

Supplementary Materials:

**Table S1.**Hepatitis B annual positive rate (per 100,000) among first-time CBS donors, 2005 to 2020

Year	Total n	Clinical Scenario 2		Clinical Scenarios 1/3	
		Likely Chronic hepatitis B		Likely Resolved/Occult hepatitis B	
		Positive n	Rate per 100,000 (95% CI)	Positive n	Rate per 100,000 (95% CI)
<b>2005</b>	59,979	28	46.7 (31.0 - 67.5)	735	1,225.4 (1138.4 - 1317.3)
<b>2006</b>	88,804	68	76.6 (59.5 - 97.1)	1,200	1,351.3 (1275.9 - 1430.0)
<b>2007</b>	85,591	70	81.8 (63.8 - 103.3)	1,016	1,187.0 (1115.2 - 1262.3)
<b>2008</b>	90,490	66	72.9 (56.4 - 92.8)	1,095	1,210.1 (1139.5 - 1283.9)
<b>2009</b>	87,389	52	59.5 (44.4 - 78.0)	1,052	1,203.8 (1132.2 - 1278.8)
<b>2010</b>	81,471	56	68.7 (51.9 - 89.3)	1,020	1,252.0 (1176.3 - 1331.2)
<b>2011</b>	92,745	52	56.1 (41.9 - 73.5)	1,228	1,324.1 (1251.0 - 1400.3)
<b>2012</b>	92,066	53	57.6 (43.1 - 75.3)	1,234	1,340.3 (1266.6 - 1417.3)
<b>2013</b>	90,886	42	46.2 (33.3 - 62.5)	1,147	1,262.0 (1190.0 - 1337.2)
<b>2014</b>	96,543	43	44.5 (32.2 - 60.0)	1,148	1,189.1 (1121.3 - 1259.9)
<b>2015</b>	81,589	32	39.2 (26.8 - 55.4)	1,070	1,311.5 (1234.1 - 1392.5)
<b>2016</b>	88,806	51	57.4 (42.8 - 75.5)	1,382	1,556.2 (1475.2 - 1640.5)
<b>2017</b>	101,755	48	47.2 (34.8 - 62.6)	1,456	1,430.9 (1358.3 - 1506.3)
<b>2018</b>	102,037	41	40.2 (28.8 - 54.5)	1,371	1,343.6 (1273.5 - 1416.7)
<b>2019</b>	87,201	54	61.9 (46.5 - 80.8)	1,264	1,449.5 (1370.7 - 1531.7)
<b>2020</b>	74,251	31	41.8 (28.4 - 59.3)	1,003	1,350.8 (1268.5 - 1437.1)
<b>Overall</b>					
<b>2005 to</b>					
<b>2020</b>	1,401,603	787	56.1 (52.3-62.1)	18,421	1314.3 (1295.5 – 1333.4)

**Table S2.** Breakdown of HBV-positive rates by clinical scenario among first-time donors by sex, age, and region, 2019.

Demographics	Clinical Scenario 2		Clinical Scenario 1 and 3	
	Likely Chronic		Likely Occult and Resolved	
	Total Tested	Rate/100,000 first-time donors (95% CI)	Total Tested	Rate/100,000 first-time donors (95% CI)
<b>Sex</b>				
Female	46,117	36.9 (21.5 - 59.0)	46,117	1,047.3 (956.0 - 1145.0)
Male	41,084	90.1 (63.4 - 124.1)	41,084	1,901.0 (1770.0 - 2039.1)
<b>Age Group</b>				
17-29	42,487	37.7 (21.5 - 61.2)	42,487	313.0 (262.1 - 371.0)
30-39	17,084	122.9 (76.1 - 188.0)	17,084	1,574.6 (1392.1 - 1774.5)
40-49	12,198	65.6 (28.4 - 129.3)	12,198	3,328.4 (3012.5 - 3668.5)
50+	15,432	58.3 (26.7 - 110.7)	15,432	2,954.9 (2689.9 - 3239.0)
<b>Province or Region of Residence*</b>				
British Columbia	14,718	88.3 (47.1 - 151.1)	14,718	1,644.3 (1443.6 - 1865.0)
Alberta	16,873	35.6 (13.1 - 77.4)	16,873	1,535.0 (1353.8 - 1733.8)
Saskatchewan	3,554	140.7 (45.9 - 328.4)	3,554	1,012.9 (709.6 - 1402.4)
Manitoba	3,866	51.7 (6.5 - 187.0)	3,866	1,474.4 (1116.9 - 1910.5)
Ontario	40,789	63.7 (41.7 - 93.4)	40,789	1,532.3 (1414.5 - 1657.3)
Atlantic Canada**	7,401	27.0 (3.4 - 97.7)	7,401	608.0 (443.6 - 813.7)
<b>Total</b>	<b>87,201</b>	<b>61.9 (46.5 - 80.8)</b>	<b>87,201</b>	<b>1,449.5 (1370.7 - 1531.7)</b>

\* Province or region of residence at the time of CBS hepatitis B first-time blood donor screening.

\*\* Atlantic Canada is a summary of CBS first-time donors who were screened for hepatitis B who resided in the provinces of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland & Labrador at the time of blood donor screening.

**Table S3.** Output from univariate logistic regression model of case-control interviews with clinical scenario 2 (likely chronic infection) as the dependent variable.

<b>Variable</b>	<b>Odds Ratio (OR)</b>	<b>95% CI</b>	<b>P Value</b>
Ever received a blood transfusion	2.58	1.53 – 4.37	0.0004
Lived with someone who had hepatitis (any)	10.49	4.94 – 22.13	<0.0001
Lived with someone who had liver disease	2.75	1.00 – 7.56	0.0500
Vaccinated for hepatitis B	0.56	0.41 – 0.76	0.0003
High-risk ethnic origin <sup>1</sup>	7.22	5.38 – 9.77	<0.0001
Body piercing	0.40	0.20 – 0.77	0.0064
10+ sexual partners in lifetime	0.35	0.22 – 0.58	<0.0001
Tattoo	0.36	0.23 – 0.59	<0.0001
Born in high-risk country (>5% prevalence)*	9.21	6.62 -12.81	<0.0001

\*Ethnic origin was classified as high-risk if the donor self-reported their ancestral ethnicity to be from a high-risk country (5% or higher HBV prevalence (Schweitzer et al., 2015)); these ethnicities included Asian (unspecified, East, Southeast, West, and South), African, Chinese, and Filipino. People of African, Asian, Chinese, and Filipino ethnic origin have an increased likelihood of having been born in or having lived with people born in HBV-endemic countries and were considered “high-risk”