

### Definition/Description:

#### Injury Hospitalization

Defined as in-patient hospital treatment for an injury event as indicated by the presence of the first valid ICD-9 E-code (E800-E999) in any one of the 16 diagnosis fields in the Hospital Discharge Abstract Database occurring to children and youth 19 years of age and younger (i.e. 0-19 years). "All Injury" (ICD-9 codes: E800-869.9, E880-929.9, and E950-E999.9) is used in this report as the summary measure of injury in the Winnipeg Health Region. Health Canada, the United States Centers for Disease Control and the International Collaborative Effort on Injury (ICE on Injury) have recommended the use of *All Injury* instead of all external causes of injury (i.e. ICD-9 E800-E999.9) when examining injury data for injury prevention and control. It should be noted that injuries due to Adverse Events are excluded from the *All Injury* definition.

*All Injury* can be divided into five intent-manner categories: *Unintentional*, *Self-inflicted*, *Assault*, *Undetermined*, and *Other Violence*. Crude rates and counts for all five intent-manner categories are reported at the regional-level and by community area (see list below). Note that the total of these five intent-manner categories results in *All Injury*.

The following data is presented in this indicator:

1. Table of Injury Hospitalizations in the WHR for Children and Youth, 19 Years of Age and Under, 1997-2002. Counts and crude rates.
2. Table of Injury Hospitalizations in the WHR for Children and Youth, Age-specific rates, 1997-2002. Counts and crude rates.
3. Table of Injury Hospitalization for children and Youth of the WHR: Injury Matrix: 1997-1999
4. Table of Injury Hospitalization for children and Youth of the WHR: Injury Matrix: 2000-2002

#### Additional Note:

A limitation of this data is that as a measure of injury in the population, injury hospitalizations represent severe injuries: those that required hospital admission for treatment. Persons treated and released from the emergency department for injuries are not included in hospital abstract data. A substantial number of injuries occur that is never treated in hospital and therefore is not captured by this data. Please refer to the Self-Reported Injuries indicator (indicator #48), which addresses this information gap.

Note that all rates provided in this indicator are *per 100 000 population*.

#### Method

Six calendar years of hospitalization data from the Hospital Discharge Abstract Database (source: Manitoba Health) were used, for the period of January 1, 1997 to December 31, 2002. Residents of the WHR who were treated in any Manitoba hospital for an injury were included in this analysis. Further detail can be found in the indicator for Injury Hospitalization (Indicator #47).

#### Source:

The source data was the Hospital Abstract Database, provided by Decision Support Service, Manitoba Health. All numerical values, tables, and figures were generated by Population Health & Health System Analysis, Winnipeg Regional Health Authority, 2004.

**Findings:****Injury Hospitalizations for Children and Youth in the Winnipeg Health Region, 1997-2002**

Counts and Crude Rates of Injury Hospitalization for those 19 years of Age and Younger

Unintentional		Self-inflicted		Assault		Undetermined		All Injury	
Count	Rate per 100,000	Count	Rate per 100,000	Count	Rate per 100,000	Count	Rate per 100,000	Count	Rate per 100,000
3066	305.4	401	39.9	376	37.5	94	9.4	3946	393.1

**Counts and Age-Specific Rates of Injury Hospitalization for Children and Youth in the Winnipeg Health Region, 1997-2002**

Counts and Age-Specific Rates of Injury Hospitalization for Children and Youth in the WHR


Age Group	Unintentional		Self-inflicted		Assault		Undetermined		All Injury	
	Count	Rate per 100,000	Count	Rate per 100,000	Count	Rate per 100,000	Count	Rate per 100,000	Count	Rate per 100,000
<1	109	239.9	0	0.0	16	35.2	8	17.6	133	292.7
1-4	574	296.2	*	*	12	6.2	11	5.7	598	308.5
5-9	631	242.7	*	*	9	3.5	*	*	646	248.5
10-14	782	306.6	87	34.1	34	13.3	23	9.0	928	363.8
15-19	970	388.8	314	125.8	305	122.2	52	20.8	1641	657.7

## Notes:

- The intent/manner category of 'Other violence' is not shown due to small counts, but these counts were included in the 'All Injury' totals.
- All Injury excludes Adverse Events.
- \* Indicates that the value is suppressed due to a cell count of less than five.
- All rates are per 100 000 population.

## Injury Hospitalization for Children and Youth of the Winnipeg Health Region: Injury Matrix, 1997-1999

Mechanism or Cause	Manner or Intent											
	Unintentional		Self-inflicted		Assault		Undetermined		Other Violence		Total	
	Counts	Rate per 100,000	Counts	Rate per 100,000	Counts	Rate per 100,000	Counts	Rate per 100,000	Counts	Rate per 100,000	Counts	Rate per 100,000
Cut/pierce	125	24.78	16	3.17	48	9.51	6	1.19	0	0.00	195	38.65
Drowning/submersion	10	1.98	0	0.00	0	0.00	0	0.00			10	1.98
Fall	497	98.51	*	*	*	*	*	*			502	99.50
Fire/burn	90	17.84	0	0.00	0	0.00	0	0.00			90	17.84
Fire/flame	33	6.54	0	0.00	0	0.00	0	0.00			33	6.54
Private home conflagration	20	3.96									20	3.96
Ignition of clothing	*	*									*	*
Hot object/substance	57	11.30	0	0.00	0	0.00	0	0.00			57	11.30
Firearm	*	*	0	0.00	0	0.00	0	0.00	0	0.00	*	*
Machinery	15	2.97									15	2.97
Agricultural machines	*	*									*	*
Motor vehicle traffic	218	43.21	0	0.00	0	0.00	0	0.00			218	43.21
Occupant	121	23.98									121	23.98
Motorcyclist	5	0.99									5	0.99
Pedal cyclist	14	2.78									14	2.78
Pedestrian	69	13.68									69	13.68
Unspecified	7	1.39									7	1.39
Pedal cyclist, other	62	12.29									62	12.29
Pedestrian, other	5	0.99									5	0.99
Transport, other	36	7.14	0	0.00			0	0.00			36	7.14
Snowmobile	6	1.19									6	1.19
Other off-road vehicle	7	1.39									7	1.39
Water transport, ex. Drowning	*	*									*	*
Air & space transport	0	0.00									0	0.00
Natural/environmental	58	11.50	0	0.00			0	0.00			58	11.50
Excessive cold	5	0.99	0	0.00			0	0.00			5	0.99
Bites and stings	43	8.52									43	8.52
Overexertion	18	3.57									18	3.57
Poisoning	63	12.49	181	35.88	*	*	34	6.74	0	0.00	279	55.30
Medication	44	8.72	176	34.89	0	0.00	22	4.36			242	47.97
Alcohol	*	*									*	*
Motor vehicle exhaust	0	0.00	*	*			0	0.00			*	*
Other carbon monoxide	0	0.00	0	0.00			0	0.00			0	0.00
Struck by, against	150	29.73			83	16.45			0	0.00	233	46.18
Suffocation	23	4.56	*	*	0	0.00	*	*			29	5.75
Choking on food	11	2.18									11	2.18
Choking, non-food	9	1.78									9	1.78
Suffocation, plastic bag	0	0.00	0	0.00							0	0.00
Suffocation in bed or cradle	*	0.20									*	*
Hanging ex in bed or cradle	0	0.00	*	*	0	0.00	*	*			5	0.99
Other specified, classifiable	139	27.55	*	*	34	6.74	0	0.00	0	0.00	174	34.49
Child maltreatment					30	5.95					30	5.95
Other specified, NEC	17	3.37	5	0.99	22	4.36	0	0.00	*	*	46	9.12
Unspecified	71	14.07	*	*	11	2.18	*	*	0	0.00	87	17.24
Fracture, cause unspecified	38	7.53									38	7.53
<b>All injury</b>	<b>1599</b>	<b>316.94</b>	<b>210</b>	<b>41.63</b>	<b>201</b>	<b>39.84</b>	<b>47</b>	<b>9.32</b>	<b>*</b>	<b>*</b>	<b>2059</b>	<b>408.12</b>


 = no applicable E-code(s)

## Notes:

- \* Indicates that the value is suppressed due to a cell count of less than five.
- All rates are per 100 000 population

Injury Hospitalization for Children and Youth of the Winnipeg Health Region: Injury Matrix, 2000 - 2002

Mechanism or Cause	Manner or Intent											
	Unintentional		Self-inflicted		Assault		Undetermined		Other Violence		Total	
	Counts	Rate per 100,000	Counts	Rate per 100,000	Counts	Rate per 100,000	Counts	Rate per 100,000	Counts	Rate per 100,000	Counts	Rate per 100,000
Cut/pierce	105	21.03	19	3.81	45	9.01	*	*	0	0.00	171	34.25
Drowning/submersion	10	2.00	0	0.00	0	0.00	*	*			11	2.20
Fall	477	95.53	*	*	0	0.00	0	0.00			480	96.14
Fire/burn	77	15.42	*	*	*	*	*	*			80	16.02
Fire/flame	24	4.81	0	0.00	0	0.00	*	*			25	5.01
Private home conflagration	*	*									*	*
Ignition of clothing	*	*									*	*
Hot object/substance	53	10.61	*	*	*	*	0	0.00			55	11.02
Firearm	*	0.20	0	0.00	*	*	*	*	0	0.00	6	1.20
Machinery	12	2.40									12	2.40
Agricultural machines	*	*									*	*
Motor vehicle traffic	198	39.66	0	0.00	0	0.00	0	0.00			198	39.66
Occupant	116	23.23									116	23.23
Motorcyclist	8	1.60									8	1.60
Pedal cyclist	12	2.40									12	2.40
Pedestrian	61	12.22									61	12.22
Unspecified	*	*									*	*
Pedal cyclist, other	46	9.21									46	9.21
Pedestrian, other	8	1.60									8	1.60
Transport, other	38	7.61	0	0.00			0	0.00			38	7.61
Snowmobile	7	1.40									7	1.40
Other off-road vehicle	18	3.61									18	3.61
Water transport, ex. Drowning	*	*									*	*
Air & space transport	0	0.00									0	0.00
Natural/environmental	53	10.61	0	0.00			0	0.00			53	10.61
Excessive cold	*	*	0	0.00			0	0.00			*	*
Bites and stings	44	8.81									44	8.81
Overexertion	19	3.81									19	3.81
Poisoning	67	13.42	165	33.05	0	0.00	38	7.61	0	0.00	270	54.08
Medication	47	9.41	164	32.85	0	0.00	26	5.21			237	47.47
Alcohol	*	*									*	*
Motor vehicle exhaust	0	0.00	0	0.00			*	*			*	*
Other carbon monoxide	0	0.00	0	0.00			0	0.00			0	0.00
Struck by, against	136	27.24			72	14.42			0	0.00	208	41.66
Suffocation	16	3.20	*	*	0	0.00	0	0.00			19	3.81
Choking on food	*	*									*	*
Choking, non-food	12	2.40									12	2.40
Suffocation, plastic bag	0	0.00	0	0.00							0	0.00
Suffocation in bed or cradle	*	*									*	*
Hanging ex in bed or cradle	*	*	*	*	0	0.00	0	0.00			*	*
Other specified, classifiable	90	18.03	*	*	28	5.61	0	0.00	0	0.00	119	23.83
Child maltreatment					27	5.41					27	5.41
Other specified, NEC	20	4.01	0	0.00	12	2.40	*	*	0	0.00	35	7.01
Unspecified	94	18.83	*	*	13	2.60	5	1.00	0	0.00	114	22.83
Fracture, cause unspecified	49	9.81									49	9.81
<b>All injury</b>	<b>1467</b>	<b>293.81</b>	<b>194</b>	<b>38.85</b>	<b>175</b>	<b>35.05</b>	<b>51</b>	<b>10.21</b>	<b>0</b>	<b>0.00</b>	<b>1887</b>	<b>377.93</b>

 = no applicable E-code(s)

Notes:

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## Highlights:

**Note:** Only the crude rates are referred to in this narrative.

The *All Injury* hospitalization rate for Children and Youth (19 years of age and younger) in the Winnipeg Health Region was 393.1 per 100 000 population, for 1997-2002.

### Children

#### under 1 year, 1-4, 5-9, and 10-14 year-olds

- 2305 children were hospitalized due to injury in the period of 1997-2002.
- The *All Injury* rate ranges from 248.5 to 363.8 hospitalizations per 100 000 population among the Children's age groups.
- *Unintentional injury* makes up the greatest percentage of injuries experienced by children.

### Youth

#### 15-19 year-olds

- 1641 Youth, 15-19 years of age, were hospitalized due to injury in the period of 1997-2002.
- The *All Injury* rate is 657.7 hospitalizations per 100 000 population for 15-19 year-olds.
- Most noteworthy are the larger *Self-inflicted* and *Assault Injury* hospitalizations rates for Youth compared to Children.
- Youth have the highest rate of *Self-inflicted Injury* hospitalizations, at 125.8 per 100 000 population, compared to all other age groups in the Winnipeg Health Region (see Injury Hospitalization indicator #46 for comparison to older age groups).

### Changes Over Time

- There has been a decrease of 7.4% in the *All Injury* hospitalization rate for children and youth (19 years of age and younger) between 1997-1999 and 2000-2002 (see tables of the Injury Matrix, 1997-1999 and Injury Matrix, 2000-2002).
- Similar decreases were observed for *Unintentional Injury* (-7.3%) and *Self-inflicted Injury* (-6.7%) hospitalization rates for children and youth, between the two time period.
- A greater decrease in the *Assault* hospitalization rate was observed at -12.0%, while the hospitalization rate for injuries of *Undetermined* intent increased by 9.6% between the two time periods.