

Injury Among Students in Grades 7 to 12 in the NBPSDHU Region

Methodology, Data Source and Limitations

The data presented in this report is from the Ontario Student Drug Use and Health Survey (OSDUHS) conducted by the Centre for Addiction and Mental Health (CAMH) and administered by the Institute for Social Research, York University. Its contents and interpretation are solely the responsibility of the author and do not necessarily represent the official view of the Centre for Addiction and Mental Health.

The data presented in this report was collected during the 2014/2015 school year, and when noted, for a combined sample of the 2010/2011 & 2014/2015 school years. It provides an update of substance use in Ontario youth, updating data that were previously reported in [The Health of Youth in the North Bay Parry Sound District Health Unit Region](#) (North Bay Parry Sound District Health Unit, 2012).

The survey was administered to students from grades seven through twelve enrolled in public and Catholic school systems (French and English). Excluded from this report are youth enrolled in private schools or home-schooled, those institutionalized for correctional or health reasons, and those schooled on native reserves, military bases, or in the remote northern region of Ontario. Data in this report has been presented for the North Bay Parry Sound District Health Unit (NBPSDHU), other northern regions in Ontario (excluding the NBPSDHU region) and Ontario. The NBPSDHU region sample includes 580 students from 19 regional schools within three school boards.

The term “significant” is used within this report to describe differences between health regions or groups that are statistically meaningful. Without statistical significance you cannot say with certainty that the differences are real, or simply due to chance. Sampling variability associated with each estimate is described using 95% confidence intervals (95% CI), which indicate the precision of the estimate. Confidence intervals were used to determine significant differences between estimates.

Estimates with a coefficient of variation (ratio of standard error to its estimate) equal to or higher than 33.3, or based on less than 50 responses were suppressed due to high sampling variability. Estimates were calculated using complex survey analysis in Stata 14.2 (StataCorp LP, College Station, TX).

Definitions and Comparison Groups

Aboriginal Identity

Only students who identified themselves as Aboriginal on the survey are included in this group. It is possible that some students did not self-identify, and are thus excluded from this group.

Perceived Socio-Economic Status (SES)

Students were asked to identify where they thought their family would be on the socioeconomic status (SES) ladder, on a scale from 1 to 10, with 1 being “worst off”, and 10 being “best off”. Students who selected a rating of 1-6 were considered to be of low SES, while students who selected 7-10 were considered to be of high SES.

Treated for a Physical Injury

In 2014/15, about four of every ten students in our region reported that they were treated by a doctor or nurse for a physical injury at least once in the previous 12 months (42.0%; 95% CI: 35.6, 48.7); similar to the percentage for other northern regions (52.3%; 95% CI: 46.1, 58.3), and Ontario (43.7%; 95% CI: 41.1, 46.3). This percentage has not changed between 2010/11 and 2014/15 school years in all three regions.

Data from 2010/11 & 2014/15 was combined to analyze those who were treated by a doctor or nurse for a physical injury at least once in the previous 12 months, among selected demographic subgroups (Tables 1 through 6). Treatment of a physical injury did not vary among each sociodemographic group, in all three regions.

Table 1. Percentage (95% CI) of Students Who Were Treated for a Physical Injury by a Doctor or Nurse at Least Once in the Previous 12 Months, by Gender & Region, 2010/11 & 2014/15 Combined

Gender	NBPSDHU Region	Other Northern Regions	Ontario
Males	44.4 (36.9, 52.2)	50.9 (45.7, 56.1)	44.8 (42.5, 47.0)
Females	40.1 (34.1, 46.3)	51.8* (46.1, 57.5)	40.5 (38.1, 43.0)

* Estimate is significantly different from provincial estimate

Table 2. Percentage (95% CI) of Students Who Were Treated for a Physical Injury by a Doctor or Nurse at Least Once in the Previous 12 Months, by Grade Level & Region, 2010/11 & 2014/15 Combined

Grade Level	NBPSDHU Region	Other Northern Regions	Ontario
Grades 7 - 8	45.0 (38.3, 51.8)	47.3 (42.7, 51.9)	41.0 (38.0, 44.0)
Grades 9 - 12	41.3 ^Δ (35.8, 47.1)	52.9* (48.0, 57.9)	43.4 (41.2, 45.5)

* Estimate is significantly different from provincial estimate

Δ Estimate is significantly different from estimate for other northern regions

Table 3. Percentage (95% CI) of Students Who Were Treated for a Physical Injury by a Doctor or Nurse at Least Once in the Previous 12 Months, by Aboriginal Identity & Region, 2010/11 & 2014/15 Combined

Aboriginal identity	NBPSDHU Region	Other Northern Regions	Ontario
Aboriginal	35.5 ^Δ (26.0, 46.3)	60.7 (49.0, 71.3)	48.9 (40.6, 57.4)
Non-Aboriginal	42.8 (38.0, 47.8)	50.2* (46.4, 53.9)	42.4 (40.6, 44.3)

* Estimate is significantly different from provincial estimate

Table 4. Percentage (95% CI) of Students Who Were Treated for a Physical Injury by a Doctor or Nurse at Least Once in the Previous 12 Months, by Perceived Socioeconomic Status & Region, 2010/11 & 2014/15 Combined

Perceived Socioeconomic Status (SES)	NBPSDHU Region	Other Northern Regions	Ontario
Low SES	41.0 (34.2, 48.2)	47.6 (39.5, 55.7)	39.6 (37.1, 42.3)
High SES	43.1 (36.7, 49.8)	52.3* (48.7, 55.9)	43.9 (41.9, 46.0)

* Estimate is significantly different from provincial estimate

Table 5. Percentage (95% CI) of Students Who Were Treated for a Physical Injury by a Doctor or Nurse at Least Once in the Previous 12 Months, by Highest Level of Maternal Education Completed & Region, 2010/11 & 2014/15 Combined

Highest level of maternal education completed	NBPSDHU Region	Other Northern Regions	Ontario
University	44.7 (34.4, 55.4)	56.5 (47.2, 65.4)	45.4 (42.9, 47.9)
College	43.1 (34.6, 52.1)	54.0 (47.2, 60.6)	46.6 (42.8, 50.6)
High school	41.8 (30.1, 54.5)	29.3 (18.1, 43.8)	39.2 (34.2, 44.4)
Less than high school	F	62.4 ^E (42.5, 78.8)	39.7 (33.5, 46.3)

E Interpret with caution; the estimate is associated with high sampling variability

F Estimate is suppressed; too unreliable to be released

Table 6. Percentage (95% CI) of Students Who Were Treated for a Physical Injury by a Doctor or Nurse at Least Once in the Previous 12 Months, by Highest Level of Paternal Education Completed & Region, 2010/11 & 2014/15 Combined

Highest level of paternal education completed	NBPSDHU Region	Other Northern Regions	Ontario
University	45.3 (33.3, 57.9)	52.3 (44.2, 60.4)	44.1 (41.1, 47.1)
College	47.5 (35.6, 59.8)	49.1 (40.5, 57.8)	45.6 (41.6, 49.7)
High school	42.1 (29.8, 55.5)	52.8 (36.9, 68.1)	45.9 (40.9, 51.1)
Less than high school	37.9 ^E (24.0, 54.0)	47.3 (34.4, 60.7)	43.8 (38.8, 48.8)

* Estimate is significantly different from provincial estimate

E Interpret with caution; the estimate is associated with high sampling variability

Wearing a Bicycle Helmet

In 2014/15, about one in three students in our region wore a bicycle helmet all of the time in the previous 12 months, statistically similar to the Ontario percentage (Table 7). A significantly lower percentage of students in our region never wore a helmet (10.8%), compared to the Ontario percentage (25.7%).

Not always wearing a bicycle helmet in the previous 12 months did not vary among each sociodemographic group in our region (Tables 8 through 11). In Ontario, significantly higher percentages of males and secondary students did not always wear a bicycle helmet, compared to females and elementary students respectively (Table 9).

Table 7. Percentage (95% CI) of Students by How Often They Wore a Bicycle Helmet in the Previous 12 Months & Region, 2014/15

Frequency of wearing a bicycle helmet	NBPSDHU Region	Other Northern Regions	Ontario
Did not ride a bicycle	18.4 ^E (12.5, 26.3)	18.6 (15.2, 22.7)	21.5 (19.6, 23.5)
Wore a helmet all of the time	32.2 ^E (20.1, 47.3)	27.5* (21.9, 34.0)	18.1 (16.2, 20.2)
Wore a helmet most of the time	20.9 ^E (10.3, 37.7)	12.7 ^E (8.3, 18.9)	12.6 (11.0, 14.4)
Wore a helmet some of the time	8.5 ^E (4.4, 16.0)	6.5 ^E (4.5, 9.2)	8.7 (7.5, 10.0)
Rarely wore a helmet	9.2 ^E (6.1, 13.7)	12.1 ^E (7.6, 18.8)	13.4 (12.1, 14.8)
Never wore a helmet	10.8* ^E (6.5, 17.4)	22.6 (15.7, 31.2)	25.7 (23.0, 28.6)

* Estimate is significantly different from provincial estimate

E Interpret with caution; the estimate is associated with high sampling variability

Table 8. Percentage (95% CI) of Students Who Did Not Always Wear a Bicycle Helmet in the Previous 12 Months, by Gender & Region, 2014/15

Gender	NBPSDHU Region	Other Northern Regions	Ontario
Males	51.2 (38.4, 63.8)	61.4 (53.6, 68.6)	65.6 ‡ (61.9, 69)
Females	47.2 (38.5, 56.1)	46.4 (37.0, 56.2)	55.0 (51.5, 58.3)

‡ Estimate is significantly different from females in the same region

Table 9. Percentage (95% CI) of Students Who Did Not Always Wear a Bicycle Helmet in the Previous 12 Months, by Region & Grade Level, 2014/15

Grade Level	NBPSDHU Region	Other Northern Regions	Ontario
Grades 7 - 8	51.3 (41.3, 61.2)	35.5*‡ (26.5, 45.6)	52.6 ‡ (47.5, 57.6)
Grades 9 - 12	48.5 (35.1, 62.1)	61.5 (54.7, 67.8)	62.9 (59.7, 66.0)

* Estimate is significantly different from provincial estimate

‡ Estimate is significantly different from students in grades 9 to 12 in the same region

Table 10. Percentage (95% CI) of Students Who Did Not Always Wear a Bicycle Helmet in the Previous 12 Months, by Region & Aboriginal Identity, 2014/15

Aboriginal identity	NBPSDHU Region	Other Northern Regions	Ontario
Aboriginal	F	62.1 (47.6, 74.7)	64.1 (52.4, 74.4)
Non-Aboriginal	50.1 (39.3, 61.0)	52.9 (45.8, 60.0)	60.3 (57.5, 63.0)

F Estimate is suppressed; too unreliable to be released

Table 11. Percentage (95% CI) of Students Who Did Not Always Wear a Bicycle Helmet in the Previous 12 Months, by Region & Perceived Socioeconomic Status, 2014/15

Perceived Socioeconomic Status (SES)	NBPSDHU Region	Other Northern Regions	Ontario
Low SES	54.6 (47.4, 61.6)	56.0 (46.8, 64.8)	63.1 (59.4, 66.7)
High SES	45.8 (35.7, 56.3)	52.4 (45.2, 59.4)	58.9 (55.9, 61.8)

Head Injury

In 2014/15, about one in ten students in our region (9.0%; 95% CI: 6.1, 12.9) suffered a head injury in the previous 12 months, similar to the percentage in other northern regions (6.2%; 95% CI: 4.1, 9.5) and Ontario (5.2%; 95% CI; 4.45, 6.2). About one in four students in our region reported suffering a head injury in their lifetime (23.6%; 95% CI: 19.8, 27.9), similar to the percentage in other northern regions (23.0%; 95% CI: 18.7, 27.9) and Ontario (19.6%; 95% CI: 18.3, 20.9).

Data from 2010/11 & 2014/15 was combined to analyze those who suffered a head injury in their lifetime, among selected demographic subgroups (Tables 12 through 17). A significantly higher percentage of male students have suffered a head injury in their lives compared to females, in all three regions (Table 12). Lifetime head injury did not vary by other sociodemographic groups in our region.

For those who have suffered a head injury in their life, one in three students in our region suffered their head injury in grade five, and almost half in grade 6 or a higher grade level (Table 18). In Ontario, a significantly higher proportion of students suffered their head injuries in grades 4 or before.

Table 12. Percentage (95% CI) of Students Who Suffered a Head Injury at Least Once in their Lifetime, by Gender & Region, 2010/11 & 2014/15 Combined

Gender	NBPSDHU Region	Other Northern Regions	Ontario
Males	25.5 ‡ (20.1, 31.9)	28.9 ‡ (25.0, 33.2)	23.3 ‡ (21.6, 25.2)
Females	15.3 (12.5, 18.6)	19.4 (15.8, 23.4)	15.9 (14.5, 17.3)

‡ Estimate is significantly different from females within the same region

Table 13. Percentage (95% CI) of Students Who Suffered a Head Injury at Least Once in their Lifetime, by Grade Level & Region, 2010/11 & 2014/15 Combined

Grade Level	NBPSDHU Region	Other Northern Regions	Ontario
Grades 7 - 8	21.0 (16.9, 25.7)	20.5 (16.6, 25.1)	19.2 (17.7, 20.8)
Grades 9 - 12	20.4 (17.2, 24.0)	25.7* (22.3, 29.5)	19.9 (18.3, 21.6)

* Estimate is significantly different from provincial estimate

Table 14. Percentage (95% CI) of Students Who Suffered a Head Injury at Least Once in their Lifetime, by Aboriginal Identity & Region, 2010/11 & 2014/15 Combined

Aboriginal identity	NBPSDHU Region	Other Northern Regions	Ontario
Aboriginal	20.6 ^E (12.8, 31.4)	32.9 (23.3, 44.1)	27.0 ‡ (22.0, 32.7)
Non-Aboriginal	20.1 (17.0, 23.6)	23.1 (20.2, 26.3)	19.4 (18.2, 20.7)

E Interpret with caution; the estimate is associated with high sampling variability

‡ Estimate is significantly different from those who did not identify as Aboriginal in the same region

Table 15. Percentage (95% CI) of Students Who Suffered a Head Injury at Least Once in their Lifetime, by Perceived Socioeconomic Status & Region, 2010/11 & 2014/15 Combined

Perceived Socioeconomic Status (SES)	NBPSDHU Region	Other Northern Regions	Ontario
Low SES	25.0 (21.9, 28.5)	24.5 (20.2, 29.5)	20.7 (18.4, 23.2)
High SES	18.7 (15.8, 22.1)	23.9* (21.3, 26.7)	19.3 (18.1, 20.5)

* Estimate is significantly different from provincial estimate

Table 16. Percentage (95% CI) of Students Who Suffered a Head Injury at Least Once in their Lifetime, by Highest Level of Maternal Education Completed & Region, 2010/11 & 2014/15 Combined

Highest level of maternal education completed	NBPSDHU Region	Other Northern Regions	Ontario
University	21.4 ^E (15.0, 29.6)	26.2* (21.8, 31.2)	19.6 (18.0, 21.3)
College	19.2 (15.0, 24.1)	21.0 (16.5, 26.4)	20.2 (18.0, 22.5)
High school	19.5 ^E (11.3, 31.7)	24.7 ^E (16.8, 34.8)	20.8 (18.4, 23.3)
Less than high school	F	41.6 ^E (27.9, 56.7)	23.3 (20.0, 26.9)

* Estimate is significantly different from provincial estimate

E Interpret with caution; the estimate is associated with high sampling variability

F Estimate is suppressed; too unreliable to be released

Table 17. Percentage (95% CI) of Students Who Suffered a Head Injury at Least Once in their Lifetime, by Highest Level of Paternal Education Completed & Region, 2010/11 & 2014/15 Combined

Highest level of paternal education completed	NBPSDHU Region	Other Northern Regions	Ontario
University	20.0 ^E (13.3, 29.0)	23.6 (19.6, 28.2)	17.4 (16.1, 18.7)
College	20.7 (15.0, 27.7)	21.8 (17.8, 26.5)	20.6 (18.1, 23.3)
High school	18.8 ^E (12.4, 27.4)	25.3 (18.4, 33.6)	22.6 (20.0, 25.5)
Less than high school	21.9 ^E (13.4, 33.6)	36.7 ‡ (28.3, 46.0)	24.8 ‡ (21.3, 28.7)

* Estimate is significantly different from provincial estimate

^E Interpret with caution; the estimate is associated with high sampling variability

‡ Estimate is significantly different from those who with a university level education in the same region

Table 18. Percentage (95% CI) of Students Who Suffered a Head Injury at Least Once in their Lifetime by Grade When the First Head Injury Occurred & Region, 2014/15

Grade Level	NBPSDHU Region	Other Northern Regions	Ontario
Grade 4 or before	21.2* (16.6, 26.6)	34.7 (28.0, 42.1)	40.2 (36.9, 43.7)
Grade 5	32.7* (24.4, 42.2)	21.7 (15.9, 28.9)	19.7 (17.3, 22.3)
Grade 6 or above	46.1 (36.5, 56.1)	42.2 (33.6, 51.3)	38.3 (34.8, 41.9)

* Estimate is significantly different from provincial estimate