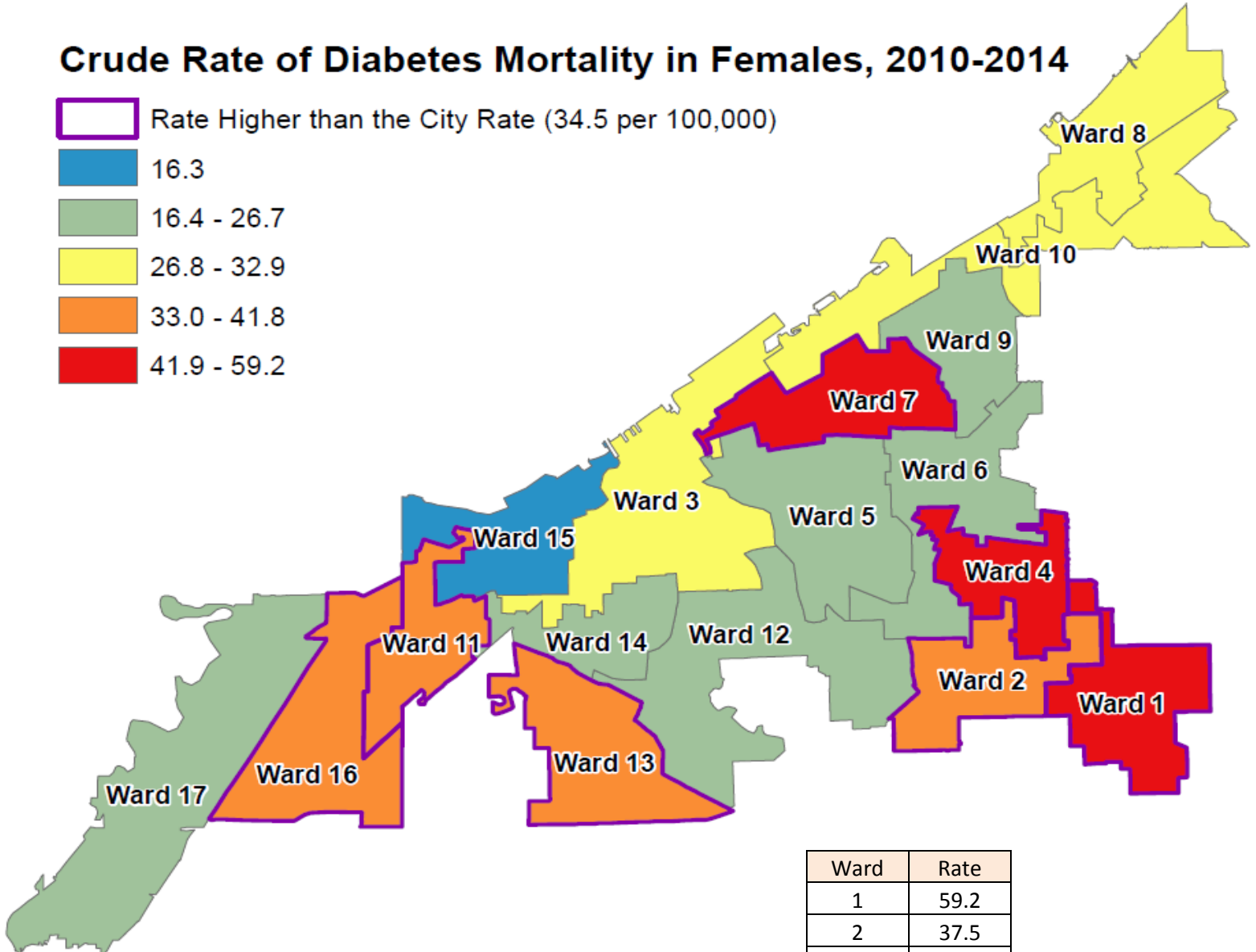
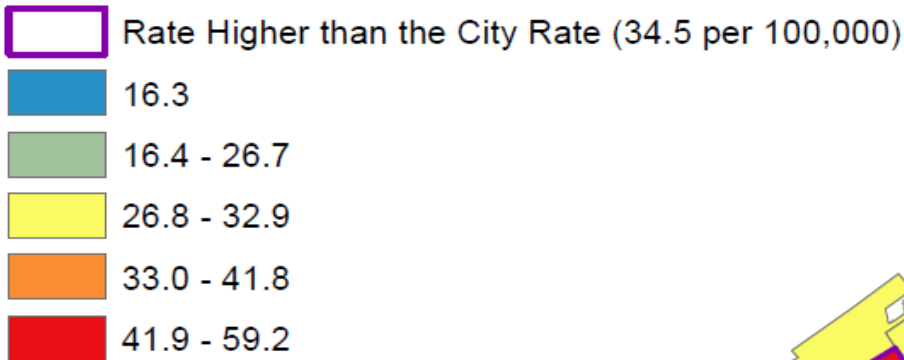
### Crude Rate of Diabetes Mortality, 2010-2014



Ward	Rate
1	61.7
2	35.3
3	27.8
4	41.4
5	29.5
6	26.6
7	42.1
8	30.3
9	30.5
10	35.9
11	34.3
12	35.5
13	34.3
14	30.3
15	23.7
16	38.7
17	32.1
Total	34.7

The 7 Wards outlined in purple have higher heart disease mortality rates than the city average of 34.7 per 100,000. Ward 1 had the highest diabetes mortality rate of 61.7 persons per 100,000.

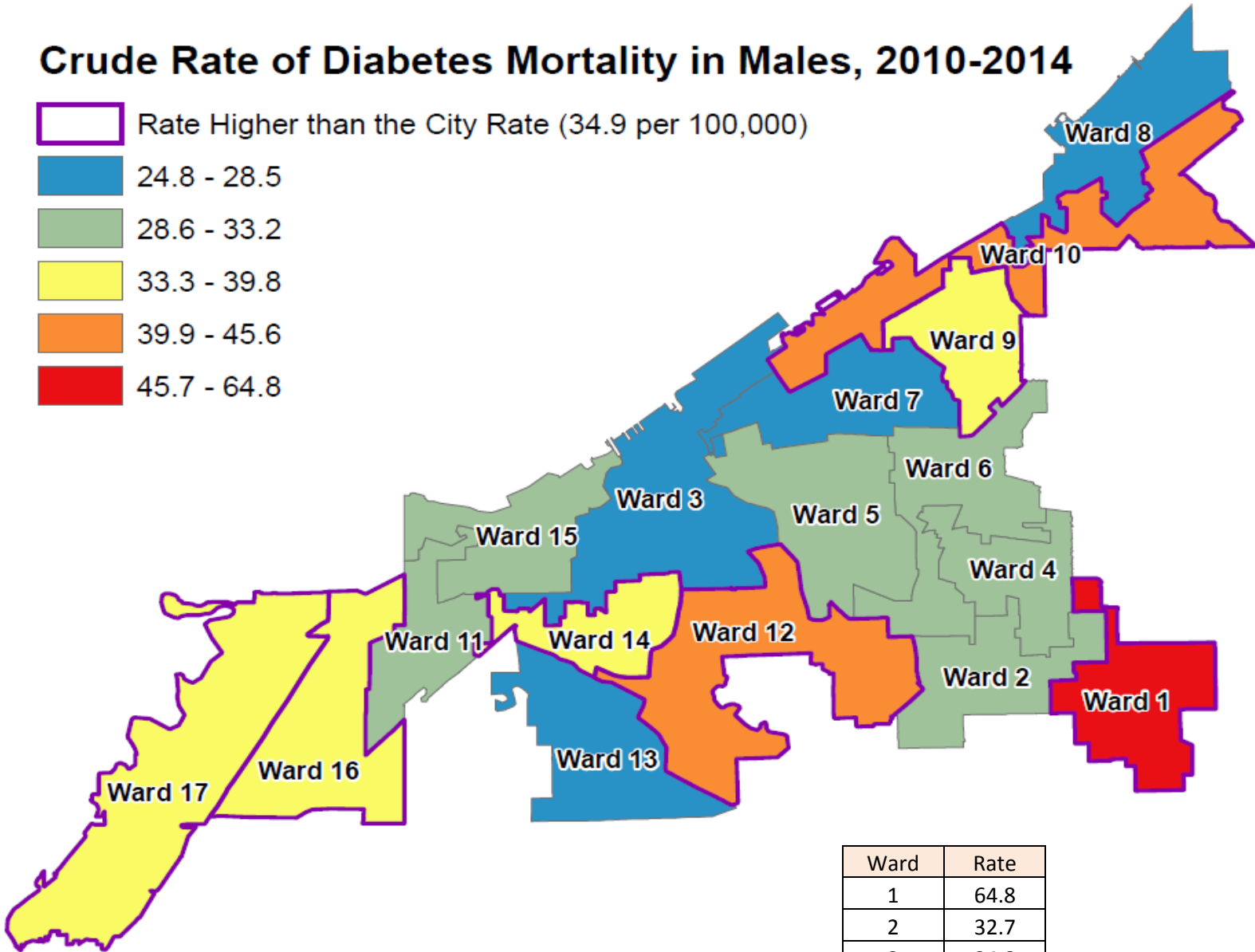
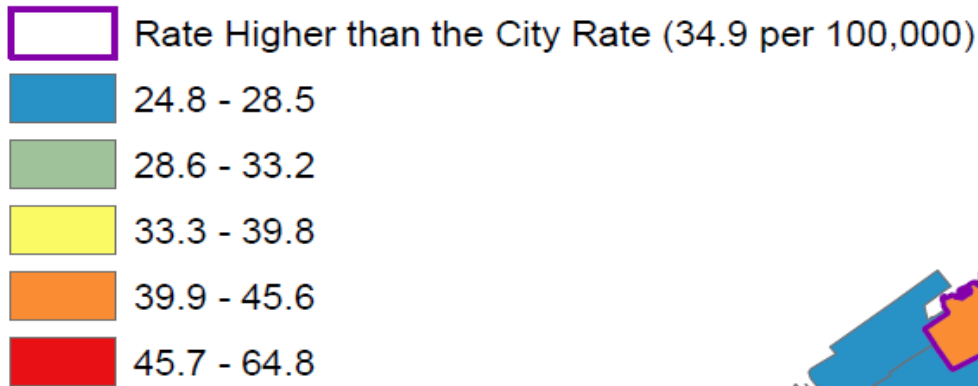
Crude Rate of Diabetes Mortality in Females, 2010-2014



The 7 Wards outlined in purple have higher heart disease mortality rate among Females than the city average among Females of 34.5 per 100,000. Ward 1 had the highest rate of 59.2 persons per 100,000.

Ward	Rate
1	59.2
2	37.5
3	31.6
4	50.4
5	26.7
6	23.4
7	56.1
8	32.9
9	26.0
10	29.9
11	36.9
12	25.9
13	41.8
14	24.1
15	16.3
16	41.3
17	25.1
Total	34.5

### Crude Rate of Diabetes Mortality in Males, 2010-2014



Ward	Rate
1	64.8
2	32.7
3	24.8
4	30.9
5	33.2
6	30.2
7	28.5
8	27.2
9	35.9
10	43.0
11	31.6
12	45.6
13	26.5
14	36.9
15	31.1
16	35.9
17	39.8
Total	34.9

The 7 Wards outlined in teal have higher heart disease mortality rate among Males than the city average among Males of 34.9 per 100,000. Ward 1 had the highest rate of 64.8 persons per 100,000.



## About the Minority Health Office

The goal of the Cleveland Office of Minority Health (COMH) is to identify local health disparity needs with an emphasis on informing, educating and empowering minority populations. The office is responsible for activating efforts to educate citizens and professionals on imperative health care issues and seeks to provide minority health data and technical assistance to local agencies working to improve the health status of minority populations. COMH diligently advocates and promotes equity. The Cleveland Local Office works with private and public partners to improve the effectiveness and efficiency of our collective efforts.

## Health Resources

The Healthy People 2020 goal is to reduce the disease burden of diabetes mellitus (DM) and improve the quality of life for all persons who have, or are at risk for diabetes mellitus.

### Sources:

Basics About Diabetes. (2015, March 31). Retrieved June 20, 2016, from <http://www.cdc.gov/diabetes/basics/diabetes.html>

What is Diabetes? (2014, October 17). Retrieved June 20, 2016, from <http://www.healthy.ohio.gov/diabetes/whatis/whatis.aspx>

Diabetes. (n.d.). Retrieved November 1, 2016, from <https://www.healthypeople.gov/2020/topics-objectives/topic/diabetes/objectives>

\*Neighborhood and Ward Level Population Data were provided by Cleveland City Planning Commission. Data is from United States Census Bureau 2010 Decennial Census



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