

The dataset of bodily injury in automobile accidents was used to analyse odds of fatality by hour in a day. The time was manipulated to create a categorical variable with hours as levels, as well as accident severity was re-coded to represent a two levels with fatal outcome either “Yes” and “No”.

Figure 1. represents the odds of fatalities by hour in a 24 hour period with a 95% Confidence Interval. In the previous analysis, we visualized the total number of accidents in a 24 hour period. We concluded that the total number of accidents is highest during peak hours of the day mainly at 8 am and 5-6 pm when people are getting to and from work. An interesting trend then occurs, looking at the odds of fatality by hour. The odds of being in a fatal vs non-fatal accidents are 0.006 (0.005, 0.008) at 8 am which is a very sharp decline in comparison to hours prior to the rush hour. Despite having more accidents, there are less fatal outcomes. This may be due to speed of vehicles and other factors.

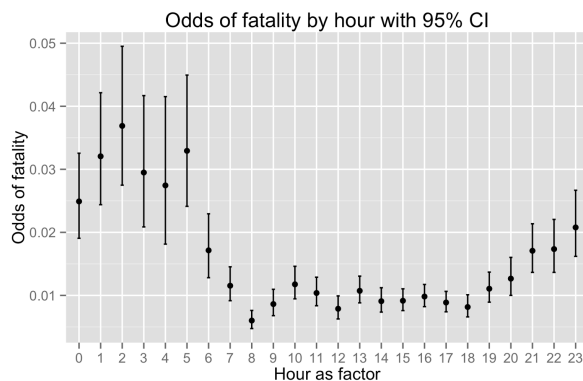


Figure 1. Odds of fatality by hour with a 95% CI