

Rate, Cost, and Geographic Distribution of Alcohol-attributable Hospitalizations in the Wellington-Dufferin-Guelph Health Region

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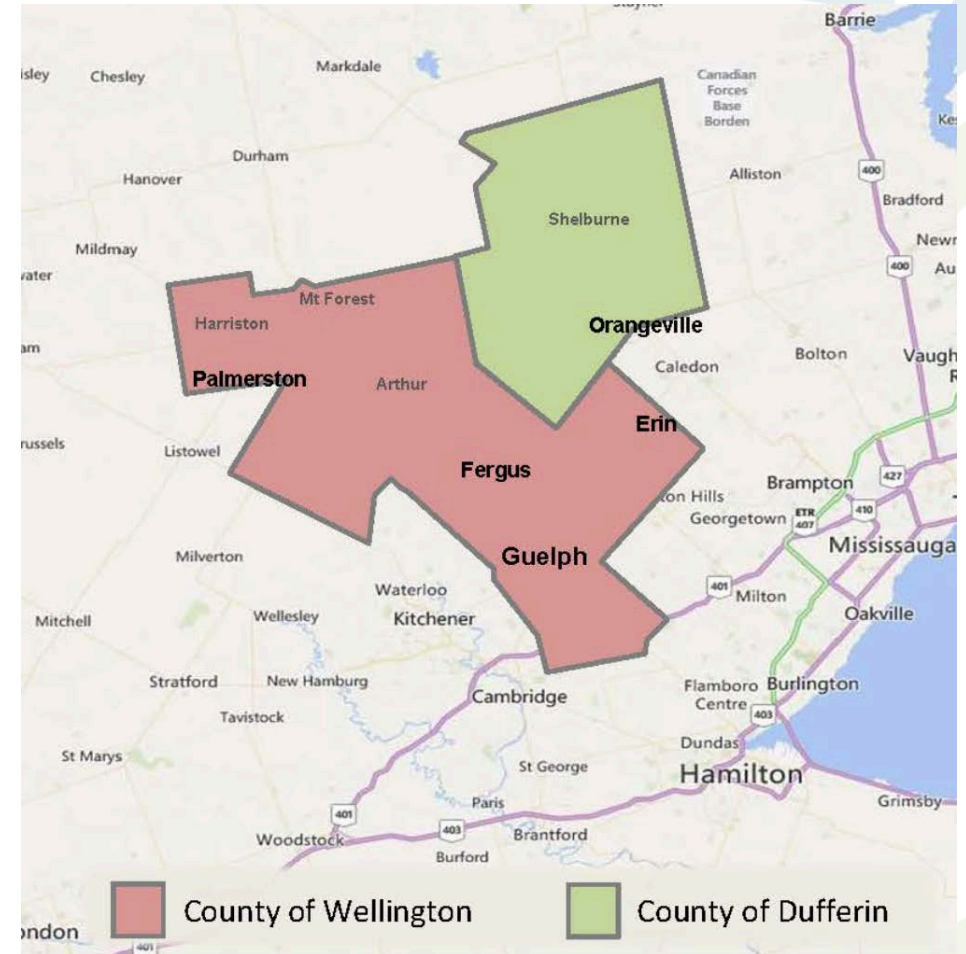
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Burden of Alcohol use

- One of the leading risk factors for disease and injury
 - Causal factor in 200+ medical conditions
- Significant economic costs
 - \$5.3 billion per year in Ontario

In WDG

- 28% increase in hospital visits for conditions entirely attributable to alcohol (2009 to 2013)
 - E.g. alcohol dependence, alcohol abuse
 - Suggests a rise in alcohol-related harms in WDG
- Helpful to consider conditions partially attributable to alcohol
 - E.g. liver cirrhosis, cancer, etc



Purpose

- Calculate the number, rate, and cost of hospitalizations attributable to alcohol in WDG (2011 to 2013)
 - Cancer
 - Cardiovascular diseases
 - Digestive diseases
 - Neuropsychiatric conditions
 - Injuries
 - Explore the geographical distribution of alcohol-attributable hospitalizations and income levels within WDG
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Alcohol-attributable fraction (AAF)

- $AAF = [P * (RR - 1)] / [P * (RR - 1) + 1]$
 - P = proportion of the WDG population who consume alcohol
 - RR = relative risk of disease/injury compared with zero alcohol consumption
- AAF applied to the # of hospitalizations for each alcohol-related condition of interest



- Rate

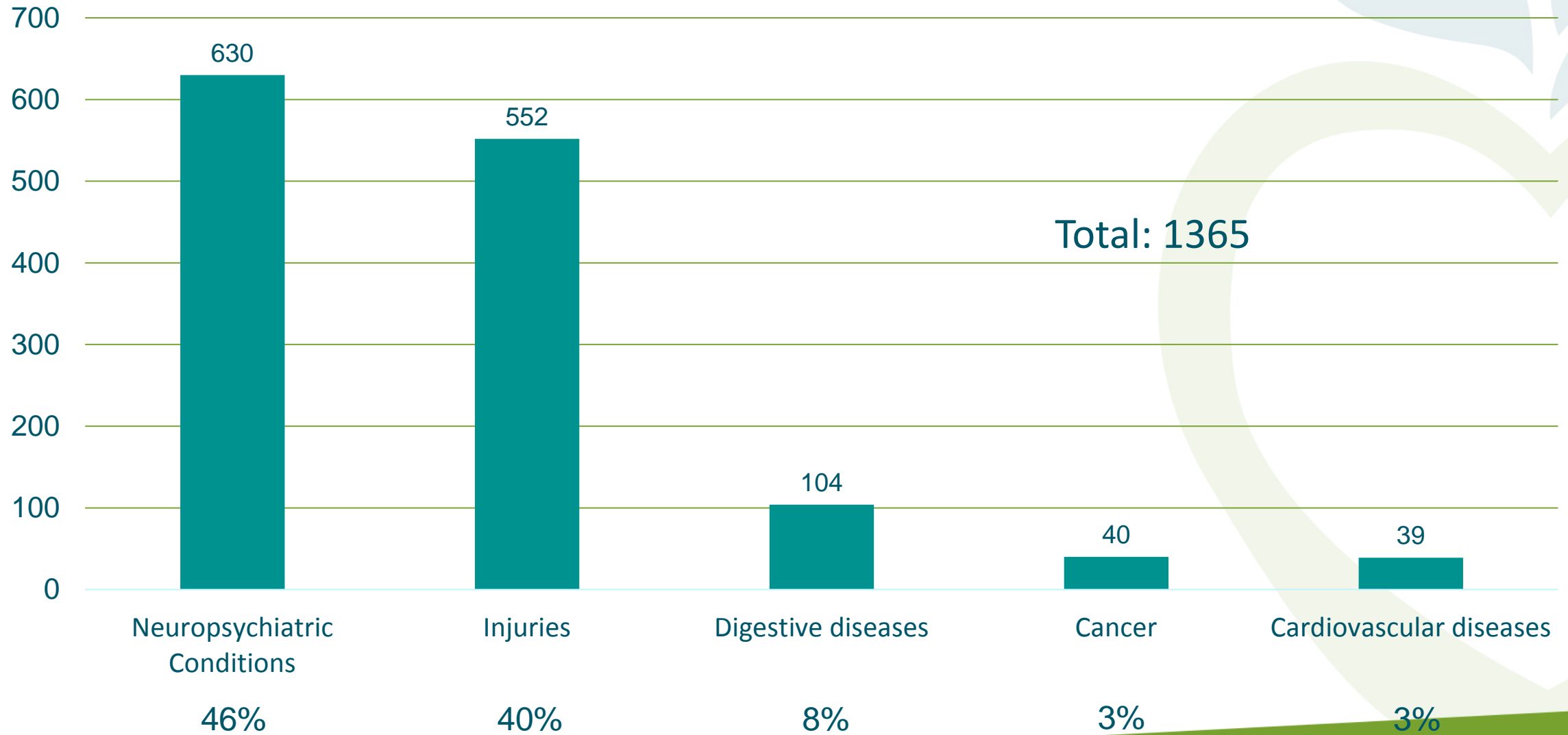
- # of alcohol-attributable hospitalizations / population size

- Cost

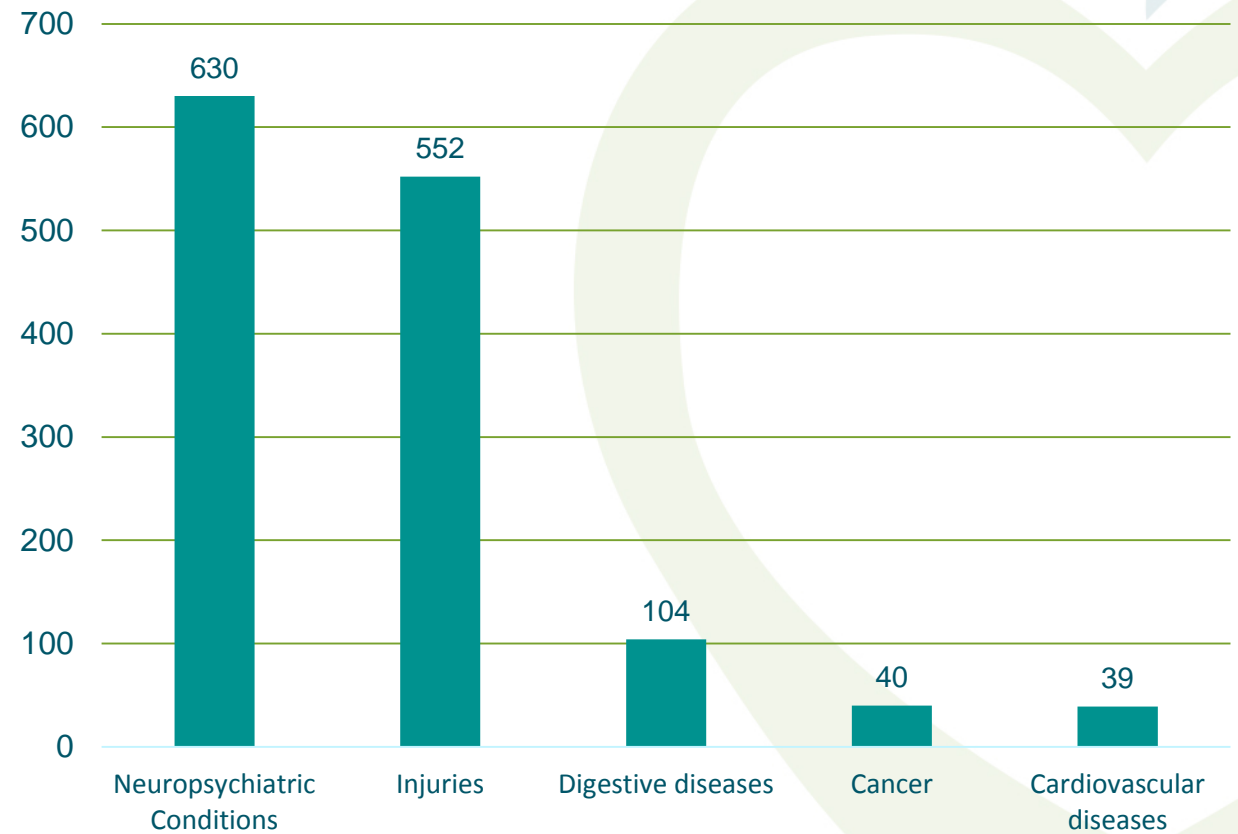
- # of alcohol attributable hospitalizations x average cost of a standard hospital stay



Number of alcohol-attributable hospitalizations (2011-2013)



- ~1/2 due to neuropsychiatric conditions
- Neuropsychiatric conditions: high AAFs
 - Alcohol dependence
 - Alcohol abuse
 - Alcoholic psychoses
- Males: 68%
- Females: 32%



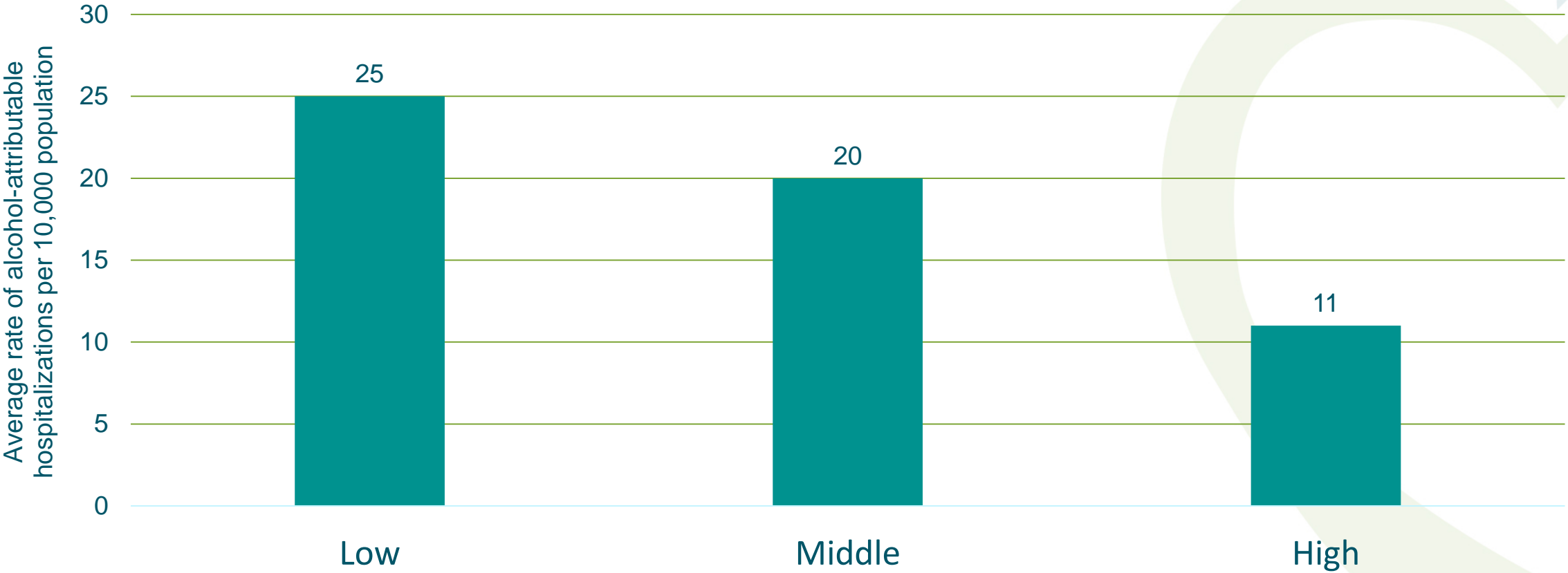
Cost of alcohol-attributable hospital admissions (2011-2013)

- Costs – \$3.8 mil
 - Neuropsychiatric diseases – \$2.9 mil
 - Digestive diseases - \$490,000
 - Cancer - \$190,000
 - Cardiovascular diseases - \$180,000

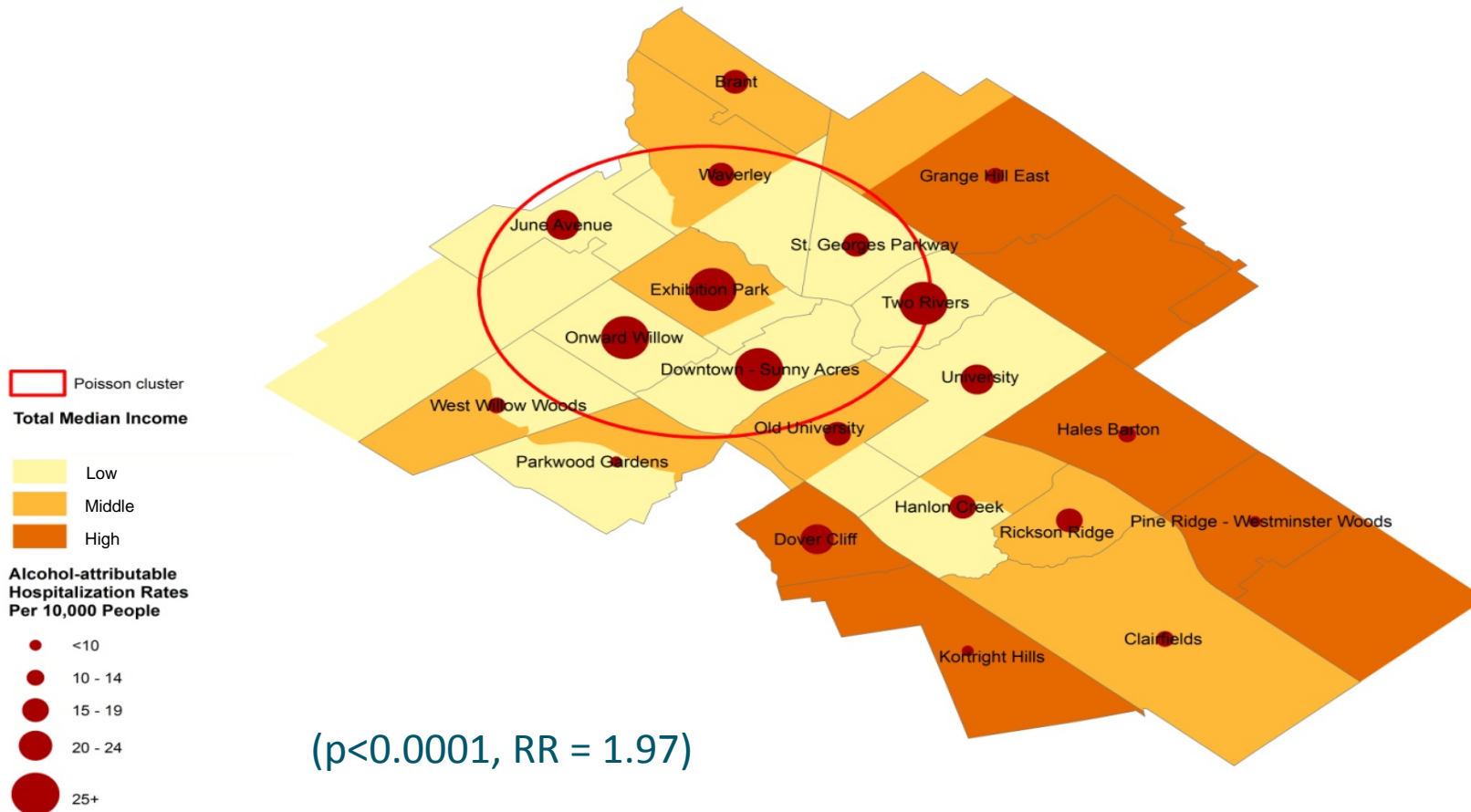


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ESTIMATE

Rate of alcohol-attributable hospitalizations and income (Guelph)



Geographical distribution of income and alcohol-attributable hospitalization rates (Guelph)



In WDG...

- 58% (highest income category) compared to 44% (lowest income category) exceed daily/weekly limits proposed by the LRADG
 - Suggests more higher income individuals are heavier drinkers than lower income individuals
- Possibly explained by drinking patterns
 - Frequency of binge drinking = important factor

Next steps

- Target alcohol harm prevention programs to ensure coverage with groups most at risk of harm
 - Lower income neighbourhoods
- Discussion with community partners
 - Creation of 2 alcohol harm prevention committees
- Media campaign to raise public awareness of alcohol-related harms

Conclusion

- Study aimed to estimate the health burden of alcohol use in WDG
- Health burden disproportionately placed on lower income groups
- Overall...
 - Importance of socioeconomic variables
 - Identification of high risk subgroups
- More work needed to understand the cause of differential health impact

Thank you!

Questions?



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CANCER	CARDIOVASCULAR DISEASES	DIGESTIVE DISEASES	NEUROPSYCHIATRIC CONDITIONS	INJURIES
Mouth	Hypertensive disease	Alcoholic gastritis,	Alcoholic psychoses	Motor vehicle accidents
Esophageal	Ischemic Heart Disease	Liver cirrhosis	Alcohol dependence	Poisoning
Liver	Alcoholic cardiomyopathy	Cholelithiasis	Alcohol abuse	Falls
Laryngeal	Cardiac arrhythmias	Acute/chronic pancreatitis	Depression	Fires
Breast	Stroke		Degeneration of nervous system	Drowning
Other	Esophageal varices		Epilepsy	Intentional/unintentional injuries
				Homicide