Motor vehicle traffic crashes at a glance

Highlights

- Since 2007, the hospitalization rates in Durham Region residents have remained stable. In 2016, 220 Durham Region residents were hospitalized as a result of motor vehicle crashes. Rates are consistently higher for males than females. The rates for Durham Region are similar to Ontario's rates.
- Since 2007, the emergency department (ED) visit rates for Durham Region have remained stable. In 2016, over 4,000 Durham Region residents visited the ED as a result of motor vehicle crashes. Rates are consistently higher for females than males. The rates for Durham Region are higher than the provincial rates.
- Durham Region young adults aged 15-24 account for almost 20 per cent (43/220) of the hospitalizations due to motor vehicle crashes. While rates of hospitalization in Durham Region young males declined, the female rate reached its highest level in 2016.
- Durham Region young adults account for almost one-quarter (953/4022) of the ED visits. ED visit rates in Durham Region young females are higher than the rates for males and higher than the provincial rates.
- There were over 140 ED visits for Durham Region children aged 0-9 in 2016. While provincial rates declined, the rates in Durham Region children are on the rise and are higher than Ontario's rates.

Introduction

The burden of motor vehicle traffic crashes in Durham Region is described in the following figures and tables.

- Age-standardized hospitalization rates by sex
- Age-standardized emergency department (ED) visit rates by sex
- Age-specific hospitalization rates by sex for individuals 15 to 24 years
- Age-specific ED visit rates by sex for individuals 15 to 24 years and 0 to 9 years

For additional local information on road safety, contact the Durham Region Police Services, Traffic Services Branch.

Go to the Health Statistics in Durham Region webpage found at durham.ca under Departments, Health, Statistics and Publications for more detailed, topic-specific reports on impaired driving, distracted driving, aggressive driving and seat belt compliance.

Contact the Durham Health Connection Line at 905-666-6241 or 1-800-841-2729 for any questions.

Release date: August 2017

Figure 1: Age-standardized hospitalization rates per 100,000 for motor vehicle traffic crashes for Durham Region and Ontario, by sex, between 2007 and 2016

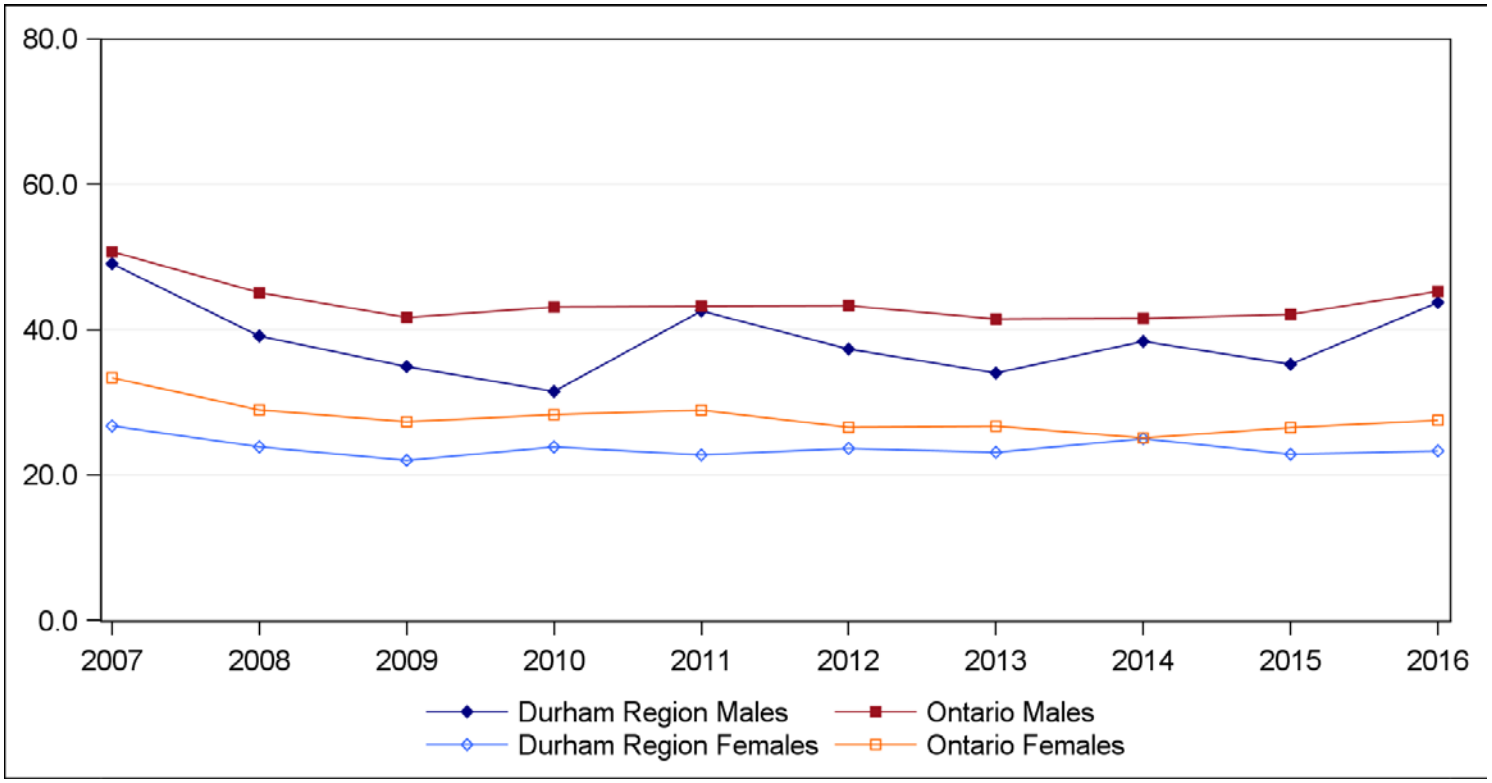

Table 1: Counts and age-standardized hospitalization rates per 100,000 for motor vehicle traffic crashes for Durham Region and Ontario, by sex, between 2002 and 2016

Statistic	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Durham Region females rate	26.7	23.8	22.0	23.8	22.7	23.6	23.1	24.9	22.8	23.3
Durham Region females count	77	70	66	74	71	75	75	82	77	81
Durham Region males rate	49.0	39.1	34.9	31.4	42.5	37.3	34.0	38.3	35.2	43.7
Durham Region males count	135	114	101	94	124	111	105	118	109	139
Ontario females rate	33.3	28.9	27.3	28.3	28.9	26.5	26.7	25.1	26.5	27.5
Ontario females count	2,158	1,901	1,830	1,924	1,997	1,860	1,906	1,813	1,944	2,049
Ontario males rate	50.7	45.0	41.6	43.1	43.2	43.2	41.4	41.5	42.1	45.2
Ontario males count	3,104	2,795	2,613	2,738	2,751	2,808	2,726	2,772	2,839	3,109

Figure 2: Age-standardized ED visit rates per 100,000 for motor vehicle traffic crashes for Durham Region and Ontario, by sex, between 2007 and 2016

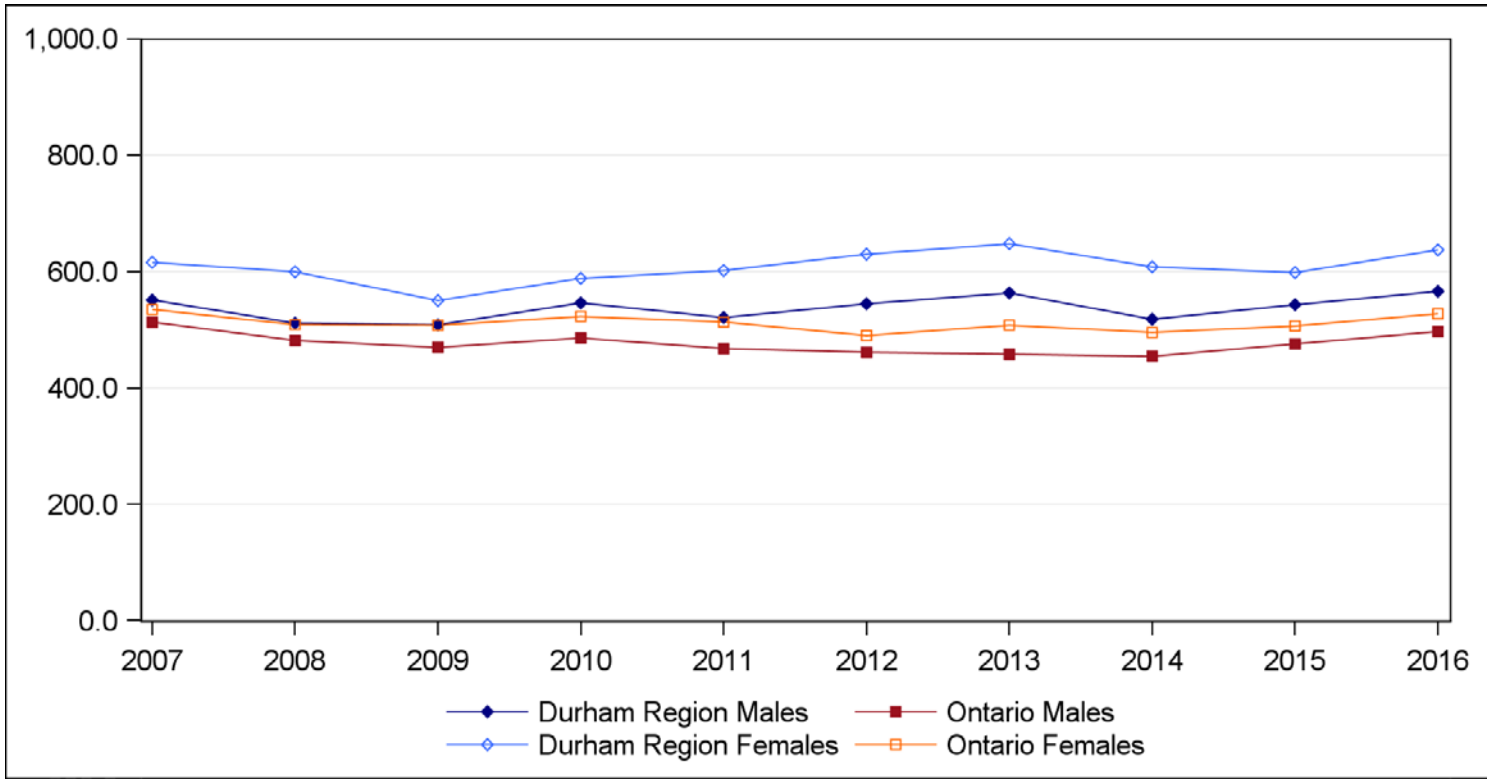

Table 2: Counts and age-standardized ED visit rates per 100,000 for motor vehicle traffic crashes for Durham Region and Ontario, by sex, between 2007 and 2016

Statistic	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Durham Region females rate	615.6	599.4	550.1	588.1	601.6	629.6	647.7	607.9	598.1	637.0
Durham Region females count	1,847	1,817	1,695	1,840	1,913	2,026	2,114	2,001	1,998	2,152
Durham Region males rate	550.9	511.2	508.3	545.9	520.7	544.4	563.0	517.8	542.8	565.9
Durham Region males count	1,620	1,515	1,531	1,648	1,588	1,682	1,771	1,650	1,758	1,870
Ontario females rate	534.6	508.5	507.4	522.6	513.2	489.7	507.5	495.1	506.2	527.3
Ontario females count	34,556	33,207	33,457	34,848	34,548	33,306	34,822	34,241	35,223	37,061
Ontario males rate	512.9	481.4	469.4	485.6	467.4	461.0	457.8	454.0	475.4	496.6
Ontario males count	32,562	30,697	30,089	31,435	30,479	30,426	30,520	30,504	32,192	34,106

Figure 3: Age-specific hospitalization rates per 100,000 for motor vehicle traffic crashes for Durham Region and Ontario young adults aged 15 to 24 years, by sex, between 2007 and 2016

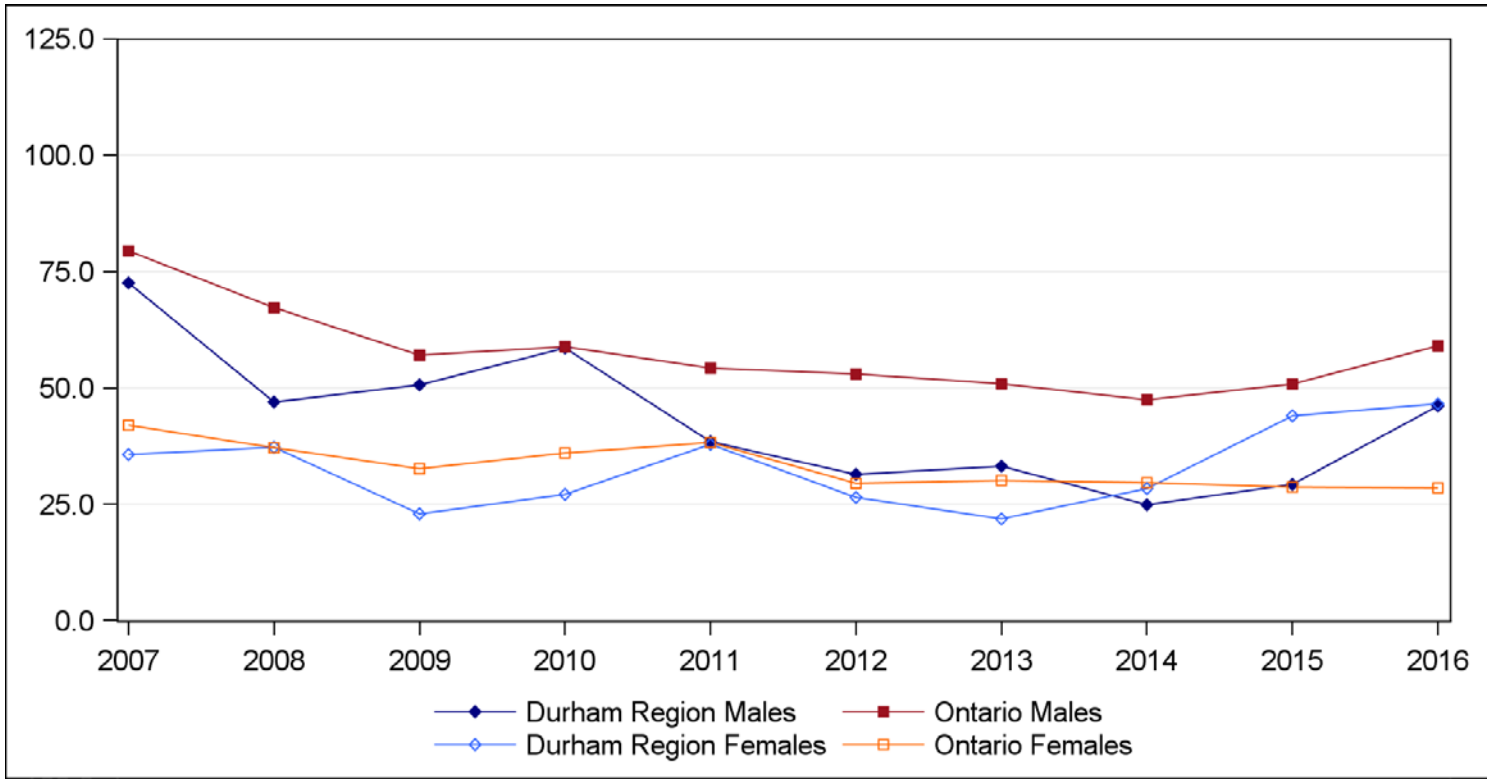

Table 3: Counts and age-specific hospitalization rates per 100,000 for motor vehicle traffic crashes for Durham Region and Ontario young adults aged 15 to 24 years, by sex, between 2007 and 2016

Statistic	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Durham Region females rate	35.6	37.2	22.9	27.0	37.8	26.4	21.8	28.3	43.9	46.5
Durham Region females count	15	16	10	12	17	12	10	13	20	21
Durham Region males rate	72.5	46.9	50.6	58.5	38.4	31.3	33.1	24.8	29.2	46.0
Durham Region males count	32	21	23	27	18	15	16	12	14	22
Ontario females rate	41.9	37.1	32.6	35.9	38.2	29.4	30.0	29.6	28.6	28.4
Ontario females count	362	323	286	319	342	265	271	266	255	253
Ontario males rate	79.4	67.2	57.0	58.8	54.2	52.9	50.8	47.4	50.8	59.0
Ontario males count	711	603	514	537	501	495	478	446	476	554

Figure 4: Age-specific ED visit rates per 100,000 for motor vehicle traffic crashes for Durham Region and Ontario young adults aged 15 to 24 years, by sex, between 2007 and 2016

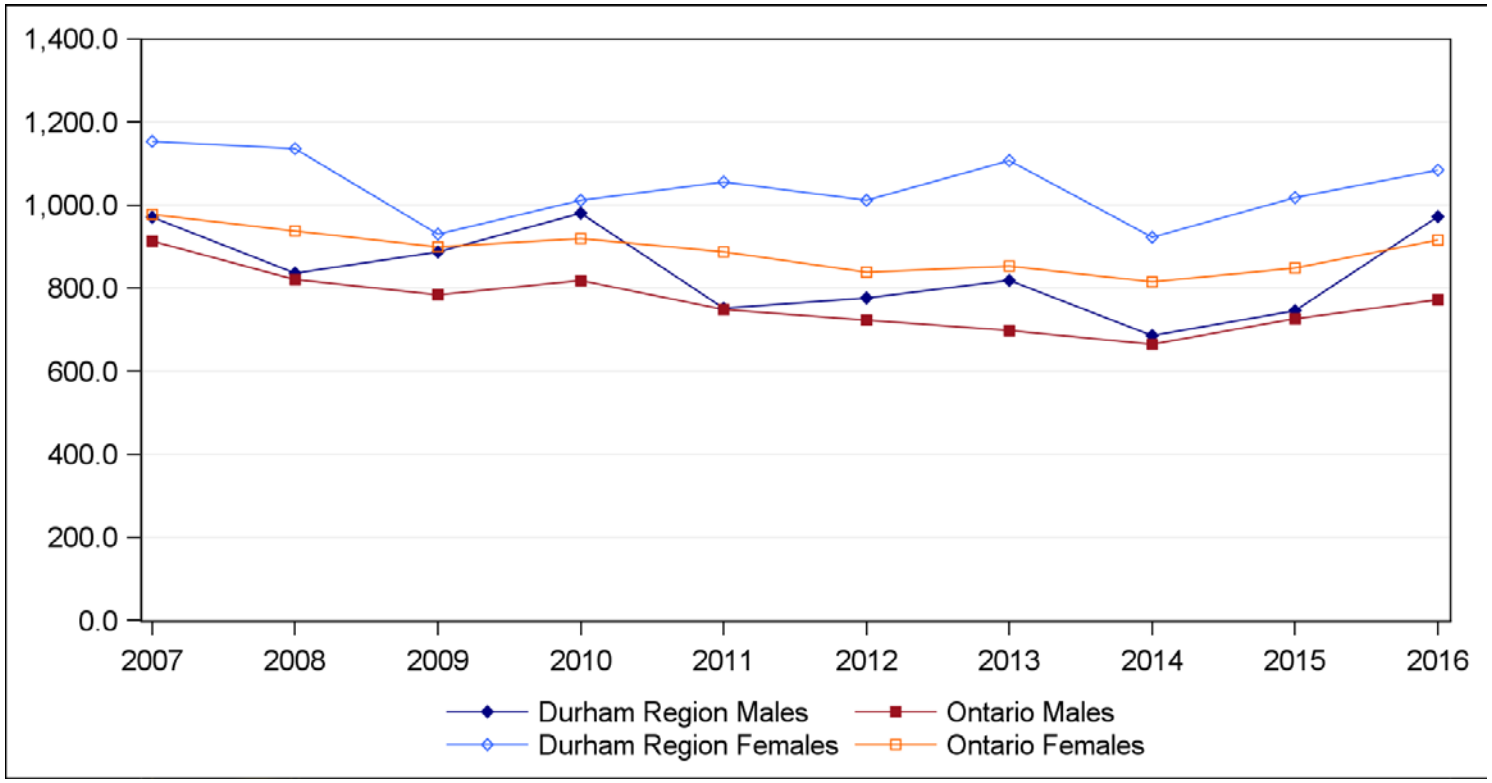

Table 4: Counts and age-specific ED visit rates per 100,000 for motor vehicle traffic crashes for Durham Region and Ontario young adults aged 15 to 24 years, by sex, between 2007 and 2016

Statistic	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Durham Region Females rate	1,153.1	1,135.5	929.7	1,011.2	1,055.3	1,011.3	1,106.8	922.3	1,017.8	1,083.9
Durham Region Females count	485	488	406	448	474	459	507	423	463	489
Durham Region Males rate	970.3	835.9	886.9	980.2	751.4	776.2	818.5	685.5	745.6	972.0
Durham Region Males count	428	374	403	452	352	371	395	331	357	464
Ontario Females rate	977.1	937.3	898.9	919.2	887.0	838.3	852.8	815.0	848.4	915.5
Ontario Females count	8,429	8,154	7,883	8,149	7,933	7,539	7,685	7,323	7,549	8,129
Ontario Males rate	912.8	820.6	783.9	818.1	748.5	722.8	697.9	664.7	726.3	771.8
Ontario Males count	8,172	7,360	7,068	7,469	6,915	6,755	6,559	6,252	6,805	7,248

Figure 5: Age-specific ED visit rates per 100,000 for motor vehicle traffic crashes for Durham Region and Ontario children aged 0 to 9 years, by sex, between 2007 and 2016

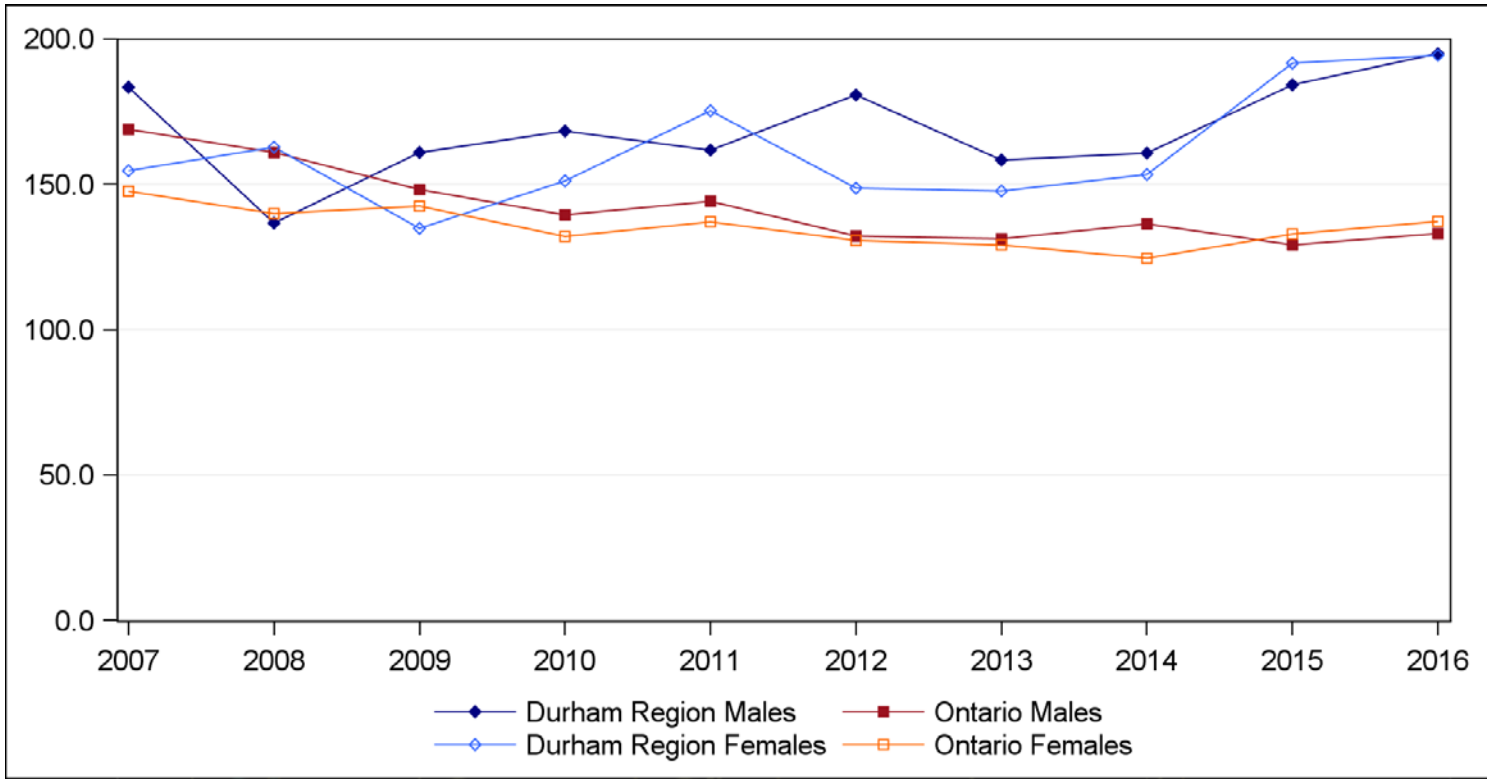

Table 5: Counts and age-specific ED visit rates per 100,000 for motor vehicle traffic crashes for Durham Region and Ontario children aged 0 to 9 years, by sex, between 2007 and 2016

Statistic	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Durham Region Females rate	154.6	162.7	134.8	151.1	175.2	148.6	147.6	153.3	191.6	194.3
Durham Region Females count	54	57	47	53	62	53	53	55	69	72
Durham Region Males rate	183.3	136.6	160.9	168.2	161.7	180.6	158.3	160.7	184.1	194.9
Durham Region Males count	67	50	59	62	60	67	59	60	69	75
Ontario Females rate	147.5	139.8	142.4	132.0	137.0	130.6	129.0	124.5	132.8	137.1
Ontario Females count	1018	966	986	918	960	918	911	881	943	988
Ontario Males rate	168.8	160.9	148.1	139.4	144.1	132.1	131.2	136.3	129.1	133.0
Ontario Males count	1229	1172	1082	1021	1061	976	973	1013	963	1007

Data Sources

Hospitalization and ED visit data are collected by the Canadian Institute for Health Information (CIHI) on a fiscal year basis. For hospitalizations, the main diagnostic code gives the primary reason for the hospital stay or "most responsible diagnosis" (MRD) while for ED visits, the main diagnostic code is the “main problem” (MP) that is deemed to be the clinically significant reason for the visit. A second set of codes, external cause codes, are used to classify the environmental events, circumstances and conditions that cause an injury (i.e. accidental fall). External cause codes are not used as a MRD or MP so need to be examined separately. Multiple external cause codes can exist for each separation (discharge, death or transfer) or visit. The counts shown for groupings of external cause codes (i.e. ICD-10 codes W00-W19 for falls) are actually counts of codes; not counts of separations or visits.

A small number of separations or visits may be double or triple counted when an individual has two or more codes within a code range for the same hospitalization or visit (i.e. an individual visits the emergency department or is hospitalized for a fall down stairs [W10] involving a skateboard [W02.03]). Co-morbidity, where a patient may have more than one disease or condition, contributes uncertainty to classifying the MRD or MP.

A person may be hospitalized or visit the ED several times for the same injury, or discharged from more than one hospital (when transferred) or ED for the same injury. Hospitalization and ED visit data provide only a crude measure of the prevalence of an injury. Data are influenced by factors that are unrelated to health status such as availability and accessibility of care, administrative policies and hospital procedures. For example, the 2003 SARS outbreaks likely reduced admissions in affected hospitals including Durham Region. This may influence comparisons between areas and over time.

For all indicators, data were analyzed by the residence of the patient, not where the hospitalization or ED visit occurred. For hospitalizations and ED visits, Ontario residents treated outside of the province were excluded; however, less than 0.5 per cent of hospitalizations for Ontario residents are out-of-province. Data were reported by calendar year, based on year of separation or visit. This report includes hospitalization and ED visit indicators with relevance to public health programming, as outlined in the Ontario Public Health Standards (OPHS). The new OPHS were published in 2008 by the Ministry of Health and Long-Term Care, pursuant to Section 7 of the Health Protection and Promotion Act.

Hospitalizations and ED visits for motor vehicle traffic crashes were selected using ICD-9 codes E810-E819 and ICD-10-CA codes V02-V04 (.1, .9), V09.2, V12-V14 (.3 -.9), V19 (.4 - .6), V20-V28 (.3 - .9), V29 (.4 - .6, .9), V30-V79 (.4 - .9 excluding V39.8, V49.8, V59.8, V69.8, V79.8), V80 (.3 - .5), V81 - V82 (.1), V83-V86 (.0 - .3), V87 (.0 -.8), and V89.2. Traffic crashes occur on public streets, roadways or highways involving pedestrians and/or drivers and passengers of: bicycles; motorized tricycles; cars; pick-up trucks or vans; motorcycles; heavy transport vehicles or buses; or other land vehicles, such as animal-driven vehicles, railway trains or vehicles, streetcars, all-terrain vehicles and snowmobiles. This includes injuries while boarding or deboarding. Non-traffic crashes are excluded.

Definitions

Age-standardized hospitalization rate
The number of hospitalizations per 100,000 population that would have occurred if the population had the same age distribution as the 2011 Canadian population. This rate provides a single summary number that allows populations with different age compositions to be compared.

Age-standardized ED visit rate
The number of ED visits per 100,000 population that would have occurred if the population had the same age distribution as the 2011 Canadian population. This rate provides a single summary number that allows populations with different age compositions to be compared.

Age-specific hospitalization rate
This rate is the total number of hospitalizations in a specified age group per 100,000 population in that age group. The numerator and denominator refer to the same age group.

Age-specific ED visit rate
This rate is the total number of ED visits in a specified age group per 100,000 population in that age group. The numerator and denominator refer to the same age group.