

INJURY SURVEILLANCE IN THE EMERGENCY DEPARTMENT: The Second Year of Data Collection in the Thompson Health Region

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Objectives

This study is part of a broad collaborative effort between the British Columbia Injury Research and Prevention Unit and Health Regions in British Columbia. This initiative aims at the implementation of an injury surveillance system in the Emergency Departments (ED) across the province. The study reports the one-year experience of injury data collection in two EDs in the Thompson Health Region in 1999.

Methods

Data were collected in the EDs based on a standardized minimum data set adapted from the Canadian Institute for Health Information Ambulatory Care System.

Minimum Data Set

Personal Data

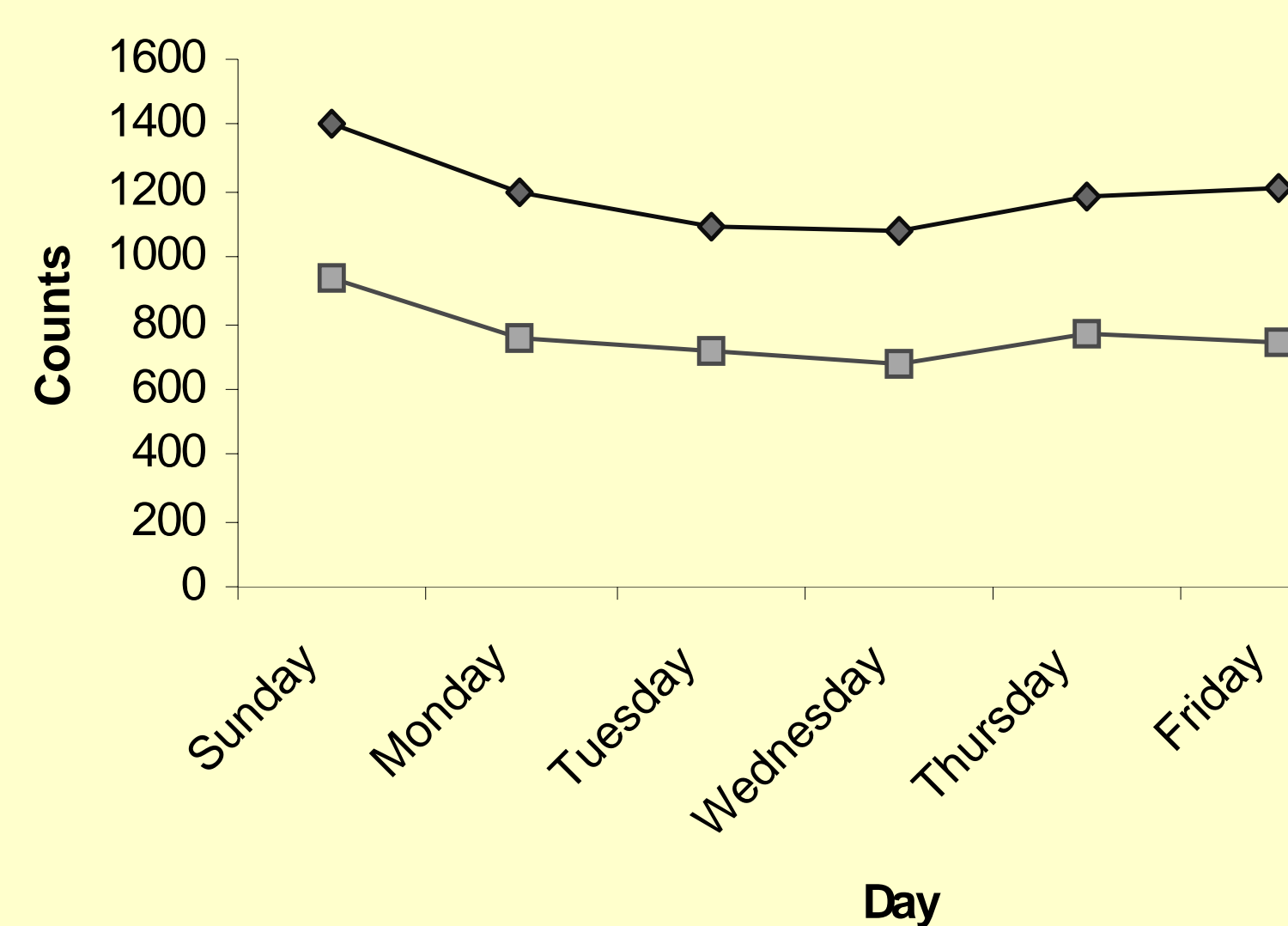
ID number (Scrambled)
Gender
Postal code
Date of birth

Injury Event Identifiers

Data of visit/injury
Place of injury occurrence
Main problem (N-code)
Other problem (N-code)
Activity when injured
External cause (E-code)
Visit disposition

Descriptive analyses were conducted to examine the distribution of injuries by age, gender, time trends, cause, place of occurrence, nature of injury, and activity when injured.

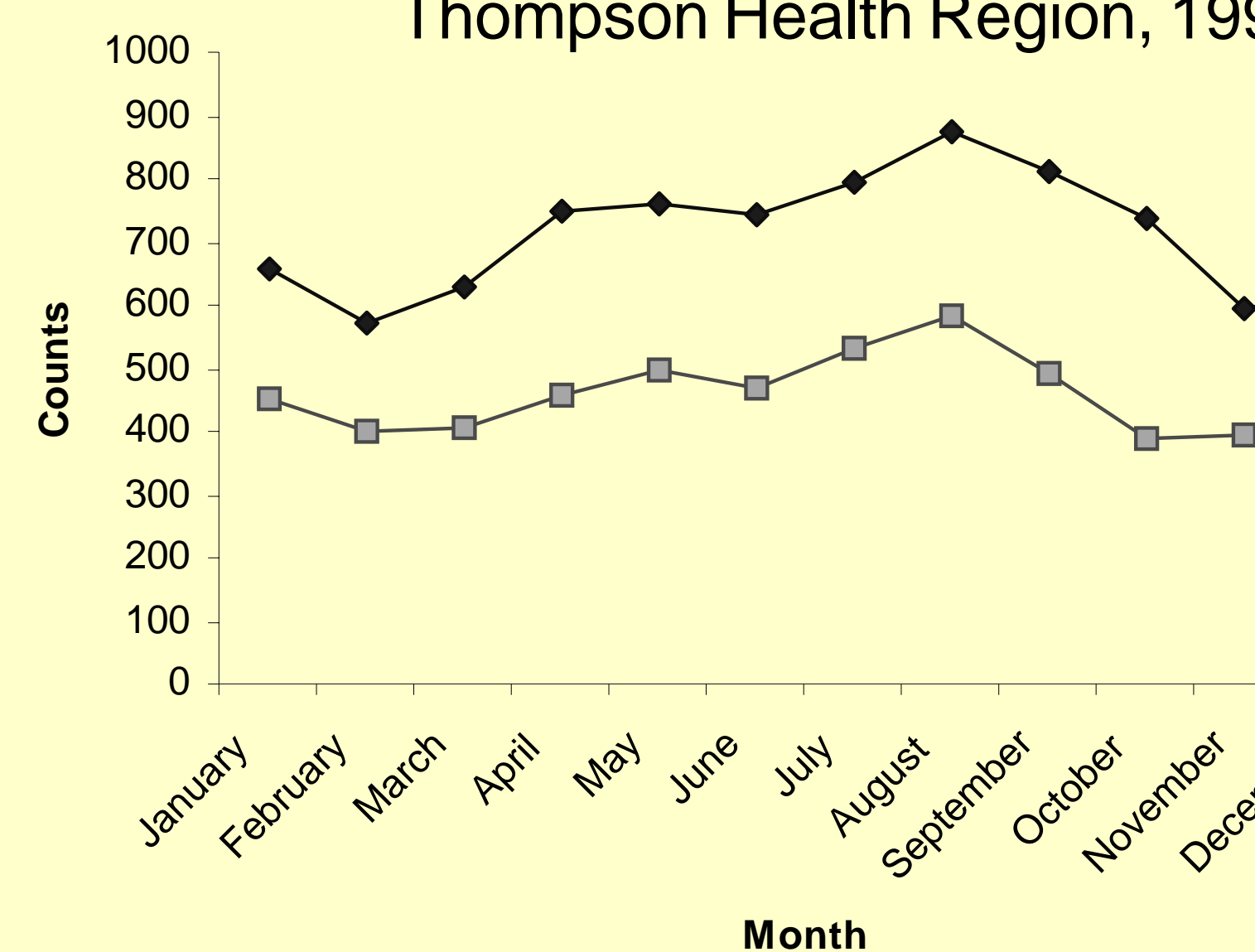
Emergency Department Visits by Day Thompson Health Region, 1999



Time trends

The trends of injury visits by day of the week showed significantly higher frequencies of injuries in the weekends among both males and females ($p < 0.05$). Similarly, significantly higher frequencies of injuries were observed in the summer (from July to August) ($p < 0.05$).

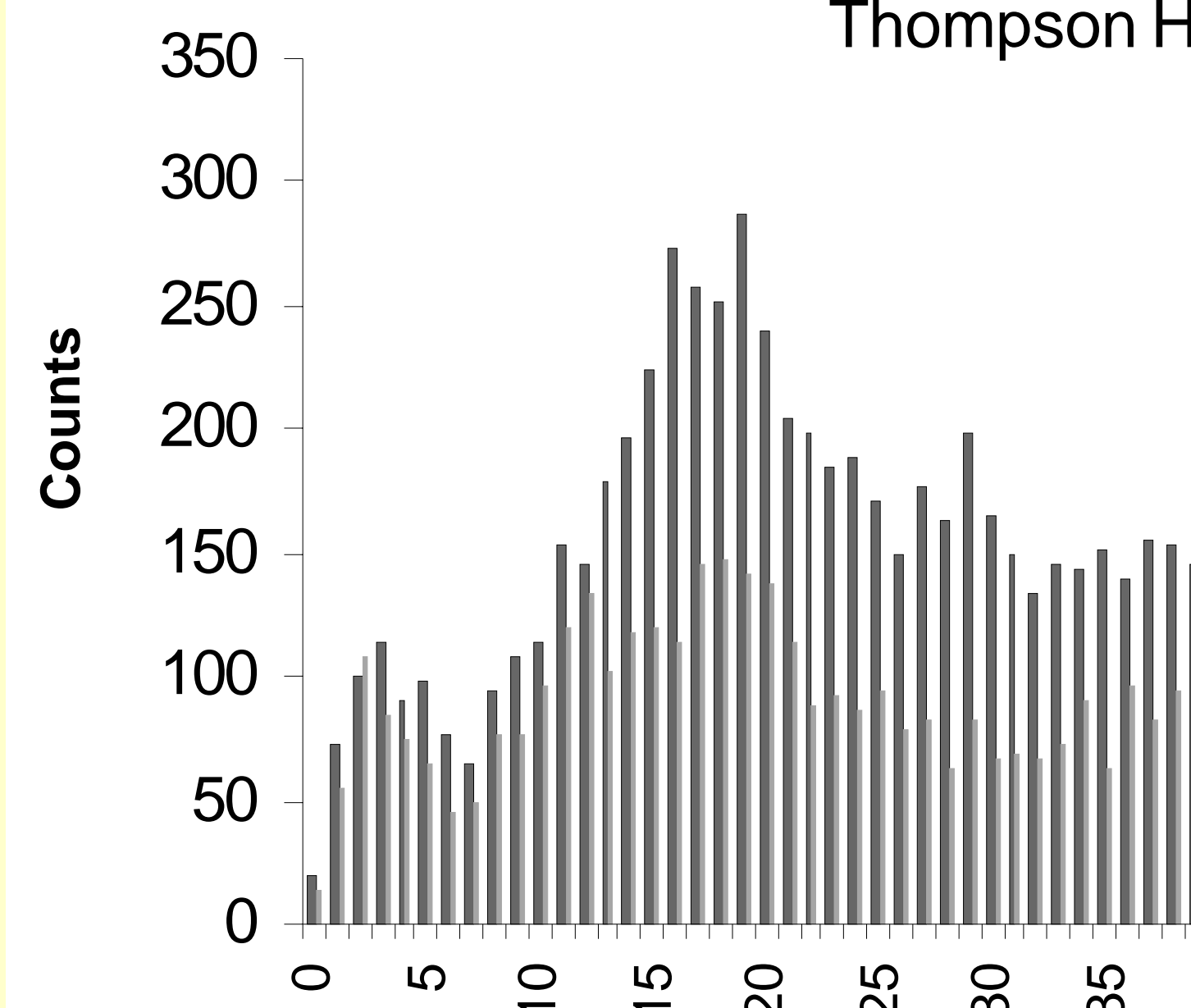
Emergency Department Visits by Month Thompson Health Region, 1999



Results

14,020 injury cases were recorded during 1999.

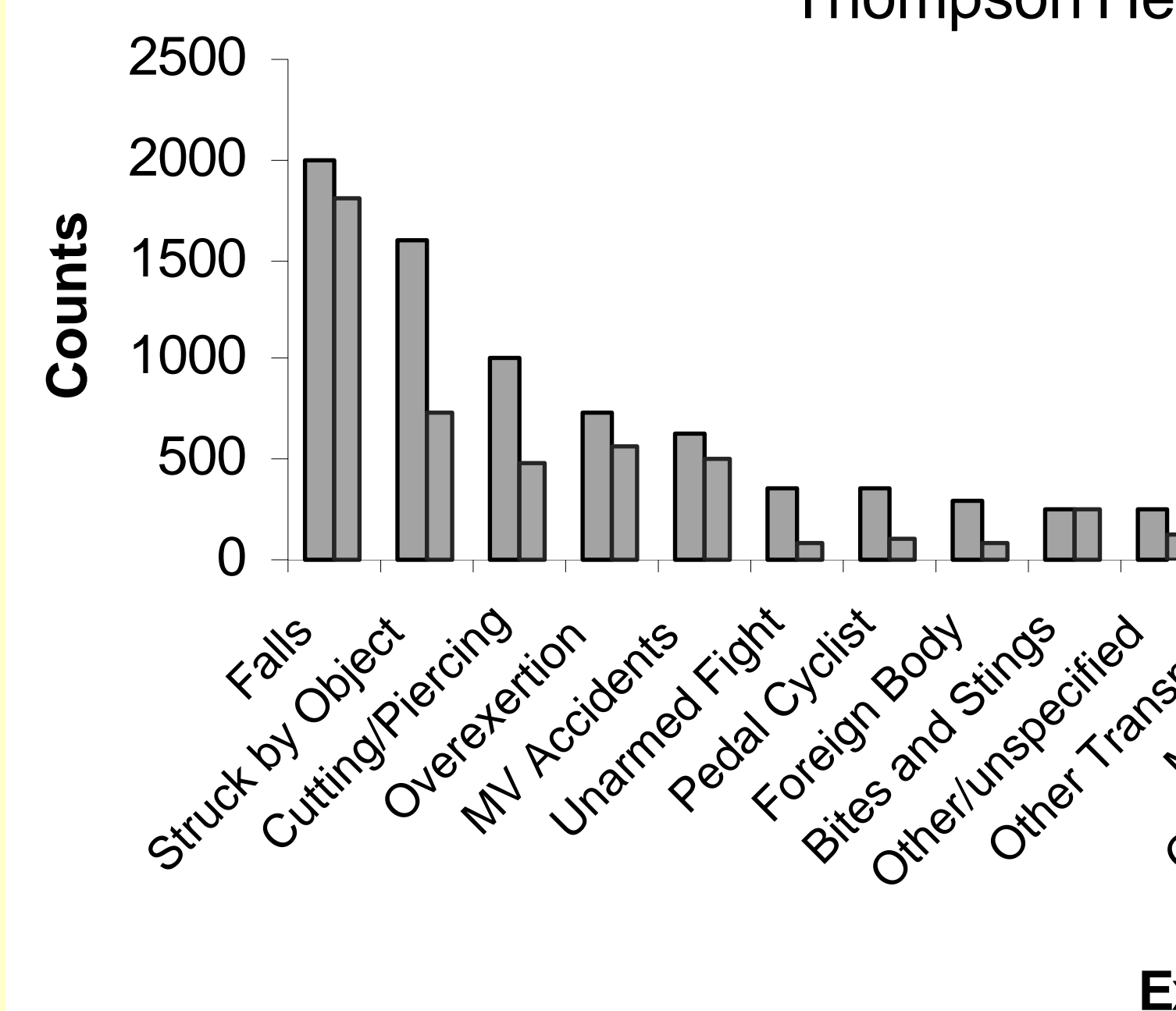
Emergency Department Visits by Age and Gender Thompson Health Region, 1999



Age and Gender

Average age was 31 years (+/- 20 years). Sixty-one percent of the cases were males.

Emergency Department Visits by External Cause Thompson Health Region, 1999



External Causes

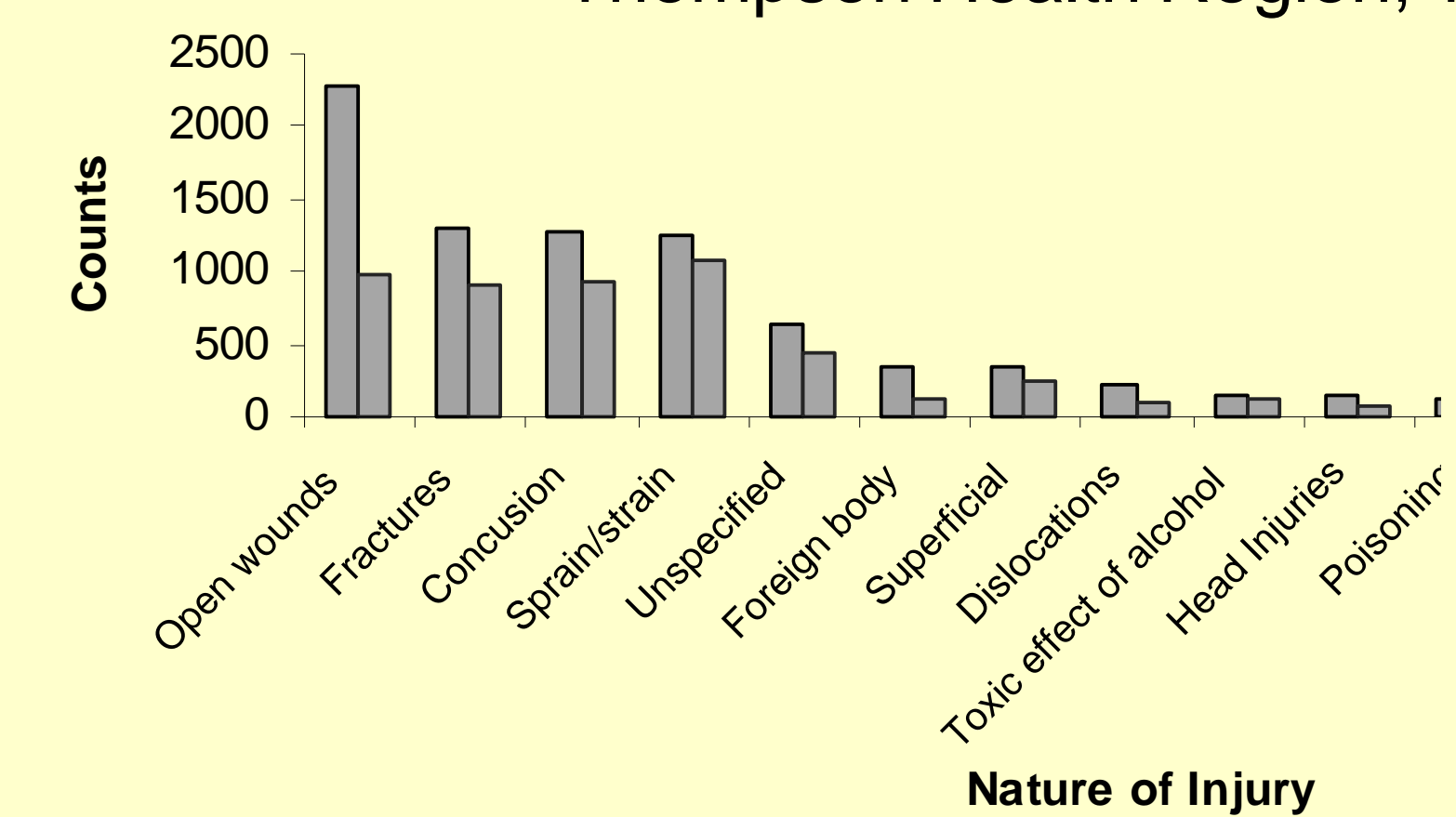
The six leading causes of injury included Falls (27%) followed by Struck by Object (17%), Cutting/Piercings (11%), Overexertion (9%), Motor Vehicle (MV) Accidents* (8%), and Unarmed Fights (3%).

*MV Accidents encompass accidents with occupants, pedestrians, motorcyclists, and bicyclists. Other types of MV accidents fall under the headings Other Transport or Off-road Vehicle.

Conclusion

- Based on this data, target areas for prevention have been set for home, and sport and recreation injuries. Further collaborative work is also being conducted with ICBC on transport injuries.
- Injury data collection is feasible in the Emergency Department.
- The minimum data set provides standards for injury surveillance. Generalized to the province, this standardized system will allow data collection and comparison across time and between jurisdictions.
- The minimum data set cannot meet all the needs of any single user. This system provides information to assess the burden of injury and the priority areas (leading causes, age and gender differences), and to identify settings where responsibility and resources for injury prevention can be identified (place of occurrence and activity when injured).

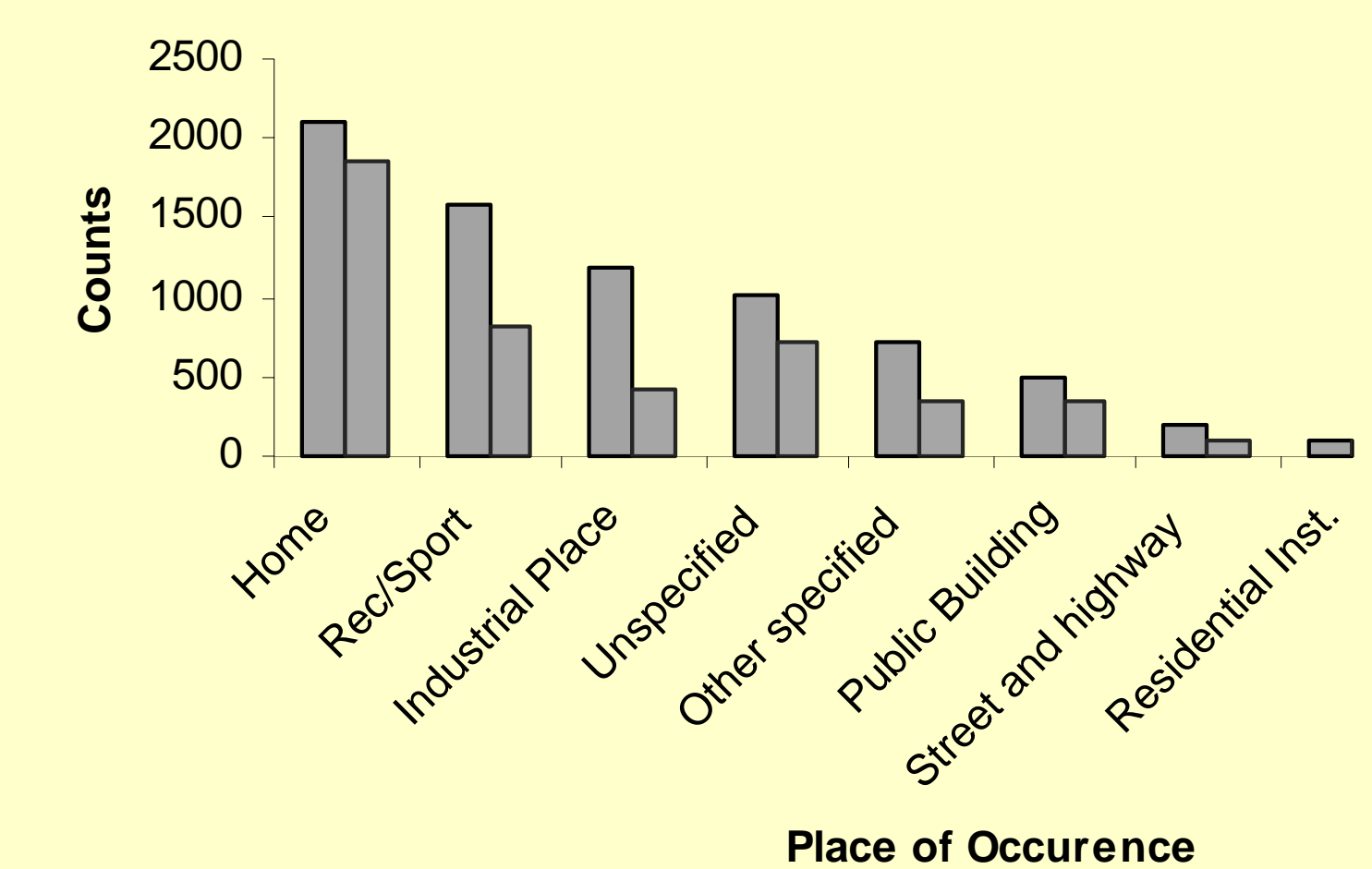
Emergency Department Visits by Nature of Injury Thompson Health Region, 1999



Nature of Injury

Analyses of the nature of injury revealed a high prevalence of open wounds (24%) followed by sprains and strains (17%), fractures (16%), and concussions (16%).

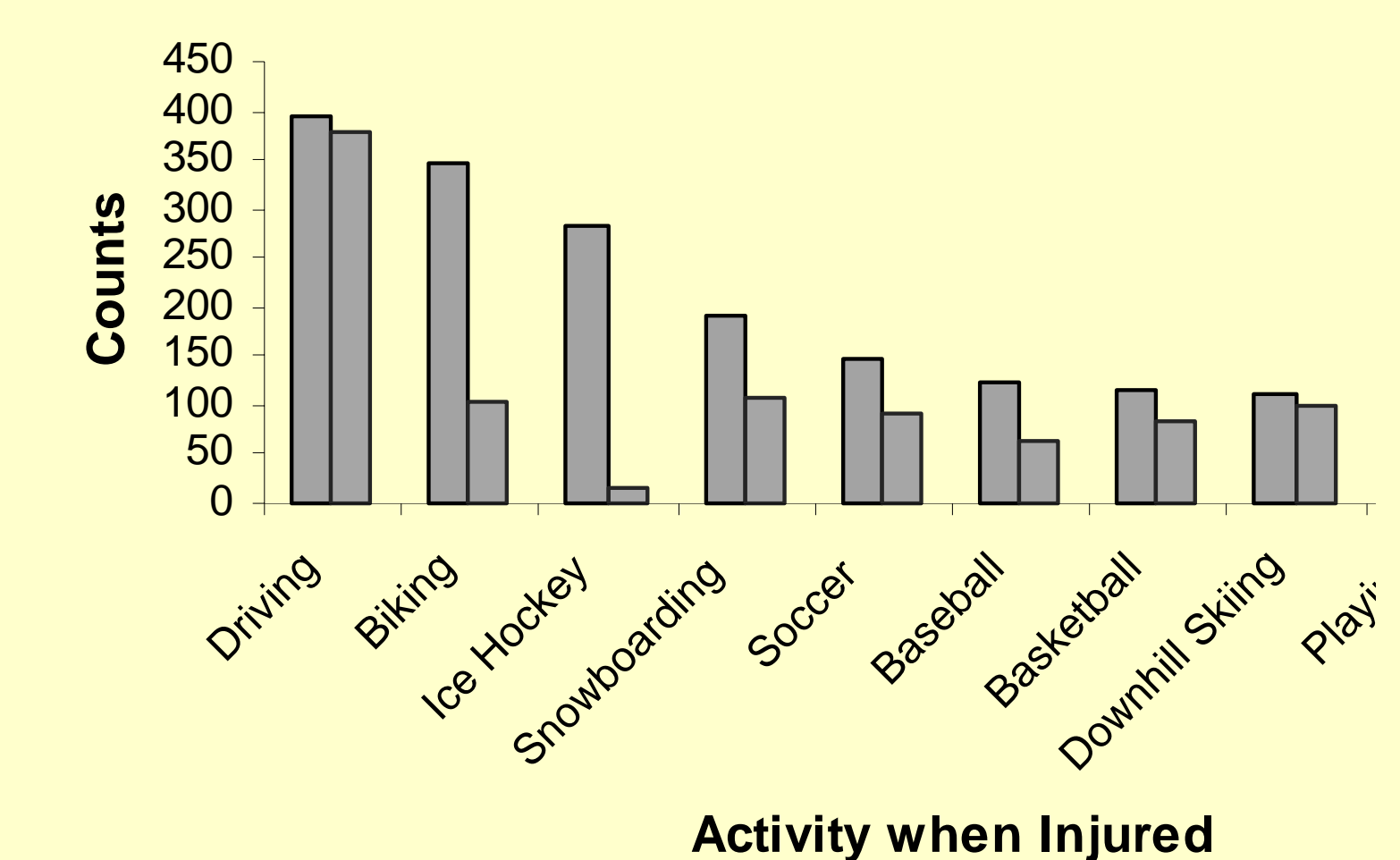
Emergency Department Visits by Place of Occurrence Thompson Health Region, 1999



Place of Occurrence

Thirty-three percent of the injuries occurred at home, followed by Places for Recreation and Sport (20%) and Industrial Place (13%). The place of occurrence of injury was not specified in fourteen percent of the cases.

Emergency Department Visits by Leading Activity When Injured Thompson Health Region, 1999



Activity when Injured

Activities most frequently cited were Driving (18%), Biking (11%), Icehockey (7%), Snowboarding (7%) and Soccer (6%). Activity when injured was not specified in 70% of the cases.