

Northwestern Health Unit  
Injury Trends Report  
2015



---

**Northwestern  
Health Unit**

---

[www.nwhu.on.ca](http://www.nwhu.on.ca)

## About the report

The ***Northwestern Health Unit Report on Injury Trends, 2015*** outlines recent trends in mortality and morbidity caused by injuries in the Northwestern Health Unit (NWHU) catchment area. The report provides data on mortality as well as the incidence of emergency room visits and hospitalizations caused by injuries.

The objectives of the report are to:

- Provide numbers and rates of mortality and morbidity caused by injuries in the NWHU area
- Examine recent trends of mortality and morbidity
- Compare local and provincial trends
- Identify priority areas and populations for injury prevention efforts

This report outlines the types of injuries that occur with the highest frequency in the NWHU area. The following topics are outlined in the report: mortality and morbidity from all injuries combined, intentional injuries, unintentional injuries, assault, intentional-self harm, falls, unintentional poisoning, and transport injuries. Other types of injuries are not covered in this report because they don't occur with enough frequency in the area to allow for meaningful analysis and interpretation of trends.

All data used in this report were collected between October 2014 and April of 2015, and were retrieved from IntelliHEALTH Ontario and Public Health Ontario's Snapshots tool. More details about the data sources can be found in Appendix 1.

## Table of Contents

Report on Injury Trends Cover Page .....	i
About the Report .....	ii
Table of Contents .....	1
List of Tables .....	2
List of Figures .....	3
Executive Summary.....	4
All Injuries.....	5
Intentional Injuries .....	11
Intentional self-harm.....	15
Assault.....	20
Unintentional Injuries .....	24
Falls .....	30
Unintentional Poisoning .....	34
Transport Injuries.....	38
Discussion and Limitations.....	42
Appendix 1: Data Notes .....	43
Appendix 2: ICD-10 Codes and Definitions for Injuries .....	44

## List of Tables

Table 1: Deaths due to injuries from 2007-2011, by age and gender, NWHU .....	6
Table 2: Top causes of deaths due to all injuries, 2007-2011, NWHU .....	6
Table 3: Hospitalizations in 2013 by age group and gender, all injuries combined, NWHU .....	8
Table 4: Top causes of hospitalization due to injury in 2013, NWHU .....	8
Table 5: ER visits in 2013 by age group and gender, all injuries combined, NWHU .....	10
Table 6: Top causes of visits to the ER due to injury in 2013, NWHU .....	10
Table 7: Deaths due to unintentional injury from 2007-2011, by age and gender, NWHU .....	25
Table 8: Top causes of deaths due to unintentional injury, 2007-2011, NWHU .....	25
Table 9: Hospitalization due to unintentional injury in 2013, by age and gender, NWHU .....	27
Table 10: Top causes of hospitalizations due to unintentional injuries, 2013, NWHU .....	27
Table 11: ER visits due to unintentional injury in 2013, by age and gender, NWHU .....	29
Table 12: Top causes of ER visits due to unintentional injury, 2013, NWHU .....	29
Table 13: Deaths due to intentional injury from 2007-2011, by age and gender, NWHU .....	12
Table 14: Hospitalization due to intentional injury from 2009-2013, by age and gender, NWHU .....	13
Table 15: ER visits due to intentional injury in 2013, by age and gender, NWHU .....	14
Table 16: Deaths due to intentional self-harm from 2007-2011, by age and gender, NWHU .....	16
Table 17: Hospitalization due to intentional self-harm from 2009-2013, by age and gender, NWHU .....	17
Table 18: ER visits due to intentional self-harm in 2013, by age and gender, NWHU .....	19
Table 19: Hospitalization due to assault from 2009-2013, by age and gender, NWHU .....	22
Table 20: ER visits due to assault in 2013, by age and gender, NWHU .....	23
Table 21: Deaths due to falls from 2007-2011, by age and gender, NWHU .....	31
Table 22: Hospitalization due to falls in 2013, by age and gender, NWHU .....	32
Table 23: ER visits due to falls in 2013, by age and gender, NWHU .....	33
Table 24: Deaths due to unintentional poisoning from 2007-2011, by age and gender, NWHU .....	35
Table 25: Hospitalization due to unintentional poisoning from 2009-2013, by age and gender, NWHU .....	36
Table 26: ER visits due to unintentional poisoning in 2013, by age and gender, NWHU .....	37
Table 27: Deaths due to transport injuries from 2007-2011, by age and gender, NWHU .....	39
Table 28: Hospitalization due to transport injuries from in 2013, by age and gender, NWHU .....	40
Table 29: ER visits due to transport injuries in 2013, by age and gender, NWHU .....	41

## List of Figures

Figure 1: Mortality due to all injuries, age-standardized rates per 100,000, 2007-2011 .....	5
Figure 2: Hospitalization due to all injuries, age-standardized rates per 10,000, 2009-2013 .....	7
Figure 3: ER visits due to all injuries, age-standardized rates per 1,000, 2009-2013 .....	9
Figure 4: Mortality due to unintentional injuries, age-standardized rates per 100,000, 2007-2011.....	24
Figure 5: Hospitalization due to unintentional injuries, age-standardized rates per 10,000, 2009-2013 .....	26
Figure 6: ER visits due to unintentional injuries, age-standardized rates per 1,000, 2009-2013.....	28
Figure 7: Mortality due to intentional injuries, age-standardized rates per 100,000, 2007-2011.....	11
Figure 8: Hospitalization due to intentional injuries, age-standardized rates per 10,000, 2009-2013 .....	12
Figure 9: ER visits due to intentional injuries, age-standardized rates per 1,000, 2009-2013.....	14
Figure 10: Mortality due to intentional self-harm, age-standardized rates per 100,000, 2007-2011 .....	15
Figure 11: Hospitalization due to intentional self-harm, age-standardized rates per 10,000, 2009-2013.....	17
Figure 12: ER visits due to intentional self-harm, age-standardized rates per 10,000, 2009-2013 .....	18
Figure 13: Mortality due to assault, age-standardized rates per 100,000, 2007-2011 .....	20
Figure 14: Hospitalization due to assault, age-standardized rates per 100,000, 2009-2013 .....	21
Figure 15: ER visits due to assault, age-standardized rates per 10,000, 2009-2013 .....	22
Figure 16: Mortality due to falls, age-standardized rates per 100,000, 2007-2011 .....	30
Figure 17: Hospitalization due to falls, age-standardized rates per 100,000, 2009-2013 .....	31
Figure 18: ER visits due to falls, age-standardized rates per 1,000, 2009-2013.....	33
Figure 19: Mortality due to unintentional poisoning, age-standardized rates per 100,000, 2007-2011 .....	34
Figure 20: Hospitalization due to unintentional poisoning, age-standardized rates per 100,000, 2009-2013.....	35
Figure 21: ER visits due to unintentional poisoning, age-standardized rates per 10,000, 2009-2013 .....	37
Figure 22: Mortality due to transport injuries, age-standardized rates per 100,000, 2007-2011 .....	38
Figure 23: Hospitalization due to transport injuries, age-standardized rates per 100,000, 2009-2013.....	39
Figure 24: ER visits due to transport injuries, age-standardized rates per 10,000, 2009-2013 .....	40

## Executive Summary

---

Historically, the Northwestern Health Unit (NWHU) catchment area has had high rates of mortality and morbidity caused by injuries. Looking back over the last number of years, mortality rates and rates of hospitalization have been consistently higher in the NWHU when compared with the province for many types of injuries. Areas where rates are particularly high include intentional self-harm and assault; the NWHU has some of the highest rates of any health units in the province. Rates for other types of injuries are not so extreme, but in most cases the NWHU is statistically higher than the province as a whole.

Key findings of this report include:

- Mortality rates from all types of injuries are more than twice as high in the NWHU area compared with the province. In 2011 the mortality rate in the NWHU was 83.6 per 100,000, compared with 34.5 per 100,000 for Ontario.
- Mortality rates from injury are almost twice as high in males in the NWHU area: 100.0 per 100,000 per year compared with 55.2 per 100,000 per year amongst females between 2007 and 2011.
- Similar to mortality, rates of hospitalization and ER visits due to injury are also significantly higher in the NWHU area compared with the province.
- Mortality from self-harm has been increasing in the NWHU area. The 2011 mortality rate was 29.4 per 100,000, three times higher than the provincial rate of 9.4 per 100,000. It has almost tripled since 2007 when the rate was 9.9 per 100,000. Between 2007 and 2011 self-harm was the leading cause of injury-related death in the NWHU, responsible for 23.8% of injury-related deaths.
- Mortality from self-harm is significantly higher in males than females: about twice as high. In contrast, rates of hospitalization and ER visits from self-harm are about twice as high in females than males.
- Mortality, hospitalization and ER visits caused by assault have been consistently significantly higher in the NWHU area than the province as a whole.

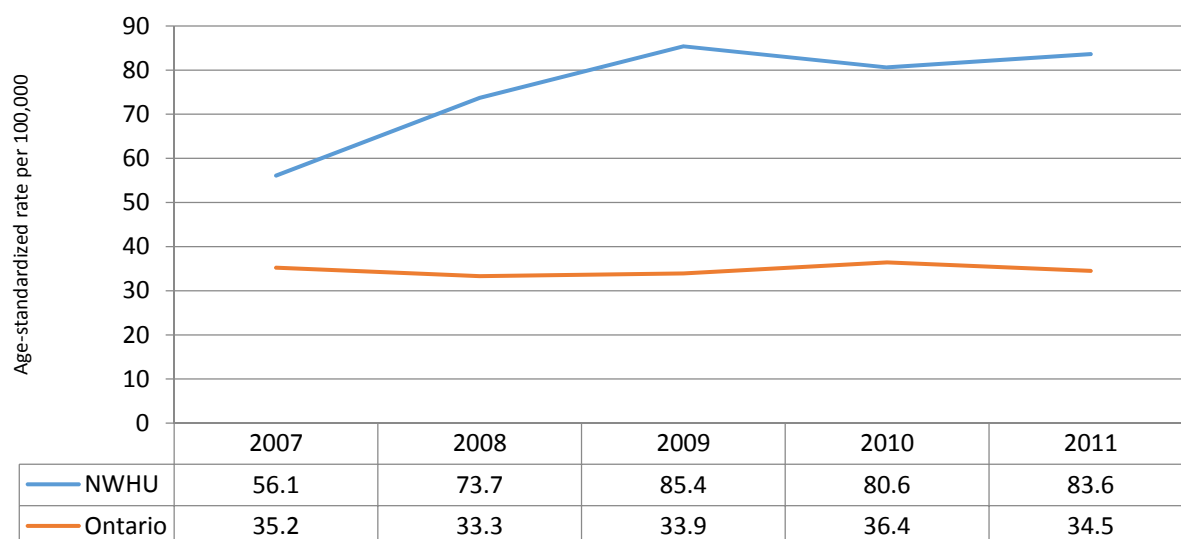
The statistics in this report indicate that mortality and morbidity from injuries is a major issue of public health concern in the NWHU catchment area.

# All Injuries

## Mortality

In 2011 there were 67 deaths in the NWHU area due to injuries (all injuries, including intentional and unintentional), giving an incidence rate of 83.6 per 100,000 for that year. From 2007 to 2011 the average mortality rate due to injury was 77.7 per 100,000 per year, which is significantly higher than the provincial rate of 41.1 per 100,000 during this period.

Figure 1: Mortality due to all injuries, age-standardized rates per 100,000, 2007-2011



NWHU is statistically different than Ontario for all years

Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 22, 2014

Overall, between 2007 and 2011 there were 320 deaths due to injuries in the NWHU area. Mortality due to injury is particularly high amongst males; from 2007 to 2011 the mortality rate in males was nearly twice as high as females, at 100 per 100,000 per year and 55 per 100,000 per year respectively. Rates amongst seniors aged 65 and older were the highest of any age group, at 170 per 100,000 per year.

**Table 1: Deaths due to injuries from 2007-2011, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 100,000 per year	#	Rate per 100,000 per year	#	Rate per 100,000 per year
0-19 yrs	33	56.0	27	47.3	60	51.7
20-44 yrs	80	124.5	29	45.8	109	85.5
45-64 yrs	46	77.9	13	23.6	59	51.7
65+ yrs	48	193.2	44	150.7	92	170.3
<b>Overall</b>	<b>207</b>	<b>100.0</b>	<b>113</b>	<b>55.2</b>	<b>320</b>	<b>77.7</b>

Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

The leading causes of injury-related death in the NWHU are, in order: intentional self-harm, falls, unintentional poisoning, transport injuries, and assault. From 2007 to 2011 76 deaths, nearly a quarter of all injury-related deaths, were due to intentional self-harm, the rates of which are significantly higher in the NWHU area when compared with the province. Table 2 illustrates a breakdown of the top causes of injury-related death.

**Table 2: Top causes of deaths due to all injuries, 2007-2011, NWHU**

Cause	# deaths			% of total injury-related deaths
	Males	Females	Total	
Intentional self-harm	51	25	76	23.8
Falls	22	29	51	15.9
Unintentional poisoning	27	20	45	14.1
Transport injuries	32	10	42	13.1
Assault	16	5	21	6.6

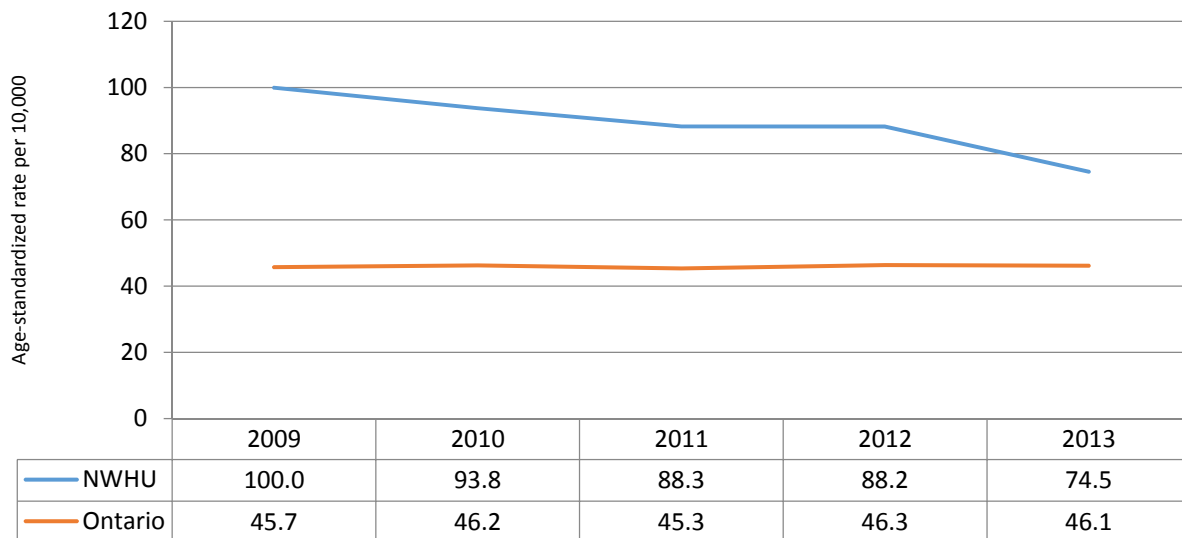
Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014



## Hospitalization

In 2013 there were 644 hospitalizations in the NWHU area due to injury-related causes, giving an incidence rate of 74.5 per 10,000 that year. This is significantly higher than the provincial rate that year, which was 46.1 per 10,000. Rates in the NWHU area have been consistently higher than the province over the last number of years, although there has been a slight downward trend during that time.

Figure 2: Hospitalization due to all injuries, age-standardized rates per 10,000, 2009-2013



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Hospitalization from all injuries – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from:

<http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Hospitalization.aspx#.VQnld46VmmU>

Unlike with mortality trends, hospitalization due to injuries is much more common amongst females. In 2013, female hospitalization rate was 94.1 per 10,000, which was about 50% higher than the male rate of 62.8 per 10,000, with the difference being statistically significant. Hospitalization was highest amongst the older population.

**Table 3: Hospitalizations in 2013 by age group and gender, all injuries combined, NWHU**

Age group	Male		Female		Total	
	#	Rate per 10,000	#	Rate per 10,000	#	Rate per 10,000
0-19 yrs	42	37.2	55	50.3	97	43.6
20-44 yrs	91	72.0	85	68.8	176	70.4
45-64 yrs	52	43.1	76	66.5	128	54.5
65-74 yrs	25	81.0	48	155.0	73	118.1
75+ yrs	50	214.8	120	398.8	170	318.5
<b>Overall</b>	<b>260</b>	<b>62.8</b>	<b>384</b>	<b>94.1</b>	<b>644</b>	<b>78.3</b>

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

The leading causes of injury-related hospitalization in the NWHU area are falls, intentional self-harm, transport injuries, assault, and exposure to inanimate mechanical forces (i.e. struck by an object, sports equipment, cut by tool, etc.). In 2013 falls accounted for nearly half off all injury-related hospitalization, and intentional self-harm accounted for an additional fifth.

**Table 4: Top causes of hospitalization due to injury in 2013, NWHU**

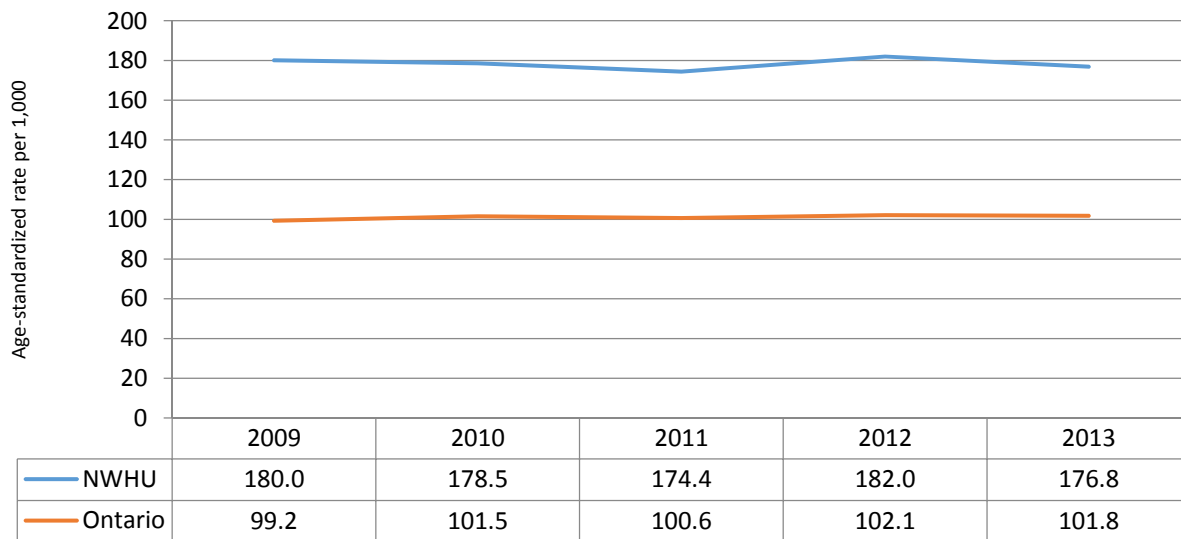
Cause	# hospitalizations			% of total hospitalizations from injuries
	Males	Females	Total	
Falls	98	198	296	46.0
Intentional self-harm	50	91	141	21.9
Transport injuries	26	35	62	9.6
Assault	25	24	49	7.6
Exposure to inanimate mechanical forces	27	12	39	6.1

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

## Emergency Room Visits

In 2013 there were 13,698 visits to the ER due to injuries in the NWHU area, which equals an incidence rate of 176.8 per 1,000 (or 1.8 for every 10 people). Incidence of ER visits due to injury has been significantly higher in the NWHU when compared to the province as a whole in recent years; for comparison, the provincial rate in 2013 was 101.8 per 1,000, which is statistically significantly lower than the rate in the NWHU.

**Figure 3: ER visits due to all injuries, age-standardized rates per 1,000, 2009-2013**



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Emergency department visits from all injuries – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: [http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1\\_fCVkQM](http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1_fCVkQM)

ER visits due to injuries are highest in younger populations (0-19, 20-44), but incidence is fairly even across the rest of the lifespan. The highest rates in 2013 were in males aged 20-44 years old, at 201.6 per 1,000. Overall, the rate in males was 177.1 per 1,000 and the female rate was 155.9, with the difference being statistically significant.

**Table 5: ER visits in 2013 by age group and gender, all injuries combined, NWHU**

Age group	Male		Female		Total	
	#	Rate per 1,000	#	Rate per 1,000	#	Rate per 1,000
0-19 yrs	2277	201.6	2012	184.1	<b>4289</b>	<b>193.0</b>
20-44 yrs	2770	219.0	2097	169.8	<b>4867</b>	<b>194.7</b>
45-64 yrs	1605	133.1	1363	119.2	<b>2968</b>	<b>126.3</b>
65-74 yrs	385	124.7	390	126.0	<b>775</b>	<b>125.3</b>
75+ yrs	297	127.6	502	166.8	<b>799</b>	<b>149.7</b>
<b>Overall</b>	<b>7334</b>	<b>177.1</b>	<b>6364</b>	<b>155.9</b>	<b>13698</b>	<b>166.6</b>

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

The most common causes of injury-related ER visits by far are exposure to inanimate mechanical forces (i.e. being hit by an object) and falls. Exposure to inanimate mechanical forces accounted for 27.1% of all injury-related ER visits in 2013 and falls accounted for a further 26.4%. Other common causes include overexertion, assault, land transport injuries and intentional self-harm.

**Table 6: Top causes of visits to the ER due to injury in 2013, NWHU**

Cause	# ER visits			% of total ER visits from injuries
	Males	Females	Total	
Exposure to inanimate mechanical forces	2,362	1,355	<b>3,717</b>	<b>27.1</b>
Falls	1,611	2,004	<b>3,615</b>	<b>26.4</b>
Unintentional exposure to unspecified factors	621	624	<b>1,245</b>	<b>9.1</b>
Overexertion, travel and privation	624	619	<b>1,243</b>	<b>9.1</b>
Exposure to animate mechanical forces	598	479	<b>1,077</b>	<b>7.9</b>
Assault	572	426	<b>998</b>	<b>7.3</b>
Land transport injuries	440	350	<b>790</b>	<b>5.8</b>
Intentional self-harm	137	286	<b>423</b>	<b>3.1</b>

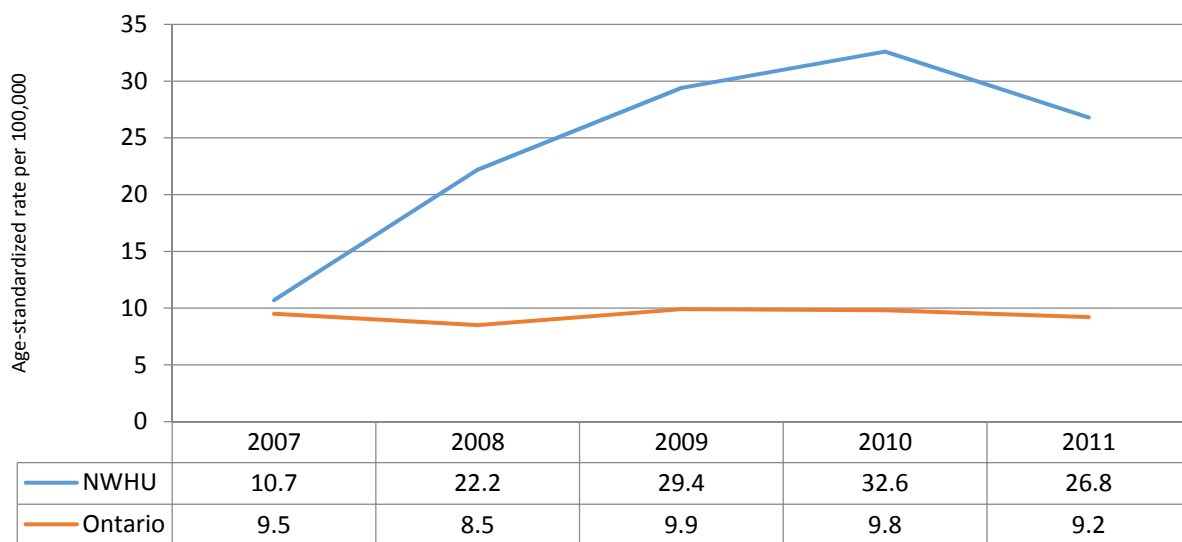
Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

# Intentional Injuries

## Mortality

In 2011 there were 22 deaths attributed to intentional injury in the NWHU area, which equals an incidence rate of 26.8 per 100,000 people. Rates in the NWHU area have been statistically higher than the province in recent years, and rates have increased since 2007. Intentional injuries include both assault and intentional self-harm.

Figure 7: Mortality due to intentional injuries, age-standardized rates per 100,000, 2007-2011



NWHU is statistically different than Ontario in 2008, 2009, 2010, 2011

Source: Public Health Ontario. Snapshots: Mortality from intentional injuries – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: <http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Mortality.aspx#.VQmENI6VkQM>

Mortality due to intentional injuries in the NWHU has been much more common amongst males; from 2007 to 2011 the mortality rate for males was 32.4 per 100,000 per year, twice as high as the female rate of 14.7 per 100,000 per year. Rates were also higher in younger populations during this time period.

Table 13: Deaths due to intentional injury from 2007-2011, by age and gender, NWHU

Age group	Male		Female		Total	
	#	Rate per 100,000 per year	#	Rate per 100,000 per year	#	Rate per 100,000 per year
0-19 yrs	15	25.5	17	29.8	32	27.6
20-44 yrs	31	48.2	11	17.4	42	32.9
45-64 yrs	*	*	*	*	17	14.9
65+ yrs	*	*	*	*	6	11.1
<b>Overall</b>	<b>67</b>	<b>32.4</b>	<b>30</b>	<b>14.7</b>	<b>97</b>	<b>23.6</b>

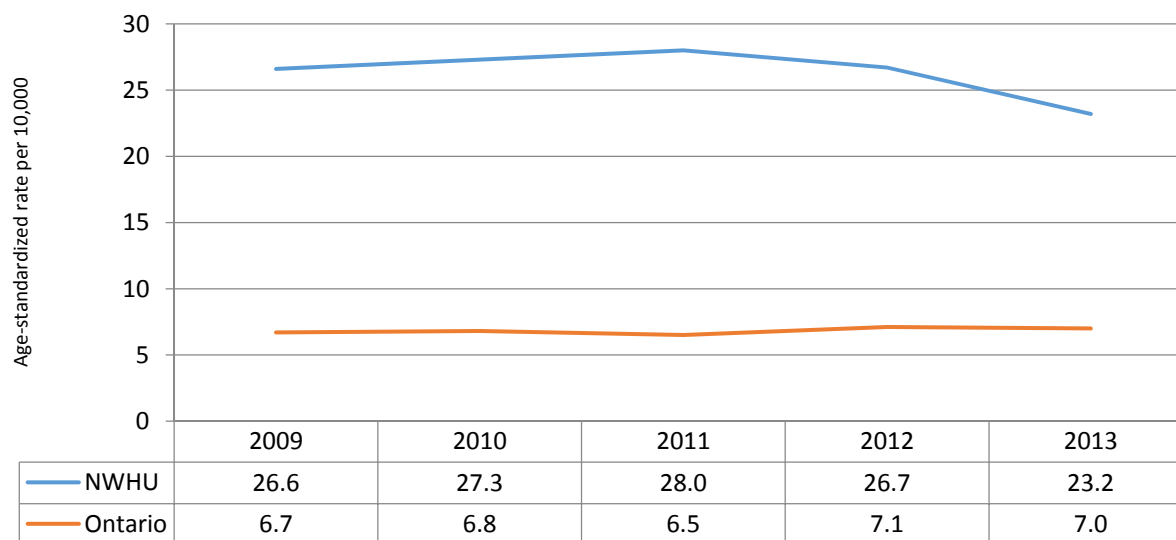
\*suppressed due to small counts

Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

## Hospitalization

In 2013 there were 161 hospitalizations in the NWHU area due to intentional injuries, which equals an incidence rate of 23.2 per 10,000 that year. This rate was the highest for all health units, and rates in the NWHU have consistently been at around that range in recent years. For comparison, the incidence rate provincially for 2013 was 7.0 per 10,000.

Figure 8: Hospitalization due to intentional injuries, age-standardized rates per 10,000, 2009-2013



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Hospitalization from intentional injuries – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from:

<http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Hospitalization.aspx#.VQnld46VmmU>

Incidence of hospitalization from intentional injury in the NWHU is highest by far in those aged 20-44 years old. Between 2009 and 2013 the average rate per year in this age group was 43.7 per 10,000, more than twice as high than in any other age group. Rates were lowest in the 65+ age group, and there was no significant difference between males and females.

**Table 14: Hospitalization due to intentional injury from 2009-2013, by age and gender, NWHU**

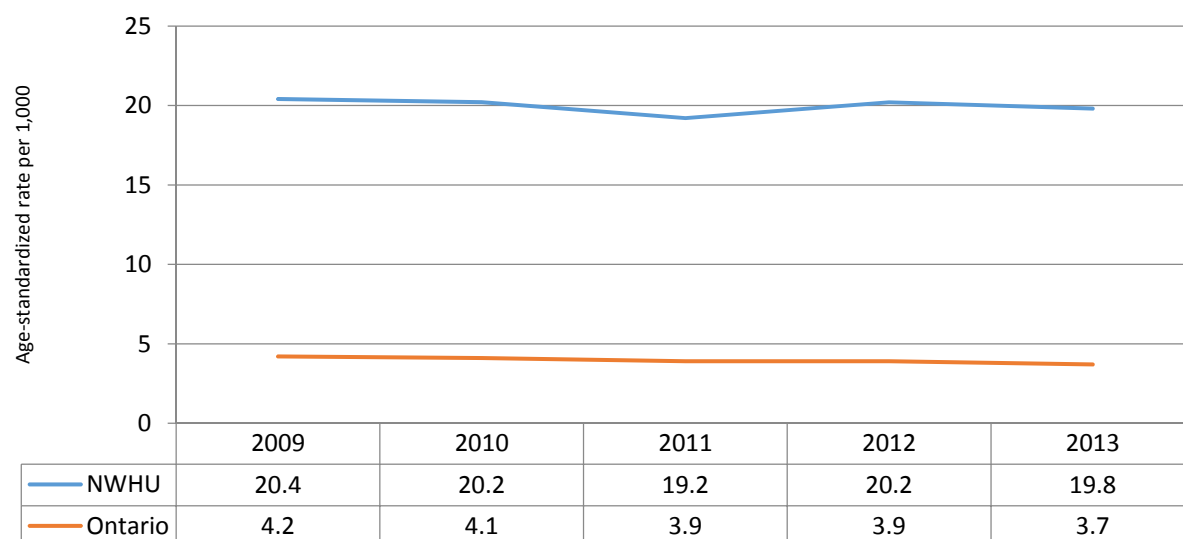
Age group	Male		Female		Total	
	#	Rate per 10,000 per year	#	Rate per 10,000 per year	#	Rate per 10,000 per year
0-19 yrs	92	16.0	134	24.1	226	20.0
20-44 yrs	295	46.6	253	40.8	548	43.7
45-64 yrs	56	9.3	65	11.5	121	10.4
65+ yrs	9	3.4	8	2.7	17	3.0
<b>Overall</b>	<b>452</b>	<b>21.9</b>	<b>460</b>	<b>22.5</b>	<b>912</b>	<b>22.2</b>

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

### Emergency Room Visits

In 2013 there were 1,333 visits to the ER in the NWHU due to intentional injuries, giving an incidence rate of 19.8 per 1,000 people. Rates in the NWHU area have been significantly higher than provincial rates over the past number of years; in 2013 the provincial rate was 3.7 per 1,000, over four times lower than the NWHU rate, which has been a consistent pattern in recent years.

Figure 9: ER visits due to intentional injuries, age-standardized rates per 1,000, 2009-2013



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Emergency department visits from intentional injuries – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: [http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1\\_fCVkQM](http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1_fCVkQM)

Incidence of ER visits from intentional injury in the NWHU is highest in those aged 20-44 years old. In 2013, the rate in this age group was 33.3 per 1,000, about twice as high as in any other age group. The lowest rates were in those aged 65 and older, and rates in males and females were similar.

Table 15: ER visits due to intentional injury in 2013, by age and gender, NWHU

Age group	Male		Female		Total	
	#	Rate per 1,000	#	Rate per 1,000	#	Rate per 1,000
0-19 yrs	116	10.3	211	19.3	327	14.7
20-44 yrs	461	36.5	372	30.1	833	33.3
45-64 yrs	104	8.6	57	5.0	161	6.9
65+ yrs	5	0.9	7	1.1	12	1.0
<b>Overall</b>	<b>686</b>	<b>16.6</b>	<b>647</b>	<b>15.9</b>	<b>1333</b>	<b>16.2</b>

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014



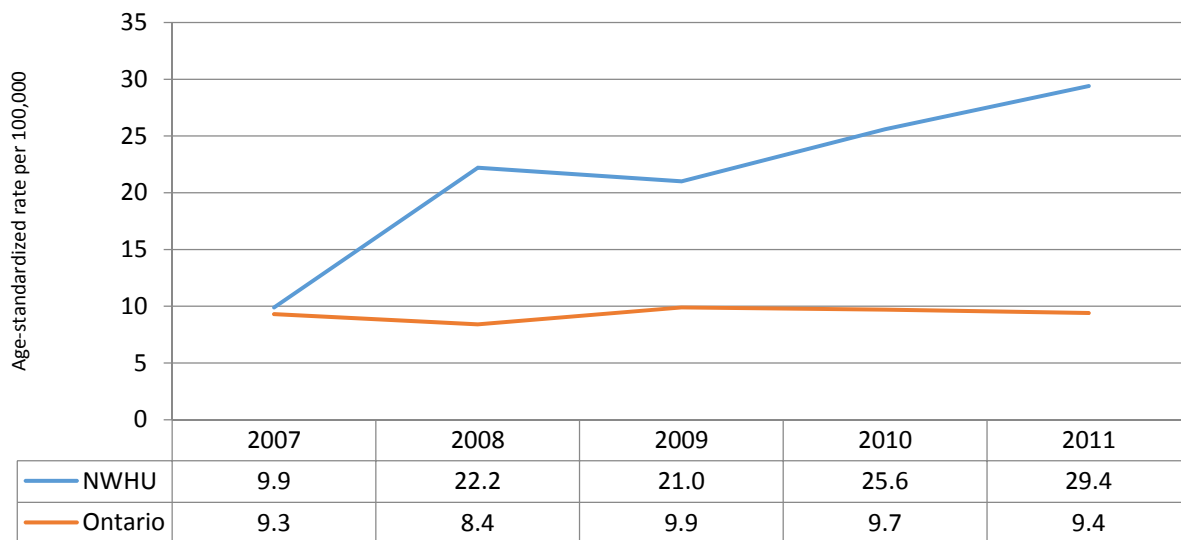
# Intentional self-harm

## Mortality

In 2011 there were 21 deaths attributed to intentional self-harm in the NWHU area, giving an incidence rate of 29.4 per 100,000. In the years between 2007 and 2011, intentional self-harm was the leading cause of injury-related mortality in the area; 23.8% of injury-related deaths during the time period were from intentional self-harm.

Mortality rates from intentional self-harm in the NWHU have been higher than the province in recent years. In 2011 the rate in the NWHU area was 3 times higher than the provincial rate. As seen in the graph below, the 2007 rate was nearly level with the province; however, prior to 2007 rates were high as well; 2006 had the highest rate over the past 10 years, so it appears that 2007 deviated from the norm.

Figure 10: Mortality due to intentional self-harm, age-standardized rates per 100,000, 2007-2011



NWHU is statistically different than Ontario in 2008, 2009, 2010, 2011

Source: Public Health Ontario. Snapshots: Mortality from intentional injuries – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from:

<http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Mortality.aspx#.VQmENI6VkQM>

Between 2007 and 2011 death rates from intentional self-harm in the NWHU area have been significantly higher amongst males; the rate in males in this time was 28.3 per 100,000 per year, twice as high as the female rate of 14.0 per 100,000 with the difference being statistically significant. It is also primarily a problem in the younger populations; 34% of the deaths in this time period were amongst those under 20 years old, with an additional 42% occurring in the 20-44 age group.

**Table 16: Deaths due to intentional self-harm from 2007-2011, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 100,000 per year	#	Rate per 100,000 per year	#	Rate per 100,000 per year
10-19 yrs	12	37.6	14	45.4	26	41.4
20-44 yrs	23	35.8	9	14.2	32	25.1
45-64 yrs	*	*	*	*	13	11.4
65+ yrs	*	*	*	*	5	9.3
<b>Overall</b>	<b>51</b>	<b>28.3</b>	<b>25</b>	<b>14.0</b>	<b>76</b>	<b>21.2</b>

\*suppressed due to small counts

Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

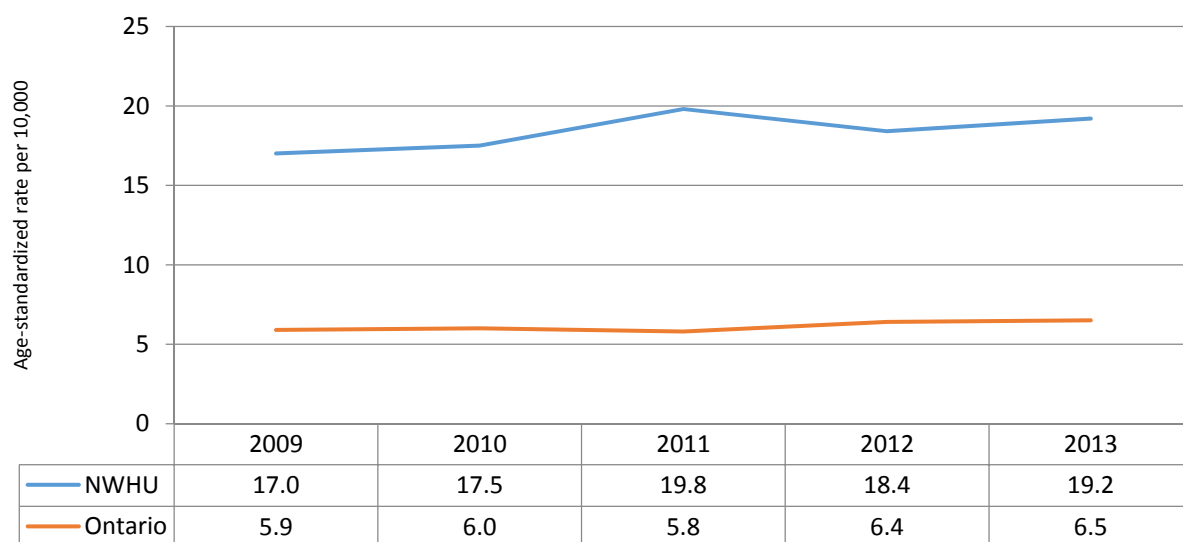
The most common method of intentional self-harm leading to death from 2007-2011 was hanging, strangulation and suffocation, which accounted for 66% of self-harm deaths in the area during this time. The next most common method was firearm discharge, which accounted for 20% of deaths during the same time period.

## Hospitalization

In 2013 there were 141 hospitalizations in the NWHU area from intentional self-harm, giving an incidence rate of 19.2 per 10,000 that year. Intentional-self harm was the second leading cause of injury-related hospitalization in the area in 2013 (after falls), accounting for about a fifth (20.8%) of hospitalizations from injuries.

Rates of hospitalization from self-harm have been statistically higher in the NWHU compared with the province as a whole every year in recent years. In 2013 the rate in the NWHU was nearly three times as high as the provincial rate.

**Figure 11: Hospitalization due to intentional self-harm, age-standardized rates per 10,000, 2009-2013**



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Hospitalization from intentional self-harm – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: [http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Hospitalization.aspx#\\_VOnd46VmmU](http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Hospitalization.aspx#_VOnd46VmmU)

Hospitalization from self-harm was higher in females between 2009 and 2013 in the NWHU area. The average rate per year in females during this time was 23.0 per 10,000, which is statistically higher than the male rate of 14.1 per 10,000. The demographic with the highest rates was females aged 10-19, with a rate of 44.9 per 10,000 per year.

**Table 17: Hospitalization due to intentional self-harm from 2009-2013, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 10,000 per year	#	Rate per 10,000 per year	#	Rate per 10,000 per year
10-19 yrs	65	21.3	134	44.9	199	33.0
20-44 yrs	154	24.3	214	34.5	368	29.4
45-64 yrs	30	5.0	57	10.1	87	7.4
65+ yrs	5	1.9	6	2.0	11	2.0
<b>Overall</b>	<b>254</b>	<b>14.1</b>	<b>411</b>	<b>23.0</b>	<b>665</b>	<b>18.6</b>

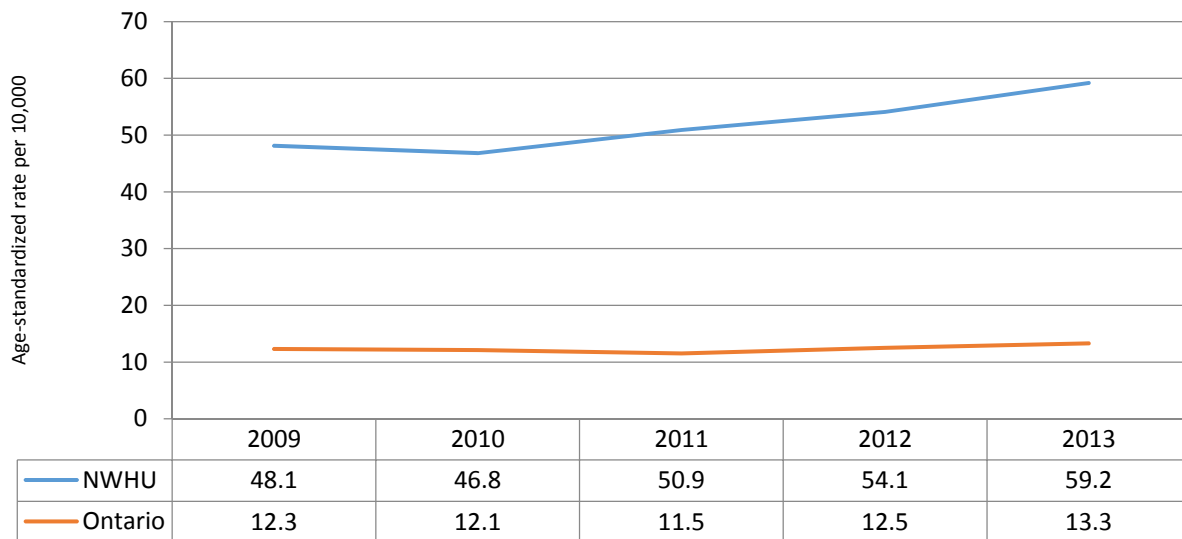
Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

Intentional poisoning was the most common method of self-harm-related hospitalizations in the NWHU. In 2013, self-poisoning (with drugs, alcohol and other substances) accounted for 77% of self-harm hospitalizations in the NWHU area. It is important to note when looking at these statistics that the classification of hospitalizations as being unintentional (i.e. overdose) or intentional depends on a code given to the patient at the hospital.

### Emergency Room Visits

In 2013 there were 362 visits to the ER in the NWHU area due to intentional-self harm, which gives an incidence rate of 59.2 per 10,000. Over the past decade rates in the NWHU have been significantly higher than provincial rates; the provincial rate for 2013 was 13.3 per 10,000, over four times lower than in the NWHU, a differences which has been consistent in recent years.

**Figure 12: ER visits due to intentional self-harm, age-standardized rates per 10,000, 2009-2013**



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Emergency department visits from intentional self-harm – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: [http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1\\_fCVkQM](http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1_fCVkQM)

ER visits from intentional self-harm were much more common in females in the NWHU area in 2013. The rate per 10,000 in females was 67.8, twice as high as the male rate of 33.3 per 10,000 with the difference being statistically significant. Rates were by far the highest in those aged 10-19 years old, at 133.1 per 10,000 (and females in that age group having a rate of 210.5 per 10,000). Overall it is a larger problem with younger demographics.

**Table 18: ER visits due to intentional self-harm in 2013, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 10,000	#	Rate per 10,000	#	Rate per 10,000
10-19 yrs	34	57.4	122	210.5	<b>156</b>	<b>133.1</b>
20-44 yrs	73	57.7	100	81.0	<b>173</b>	<b>69.2</b>
45-64 yrs	12	10.0	18	15.7	<b>30</b>	<b>12.8</b>
65-74 yrs	*	*	*	3.3	*	*
75+ yrs	*	*	*	*	*	*
<b>Overall</b>	<b>120</b>	<b>33.3</b>	<b>242</b>	<b>67.8</b>	<b>362</b>	<b>50.5</b>

\*Suppressed due to small counts

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

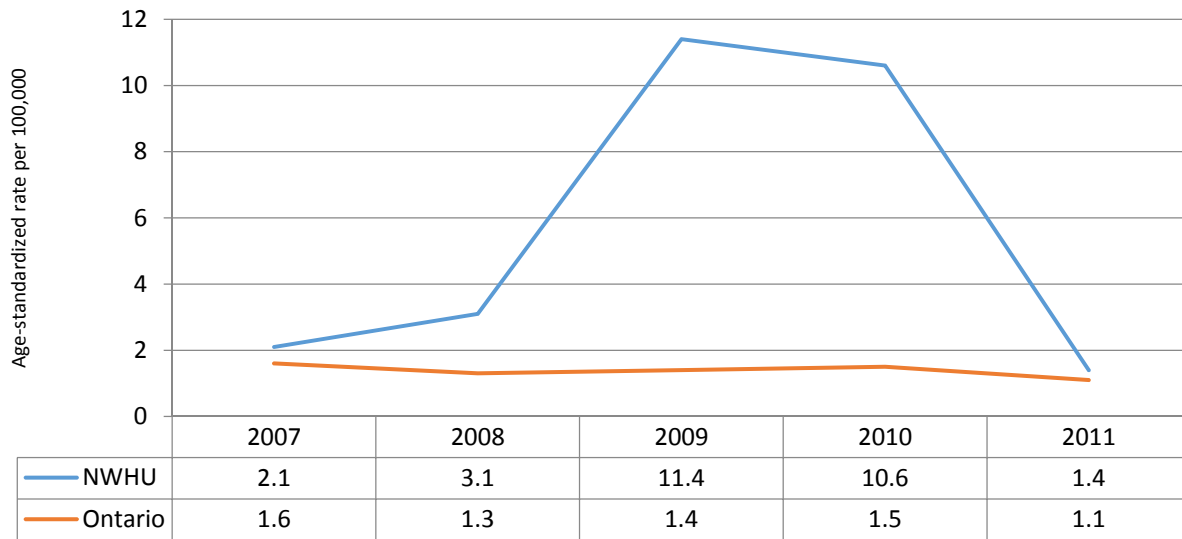
The most common forms of intentional self-harm when it comes to ER visits are poisoning with substances, sharp objects, and hanging, strangulation or suffocation. Intentional poisoning with substances (including drugs, alcohol, and other substances) played a role in 77% of self-harm ER visits in the NWHU in 2013. Self-harm using a sharp object had a part in 28% of the ER visits.

# Assault

## Mortality

Between 2007 and 2011 there were 21 deaths from assault in the NWHU area, which is a mortality rate of 5.1 per 100,000 per year. Over the same time, the provincial mortality rate was 1.3 per 100,000 per year, statistically lower than the NWHU rate, although 2009 and 2010 were the only individual years in which the rates in the NWHU were significantly higher than the provincial rate. Due to relatively low numbers in the NWHU, rates tend to fluctuate each year, as seen in Figure 13.

**Figure 13: Mortality due to assault, age-standardized rates per 100,000, 2007-2011**



NWHU is statistically different than Ontario in 2009 and 2010

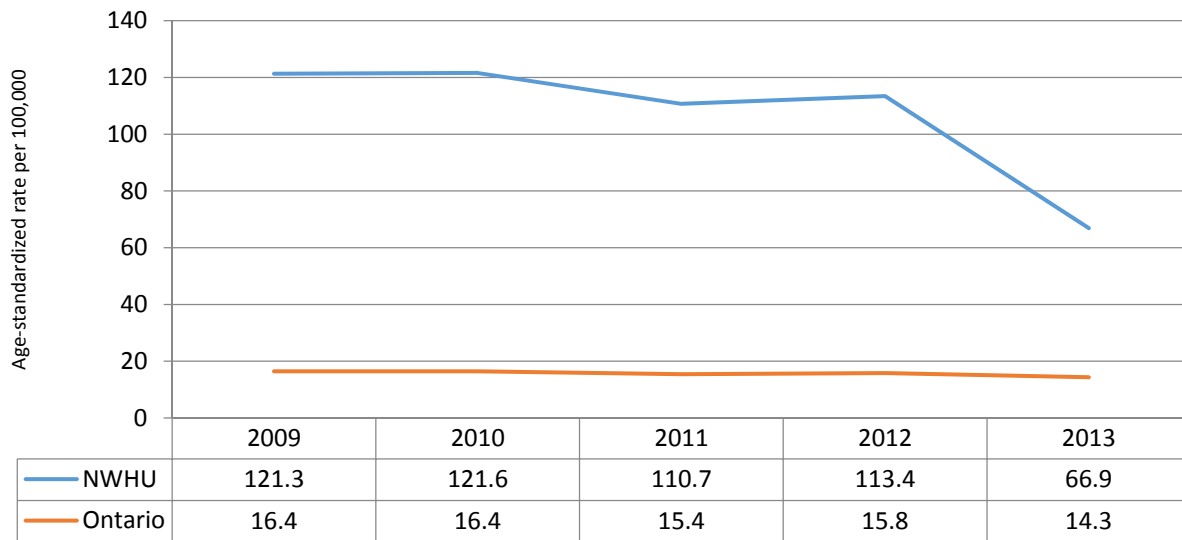
Source: Public Health Ontario. Snapshots: Mortality from assault – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: <http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Mortality.aspx#.VQmENI6VkQM>

The majority of the 21 deaths in the NWHU area between 2007 and 2011 were males (16 deaths, 76%), and two-thirds occurred in those under the age of 40.

## Hospitalization

In 2013 there were 44 hospitalizations in the NWHU area due to assault, which is an incidence rate of 66.9 per 100,000. Rates in the NWHU have been significantly higher than provincial rates consistently over the past decade. In 2013 Ontario's rate was over four times lower than the NWHU rate, despite the fact that the NWHU rate was only half as high as it was as recently as 2010 (in 2010, NWHU rates were 7 times higher than the province). Rates in the NWHU have consistently been the highest of all health units in the province.

**Figure 14: Hospitalization due to assault, age-standardized rates per 100,000, 2009-2013**



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Hospitalization from assault – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from:

<http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Hospitalization.aspx#.VQnld46VmmU>

Hospitalization from assault in the NWHU occurs more in males than females. From 2009 to 2013, the rate of hospitalization amongst males was 119.4 per 100,000 per year compared with 87.8 per 100,000 for females, with the difference being statistically significant. The age group with the highest rate during this time was those aged 20-44, with a rate of 194.8 per 100,000 per year.

Table 19: Hospitalization due to assault from 2009-2013, by age and gender, NWHU

Age group	Male		Female		Total	
	#	Rate per 100,000 per year	#	Rate per 100,000 per year	#	Rate per 100,000 per year
10-19 yrs	40	69.7	21	37.7	61	54.0
20-44 yrs	170	268.7	74	119.4	244	194.8
45-64 yrs	33	54.9	17	30.0	50	42.8
65+ yrs	*	*	*	*	6	10.7
<b>Overall</b>	<b>247</b>	<b>119.4</b>	<b>114</b>	<b>55.8</b>	<b>361</b>	<b>87.8</b>

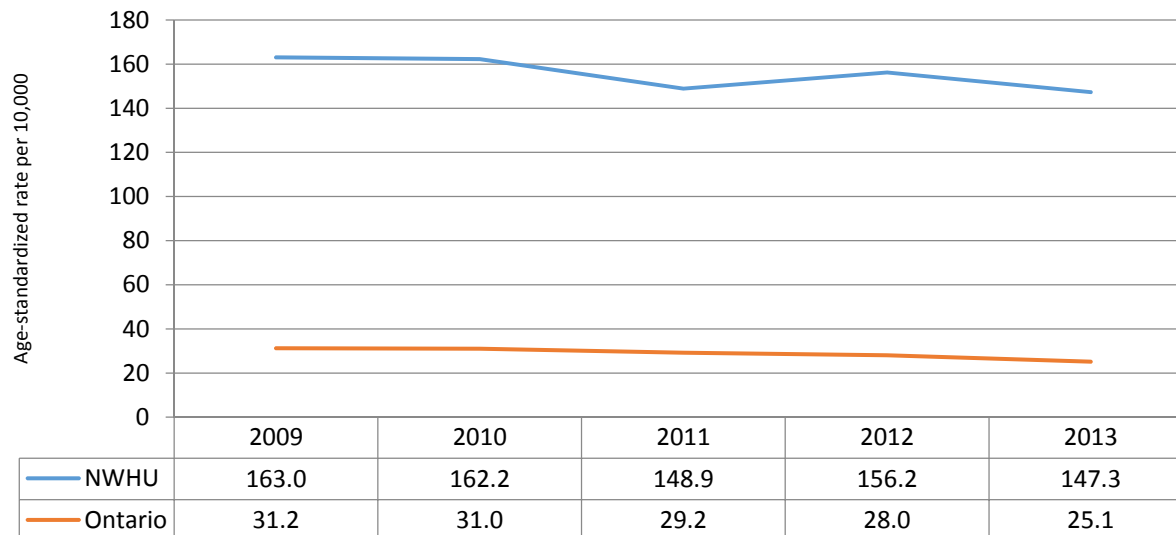
\*suppressed due to small counts

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

## Emergency Room Visits

In 2013 there were 972 visits to the ER in the NWHU area due to assault, which equals an incidence rate of 147.3 per 10,000, the highest rate of all health units in the province. Rates in the NWHU have consistently been much higher than provincial rates; in 2013 the provincial rate was 25.1 per 1,000, over 5 times lower than in the NWHU area.

Figure 15: ER visits due to assault, age-standardized rates per 10,000, 2009-2013



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Emergency department visits from assault – age standardized rate (both sexes combined).

Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from:

[http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1\\_fCVkQM](http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1_fCVkQM)



In 2013 the rate of ER visits from assault was slightly higher in males: 136.7 per 10,000 compared with 99.5 per 10,000 in females, with the difference being statistically significant. The highest rates were in those aged 20-44, at 264.5 per 10,000, significantly higher than in any other age group.

**Table 20: ER visits due to assault in 2013, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 10,000	#	Rate per 10,000	#	Rate per 10,000
0-19 yrs	82	72.6	89	81.4	171	76.9
20-44 yrs	388	306.8	273	221.1	661	264.5
45-64 yrs	92	76.3	39	34.1	131	55.8
65-74 yrs	*	*	*	*	*	*
75+ yrs	*	*	*	*	*	*
<b>Overall</b>	<b>566</b>	<b>136.7</b>	<b>406</b>	<b>99.5</b>	<b>972</b>	<b>118.2</b>

\*Suppressed due to small counts

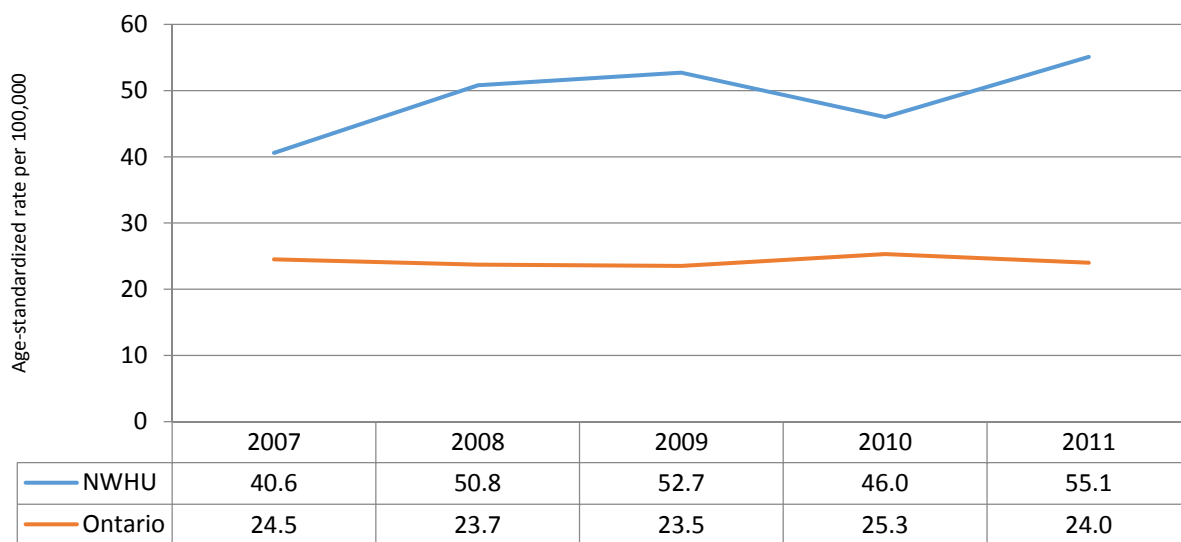
Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

# Unintentional Injuries

## Mortality

In 2011 there were 43 deaths in the NWHU area due to unintentional injuries, giving an incidence rate of 55.1 per 100,000 for that year. The provincial rate for the same year was 24.0 per 100,000, which is statistically lower than the NWHU rate. Rates in the NWHU area have consistently been higher than provincial rates in recent years.

Figure 4: Mortality due to unintentional injuries, age-standardized rates per 100,000, 2007-2011



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Mortality from unintentional injuries – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: <http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Mortality.aspx#.VQmENI6VkQM>

Rates of mortality due to unintentional injury in the NWHU are highest in those aged 65 and older. Between 2007 and 2011 there were 86 deaths in the 65+ population, giving a rate of 159.2 per 100,000 per year, significantly higher than any other age group. Rates amongst males were significantly higher than females during this time; 64.2 per 100,000 per year for males compared with 38.1 per 100,000 per year in females.

**Table 7: Deaths due to unintentional injury from 2007-2011, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 100,000 per year	#	Rate per 100,000 per year	#	Rate per 100,000 per year
0-19 yrs	18	31.5	9	15.8	27	23.3
20-44 yrs	47	73.1	16	25.3	63	49.4
45-64 yrs	26	44.0	9	16.3	35	30.6
65+ yrs	42	169.1	44	150.7	86	159.2
<b>Overall</b>	<b>133</b>	<b>64.2</b>	<b>78</b>	<b>38.1</b>	<b>125</b>	<b>51.2</b>

Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

The top causes of deaths due to unintentional injury in the NWHU area are falls, unintentional poisoning and transport injuries. From 2007 to 2011 falls accounted for a quarter of unintentional injury deaths, while poisoning and transport injuries each accounted for about a fifth of deaths.

**Table 8: Top causes of deaths due to unintentional injury, 2007-2011, NWHU**

Cause	# deaths			% of total deaths from unintentional injury
	Males	Females	Total	
Falls	22	29	51	24.2
Unintentional poisoning	27	20	45	21.3
Transport injuries	32	10	42	19.9
Unintentional drowning	*	*	19	9.0

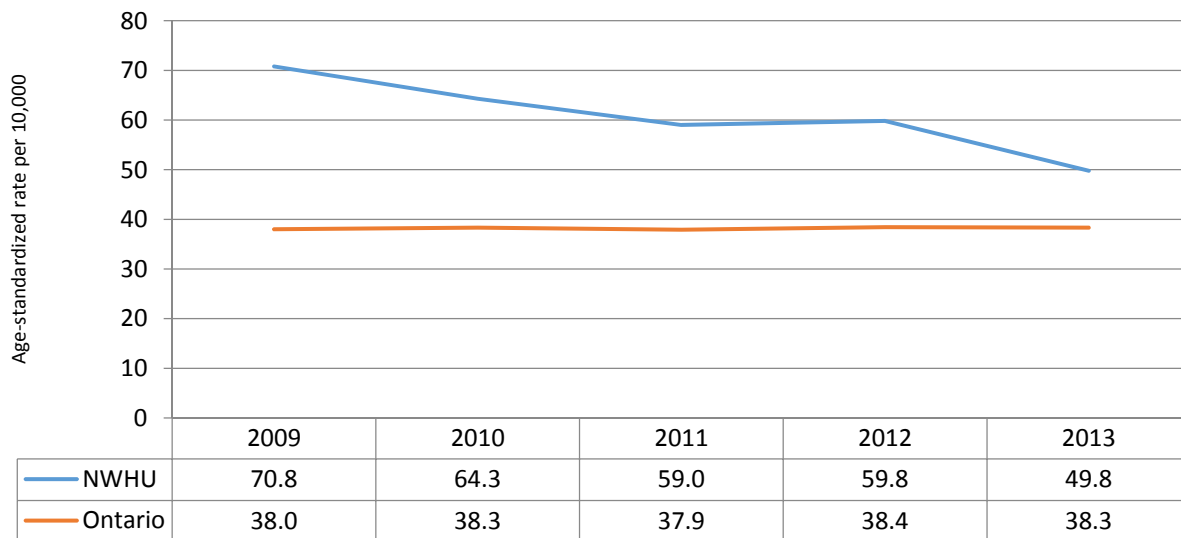
\*suppressed due to small counts

Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

## Hospitalization

In 2013 there were 471 hospitalizations due to unintentional injuries in the NWHU area, giving an incidence rate of 49.8 per 10,000 that year. The provincial rate in 2013 was 38.3 per 10,000, which was statistically lower than the NWHU rate. Rates of hospitalization due to unintentional injuries have been consistently higher in the NWHU in recent years when compared to the province, although they have shown a slight decrease during this time.

**Figure 5: Hospitalization due to unintentional injuries, age-standardized rates per 10,000, 2009-2013**



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Hospitalization from unintentional injuries – age standardized rate (both sexes combined).

Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from:

<http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Hospitalization.aspx#.VQnld46VmmU>

Rates of hospitalization due to unintentional injury are highest in older populations. In 2013 the rate amongst those aged 75 and older was 316.7 per 10,000, significantly higher than in other age groups. Rates are also highest amongst women; the 2013 hospitalization rate for females was 70.6 per 10,000, which is statistically higher than the male rate of 44.2 per 10,000.

**Table 9: Hospitalization due to unintentional injury in 2013, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 10,000	#	Rate per 10,000	#	Rate per 10,000
0-19 yrs	29	25.7	17	15.6	46	20.7
20-44 yrs	42	33.2	41	33.2	83	33.2
45-64 yrs	40	33.2	63	55.1	103	43.8
65-74 yrs	23	74.5	47	151.8	70	113.2
75+ yrs	49	210.5	120	398.8	169	316.7
<b>Overall</b>	<b>183</b>	<b>44.2</b>	<b>288</b>	<b>70.6</b>	<b>471</b>	<b>57.3</b>

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

The most common reasons for hospitalization from unintentional injury are falls, transport injuries and exposure to inanimate mechanical forces (i.e. being hit by an object). Falls accounted for over three-fifths of unintentional injuries, while transport injuries accounted for a further 13.2%.

**Table 10: Top causes of hospitalizations due to unintentional injuries, 2013, NWHU**

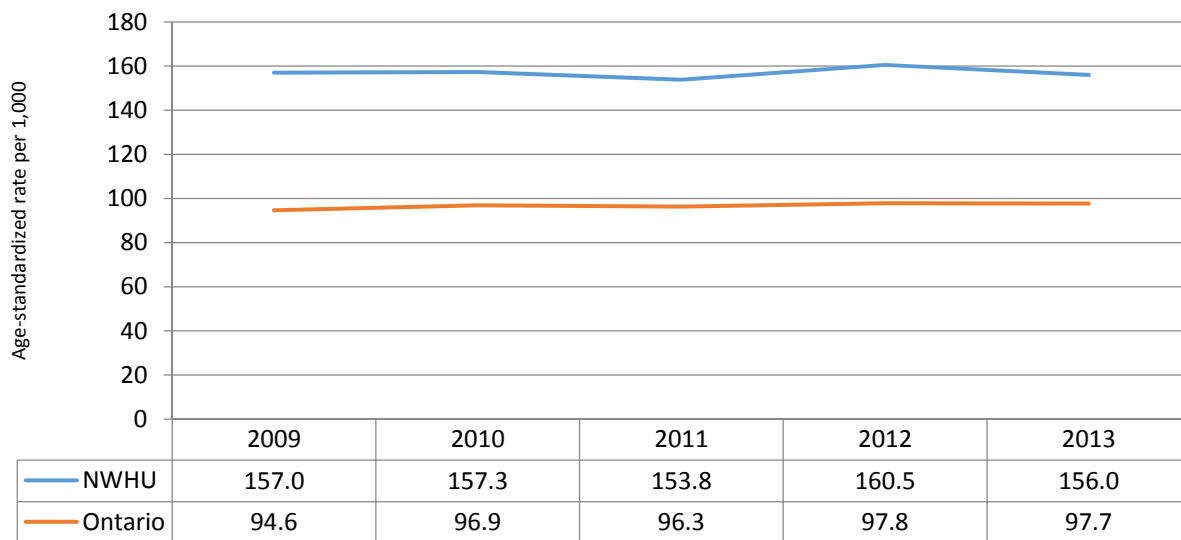
Cause	# hospitalizations			% of total hospitalizations from unintentional injuries
	Males	Females	Total	
Falls	98	198	296	62.8
Transport injuries	26	35	62	13.2
Exposure to inanimate mechanical forces	27	12	39	8.3

Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

## Emergency Room Visits

In 2013 there were 12,292 visits to the ER due to unintentional injuries in the NWHU area, giving an incidence rate of 156.0 per 1,000 people that year. The provincial rate in 2013 was 97.7 per 1,000, which is statistically lower than the rate in the NWHU. Rates in the NWHU have consistently higher than in the province as a whole, and have remained at approximately the same level over the past few years.

Figure 6: ER visits due to unintentional injuries, age-standardized rates per 1,000, 2009-2013



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Emergency department visits from unintentional injuries – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: [http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1\\_fCVkQM](http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1_fCVkQM)

ER visits due to unintentional injury are most common in younger age groups; in 2013 the ER visit rate in those under 20 years old was 176.9 per 1,000, which is higher than in any other age group. Rates are also higher in men compared with women; 159.5 per 1,000 compared with 139.3 per 1,000, with the difference being statistically significant.

**Table 11: ER visits due to unintentional injury in 2013, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 1,000	#	Rate per 1,000	#	Rate per 1,000
0-19 yrs	2145	189.9	1786	163.4	3931	176.9
20-44 yrs	2289	181.0	1714	138.8	4003	160.2
45-64 yrs	1496	124.1	1303	113.9	2799	119.2
65-74 yrs	381	123.4	384	124.0	765	123.7
75+ yrs	294	126.3	500	166.2	794	148.8
<b>Overall</b>	<b>6605</b>	<b>159.5</b>	<b>5687</b>	<b>139.3</b>	<b>12292</b>	<b>149.5</b>

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

The most common reasons for ER visits due to unintentional injury are exposure to inanimate mechanical forces (i.e. being struck by an object) and falls. Exposure to inanimate mechanical forces accounted for 30% of ER visits due to unintentional injury in 2013, while falls accounted for a further 29% of visits.

**Table 12: Top causes of ER visits due to unintentional injury, 2013, NWHU**

Cause	# ER visits			% of total ER visits from unintentional injuries
	Males	Females	Total	
Exposure to inanimate mechanical forces	2362	1355	3717	30.2
Falls	1611	2004	3615	29.4
Overexertion, travel and privation	624	619	1243	10.1
Exposure to animate mechanical forces	598	479	1077	8.8
Transport injuries	463	352	815	6.6

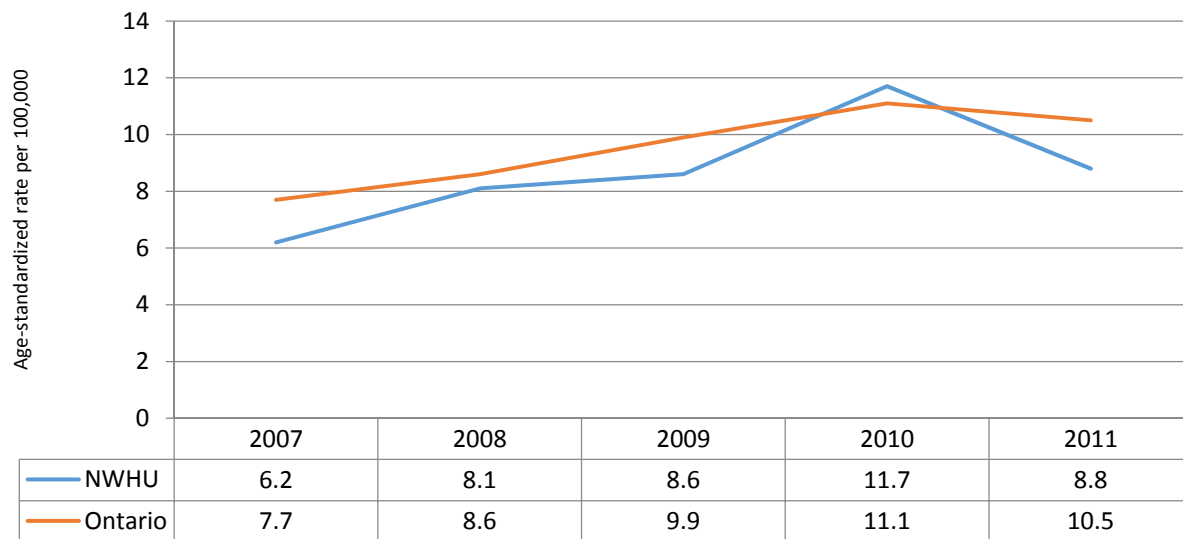
Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

# Falls

## Mortality

In 2011 there were 11 deaths from falls in the NWHU area, giving a mortality rate of 8.8 per 100,000 people. In recent years mortality from falls in the area has been average when compared across the province; the provincial rate in 2011 was 10.5 per 100,000, and the NWHU was in the lower half of health units in terms of mortality rates.

Figure 16: Mortality due to falls, age-standardized rates per 100,000, 2007-2011



NWHU is statistically different than Ontario in 2009 and 2010

Source: Public Health Ontario. Snapshots: Mortality from assault – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: <http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Mortality.aspx#.VQmENI6VkQM>

Rates of mortality due to falls in the NWHU area are most common by far in seniors, and close to zero in younger populations. In those aged 65 and older, mortality rates from 2007 to 2011 were 87 per 100,000 per year, and the rate for those 75 and older was 177.4 per 100,000 per year. These figures are both consistent with mortality rates across the province for senior falls.



Table 21: Deaths due to falls from 2007-2011, by age and gender, NWHU

Age group	Male		Female		Total	
	#	Rate per 100,000 per year	#	Rate per 100,000 per year	#	Rate per 100,000 per year
0-19 yrs	*	*	*	*	*	*
20-44 yrs	*	*	*	*	*	*
45-64 yrs	*	*	*	*	*	*
65+ yrs	20	80.5	27	92.5	47	87.0
<b>Overall</b>	<b>22</b>	<b>10.6</b>	<b>29</b>	<b>14.2</b>	<b>51</b>	<b>12.4</b>

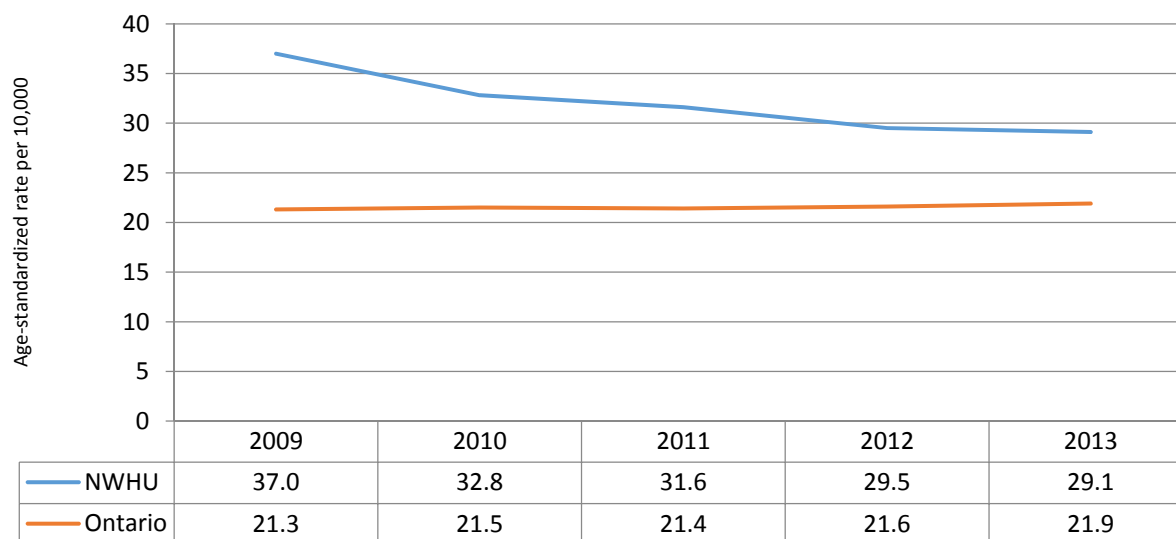
\*suppressed due to small counts

Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

## Hospitalization

In 2013 there were 296 hospitalizations due to falls in the NWHU area, which gives an incidence rate of 29.1 per 10,000. This is statistically higher than the provincial rate of 21.9 that year. Over the past number of years rates of hospitalizations from falls have been consistently higher in the NWHU area when compared with the province.

Figure 17: Hospitalization due to falls, age-standardized rates per 10,000, 2009-2013



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Hospitalization from falls – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: <http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Hospitalization.aspx#.VQnld46VmmU>

Rates of hospitalization in the NWHU from falls are significantly higher in females than males. In 2013 the rate amongst females was 48.5 per 10,000, twice as high as the male rate of 23.7 per 10,000. Rates are highest amongst seniors aged 65 and older, with 2013 rate of 164.1 per 10,000 significantly higher than any other age group.

Hospitalization due to falls amongst females aged 65 and older was higher in the NWHU area when compared with the province in 2013: 217.9 per 10,000 compared with 165.3 per 10,000 respectively. Male rates, however, were roughly equal in the NWHU area and the rest of the province. Female rates for those over 65 in the NWHU were more than twice as high as male rates.

**Table 22: Hospitalization due to falls in 2013, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 10,000	#	Rate per 10,000	#	Rate per 10,000
10-19 yrs	15	13.3	9	8.2	24	10.8
20-44 yrs	12	9.5	16	13.0	28	11.2
45-64 yrs	15	12.4	40	35.0	55	23.4
65+ yrs	56	103.4	133	217.9	189	164.1
<b>Overall</b>	<b>98</b>	<b>23.7</b>	<b>198</b>	<b>48.5</b>	<b>296</b>	<b>36.0</b>

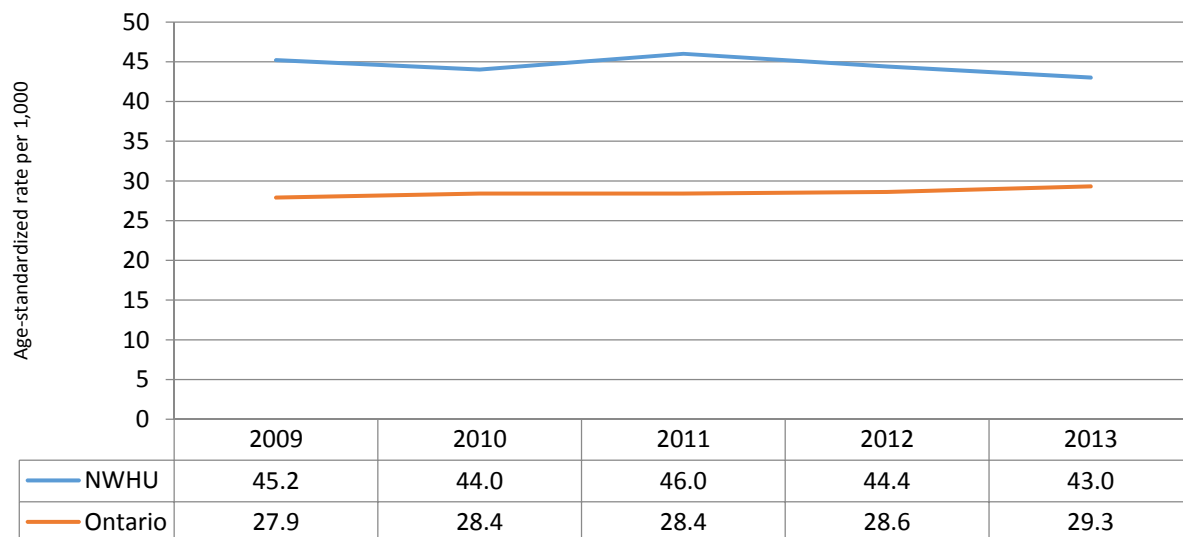
\*suppressed due to small counts

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

## Emergency Room Visits

In 2013 there were 3,605 visits to the ER due to falls in the NWHU area, giving an incidence rate of 43.0 per 1,000 people. This is statistically higher than the provincial rate of 29.3 per 1,000. Rates in the NWHU have been consistently higher than provincial rates in recent years.

Figure 18: ER visits due to falls, age-standardized rates per 1,000, 2009-2013



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Emergency department visits from falls – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: [http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1\\_fCVkQM](http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1_fCVkQM)

Rates of ER visits due to falls in 2013 were slightly higher in females compared to males, at 48.9 per 1,000 and 38.8 per 1,000 respectively. Rates amongst seniors aged 65 and older were the highest of any age group, at 67.2 per 1,000, with females in this age group having significantly higher rates than males: 79.0 per 1,000 in females compared with 53.9 per 1,000 in males.

Table 23: ER visits due to falls in 2013, by age and gender, NWHU

Age group	Male		Female		Total	
	#	Rate per 1,000	#	Rate per 1,000	#	Rate per 1,000
0-19 yrs	546	48.3	536	49.0	1082	48.7
20-44 yrs	400	31.6	462	37.4	862	34.5
45-64 yrs	369	30.6	518	45.3	887	37.8
65+ yrs	292	53.9	482	79.0	774	67.2
<b>Overall</b>	<b>1607</b>	<b>38.8</b>	<b>1998</b>	<b>48.9</b>	<b>3605</b>	<b>43.8</b>

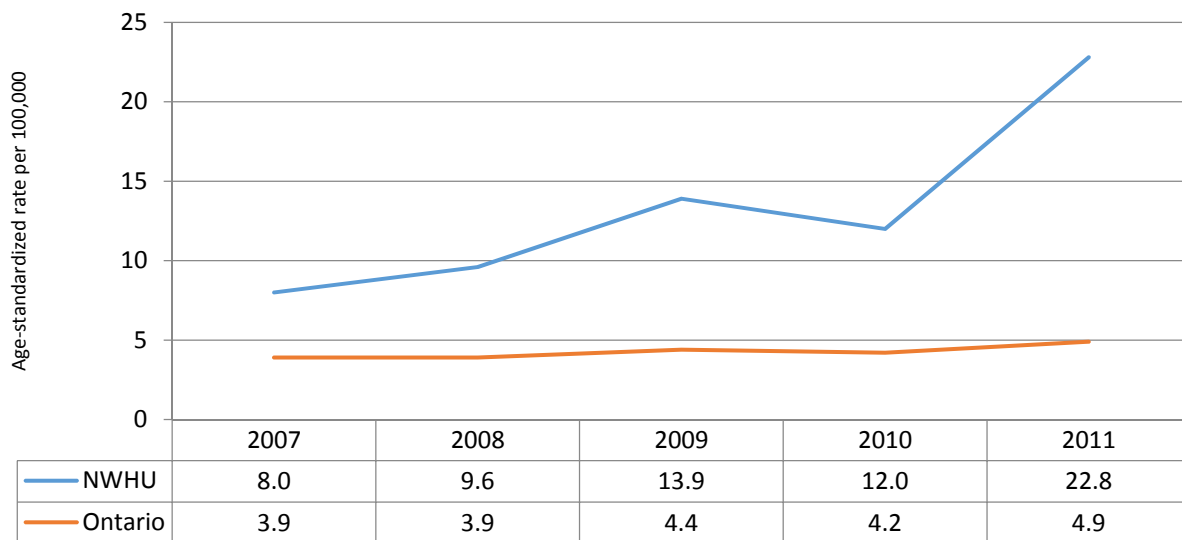
Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

# Unintentional Poisoning

## Mortality

In 2011 there were 14 deaths in the NWHU area caused by unintentional poisoning, which equals a mortality rate of 22.8 per 100,000. This is statistically higher than the provincial rate that year of 4.9 per 100,000. The 2011 rate was the highest in recent years in the NWHU area, and only in 2009, 2010 and 2011 were the rates statistically higher than provincial rates.

**Figure 19: Mortality due to unintentional poisoning, age-standardized rates per 100,000, 2007-2011**



NWHU is statistically different than Ontario in 2009, 2010 and 2011

Source: Public Health Ontario. Snapshots: Mortality from unintentional poisoning – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: <http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Mortality.aspx#.VQmENI6vkQM>

Between 2007 and 2011 the most deaths due to unintentional poisoning in the NWHU area occurred in the 20-44 age group: 29 deaths, which gave an average annual rate of 22.7 per 100,000 per year. Overall, rates were twice as high in males than females: 14.5 per 100,000 per year compared with 7.3 per 100,000 per year, with the difference being statistically significant.

Table 24: Deaths due to unintentional poisoning from 2007-2011, by age and gender, NWHU

Age group	Male		Female		Total	
	#	Rate per 100,000 per year	#	Rate per 100,000 per year	#	Rate per 100,000 per year
0-19 yrs	*	*	*	*	*	*
20-44 yrs	20	31.1	9	14.2	29	22.7
45-64 yrs	*	*	*	*	8	7.0
65+ yrs	*	*	*	*	*	*
<b>Overall</b>	<b>30</b>	<b>14.5</b>	<b>15</b>	<b>7.3</b>	<b>45</b>	<b>10.9</b>

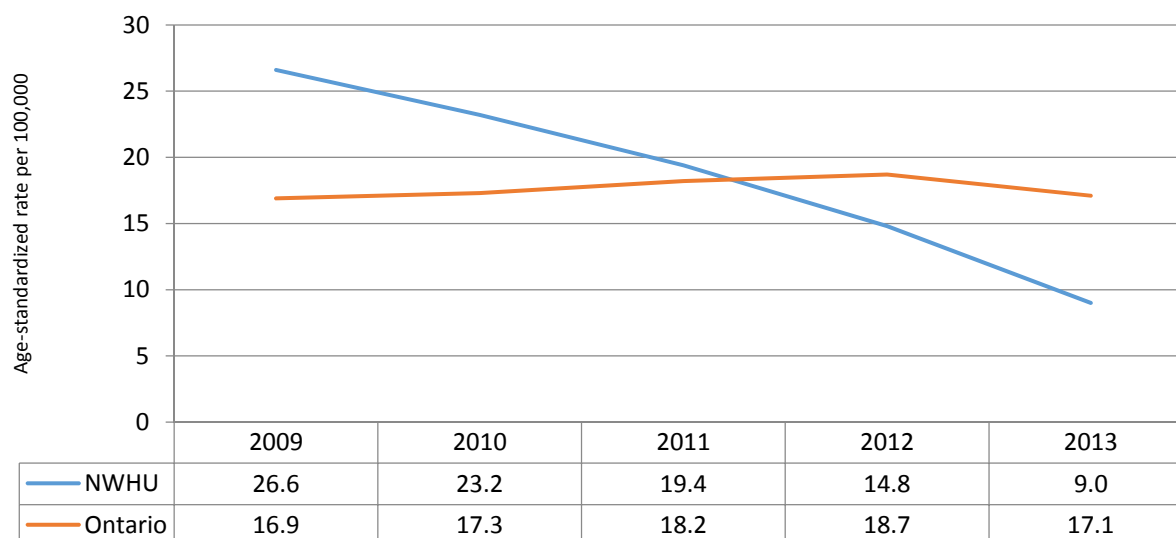
\*suppressed due to small counts

Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

## Hospitalization

In 2013 there were 8 hospitalizations in the NWHU area due to unintentional poisoning, equalling an incidence rate of 9.0 per 100,000. Between 2009 and 2013 the average rate in the area was 18.7 per 100,000 per year. In 2013 the NWHU rate was the lowest of all health units across the province. There has been a consistent downward trend in the NWHU in recent years, which is interesting considering the upward trend of mortality from unintentional poisoning in the same time period.

Figure 20: Hospitalization due to unintentional poisoning, age-standardized rates per 100,000, 2009-2013



NWHU is statistically different than Ontario in 2013

Source: Public Health Ontario. Snapshots: Hospitalization from unintentional poisoning – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: <http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-Hospitalization.aspx#.VQnld46VmmU>

Rates of hospitalization due to unintentional poisoning in the NWHU area are relatively similar across the entire age spectrum, and there is no difference between males and females.

**Table 25: Hospitalization due to unintentional poisoning from 2009-2013, by age and gender, NWHU**

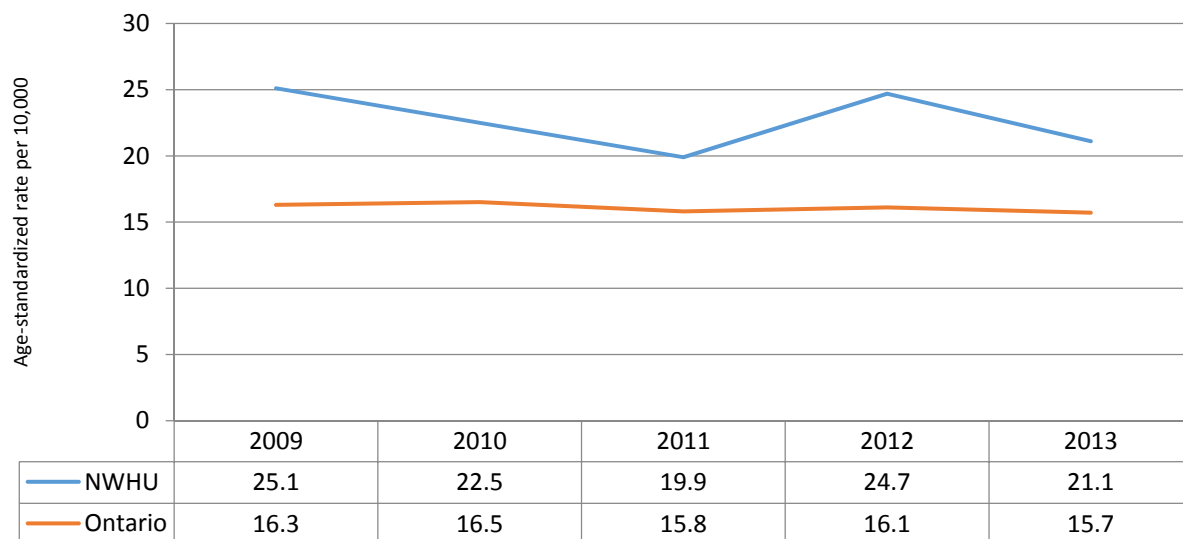
Age group	Male		Female		Total	
	#	Rate per 100,000 per year	#	Rate per 100,000 per year	#	Rate per 100,000 per year
10-19 yrs	11	19.2	11	19.8	22	19.5
20-44 yrs	11	17.4	12	19.4	23	18.4
45-64 yrs	11	18.3	7	12.3	18	15.4
65+ yrs	6	23.0	8	26.7	14	25.0
<b>Overall</b>	<b>39</b>	<b>18.9</b>	<b>38</b>	<b>18.6</b>	<b>77</b>	<b>18.7</b>

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

### Emergency Room Visits

In 2013 there were 169 visits to the ER in the NWHU area from unintentional poisoning, which gives an incidence rate of 21.1 per 10,000. The provincial rate in the same year was 15.7 per 10,000. Rates in the NWHU have been consistently slightly higher than provincial rates over the past number of years.

**Figure 21: ER visits due to unintentional poisoning, age-standardized rates per 10,000, 2009-2013**



NWHU is statistically different than Ontario for all years

Source: Public Health Ontario. Snapshots: Emergency department visits from unintentional poisoning – age standardized rate (both sexes combined). Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 November 5 [cited 2015 March 18]. Available from: [http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1\\_fCvkQM](http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/Injury-ED-Visits.aspx#.VUd1_fCvkQM)

ER visits due to unintentional poisoning in the NWHU area are relatively similar across the lifespan, and there is not too much difference between genders, with males having a slightly higher but not significantly different rate than females.

**Table 26: ER visits due to unintentional poisoning in 2013, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 10,000	#	Rate per 10,000	#	Rate per 10,000
0-19 yrs	35	31.0	24	22.0	59	26.5
20-44 yrs	28	22.1	21	17.0	49	19.6
45-64 yrs	22	18.2	21	18.4	43	18.3
65+ yrs	11	20.3	7	11.5	18	15.6
<b>Overall</b>	<b>96</b>	<b>23.2</b>	<b>73</b>	<b>17.9</b>	<b>169</b>	<b>20.6</b>

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

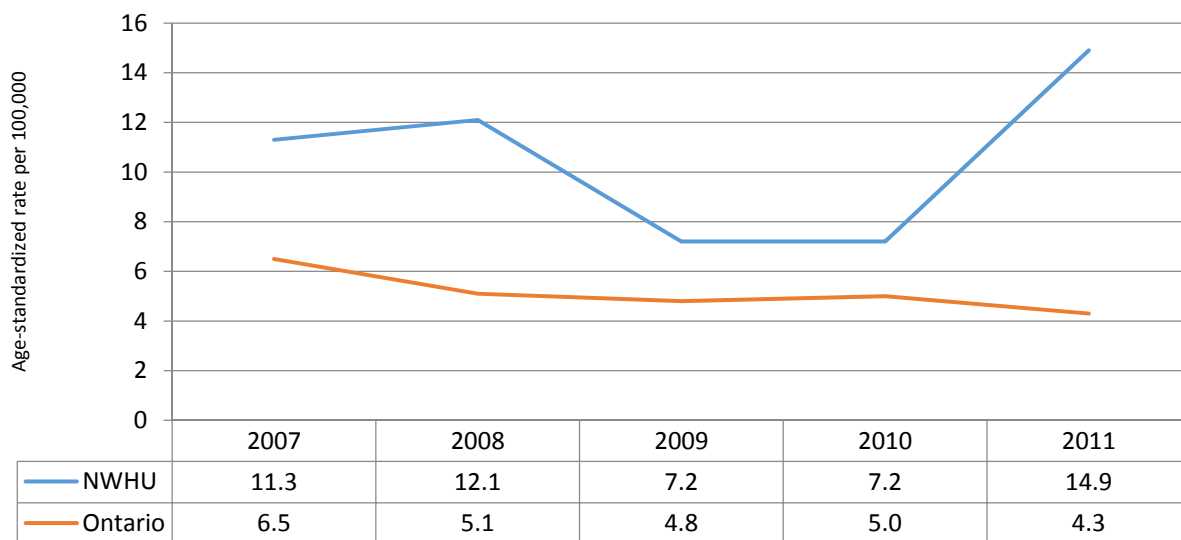
## Transport Injuries

It is important to note that all of the statistics for transport injuries in the NWHU area are only for the population that resides within the NWHU area; people passing through the area who have transport collisions/injuries are not included in the statistics. It does include people who reside in the NWHU area who are injured anywhere in Ontario (but not outside of the province).

### Mortality

In 2011 there were 9 deaths due to transport injuries in the NWHU area, giving a mortality rate of 14.9 per 100,000. Overall there were 42 deaths from transport injuries between 2007 and 2011, which gives an average mortality rate of 10.2 per 100,000 per year. Rates in the NWHU have been slightly higher than provincial rates in the past 5 years, but were only statistically significantly higher in 2011.

Figure 22: Mortality due to transport injuries, age-standardized rates per 100,000, 2007-2011



NWHU is statistically different than Ontario in 2011

Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 22, 2014

Mortality rates due to transport injuries are much higher in males than females; between 2007 and 2011 the mortality rate for males in the NWHU was 15.5 per 100,000 per year compared with 4.9 per 100,000 per year in females. Rates are relatively consistent across different age groups.



Table 27: Deaths due to transport injuries from 2007-2011, by age and gender, NWHU

Age group	Male		Female		Total	
	#	Rate per 100,000 per year	#	Rate per 100,000 per year	#	Rate per 100,000 per year
0-19 yrs	*	*	*	*	12	10.3
20-44 yrs	*	*	*	*	16	12.5
45-64 yrs	*	*	*	*	8	7.0
65+ yrs	*	*	*	*	6	11.1
<b>Overall</b>	<b>32</b>	<b>15.5</b>	<b>10</b>	<b>4.9</b>	<b>42</b>	<b>10.2</b>

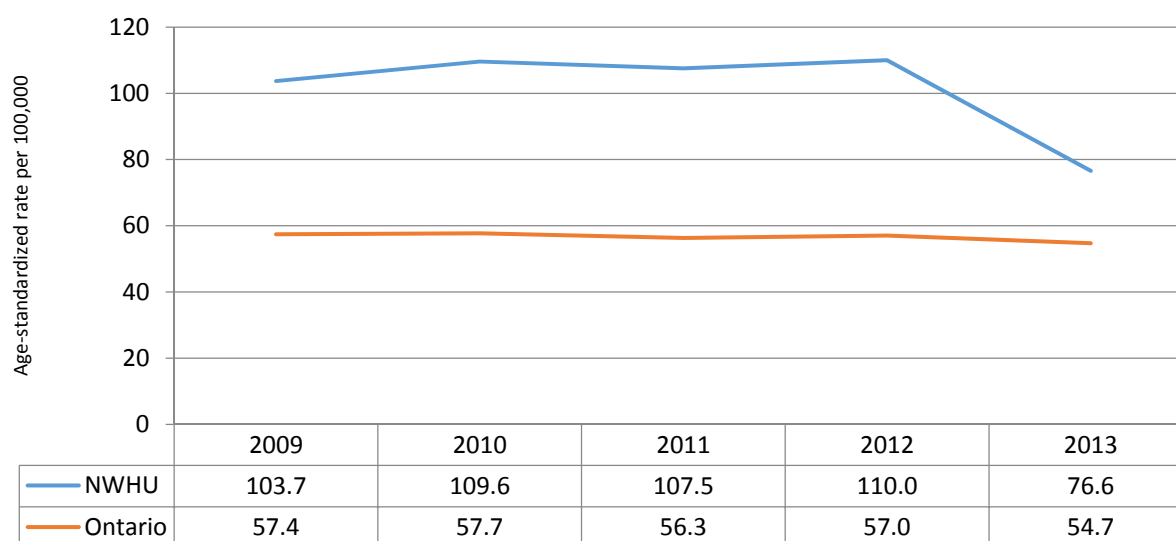
\*suppressed due to small counts

Source: Ontario Mortality Data 2007-2011, Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

## Hospitalization

In 2013 there were 62 hospitalizations in the NWHU area caused by transport injuries, giving an incidence rate of 76.6 per 100,000. The provincial rate in 2013 was 54.7 per 100,000, statistically lower than the NWHU rate. Rates in the NWHU have been consistently higher in the NWHU in recent years when compared with the province.

Figure 23: Hospitalization due to transport injuries, age-standardized rates per 100,000, 2009-2013



NWHU is statistically different than Ontario in 2009,2010,2011,2013

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

In recent years the rate of hospitalization from transport injuries has been higher in males than in females: between 2009 and 2013 the rate in males was 120.4 per 100,000 per year compared to the female rate of 75.9 per 100,000 year, with the difference being statistically significant. The age groups with the highest rates were those over 65 and those aged 20 to 44 years old.

**Table 28: Hospitalization due to transport injuries from in 2013, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 100,000	#	Rate per 100,000	#	Rate per 100,000
10-19 yrs	55	95.9	29	52.1	84	74.3
20-44 yrs	112	177.1	58	93.5	170	135.7
45-64 yrs	46	76.5	35	61.7	81	69.3
65+ yrs	36	137.9	33	110.2	69	123.1
<b>Overall</b>	<b>249</b>	<b>120.4</b>	<b>155</b>	<b>75.9</b>	<b>404</b>	<b>98.3</b>

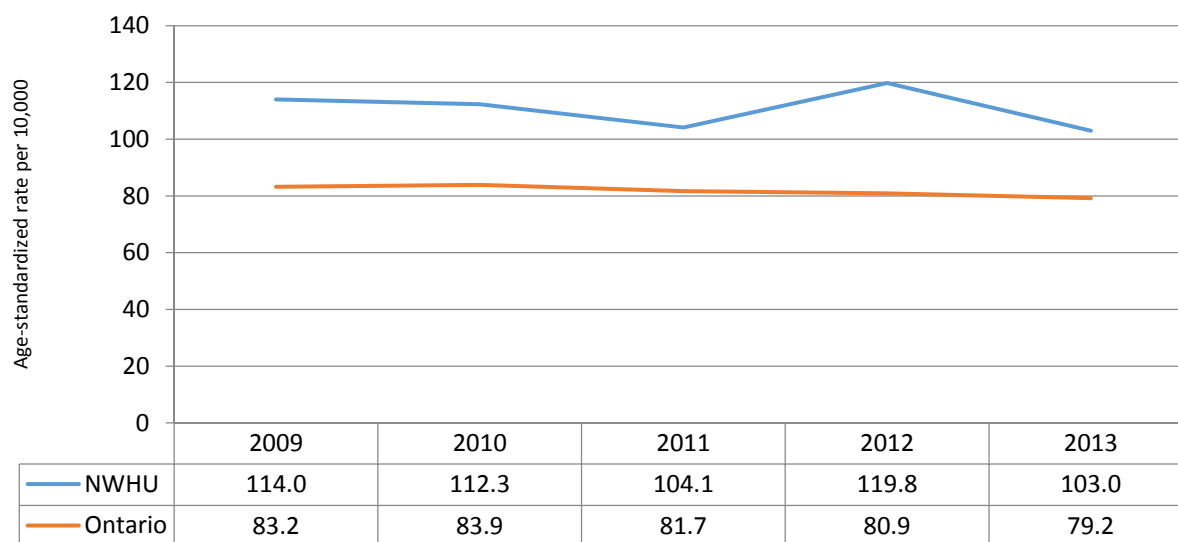
\*suppressed due to small counts

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

## Emergency Room Visits

In 2013 there were 812 visits to the ER in the NWHU area caused by transport injuries, which gives an incidence rate of 103.0 per 10,000. Rates have been relatively consistent in recent years, with 800-900 visits occurring each year. The provincial rate in 2013 was 79.2 per 10,000, statistically lower than the NWHU rate. Rates in the NWHU have consistently been higher than provincial rates in recent years.

**Figure 24: ER visits due to transport injuries, age-standardized rates per 10,000, 2009-2013**



NWHU is statistically different than Ontario in all years

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

ER visits from transport injuries were more common in males than females in 2013: the male rate was 111.1 per 10,000, statistically higher than the female rate of 86.2 per 10,000. Younger populations had the highest rates, with those aged 0-19 having a rate of 110.7 per 10,000 and those aged 20-44 having a rate of 123.6 per 10,000.

**Table 29: ER visits due to transport injuries in 2013, by age and gender, NWHU**

Age group	Male		Female		Total	
	#	Rate per 10,000	#	Rate per 10,000	#	Rate per 10,000
0-19 yrs	150	132.8	96	87.8	<b>246</b>	<b>110.7</b>
20-44 yrs	174	137.6	135	109.3	<b>309</b>	<b>123.6</b>
45-64 yrs	107	88.8	91	79.6	<b>198</b>	<b>84.3</b>
65+ yrs	29	53.6	30	49.1	<b>59</b>	<b>51.2</b>
<b>Overall</b>	<b>460</b>	<b>111.1</b>	<b>352</b>	<b>86.2</b>	<b>812</b>	<b>98.7</b>

Source: Ambulatory Emergency External Cause 2013 Ontario Ministry of Health and Long-Term Care, Intellihealth Ontario, Date Extracted: October 16, 2014

## Discussion and Limitations

---

The data presented in this report demonstrate that mortality and morbidity from injuries is a concern in the NWHU catchment area. In 2011 the mortality rate from all injuries combined in the NWHU was 83.6 per 100,000, 2.4 times higher than the provincial rate of 34.5 per 100,000. Similarly, rates of hospitalizations and emergency room visits are also significantly higher in the NWHU area when compared with the province.

An area of particular concern in the NWHU is self-harm. Mortality rates from self-harm have been increasing in recent years culminating in a 2011 rate of 29.4 per 100,000, about 3 times higher than the provincial rate of 9.4 per 100,000. Between 2007 and 2011 self-harm accounted for nearly a quarter (23.8%) of injury-related deaths in the area.

Mortality from injuries is higher in males than females in the NWHU area. Between 2007 and 2011, the male mortality rate of 100 per 100,000 per year was nearly twice as high as the female rate of 55 per 100,000 per year.

One of the limitations of this analysis is the fact that classification of injuries is based on a code assigned to a patient upon entry to a hospital or after a person's time of death. These codes are given by qualified health professionals, but there is no guarantee of complete accuracy and one can always expect a certain degree of uncertainty around the numbers due to this factor.

Another limitation is the relatively small population of the NWHU catchment area, which has implications when performing data analyses. A smaller population leads to a small number of events (deaths, hospitalizations, etc.), and a small number of events has a higher degree of uncertainty when it comes to analysis and inference. Often times during this report multiple years had to be combined to produce more robust estimates, larger age groups had to be used for age-specific rates, and in some cases results had to be suppressed due to small numbers and high variability of data.

## Appendix 1: Data Notes

### Data sources

All data used in this report were extracted between October 2014 and April 2015, and came from Public Health Ontario's Snapshots tool and IntelliHEALTH Ontario.

### Snapshots

Snapshots is a tool developed by Public Health Ontario that provides a dashboard of tables and graphs of numerous public health indicators, focusing on the Core Indicators developed by the Association of Public Health Epidemiologists in Ontario (APHEO). Statistics in the tool are available at the public health unit level.

The tool is targeted towards public health epidemiologists, but is available to the general public on Public Health Ontario's website at:

<http://www.publichealthontario.ca/en/DataAndAnalytics/Snapshots/Pages/default.aspx#.VVOQbPCVkQM>

### IntelliHEALTH Ontario

IntelliHEALTH Ontario is a provincial portal maintained by the Ministry of Health and Long-Term Care, which pulls together administrative data from several databases, including Vital Statistics, National Ambulatory Care Reporting System (NACRS), Discharge Abstract Database (DAD), and Statistics Canada. The portal can be accessed by authorized users who use the data for analysis and planning of healthcare delivery in Ontario.

### Analysis

This report provides mortality incidence data in the form of age-standardized rates and sex- and age-specific crude rates. Crude rates were calculated by dividing the total number of deaths/hospitalizations/ER visits by the total person-time for the population, and multiplying it by a factor of 1,000, 10,000, or 100,000. Age-standardized rates were extracted directly from Snapshots, or when the data was not available there, was calculated manually using the 1991 Canadian population as a standard population.

At the time the data was extracted, population counts for the NWHU area were only available up to 2012. Subsequently, mortality and incidence rates for 2013 were calculated using the 2012 population figures.

Analysis was carried out using Microsoft Excel, Stata Statistical Software, and Open Epi.

## Appendix 2: ICD-10 Codes and Definitions for Injuries

Classification	ICD-10 codes	Definition
All Injuries	V01-Y09, Y85-Y871	All-encompassing term that includes all types of injuries
Unintentional Injuries	V01-X59, Y85-Y86	All injuries that are considered unintentional. Includes falls, unintentional poisoning, transport injuries, etc.
Intentional Injuries	X60-Y09, Y870, Y871	All injuries that are considered intentional or purposely inflicted, including assault and self-harm
Intentional Self-Harm (ages 10 and older)	X60-X84, Y870	Includes purposely inflicted injury or poisoning to oneself
Intentional Self-Poisoning	X60-X69	Includes all of the methods used for purposely inflicting injury by poisoning
Unintentional Poisoning	X40-X49	Includes all incidences of poisoning considered to be unintentional
Assault	X85-Y09, Y871	Harmful or offensive contact with another person
Falls	W00-W19	Includes every type of fall (i.e. falling from a vehicle, falling from a height, etc.)
Transport Injuries	V01-V99	All injuries caused by transport collisions, including land, water and air
Exposure to Inanimate Mechanical Forces	W20-W49	Any injuries caused by being struck, cut, etc. by non-living objects (i.e. being struck by a ball, etc.)
Exposure to Animate Mechanical Forces	W50-W64	Any injuries caused by living things (i.e. bitten by a dog, etc.)
Overexertion, Travel and Privation	X50-X57	Includes overexertion, injuries caused by travel and motion, lack of food, lack of water, etc.