

Definition/Description:

Hepatitis B virus is a sexually transmitted infection and blood borne pathogen that is preventable through universal immunization programs and ongoing immunization of high-risk groups.¹ Transmission of hepatitis B virus may occur through transfusion of blood and blood products, human bites, sharing needles during injection drug use, hemodialysis, acupuncture, tattooing, body piercing, needlestick injuries, and through sexual contact and perinatal transmission. In Manitoba, hepatitis B vaccine is administered annually to Grade 4 students. In addition, contacts to cases of hepatitis B and those at risk of hepatitis B are offered vaccine free of charge.

All acute cases and newly identified chronic cases (carriers) of hepatitis B virus are reportable by laboratories and attending health care professionals to the Director of Communicable Disease Control at Manitoba Health. While chronic cases are included within this report, acute cases are highlighted.

Source:

- *Case Event (Numerator) Data*: Communicable Disease Control Unit, Public Health Branch, Manitoba Health
- *Population (Denominator) Data*: Decision Support Services, Health Information Management Branch, Manitoba Health
- *Tabulations*: Population Health and Health Systems Analysis Unit, Quality and Decision Support, Winnipeg Regional Health Authority

Findings:

Acute and Chronic (Carriers) Cases

From 1996 to 2002, 807 cases of hepatitis B virus (HBV) were reported among residents of the Winnipeg Health Region (WHR), with approximately 18% of cases classified as acute, and 67% classified as chronic cases (carriers) (Table HBV1). Since 1996, the number of reported cases of acute HBV has declined substantially in the WHR – from 52 cases in 1996 to 9 cases in 2002 (Table HBV2). In 2002, the crude rate of acute HBV infection was 0.014 per 1000 population (Table HBV2). In Canada, the crude rate of acute HBV in 2000 was approximately 0.032 per 1000 population, while in Manitoba; the crude rate of HBV was 0.011 per 1000.²

¹Hepatitis B virus is also included within Indicator #56 – Vaccine Preventable Diseases.

²Notifiable Diseases On-Line, Health Canada, 2004.

Table HBV1
Hepatitis B Virus: Number of Cases by Community Area and Year, Winnipeg Health Region
(Both Genders, All Ages), 1996-2002

Community Area	Status	Total 1996-2002	1996	1997	1998	1999	2000	2001	2002
St.James Assiniboia	Acute	8	1	5	0	1	1	0	0
	Carrier	13	5	1	2	2	0	3	0
	Unknown	7	0	0	0	1	0	1	5
Assiniboine South	Acute	4	0	1	0	0	2	1	0
	Carrier	22	7	1	2	4	4	2	2
	Unknown	1	0	0	0	1	0	0	0
Fort Garry	Acute	7	2	1	1	1	1	1	0
	Carrier	79	18	15	8	11	7	9	11
	Unknown	12	0	0	1	1	1	5	4
St. Vital	Acute	4	0	0	2	1	1	0	0
	Carrier	40	9	4	6	2	0	10	9
	Unknown	2	0	0	0	1	0	0	1
St. Boniface	Acute	7	2	2	0	1	0	0	2
	Carrier	25	4	4	1	6	4	2	4
	Unknown	6	0	0	0	0	2	2	2
Transcona	Acute	3	1	0	0	1	0	0	1
	Carrier	4	2	1	0	0	0	1	0
	Unknown	0	0	0	0	0	0	0	0
River East	Acute	14	5	2	3	2	0	0	2
	Carrier	38	7	5	6	3	7	4	6
	Unknown	4	0	0	0	0	0	1	3
Seven Oaks	Acute	13	3	2	4	0	2	2	0
	Carrier	39	4	5	12	6	2	6	4
	Unknown	10	0	0	0	1	2	4	3
Inkster	Acute	8	3	1	4	0	0	0	0
	Carrier	57	11	15	9	6	5	7	4
	Unknown	8	0	0	0	1	2	3	2
Point Douglas	Acute	26	19	4	0	2	0	0	1
	Carrier	32	7	9	5	2	2	3	4
	Unknown	10	0	0	0	3	1	2	4
Downtown	Acute	37	11	8	7	7	2	1	1
	Carrier	158	28	17	34	27	18	19	15
	Unknown	54	0	0	1	8	14	14	17
River Heights	Acute	14	5	3	3	1	0	0	2
	Carrier	33	2	5	9	4	6	3	4
	Unknown	8	0	0	0	2	1	5	0
Winnipeg Health Region	Acute	145	52	29	24	17	9	5	9
	Carrier	540	104	82	94	73	55	69	63
	Unknown	122	0	0	2	19	23	37	41
Total		807	156	111	120	109	87	111	113

Table HBV2
Hepatitis B (Acute Cases): Number of Reported Cases, Crude and Age-Adjusted Rates, Winnipeg Health Region (Both Genders, All Ages), 1996–2002

Year	Frequency	Crude Rate per 1000	Age-adjusted Rate per 1000
1996	52	0.081	0.076
1997	29	0.045	0.043
1998	24	0.377	0.037
1999	17	0.267	0.027
2000	9	0.014	0.014
2001	5	0.008	0.008
2002	9	0.014	0.014

Age and Gender

Table HBV3 reports the number and percentage of acute HBV cases by age group and gender for the most recent five-year period (1998-2002). For both males and females, more than half of all cases are accounted for by individuals 20 to 39 years.

Table HBV3
Hepatitis B Acute Cases in the Winnipeg Health Region, 1998-2002

Age Group (Years)	Both Sexes		Females		Males	
	Cases	%	Cases	%	Cases	%
0-20	6	9%	3	11%	3	8%
20-29	21	33%	9	33%	12	31%
30-39	16	25%	8	30%	8	21%
40-49	12	19%	5	19%	7	18%
50-59	3	5%	1	4%	2	5%
60-69	5	8%	1	4%	4	10%
70+	1	2%	0	0%	1	3%
Total	64	100%	27	100%	39	100%

Geographical Variation

The number of cases, crude rates and age-adjusted rates for acute HBV were generated for the Community Areas within the WHR and are presented in Table HBV4. Overall, the incidence of infection is greatest in the Downtown Community Area (18 cases, 0.05 per 1000 population).

Table HBV4

Hepatitis B (Acute Cases): Counts, Crude and Age-Adjusted Rates by Community Area, Winnipeg Health Region, 1998-2002

Community Area	Females			Male			Both Genders		
	Cases	Crude Rate	Age-Adjusted Rate	Cases	Crude Rate	Age-Adjusted Rate	Cases	Crude Rate	Age-Adjusted Rate
St. James Assiniboia	1	0.01	0.01	1	0.01	0.01	2	0.01	0.01
Assiniboine South	1	0.01	0.01	2	0.02	0.03	3	0.02	0.02
Fort Garry	2	0.01	0.01	2	0.01	0.01	4	0.01	0.01
St. Vital	2	0.01	0.01	2	0.01	0.01	4	0.01	0.01
St. Boniface	1	0.01	0.01	2	0.02	0.02	3	0.01	0.01
Transcona	2	0.03	0.02	0	0.00	0.00	2	0.01	0.01
River East	3	0.01	0.01	4	0.02	0.02	7	0.02	0.02
Seven Oaks	5	0.03	0.03	3	0.02	0.02	8	0.03	0.03
Inkster	1	0.01	0.01	3	0.04	0.05	4	0.03	0.03
Point Douglas	2	0.02	0.02	1	0.01	0.01	3	0.01	0.01
Downtown	5	0.03	0.03	13	0.07	0.07	18	0.05	0.05
River Heights	2	0.01	0.01	4	0.03	0.03	6	0.02	0.02
Winnipeg Health Region	27	0.02	0.02	37	0.02	0.02	64	0.02	0.02

Highlights:

- From 1996 to 2002, 807 cases of hepatitis B virus (HBV) were reported among residents of the Winnipeg Health Region (WHR), with approximately 18% of cases classified as acute, and 67% classified as chronic cases (carriers).
- Since 1996, the number of reported cases of acute HBV has declined substantially in the WHR – from 52 cases in 1996 to 9 cases in 2002.
- For both males and females, more than half of all cases are accounted for by individuals 20 to 39 years.
- The incidence of infection is greatest in the *Downtown Community Area*.

¹Additional information describing communicable diseases (including sexually transmitted and blood-borne infections) and immunization in the Winnipeg Health Region is available in **Report on Communicable Diseases and Immunization in the Winnipeg Health Region, 2004** [available fall 2004].