



# Shootings in Ottawa

Crime Trends in Ottawa

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# EXECUTIVE SUMMARY

- This presentation includes charts and maps that illustrate various metrics related to shooting incidents in Ottawa. The analysis covers data from 2018 to 2024, revealing key trends in these events' frequency and geographical distribution. The data highlights patterns regarding when and where the incidents occur and their severity in terms of injuries.
- Certain areas, such as Overbrook – McArthur and Ledbury – Heron Gate, consistently report higher numbers of shooting incidents. These neighbourhoods experience multiple events with varying levels of injury, indicating potential hotspots for violence.
- The findings emphasize the importance of targeted law enforcement and community safety initiatives, particularly in neighbourhoods and wards with repeated incidents. These trends can assist policymakers and law enforcement agencies in strategizing intervention efforts and allocating resources effectively to reduce both the frequency and severity of shootings across Ottawa.



# INTRODUCTION

- This analysis is intended to guide discussions on resource allocation, preventive measures, and public safety initiatives in Ottawa. It will focus on mitigating risks in identified high-risk areas.
- The analysis focuses on data from 2018 to 2024. We see shooting incidents distributed unevenly across Ottawa's Divisions and Wards.
- We begin by exploring the critical insights from the data, including monthly shooting patterns, the most affected neighbourhoods and wards, and a closer look at the incidents by year. Through this analysis, we can better understand Ottawa's gun violence trends and stimulate proactive solutions for the future.
- Now, let's dive into the data and the story it tells.



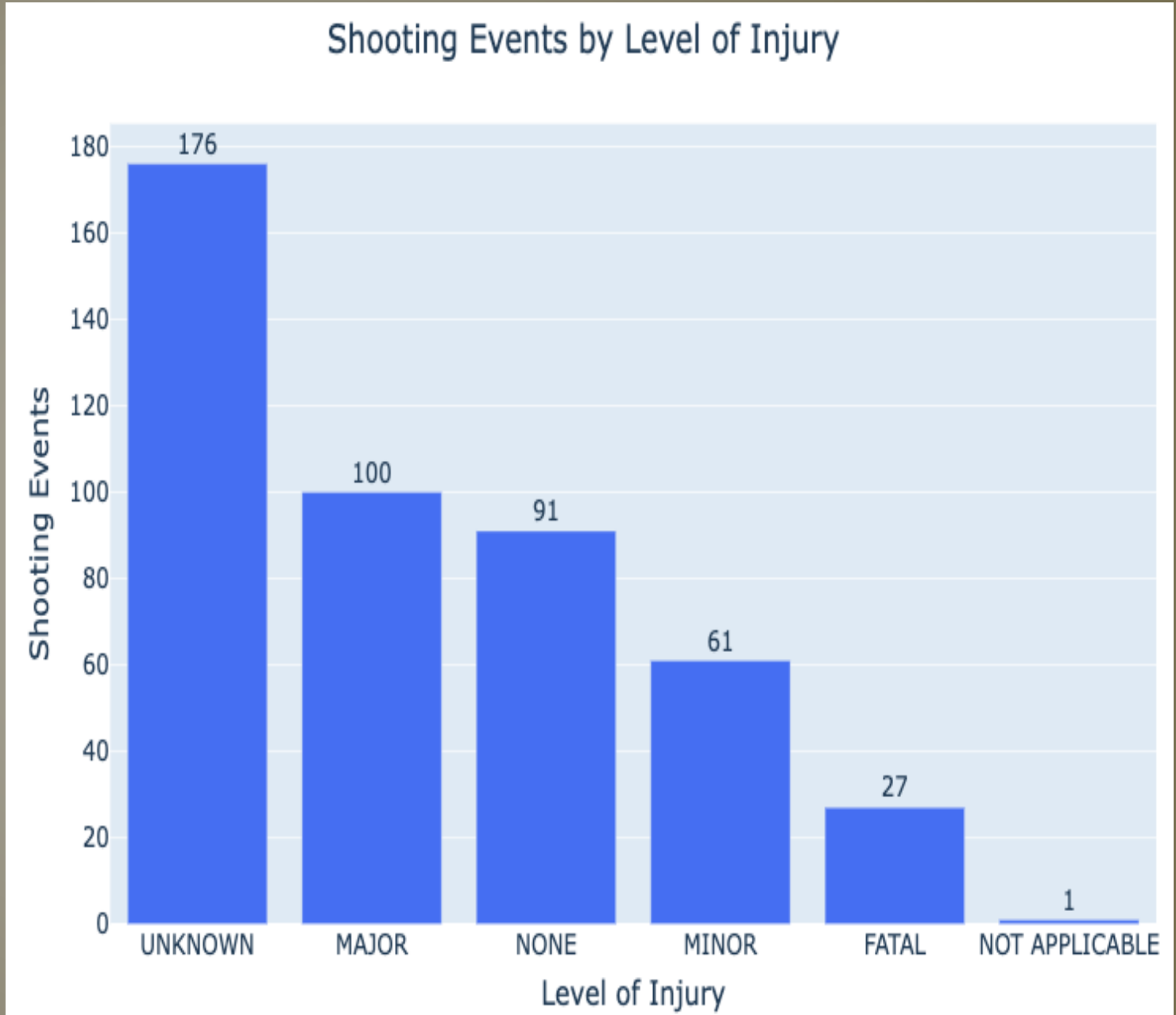


# METHODOLOGY

- The original CSV dataset used contains **456 records of shooting occurrences from 2018 – 2024.**  
[https://data.ottawapolice.ca/datasets/aeb09d77912246139014516c8eeefcd9\\_0/explore?location=45.229186%2C-75.832950%2C9.21&showTable=true](https://data.ottawapolice.ca/datasets/aeb09d77912246139014516c8eeefcd9_0/explore?location=45.229186%2C-75.832950%2C9.21&showTable=true)
- The CSV dataset was loaded into a MySQL database and cleaned with SQL Data Manipulation and Definition Statements. A Python script queried the database view, and the data was visualized using Python.
- A statistical web application was created using Python's Dash Plotly framework to visualize overall, yearly, and geolocational trends.
- The dataset initially contained 173 records with missing values in the 'Level of Injury' column and 3 records where the 'Level of Injury' was recorded as 'Unknown.' The 173 missing values were treated as 'Unknown' to maintain consistency in data categorization. As a result, there are now a total of **176 records classified under 'Level of Injury: Unknown.'**
- This ongoing project will be updated with new data from the Ottawa Police website. The web app will also evolve with additional features and improved responsiveness for various screen sizes and mobile devices.

# Results

- Injuries of varying severity were reported across multiple wards, with 'Unknown' and 'Major' being the most common levels of injury.
- "Major" injuries are frequent, but there are close to twice as many events resulting in "Unknown" injuries.
- The East Division sees the highest number of shootings.

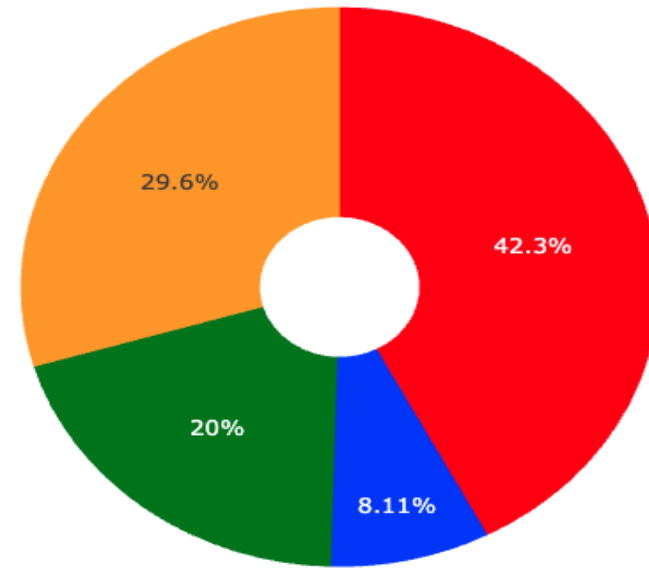


# Results

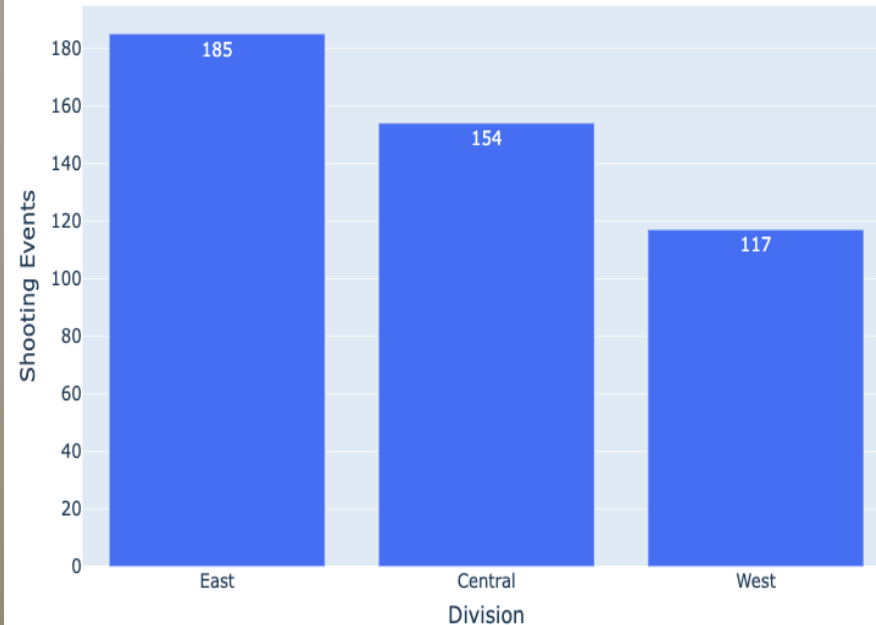
- Neighbourhoods like Ledbury-Heron-Gate-Ridgemont-Elmwood and Overbrook-McArthur are notable for having relatively more shooting events compared to other neighbourhoods.
- The most significant proportion of shooting incidents (42.3%) occurred in the evenings, followed by nights (29.6%), afternoons (20%), and mornings (8.11%).
- Ward 10 (Gloucester-Southgate) has the highest shooting incidents, followed closely by Ward 12 (Rideau-Vanier). Other wards have relatively fewer incidents.

Shooting Events by Time of day

■ Evening ■ Night ■ Afternoon ■ Morning



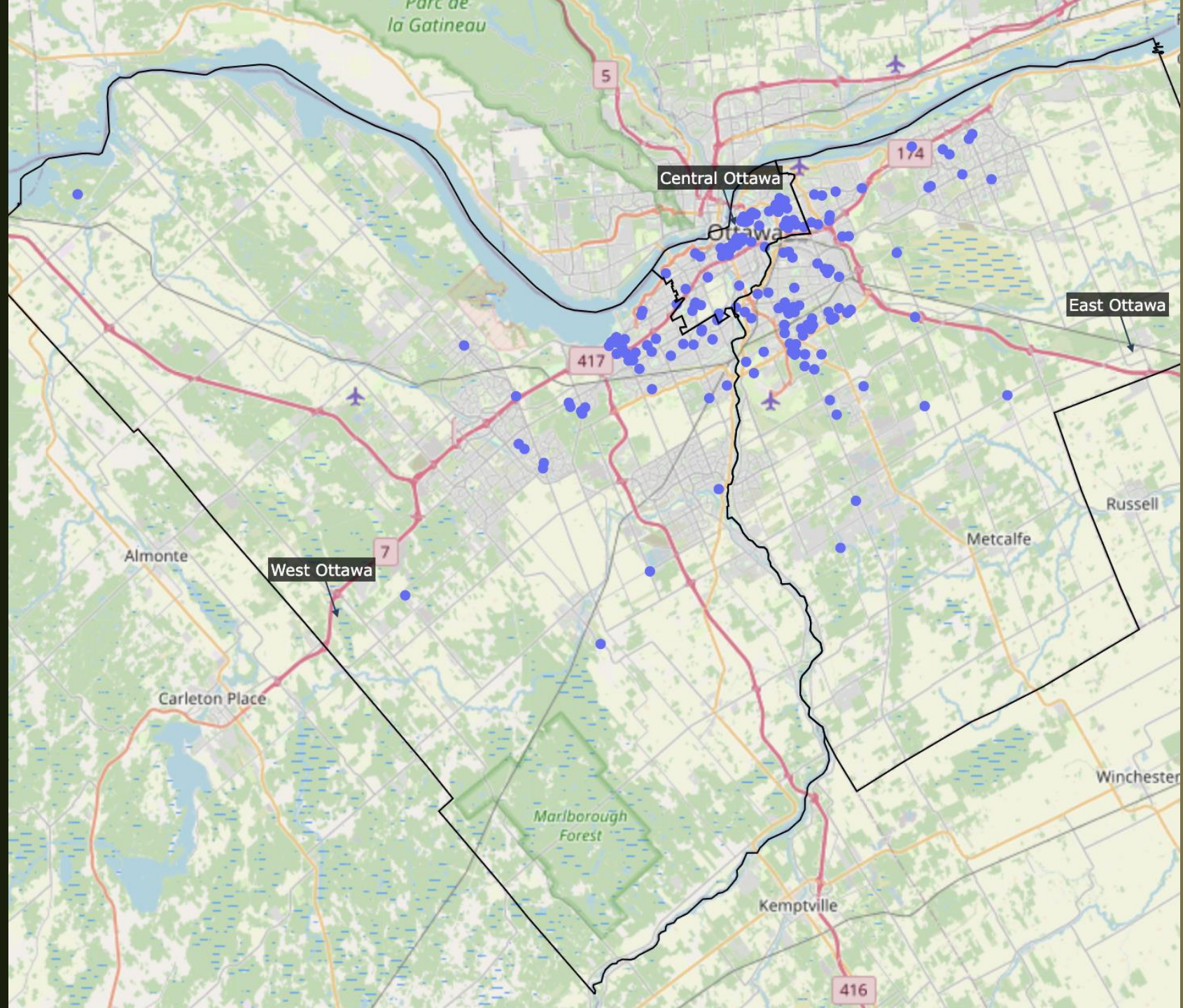
Shooting Events by Division





# Shootings by Division

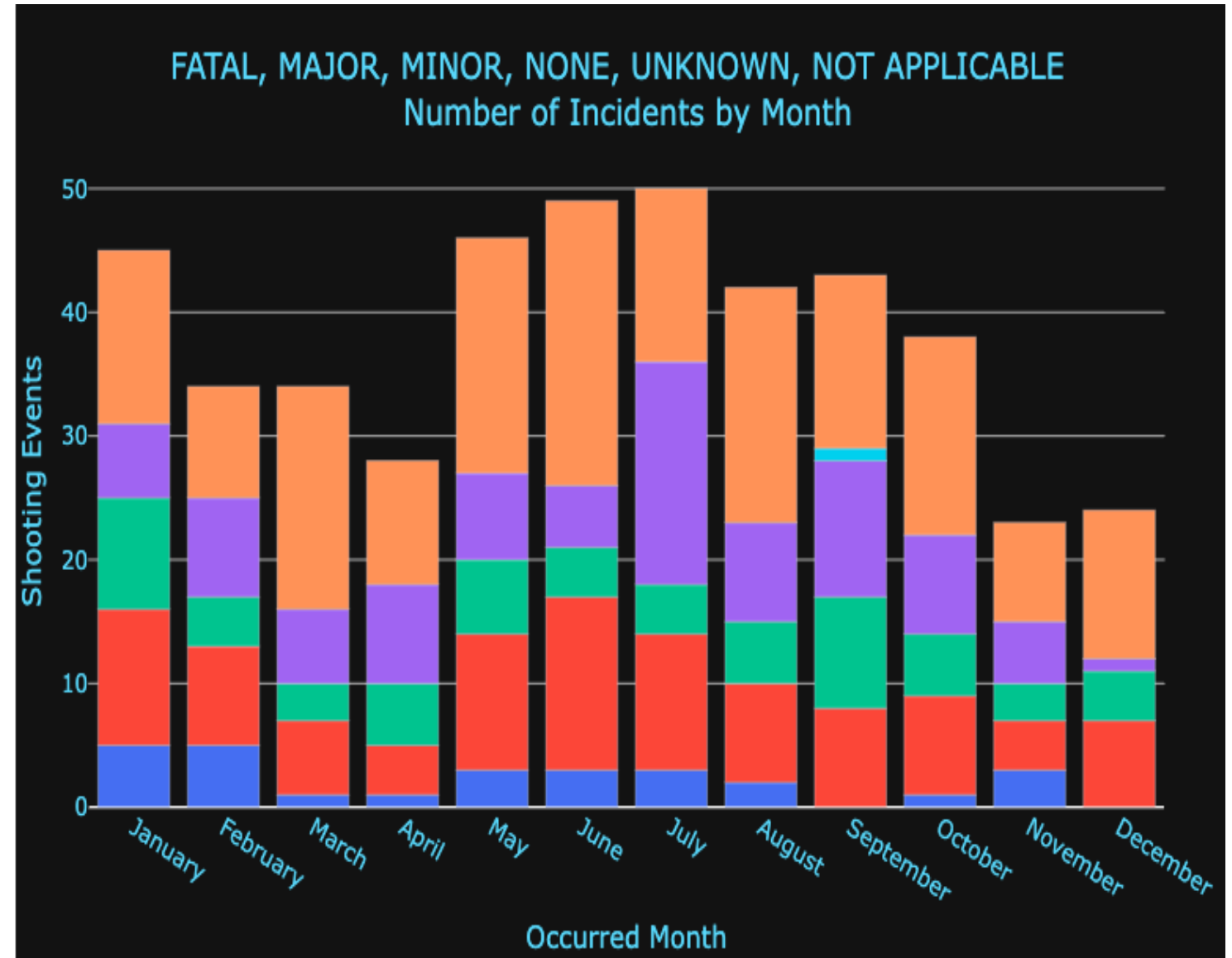
- Incidents are concentrated towards the center of the city as the population tends to increase towards the city center.
- The majority of events occurred in the East Division (185), followed by Central (154) and West (117).
- Interestingly, despite appearing to cover a smaller geographical area, the East Division accounts for more incidents than the West.





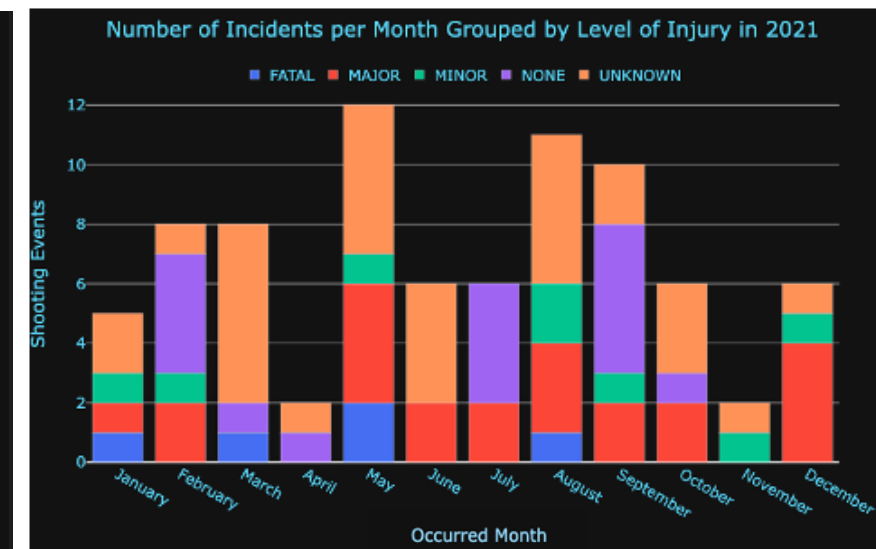
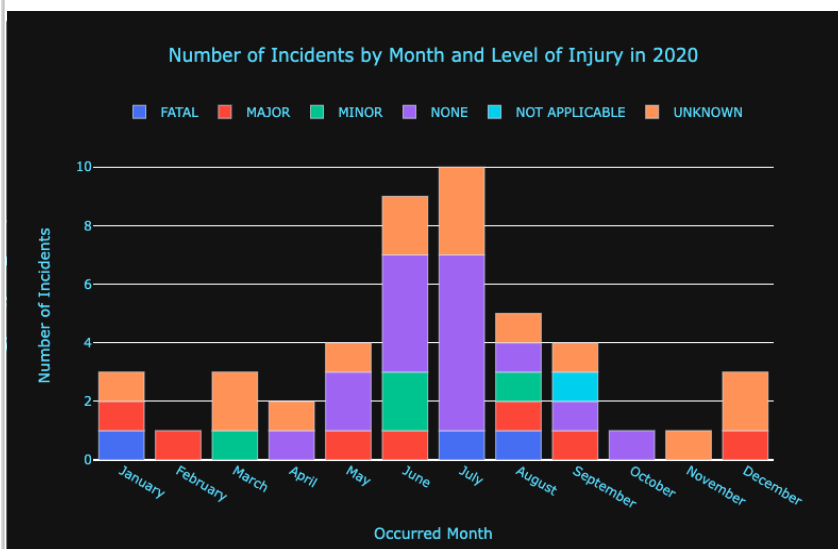
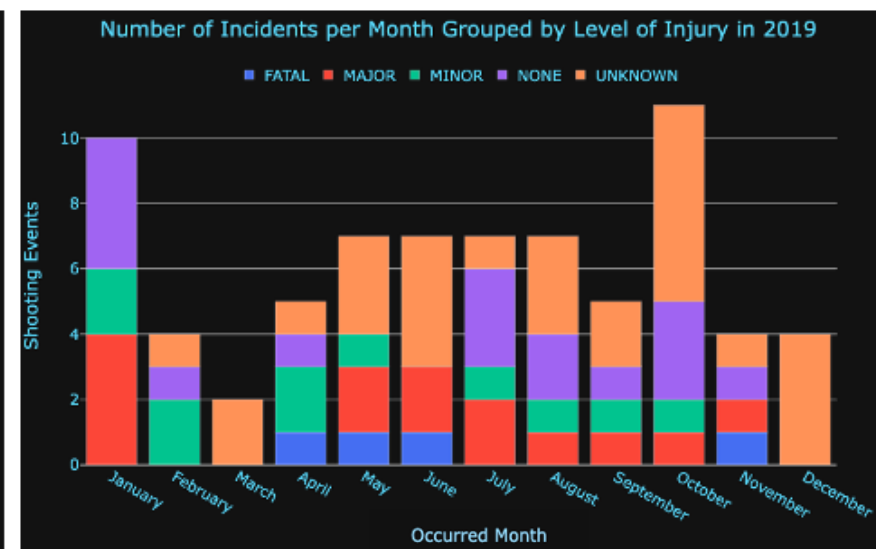
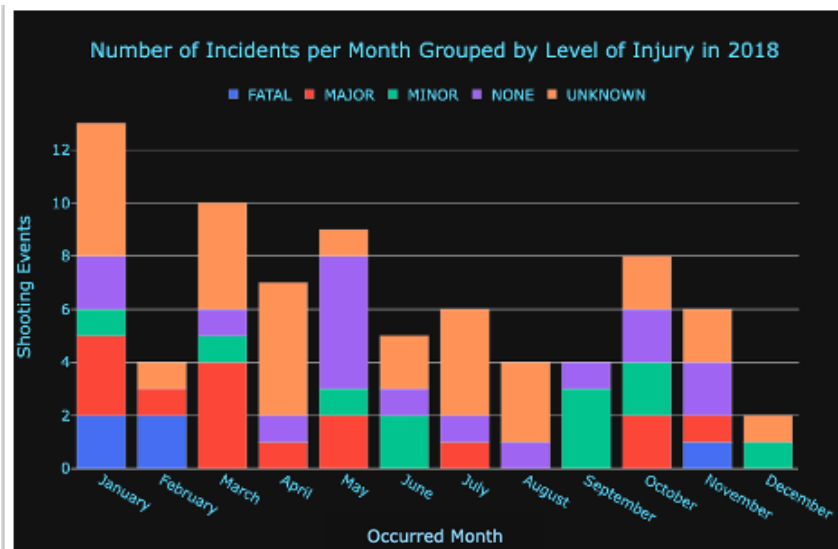
## Monthly Trends (2018-2024)

- **Summer Trends:** May, June and July show the highest number of incidents across all years, indicating increased mid-summer risk.
- **UNKNOWN** injuries (Orange) consistently dominate many months, suggesting a frequent lack of injury reporting. **MAJOR** and **NONE** are the next most frequent injury levels, while **FATAL** and **MINOR** injuries are present but lower in volume across most months.



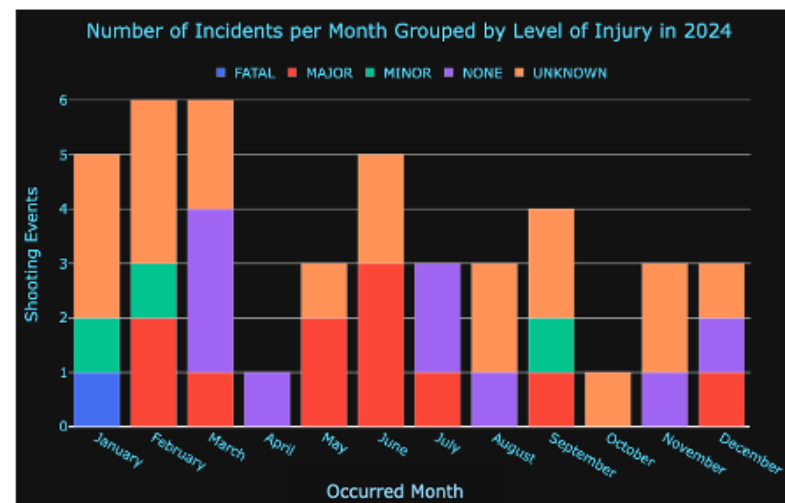
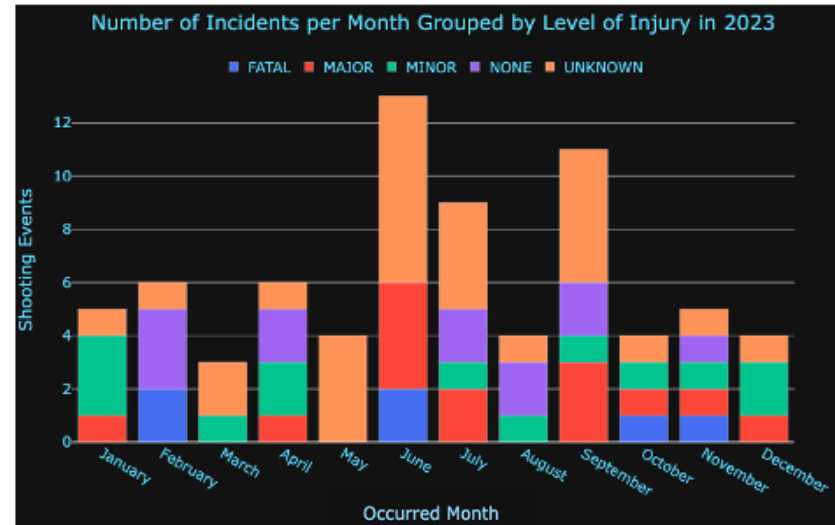
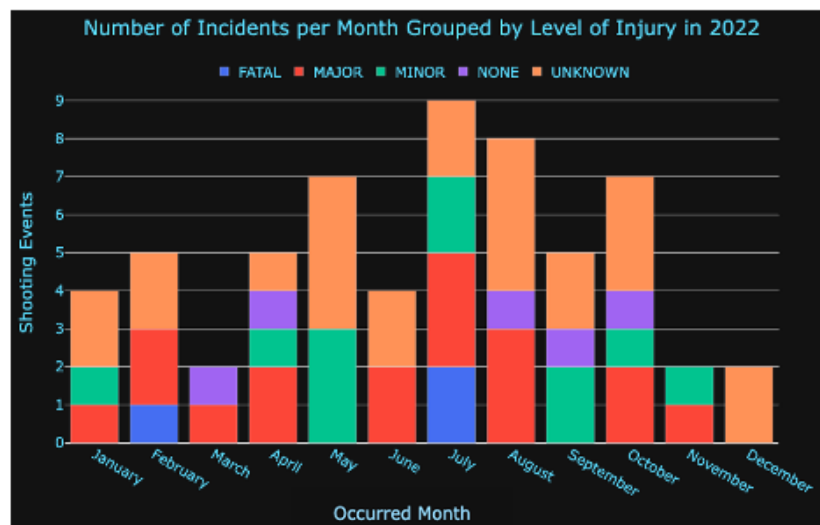
# Monthly Incidents Each Year (2018-2024)

- **Late Year Activity: September to November** shows an uptick in incidents, notably with **major** injuries in **2019** and **2021**. A smaller, more even distribution is observed in **2022-2024**.
- **2018, 2021, 2022, and 2023** show clear spikes in summer months, especially **July**.
- **2020** has fewer high-incident months and a peak in July, likely influenced by pandemic-related disruptions.

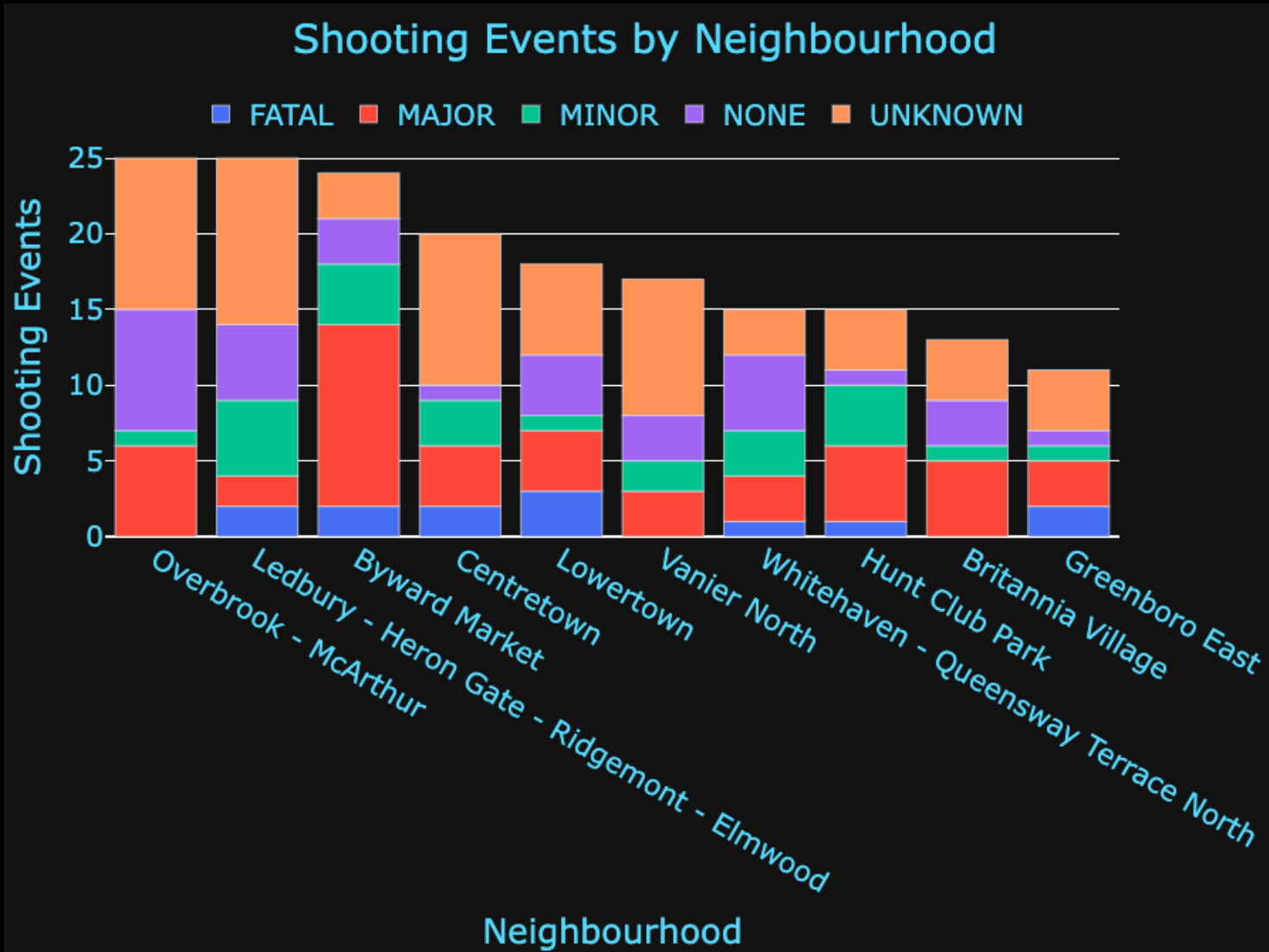


# Monthly Incidents Each Year (2018-2024)

- **2023** shows a sharp spike in **June**, mostly driven by unknown and major injuries.
- **2024** has relatively **lower incidents**, especially in the summer months, suggesting either a positive trend or incomplete data.
- **Preventive Measures:** Targeting injury severity through improved medical response and policing could greatly enhance public safety.



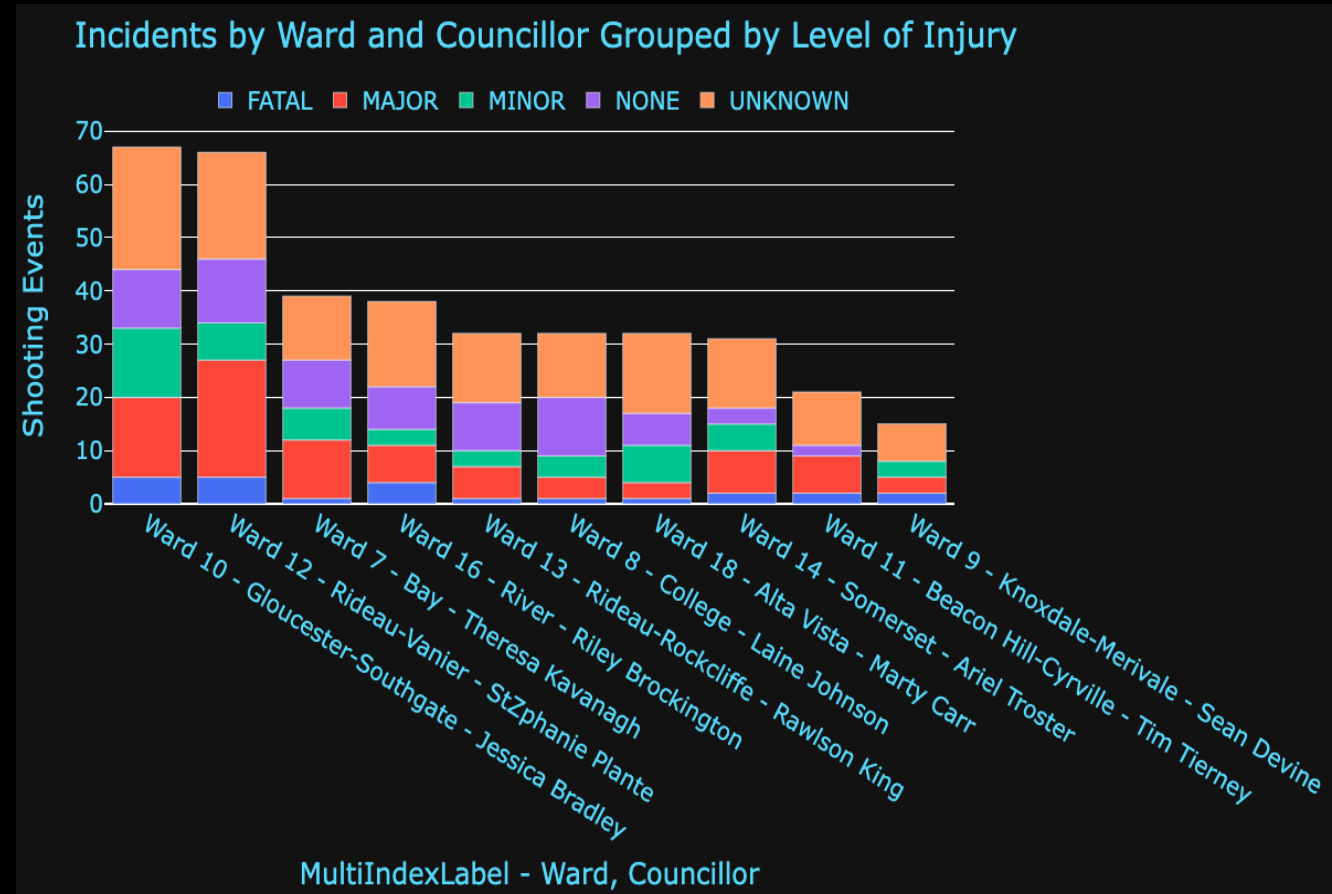
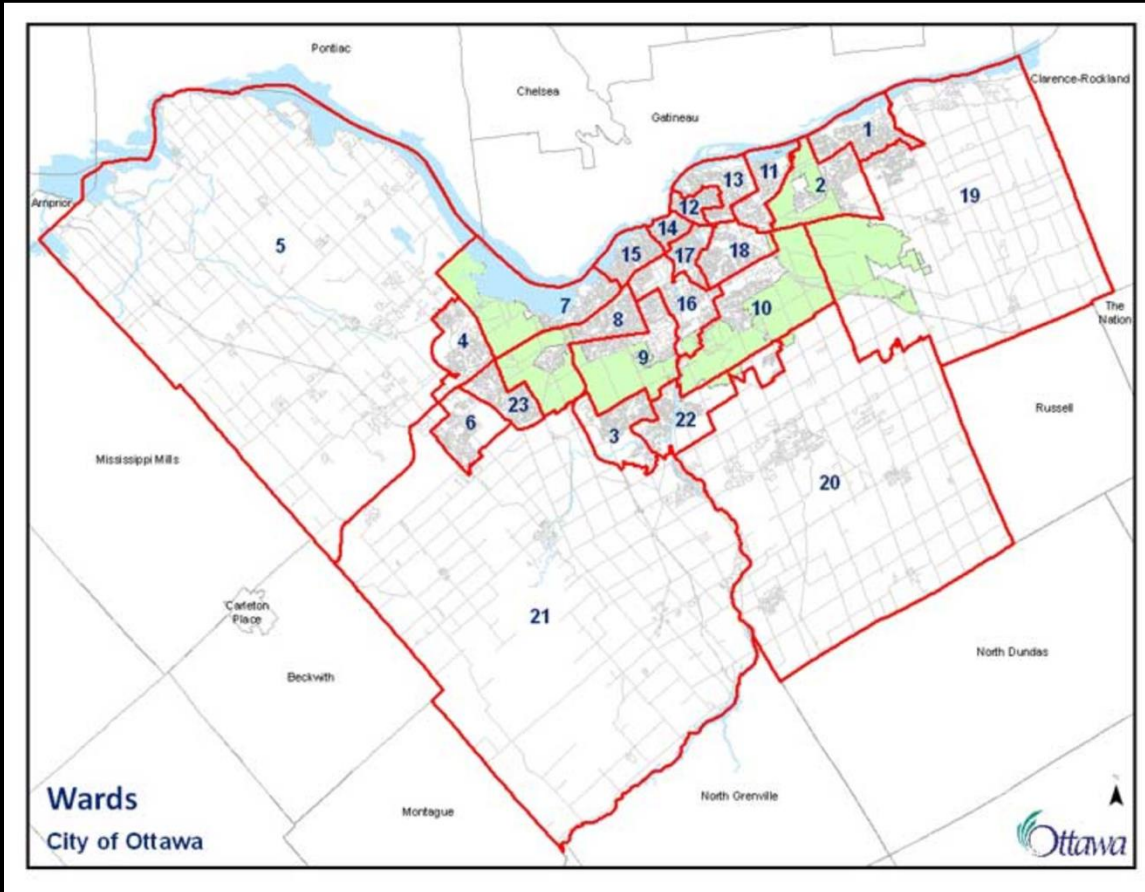
## Shootings By Neighbourhood



- Of the top ten neighbourhoods with the most shootings, four are in the East, two are in the West, and four are in Central Ottawa.
- Ledbury-Heron Gate-Ridgemont-Elmwood(East) and Byward Market(Central) are notable for having more shooting events than other neighbourhoods.
- Britannia Village and Whitehaven – Queensway Terrace North are the two West neighbourhoods among the top ten neighbourhoods with the most shooting events.



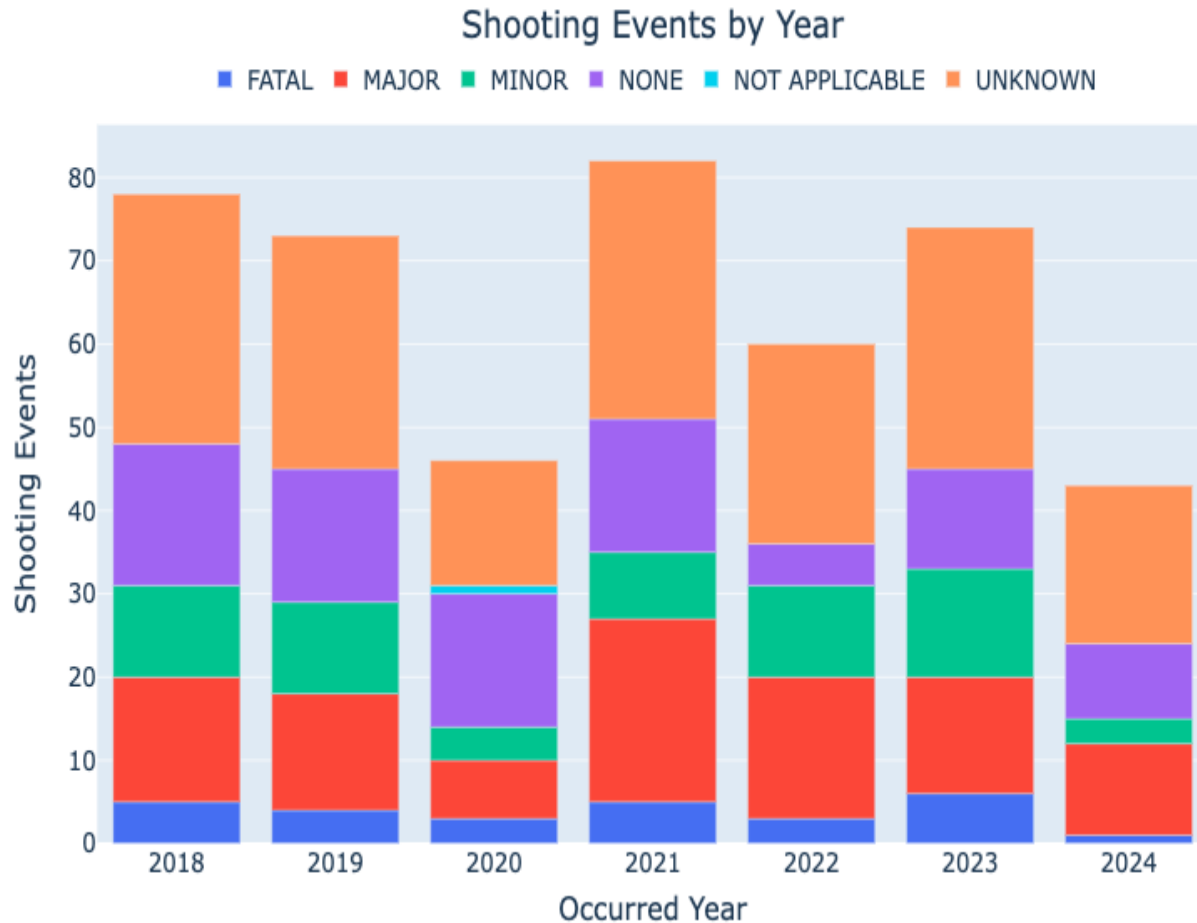
# Incidents by Ward/Councillor



(McKay, "Ottawa Seeking Feedback on Ward Boundary Review")

- Three of the top 10 neighbourhoods where shootings occurred are in Ward 10 - EAST. **(Ledbury-Heron Gate-Ridgemont-Elmwood, Hunt Club Park, and Greenboro East)**
- Three of the top 10 neighbourhoods where shootings occurred are in Ward 12 - CENTRAL. **(Byward Market, Lowertown, and Vanier North)**
- Two of the top 10 neighbourhoods where shootings occurred are in Ward 7 - WEST. **(Whitehaven – Queensway Terrace North and Britannia Village)**

# Overall Trends and Patterns



- **2018 and 2019** have similar total incidents, with **2018** slightly higher.
- A notable dip in **2020** can be correlated with public restrictions and societal changes during the COVID-19 pandemic, which will undoubtedly have impacted crime patterns.
- The highest shooting incidents occurred in **2021**, confirming that the year experienced a significant increase compared to previous years. This correlates with the partial lifting of COVID-19 restrictions, which saw people return to somewhat normal daily activities.
- After the **2021** peak, the number of incidents in **2022** considerably reduced, though still higher than in **2020**. However, a relatively balanced spread of **fatal**, **major**, and **minor** injuries indicates a diverse range of severity in outcomes.

# DISCUSSIONS

- **Geographical Distribution of Shootings:** The East division experiences the most shootings, followed by Central and West. Certain socioeconomic factors, such as income, education, employment status, and others, could drive these differences in regional crime patterns.
- **Ward Representation and Response:** The disparity in shooting events across wards could reflect how various local councils address crime prevention. For example, certain wards may prioritize safety differently.
- **Temporal Trends:** The highest number of shootings occurred in 2021. Pandemic-related disruptions in 2020 and subsequent societal shifts thereafter are likely to have had an influence on crime rates in Ottawa. Ottawa interim police chief Steve Bell pointed to changing societal trends and a lack of police staffing as crucial reasons behind the increase. Ottawa Police Services Board (OPSB) "amended the 2022 budget and did not anticipate the need for an increase in police resources[;] it actually anticipated a decrease," said Bell (Kurys).
- **Injury Severity and Impact:** Many incidents resulted in major or no injuries. This could be reflective of varying motives or targets in the shootings, such as intimidation versus intent to cause harm.



# OVERALL FINDINGS & IMPLICATIONS

- **Shooting Trends and Crime Rates:** The data suggest that the crime rate, including shootings, has fluctuated over the years, with a peak in 2021. Although there was a decline in 2022, we see a resurgence in 2023. Ottawa still faces challenges, as confirmed by broader crime data showing a 25% rise in overall criminal activity compared to pre-pandemic levels (Kurys). Violent crime, including shootings, increased by ~ 26% in 2021, indicating that societal factors such as economic distress, the pandemic, and police staffing shortages may be contributing to this rise in shootings (Ottawa Police Service).
- **Injury Levels:** The fact that many shootings did not result in injuries or only caused minor injuries raises questions about the nature of these incidents. It could suggest that not all shootings are intended to kill or maim and may instead be related to gang violence, warnings, or disputes. However, there were still significant incidents causing "major" injuries and fatalities, signalling the dangerous and unpredictable nature of these events.





# CONCLUSION



- The Ottawa shooting data offers insight into both the geographical and temporal patterns of gun violence in the city. With most incidents concentrated in specific divisions and neighbourhoods, there is a clear need for policing and targeted socioeconomic interventions.
- Rising crime rates overall, including a notable increase in gun violence incidents since the pandemic, underscore the urgency for effective policing and community engagement strategies.
- Collaboration between law enforcement, local governments, and communities is essential to address both immediate safety concerns and the root causes of gun violence.



# References

Kurys, Chris. "Ottawa Crime Rates Up 25 Per Cent in 2022 Compared to Pre-Pandemic Levels." *Ottawa City News*, 26 July 2022, [ottawa.citynews.ca/2022/07/26/ottawa-crime-rates-up-25-per-cent-in-2022-compared-to-pre-pandemic-levels-5623395/](https://ottawa.citynews.ca/2022/07/26/ottawa-crime-rates-up-25-per-cent-in-2022-compared-to-pre-pandemic-levels-5623395/). Accessed 15 Oct. 2024.

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