



CONCUSSION AMONG CHILDREN AND YOUTH IN BRITISH COLUMBIA

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BC INJURY research and prevention unit

January 2013

Summary

- Purpose to provide details on the burden of concussion among children and youth in BC as a supplement to the original report : *The Burden of Concussion in British Columbia*.
- The report is targeted to Health Authorities, Health Care providers and Community Stakeholders
- The report is to be used to facilitate further discussion for a comprehensive concussion strategy for children and youth of BC.

Report Highlights

- From 2001-2010, for children and youth ages 0-19 years, there were:
 - 268 head injury deaths
 - Majority were transport-related (91%)
 - 1,619 concussion-related hospitalizations
 - Leading causes were falls, transport related, and struck by/against an object
- In a one year period there were:
 - 6,675 concussion-related emergency department visits in the Lower Mainland
 - Leading causes were falls, sports and recreational activities, and struck by/against an object
- Males account for 60-70 percent of head injuries resulting in death, and concussion-related hospitalizations and emergency department visits

Head injuries in BC, Ages 0-19 years, 2001-2010

Head Injury Mortality, 2001 - 2010

- 268 deaths in BC among children & youth
 - Males accounted for 67.9% of all cases

Head Injury Hospitalization, 2001 - 2010

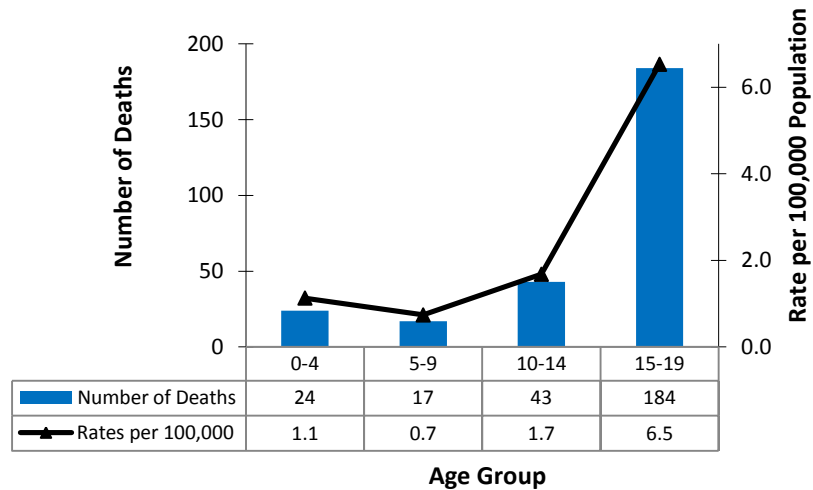
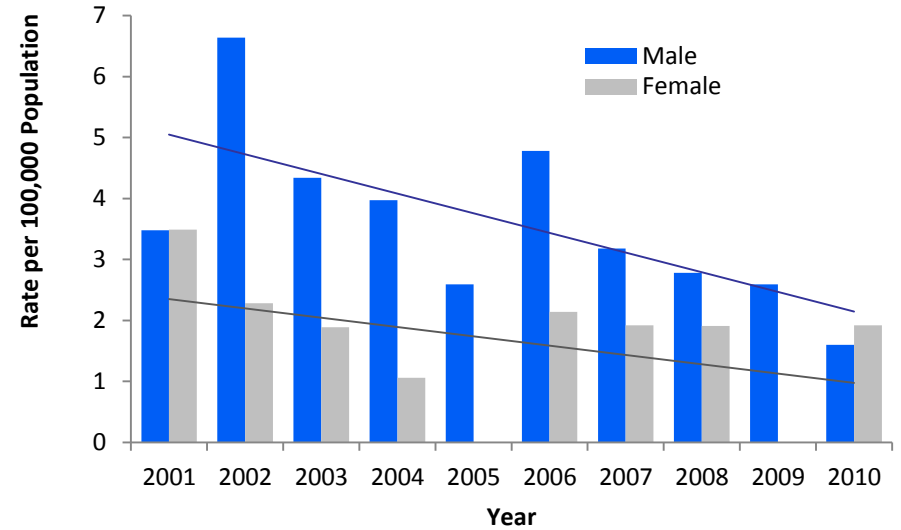
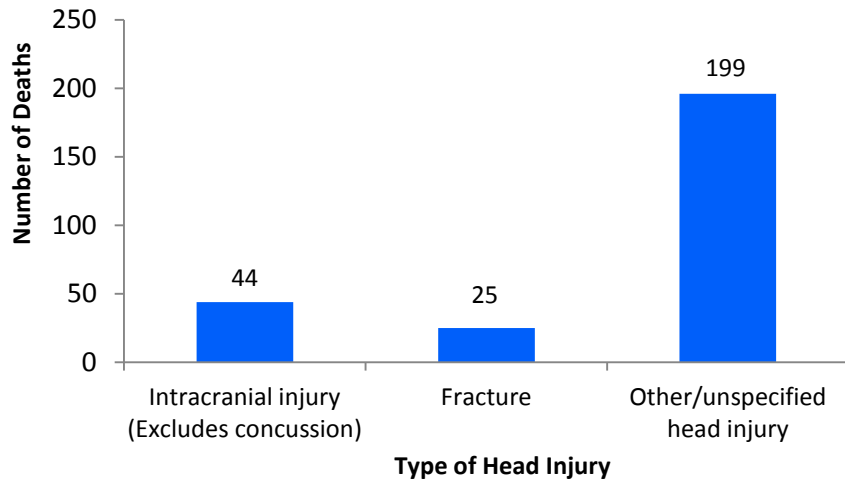
- 9,514 hospitalizations in BC among children & youth
 - Concussion accounted for 17.0% of all cases
 - Males accounted for 69.2% of all concussion-related hospitalizations

Concussions in BC, ages 0-19 years

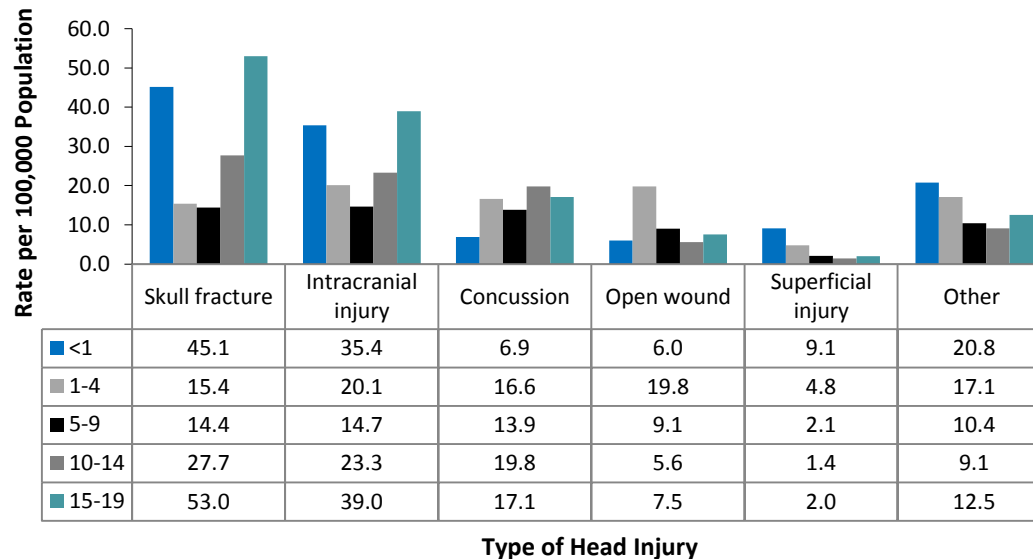
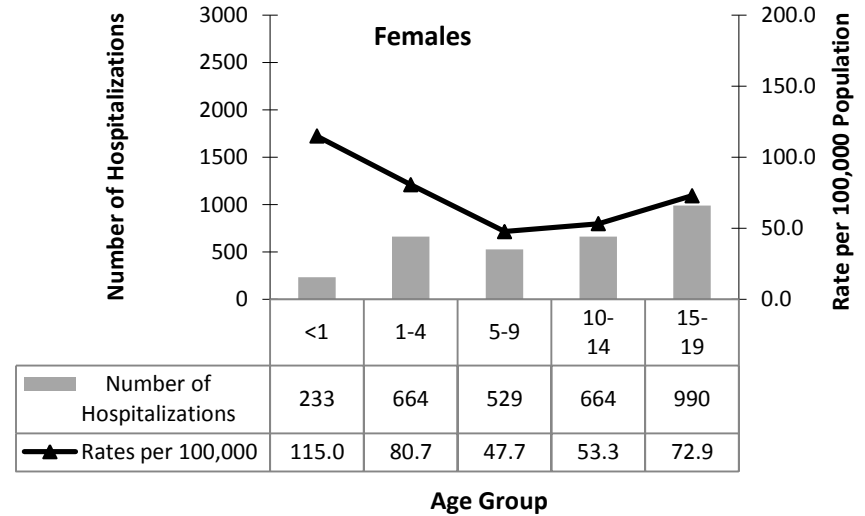
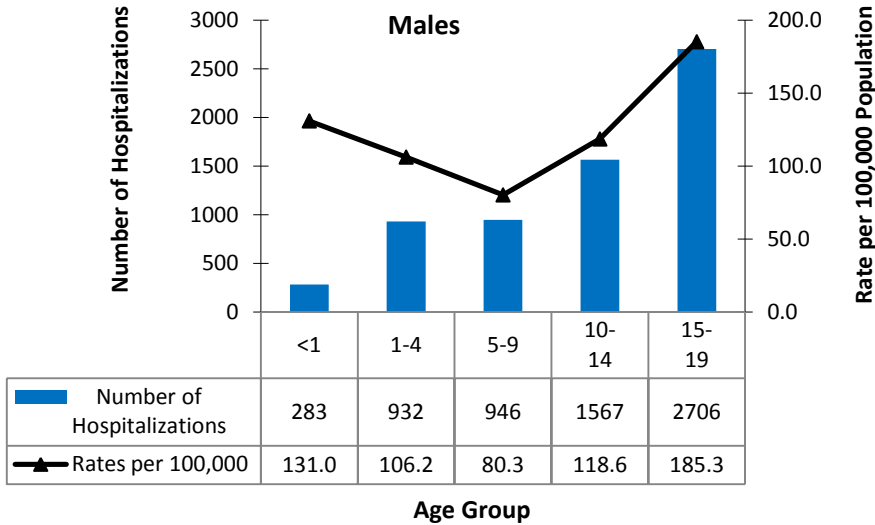
Concussions

- 6,675 concussions seen in ED throughout the BC Lower Mainland in 2011
 - Males accounted for 63.7% of cases
- 9,027 children & youth presented to BC Children's Hospital with a concussion/minor head injury during the 2001-2009 period.
 - Males accounted for 61.7% of cases
 - Leading causes – falls and struck by/against object
 - Concussion due to falls highest among 2-4 year olds (25.7%)
 - Concussion due to struck by/against object highest among 10-14 year olds (35.2%)

Mortality – Head Injuries by type, year & age group, 0-19 years, BC, 2001 – 2010

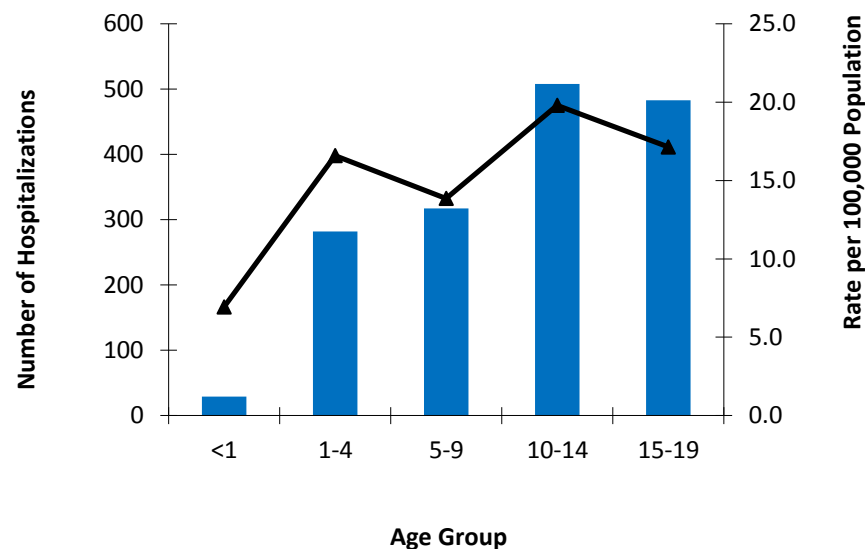
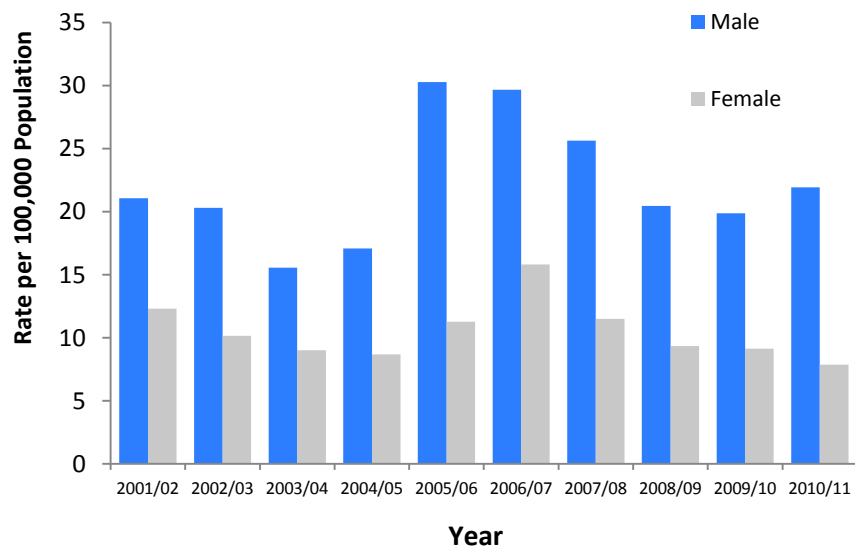


Hospitalizations – Head Injuries by sex, type & age group, 0-19 years, BC, 2001/02 – 2010/11

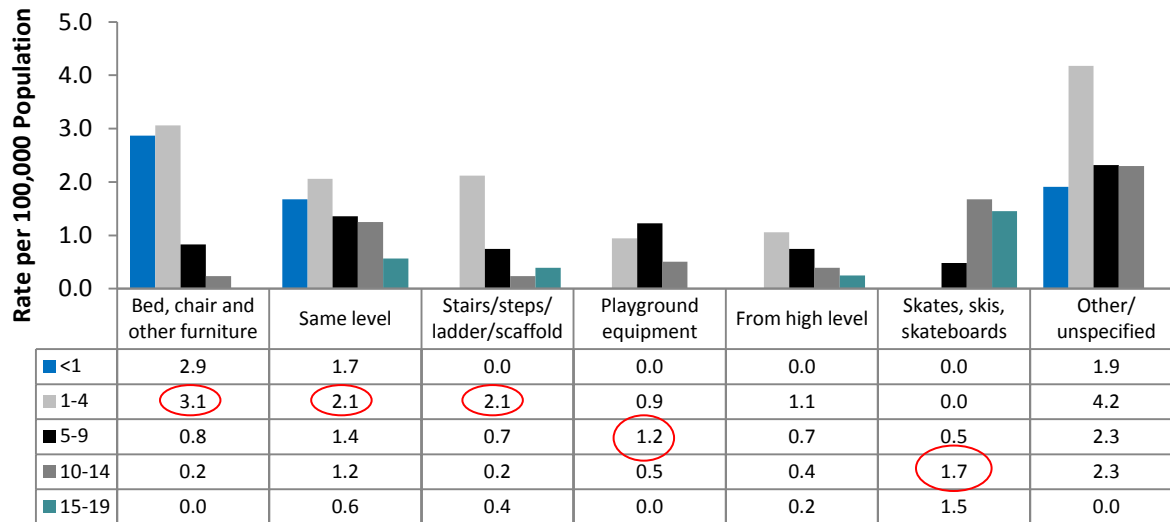
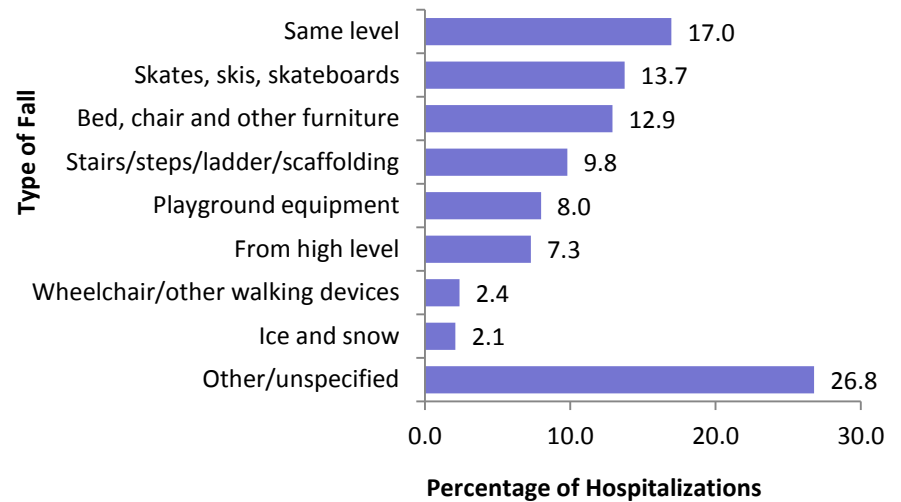
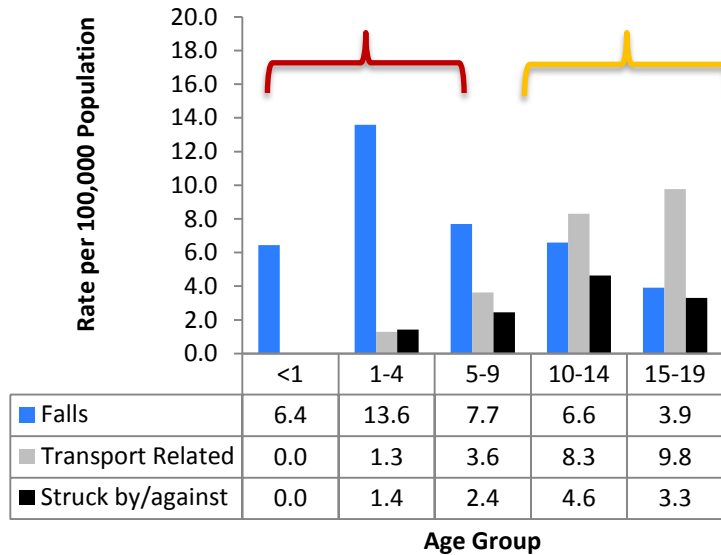


Concussion hospitalization rates by year, sex, age group & cause, 0-19 years, BC, 2001/02–2010/11

Age Group	<1	1-4	5-9	10-14	15-19
Number	29	282	317	508	483
Rate	6.9	16.6	13.9	19.8	17.1

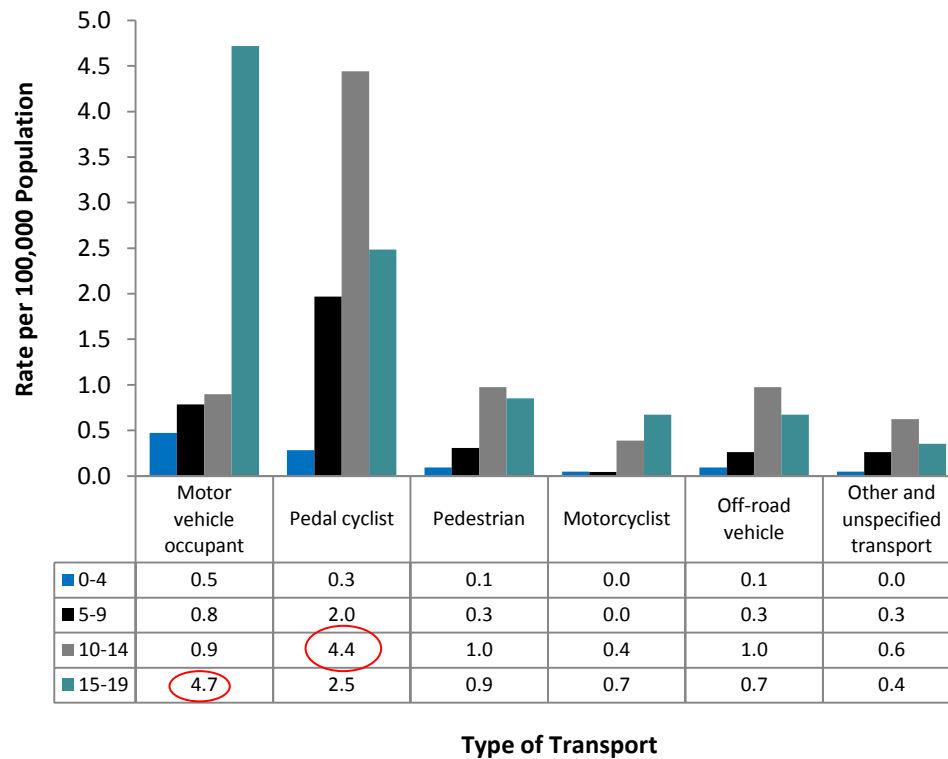
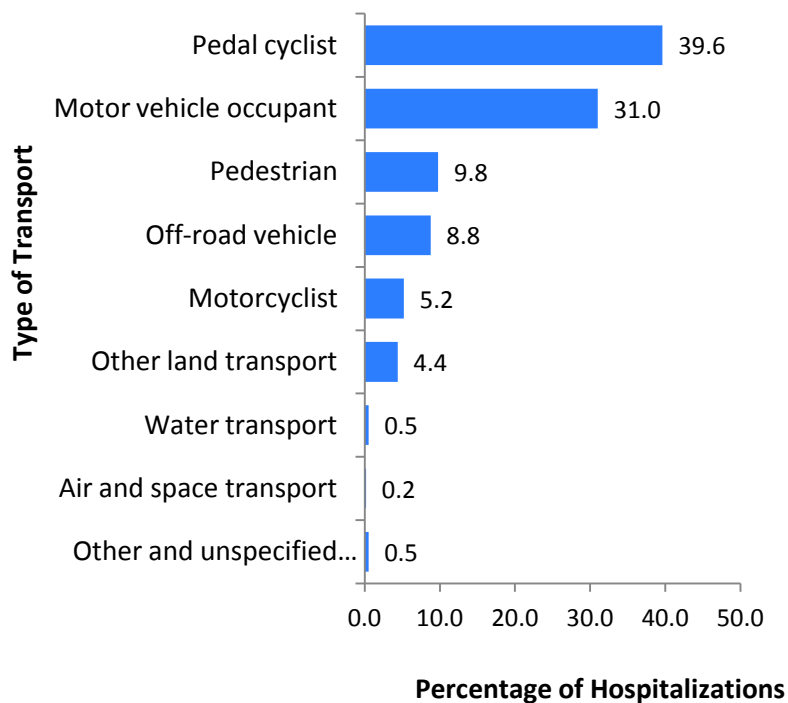


Concussion hospitalization by type of fall & age group, 0-19 years, BC, 2001/02 – 2010/11

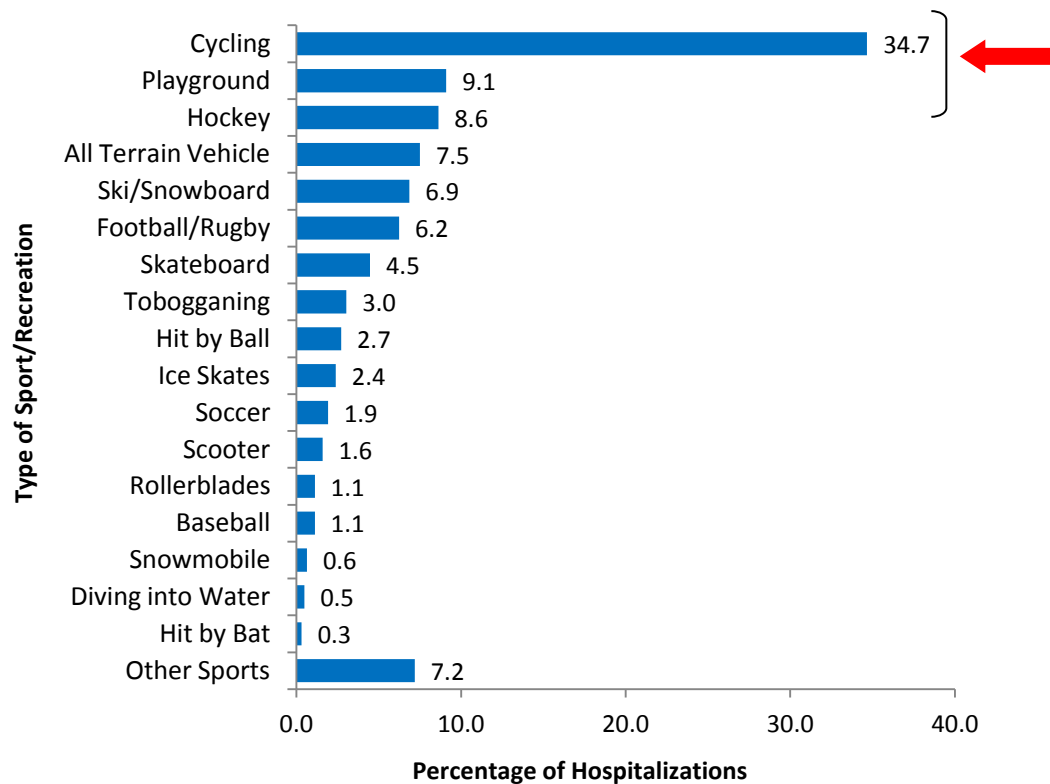
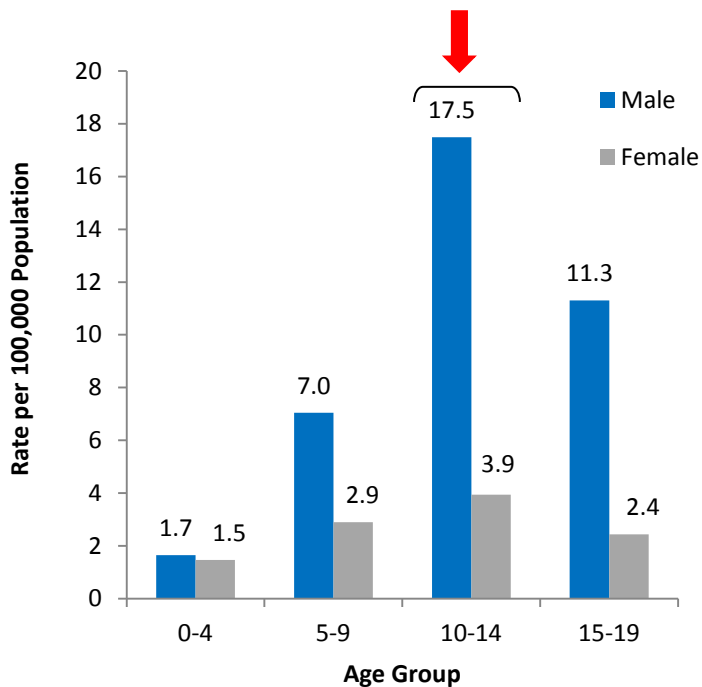


Type of Fall

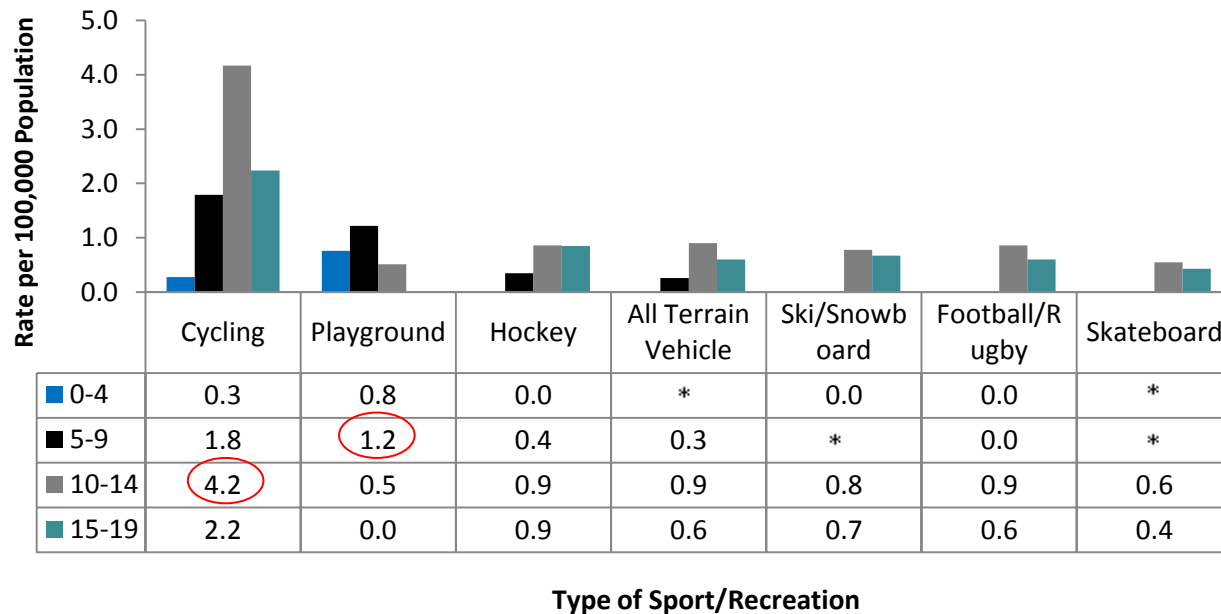
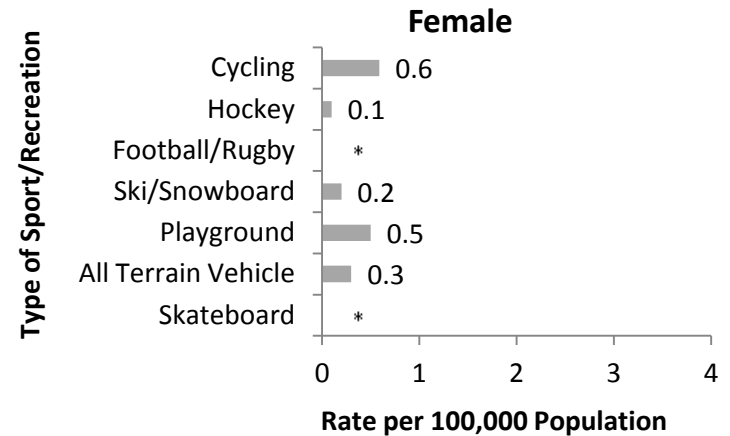
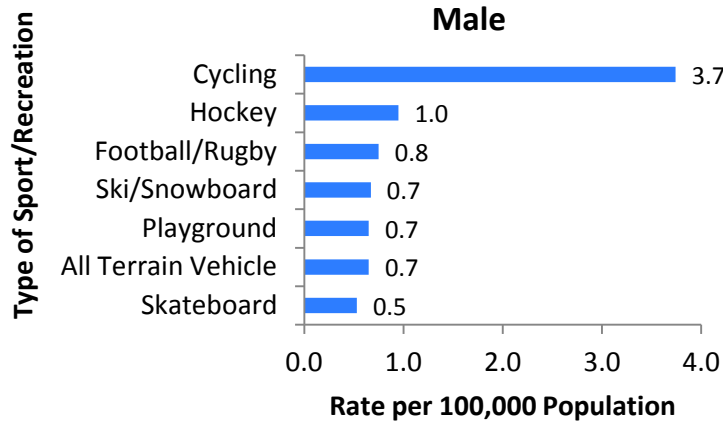
Concussion hospitalization by type of transport & age group, 0-19 years, BC, 2001/02–2010/11



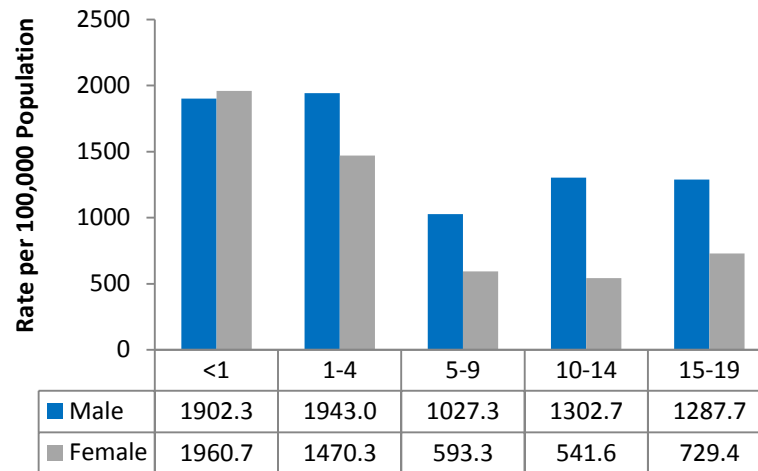
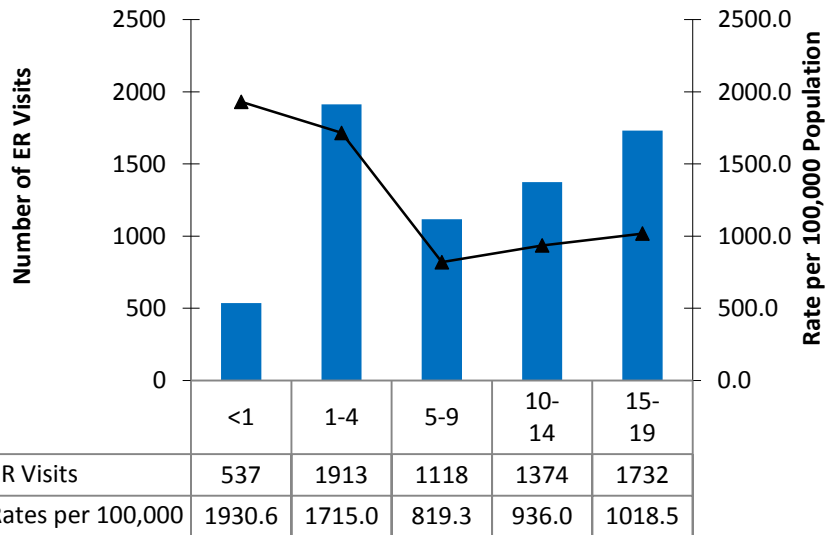
Sport & Recreation-related Concussion hospitalization rates by type & age group, 0-19 years, BC, 2001/02 – 2010/11



Sport & Recreation-related Concussion hospitalization rates by type, sex & age group, 0-19 years, BC, 2001/02 – 2010/11

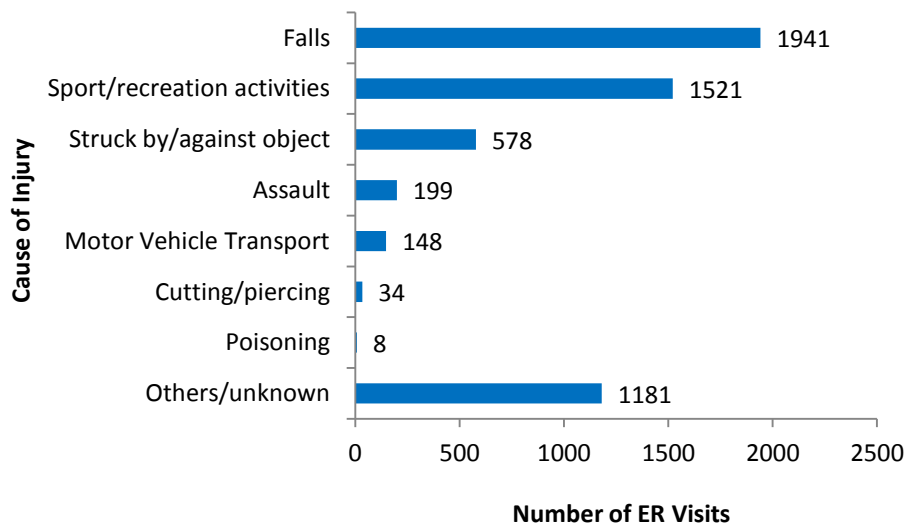


Concussion and minor head injury by age group, sex & cause, 0-19 years, Lower Mainland EDs

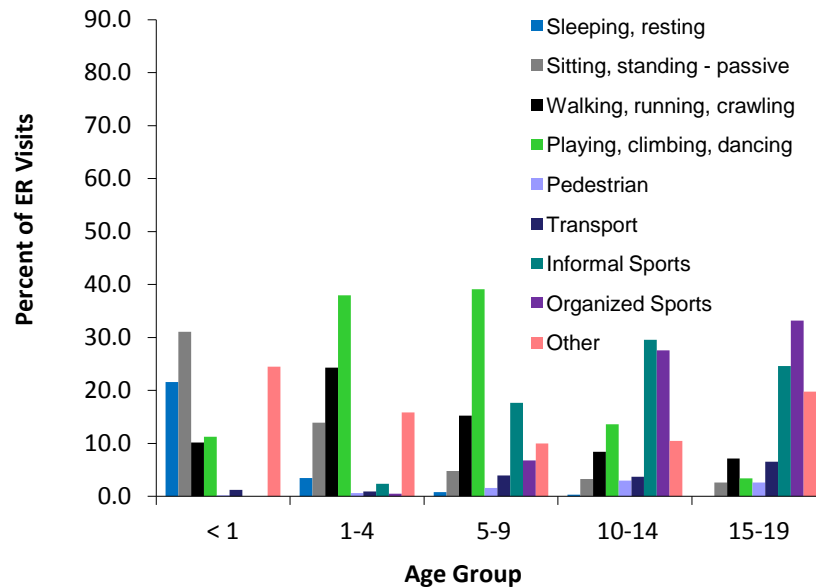
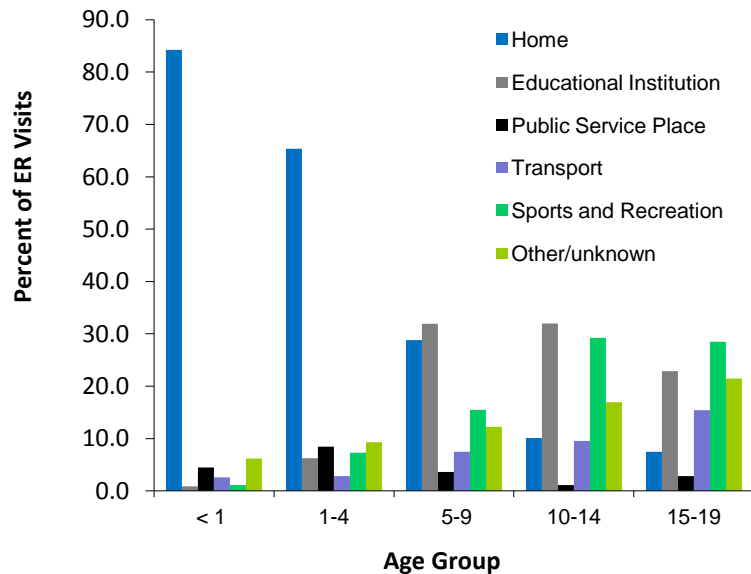
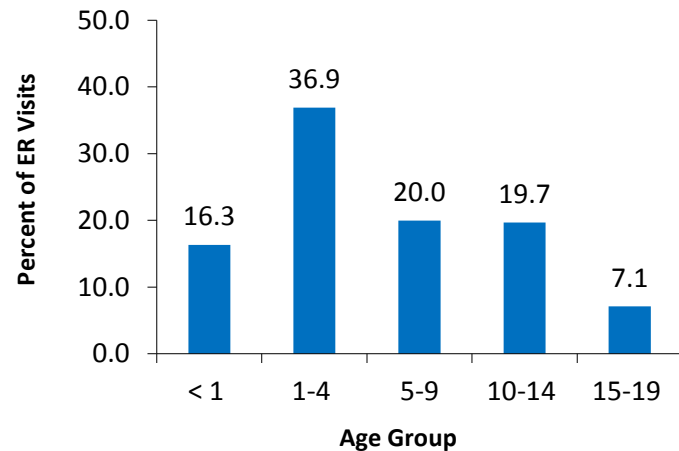
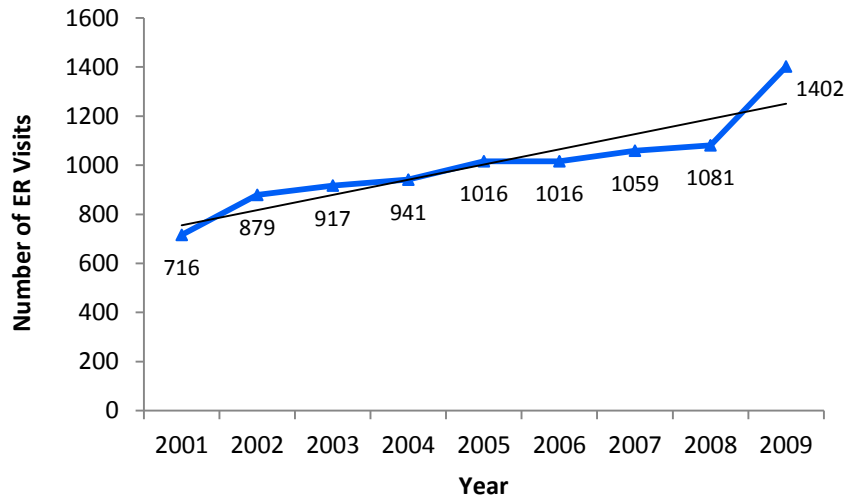


Age Group

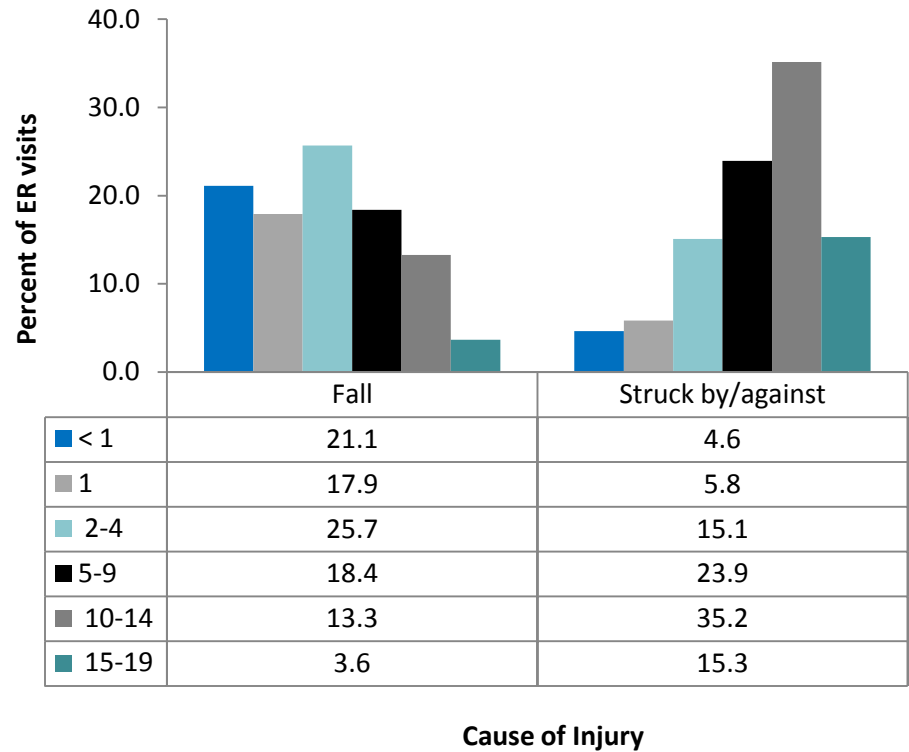
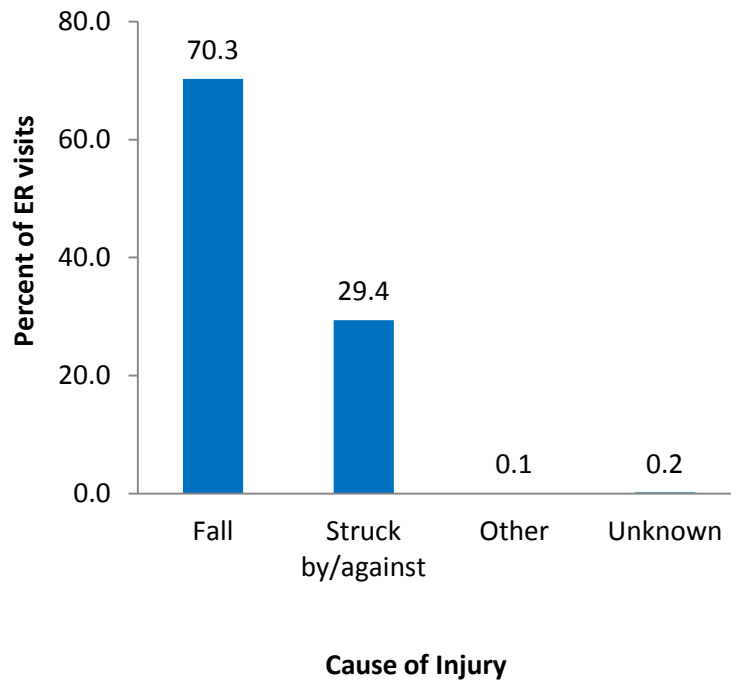
Age Group



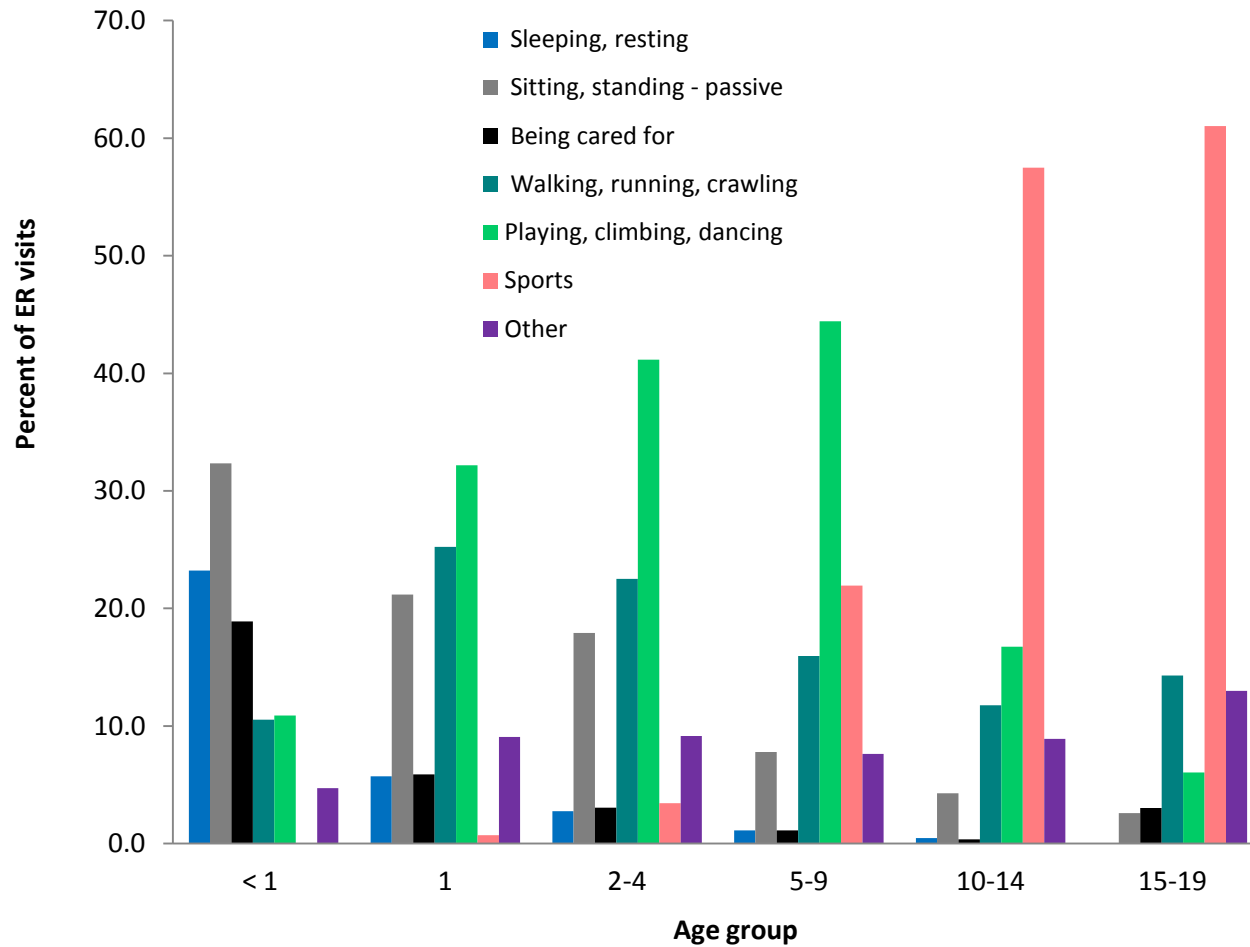
Concussion and minor head injury by year, sex, age group, location & activity, BC CHIRPP, 2001-2009



Concussion and minor head injury by cause & age group, BC CHIRPP, 2001-2009

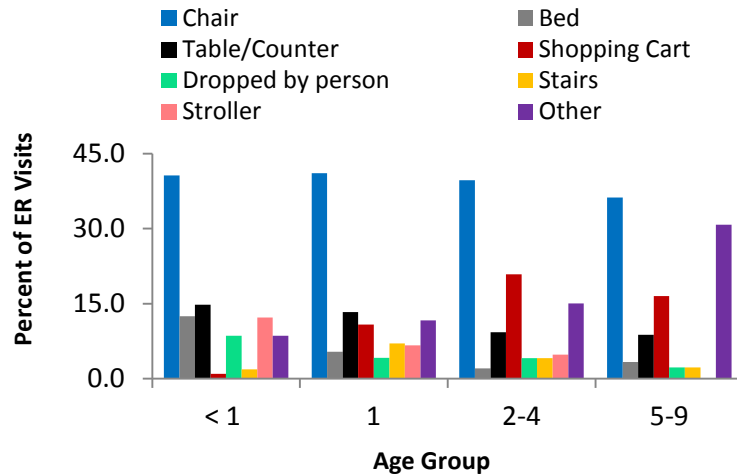


Concussion and minor head injury by cause of fall & age group, BC CHIRPP, 2001-2009

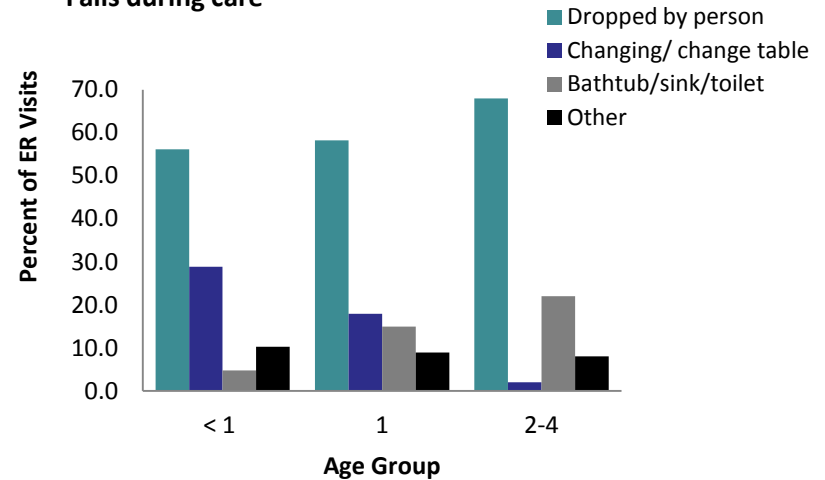


Concussion and minor head injury by cause of fall & age group, BC CHIRPP, 2001-2009

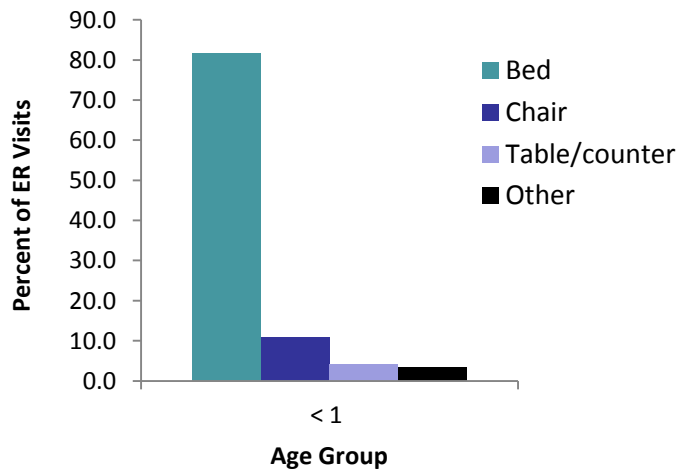
Falls from Sitting, Standing – Passive positions



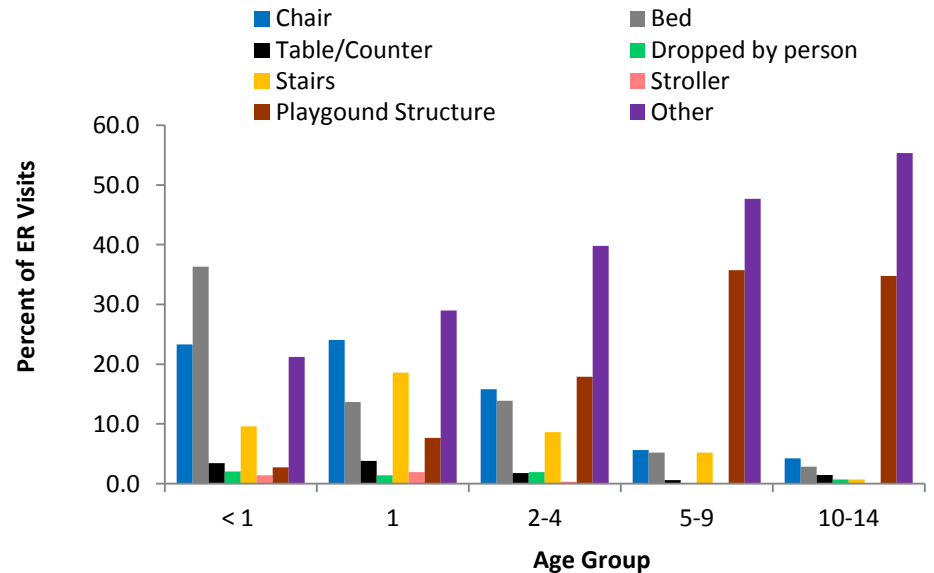
Falls during care



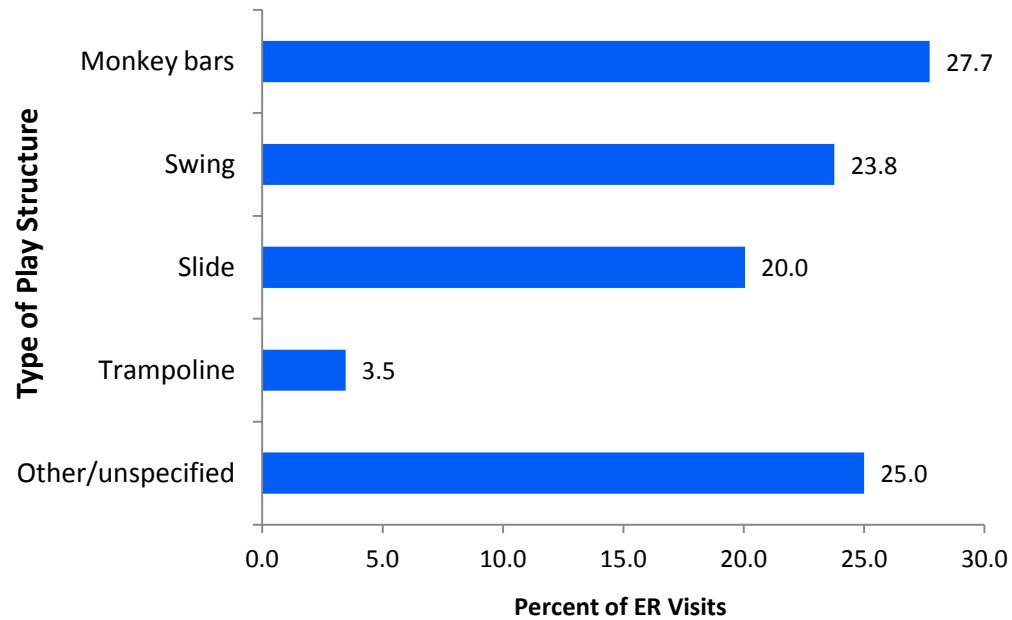
Falls during sleeping/resting



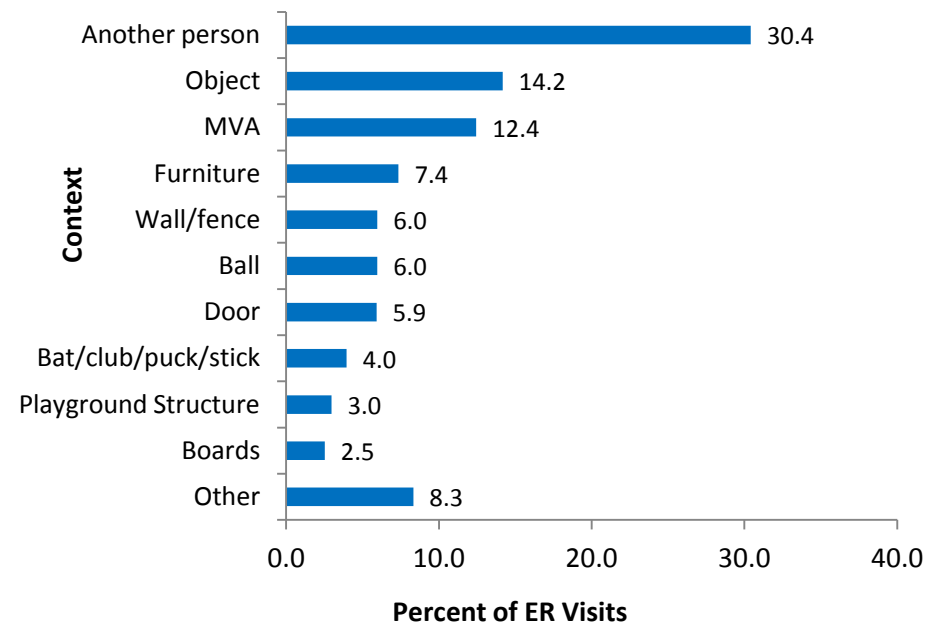
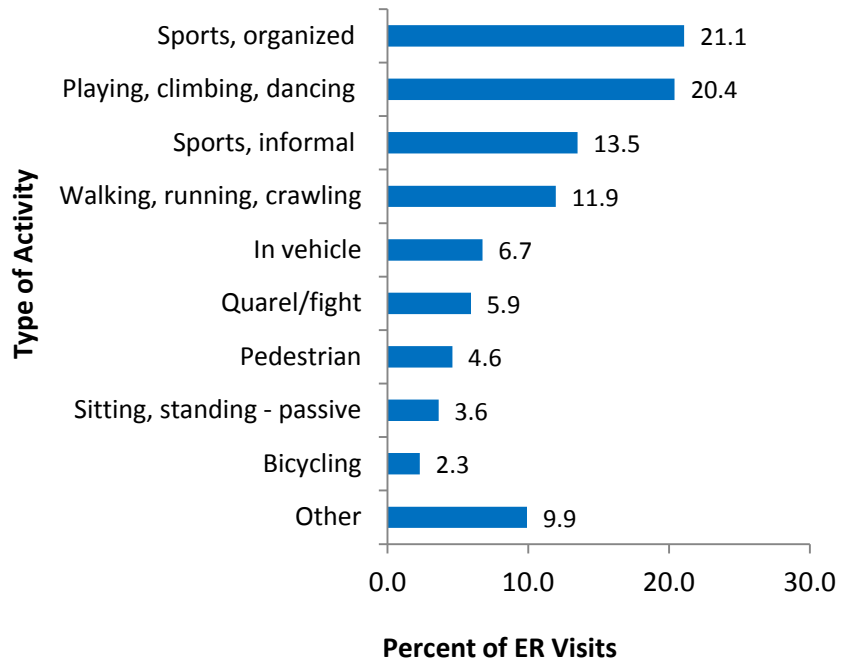
Falls during playing, dancing, climbing



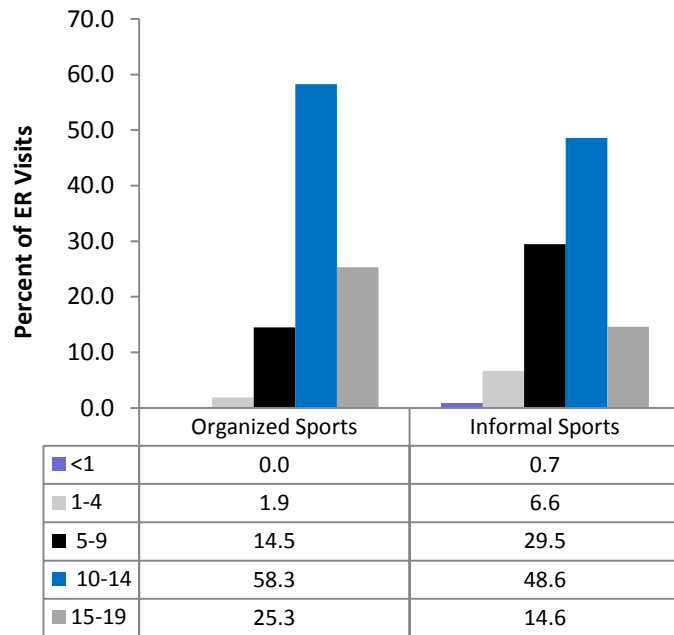
Concussion and minor head injury by falls from type of play structure, BC CHIRPP, 2001-2009



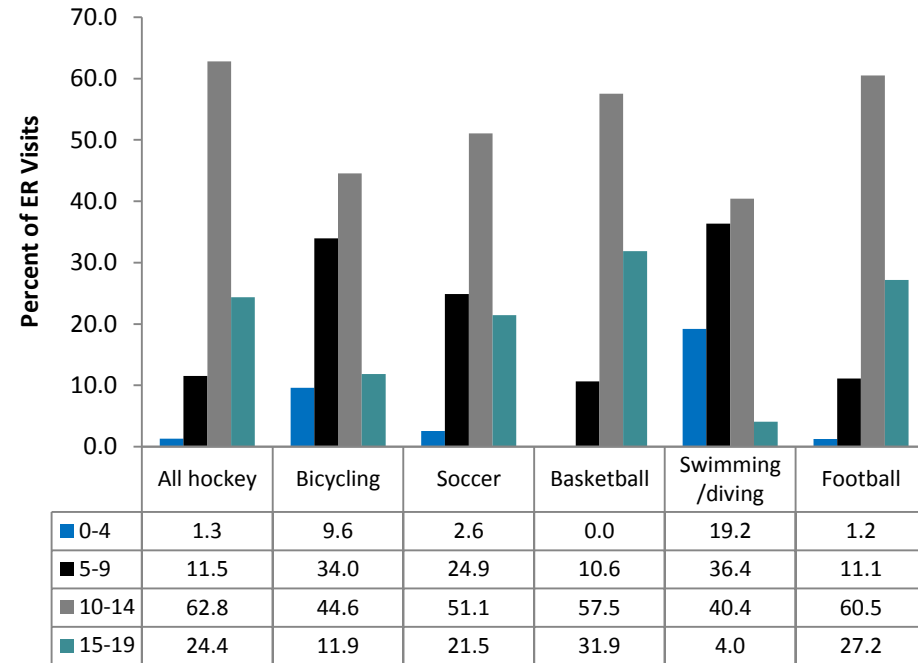
Concussion and minor head injury by activity & context when struck by/against object, BC CHIRPP, 2001-2009



Concussion and minor head injury by type of sport & age group, BC CHIRPP, 2001-2009



Type of Sport



Type of Sport

Concussion and minor head injury by type of sport & helmet use, BC CHIRPP, 2001-2009

