



## Problematic:

- 33% of drivers involved in traffic collisions are professionals
- 2% of all workers involved in road collisions led to 25%-30% of total mortality from 2000 to 2008 in Quebec.
- The total paramedics' collisions is 1228 (370 injuries and 858 non-injury) between 2010 and 2020 in Quebec.

## Aim:

- Distribution of ambulance Collisions across 17 regions in Quebec
- Evaluating the variables impacting the quantity as well as the severity of paramedics' collisions

## Method:

### Statistical Analysis:

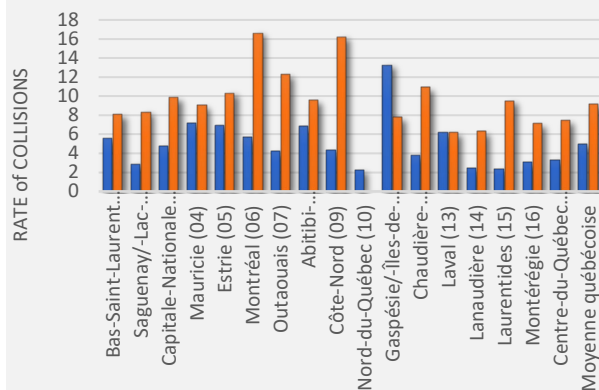
Explore the impact of factors on the odds ratio of paramedic collisions severity.

$$\ell = \text{Log} \frac{P}{1-P} = \beta_0 + \beta_1 X_1 + \beta_2 X_2$$

### Data Collection:

Data from SAAQ from 2010 to 2020 (including collision, environment, and road characteristics)

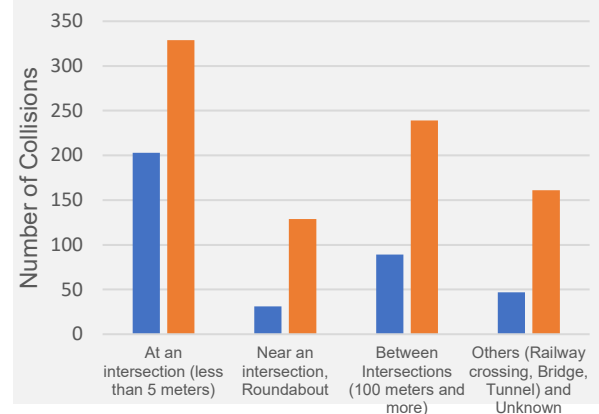
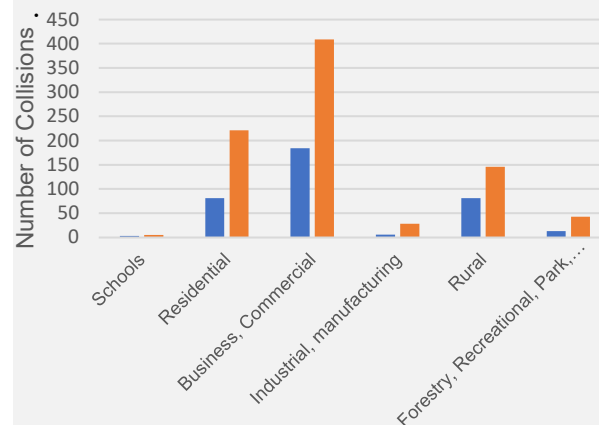
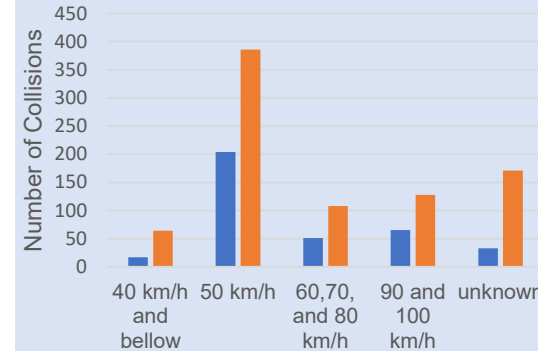
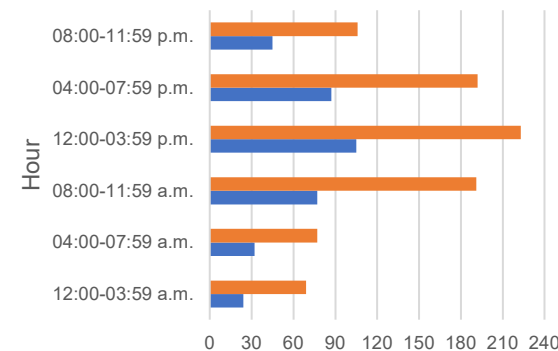
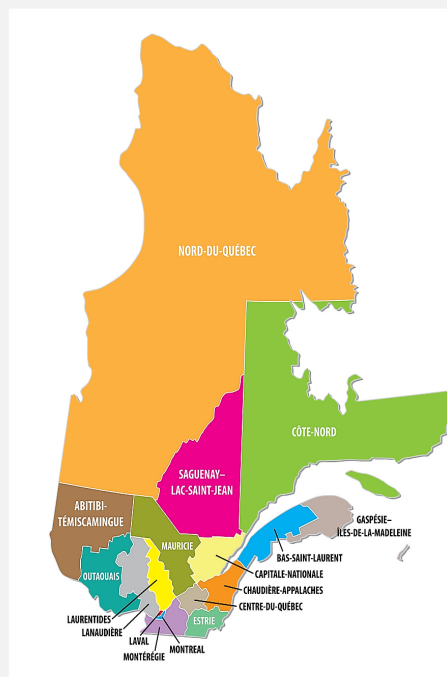
## Data Descriptive:



ADMINISTRATIVE REGIONS OF QUEBEC

■ Injury Collisions per 10000 population

■ non-injury Collisions per 10000 population



## Logit Regression Results:

- Accidents like fire, which do not include traffic collisions, are associated with an average increase of 15.31 in the odds ratio.
- Areas between intersections (100 meters and more) result in a 0.36 decrease in the odds ratio

## Conclusions:

- These analyses could lead to better-informed decisions on awareness and recommendations to reduce ambulance collisions as follow:
  - Training and educational program,
  - changing the policies and administration
  - Marketing campaigns,
  - Using the in-vehicle monitoring system