Opioid Crisis in the US

Deaths per 100,000 People Overall and by Gender

Mediocre At Best

Name (full name)	Purdue Email address
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Project URL: https://lionfish-app-tlnkv.ondigitalocean.app/

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Opioid Crisis in the US

Introduction

In this section, Introduce your topic.

Team Mediocre At Best for the past three months have been collecting data and information to answer our question about the Opioid Crisis in the US.

Background

The team worked from two data sets compiled by the CDC – the SUDORS fatal overdose dataset and the DOSE nonfatal overdose dataset. These datasets are intensive and cover many aspects of the opioid epidemic with regards to demographics, such as age, race, location, and gender.

Questions

What is the question(s) the team has chosen to address? Who is your audience? – What problem are you trying to solve or address? What's been done before?

What demographics of people are impacted by the Opioid Crisis in the United States? Our intended audience is people in government. Our insights are intended to identify what groups are most severely impacted so that government officials can direct efforts to provide them aid. Things that have been done regarding this include efforts made to make rehabilitation more accessible to addicts.

Problem Statement

Significance (why should anyone care)? – why is the team's work important? What will the team do differently?

 The war on drugs has been going on for decades, with no sign of stopping. It's an issue in America with deaths rising each year. That is why we should care because the next person who can die or be severely injured could be someone related to you. Our work is important because we are showing recent data that shows we are not out of the woods from the epidemic. Our team will continually alter our visualizations to fit the public need.

Methodology

What did the team do? Show your process, include sketches, and the data visualization activity worksheets: Acquire, Parse, Mine, Filter & Represent, Sketches of first drafts of visualizations, Refine worksheet

Response Summary:

From a Problems to Data Sources Worksheet

Goal: Acquire data for semester topic
Objectives: Students will identify appropriate data sources transition from a broad topic to a specific question
Outcomes: Students will plan, generate, and determine the availability of data for the semester

1. Student Information *

First Name	Avery
Last Name	McGinley
Course (e.g. CGT 270-001; CGT 501)	CGT 270
Term (e.g. F2020)	F2022

Q12. If you are enrolled in CGT 501, select a cohort
   N/A

2. Email Address (enter your University email address) *
   amcginl@purdue.edu

3. Purpose (select an option from the drop down box) *
   • Develop Research Questions

Evaluate

4. Describe your semester topic below *

I am working on the topic of: describe your topic	We are learning about the addictiveness of opioids
Because I want to find our: describe the research goal	What are the main causes of the opioid epidemic, why are specific groups targeted more than others, how are efforts being made to resolve this epidemic
In order to help my reader understand better: describe intention for reader	The true effect of the opioid epidemic and to overcome it

5. Talk to a Librarian to help identify appropriate data sources for the semester topic. *

Primary Sources: Raw data (that you collect and/or generate where applicable)	NCHS Data Brief, Number 428, December 2021, VSRR_Provisional_Drug_Overdose_Death_Counts Excel Spreadsheet, Non-Fatal_Overdose_Data Excel Spreadsheet by CDC
Secondary Sources (must have at least 1 secondary source): best secondary sources are books from published literature, university press and/or articles that have been peer reviewed	The Dataset from Brightspace, DOSE Dashboard: Non-Fatal Overdose Data,
Tertiary Source: include Books and articles that synthesize secondary data for general readers	Opioid Data Analysis and Resources by the CDC, Overdose Death Rates by the National Institute on Drug Abuse.

You must have a minimum of 3 data sources. If all of your data sources are internet web sites, this page will be returned to you to find additional sources.

6. How did you evaluate the data sources provided above for relevance and reliability? *
The data we collected came from government institutes that have a reliable reputation and as for relevance most of the data collected had to do with deaths due to overdosing on opioids as well as information on how much caused the overdosing.

Response Summary:

Parse Worksheet

Goal: to understand the structure of the data
Objectives: Students will change data into a format that tags each part of the data with its intended use
Outcomes: Every element of the data will be broken into its individual parts

1. Student Information *

First Name	Claire
Last Name	O'Malley
Course (e.g. CGT 270-001)	CGT270
Term (e.g. F2019)	F2022

2. Email Address *
omalle18@purdue.edu

3. Visualization Assignment *
   • Final Project

Understand

4. Parse Data: List each field and its data type. Refer to Fry (page 8-9, 2007) for examples of description of different data types (string, float, character, integer), you can also create user defined types (some combination that uniquely identifies data like the Index type in the Fry 2007 page 9 example) *

Rate of overdose deaths by state and drug or drug class-Numeric
Percentages of overdose deaths involving select drugs and drug classes-Numeric; percentage ranging from 0-100
Percentage of overdose deaths involving the most common opioids and stimulants alone or in combination-Numeric; percentage ranging from 0-100,Character
Distribution of overdose deaths by opioid and stimulant involvement-Numeric; percentage ranging from 0-100
How many drug overdose deaths occurred each month in 2020?-Numeric
Who died of a drug overdose in 2020? By Sex-Numeric; percentage ranging from 0-100
Who died of a drug overdose in 2020? By Race/Ethnicity-Numeric; percentage ranging from 0-100
Who died of a drug overdose in 2020? By Age (In Years)-Numeric; percentage ranging from 0-100
Who died of a drug overdose in 2020? By Age and Sex-Numeric; percentage ranging from 0-100
Potential opportunities for intervention-Numeric; percentage ranging from 0-100
Additional circumstances surrounding overdose deaths-Numeric; percentage ranging from 0-100
State-Character
Geo-Location-Character
Start Year-Integer
End Year-Integer
Start Month-Integer
End Month-Integer
All Percent Change-Float
Opioid Percent Change-Float
Heroin Percent Change-Float
Stimulant Percent Change-Float
All LS Significant-Binary
Opioid LS Significant-Binary
Heroin Ls Significant-Binary
Stimulant LS Significant-Binary
All Significance-String
Opioid Significance-String
Heroin Significance-String
Stimulant Significant-String
Gender-String
Age Range-String
Jurisdiction Count-String
Comparison Type-String
Year-Integer
Number-Integer
Deaths per 100,000-Float
Sex-String
Age Group-Integer
Race and Hispanic Origin-String
Opioid Type-String
Stimulant Type-String

5. Assumptions: List any assumptions you are making about the data and/or the visualization challenge (aka the project) *

The data sources are trustworthy and as for the non-fatal data, legalized drugs were likely not taken into consideration.

Response Summary:

Mine Worksheet

Goal: to identify patterns, extreme and subtle features about the data

Objectives: Students will identify basic descriptors for the data, and categorize the data according to the specifications from the Parse Worksheet

Outcomes: Three (3) specific questions to be answered using the data

1. Student Information *

First Name	Gabriel
Last Name	Doria
Major	Animation and Visual Effects
Course (e.g. CGT 270-001)	CGT270-008
Term (e.g. F2019)	F2022

2. Email Address *
(University Email Address is required.)
gdoria@purdue.edu

3. Visualization Assignment *
- Final Project

Analyze

4. Basic Descriptors: for each data component from the Parse Worksheet, identify basic descriptors (basic statistics). Explain *
For our data on non fatal, fatal, NCHS Data we used Mean, Median, and Mode as our basic descriptions.

5. Categorize: consider what is similar and what is different? Categorize the data. Are the variables categorical (normal, ordinal, or rank). Are they quantitative (discrete or continuous)? Show categories. Explain. *

Rate of overdose deaths by state and drug or drug class - Rank, Continuous
Percentages of overdose deaths involving select drugs and drug classes - Rank, Discrete
Percentage of overdose deaths involving the most common opioids and stimulants alone or in combination - Rank, Continuous
Distribution of overdose deaths by opioid and stimulant involvement - Rank Continuous/Discrete
How many drug overdose deaths occurred each month in 2020? - Rank, Continuous
Who died of a drug overdose in 2020? By Sex - Rank, Continuous/Discrete
Who died of a drug overdose in 2020? By Race/Ethnicity - Rank, Continuous/Discrete
Who died of a drug overdose in 2020? By Age (In Years) - Rank, Continuous/Discrete
Who died of a drug overdose in 2020? By Age and Sex - Rank, Continuous/Discrete
Potential opportunities for intervention - Rank, Continuous/Discrete
Additional circumstances surrounding overdose deaths - Rank, Continuous/Discrete
State - Ordinal, Discrete
Geo - Ordinal, Discrete
Start Year - Rank , Discrete
End Year - Rank , Discrete
Start Month - Rank , Discrete
End Month - Rank , Discrete
All Percent Change - Rank, Discrete
Opioid Percent Change - Rank, Discrete
Heroin Percent Change - Rank, Discrete
Stimulant Percent Change - Rank, Discrete
All LS Significant - Ordinal, Discrete
Opioid LS Significant - Ordinal, Discrete
Heroin Ls Significant - Ordinal, Discrete
Stimulant LS Significant - Ordinal, Discrete
All Significance - Ordinal, Discrete
Opioid Significance - Ordinal, Discrete
Heroin Significance - Ordinal, Discrete
Stimulant Significant - Ordinal, Discrete
Gender - Ordinal, Discrete
Age Range - Rank, Continuous
Jurisdiction Count - Rank, Continuous
Comparison Type - Rank, Continuous
Year - Rank, Discrete
Number - Rank, Continuous
Deaths per 100,000 -Rank, Continuous
Sex - Ordinal, Discrete
Age Group - Rank, Continuous
Race and Hispanic Origin - Ordinal, Discrete
Opioid Type - Rank, Continuous
Stimulant Type - Rank, Continuous
The data represented through these variables are either ordinal or rank. This is because no normal data is shown. The data is also shown to have both quantitative data which is continuous and or discrete. Some data has both because they involve ranges and unlimited amount.

6. Temporal: is the data streaming data? How is it stored (all at one time, over several years in years, days, minutes, seconds)? Explain. *

There is no streaming data. They are not collecting the data continuously.

7. Range and Distribution: what is the distribution of the data? Few values, small size, evenly spread, sparse or dense? Explain. *

The data is dense. The reason why is there is so much data to support the many variables we have.

Evaluate

8. Questions and Assumptions: list at least 3 questions you plan to answer with the data or list the questions if they were provided. Must be complete sentences and end in a question mark. What assumptions are you making? *

Question 1	What are the main causes of the opioid epidemic?
Question 2	Why are specific groups more targeted than others from the opioid epidemic?
Question 3	How are efforts being made to resolve the epidemic?
Assumptions	The data source are trustworthy The non fatal data probably doesn't take legalized drugs into consideration.

Response Summary:

Filter & Represent Worksheet

Goal: Produce visual representation of the data to address the questions.
Objectives: Students will extract data related to the questions.
Outcomes: Two visual representations of the same data showing different aspects of the data for the questions.

1. Student Information *

First Name	Emma
Last Name	Belter
Major	Web Programming and Design
Course (e.g. CGT 270-001)	CGT 270
Term (e.g. F2019)	F2022

2. Email Address *
(University Email Address is required.)
  ebelter@purdue.edu

3. Visualization Assignment *
- Final Project

Q16. How many questions have visualizations?
- One

Q17. Question 1
  Why are certain groups more targeted by the opioid epidemic?

Remember

Question 1: *

Why are certain groups more targeted by the opioid epidemic?

Apply

5. Filter the data: Remove any duplicate or any data unrelated to answering your question. Provide a description of the filtered data (what is needed to answer your question). *

The data we will be using to understand how certain groups are more targeted by the opioid epidemic use these data categories.

Non-fatal overdoses: age group, state, gender

Death rates of opioids by: gender, age group, sex, race and Hispanic origin

Death per 100,000: gender, age group, sex, race and Hispanic origin

Evaluate

6. Next Step: Answer the following questions: *

Do you have enough data? Explain. If no, explain then revisit the Acquire Worksheet.	Yes, we have enough data to compare the death rates of opioids by age, sex, and race as well as non-fatal overdoes.
Do you have the right data to answer Question 1? If yes, explain then proceed. If no, then revisit 'Filter the Data' question. Repeat until this answer is yes.	Yes, we have the right data to compare the death rates of opioids by age, sex, race as well as non-fatal overdoes.

8. View 1 for Question 1 *

Enter the filename of the first visualization for the first question. Teamname_Fig#Q1.jpg

MediocreAtBest_Fig1Q1.jpg

9. View 2 for Question 1 *

Enter the filename of the second visualization for the first question. Teamname_Fig#Q1.jpg (or .jpeg)

MediocreAtBest_Fig2Q1.jpg

Response Summary:

Refine Worksheet

Goal: Generate/produce new and/or improved visualizations from the Filter & Represent Worksheet
Objectives: Students will apply suggestions from Critique 1 to improve the visualization
Outcomes: Improved visualizations that provide insight

1. Student Information *

First Name	Madison
Last Name	Newman
Major	Chemical Engineering
Course (e.g. CGT 270-001)	CGT270-008
Term (e.g. F2019)	F2022

2. Email Address *
(University Email Address is required.)
newman89@purdue.edu

3. Visualization Assignment *
- Final Project

4. How many questions have refined views?
- Two

5. Question 1
Why are certain groups more targeted by the opioid epidemic?

6. Question 2
N/a

Question 1: *

Why are certain groups more targeted by the opioid epidemic?

Create

8. Refined Figure 1 for Question 1: provide the filename of the revised version of Figure 1 that answers Question 1 from the MINE worksheet. Make sure the visualization includes a Figure caption and follows the Data Visualization Check List and Best Practices for creating visualization. *

MediocreAtBest_Fig1_Refine.jpg

9. In the space below, list the changes made to Figure 1
- fixed typos
- added data labels to make "total" column more understandable

10. Refined Figure 2 for Question 1: provide the filename of the revised version of Figure 1 that answers Question 1 from the MINE worksheet. Make sure the figure includes a Figure caption and follows the Data Visualization Check List and Best Practices for creating visualization. *

Data points were taken from wrong column, rectified this. Dot sizes are being changed to reflect their value. Adding chart titles and a legend.

11. In the space below, list the changes made to Figure 2
MediocreAtBest_Fig2_Refine.jpg

Question 2: *

N/a

Create

12. Refined Figure 1 for Question 2: provide the filename for the revised version of Figure 1 that answers Question 2 from the MINE worksheet. Make sure the visualization Includes a Figure caption and follows the Data Visualization Check List and Best Practices for creating visualization. *

only one questions, worksheet won't let me change my answers

13. In the space below, list the changes made to Figure 1
only one questions, worksheet won't let me change my answers

14. Refined Figure 2 for Question 2: provide the filename for the revised version of Figure 2 that answers Question 2 from the MINE worksheet. Include a Figure caption and follow the Data Visualization Check List and Best Practices for creating visualization. *

only one questions, worksheet won't let me change my answers

15. In the space below, list the changes made to Figure 2
only one questions, worksheet won't let me change my answers

Results

Choose one of your team's "BEST" visualization and insert it here. This visualization should be the best representation of the team's effort. Provide a figure caption. If the team would like to include additional visualizations, add them to this section. Make sure each visualization has a figure caption AND includes the name of the person who created the visualization. Also make sure the appropriate page layout (portrait or landscape) is used as well as the appropriate chart type and layout (see best practices for visualization data and data visualization checklist).
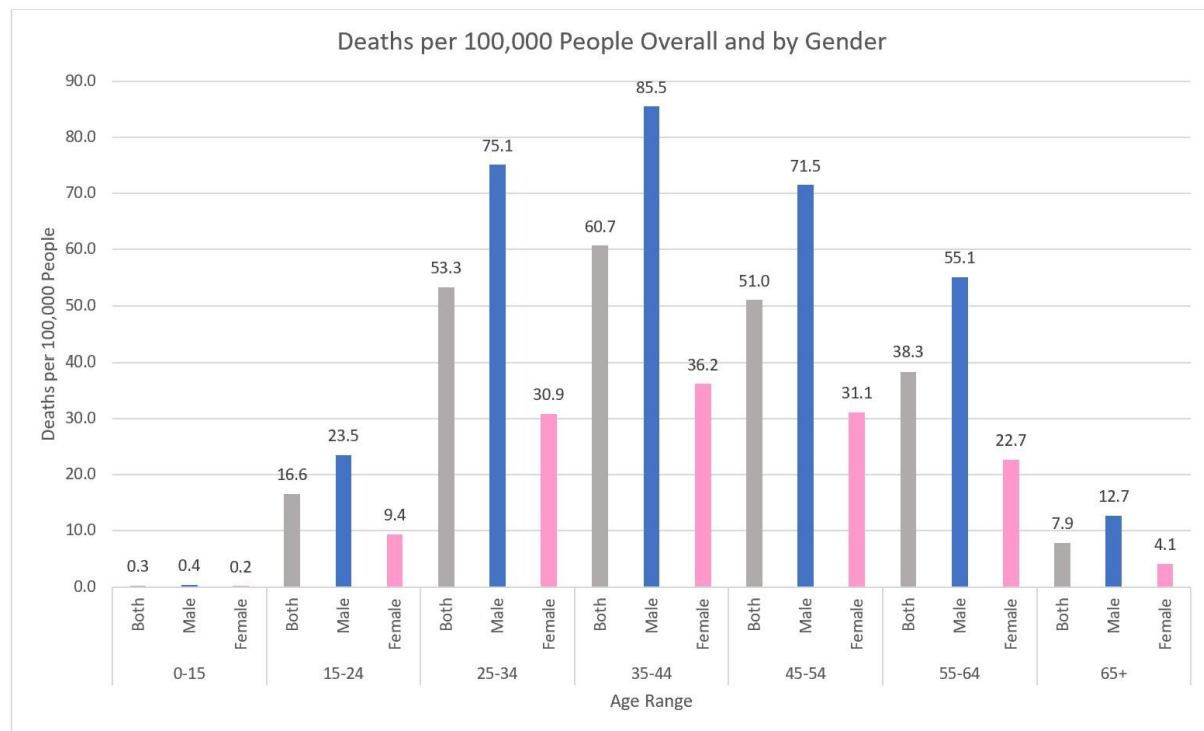
Deaths per 100,000 People Overall and By Gender: Created by Claire O'Malley and Madison Newman

Discussion (What's the story?) and Conclusion

Discuss your results (the figures in the Results section). Do your visualizations address the problem stated in the Problem Statement Section? Explain. What insights did the team uncover? What recommendations can be made based on these insights?

The above visualization shows the spread of deaths as a result of opioid overdose. The visualization breaks down the data into categories of age range and gender. The data trends in a bell curve, with men and women seeing the highest overdose rates at ages 35-44. The graph also shows how men are disproportionately affected by the epidemic, with overdose rates more than two times that of women. Our team recommends researching the rates at which opioids are prescribed to men versus women, as well as the spread of prescriptions among age ranges, to determine if the root cause of the difference in death rates is based on access, or another factor.

References

If references are listed, make sure they are cited in the body of the document. See Purdue Online Writing Lab for how to cite and list full citations. Improperly cited work will be treated as plagiarism and handled accordingly.

Centers for Disease Control and Prevention. (2022, November 30). *Dose dashboard: Nonfatal overdose data*. Centers for Disease Control and Prevention. Retrieved December 9, 2022, from https://www.cdc.gov/drugoverdose/nonfatal/dashboard/index.html

Centers for Disease Control and Prevention. (2022, December 8). *Sudors dashboard: Fatal overdose data*. Centers for Disease Control and Prevention. Retrieved December 9, 2022, from https://www.cdc.gov/drugoverdose/fatal/dashboard/index.html

Appendix A – Resources Used

Datasets

List the name of the data set provided and a description of the additional data set acquired.

Datasets must be available on the project web page.

All data must be accessible to the public. No paid data sources allowed.

Non-Fatal Overdose Data: This dataset is about injuries because of the opioid crisis and lists each state and what year the data was recorded.

SUDORS Fatal Overdose Data: The fatal dataset talks about the age and gender of the people who die from taking opioids.

Tools used

List all tools used in the project and a brief description (see the *examples* below); **update accordingly**.

Tool/Application	Description
Excel	Data cleaning
Tableau	Data visualization

HTML	Web development

Appendix B – Project Web Page

The project web page will be an extension of the final report. You will be allowed to add content to the project web page up to last day of classes. The project web page should contain *(at a minimum)* the following sections:

<u>About The team</u>

List each team member, provide a short bio (150 words or less) for each team member, Provide photo (headshot only) dress appropriately.

Claire O'Malley is a freshman from the suburbs of Chicago majoring in user experience design. Fun fact, she has gone sky diving before.

Emma Belter is a freshman from Indiana majoring in web programming and design. Fun fact, she has a cat named Salem and he has no hair!

Gabriel Doria is a sophomore who is majoring in Animation and Visual effects. He is from New Jersey. Fun fact, he can pop his shoulder in and out of socket.

 Avery Jane McGinley is a sophomore from Florida, and I major in User Experience Design. Her fun fact is she has swum with sharks before.

Madison Newman is a senior from Pennsylvania majoring in chemical engineering. Her fun fact is she still has a baby tooth.

The Challenge

Describe the team's focus/goal related to the challenge, Who's the audience? What assumptions are made?

The team's goal for this challenge was to provide insight on the effect of the opioid epidemic on different demographics. The audience for this visualization is anyone concerned with the opioid epidemic, including government officials, doctors, pharmacists, and public health experts. Assumptions made for this challenge are that all data was collected accurately and ethically.

Methodology

Describe the team's data visualization workflow and process.

Mediocre at Best has used GroupMe to remain organized, communicate meetings, and update the group on progress. During these meetings we divide tasks between individuals to be completed by the agreed time. This has worked very well for us, and we have met each deadline without issues.

Deliverables

5-minute video (1 pt deduction for each minute over if over 5:00:00 minutes), Final Report, Team agreement (signed by all team members)

https://lionfish-app-tlnkv.ondigitalocean.app/video.html

Results

This the team's time to shine! Visualizations created by the team that support the team's solution to the challenge, Visualizations must be relevant to the question(s) the team is answering in regards to the visualization challenge.
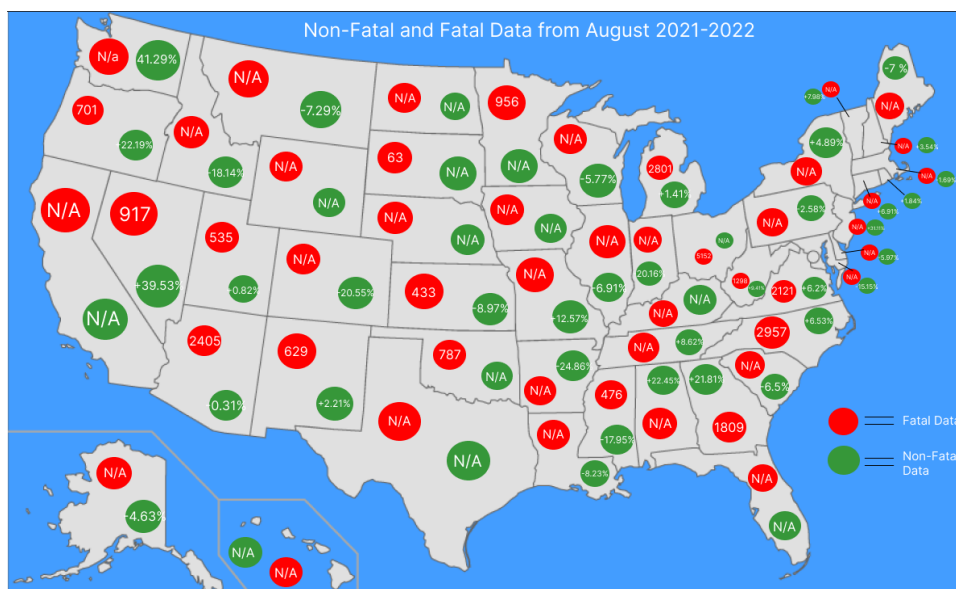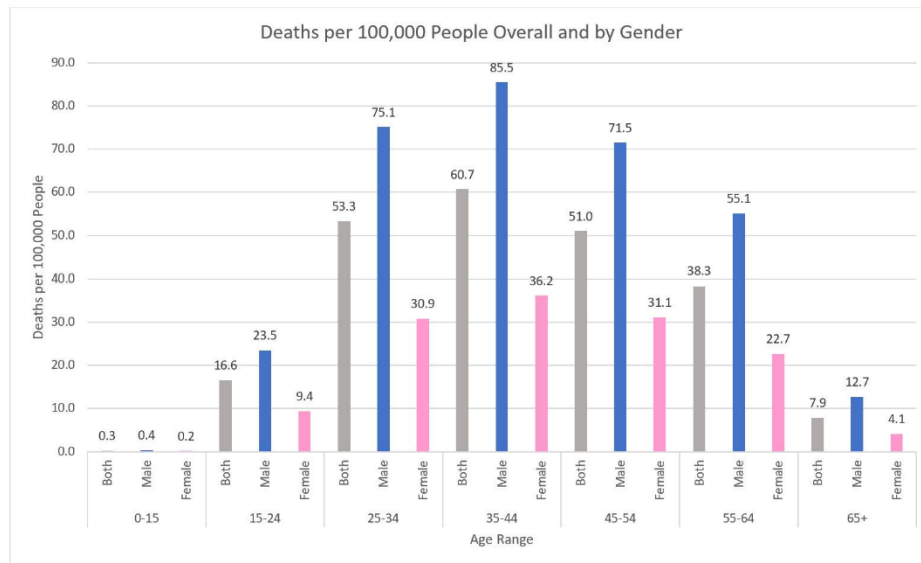
Conclusions

What insights are presented? What recommendations did the team make?

When it comes to insights, we have found that men have more deaths from opioids and are more affected than women. Another insight can be drawn from our map visualization is that southern states such as people from Arkansas are more severely impacted by deaths/non fatal stuff which one could infer is attributed to a variety of factors such as economic, ease of access, and internal factors. These insights could lead our target audience of government officials to direct efforts toward men/middle age people/southern people in order to help with the opioid epidemic.

Appendix C – Percent Contribution

Group Contributions

In this section list the tasks that were completed by all team members for example: contributed to the data visualization process, brain stormed topic ideas, served as rotating team leader, contributed content to the short story (summary), contributed content to the 5-minute video, reading the final deliverable before submission, <add more if appropriate>

Group contributions include:

- Contributing content to video
- Research for data sets
- Rotating group leader
- Contributing to the data visualization process
- Writing final report
- Brainstorming sessions
- Coding Website

Individual Contributions

The Table 1 shows an example of what a team contributions table might look like.

Table 1 Example Team Contribution Table.

Team Member	Contribution (DO NOT edit or remove this table)	Contribution
Example Team Member 1	*Developed the project web page, acquired additional data for the project*	*25%*
Example Team Member 2	*Responsible for gathering written contributions from the team and combining them into a cohesive story, data wrangling (parsing, filtering) ,*	*20%*
Example Team Member 3	*Videographer for the 5-minute video (recording and editing)*	*15%*
Example Team Member 4	*Creating visualizations of the data, revising and refining*	*40%*

Total   100%

In the table below list each team member's full name, their contribution (body of work) and their % of the work completed. The total must add up to 100%.

Team Member	Contribution	Contribution
Emma Belter	*Parsing the NCHS Fatal Dataset, coding and maintaining the website, script writing, leading the filter and represent worksheet, and generating two group summaries.*	*20%*
Avery McGinley	*Parse and visualize the non-fatal opioid data, host and maintain web server, acquire worksheets, and identify datasets.*	*20%*
Gabe Doria	*The mining process, video editing, directing, script writing, two group summaries, and working on the non-fatal visualization.*	*20%*
Claire O'Malley	*Parsing the fatal dataset, leading the parsing and acquire worksheets, creating the data visualization with Madison, generating two group summaries, and script writing.*	*20%*
Madison Newman	*Identifying sources, parsing the fatal data set with Claire, leading the Refine worksheet, creating the fatal visualization with Claire, and generating two group summaries.*	*20%*

Total contributions must equal 100%   100%

Appendix D – Individual Contributions

In this appendix each team member must contribute a one-page document relating the team's topic/data. The one-page document must contain: (1) a description of the problem, (2) a comparison to the team's findings with insights related to the project data (3) a visualization to support items (1) and (2).

Each person should create their individual page (**1-page only**) and make it available to the designated team member who will upload the final document.

This will be viewed and assessed as part of each person's individual contribution.

Leave this page as is.

Start adding individual page content on the next page.

REMOVE any blank pages before submitting.

Team Member #1:   Avery Jane McGinley
Group Topic: Opioid Epidemic
Your Topic/Question: What type of opioid is causing people inf Florida to die?

Include your story and visualization below (**do not go over one page**). Single spaced, 11-pt font, Times New Roman.

Deaths by Specific Opioid Drugs

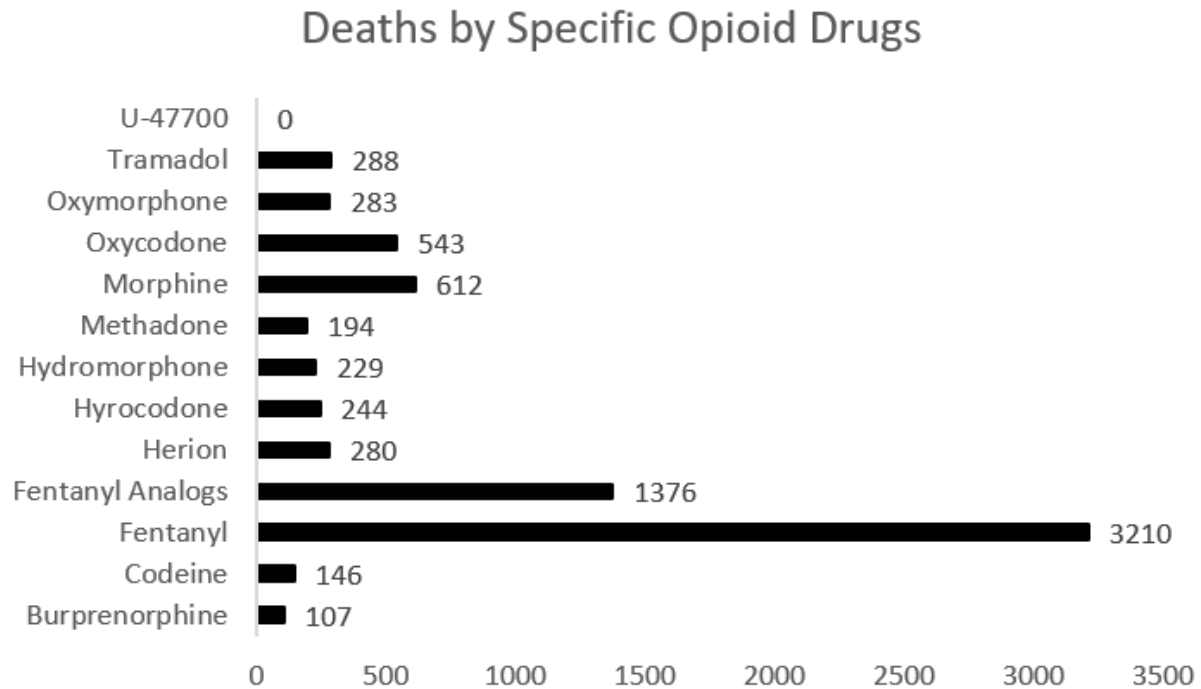| Drug	Deaths
U-47700	0
Tramadol	288
Oxymorphone	283
Oxycodone	543
Morphine	612
Methadone	194
Hydromorphone	229
Hyrocodone	244
Herion	280
Fentanyl Analogs	1376
Fentanyl	3210
Codeine	146
Burprenorphine	107

Figure Caption: Deaths from Opioid Drug from January 2021 to December 2021

My story is this, all throughout middle and high school every year we would have a talk about opioids and other drugs from a foundation call MAD (Moms Against Drugs). Where I am from the crisis against drugs is very evident and there isn't a lot of change going besides stricter law enforcement which doesn't help. According to Florida's state report on deaths by drugs, in 2021 opioids caused more deaths than any other drug, Fentanyl as shown above caused more death than the next three drugs combined. Sure, the drug is illegal but as we can see, it is still causing damage to people's livelihood. I think with this information alone for one year, people should start to take notice and take action against this deadly drug. Even the smallest amount of Fentanyl can be fatal, and it should be taken more seriously especially since people's lives are at stake. I am not suggesting that it will be an ease process, I am saying instead of more enforcement of the law how about we make free programs to help those in need. Help these people find their way back onto their feet instead of punishing them for having a disease because addiction is a medical disease that can be fixed with time in the right care.

FLORIDA DEPARTMENT OF LAW ENFORCEMENT. (2022, May). *Drugs in deceased persons*. Drugs Identified in Deceased Persons by Florida Medical Examiners. Retrieved December 9, 2022, from https://www.fdle.state.fl.us/MEC/Publications-and-Forms/Documents/Drugs-in-Deceased-Persons

Team Member #2:   Madison Newman
Group Topic: The opioid epidemic
Your Topic/Question: Different Drug Prescriptions in Pennsylvanias

Include your story and visualization below (**do not go over one page**). Single spaced, 11-pt font, Times New Roman.
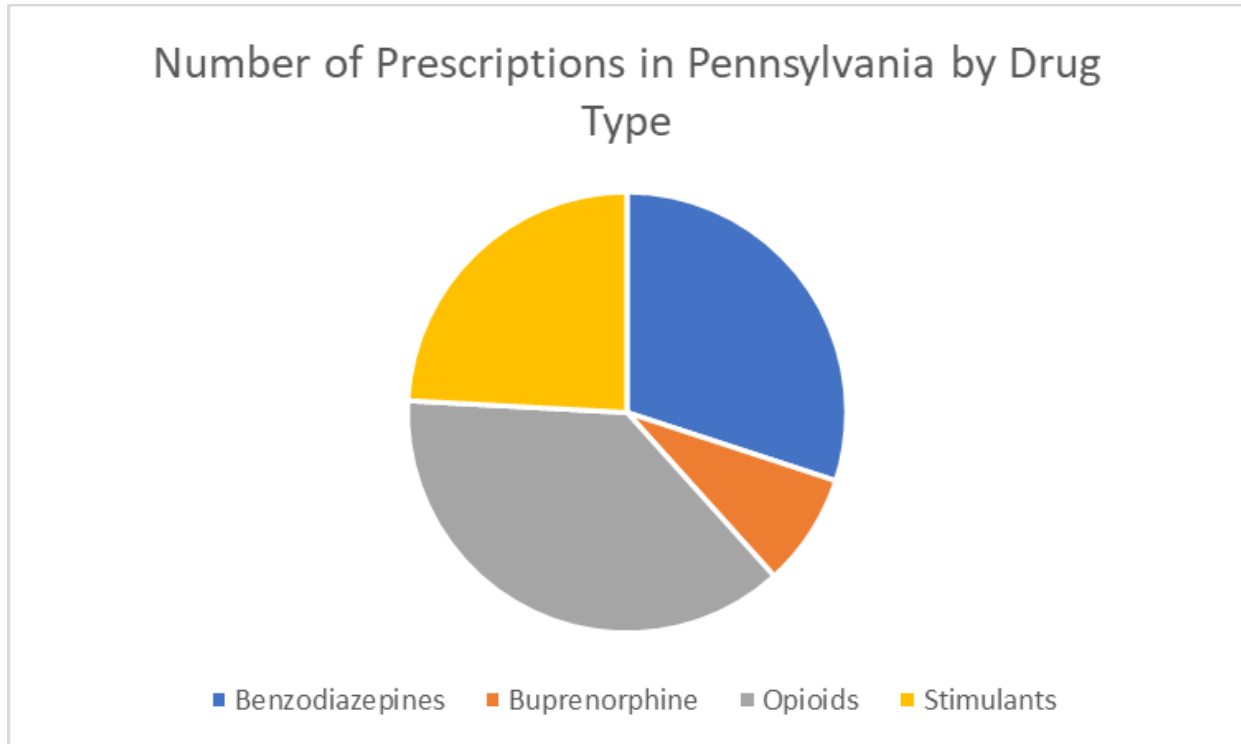
For our group project, we have been focusing on opioid use and overdoses throughout America. For my complementary topic, I chose to look at other drugs as well, specifically in my home state of Pennsylvania. As be seen in the chart, opioids have the largest number of prescriptions in Pennsylvania, followed by benzodiazepines, buprenorphine, and then stimulants. In fact, opioids are the largest category of drugs that are prescribed by far.

I believe that looking into why opioids are being prescribed so heavily is important – clearly, they are being prescribed more than other drugs, but there must be a reason for this. Determining the root cause of the large number of opioids that people have access to could be a first step towards fighting the opioid epidemic. For much of this project, our team has focused on the demographics that are affected by opioid misuse, and not why these different cohorts are affected. However, we used data that reputable agencies have gathered, and there is not a clear single reason for the increased use of opioids in America, let alone Pennsylvania. Finding the causes of this crisis is a large undertaking, and people in data visualization are helping to lead the charge.

Office of Drug Surveillance and Misuse Prevention (Ed.). (n.d.). *Prescription Drug Monitoring Program | Interactive Data Report*. Public.tableau.com. Retrieved December 8, 2022, from https://public.tableau.com/app/profile/pennsylvania.pdmp/viz/PennsylvaniaODSMP-PDMPInteractiveDataReport/Contents
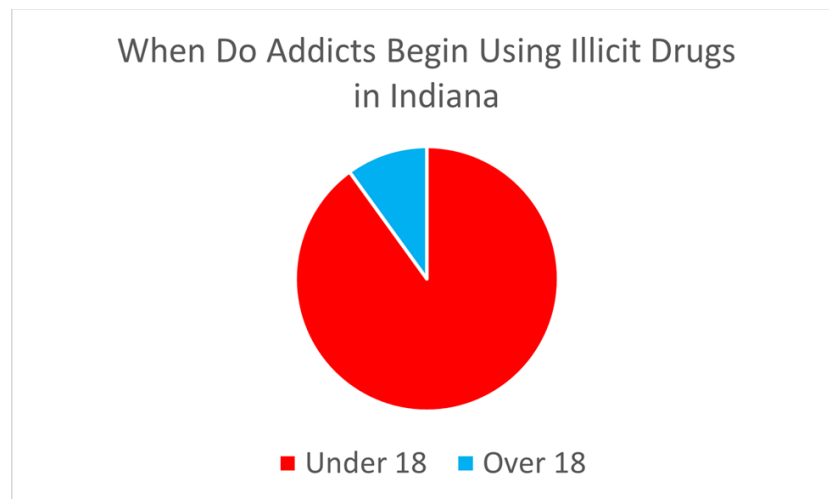
Team Member #3:   Emma Belter
Group Topic: Opioid Epidemic in The United States
Your Topic/Question: Youth Drug Use in Indiana

Include your story and visualization below (**do not go over one page**). Single spaced, 11-pt font, Times New Roman.

      In our group project, we are determining the role age, gender, and location play in the impacts of the opioid epidemic in the United States. Through insights pulled from the data, we have determined that middle-aged individuals from ages 35-44 experience the most deaths due to Opioids per 100,000 people (Centers for Disease Control and Prevention). Expanding on this idea, I wanted to look at how these individuals began their addictions and what led them to abuse Opioids.

      After doing some research, I have found that oftentimes, one's road to Opioid addiction begins before the individual's eighteenth birthday. According to statistics from the Indiana MPH, in Indiana, approximately 90% of people with addiction start using illegal drugs before the age of eighteen (Mph). This leads me to pose the question, why do addicts begin their path to addiction before the age of 18 but peak in the number of opioid deaths during their 30s and 40s? This could potentially be attributed to the idea that individuals do not see the harm of experimenting with gateway drugs in early adulthood. A number of these individuals, due to a variety of factors such as genetic predisposition to addiction, mental health issues, and environmental factors, will fall into more serious addictions to harmful and dangerous drugs such as opioids. This chain of events would not happen overnight, and the serious impacts on an individual's health from abusing opioids may not be seen until around middle age, which could be the cause of the increase in opioid deaths steadily from early adulthood to its peak during ages 35-44. One could use this data to infer that an increase in youth drug abuse plays a direct role in the rapid spread of the opioid epidemic in Indiana.

When Do Addicts Begin Using Illicit Drugs in Indiana
■ Under 18   ■ Over 18

Mph. (2022, May 21). *Opioid epidemic*. MPH. Retrieved December 9, 2022, from
   https://www.in.gov/mph/projects/opioid-epidemic/

Centers for Disease Control and Prevention. (2022, December 8). *Sudors dashboard: Fatal overdose data*. Centers for Disease Control and Prevention. Retrieved December 9, 2022, from
    https://www.cdc.gov/drugoverdose/fatal/dashboard/index.html

Team Member #4:   Gabriel Doria

Group Topic: Opioid Epidemic
Your Topic/Question:
Include your story and visualization below (**do not go over one page**). Single spaced, 11-pt font, Times New Roman.

Suspected Opioid Deaths In New Jersey 2022
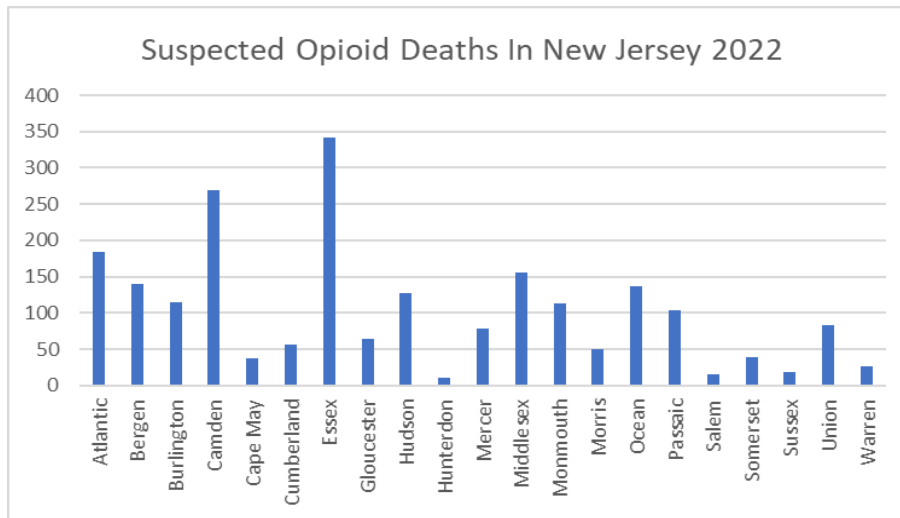
       Our group project on the opioid epidemic talked a lot about gender and age, but I wanted to see if population was a key factor to this issue. Being from New Jersey my state is a perfect answer to the question I have. So, I used data from each county to understand is the North more affected than the south or vice versa. Since New Jersey is super close to New York City, I wanted to dive deeper into each county and their drug problems. I live in Union County which is in the northern part of New Jersey. Nothern New Jersey is way more populated than southern New Jersey, this is because we are so close to Manhattan. A lot of people live in my home state because it's cheaper and not too difficult to commute to work. But the higher the population the more likely drugs will become an issue as we see here. Nothern counties see drastic data differences than those of the southern counties. We can see from this data alone that population is the reason why. Another factor that could be important is being so close to the city, the drug trade can easily be brought into New Jersey. All it takes is crossing the river and boom you have an expanded drug trade. A lot of factors can determine why drugs are growing in specific areas, but one undeniable fact is that population is an important reason why.

https://www.njoag.gov/programs/nj-cares/nj-cares-suspected-overdose-deaths/

Team Member #5:   Claire O'Malley

Group Topic: Opioid Crisis

Your Topic/Question: What gender has more deaths from opioids in Chicago?

I have found an article called "Opioid Overdose Surveillance Report" created by Chicago.gov. This article provides information about opioid use related to gender, race, age, drug type, and even economic hardship in community area of occurrence. These statistics come from 2015-2018. The statistics from my data support the data from our project for the fatal data we acquired. Through the years, we can clearly see that the male deaths drastically outweigh the female deaths. For example, in 2015 the male population had 322 deaths per 100,000 people. The female population had 104. This is almost a third of the amount of male deaths. From our group project, we saw that the male deaths also outweighed the female deaths. From ages 35-44, the female rate per 100,000 people was 36.2, and male was 85.5 per 1000,000 people. With both of these data sets and visualizations being analyzed, the insight found was that males consistently have more opioid related deaths than females. The Opioid Overdose Surveillance Report supported our original data.

Opioid Report – City of Chicago.
        https://www.chicago.gov/content/dam/city/cdph/statistics_and_reports/CDPH-
        005_OpioidReport_Final.pdf.

Include your story and visualization below (**do not go over one page**). Single spaced, 11-pt font, Times New Roman.
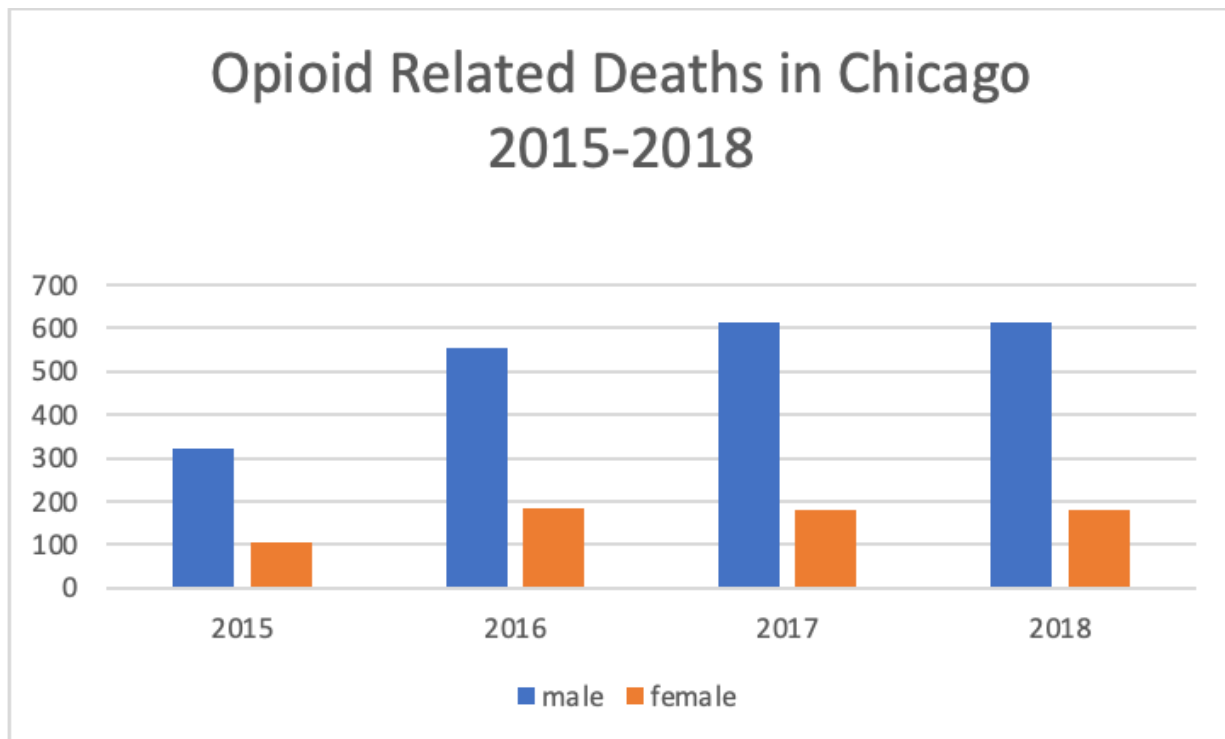
Appendix E - Diversity Statement

Some of the most enlightening outcomes are generated by diverse teams working together to solve complex problems. What does diversity mean and why is it important? Merriam-Webster defines diversity as: 1) the quality or state of having many different forms, types, ideas, etc., 2) the state of having people who are different races or who have different cultures in a group or organization. When solving complex problems having adequate representation is important. In the context of the problem to be solved, diversity could mean (but is not limited to): varied perspectives, varied points of view, different academic majors represented, different academic levels (Freshmen, Sophomore, Junior, Seniors) on the team, different ethnicities (state this professionally). Having a diverse team from different backgrounds can boost engagement and productivity and make us smarter (read short article: "How diversity actually makes us smarter").

In the space below, provide a statement describing the group's diverse make up and how the diversity of the group contributed to the outcomes of the team's deliverables for the semester project. Every team member must contribute to the development of the diversity statement. **Listing diversity traits is not sufficient. You must provide context/relevance within the scope of the project.**

Team Mediocre At Best has a wide variety of majors from User Experience Design (Avery McGinley and Claire O'Malley), Web Design (Emma Belter), Chemical Engineering (Madison Newman), and Animation and Visual Effects (Gabe Doria). Although most of our group is made up of women, the variety of age is abundant. Madison is a super senior, Gabe and Avery are sophomores, and Emma and Claire are freshmen. While our group are all in the same school, we have all come from different parts of the US, coming from New Jersey (Gabe Doria), Pennsylvania (Madison Newman), Indiana (Emma Belter), Illinois (Claire O'Malley) and Florida (Avery McGinley). In another way, other perspective is unique we have different representation amongst our team. We have perspective from the LGBTQ community (Avery McGinley and Emma Belter), and perspective from personal connections (Gabe Doria, Madison Newman, and Claire O'Malley). All team members contributed unique things to this project, either through unique skill sets or unique perspectives and the team worked extremely well together. Always answering each other's questions, brainstorming ideas, and overall working together as a team on this important project.

Appendix F – Team Consensus

Team Consensus

I have read and approve of the content as a representation of the team's work and my contribution.

Avery Jane McGinley	*Avery Jane McGinley*	12/09/2022
Type Team Member Full Name	Signature	Date

Madison Newman	*Madison Newman*	12/09/2022
Type Team Member Full Name	Signature	Date

Emma Belter	*Emma Belter*	12/09/2022
Type Team Member Full Name	Signature	Date

Gabe Doria	*Gabe Doria*	12/09/2022
Type Team Member Full Name	Signature	Date

Claire O'Malley	*Claire O'Malley*	12/09/2022
Type Team Member Full Name	Signature	Date

Type Team Member Full Name	Signature	Date

Save this document as:

TeamName_CGT270Fall2022_FinalReport.pdf