

eBULLETIN Special Report

Student Drug Use in the Local Health Integration Networks of Ontario

This extended *eBulletin* presents the prevalence of drug use among high school students (grades 9-12) according to the Local Health Integration Networks (LHINs) of Ontario. In 2006, the province designated 14 geographic areas each to function as health systems that plan, integrate and fund local health services.¹

Data are from the 2005 *Ontario Student Drug Use Survey (OSDUS)*, which is an anonymous in-class survey of 7th- to 12th-graders conducted every two years in Ontario schools. Due to small sample sizes, some adjacent LHINs were merged. The 12 LHIN

areas presented are: Erie St. Clair; South West; Waterloo Wellington; Hamilton Niagara Haldimand Brant; Central West; Mississauga Halton; Toronto Central; Central; Central East & North Simcoe Muskoka (merged); South East; Champlain; and North East & North West (merged).

Table 1. Summary of LHIN Drug Use Significantly Lower than the Province

LHIN	Lower than Province
Central West	• Binge Drinking (20% vs 31%)
Mississauga Halton	• Binge Drinking (25% vs 31%) • Passenger/Alcohol (28% vs 33%) • Passenger/Drug (22% vs 28%)
Toronto Central	• Daily Smoking (7% vs 12%) • Binge Drinking (25% vs 31%) • Cannabis (27% vs 36%) • Stimulants (3% vs 6%) • Any Illicit Drug (11% vs 15%) • Passenger/Alcohol (20% vs 33%) • Passenger/Drug (15% vs 28%)
Central	• Binge Drinking (24% vs 31%) • Hallucinogens (6% vs 9%) • Stimulants (3% vs 6%) • Cocaine (4% vs 6%) • Any Illicit Drug (10% vs 15%) • Passenger/Alcohol (29% vs 33%)
Central East + North Simcoe Muskoka	• Daily Smoking (7% vs 12%) • Alcohol (66% vs 73%)
South East	• Smoking (14% vs 19%)
Champlain	• Smoking (11% vs 19%) • Daily Smoking (4% vs 12%) • Alcohol (70% vs 73%) • Cannabis (28% vs 36%) • Hallucinogens (6% vs 9%) • Cocaine (2% vs 6%) • Any Illicit Drug (11% vs 15%) • Drink & Drive (7% vs 14%) • Cannabis & Drive (13% vs 20%)

Table 2. Summary of LHIN Drug Use Significantly Higher than the Province

LHIN	Higher than Province
Erie St. Clair	• Smoking (31% vs 19%) • Daily Smoking (24% vs 12%) • Alcohol (81% vs 73%) • Binge Drinking (44% vs 31%) • Cannabis (47% vs 36%) • Hallucinogens (19% vs 9%) • Ecstasy (15% vs 6%) • Stimulants (11% vs 6%) • Cocaine (13% vs 6%) • Any Illicit Drug (28% vs 15%) • Passenger/Alcohol (44% vs 33%) • Passenger/Drug (36% vs 28%)
South West	• Passenger/Alcohol (48% vs 33%) • Drink & Drive (25% vs 14%)
Waterloo Wellington	• Alcohol (83% vs 73%)
Hamilton Niagara Haldimand Brant	• Smoking (27% vs 19%) • Hallucinogens (14% vs 9%) • Ecstasy (11% vs 6%) • Stimulants (8% vs 6%) • Cocaine (11% vs 6%) • Any Illicit Drug (22% vs 15%) • Passenger/Drug (40% vs 28%) • Drink & Drive (22% vs 14%) • Cannabis & Drive (33% vs 20%)
Central West	• Cocaine (10% vs 6%)
South East	• Alcohol (89% vs 73%) • Binge Drinking (52% vs 31%) • Cannabis (44% vs 36%) • Hallucinogens (16% vs 9%) • Stimulants (10% vs 6%) • Any Illicit Drug (23% vs 15%) • Passenger/Alcohol (45% vs 33%) • Passenger/Drug (42% vs 28%) • Drink & Drive (21% vs 14%)
North East + North West	• Smoking (25% vs 19%) • Daily Smoking (16% vs 12%) • Binge Drinking (43% vs 31%) • Cannabis (43% vs 36%)

Figure 1. Percentage of High School Students in the Erie St. Clair LHIN (n=298) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS

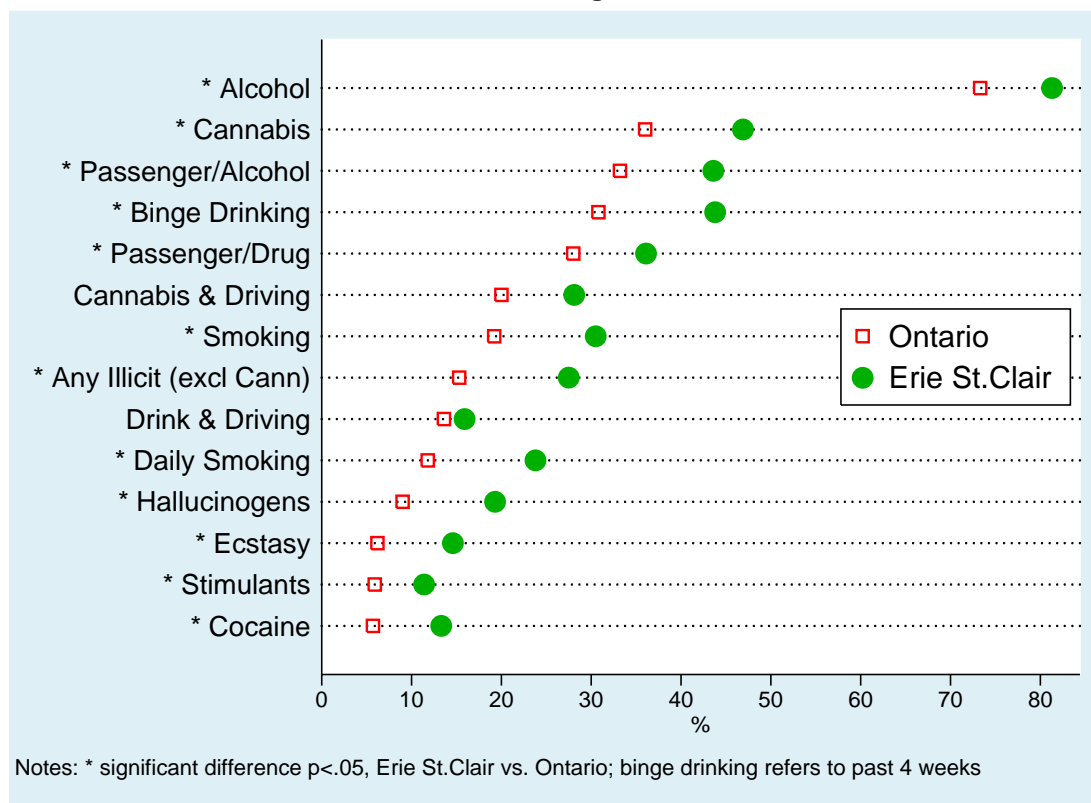


Figure 2. Percentage of High School Students in the South West LHIN (n=227) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS

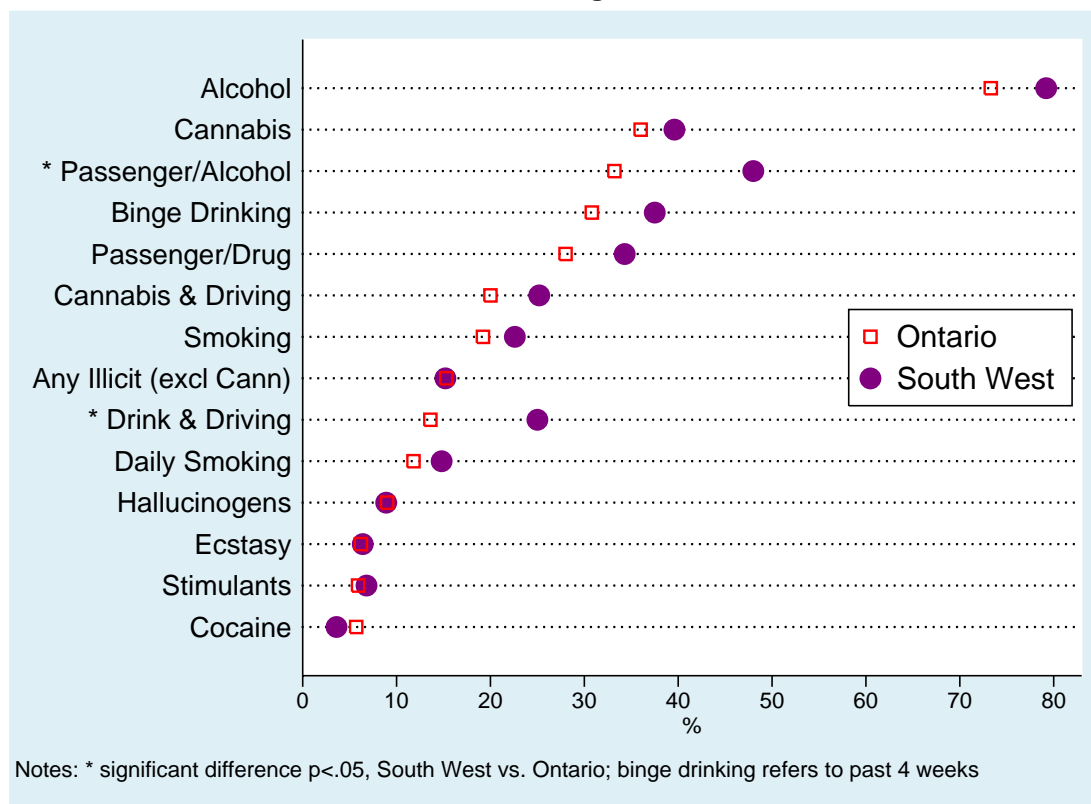


Figure 3. Percentage of High School Students in the Waterloo Wellington LHIN (n=258) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS

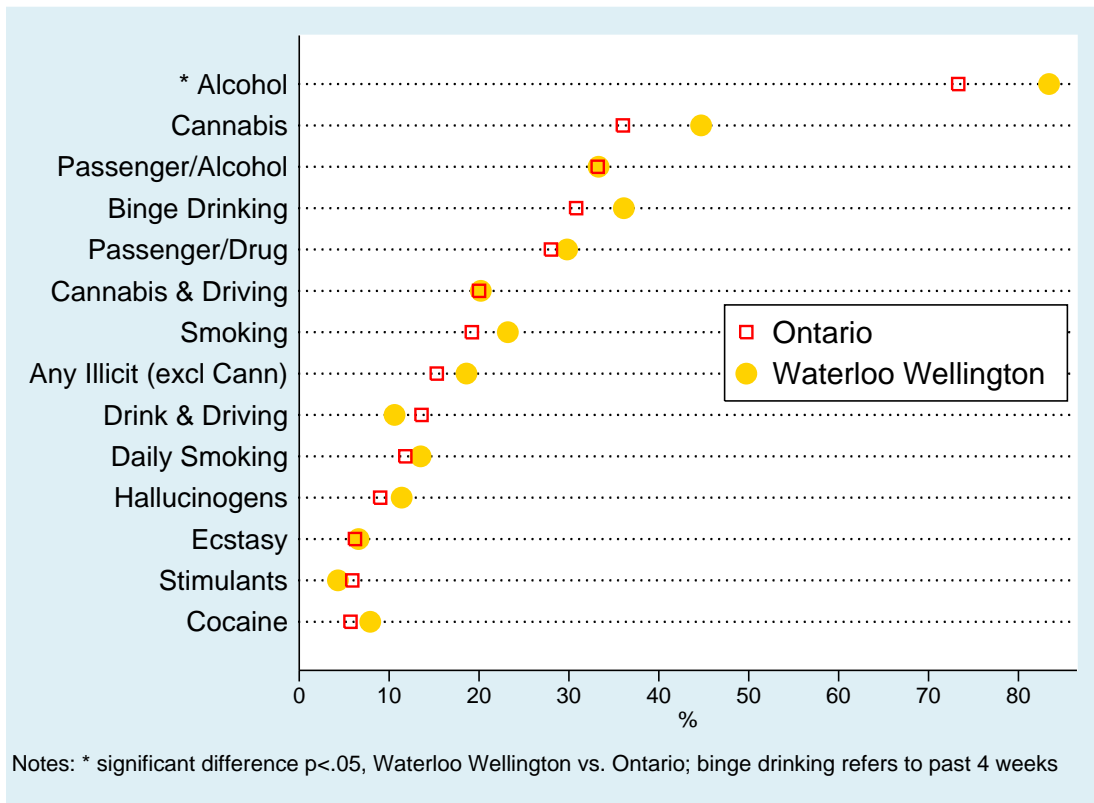


Figure 4. Percentage of High School Students in the Hamilton Niagara Haldimand Brant LHIN (n=297) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS

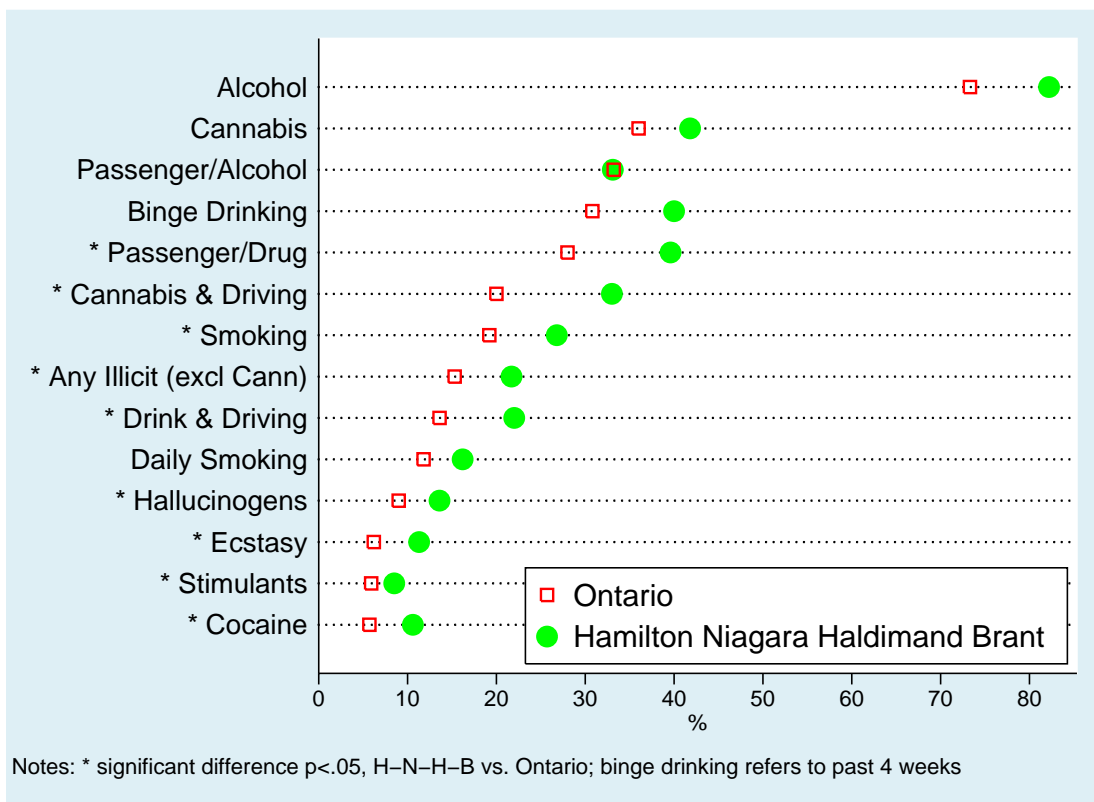


Figure 5. Percentage of High School Students in the Central West LHIN (n=386) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS

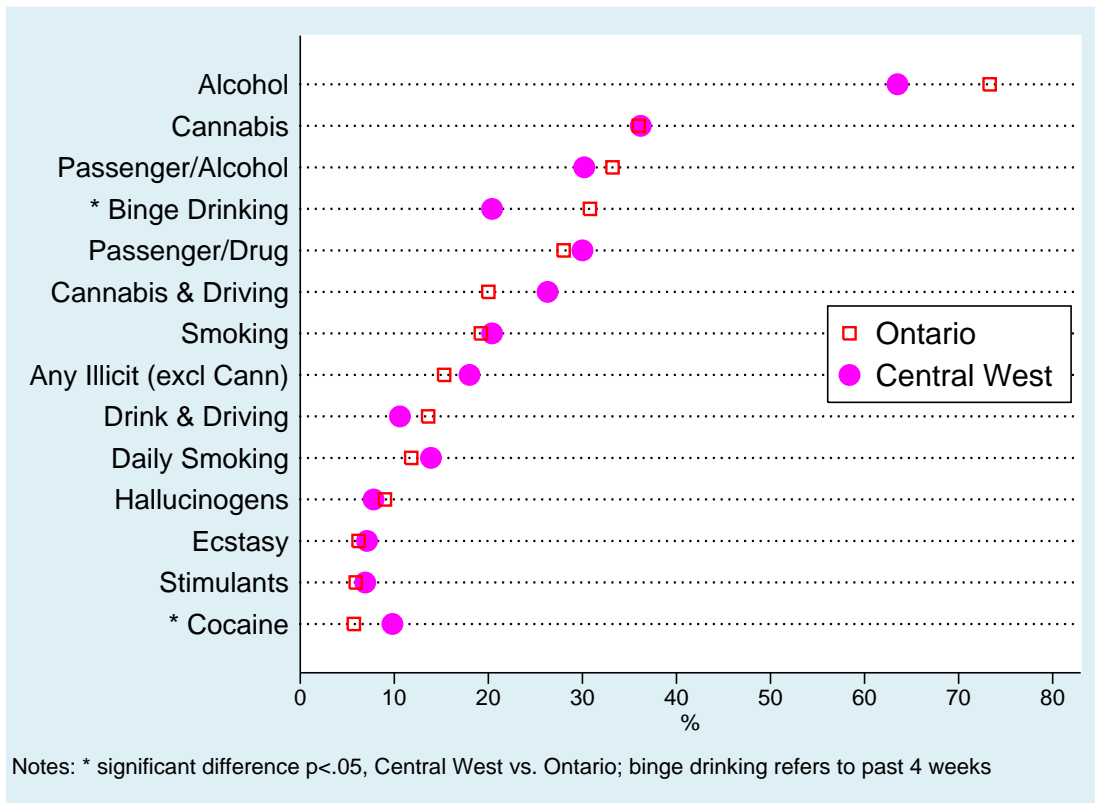


Figure 6. Percentage of High School Students in the Mississauga Halton LHIN (n=750) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS

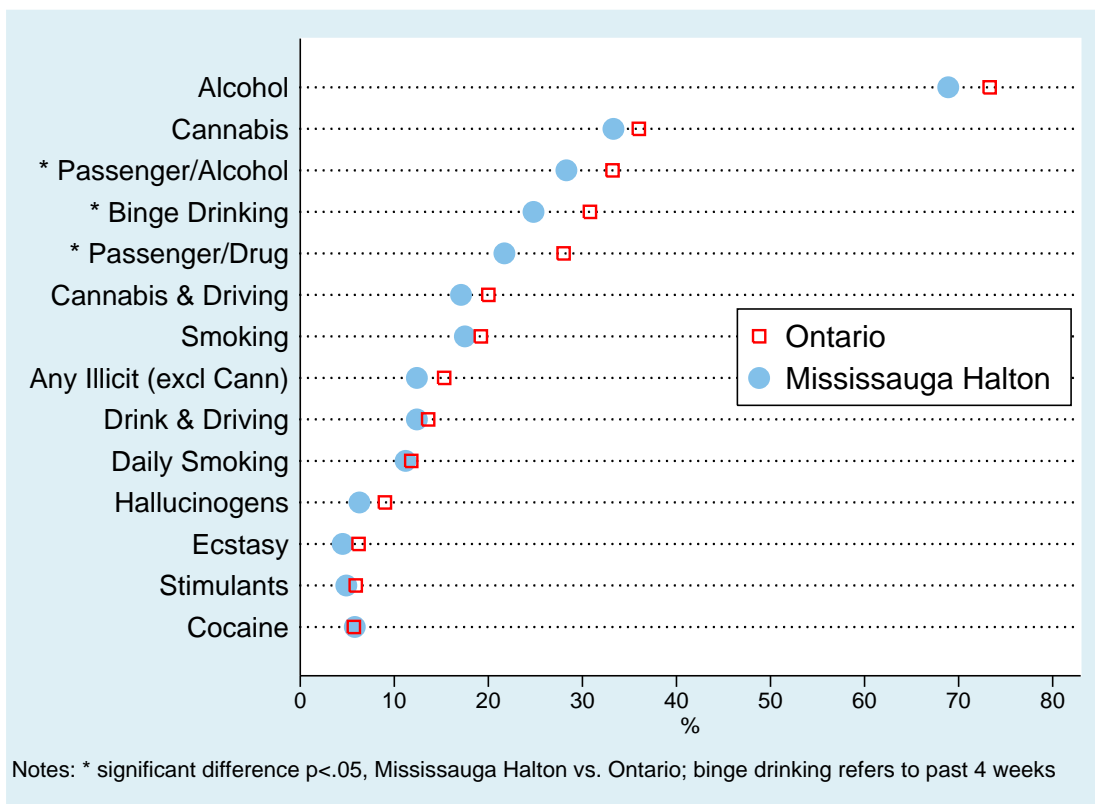


Figure 7. Percentage of High School Students in the Toronto Central LHIN (n=231) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS

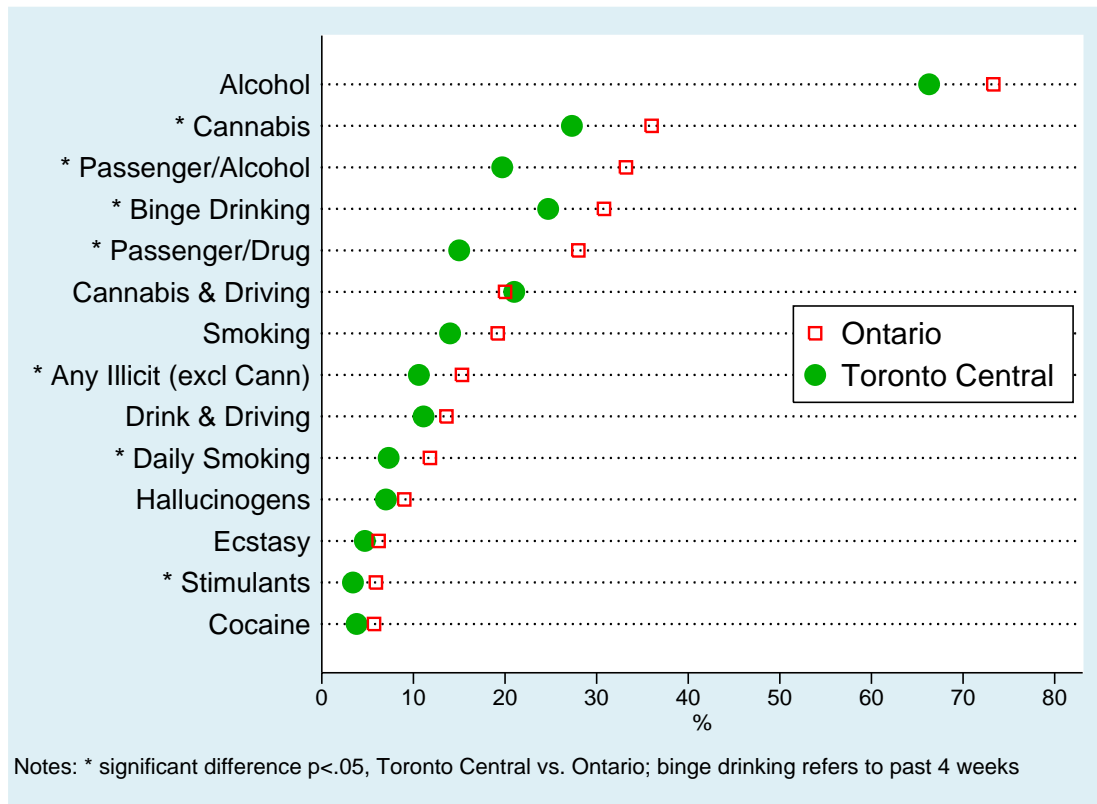


Figure 8. Percentage of High School Students in the Central LHIN (n=902) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS

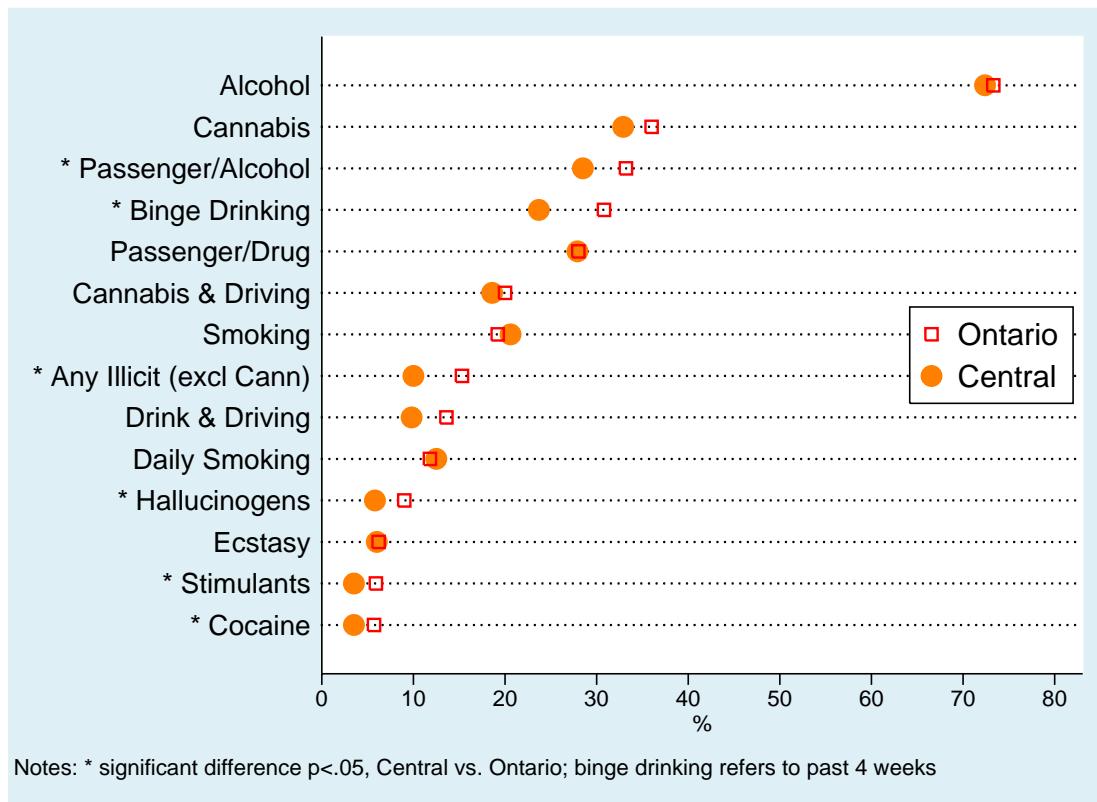
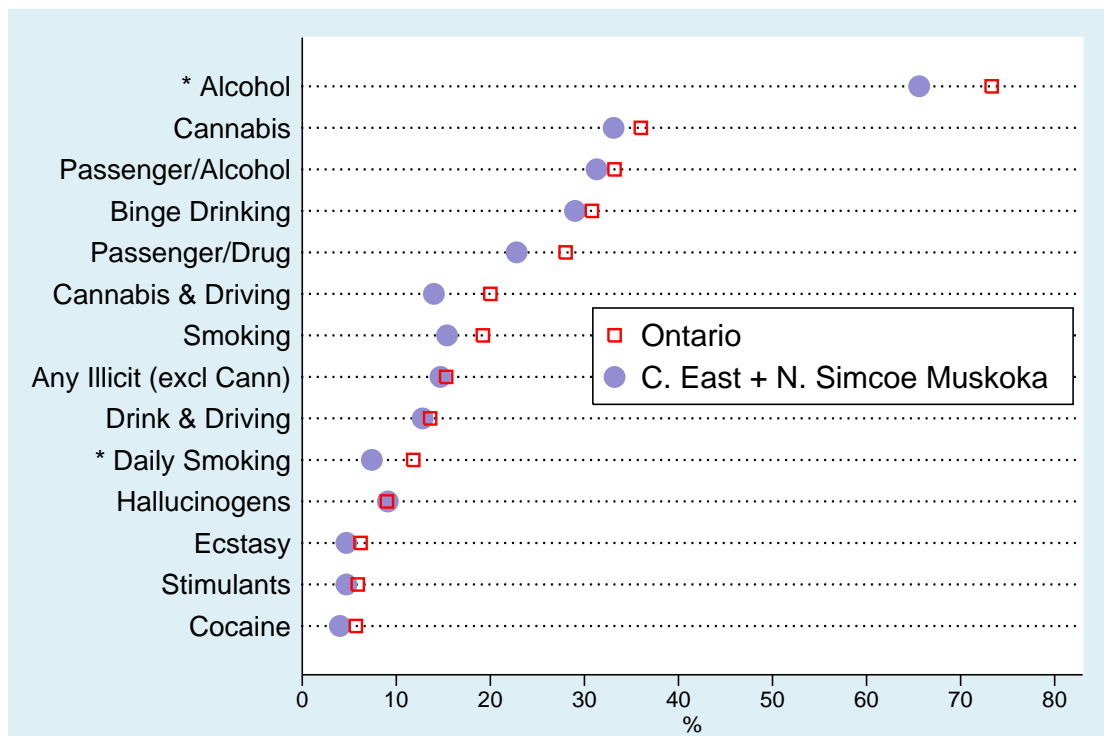
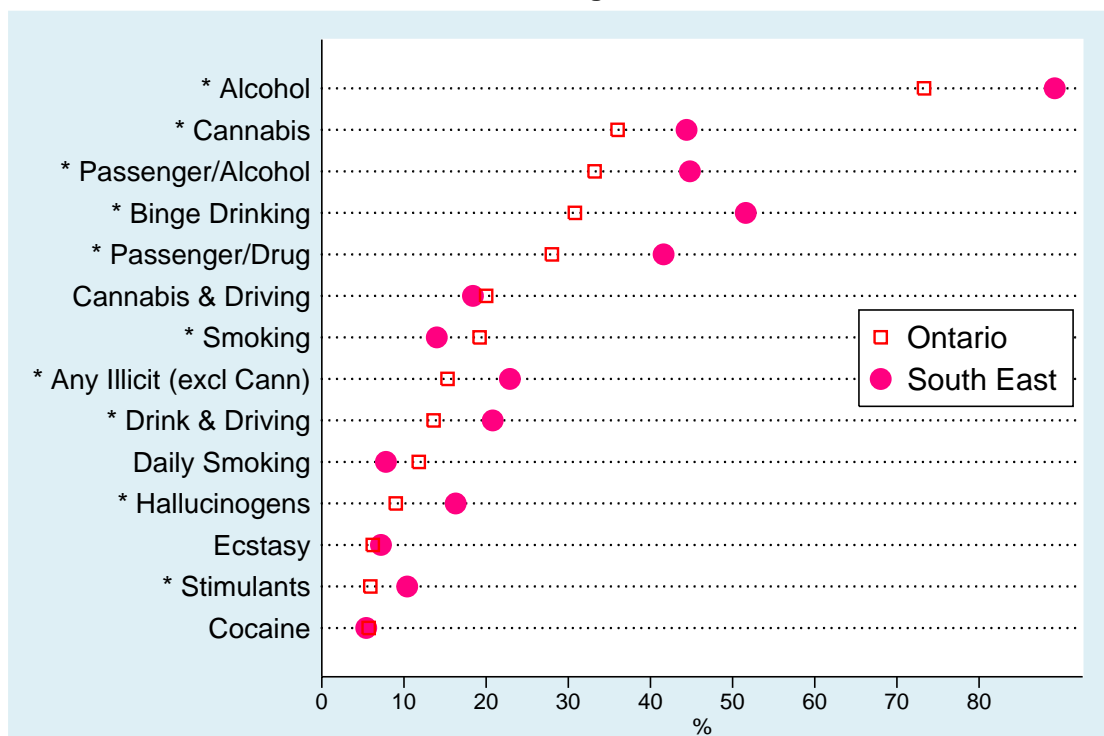


Figure 9. Percentage of High School Students in the Central East and North Simcoe Muskoka LHINS (n=638) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS



Notes: *significant difference $p < .05$, C.East + N.Simcoe Muskoka vs. Ontario; binge drinking refers to past 4 weeks

Figure 10. Percentage of High School Students in the South East LHIN (n=219) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS



Notes: * significant difference $p < .05$, South East vs. Ontario; binge drinking refers to past 4 weeks

Figure 11. Percentage of High School Students in the Champlain LHIN (n=631) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS

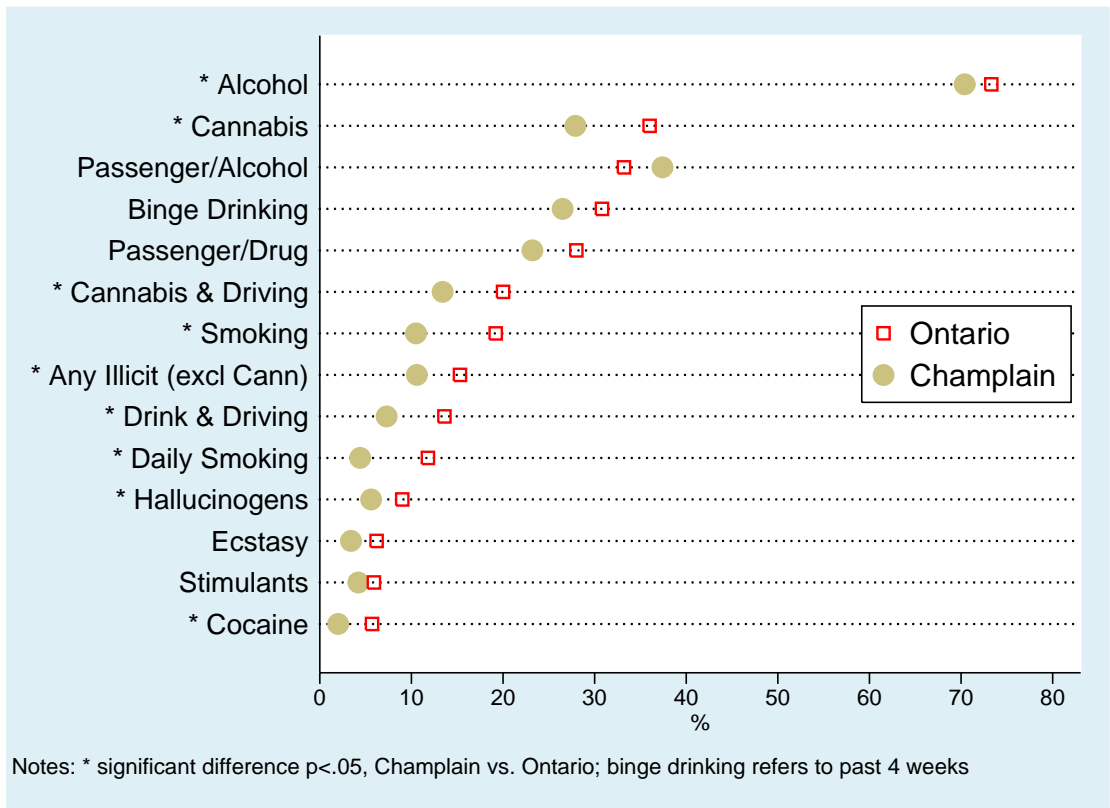


Figure 12. Percentage of High School Students in the North East and North West LHINs (n=957) Reporting Substance Use and Related Behaviours During the Past 12 Months, 2005 OSDUS

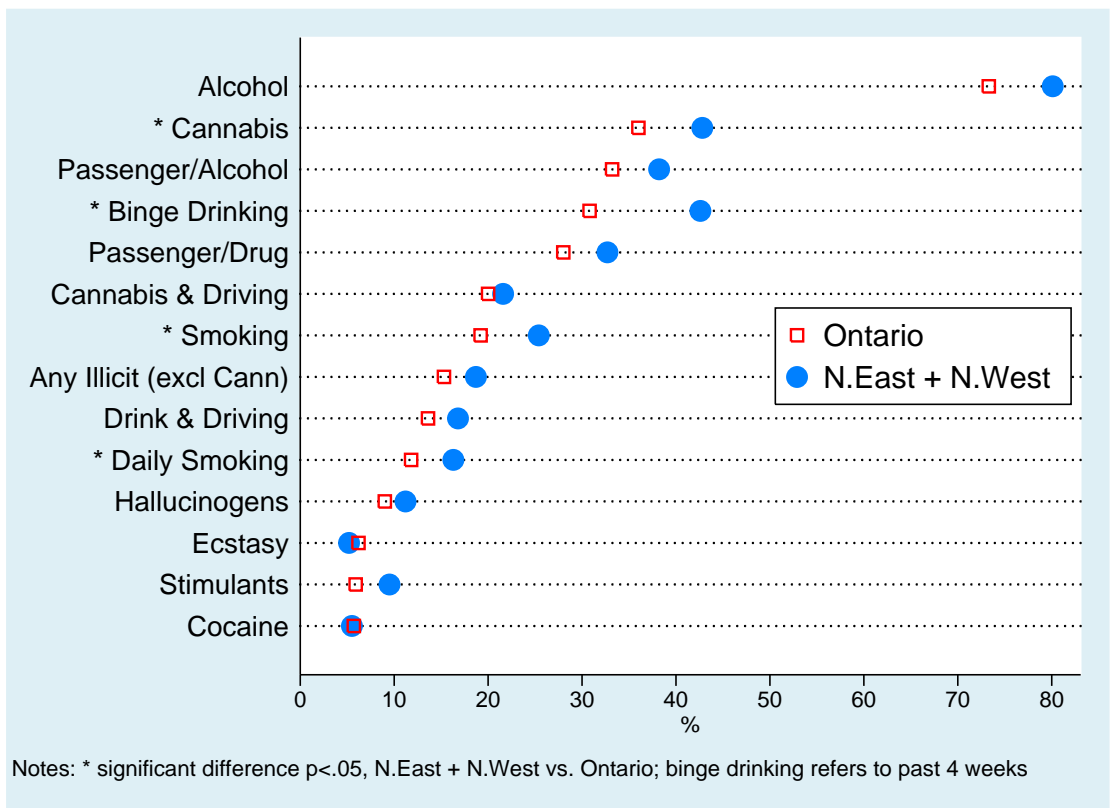


Table 3. Percentage of High School Students Reporting Substance Use and Driving-Related Behaviours During the Past 12 Months, by Ontario LHIN, 2005 OSDUS

	Erie St.Clair	South West	Waterloo Wellington	Hamilton Niagara Haldimand Brant	Central West	Mississauga Halton	Toronto Central	Central	C. East + N.Simcoe Muskoka	South East	Champlain	N.East + N.West	ONTARIO
No. of Students	298	227	258	297	386	750	231	902	638	219	631	957	5794
No. of Schools	4	4	5	5	6	11	3	12	9	3	10	17	89
Smoking	31**	23	23	27**	20	18	14	21	15	14**	11**	25**	19
(95% CI)	(24-38)	(14-34)	(18-29)	(24-30)	(14-29)	(14-22)	(8-22)	(17-24)	(12-20)	(12-17)	(7-16)	(21-30)	(17-21)
Daily Smoking	24**	15	14	16	14	11	7**	13	7*	8	4**	16**	12
	(16-34)	(8-25)	(8-21)	(11-23)	(9-21)	(8-16)	(6-9)	(10-15)	(5-11)	(5-12)	(2-9)	(12-21)	(10-14)
Alcohol	81*	79	83*	82	64	69	66	72	66*	89**	70*	80	73
	(77-85)	(75-83)	(76-89)	(74-88)	(43-80)	(59-78)	(53-77)	(68-77)	(53-76)	(81-94)	(64-76)	(76-83)	(70-76)
Binge Drinking	44*	38	36	40	20*	25*	25**	24**	29	52*	27	43**	31
	(34-54)	(33-42)	(26-48)	(32-48)	(13-31)	(18-33)	(22-28)	(20-27)	(20-40)	(34-69)	(20-34)	(36-49)	(28-34)
Cannabis	47**	40	45	42	36	33	27**	33	33	44**	28**	43*	36
	(40-54)	(35-44)	(33-57)	(34-50)	(24-50)	(27-40)	(22-33)	(29-38)	(26-42)	(42-47)	(23-33)	(38-47)	(34-38)
Hallucinogens	19**	9	11	14**	8	6	7	6*	9	16**	6*	11	9
	(13-28)	(6-14)	(6-21)	(12-16)	(4-15)	(4-11)	(3-14)	(4-9)	(5-15)	(11-23)	(4-9)	(9-14)	(8-11)
Ecstasy	15**	6	7	11**	7	5	5	6	5	7	3	5	6
	(11-19)	(5-8)	(3-14)	(8-16)	(4-12)	(3-7)	(3-7)	(5-8)	(2-10)	(5-11)	(2-7)	(4-7)	(5-7)
Stimulants	11**	7	4	8**	7	5	3*	3*	5	10**	4	9	6
	(8-16)	(3-13)	(2-10)	(7-10)	(5-10)	(3-8)	(2-6)	(2-5)	(3-7)	(7-15)	(3-6)	(6-16)	(5-7)
Cocaine	13**	4	8	11**	10**	6	4	4*	4	5	2**	5	6
	(10-17)	(2-7)	(4-16)	(7-15)	(8-12)	(4-8)	(2-6)	(2-5)	(2-8)	(3-11)	(1-4)	(4-8)	(5-7)
Any Illicit Drug excluding Cannabis	28**	15	19	22**	18	12	11**	10**	15	23**	11**	19	15
	(22-34)	(10-22)	(11-31)	(19-25)	(13-24)	(9-16)	(8-15)	(8-13)	(10-21)	(20-26)	(8-14)	(15-23)	(14-17)
Passenger/Alcohol	44**	48*	33	33	30	28**	20**	29**	31	45**	37	38	33
	(39-49)	(34-63)	(22-46)	(29-38)	(24-37)	(24-33)	(15-26)	(25-33)	(24-40)	(40-50)	(29-46)	(32-45)	(31-36)
Passenger/Drug	36*	34	30	40**	30	22**	15**	28	23	42**	23	33	28
	(29-44)	(24-46)	(22-39)	(35-45)	(24-37)	(17-27)	(8-25)	(22-34)	(17-30)	(36-47)	(17-31)	(27-39)	(25-31)
Drink & Drive	16	25**	11	22**	11	12	11	10	13	21**	7**	17	14
(Drivers in Gr. 10-12)	(12-20)	(19-33)	(6-19)	(16-30)	(6-18)	(10-16)	(6-21)	(7-14)	(7-21)	(17-25)	(5-10)	(13-21)	(12-16)
Cannabis & Drive	28	25	20	33**	26	17	21	19	14	18	13*	22	20
(Drivers in Gr. 10-12)	(18-42)	(20-32)	(12-31)	(27-40)	(16-41)	(11-25)	(17-26)	(16-22)	(7-25)	(10-32)	(9-20)	(17-27)	(18-23)

Notes: (1) due to small sample sizes, the Central East (n=576) and North Simcoe Muskoka (n=62) LHINs were merged, and the North East (n=804) and North West (n=153) LHINs were merged; (2) 95% CI is the confidence interval; (3) binge drinking refers to past 4 weeks; (4) significantly different from Ontario, * p<.05 ** p<.01.

Methods:

The *Ontario Student Drug Use Survey (OSDUS)* is an Ontario-wide survey of elementary (grades 7 and 8) and secondary (grades 9-12) school students conducted every two years since 1977. The 2005 survey, which used a stratified (region) two-stage cluster design (school, class) included 7,726 students in grades 7 to 12 from 42 school boards, 137 schools, and 445 classes. Self-administered, anonymous questionnaires were distributed and collected by staff from the Institute for Social Research, York University on a classroom basis between January and June 2005. The student participation rate was 72%. The 2005 full sample size of 7,726 students represents about 975,200 students in grades 7 to 12 in public and Catholic schools across the province. The present analysis is based on secondary school students only (N=5,794). The LHINs were assigned at the school-level according to the postal code, and not at the student-level.

All survey estimates were weighted, and variance and statistical tests were corrected for the sampling design. Due to instability, drug prevalence rates below 5% for the provincial sample are not presented.

Terminology:

- **Alcohol Use** is defined as drinking any alcohol during the past 12 months, excluding sips, but includes drinking at special events.
- **Binge Drinking** is defined as having 5 or more alcoholic drinks on one occasion at least once during the 4 weeks before the survey.
- **Drug Use** is defined as the use of the given substance at least once during the 12 months before the survey.
- **Hallucinogen Use** refers to the use of Mescaline or Psilocybin ("magic mushrooms") and excludes LSD and PCP.
- **Any Illicit Drug Use (excluding Cannabis)** is defined as the use of any of the following at least once during the past 12 months: cocaine, crack, heroin, methamphetamine, barbiturates, stimulants, tranquillizers, LSD, PCP, and other hallucinogens. Excluded are: cannabis, glue, solvents, ecstasy, Ice (crystal methamphetamine), GHB, Rohypnol, Ketamine, Ritalin, OxyContin and any prescription drug.
- **Passenger/Alcohol** refers to riding in a vehicle, at least once in the past 12 months, with a driver who had consumed alcohol.
- **Passenger/Drug** refers to riding in a vehicle, at least once in the past 12 months, with a driver who had used drugs.
- **Drink & Drive** refers to driving within an hour of consuming 2 or more alcoholic drinks (among only those in grades 10 to 12 with a valid driver's licence).
- **Cannabis & Drive** refers to driving within an hour of using cannabis (among only those in grades 10 to 12 with a valid driver's licence).
- **95% Confidence Interval (CI)** can be crudely interpreted as being 95% likely to include the "true" value if every student in grades 9 to 12 in Ontario was surveyed.
- **Significant Difference** refers to a difference between two percentages that is not likely due to chance. For example, a difference found at the $p < .05$ level of statistical significance is one that is less than 5% likely to occur by chance alone.

Source:

For more substance use results from the 2005 *OSDUS*, please see: Adlaf, E.M., & Paglia-Boak, A. (2005). *Drug Use Among Ontario Students, 1977-2005: Detailed OSDUS Findings*. CAMH Research Document Series, No. 16. Toronto: Centre for Addiction and Mental Health. (The report is available in PDF format at <http://www.camh.net/research/osdus.html>.)

References:

1. Government of Ontario. (2006). Local Health Integration Networks. Retrieved November 1, 2006, from <http://www.lhins.on.ca/english/main/home.asp>

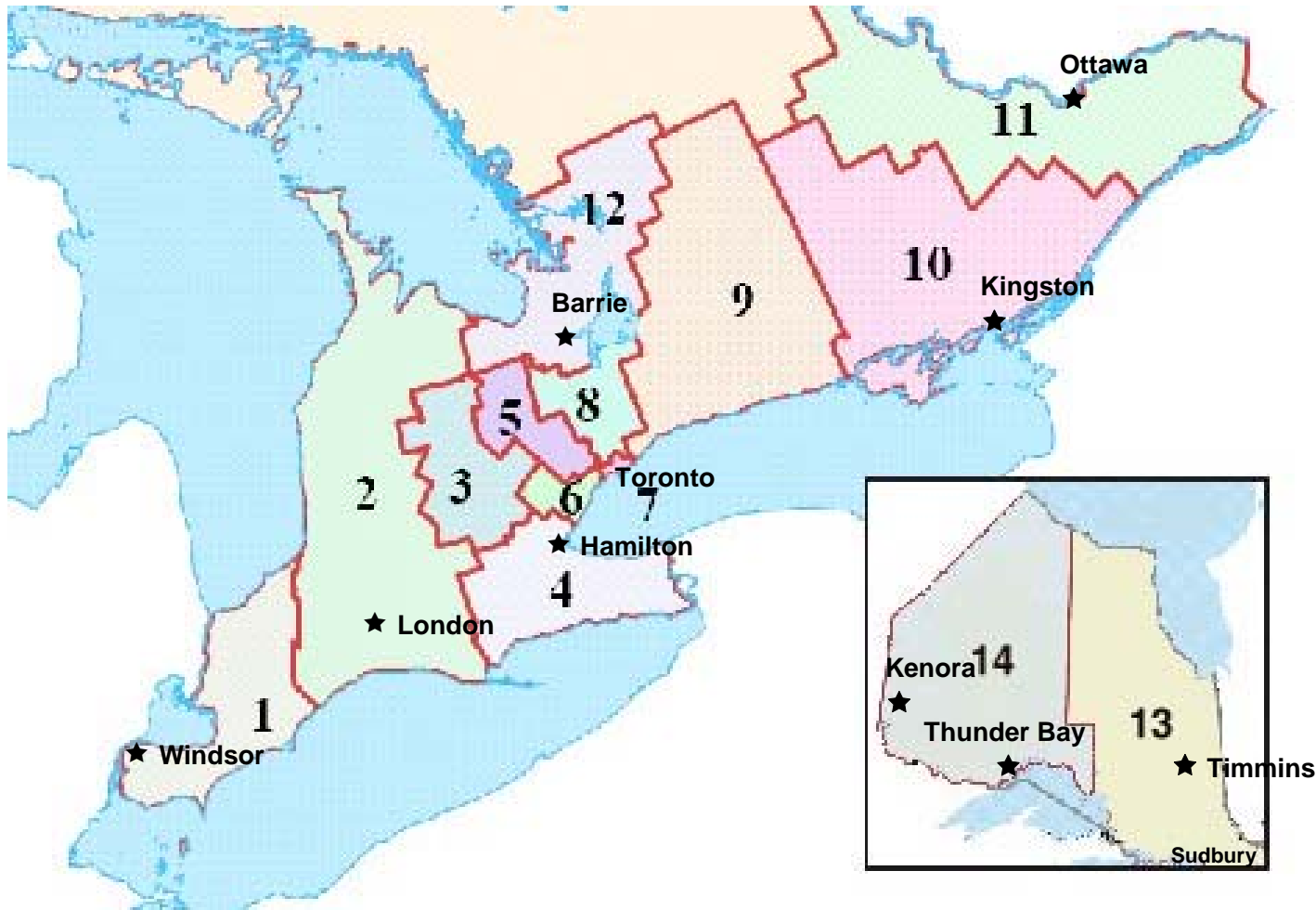
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14 LHINs of Ontario



- 1 Erie St.Clair
- 2 South West
- 3 Waterloo Wellington
- 4 Hamilton Niagara Haldimand Brant
- 5 Central West
- 6 Mississauga Halton
- 7 Toronto Central
- 8 Central
- 9 Central East
- 10 South East
- 11 Champlain
- 12 North Simcoe Muskoka
- 13 North East
- 14 North West