**Effect of the Opioid Epidemic on Indiana’s Economy**

<insert a visualization created by the team here.>

**The Vicious Visualizers**

|  |  |
| --- | --- |
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|  |  |

Remove the highlighted text before submitting:

* The paper should be free of grammatical and spelling errors (use spell and grammar check)
* Times New Roman, font size 11, 1-inch margin, single spaced.
* If you cite any literature, include a References Section at the end of this document.

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Effect of the Opioid Epidemic on Indiana’s Economy

# Introduction

“In 2014, more than 1,100 Hoosiers died from drug poisoning – more than the number of fatalities from car accidents. Two years later, Indiana has taken important steps to address the epidemic, but our state has not yet turned the corner. In 2017, preliminary data show that more than 1,700 Hoosiers died from a drug overdose, an all-time high and a 75 percent increase since 2011. The rising number of drug-related fatalities in Indiana is driven by an evolution in the opioid crisis that has been observed in states across the country” (RMFF). The increase in opioid abuse has brought the state into a large-scale epidemic. Along with increased fatalities and loss of livelihood, the state is also experiencing a dramatic increase in costs due to the epidemic. Our mission is to determine the effects of the opioid crisis on the Indiana economy.

# Background

In this section provide background about the data – what dataset did the team choose and why? What additional data was acquired by the team? Why? Explain.

The dataset our team chose was Opioid Abuse in Indiana. We chose this set because it was the most interesting one to us and we believe that it is a big problem that needs to be addressed and solved. We hoped to gain some insight into the problem so we could understand it better. We were able to get additional data from the Indiana Business Research Center that showed a comprehensive estimate of the total damage experienced in Indiana due to opioid abuse. The losses measured in the study include direct costs, indirect costs, and loss of life and opportunity. Each region of the country has been affected, but the epidemic has produced among the most severe outcomes in Indiana (Brewer et. Freeman, 2018).

# 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 has been done before?

The question we want to address is “What are the financial costs of the opioid crisis in Indiana?” Our audience is anyone who wants to know the financial costs of the opioid epidemic. More specifically, this could include the state government, the CDC, hospitals, prevention agencies, etc. We are trying to determine the financial costs of the opioid crisis to determine how this issue not only affects individuals and their lives, but the economy, as well. Studies have been done in different states to try to determine how much the epidemic has cost each state individually. In Indiana, we could only find one study done by Ryan Brewer and Kayla Freeman that estimates the costs of the opioid crisis.

# Problem Statement

How has the data been visualized before? Significance (why should anyone care)? – why is the team’s work important?

Yes, it has been visualized before. Because opioid abuse is a widespread and deadly practice. It is a public health issue; the risk of opioid uses, and misuses continue to receive national attention. Along with this, it is important to look at the other effects of the epidemic. The opioid crisis has deep rooted effects on the economy that are not apparent at first glance. The team’s work is important because a lot of people probably feel that the epidemic does not affect them, but it affects everyone in ways they might not understand at first. Our work can show them how the opioid crisis affects the economy, which can lead people to realize how big of an issue the epidemic is.

# Methodology

What did the team do? Show your process, include sketches

# 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. This section should only contain the visualization and the figure caption.

# Discussion and Conclusion

Discuss your results (the figure in the Results section). Do your visualizations address the problem stated in the Problem Statement Section? Explain.

<https://theviciousvizualizers.weebly.com/>

<https://docs.google.com/presentation/d/11QGSFwRB7sv1CxblI9oBxVm5cnq6Q9GXQe4DeQUffAo/edit?usp=sharing>

# References

If references are listed, make sure they are cited in the body of the document.

<https://www.ibrc.indiana.edu/ibr/2018/spring/article1.html>

<https://www.rmff.org/insights/research-and-reports/the-opioid-epidemic-in-indiana-and-marion-county/>

# Appendix A – Resources Used

## Datasets

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

## Tools used

List all tools used in the project and a brief description (see the examples below); add more if applicable.

|  |  |
| --- | --- |
| **Tool/Application** | **Description** |
| Excel | Data cleaning |
| Tableau | Data visualization |
| Weebly.com | Web development |

# Appendix B

## 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>

## Individual Contributions

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** | **Description** | **Contribution** |
| *Alex McCausland* |  |  |
| *Caroline Risewick* |  |  |
| *Zhenghao Fang* |  |  |
|  | Total | 100% |

# Appendix C – Individual Contributions

In this appendix each team member must contribute a one-page document relating the team’s topic/data to their home town or home country. The one-page document must contain: (1) a description of the problem, (2) a comparison of the team’s findings with insights about your home town/country related to the hackathon data (3) a visualization to support items (1) and (2).

Each person should create their individual page 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: Alex McCausland

My Hometown/City/Country: Novi, MI (Wayne County) Hackathon Topic (dataset): Opioid Abuse in Indiana

Include your story and visualization below.

<https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state/michigan-opioid-involved-deaths-related-harms>

<https://www.michigan.gov/opioids/0,9238,7-377-94655---,00.html>

<https://www.cdc.gov/mmwr/volumes/70/wr/mm7015a1.htm>

<https://mi-suddr.com/opioids/>

## Team Member #2: Caroline Risewick

My Hometown/City/Country: **Evansville, IN**  Hackathon Topic (dataset): Opioid Abuse in Indiana

Include your story and visualization below.

## Team Member #3: Zhenghao Fang

My Hometown/City/Country: Hangzhou, China Hackathon Topic (dataset): Opioid Abuse in Indiana

Include your story and visualization below.

Since the China and America have the different drug control policy, China has strict drug control laws, the opioid abuse issue is less widespread than US. However, before 1980s during Qing dynasty, China had a severe drug abuse issue due to the Opium War. Drug use and supply have been a sensitive and high-priority issue for successive governments in China since at least the Opium Wars in the mid-19th century.

<https://link.springer.com/article/10.1007/s10571-007-9225-2>

<https://www.statista.com/statistics/287914/china-drug-users-by-drug-type/>

# Appendix C – Team Consensus

## Team Consensus

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

|  |  |  |
| --- | --- | --- |
| Team Member (full name) | Signature | Date |
|  |  |  |
|  |  |  |
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