

Suicide Trends in Cuyahoga County, Ohio 2003-2023



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Master of Public Health Program

Background

The Cuyahoga County Medical Examiner's Office is located at 11001 Cedar Avenue, Cleveland, Ohio 44106.

Mission Statement: The Cuyahoga County Medical Examiner's Office is a public service agency responsible for the investigation of violent, suspicious and sudden and unexpected deaths and the provision of laboratory services.

The Medical Examiner's Laboratory supports the investigative functions of the Medical Examiner and staff and performs scientific examinations in the areas of Forensic Pathology, Trace Evidence, Serology, DNA, Parentage and Identification, Toxicology, Controlled Substance Analysis, and Forensic Chemistry.

The Medical Examiner's Office uses and makes available information gathered from its investigations to citizens and personnel who are interested in developing ways to prevent tragic deaths in the future. Data from the Medical Examiner's Office is also used to monitor the effectiveness of publicly funded projects in place and to identify gaps in the system.

From the CDC (<https://www.cdc.gov/suicide/facts/data.html>), suicide is one of the leading causes of death in the United States and over 49,000 people in the United States died by suicide in 2022. In 2022, the suicide rates among males were approximately 4 times higher than that of females. Suicide rates vary among different racial/ethnic groups. People ages 85+ had the highest rates of suicide in 2022. Firearms are the most common method used and were used in over 50% of the suicides in 2022.

Population

The Cuyahoga County Medical Examiner's Office serves the general public, medical and legal communities, and the overall public health of the citizens of Cuyahoga County.

Learning Objectives

1. Organize and clean data from suicide deaths in Cuyahoga County between 2003 and 2023 from the Cuyahoga County Medical Examiner's records.
2. Conduct a literature review of epidemiological trends in suicide with a particular focus on Black males, and firearm related suicide trends.
3. Create a plan for data analysis and procedures of compiling data that is ready for further analysis as part of the Capstone project

Activities

For my practicum, I received a spreadsheet of all suicide deaths (including Out-of-County cases) handled by the Cuyahoga County Medical Examiner's Office between 2003 and 2023.

- Not fully ready for statistical analysis
- Data cleaned and organized
 - Preparation for input into IBM SPSS Statistics Version 29.0.2.0 (20)
 - 6 cases from 2023 were pending final information
 - 9 suicides do not have the city of injury available
 - Approximately 20 cases had incomplete cause of death information
 - Archive lookup was conducted to fill in.

Following cleaning, data was imported into SPSS

- Frequency tables created for different variables
 - Totals per year by age, race, gender, and cause of death
 - Various combinations of these variables
 - Capstone project will include statistical analysis
 - Frequency counts converted into % of total suicide deaths each year and over the course of the 20 years M
 - Microsoft Excel Professional Plus 2016.

In addition to the work performed on the dataset, a literature review was conducted using Pubmed (<https://pubmed.ncbi.nlm.nih.gov>) to compile a reference list

- Keywords included Black/African American Suicides, United States Suicide Trends, Black/African American Youth Suicides, and Firearms Suicides

Deliverables

As a result of this work, a cleaned data table and frequency tables were provided that can be used for future work on my Capstone project or in future examinations of suicide trends in Cuyahoga County.

A list of references was created after the literature review which will be used for future work on my Capstone project and to further the understanding of suicides trends in the United States.

Lessons Learned

From this Practicum, I have learned that data needs to be organized in a very specific way in order to get analysis software to do the things it is designed to do. I have also learned that there are a wealth of resources available to be considered when looking at a topic with Public Health considerations.

Methods and Results

Figure 1 - Cuyahoga County Suicides per Year

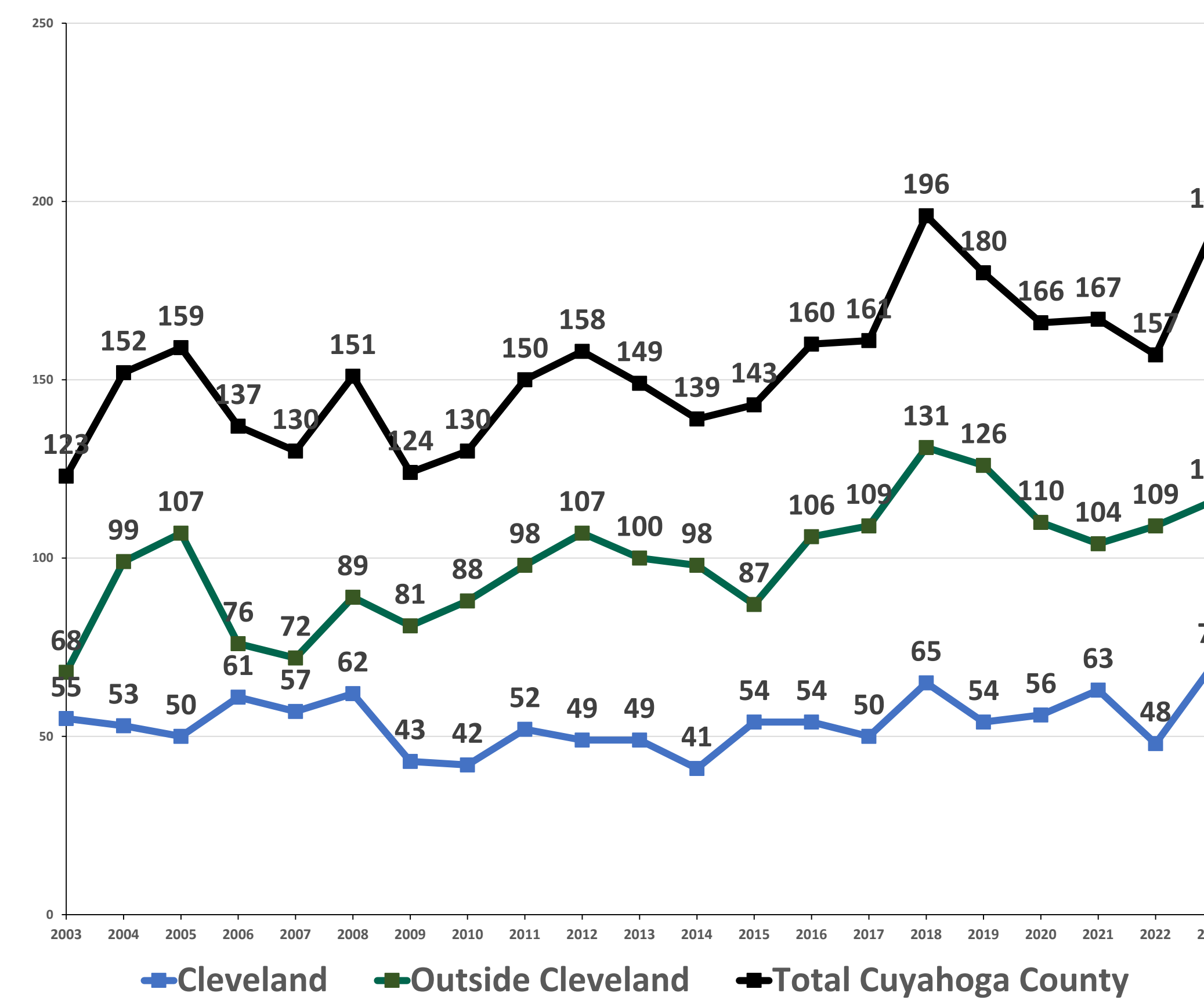


Figure 2 - Cuyahoga County Suicide Cause of Death Breakdown by Method from 2003-2023

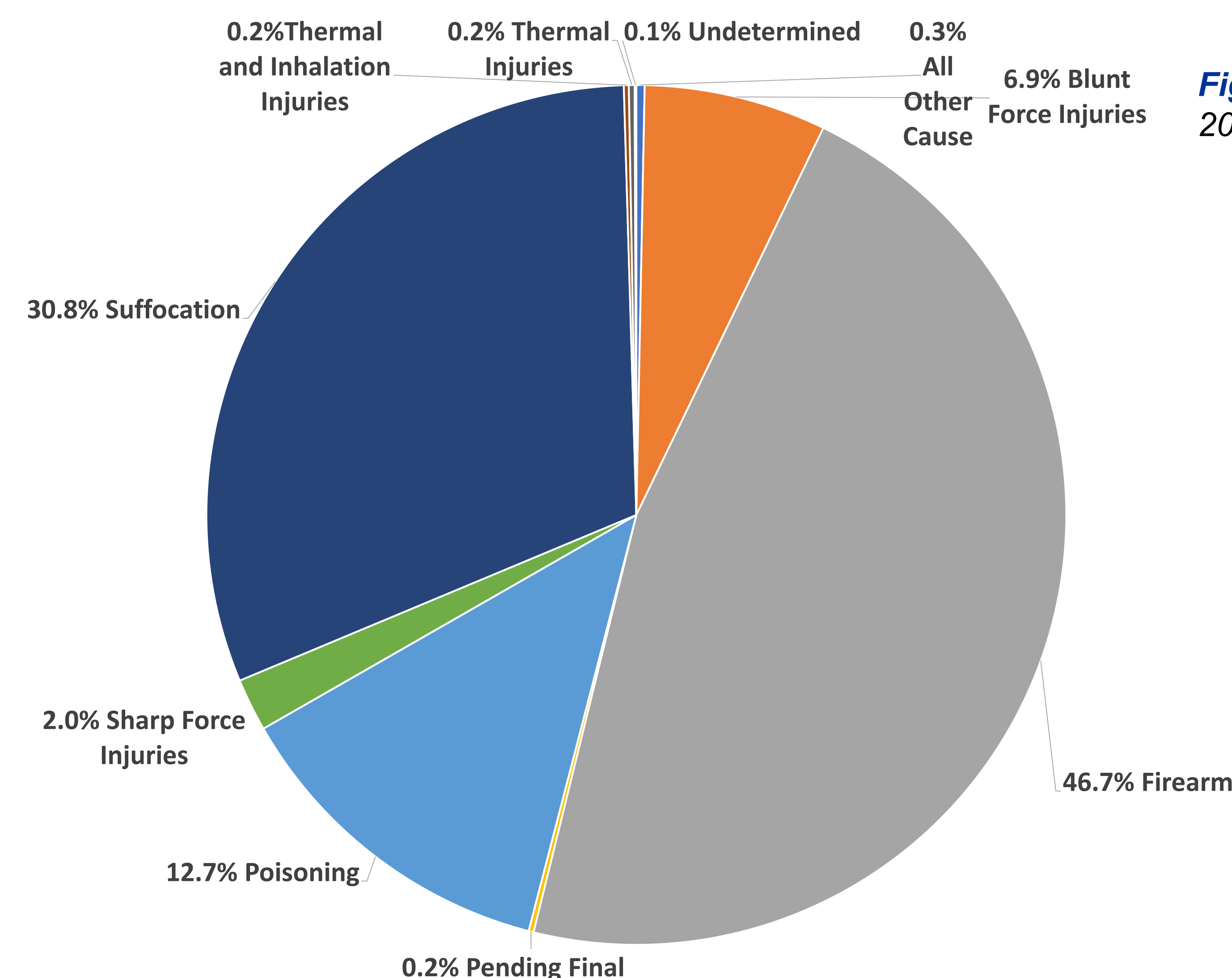


Figure 3 - Cuyahoga County Suicide Deaths from 2003-2023 by CDC Age Groups

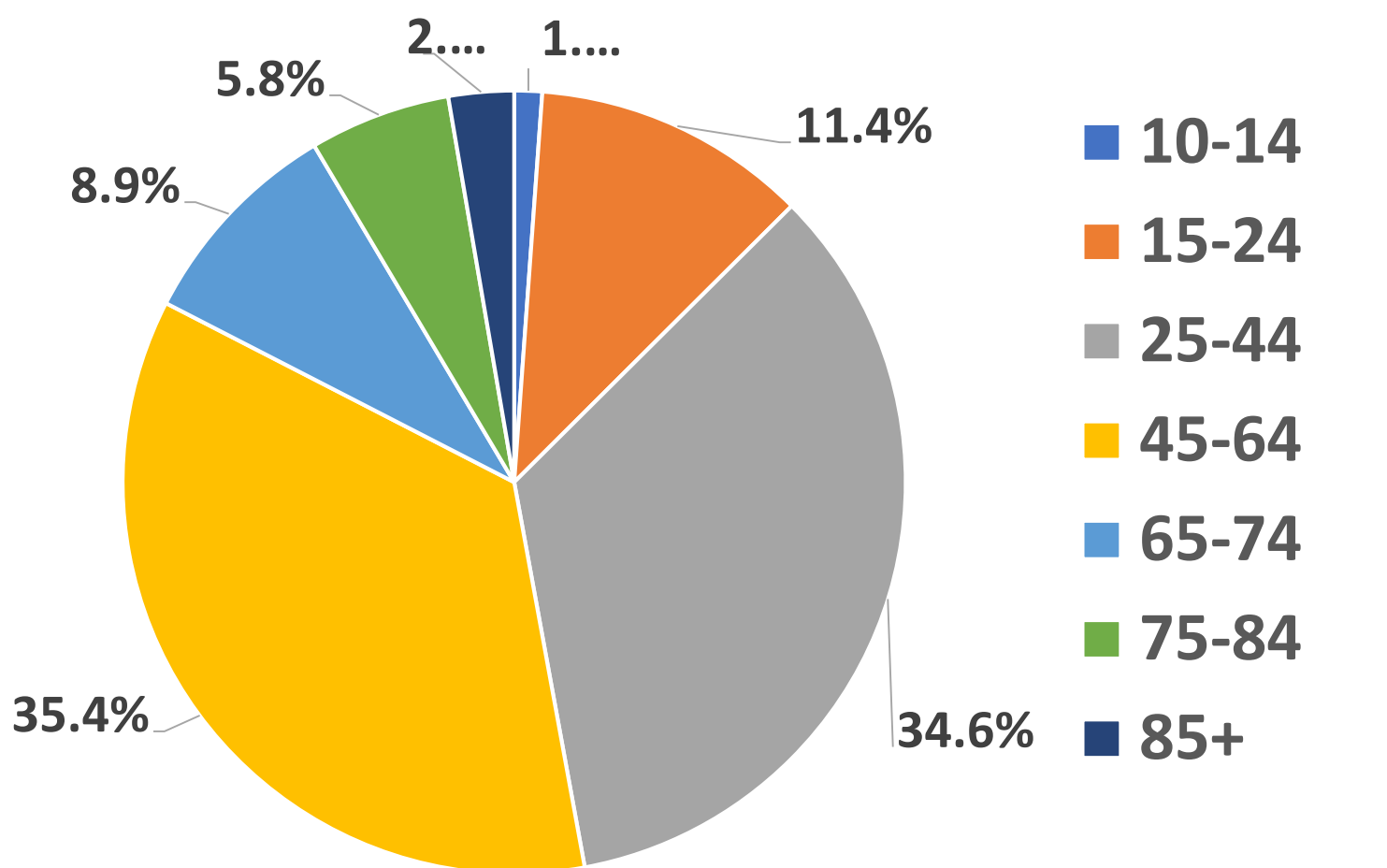


Figure 4 - Cuyahoga County Suicide Deaths from 2003-2023 by Race

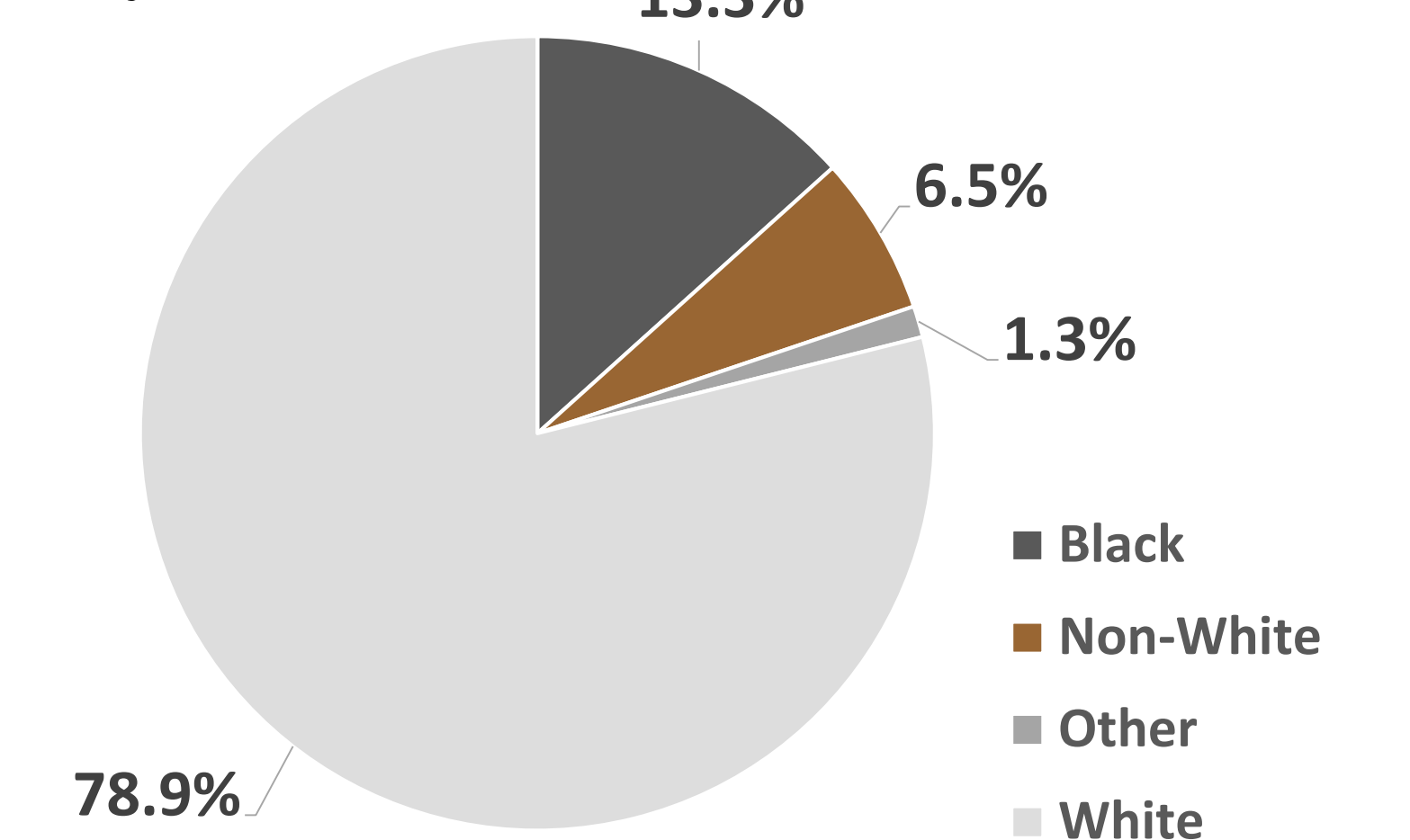
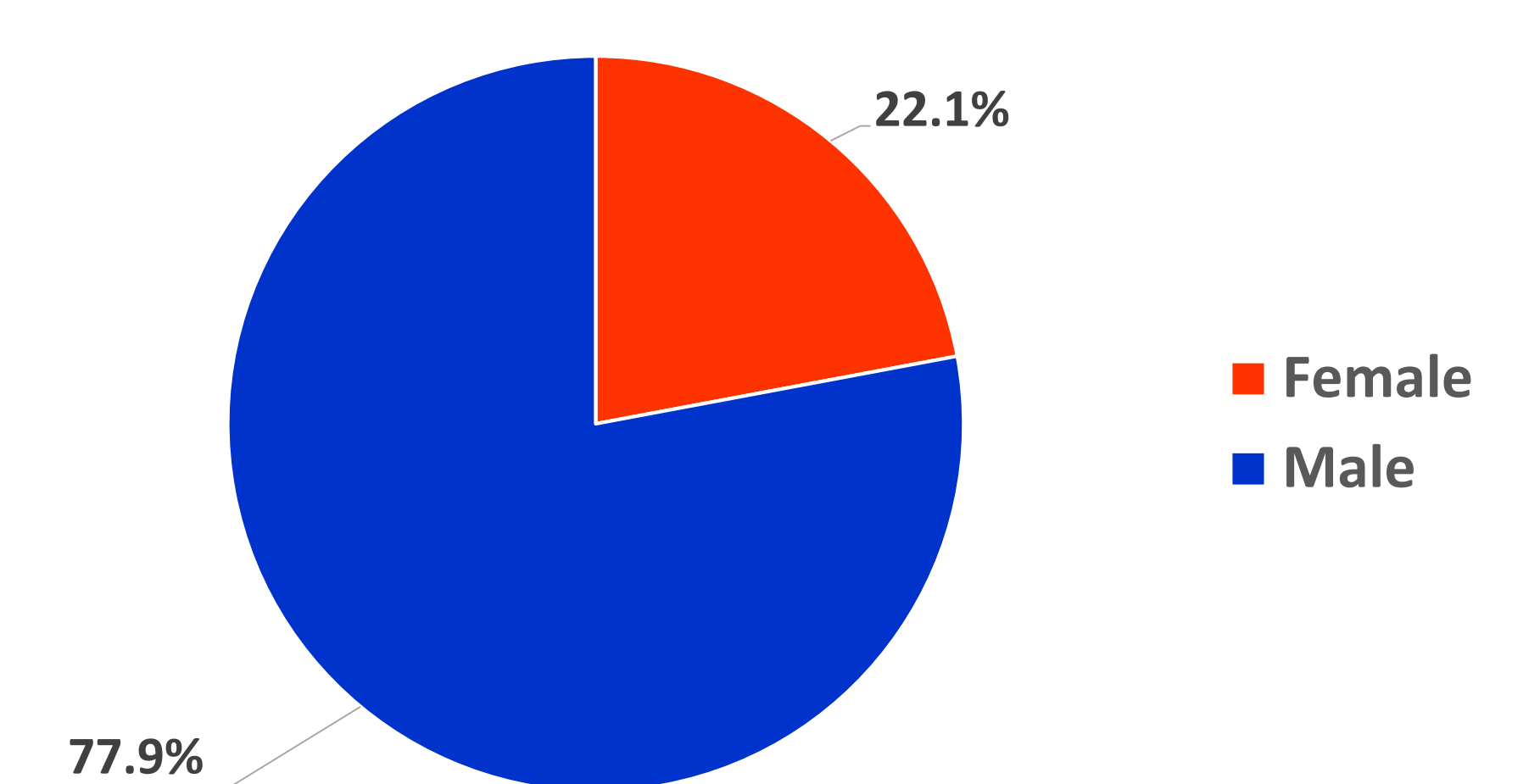


Figure 5 - Cuyahoga County Suicide Deaths from 2003-2023 by Gender



References and Acknowledgements

<https://cuyahogacounty.gov/medical-examiner/departments/administration>

As the literature search conducted was extensive, a full list of references cannot be provided in this space but is available upon request.

I would like to thank the Cuyahoga County Medical Examiner's Office for the data provided and my preceptors for the technical assistance provided throughout the course of my practicum.

Public Health Implications

The implications of this Practicum, and the future Capstone project continuing it, include more targeted suicide prevention programs or policies to prevent future suicides.