

Appendix Table A1. Results of Systematic Review: HBsAg Seroprevalence Articles Identified in PubMed (2009–2019) by Country

Country/Region	2019 Country-Specific PubMed Searches							2009 Meta-Analysis	2019 Meta-Analysis	
	Articles Identified in Country Searches	Articles Excluded at Title Abstract	Full Text Articles Evaluated	Articles Excluded at Full Text Review	Eligible Articles from 2019 Country Searches	Eligible Articles from Other Sources*	Total Eligible Articles from 2019 Searches	Eligible Articles from 2009 Meta-Analysis	Total Articles in 2019 Country Meta-Analysis	Number of Surveys in Country Meta-Analysis
Asia	16,103	14,218	1,885	1,525	360	85	445	705	1,150	1,685
Americas	1,007	743	264	229	35	6	41	155	196	286
Oceania	26	0	26	21	5	5	10	20	30	62
Africa	2,347	1,570	777	635	142	48	190	226	416	578
Europe	830	598	232	208	24	13	37	109	146	189
All regions	20,313	17,129	3,184	2,618	566	157	723	1,215	1,938	2,800

Appendix Table A1—Continued

Country/Region	2019 Country-Specific PubMed Searches							2009 Meta-Analysis	2019 Meta-Analysis	
	Articles Identified in Country Searches	Articles Excluded at Title Abstract	Full Text Articles Evaluated	Articles Excluded at Full Text Review	Eligible Articles from 2019 Country Searches	Eligible Articles from Other Sources*	Total Eligible Articles from 2019 Searches	Eligible Articles from 2009 Meta-Analysis	Total Articles in 2019 Country Meta-Analysis	Number of Surveys in Country Meta-Analysis
Asia	16,103	14,218	1,885	1,525	360	85	445	705	1,150	1,685
Eastern Asia	9,446	8,637	809	645	164	18	182	281	463	741
China (incl. Hong Kong)	6,670	6,156	514	405	109	2	111	118	229	362
Taiwan	1,094	974	120	89	31	8	39	116	155	236
Korea	1,609	1,456	153	129	24	8	32	47	79	143
Japan	—	—	—	—	—	—	—	—	—	—
Eastern Asia, other/n.s.	73	51	22	22	0	0	0	0	0	0
South Eastern Asia	3,395	2,951	444	384	60	23	83	147	230	324
Philippines	83	60	23	22	1	6	7	13	20	25
Vietnam	746	640	106	92	14	3	17	38	55	80
Thailand	880	791	89	77	12	3	15	36	51	75
Laos	36	17	19	8	11	2	13	12	25	35
Cambodia	649	578	71	66	5	1	6	12	18	23
Indonesia	104	79	25	19	6	3	9	12	21	28
Myanmar	645	573	72	66	6	1	7	4	11	11
Malaysia	89	66	23	20	3	4	7	8	15	20
Singapore	163	147	16	14	2	0	2	12	14	27
South Central Asia	1,985	1,560	425	340	85	22	107	158	265	343
India	825	696	129	101	28	3	31	67	98	120
Iran	650	529	121	97	24	4	28	17	45	63
Pakistan	275	194	81	58	23	5	28	25	53	71
Bangladesh	99	72	27	23	4	5	9	17	26	31
Afghanistan	34	12	22	19	3	5	8	5	13	16
Uzbekistan	9	4	5	5	0	0	0	9	9	10
Nepal	36	19	17	14	3	0	3	15	18	26
Sri Lanka	22	13	9	9	0	0	0	1	1	2
Kazakhstan	17	10	7	7	0	0	0	2	2	4
So Cen Asia, other/n.s.	18	11	7	7	0	0	0	0	0	0
Western Asia	1,277	1,070	207	156	51	22	73	119	192	277
Iraq	25	10	15	11	4	5	9	2	11	11
Israel	121	100	21	17	4	0	4	9	13	21
Lebanon	27	21	6	4	2	1	3	6	9	11
Turkey	538	469	69	47	22	7	29	59	88	115
Armenia	7	7	0	0	0	1	1	3	4	5
Syria	22	12	10	6	4	3	7	1	8	10
Jordan	21	17	4	4	0	0	0	4	4	8
Saudi Arabia	232	201	31	24	7	1	8	22	30	64
Yemen	17	8	9	5	4	0	4	7	11	17
Kuwait	10	6	4	3	1	0	1	2	3	3
Azerbaijan	10	6	4	1	3	2	5	2	7	8
Georgia	160	144	16	16	0	2	2	2	4	4
Western Asia, other/n.s.	87	69	18	18	0	0	0	0	0	0
Asia, not specified	0	0	0	0	0	0	0	0	0	0

Appendix Table A1—Continued

Country/Region	2019 Country-Specific PubMed Searches							2009 Meta-Analysis	2019 Meta-Analysis	
	Articles Identified in Country Searches	Articles Excluded at Title Abstract	Full Text Articles Evaluated	Articles Excluded at Full Text Review	Eligible Articles from 2019 Country Searches	Eligible Articles from Other Sources*	Total Eligible Articles from 2019 Searches	Eligible Articles from 2009 Meta-Analysis	Total Articles in 2019 Country Meta-Analysis	Number of Surveys in Country Meta-Analysis
Americas	1,007	743	264	229	35	6	41	155	196	286
Central America	132	77	55	49	6	3	9	35	44	72
Mexico	105	60	45	43	2	2	4	14	18	27
El Salvador	2	2	0	0	0	0	0	3	3	7
Guatemala	7	4	3	1	2	0	2	6	8	9
Honduras	2	1	1	1	0	1	1	2	3	7
Nicaragua	2	1	1	1	0	0	0	2	2	2
Panama	11	6	5	3	2	0	2	4	6	11
Costa Rica	3	3	0	0	0	0	0	1	1	2
Belize	0	0	0	0	0	0	0	3	3	7
Caribbean	59	44	15	12	3	2	5	29	34	40
Cuba	27	23	4	4	0	1	1	5	6	7
Dominican Republic	8	6	2	1	1	0	1	6	7	8
Jamaica	7	5	2	2	0	0	0	4	4	4
Haiti	16	9	7	5	2	1	3	11	14	16
Trinidad and Tobago	1	1	0	0	0	0	0	1	1	2
Barbados	0	0	0	0	0	0	0	2	2	3
Caribbean, other/n.s.	0	0	0	0	0	0	0	0	0	0
South America	816	622	194	168	26	1	27	91	118	174
Colombia	44	24	20	19	1	0	1	3	4	4
Ecuador	5	4	1	1	0	0	0	3	3	12
Peru	42	25	17	15	2	0	2	11	13	25
Brazil	538	414	124	104	20	1	21	50	71	90
Guyana	2	1	1	0	1	0	1	0	1	1
Argentina	97	86	11	9	2	0	2	4	6	11
Venezuela	18	13	5	5	0	0	0	8	8	10
Chile	32	29	3	3	0	0	0	4	4	5
Bolivia	9	6	3	3	0	0	0	4	4	4
Uruguay	13	10	3	3	0	0	0	2	2	6
Paraguay	9	6	3	3	0	0	0	2	2	6
South America, other/n.s.	7	4	3	3	0	0	0	0	0	0
Northern America	0	0	0	0	0	0	0	0	0	0
Canada	—	—	—	—	—	—	—	—	—	—
Northern America, other/n.s.	0	0	0	0	0	0	0	0	0	0
Americas, not specified	0	0	0	0	0	0	0	0	0	0
Oceania	26	0	26	21	5	5	10	20	30	62
Australia	—	—	—	—	—	—	—	—	—	—
New Zealand	—	—	—	—	—	—	—	—	—	—
Fiji	7	0	7	5	2	2	4	3	7	16
Tonga	5	0	5	4	1	1	2	5	7	11
Micronesia	11	0	11	9	2	0	2	6	8	24
Samoa	3	0	3	3	0	2	2	6	8	11
Oceania, other/n.s.	0	0	0	0	0	0	0	0	0	0

Appendix Table A1—Continued

Country/Region	2019 Country-Specific PubMed Searches							2009 Meta-Analysis	2019 Meta-Analysis	
	Articles Identified in Country Searches	Articles Excluded at Title Abstract	Full Text Articles Evaluated	Articles Excluded at Full Text Review	Eligible Articles from 2019 Country Searches	Eligible Articles from Other Sources*	Total Eligible Articles from 2019 Searches	Eligible Articles from 2009 Meta-Analysis	Total Articles in 2019 Country Meta-Analysis	Number of Surveys in Country Meta-Analysis
Africa	2,347	1,570	777	635	142	48	190	226	416	578
Eastern Africa	375	234	141	104	37	19	56	70	126	189
Ethiopia	123	72	51	29	22	9	31	22	53	73
Kenya	59	43	16	13	3	0	3	9	12	27
Somalia	18	5	13	12	1	7	8	12	20	23
Uganda	68	41	27	22	5	1	6	5	11	17
Eritrea	8	0	8	6	2	2	4	1	5	6
Tanzania	53	39	14	11	3	0	3	11	14	18
Zimbabwe	15	7	8	7	1	0	1	10	11	25
Eastern Africa, other/n.s.	31	27	4	4	0	0	0	0	0	0
Middle Africa	259	143	116	96	20	3	23	13	36	45
Cameroon	106	60	46	26	20	3	23	13	36	45
Middle Africa, other/n.s.	153	83	70	70	0	0	0	0	0	0
Northern Africa	478	375	103	82	21	8	29	50	79	103
Egypt	269	225	44	31	13	2	15	32	47	63
Morocco	51	27	24	19	5	1	6	4	10	12
Sudan/South Sudan	60	41	19	16	3	5	8	12	20	25
Algeria	15	7	8	8	0	0	0	2	2	3
Northern Africa, other/n.s.	83	75	8	8	0	0	0	0	0	0
Southern Africa	460	311	149	142	7	0	7	20	27	39
South Africa	359	266	93	86	7	0	7	20	27	39
Southern Africa, other/n.s.	101	45	56	56	0	0	0	0	0	0
Western Africa	775	507	268	211	57	18	75	73	148	202
Nigeria	270	178	92	53	39	9	48	42	90	124
Ghana	119	72	47	36	11	4	15	7	22	27
Liberia	3	0	3	3	0	0	0	6	6	7
Cape Verde	1	1	0	0	0	0	0	1	1	2
Sierra Leone	14	6	8	6	2	3	5	4	9	12
Senegal	62	40	22	18	4	2	6	10	16	24
Guinea	31	26	5	4	1	0	1	3	4	6
Western Africa, other/n.s.	275	184	91	91	0	0	0	0	0	0
Africa, not specified	0	0	0	0	0	0	0	0	0	0

Appendix Table A1—Continued

Country/Region	2019 Country-Specific PubMed Searches							2009 Meta-Analysis	2019 Meta-Analysis	
	Articles Identified in Country Searches	Articles Excluded at Title Abstract	Full Text Articles Evaluated	Articles Excluded at Full Text Review	Eligible Articles from 2019 Country Searches	Eligible Articles from Other Sources*	Total Eligible Articles from 2019 Searches	Eligible Articles from 2009 Meta-Analysis	Total Articles in 2019 Country Meta-Analysis	Number of Surveys in Country Meta-Analysis
Europe	830	598	232	208	24	13	37	109	146	189
Eastern Europe	830	598	232	208	24	13	37	109	146	189
Poland	197	155	42	38	4	1	5	13	18	20
Russia	179	134	45	40	5	1	6	15	21	26
Ukraine	26	13	13	13	0	3	3	3	6	6
Romania	112	91	21	17	4	2	6	18	24	35
Yugoslavia	7	5	2	2	0	0	0	5	5	5
Bosnia & Herzegovina	16	14	2	1	1	1	2	1	3	4
Hungary	34	26	8	8	0	0	0	3	3	3
Albania	22	7	15	12	3	1	4	12	16	24
Czech Republic & Slovakia	63	39	24	20	4	0	4	9	13	15
Belarus	5	4	1	1	0	1	1	4	5	5
Bulgaria	19	10	9	7	2	0	2	5	7	13
Moldova	11	8	3	3	0	1	1	4	5	6
Croatia	36	19	17	16	1	0	1	4	5	6
Former USSR	0	0	0	0	0	0	0	5	5	10
Lithuania	11	7	4	4	0	1	1	6	7	7
Latvia	12	12	0	0	0	0	0	2	2	3
Macedonia	6	5	1	1	0	1	1	0	1	1
Eastern Europe, other/n.s.	74	49	25	25	0	0	0	0	0	0
Southern Europe	0	0	0	0	0	0	0	0	0	0
Italy	—	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	—	—	—	—	—	—	—
Greece	—	—	—	—	—	—	—	—	—	—
Spain	—	—	—	—	—	—	—	—	—	—
Northern/Western Europe	0	0	0	0	0	0	0	0	0	0
United Kingdom	—	—	—	—	—	—	—	—	—	—
Germany	—	—	—	—	—	—	—	—	—	—
France	—	—	—	—	—	—	—	—	—	—
Ireland	—	—	—	—	—	—	—	—	—	—
Netherlands	—	—	—	—	—	—	—	—	—	—
No./West Europe, other/n.s.	—	—	—	—	—	—	—	—	—	—
Europe, not specified	0	0	0	0	0	0	0	0	0	0

Abbreviations: n.s., not specified.

Totals shown are the sum of country results and are not de-duplicated.

Individual country searches contain no duplicate records; regional duplicates were retained to allow tabulation of reviews for each country.

*Other sources for a given country include articles found in searches for other countries and citations from reviews and articles found in PubMed searches.

For Japan, northern America, Australia, New Zealand, and southern, northern, and western Europe, which have low CHB rates and relatively modest numbers of emigrants to the U.S., rate from reviews were used instead of rates from systematic review and meta-analyses. Male-specific data and female-specific data from the same survey are entered separately and counted as two surveys.

Appendix Table A2. PubMed Search Strategy

<u>Search Description</u>	<u>PubMed Search Term</u>
Country/demonym	([country] OR [demonym]) AND
2009 to 2019	("2009/01/01"[PDat] : "2019/12/31"[PDat]) AND
HBsAg	((HBsAg) OR
Hepatitis B	((hepatitis B) AND
Type of study	((epidemiological studies) OR (prevalence) OR (seroprevalence) OR (migrant) OR (immigrant) OR (foreign))))

Appendix Table A3. Criteria for Including a Survey in the 2019 Meta-Analysis

- Publication in a peer-reviewed journal (except as noted; e.g., government reports)
- Publication date Jan 1980 to Dec 2019
- Provide primary data on HBsAg seroprevalence for the general adult population or for population subgroups living in a country (e.g., pregnant women, military recruits, university students, civil service workers, visa applicants, factory workers, persons attending routine health exams)
- Provide primary data on HBsAg seroprevalence for emigrants (e.g., immigrants, refugees, asylum seekers, workers or adoptees) from the country to the U.S., Europe, or elsewhere
- Minimum sample size of 50 individuals
- Sample EXCLUDES groups at high risk for HBV such as:
 - Certain indigenous peoples (e.g., Inuit, Amazonian tribes)
 - Close contacts or family members of HBsAg-positive persons
 - HIV-positive persons or persons seeking HIV testing or counseling
 - Attendees at sexually transmitted disease clinics
 - Injection drug or non-injection users (e.g., patients in rehab)
 - Health care workers, including dentists, physicians, nurses, aides and other hospital personnel with patient contact; emergency medical personnel
 - Commercial sex workers
 - Psychiatric patients
 - Dialysis patients, multiply transfused persons, hemophiliacs
 - Persons with cancer, immunodeficiency disease, certain infectious diseases (e.g., schistosomiasis, leprosy, malaria, tuberculosis), or with diseases reported to have an association with HBV (e.g., diabetes, lichen planus, Sjogrens)
 - Occupations with blood exposure, including barbers, hairdressers, tattoo artists, waste handlers, morgue workers
 - Institutionalized persons (e.g., prisoners, institutionalized psychiatric patients or developmentally disabled)
- Studies of blood donors and other groups with HBV risk lower than the general population are excluded unless other data are limited or unavailable.
- Seroprevalence measured using any type of HBsAg assay was allowed (e.g., RPHA, CIEP, RIA, ELISA)
- Full text of paper available in English or sufficient information available from abstract, tables, and/or translation using Google Translate

Abbreviations: HBsAg, hepatitis B surface antigen; HBV, hepatitis B virus; RPHA, reverse passive hemagglutination; CIEP, counterimmunoelectrophoresis; RIA, radioimmunoassay; ELISA, enzyme-linked immunosorbent assay.

Appendix Table A4. Surveys Included in Meta-Analyses by Country: Total Sample Number and Sample Composition by Sex, Date, and Location

Country/Region	FB Living in the U.S., 2018	Total Sample in Surveys	Sample Composition by Sex			Total Number of Surveys	Surveys by Date				Surveys by Location	
			Males	Females	Sex Not Specified		Before 1990	1990–1999	2000–2009	2010–2019	Studies in Emigrants	Studies in Country
Asia	14,785,266	106,772,038	29,956,751	63,921,096	12,894,191	1,685	310	395	637	343	305	1,380
Americas	24,410,150	2,868,724	101,004	334,515	2,433,205	286	51	128	81	26	27	259
Oceania	297,510	77,311	4,529	37,315	35,467	62	28	15	18	1	11	51
Africa	2,575,550	632,984	251,468	261,742	119,774	578	165	115	123	175	66	512
Europe	5,894,567	1,642,136	50,162	526,312	1,065,662	189	42	56	65	26	48	141
All regions	47,963,043	111,993,193	30,363,914	65,080,980	16,548,299	2,800	596	709	924	571	457	2,343

Appendix Table A4—Continued

Country/Region	FB Living in the U.S., 2018	Total Sample in Surveys	Sample Composition by Sex			Total Number of Surveys	Surveys by Date				Surveys by Location	
			Males	Females	Sex Not Specified		Before 1990	1990–1999	2000–2009	2010–2019	Studies in Emigrants	Studies in Country
Asia	14,785,266	106,772,038	29,956,751	63,921,096	12,894,191	1,685	310	395	637	343	305	1,380
Eastern Asia	4,639,824	103,366,863	29,195,519	62,420,827	11,750,517	741	122	186	292	141	79	662
China (including Hong Kong)	2,527,241	78,458,637	22,575,107	44,589,077	11,294,453	362	56	71	121	114	49	313
Taiwan	404,329	16,276,641	998,067	15,134,310	144,264	236	47	74	103	12	5	231
Korea	1,133,728	8,631,585	5,622,345	2,697,440	311,800	143	19	41	68	15	25	118
Japan	560,538	—	—	—	—	—	—	—	—	—	—	—
Eastern Asia, other/n.s.	13,988	—	—	—	—	—	—	—	—	—	—	—
South Eastern Asia	4,529,616	1,031,471	99,506	405,951	526,014	324	96	71	103	54	136	188
Philippines	2,168,566	120,964	32,005	82,434	6,525	25	10	3	10	2	12	13
Vietnam	1,365,908	88,456	16,517	51,860	20,079	80	23	21	26	10	51	29
Thailand	289,335	332,550	16,169	69,028	247,353	75	15	25	26	9	16	59
Laos	189,131	39,719	1,244	23,812	14,663	35	9	3	9	14	22	13
Cambodia	144,093	16,431	2,418	9,089	4,924	23	6	5	7	5	14	9
Indonesia	101,501	32,532	7,060	23,792	1,680	28	8	5	7	8	5	23
Myanmar	145,864	19,494	503	8,651	10,340	11	0	0	6	5	10	1
Malaysia	84,316	273,000	1,077	60,269	211,654	20	7	4	9	0	6	14
Singapore	40,902	108,325	22,513	77,016	8,796	27	18	5	3	1	0	27
South Central Asia	4,264,431	1,173,284	321,870	531,475	319,939	343	40	73	148	82	53	290
India	2,670,106	508,284	108,707	281,722	117,855	120	18	28	49	25	10	110
Iran	397,203	277,671	74,105	102,185	101,381	63	3	3	34	23	3	60
Pakistan	400,978	236,682	78,540	88,439	69,703	71	3	7	42	19	12	59
Bangladesh	281,578	72,227	49,410	15,739	7,078	31	2	17	7	5	6	25
Afghanistan	119,003	31,901	3,498	11,023	17,380	16	1	0	8	7	13	3
Uzbekistan	74,008	11,946	579	8,764	2,603	10	4	3	3	0	2	8
Nepal	151,248	31,962	5,910	22,521	3,531	26	7	13	3	3	7	19
Sri Lanka	52,894	1,913	987	926	0	2	0	2	0	0	0	2
Kazakhstan	30,431	698	134	156	408	4	2	0	2	0	0	4
So. Central Asia, other/n.s.	86,982	—	—	—	—	—	—	—	—	—	—	—
Western Asia	1,257,218	1,200,420	339,856	562,843	297,721	277	52	65	94	66	37	240
Iraq	250,435	93,491	70,824	583	22,084	11	0	0	5	6	8	3
Israel	163,156	155,319	41,708	110,157	3,454	21	6	5	1	9	0	21
Lebanon	135,345	62,808	19,660	40,792	2,356	11	1	5	3	2	4	7
Turkey	150,341	539,763	174,632	320,254	44,877	115	5	36	55	19	14	101
Armenia	92,327	16,975	0	15,245	1,730	5	0	3	1	1	2	3
Syria	113,654	60,048	0	13,171	46,877	10	0	0	1	9	7	3
Jordan	87,888	2,307	261	1,172	874	8	5	0	3	0	0	8
Saudi Arabia	91,085	244,084	29,520	53,027	161,537	64	28	10	14	12	0	64
Yemen	64,556	6,028	2,936	2,918	174	17	4	5	5	3	0	17
Kuwait	39,318	5,592	0	3,011	2,581	3	1	0	1	1	0	3
Azerbaijan	23,015	5,946	315	2,013	3,618	8	2	1	3	2	1	7
Georgia	20,125	8,059	0	500	7,559	4	0	0	2	2	1	3
Western Asia, other/n.s.	25,973	—	—	—	—	—	—	—	—	—	—	—
Asia, n.s.	94,177	—	—	—	—	—	—	—	—	—	—	—

Appendix Table A4—Continued

Country/Region	FB Living in the U.S., 2018	Total Sample in Surveys	Sample Composition by Sex			Total Number of Surveys	Surveys by Date				Surveys by Location	
			Males	Females	Sex Not Specified		Before 1990	1990–1999	2000–2009	2010–2019	Studies in Emigrants	Studies in Country
Americas	24,410,150	2,868,724	101,004	334,515	2,433,205	286	51	128	81	26	27	259
Central America	15,275,916	1,070,021	40,738	93,234	936,049	72	9	33	24	6	8	64
Mexico	11,549,703	50,660	7,036	32,490	11,134	27	3	8	15	1	6	21
El Salvador	1,452,848	332,019	0	126	331,893	7	1	5	1	0	0	7
Guatemala	1,038,393	46,059	0	42,660	3,399	9	1	5	2	1	2	7
Honduras	663,876	253,570	32,846	15,721	205,003	7	0	5	1	1	0	7
Nicaragua	270,471	1,452	0	1,180	272	2	0	2	0	0	0	2
Panama	153,402	371,322	384	316	370,622	11	2	5	1	3	0	11
Costa Rica	96,525	538	0	179	359	2	2	0	0	0	0	2
Belize	50,698	14,401	472	562	13,367	7	0	3	4	0	0	7
Caribbean	4,656,720	128,329	661	65,058	62,610	40	14	12	10	4	16	24
Cuba	1,372,576	22,628	0	550	22,078	7	1	4	2	0	4	3
Dominican Republic	1,234,737	2,392	111	977	1,304	8	5	2	1	0	3	5
Jamaica	776,242	1,301	242	1,059	0	4	0	3	1	0	0	4
Haiti	718,111	63,556	308	62,472	776	16	7	2	3	4	9	7
Trinidad and Tobago	229,145	31,569	0	0	31,569	2	0	0	2	0	0	2
Barbados	58,522	6,883	0	0	6,883	3	1	1	1	0	0	3
Caribbean, other/n.s.	267,387	—	—	—	—	—	—	—	—	—	—	—
South America	3,479,059	1,670,374	59,605	176,223	1,434,546	174	28	83	47	16	3	171
Colombia	825,787	4,625	18	51	4,556	4	0	1	3	0	1	3
Ecuador	457,873	494,301	0	0	494,301	12	8	4	0	0	0	12
Peru	488,139	14,067	2,762	4,753	6,552	25	6	15	3	1	0	25
Brazil	513,965	237,275	54,489	161,596	21,190	90	7	39	34	10	1	89
Guyana	287,911	480	0	0	480	1	0	0	0	1	0	1
Argentina	203,915	11,510	1,177	6,411	3,922	11	2	3	2	4	0	11
Venezuela	422,418	3,000	205	1,267	1,528	10	2	7	1	0	1	9
Chile	111,774	1,797	229	1,277	291	5	2	3	0	0	0	5
Bolivia	85,723	1,930	725	868	337	4	1	1	2	0	0	4
Uruguay	50,626	671,739	0	0	671,739	6	0	5	1	0	0	6
Paraguay	20,806	229,650	0	0	229,650	6	0	5	1	0	0	6
South America, other/n.s.	10,122	—	—	—	—	—	—	—	—	—	—	—
Northern America	980,525	0	0	0	0	0	0	0	0	0	0	0
Canada	963,388	—	—	—	—	—	—	—	—	—	—	—
Northern America, other/n.s.	17,137	—	—	—	—	—	—	—	—	—	—	—
Americas, n.s.	17,930	—	—	—	—	—	—	—	—	—	—	—
Oceania	297,510	77,311	4,529	37,315	35,467	62	28	15	18	1	11	51
Australia	107,071	—	—	—	—	—	—	—	—	—	—	—
New Zealand	36,252	—	—	—	—	—	—	—	—	—	—	—
Fiji	49,573	27,764	310	24,464	2,990	16	6	5	4	1	2	14
Tonga	17,636	15,302	207	3,581	11,514	11	2	5	4	0	3	8
Micronesia	32,438	9,572	3,813	4,742	1,017	24	13	3	8	0	2	22
Samoa	12,682	24,673	199	4,528	19,946	11	7	2	2	0	4	7
Oceania, other/n.s.	41,858	—	—	—	—	—	—	—	—	—	—	—

Appendix Table A4—Continued

Country/Region	FB Living in the U.S., 2018	Total Sample in Surveys	Sample Composition by Sex			Total Number of Surveys	Surveys by Date				Surveys by Location	
			Males	Females	Sex Not Specified		Before 1990	1990–1999	2000–2009	2010–2019	Studies in Emigrants	Studies in Country
Africa	2,575,550	632,984	251,468	261,742	119,774	578	165	115	123	175	66	512
Eastern Africa	741,178	121,926	31,724	40,665	49,537	189	76	29	33	51	35	154
Ethiopia	295,970	41,306	15,546	14,228	11,532	73	26	6	7	34	17	56
Kenya	163,398	13,836	4,750	8,813	273	27	19	0	7	1	1	26
Somalia	101,011	11,787	1,270	2,198	8,319	23	9	3	6	5	11	12
Uganda	35,836	9,979	4,018	5,326	635	17	4	3	5	5	1	16
Eritrea	45,878	5,165	158	13	4,994	6	0	2	0	4	4	2
Tanzania	21,483	28,052	773	3,645	23,634	18	5	9	2	2	1	17
Zimbabwe	29,875	11,801	5,209	6,442	150	25	13	6	6	0	0	25
Eastern Africa, other/n.s.	47,727	—	—	—	—	—	—	—	—	—	—	—
Middle Africa	162,788	53,557	5,854	31,276	16,427	45	9	8	2	26	1	44
Cameroon	81,190	53,557	5,854	31,276	16,427	45	9	8	2	26	1	44
Middle Africa, other/n.s.	81,598	—	—	—	—	—	—	—	—	—	—	—
Northern Africa	433,036	196,109	86,572	92,983	16,554	103	29	31	22	21	12	91
Egypt	224,905	133,050	57,438	63,168	12,444	63	11	27	12	13	5	58
Morocco	84,690	50,754	26,096	23,291	1,367	12	3	1	6	2	3	9
Sudan	70,223	11,413	2,987	5,683	2,743	25	13	2	4	6	4	21
Algeria	23,307	892	51	841	0	3	2	1	0	0	0	3
Northern Africa, other/n.s.	29,911	—	—	—	—	—	—	—	—	—	—	—
Southern Africa	128,640	107,393	70,592	34,904	1,897	39	19	11	4	5	0	39
South Africa	108,660	107,393	70,592	34,904	1,897	39	19	11	4	5	0	39
Southern Africa, other/n.s.	19,980	—	—	—	—	—	—	—	—	—	—	—
Western Africa	960,077	153,999	56,726	61,914	35,359	202	32	36	62	72	18	184
Nigeria	397,555	66,737	8,134	35,542	23,061	124	14	21	40	49	5	119
Ghana	205,277	14,545	1,167	12,725	653	27	0	3	12	12	4	23
Liberia	90,793	2,526	243	623	1,660	7	5	1	1	0	2	5
Cape Verde	38,435	179	89	90	0	2	2	0	0	0	0	2
Sierra Leone	54,671	19,013	13,822	4,554	637	12	0	2	3	7	3	9
Senegal	32,863	38,232	23,681	5,968	8,583	24	10	6	4	4	4	20
Guinea	22,337	12,767	9,590	2,412	765	6	1	3	2	0	0	6
Western Africa, other/n.s.	118,146	—	—	—	—	—	—	—	—	—	—	—
Africa, n.s.	149,831	—	—	—	—	—	—	—	—	—	—	—

Appendix Table A4—Continued

Country/Region	FB Living in the U.S., 2018	Total Sample in Surveys	Sample Composition by Sex			Total Number of Surveys	Surveys by Date				Surveys by Location	
			Males	Females	Sex Not Specified		Before 1990	1990–1999	2000–2009	2010–2019	Studies in Emigrants	Studies in Country
Europe	5,894,567	1,642,136	50,162	526,312	1,065,662	189	42	56	65	26	48	141
Eastern Europe	2,166,197	1,642,136	50,162	526,312	1,065,662	189	42	56	65	26	48	141
Poland	415,200	77,172	11,231	25,799	40,142	20	4	3	9	4	2	18
Russia	396,680	543,123	15,760	276,151	251,212	26	11	6	5	4	4	22
Ukraine	343,192	40,923	0	23,065	17,858	6	0	1	3	2	3	3
Romania	170,493	192,460	8,398	18,774	165,288	35	5	15	10	5	4	31
Yugoslavia	36,223	2,593	0	63	2,530	5	1	3	1	0	4	1
Bosnia and Herzegovina	111,510	9,339	6,963	1,263	1,113	4	0	0	3	1	1	3
Hungary	72,307	34,526	0	33,434	1,092	3	2	0	1	0	1	2
Albania	95,436	87,155	2,862	9,467	74,826	24	0	8	14	2	14	10
Czech Republic & Slovakia	65,787	40,494	837	31,889	7,768	15	5	2	5	3	2	13
Belarus	74,057	31,025	0	0	31,025	5	2	1	1	1	3	2
Bulgaria	80,429	441,411	645	47,765	393,001	13	8	1	2	2	0	13
Moldova	47,170	3,967	0	1,098	2,869	6	1	3	2	0	2	4
Croatia	38,807	58,274	1,130	55,135	2,009	6	0	5	0	1	0	6
Former USSR	70,258	7,955	506	2,409	5,040	10	3	7	0	0	7	3
Lithuania	33,237	36,334	1,830	0	34,504	7	0	1	6	0	0	7
Latvia	24,665	34,950	0	0	34,950	3	0	0	3	0	0	3
Macedonia	25,940	435	0	0	435	1	0	0	0	1	1	0
Eastern Europe, other/n.s.	64,806	—	—	—	—	—	—	—	—	—	—	—
Southern Europe	878,517	0	0	0	0	0	0	0	0	0	0	0
Italy	394,857	—	—	—	—	—	—	—	—	—	—	—
Portugal	183,628	—	—	—	—	—	—	—	—	—	—	—
Greece	141,937	—	—	—	—	—	—	—	—	—	—	—
Spain	158,095	—	—	—	—	—	—	—	—	—	—	—
Northern and Western Europe	2,816,583	0	0	0	0	0	0	0	0	0	0	0
United Kingdom	882,828	—	—	—	—	—	—	—	—	—	—	—
Germany	1,149,413	—	—	—	—	—	—	—	—	—	—	—
France	253,868	—	—	—	—	—	—	—	—	—	—	—
Ireland	141,434	—	—	—	—	—	—	—	—	—	—	—
Netherlands	104,658	—	—	—	—	—	—	—	—	—	—	—
No./West Europe, other/n.s.	284,382	—	—	—	—	—	—	—	—	—	—	—
Europe, n.s.	33,270	—	—	—	—	—	—	—	—	—	—	—

Abbreviations: FB, foreign-born; n.s., not specified.

For Japan, northern America, Australia, New Zealand, and southern, northern, and western Europe, which have low CHB rates and relatively modest numbers of emigrants to the U.S., rate from reviews were used instead of rates from systematic review and meta-analyses. Male-specific data and female-specific data from the same survey are entered separately and counted as two surveys.

Appendix Table A5. Heterogeneity Tests for Random Effects Meta-Analyses by Country

Country/Region	Total Sample	Total Surveys	Survey Composition				Heterogeneity Tests			
			Male-Only (MO)	Female-Only (FO)	Both-Sex (M-F)	Mixed-Gender (n.s.)	df	tau ²	Cochran's Q	I ²
Asia	106,772,038	1,685	96	360	582	647				
Eastern Asia	103,366,863	741	42	127	276	296				
China (including Hong Kong)	78,458,637	362	17	76	129	140	361	0.000164	222,049	99.8%
Taiwan	16,276,641	236	14	36	88	98	235	0.002017	282,688	99.9%
Korea	8,631,585	143	11	15	59	58	142	0.000693	185,435	99.9%
Japan	—	—	—	—	—	—	NA	NA	NA	NA
Eastern Asia, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
South Eastern Asia	1,031,471	324	12	84	94	134				
Philippines	120,964	25	0	10	6	9	24	0.000376	907	97.4%
Vietnam	88,456	80	2	15	26	37	79	0.000917	918	91.4%
Thailand	332,550	75	2	10	28	35	74	0.000389	3,419	97.8%
Laos	39,719	35	0	18	4	13	34	0.002003	961	96.5%
Cambodia	16,431	23	1	7	6	9	22	0.002004	459	95.2%
Indonesia	32,532	28	0	13	6	9	27	0.000214	255	89.4%
Myanmar	19,494	11	0	3	0	8	10	0.000614	149	93.3%
Malaysia	273,000	20	0	5	6	9	19	0.000129	1,707	98.9%
Singapore	108,325	27	7	3	12	5	26	0.000453	1,033	97.5%
South Central Asia	1,173,284	343	31	84	115	113				
India	508,284	120	8	42	29	41	119	0.000077	4,349	97.3%
Iran	277,671	63	5	8	32	18	62	0.000215	4,044	98.5%
Pakistan	236,682	71	6	17	28	20	70	0.000405	4,126	98.3%
Bangladesh	72,227	31	3	8	10	10	30	0.000478	986	97.0%
Afghanistan	31,901	16	0	3	4	9	15	0.000289	298	95.0%
Uzbekistan	11,946	10	0	3	0	7	9	0.000950	185	95.1%
Nepal	31,962	26	9	3	8	6	25	0.000047	170	85.3%
Sri Lanka	1,913	2	0	0	2	0	1	0.000480	21	95.2%
Kazakhstan	698	4	0	0	2	2	3	tau ² <0	NA	NA
So. Central Asia, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
Western Asia	1,200,420	277	11	65	97	104				
Iraq	93,491	11	1	0	0	10	10	0.000077	277	96.4%
Israel	155,319	21	0	4	10	7	20	0.000005	130	84.6%
Lebanon	62,808	11	0	4	4	3	10	0.000043	229	95.6%
Turkey	539,763	115	6	31	37	41	114	0.000364	10,042	98.9%
Armenia	16,975	5	0	2	0	3	4	0.000012	30	86.9%
Syria	60,048	10	0	3	0	7	9	0.000044	135	93.3%
Jordan	2,307	8	0	1	4	3	7	0.001165	47	85.1%
Saudi Arabia	244,084	64	3	12	36	13	63	0.000444	3,619	98.3%
Yemen	6,028	17	1	4	4	8	16	0.002425	261	93.9%
Kuwait	5,592	3	0	2	0	1	2	0.000624	120	98.3%
Azerbaijan	5,946	8	0	1	2	5	7	0.000038	13	44.4%
Georgia	8,059	4	0	1	0	3	3	0.000111	8	64.3%
Western Asia, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
Asia, not specified	—	—	—	—	—	—	NA	NA	NA	NA

Appendix Table A5—Continued

Country/Region	Total Sample	Total Surveys	Survey Composition				Heterogeneity Tests			
			Male-Only (MO)	Female-Only (FO)	Both-Sex (M-F)	Mixed-Gender (n.s.)	df	tau ²	Cochran's Q	I ²
Americas	2,868,724	286	18	83	33	152				
Central America	1,070,021	72	1	18	4	49				
Mexico	50,660	27	1	11	2	13	26	0.000005	216	87.9%
El Salvador	332,019	7	0	1	0	6	6	0.000002	128	95.3%
Guatemala	46,059	9	0	3	0	6	8	0.000016	159	95.0%
Honduras	253,570	7	0	0	0	7	6	0.000005	245	97.6%
Nicaragua	1,452	2	0	1	0	1	1	0.000044	3	60.5%
Panama	371,322	11	0	0	2	9	10	0.000024	1,859	99.5%
Costa Rica	538	2	0	1	0	1	1	tau ² <0	NA	NA
Belize	14,401	7	0	1	0	6	6	0.000046	63	90.5%
Caribbean	128,329	40	2	18	0	20				
Cuba	22,628	7	0	1	0	6	6	0.000002	7	20.0%
Dominican Republic	2,392	8	0	4	0	4	7	0.000694	52	86.6%
Jamaica	1,301	4	0	2	0	2	3	0.000841	71	95.8%
Haiti	63,556	16	2	11	0	3	15	0.000588	562	97.3%
Trinidad and Tobago	31,569	2	0	0	0	2	1	0.000002	6	82.8%
Barbados	6,883	3	0	0	0	3	2	0.000003	4	55.1%
Caribbean, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
South America	1,670,374	174	15	47	29	83				
Colombia	4,625	4	0	0	0	4	3	0	21	85.8%
Ecuador	494,301	12	0	0	0	12	11	0	51	78.6%
Peru	14,067	25	5	6	9	5	24	0	184	87.0%
Brazil	237,275	90	10	33	12	35	89	0	1,527	94.2%
Guyana	480	1	0	0	0	1	NA	NA	NA	NA
Argentina	11,510	11	0	2	4	5	10	0	33	69.7%
Venezuela	3,000	10	0	4	2	4	9	0	25	63.6%
Chile	1,797	5	0	2	2	1	4	tau ² <0	NA	NA
Bolivia	1,930	4	0	0	0	4	3	0	25	88.2%
Uruguay	671,739	6	0	0	0	6	5	0	143	96.5%
Paraguay	229,650	6	0	0	0	6	5	0	339	98.5%
South America, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
Northern America	0	0	0	0	0	0				
Canada	—	—	—	—	—	—	NA	NA	NA	NA
Northern America, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
Americas, not specified	—	—	—	—	—	—	NA	NA	NA	NA
Oceania	77,311	62	0	16	16	30				
Australia	—	—	—	—	—	—	NA	NA	NA	NA
New Zealand	—	—	—	—	—	—	NA	NA	NA	NA
Fiji	27,764	16	0	4	2	10	15	0.00059	529	97.2%
Tonga	15,302	11	0	4	2	5	10	0.00416	564	98.2%
Micronesia	9,572	24	0	5	8	11	23	0.00679	873	97.4%
Samoa	24,673	11	0	3	4	4	10	0.00022	78	87.3%
Oceania, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA

Appendix Table A5—Continued

Country/Region	Total Sample	Total Surveys	Survey Composition				Heterogeneity Tests			
			Male-Only (MO)	Female-Only (FO)	Both-Sex (M-F)	Mixed-Gender (n.s.)	df	tau ²	Cochran's Q	I ²
Africa	632,984	578	23	174	169	212				
Eastern Africa	121,926	189	5	50	70	64				
Ethiopia	41,306	73	4	30	14	25	72	0.00138	960	92.5%
Kenya	13,836	27	0	2	22	3	26	0.00117	542	95.2%
Somalia	11,787	23	0	3	4	16	22	0.00285	548	96.0%
Uganda	9,979	17	0	1	12	4	16	0.00181	232	93.1%
Eritrea	5,165	6	0	0	0	6	5	0.00189	59	91.5%
Tanzania	28,052	18	0	7	4	7	17	0.00022	54	68.5%
Zimbabwe	11,801	25	1	7	14	3	24	0.00486	672	96.4%
Eastern Africa, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
Middle Africa	53,557	45	1	22	8	14				
Cameroon	53,557	45	1	22	8	14	44	0.00340	2,244	98.0%
Middle Africa, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
Northern Africa	196,109	103	11	19	29	44				
Egypt	133,050	63	6	10	16	31	62	0.00040	2,672	97.7%
Morocco	50,754	12	2	1	5	4	11	0.00005	146	92.5%
Sudan	11,413	25	3	7	6	9	24	0.00368	557	95.7%
Algeria	892	3	0	1	2	0	2	0.00223	11	82.6%
Northern Africa, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
Southern Africa	107,393	39	2	15	10	12				
South Africa	107,393	39	2	15	10	12	38	0.00142	3,432	98.9%
Southern Africa, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
Western Africa	153,999	202	4	68	52	78				
Nigeria	66,737	124	1	45	28	50	123	0.00253	3,667	96.6%
Ghana	14,545	27	0	17	4	6	26	0.00219	569	95.4%
Liberia	2,526	7	0	1	0	6	6	0.00394	78	92.3%
Cape Verde	179	2	0	0	2	0	1	0.00098	3	60.7%
Sierra Leone	19,013	12	0	3	6	3	11	0.00063	75	85.3%
Senegal	38,232	24	2	2	10	10	23	0.00218	658	96.5%
Guinea	12,767	6	1	0	2	3	5	0.00034	21	76.6%
Western Africa, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
Africa, not specified	—	—	—	—	—	—	NA	NA	NA	NA

Appendix Table A5—Continued

Country/Region	Total Sample	Total Surveys	Survey Composition				Heterogeneity Tests			
			Male-Only (MO)	Female-Only (FO)	Both-Sex (M-F)	Mixed-Gender (n.s.)	df	tau ²	Cochran's Q	I ²
Europe	1,642,136	189	4	39	31	115				
Eastern Europe	1,642,136	189	4	39	31	115				
Poland	77,172	20	0	3	5	12	19	0	233	91.9%
Russia	543,123	26	2	6	4	14	25	0	1,437	98.3%
Ukraine	40,923	6	0	1	0	5	5	0	223	97.8%
Romania	192,460	35	0	6	6	23	34	0	537	93.7%
Yugoslavia	2,593	5	0	1	0	4	4	0	71	94.4%
Bosnia and Herzegovina	9,339	4	0	0	2	2	3	0	20	84.8%
Hungary	34,526	3	0	1	0	2	2	0	10	79.3%
Albania	87,155	24	1	6	8	9	23	0	398	94.2%
Czech Republic & Slovakia	40,494	15	0	5	2	8	14	0	296	95.3%
Belarus	31,025	5	0	0	0	5	4	0	59	93.2%
Bulgaria	441,411	13	0	5	0	8	12	0	7,198	99.8%
Moldova	3,967	6	0	1	0	5	5	0	25	80.1%
Croatia	58,274	6	0	3	2	1	5	0	97	94.8%
Former USSR	7,955	10	0	1	2	7	9	0	56	83.8%
Lithuania	36,334	7	1	0	0	6	6	0	102	94.1%
Latvia	34,950	3	0	0	0	3	2	0	11	81.0%
Macedonia	435	1	0	0	0	1	NA	NA	NA	NA
Eastern Europe, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
Southern Europe	0	0	0	0	0	0				
Italy	—	—	—	—	—	—	NA	NA	NA	NA
Portugal	—	—	—	—	—	—	NA	NA	NA	NA
Greece	—	—	—	—	—	—	NA	NA	NA	NA
Spain	—	—	—	—	—	—	NA	NA	NA	NA
Northern and Western Europe	0	0	0	0	0	0				
United Kingdom	—	—	—	—	—	—	NA	NA	NA	NA
Germany	—	—	—	—	—	—	NA	NA	NA	NA
France	—	—	—	—	—	—	NA	NA	NA	NA
Ireland	—	—	—	—	—	—	NA	NA	NA	NA
Netherlands	—	—	—	—	—	—	NA	NA	NA	NA
No./Western Europe, other/n.s.	—	—	—	—	—	—	NA	NA	NA	NA
Europe, not specified	—	—	—	—	—	—	NA	NA	NA	NA

Abbreviations: df, degrees of freedom; FO, female-only; M-F, male and female; MO, male-only; NA, not applicable; n.s., not specified

For Japan, northern America, Australia, New Zealand, and southern, northern, and western Europe, which have low CHB rates and relatively modest numbers of emigrants to the U.S., rate from reviews were used instead of rates from systematic review and meta-analyses. Male-specific data and female-specific data from the same survey are entered separately and counted as two surveys.

Both-sex surveys report sex-specific data (i.e., sample number and rate) for both males and females. Data for males and for females are entered separately in the meta-analyses, and both are counted in the survey total. Mixed-gender surveys report one combined rate for a sample of males and females; the number of males and females in the sample may or may not be specified.

The random effects meta-analysis model assumes true CHB rates differ in the different populations sampled in each country and estimates the mean of the distribution of the rates in different surveys. Observed rates in surveys in different populations have two sources of variance: within-survey variance due to sampling error, and between-survey variance reflecting the difference in the true CHB rates among the populations surveyed. Tau² is an estimate of between-survey variance (i.e., the variance of the true CHB rates across the surveys). Both sources of variance are used for calculating weighting for surveys when they are combined to calculate a pooled CHB rate (10-12).

Heterogeneity refers to variation (difference) in the true CHB rates in the populations sampled in different surveys. Cochran's Q is a statistical measure of heterogeneity that assesses whether differences in observed survey rates reflect a genuine difference in the rates or could have occurred by chance (i.e., Q is a measure of "excess" variation above that expected from sampling error alone). Q is calculated as the weighted sum of squared differences between the individual survey rates and the pooled rate across all surveys; this test lacks statistical power if the meta-analysis includes a small number of surveys.

I², an alternative measure of heterogeneity, represents the proportion of the total variability between studies that can be attributed to heterogeneity; values ≥50% suggest moderate heterogeneity (10-12).

Appendix Table A6. Comparison of CHB Pooled Prevalence Rates in Emigrants and in General Populations for All Countries

Country/Region	FB Living in U.S. in 2018 (PUMS)	Prevalence Estimates in Emigrants					Prevalence Estimates in General In-Country Populations					P-value	Prevalence Comparison	
		Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI			
Asia	14,785,266	305	994,475				1,380	105,777,563						
Eastern Asia	4,639,824	79	161,324				662	103,205,539						
China (including Hong Kong)	2,527,241	49	125,814	11.05%	9.52%	12.58%	313	78,332,823	8.26%	8.09%	8.42%	<0.001	emigrants higher	
Taiwan	404,329	5	2,925	9.80%	8.19%	11.42%	231	16,273,716	12.97%	12.36%	13.57%	<0.001	in-country higher	
Korea	1,133,728	25	32,585	3.64%	2.99%	4.30%	118	8,599,000	4.78%	4.30%	5.27%	0.006	in-country higher	
Japan	560,538	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA	
Eastern Asia, other/n.s.	13,988	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA	
South Eastern Asia	4,529,616	136	474,301				188	557,170						
Philippines	2,168,566	12	106,619	3.65%	2.94%	4.35%	13	14,345	10.45%	8.38%	12.53%	<0.001	in-country higher	
Vietnam	1,365,908	51	71,498	11.20%	10.21%	12.19%	29	16,958	12.66%	11.31%	14.02%	0.088	n.s.	
Thailand	289,335	16	231,238	5.36%	4.68%	6.04%	59	101,312	6.56%	5.69%	7.43%	0.033	in-country higher	
Laos	189,131	22	19,512	12.19%	10.05%	14.33%	13	20,207	5.13%	4.25%	6.01%	<0.001	emigrants higher	
Cambodia	144,093	14	11,605	11.34%	9.00%	13.69%	9	4,826	5.20%	3.79%	6.62%	<0.001	emigrants higher	
Indonesia	101,501	5	12,136	2.46%	1.66%	3.25%	23	20,396	4.61%	3.62%	5.60%	<0.001	in-country higher	
Myanmar	145,864	10	13,947	8.89%	6.82%	10.95%	1	5,547	6.50%	5.85%	7.15%	0.031	emigrants higher	
Malaysia	84,316	6	7,746	2.47%	1.63%	3.30%	14	265,254	3.25%	2.53%	3.97%	0.163	n.s.	
Singapore	40,902	0	0	—	—	—	27	108,325	5.61%	4.74%	6.48%	—	—	
South Central Asia	4,264,431	53	233,341				290	939,943	33.52%					
India	2,670,106	10	85,163	0.79%	0.44%	1.14%	110	423,121	2.68%	2.44%	2.91%	<0.001	in-country higher	
Iran	397,203	3	4,075	1.16%	0.61%	1.70%	60	273,596	2.39%	2.00%	2.79%	<0.001	in-country higher	
Pakistan	400,978	12	60,382	1.65%	0.86%	2.45%	59	176,300	4.29%	3.66%	4.92%	<0.001	in-country higher	
Bangladesh	281,578	6	51,581	2.81%	0.86%	4.77%	25	20,646	5.00%	3.99%	6.01%	0.051	n.s.	
Afghanistan	119,003	13	26,957	4.19%	2.97%	5.41%	3	4,944	4.50%	0.68%	8.32%	0.880	n.s.	
Uzbekistan	74,008	2	224	9.08%	-3.04%	21.21%	8	11,722	6.11%	3.83%	8.39%	0.640	n.s.	
Nepal	151,248	7	4,959	2.69%	1.47%	3.90%	19	27,003	1.19%	0.77%	1.61%	0.023	emigrants higher	
Sri Lanka	52,894	0	0	—	—	—	2	1,913	2.41%	-0.72%	5.53%	—	—	
Kazakhstan	30,431	0	0	—	—	—	4	698	4.95%	3.34%	6.56%	—	—	
So Cen Asia, other/n.s.	86,982	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA	
Western Asia	1,257,218	37	125,509				240	1,074,911						
Iraq	250,435	8	15,766	0.80%	0.61%	0.99%	3	77,725	2.18%	1.80%	2.56%	<0.001	in-country higher	
Israel	163,156	0	0	NA	NA	NA	21	155,319	0.77%	0.64%	0.90%	NA	NA	
Lebanon	135,345	4	22,932	0.92%	0.59%	1.25%	7	39,876	1.60%	0.98%	2.23%	0.058	n.s.	
Turkey	150,341	14	34,575	4.49%	3.44%	5.54%	101	505,188	4.47%	4.06%	4.89%	0.980	n.s.	
Armenia	92,327	2	390	2.54%	0.88%	4.19%	3	16,585	0.55%	0.17%	0.93%	0.022	emigrants higher	
Syria	113,654	7	51,045	1.34%	1.03%	1.66%	3	9,003	2.86%	0.79%	4.93%	0.157	n.s.	
Jordan	87,888	0	0	—	—	—	8	2,307	6.36%	3.72%	9.00%	—	—	
Saudi Arabia	91,085	0	0	—	—	—	64	244,084	5.51%	4.93%	6.09%	—	—	
Yemen	64,556	0	0	—	—	—	17	6,028	10.44%	7.88%	13.00%	—	—	
Kuwait	39,318	0	0	—	—	—	3	5,592	2.66%	-0.19%	5.52%	—	—	
Azerbaijan	23,015	1	442	5.66%	3.50%	7.81%	7	5,504	3.22%	2.65%	3.79%	0.032	emigrants higher	
Georgia	20,125	1	359	5.01%	2.76%	7.27%	3	7,700	3.41%	2.01%	4.80%	0.235	n.s.	
So Cen Asia, other/n.s.	25,973	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA	

Appendix Table A6—Continued

Country/Region	FB Living in U.S. in 2018 (PUMS)	Prevalence Estimates in Emigrants					Prevalence Estimates in General In-Country Populations					P-value	Prevalence Comparison
		Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI		
Asia, not specified	94,177	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Americas	24,410,150	27	37,033				259	2,831,691					
Central America	15,275,916	8	11,297				64	1,058,724					
Mexico	11,549,703	6	10,480	0.08%	0.02%	0.14%	21	40,180	0.56%	0.39%	0.73%	<0.001	in-country higher
El Salvador	1,452,848	0	0	—	—	—	7	332,019	0.44%	0.33%	0.55%	—	—
Guatemala	1,038,393	2	817	9.52%	-5.63%	24.67%	7	45,242	0.44%	0.22%	0.65%	0.240	n.s.
Honduras	663,876	0	0	—	—	—	7	253,570	0.51%	0.35%	0.68%	—	—
Nicaragua	270,471	0	0	—	—	—	2	1,452	0.68%	-0.41%	1.78%	—	—
Panama	153,402	0	0	—	—	—	11	371,322	0.83%	0.52%	1.13%	—	—
Costa Rica	96,525	0	0	—	—	—	2	538	0.57%	-0.07%	1.20%	—	—
Belize	50,698	0	0	—	—	—	7	14,401	1.28%	0.72%	1.83%	—	—
Caribbean	4,656,720	16	25,169				24	103,160					
Cuba	1,372,576	4	20,672	0.80%	0.50%	1.11%	3	1,956	1.09%†	0.63%	1.55%	0.311	n.s.
Dominican Republic	1,234,737	3	1,337	3.13%	-0.04%	6.31%	5	1,055	6.85%	2.60%	11.10%	0.170	n.s.
Jamaica	776,242	0	0	—	—	—	4	1,301	3.94%	0.81%	7.07%	—	—
Haiti	718,111	9	3,160	4.72%	3.21%	6.23%	7	60,396	4.10%	2.12%	6.07%	0.622	n.s.
Trinidad and Tobago	229,145	0	0	—	—	—	2	31,569	0.71%	0.49%	0.94%	—	—
Barbados	58,522	0	0	—	—	—	3	6,883	0.41%	0.15%	0.67%	—	—
Caribbean, other/n.s.	267,387	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
South America	3,479,059	3	567				171	1,669,807					
Colombia	825,787	1	334	0.90%	-0.11%	1.91%	3	4,291	0.85%	-0.21%	1.90%	0.945	n.s.
Ecuador	457,873	0	0	—	—	—	12	494,301	0.47%	0.42%	0.51%	—	—
Peru	488,139	0	0	—	—	—	25	14,067	1.82%	1.28%	2.36%	—	—
Brazil	513,965	1	91	3.30%	-0.37%	6.97%	89	237,184	1.37%	1.23%	1.51%	0.304	n.s.
Guyana	287,911	0	0	—	—	—	1	480	3.96%	2.21%	5.70%	—	—
Argentina	203,915	0	0	—	—	—	11	11,510	0.41%	0.20%	0.62%	—	—
Venezuela	422,418	1	142	0.70%	-0.67%	2.07%	9	2,858	2.12%	1.24%	3.01%	0.088	n.s.
Chile	111,774	0	0	—	—	—	5	1,797	0.40%	0.11%	0.69%	—	—
Bolivia	85,723	0	0	—	—	—	4	1,930	3.03%	0.08%	5.98%	—	—
Uruguay	50,626	0	0	—	—	—	6	671,739	0.38%	0.30%	0.46%	—	—
Paraguay	20,806	0	0	—	—	—	6	229,650	0.78%	0.52%	1.05%	—	—
South America, other/n.s.	10,122	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Northern America	980,525	0	0				0	0					
Canada	963,388	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Northern America, other	17,137	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Americas, not specified	17,930	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA

Appendix Table A6—Continued

Country/Region	FB Living in U.S. in 2018 (PUMS)	Prevalence Estimates in Emigrants					Prevalence Estimates in General In-Country Populations					P-value	Prevalence Comparison
		Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI		
Oceania	297,510	11	45,470				51	31,841					
Australia	107,071	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
New Zealand	36,252	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Fiji	49,573	2	7,942	2.01%	-0.62%	4.63%	14	19,822	5.10%	3.64%	6.56%	0.044	in-country higher
Tonga	17,636	3	13,289	9.99%	6.38%	13.60%	8	2,013	13.03%	6.73%	19.32%	0.412	n.s.
Micronesia	32,438	2	880	6.88%†	5.21%	8.55%	22	8,692	15.11%	11.22%	19.01%	<0.001	in-country higher
Samoa	12,682	4	23,359	3.98%	2.62%	5.33%	7	1,314	3.45%	1.69%	5.21%	0.642	n.s.
Oceania, other/n.s.	41,858	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Africa	2,575,550	66	54,837				512	578,147					
Eastern Africa	741,178	35	25,637				154	96,289					
Ethiopia	295,970	17	10,899	11.37%	9.40%	13.33%	56	30,407	6.29%	5.33%	7.24%	<0.001	emigrants higher
Kenya	163,398	1	121	4.10%	0.57%	7.63%	26	13,715	6.06%	4.63%	7.48%	0.314	n.s.
Somalia	101,011	11	9,263	7.54%	4.77%	10.32%	12	2,524	14.45%	9.10%	19.80%	0.025	in-country higher
Uganda	35,836	1	136	2.94%	0.10%	5.78%	16	9,843	9.67%	7.41%	11.92%	<0.001	in-country higher
Eritrea	45,878	4	4,994	6.17%	1.96%	10.39%	2	171	15.52%	2.02%	29.02%	0.195	n.s.
Tanzania	21,483	1	224	3.10%	0.83%	5.37%	17	27,828	5.97%	5.02%	6.91%	0.022	in-country higher
Zimbabwe	29,875	0	0	—	—	—	25	11,801	12.53%	9.62%	15.44%	—	—
Eastern Africa, other/n.s.	47,727	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Middle Africa	162,788	1	68				44	53,489					
Cameroon	81,190	1	68	4.41%	-0.47%	9.29%	44	53,489	9.46%	7.66%	11.27%	0.057	n.s.
Middle Africa, other/n.s.	81,598	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Northern Africa	433,036	12	19,436				91	176,673					
Egypt	224,905	5	6,329	2.93%	1.44%	4.42%	58	126,721	4.27%	3.66%	4.87%	0.103	n.s.
Morocco	84,690	3	7,992	1.52%†	1.25%	1.79%	9	42,762	2.13%	1.51%	2.75%	0.075	n.s.
Sudan	70,223	4	5,115	6.07%	4.21%	7.94%	21	6,298	16.24%	12.51%	19.97%	<0.001	in-country higher
Algeria	23,307	0	0	—	—	—	3	892	6.09%	0.00%	12.19%	—	—
Northern Africa, other/n.s.	29,911	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Southern Africa	128,640	0	0				39	107,393					
South Africa	108,660	0	0	—	—	—	39	107,393	5.68%	4.42%	6.93%	—	—
Southern Africa, other/n.s.	19,980	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Western Africa	960,077	18	9,696				184	144,303					
Nigeria	397,555	5	4,134	4.29%	2.07%	6.50%	119	62,603	10.52%	9.49%	11.55%	<0.001	in-country higher
Ghana	205,277	4	1,141	6.34%	1.41%	11.27%	23	13,404	10.36%	8.47%	12.25%	0.136	n.s.
Liberia	90,793	2	785	13.39%	10.68%	16.11%	5	1,741	18.14%	10.62%	25.65%	0.245	n.s.
Cape Verde	38,435	0	0	—	—	—	2	179	5.65%	0.16%	11.14%	—	—
Sierra Leone	54,671	3	1,044	14.36%	9.16%	19.57%	9	17,969	11.73%	9.69%	13.76%	0.355	n.s.
Senegal	32,863	4	2,592	13.66%	7.49%	19.83%	20	35,640	12.20%	10.05%	14.35%	0.661	n.s.
Guinea	22,337	0	0	—	—	—	6	12,767	14.90%	13.03%	16.77%	—	—
Western Africa, other/n.s.	118,146	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Africa, not specified	149,831	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA

Appendix Table A6—Continued

Country/Region	FB Living in U.S. in 2018 (PUMS)	Prevalence Estimates in Emigrants					Prevalence Estimates in General In-Country Populations					P-value	Prevalence Comparison
		Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI		
Europe	5,894,567	48	29,768				141	1,612,368					
Eastern Europe	2,166,197	48	29,768				141	1,612,368					
Poland	415,200	2	1,822	1.18%	0.14%	2.22%	18	75,350	1.35%	0.97%	1.73%	0.763	n.s.
Russia	396,680	4	906	1.93%	0.74%	3.11%	22	542,217	2.83%	2.35%	3.31%	0.166	n.s.
Ukraine	343,192	3	3,005	1.69%	1.01%	2.37%	3	37,918	1.74%	0.01%	3.47%	0.957	n.s.
Romania	170,493	4	1,060	5.68%	2.07%	9.28%	31	191,400	6.52%	6.01%	7.04%	0.649	n.s.
Yugoslavia	36,223	4	2,530	3.87%	1.01%	6.74%	1	63	4.76%	-0.50%	10.02%	0.772	n.s.
Bosnia and Herzegovina	111,510	1	397	2.27%	0.80%	3.73%	3	8,942	1.36%	0.53%	2.19%	0.292	n.s.
Hungary	72,307	1	94	1.10%	-1.01%	3.21%	2	34,432	1.08%	-0.18%	2.35%	0.990	n.s.
Albania	95,436	14	14,132	12.17%	9.57%	14.76%	10	73,023	9.31%	8.54%	10.08%	0.039	emigrants higher
Czech Republic & Slovakia	65,787	2	604	5.23%	-2.81%	13.26%	13	39,890	1.23%	0.77%	1.68%	0.330	n.s.
Belarus	74,057	3	355	2.16%	0.65%	3.68%	2	30,670	3.41%	1.69%	5.14%	0.286	n.s.
Bulgaria	80,429	0	0	—	—	—	13	441,411	4.14%	2.81%	5.47%	—	—
Moldova	47,170	2	956	8.62%	3.93%	13.30%	4	3,011	10.37%	7.39%	13.36%	0.535	n.s.
Croatia	38,807	0	0	—	—	—	6	58,274	1.34%	0.76%	1.92%	—	—
Former USSR	70,258	7	3,472	3.44%	2.01%	4.88%	3	4,483	4.66%	3.69%	5.63%	0.167	n.s.
Lithuania	33,237	0	0	—	—	—	7	36,334	2.03%	1.37%	2.69%	—	—
Latvia	24,665	0	0	—	—	—	3	34,950	1.39%	1.10%	1.67%	—	—
Macedonia	25,940	1	435	5.75%	3.56%	7.93%	0	0	—	—	—	—	—
Eastern Europe, other/n.s.	64,806	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Southern Europe	878,517												
Italy	394,857	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Portugal	183,628	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Greece	141,937	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Spain	158,095	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Northern/Western Europe	2,816,583												
United Kingdom	882,828	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Germany	1,149,413	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
France	253,868	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Ireland	141,434	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Netherlands	104,658	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
No./West Europe, other/n.s.	284,382	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Europe, not specified	33,270	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA

Abbreviations: CHB, chronic hepatitis B; CI, confidence interval; FB, foreign-born; n.s., difference not statistically significant; PUMS, Public Use Microdata Sample; RE, random effects.

P-values are for Z-test comparing RE pooled prevalence for surveys in emigrants and surveys in in-country populations (15)

If only one study is available; rate is as reported with 95% CIs from standard error.

†Random effects rate cannot be calculated because tau²<0; fixed effect rate is shown.

Northern America = FB from Canada and Bermuda living in the U.S.

For Japan, Northern America, Australia, New Zealand, and southern, northern, and western Europe, which have low CHB rates and relatively modest numbers of emigrants to the U.S., rates from reviews were used instead of rates from systematic review and meta-analyses. Male-specific data and female-specific data from the same survey are entered separately and counted as two surveys.

Appendix Table A7a. Comparison of RE CHB Pooled Prevalence Rates by Decade of Survey for All Countries

Country/Region	Before 1990					1990–1999					2000–2009				
	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI
Asia	310	7,058,420				395	12,209,249				637	10,460,960			
Eastern Asia	122	6,584,476				186	11,504,979				292	9,147,752			
China (including Hong Kong)	56	367,756	11.59%	10.50%	12.68%	71	276,559	10.47%	9.50%	11.43%	121	3,163,337	8.78%	8.26%	9.30%
Taiwan	47	4,934,367	14.71%	14.33%	15.10%	74	6,063,283	15.53%	14.62%	16.44%	103	3,888,334	10.21%	9.29%	11.12%
Korea	19	1,282,353	6.82%	5.84%	7.79%	41	5,165,137	5.15%	4.34%	5.95%	68	2,096,081	4.00%	3.47%	4.53%
Japan	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Eastern Asia, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
South Eastern Asia	96	368,373				71	250,942				103	354,130			
Philippines	10	13,071	9.72%	7.85%	11.59%	3	703	5.00%	1.92%	8.08%	10	107,047	5.87%	4.82%	6.92%
Vietnam	23	32,913	12.88%	11.37%	14.39%	21	8,449	13.50%	11.58%	15.42%	26	41,264	10.51%	9.42%	11.59%
Thailand	15	8,732	10.78%	7.60%	13.97%	25	161,072	4.30%	3.72%	4.89%	26	151,150	5.73%	4.94%	6.52%
Laos	9	14,838	14.58%	12.35%	16.81%	3	642	12.03%	5.44%	18.61%	9	6,809	8.58%	6.47%	10.70%
Cambodia	6	5,371	13.95%	10.75%	17.14%	5	730	8.31%†	6.31%	10.31%	7	6,644	7.26%	4.65%	9.87%
Indonesia	8	3,317	3.89%	2.39%	5.38%	5	10,972	4.50%	3.45%	5.56%	7	15,588	2.02%	1.65%	2.38%
Myanmar	0	0	—	—	—	0	0	—	—	—	6	5,786	10.11%	7.37%	12.85%
Malaysia	7	198,846	4.91%	3.68%	6.14%	4	62,380	4.44%	1.32%	7.56%	9	11,774	1.84%	1.09%	2.60%
Singapore	18	91,285	7.04%	5.83%	8.25%	5	5,994	3.44%	1.35%	5.52%	3	8,068	2.70%	2.35%	3.05%
South Central Asia	40	45,183				73	284,325				148	555,257			
India	18	24,214	3.31%	2.62%	4.00%	28	44,574	4.15%	3.45%	4.84%	49	304,890	1.81%	1.58%	2.03%
Iran	3	5,223	2.44%	2.01%	2.88%	3	91,000	2.20%	1.72%	2.68%	34	105,891	3.17%	2.33%	4.00%
Pakistan	3	1,570	7.28%	2.75%	11.82%	7	84,690	4.00%	2.48%	5.51%	42	122,465	3.64%	3.01%	4.27%
Bangladesh	2	1,076	5.63%	1.52%	9.75%	17	53,528	4.66%	3.74%	5.58%	7	10,775	5.36%	2.39%	8.34%
Afghanistan	1	418	4.10%	2.20%	6.00%	0	0	—	—	—	8	9,378	5.58%	3.75%	7.40%
Uzbekistan	4	10,134	5.67%	4.49%	6.86%	3	1,123	12.70%	9.72%	15.67%	3	689	2.84%	-0.09%	5.77%
Nepal	7	2,140	3.15%	1.50%	4.81%	13	7,497	1.93%	1.27%	2.59%	3	879	4.28%	0.81%	7.74%
Sri Lanka	0	0	—	—	—	2	1,913	2.41%	-0.72%	5.53%	0	0	—	—	—
Kazakhstan	2	408	6.34%†	3.98%	8.71%	0	0	—	—	—	2	290	3.75%†	1.57%	5.94%
So Central Asia, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Western Asia	52	60,388				65	169,003				94	403,821			
Iraq	0	0	—	—	—	0	0	—	—	—	5	12,409	1.42%	0.63%	2.22%
Israel	6	15,475	2.34%	1.33%	3.35%	5	6,993	2.28%	0.48%	4.08%	1	3,115	0.51%	0.26%	0.76%
Lebanon	1	2,356	1.70%	1.18%	2.22%	5	5,931	1.61%	0.59%	2.63%	3	23,374	0.99%	0.56%	1.42%
Turkey	5	4,989	8.55%	7.61%	9.50%	36	88,592	5.92%	5.16%	6.68%	55	226,357	3.95%	3.35%	4.55%
Armenia	0	0	—	—	—	3	16,585	0.55%	0.17%	0.93%	1	74	1.40%	-1.28%	4.08%
Syria	0	0	—	—	—	0	0	—	—	—	1	3,168	5.62%	4.82%	6.42%
Jordan	5	1,115	8.67%	5.55%	11.78%	0	0	—	—	—	3	1,192	3.13%	0.96%	5.30%
Saudi Arabia	28	33,444	9.33%	8.03%	10.62%	10	46,831	5.75%	4.57%	6.92%	14	127,340	3.12%	2.12%	4.13%
Yemen	4	879	12.63%	9.70%	15.55%	5	3,236	11.10%	7.19%	15.01%	5	959	12.42%	6.41%	18.43%
Kuwait	1	1,554	2.90%	2.07%	3.73%	0	0	—	—	—	1	2,581	4.80%	3.98%	5.62%
Azerbaijan	2	576	2.54%	0.32%	4.76%	1	835	4.10%	2.76%	5.44%	3	2,552	3.13%	2.46%	3.81%
Georgia	0	0	—	—	—	0	0	—	—	—	2	700	3.89%	1.25%	6.54%
Western Asia, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Asia, n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA

Appendix Table A7a—Continued

Country/Region	Before 1990					1990–1999					2000–2009				
	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI
Americas	51	192,073				128	1,855,200				81	618,700			
Central America	9	82,499				33	644,063				24	232,790			
Mexico	3	818	2.17%	-0.02%	4.37%	8	27,274	0.21%	0.05%	0.38%	15	21,302	0.53%	0.34%	0.73%
El Salvador	1	126	1.59%	-0.60%	3.77%	5	258,299	0.47%	0.34%	0.59%	1	73,594	0.29%	0.25%	0.33%
Guatemala	1	600	17.30%	14.27%	20.33%	5	2,510	1.48%	1.01%	1.95%	2	42,510	0.18%	0.13%	0.24%
Honduras	0	0	—	—	—	5	164,248	0.60%	0.42%	0.78%	1	40,755	0.39%	0.33%	0.45%
Nicaragua	0	0	—	—	—	2	1,452	0.68%	-0.41%	1.78%	0	0	—	—	—
Panama	2	80,417	1.45%	-0.01%	2.91%	5	187,641	0.77%	0.43%	1.11%	1	42,867	0.17%	0.13%	0.21%
Costa Rica	2	538	0.57%†	-0.07%	1.20%	0	0	—	—	—	0	0	—	—	—
Belize	0	0	—	—	—	3	2,639	1.02%	0.06%	1.98%	4	11,762	1.45%	1.03%	1.86%
Caribbean	14	3,404				12	9,171				10	71,089			
Cuba	1	550	0.40%	-0.13%	0.93%	4	2,200	0.92%	0.52%	1.32%	2	19,878	1.00%†	0.86%	1.13%
Dominican Republic	5	683	6.58%	3.53%	9.63%	2	685	5.21%	-1.74%	12.15%	1	1,024	0.95%	0.36%	1.54%
Jamaica	0	0	—	—	—	3	776	0.39%	-0.35%	1.13%	1	525	12.00%	9.22%	14.78%
Haiti	7	1,671	7.46%	4.54%	10.37%	2	2,608	5.05%†	4.21%	5.89%	3	14,612	4.30%	3.33%	5.27%
Trinidad and Tobago	0	0	—	—	—	0	0	—	—	—	2	31,569	0.71%	0.49%	0.94%
Barbados	1	500	1.40%	0.37%	2.43%	1	2,902	0.40%	0.17%	0.63%	1	3,481	0.30%	0.12%	0.48%
Caribbean, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
South America	28	106,170				83	1,201,966				47	314,821			
Colombia	0	0	—	—	—	1	69	7.25%	1.13%	13.37%	3	4,556	0.71%	-0.06%	1.48%
Ecuador	8	91,807	0.53%	0.44%	0.63%	4	402,494	0.41%	0.37%	0.45%	0	0	—	—	—
Peru	6	5,637	1.85%	0.52%	3.18%	15	4,558	2.68%	1.67%	3.69%	3	3,775	0.40%†	0.20%	0.61%
Brazil	7	5,479	0.99%	0.35%	1.62%	39	36,042	2.19%	1.76%	2.63%	34	152,718	1.32%	1.11%	1.53%
Guyana	0	0	—	—	—	0	0	—	—	—	0	0	—	—	—
Argentina	2	1,026	0.46%	-0.20%	1.13%	3	1,572	2.17%†	1.45%	2.89%	2	5,108	0.23%†	0.10%	0.36%
Venezuela	2	909	0.86%	-0.08%	1.80%	7	1,949	2.66%	1.79%	3.53%	1	142	0.70%	-0.67%	2.07%
Chile	2	1,162	0.34%†	0.01%	0.67%	3	635	0.57%†	-0.02%	1.15%	0	0	—	—	—
Bolivia	1	150	2.00%	-0.24%	4.24%	1	187	5.30%	2.09%	8.51%	2	1,593	2.80%	-3.00%	8.59%
Uruguay	0	0	—	—	—	5	570,070	0.40%	0.30%	0.49%	1	101,669	0.31%	0.28%	0.34%
Paraguay	0	0	—	—	—	5	184,391	0.87%	0.56%	1.18%	1	45,260	0.37%	0.31%	0.43%
South America, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Northern America	0	0													
Canada	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Northern America, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Americas, n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Oceania	28	9,253				15	48,399				18	17,491			
Australia	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
New Zealand	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Fiji	6	1,184	7.52%	3.00%	12.03%	5	17,085	4.19%	2.16%	6.22%	4	7,327	2.70%	0.49%	4.90%
Tonga	2	414	20.36%	15.47%	25.25%	5	11,354	11.31%	6.85%	15.78%	4	3,534	8.97%	3.30%	14.65%
Micronesia	13	6,477	20.47%	16.01%	24.93%	3	470	15.06%	2.17%	27.95%	8	2,625	4.84%	2.90%	6.77%
Samoa	7	1,178	4.73%	2.08%	7.37%	2	19,490	4.5%†	4.21%	4.79%	2	4,005	3.19%	2.65%	3.74%
	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA

Appendix Table A7a—Continued

Country/Region	Before 1990					1990–1999					2000–2009				
	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI
Africa	165	151,439				115	84,523				123	145,416			
Eastern Africa	76	31,744				29	22,514				33	42,692			
Ethiopia	26	15,215	10.37%	8.64%	12.10%	6	11,811	10.10%	6.62%	13.58%	7	3,129	5.03%	2.83%	7.23%
Kenya	19	8,734	5.38%	3.95%	6.80%	0	0	—	—	—	7	4,815	7.57%	3.54%	11.61%
Somalia	9	1,329	12.07%	7.12%	17.03%	3	1,195	19.76%	15.84%	23.69%	6	3,216	8.04%	1.10%	14.98%
Uganda	4	908	8.20%	5.71%	10.69%	3	567	6.86%	3.05%	10.67%	5	6,755	10.08%	6.23%	13.93%
Eritrea	0	0	—	—	—	2	171	15.52%	2.02%	29.02%	0	0	—	—	—
Tanzania	5	693	6.80%	4.68%	8.93%	9	3,163	5.53%	4.03%	7.04%	2	23,448	5.08%	1.57%	8.59%
Zimbabwe	13	4,865	14.68%	11.70%	17.66%	6	5,607	12.94%	5.64%	20.24%	6	1,329	7.20%	3.21%	11.19%
Eastern Africa, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Middle Africa	9	2,093				8	1,408				2	1,616			
Cameroon	9	2,093	14.51%	9.57%	19.46%	8	1,408	7.57%	5.59%	9.54%	2	1,616	13.49%	0.00%	26.99%
Middle Africa, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Northern Africa	29	11,372				31	22,400				22	48,155			
Egypt	11	6,609	7.21%	5.60%	8.82%	27	13,942	3.54%	2.74%	4.34%	12	3,307	6.05%	3.17%	8.94%
Morocco	3	1,000	4.51%	2.92%	6.10%	1	7,337	1.54%	1.26%	1.82%	6	40,900	1.61%	0.95%	2.26%
Sudan	13	3,586	22.23%	19.18%	25.27%	2	406	7.91%†	5.28%	10.53%	4	3,948	5.22%	4.36%	6.09%
Algeria	2	177	8.79%†	4.63%	12.96%	1	715	1.60%	0.68%	2.52%	0	0	—	—	—
Northern Africa, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Southern Africa	19	85,814				11	7,726				4	990			
South Africa	19	85,814	6.50%	4.60%	8.40%	11	7,726	5.40%	3.32%	7.49%	4	990	4.99%	2.29%	7.68%
Southern Africa, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Western Africa	32	20,416				36	30,475				62	51,963			
Nigeria	14	3,178	11.35%	8.64%	14.06%	21	10,399	18.03%	14.31%	21.75%	40	31,887	9.82%	8.03%	11.62%
Ghana	0	0	—	—	—	3	1,495	12.58%	5.30%	19.87%	12	4,605	12.31%	9.18%	15.44%
Liberia	5	1,741	18.14%	10.62%	25.65%	1	352	15.00%	11.27%	18.73%	1	433	12.20%	9.12%	15.28%
Cape Verde	2	179	5.65%	0.16%	11.14%	0	0	—	—	—	0	0	—	—	—
Sierra Leone	0	0	—	—	—	2	245	13.49%	7.05%	19.92%	3	908	10.08%	5.61%	14.55%
Senegal	10	14,553	11.72%	9.51%	13.92%	6	16,722	13.03%	7.87%	18.18%	4	3,390	12.32%	10.08%	14.56%
Guinea	1	765	18.20%	15.47%	20.93%	3	1,262	15.38%†	13.39%	17.37%	2	10,740	13.47%	11.77%	15.17%
Western Africa, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Africa, n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA

Appendix Table A7a—Continued

Country/Region	Before 1990					1990–1999					2000–2009				
	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI
Europe	42	490,020				56	142,796				65	921,576			
Eastern Europe	42	490,020				56	142,796				65	921,576			
Poland	4	1,473	2.38%	1.22%	3.53%	3	27,837	1.21%	0.86%	1.55%	9	42,657	1.37%	0.76%	1.99%
Russia	11	37,565	2.96%	1.83%	4.09%	6	20,278	3.35%	0.70%	6.01%	5	483,417	2.50%	1.88%	3.12%
Ukraine	0	0	—	—	—	1	487	1.60%	0.49%	2.71%	3	15,076	1.94%	0.57%	3.31%
Romania	5	3,508	9.80%	6.27%	13.34%	15	11,100	9.70%	7.41%	12.00%	10	135,070	5.19%	4.76%	5.63%
Yugoslavia	1	63	4.76%	-0.50%	10.02%	3	2,004	4.26%	0.39%	8.13%	1	526	2.90%	1.47%	4.33%
Bosnia and Herzegovina	0	0	—	—	—	0	0	—	—	—	3	8,942	1.36%	0.53%	2.19%
Hungary	2	33,528	0.51%†	0.43%	0.58%	0	0	—	—	—	1	998	1.80%	0.98%	2.62%
Albania	0	0	—	—	—	8	3,936	14.69%	11.09%	18.28%	14	78,321	9.35%	8.19%	10.51%
Czech Republic & Slovakia	5	6,163	0.79%	0.35%	1.23%	2	12,922	2.01%	-1.50%	5.52%	5	20,177	1.09%	0.10%	2.08%
Belarus	2	30,670	3.41%	1.69%	5.14%	1	100	2.00%	-0.74%	4.74%	1	57	3.50%	-1.27%	8.27%
Bulgaria	8	371,319	2.92%	1.97%	3.87%	1	2,211	3.90%	3.09%	4.71%	2	64,516	9.74%	8.99%	10.50%
Moldova	1	1,248	9.00%	7.41%	10.59%	3	1,763	11.45%	6.45%	16.45%	2	956	8.62%	3.93%	13.30%
Croatia	0	0	—	—	—	5	56,265	1.47%	0.84%	2.10%	0	0	—	—	—
Former USSR	3	4,483	4.66%	3.69%	5.63%	7	3,472	3.44%	2.01%	4.88%	0	0	—	—	—
Lithuania	0	0	—	—	—	1	421	2.14%	0.76%	3.52%	6	35,913	2.02%	1.32%	2.72%
Latvia	0	0	—	—	—	0	0	—	—	—	3	34,950	1.39%	1.10%	1.67%
Macedonia	0	0	—	—	—	0	0	—	—	—	0	0	—	—	—
Eastern Europe, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Southern Europe	0	0				0	0				0	0			
Italy	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Portugal	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Greece	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Spain	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Northern/Western Europe	0	0				0	0				0	0			
United Kingdom	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Germany	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
France	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Ireland	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Netherlands	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
No./West Europe, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA
Europe, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	—	—	NA	NA	NA

Appendix Table A7b. Comparison of RE CHB Pooled Prevalence Rates by Decade of Survey for All Countries

Country/Region	2000–2019					Subgroup P-value		
	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Before 1990 vs. 1990–1999	Before 1990 vs. 2000–2009	Before 1990 vs. 2010–2019
Asia	343	77,043,409						
Eastern Asia	141	76,129,656						
China (including Hong Kong)	114	74,650,985	7.06%	6.85%	7.28%	0.132	<0.001	<0.001
Taiwan	12	1,390,657	10.60%	8.50%	12.70%	0.105	<0.001	<0.001
Korea	15	88,014	3.19%	2.55%	3.83%	0.010	<0.001	<0.001
Japan	—	—	NA	NA	NA	NA	NA	NA
Eastern Asia, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
South Eastern Asia	54	58,026						
Philippines	2	143	1.35%†	-0.54%	3.24%	0.010	<0.001	<0.001
Vietnam	10	5,830	9.29%	7.86%	10.72%	0.617	0.012	<0.001
Thailand	9	11,596	6.32%	3.84%	8.81%	<0.001	0.003	0.030
Laos	14	17,430	5.58%	4.43%	6.72%	0.472	<0.001	<0.001
Cambodia	5	3,686	6.28%	3.17%	9.39%	0.003	0.001	0.001
Indonesia	8	2,655	7.28%	4.46%	10.11%	0.511	0.017	0.037
Myanmar	5	13,708	6.69%	4.75%	8.64%	—	—	—
Malaysia	0	0	—	—	—	0.783	<0.001	—
Singapore	1	2,978	3.60%	2.93%	4.27%	0.003	<0.001	<0.001
South Central Asia	82	288,519						
India	25	134,606	2.17%	1.77%	2.57%	0.093	<0.001	<0.001
Iran	23	75,557	1.25%	0.97%	1.52%	0.456	0.133	<0.001
Pakistan	19	27,957	3.61%	2.49%	4.72%	0.178	0.119	0.123
Bangladesh	5	6,848	2.29%	0.38%	4.19%	0.651	0.917	0.148
Afghanistan	7	22,105	3.16%	1.96%	4.36%	—	0.272	0.412
Uzbekistan	0	0	—	—	—	<0.001	0.078	—
Nepal	3	21,446	0.55%	0.13%	0.98%	0.178	0.566	0.003
Sri Lanka	0	0	—	—	—	—	—	—
Kazakhstan	0	0	—	—	—	—	0.115	—
So Central Asia, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
Western Asia	66	567,208						
Iraq	6	81,082	1.01%	0.00%	2.03%	—	—	—
Israel	9	129,736	0.61%	0.49%	0.73%	0.954	0.001	0.001
Lebanon	2	31,147	1.74%†	1.59%	1.88%	0.876	0.039	0.887
Turkey	19	219,825	2.76%	2.09%	3.43%	<0.001	<0.001	<0.001
Armenia	1	316	3.16%	1.23%	5.09%	—	—	—
Syria	9	56,880	1.39%	1.14%	1.65%	—	—	—
Jordan	0	0	—	—	—	—	0.004	—
Saudi Arabia	12	36,469	3.09%	2.12%	4.06%	<0.001	<0.001	<0.001
Yemen	3	954	4.29%	0.02%	8.56%	0.541	0.952	0.002
Kuwait	1	1,457	0.34%	0.04%	0.64%	—	0.002	<0.001
Azerbaijan	2	1,983	4.38%	2.38%	6.37%	0.239	0.617	0.228
Georgia	2	7,359	3.65%	1.67%	5.64%	—	—	—
Western Asia, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
Asia, n.s.	—	—	NA	NA	NA	NA	NA	NA

Appendix Table A7b—Continued

Country/Region	2000–2019					Subgroup P-value		
	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Before 1990 vs. 1990–1999	Before 1990 vs. 2000–2009	Before 1990 vs. 2010–2019
Americas	26	202,751						
Central America	6	110,669						
Mexico	1	1,266	0.19%	-0.05%	0.43%	0.081	0.144	0.078
El Salvador	0	0	—	—	—	0.316	0.244	—
Guatemala	1	439	0.91%	0.02%	1.80%	<0.001	<0.001	<0.001
Honduras	1	48,567	0.22%	0.17%	0.26%	—	—	—
Nicaragua	0	0	—	—	—	—	—	—
Panama	3	60,397	0.79%	-0.19%	1.78%	0.372	0.085	0.462
Costa Rica	0	0	—	—	—	—	—	—
Belize	0	0	—	—	—	—	—	—
Caribbean	4	44,665						
Cuba	0	0	—	—	—	0.123	0.032	—
Dominican Republic	0	0	—	—	—	0.722	<0.001	—
Jamaica	0	0	—	—	—	—	—	—
Haiti	4	44,665	2.37%	1.05%	3.69%	0.120	0.044	0.002
Trinidad and Tobago	0	0	—	—	—	—	—	—
Barbados	0	0	—	—	—	0.063	0.039	—
Caribbean, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
South America	16	47,417						
Colombia	0	0	—	—	—	—	—	—
Ecuador	0	0	—	—	—	0.022	—	—
Peru	1	97	6.19%	1.39%	10.98%	0.329	0.035	0.088
Brazil	10	43,036	0.30%	0.15%	0.45%	0.002	0.324	0.039
Guyana	1	480	3.96%	2.21%	5.70%	—	—	—
Argentina	4	3,804	0.22%†	0.07%	0.37%	0.001	0.496	0.485
Venezuela	0	0	—	—	—	0.006	0.852	—
Chile	0	0	—	—	—	0.508	—	—
Bolivia	0	0	—	—	—	0.099	0.801	—
Uruguay	0	0	—	—	—	—	—	—
Paraguay	0	0	—	—	—	—	—	—
South America, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
Northern America								
Canada	—	—	NA	NA	NA	NA	NA	NA
Northern America, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
Americas, n.s.	—	—	NA	NA	NA	NA	NA	NA
Oceania	1	2,168						
Australia	—	—	NA	NA	NA	NA	NA	NA
New Zealand	—	—	NA	NA	NA	NA	NA	NA
Fiji	1	2,168	2.17%	1.55%	2.78%	0.188	0.060	0.021
Tonga	0	0	—	—	—	0.007	0.003	—
Micronesia	0	0	—	—	—	0.437	<0.001	—
Samoa	0	0	—	—	—	0.866	0.266	—
	—	—	NA	NA	NA	NA	NA	NA

Appendix Table A7b—Continued

Country/Region	2000–2019					Subgroup P-value		
	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Before 1990 vs. 1990–1999	Before 1990 vs. 2000–2009	Before 1990 vs. 2010–2019
Africa	175	251,606						
Eastern Africa	51	24,976						
Ethiopia	34	11,151	5.57%	4.68%	6.45%	0.893	<0.001	<0.001
Kenya	1	287	3.83%	1.61%	6.05%	—	0.315	0.252
Somalia	5	6,047	7.07%	2.08%	12.06%	0.017	0.354	0.163
Uganda	5	1,749	10.69%	4.39%	16.99%	0.563	0.422	0.472
Eritrea	4	4,994	6.17%	1.96%	10.39%	—	—	—
Tanzania	2	748	6.50%	4.49%	8.51%	0.340	0.411	0.839
Zimbabwe	0	0	—	—	—	0.665	0.003	—
Eastern Africa, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
Middle Africa	26	48,440						
Cameroon	26	48,440	7.82%	5.54%	10.10%	0.011	0.890	0.016
Middle Africa, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
Northern Africa	21	114,182						
Egypt	13	109,192	2.60%	1.57%	3.64%	<0.001	0.491	<0.001
Morocco	2	1,517	1.78%	0.65%	2.91%	<0.001	0.001	0.006
Sudan	6	3,473	7.15%	4.63%	9.68%	<0.001	<0.001	<0.001
Algeria	0	0	—	—	—	0.001	—	—
Northern Africa, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
Southern Africa	5	12,863						
South Africa	5	12,863	3.30%	1.52%	5.09%	0.449	0.370	0.016
Southern Africa, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
Western Africa	72	51,145						
Nigeria	49	21,273	7.50%	6.45%	8.54%	0.004	0.356	0.009
Ghana	12	8,445	6.85%	4.54%	9.16%	—	—	—
Liberia	0	0	—	—	—	0.464	0.152	—
Cape Verde	0	0	—	—	—	—	—	—
Sierra Leone	7	17,860	13.68%	11.23%	16.13%	—	—	—
Senegal	4	3,567	11.75%	7.13%	16.38%	0.647	0.709	0.989
Guinea	0	0	—	—	—	0.102	0.004	—
Western Africa, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
Africa, n.s.	—	—	NA	NA	NA	NA	NA	NA

Appendix Table A7b—Continued

Country/Region	2000–2019					Subgroup P-value		
	Surveys	Sample	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Before 1990 vs. 1990–1999	Before 1990 vs. 2000–2009	Before 1990 vs. 2010–2019
Europe	26	87,744						
Eastern Europe	26	87,744						
Poland	4	5,205	0.99%†	0.72%	1.26%	0.058	0.134	0.023
Russia	4	1,863	1.52%	0.78%	2.26%	0.789	0.486	0.037
Ukraine	2	25,360	0.77%	0.66%	0.87%	—	—	—
Romania	5	42,782	4.70%	4.20%	5.20%	0.963	0.011	0.005
Yugoslavia	0	0	—	—	—	0.881	0.504	—
Bosnia and Herzegovina	1	397	2.27%	0.80%	3.73%	—	—	—
Hungary	0	0	—	—	—	—	0.002	—
Albania	2	4,898	6.48%†	5.79%	7.17%	—	—	—
Czech Republic & Slovakia	3	1,232	4.78%	1.36%	8.20%	0.498	0.586	0.023
Belarus	1	198	2.02%	0.06%	3.98%	0.393	0.973	0.296
Bulgaria	2	3,365	3.42%	0.93%	5.91%	0.124	<0.001	0.715
Moldova	0	0	—	—	—	0.360	0.879	—
Croatia	1	2,009	0.75%	0.37%	1.12%	—	—	—
Former USSR	0	0	—	—	—	0.167	—	—
Lithuania	0	0	—	—	—	—	—	—
Latvia	0	0	—	—	—	—	—	—
Macedonia	1	435	5.75%	3.56%	7.93%	—	—	—
Eastern Europe, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
Southern Europe	0	0						
Italy	—	—	NA	NA	NA	NA	NA	NA
Portugal	—	—	NA	NA	NA	NA	NA	NA
Greece	—	—	NA	NA	NA	NA	NA	NA
Spain	—	—	NA	NA	NA	NA	NA	NA
Northern/Western Europe	0	0						
United Kingdom	—	—	NA	NA	NA	NA	NA	NA
Germany	—	—	NA	NA	NA	NA	NA	NA
France	—	—	NA	NA	NA	NA	NA	NA
Ireland	—	—	NA	NA	NA	NA	NA	NA
Netherlands	—	—	NA	NA	NA	NA	NA	NA
No./West Europe, other/n.s.	—	—	NA	NA	NA	NA	NA	NA
Europe, other/n.s.	—	—	NA	NA	NA	NA	NA	NA

Abbreviations: CHB, chronic hepatitis B; CI, confidence interval; FB, foreign-born; n.s., not specified; RE, random effects

Subgroup P-values are for Z-test comparing RE pooled prevalence for surveys conducted in each decade (15)

Meta-regression analyses (done for countries with 25 or more surveys) used a RE model (method of moments) using the date of survey as a covariate (Comprehensive Meta-Analysis, Version 2, Biostat, Inc., Englewood, New Jersey)

If only one study is available, rate is as reported with 95% CIs from standard error.

†Random effects rate cannot be calculated because $\tau^2 < 0$; fixed effect rate is shown.

Rates have been rounded to two decimal places.

Northern America = FB from Canada and Bermuda living in the U.S.

For Japan, northern America, Australia, New Zealand, and southern, northern, and western Europe, which have low CHB rates and relatively modest numbers of emigrants to the U.S., rates from reviews were used instead of rates from systematic review and meta-analyses. Male-specific data and female-specific data from the same survey are entered separately and counted as two surveys.

Appendix Table A8. Sex-Specific CHB Pooled Prevalence Rates by Country

Country/Region	Male-Specific Rates					Female-Specific Rates					P-value	Rate Comparison
	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI		
Asia	385	25,313,414				652	59,214,028					
Eastern Asia	179	24,625,032				266.00	57,802,379					
China (including Hong Kong)	81	20,889,261	9.71%	9.32%	10.09%	141	42,906,718	7.07%	6.88%	7.27%	<0.001	males higher
Taiwan	58	316,103	15.43%	13.68%	17.17%	80	14,282,806	11.39%	10.59%	12.19%	<0.001	males higher
Korea	40	3,419,668	5.40%	4.82%	5.97%	45	612,855	4.25%	3.83%	4.67%	0.002	males higher
Japan	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Eastern Asia, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
South Eastern Asia	59	84,459				131	393,109					
Philippines	3	31,714	10.92%	1.75%	20.09%	13	82,164	5.43%	4.35%	6.51%	0.244	n.s.
Vietnam	15	13,196	15.93%	14.26%	17.60%	28	47,600	9.42%	8.65%	10.19%	<0.001	males higher
Thailand	16	13,709	9.22%	6.78%	11.65%	24	66,702	5.32%	4.45%	6.19%	0.003	males higher
Laos	2	329	16.69%†	12.66%	20.72%	20	22,692	6.17%	5.21%	7.12%	<0.001	males higher
Cambodia	4	1,167	7.54%	4.11%	10.98%	10	8,276	6.09%	4.16%	8.02%	0.470	n.s.
Indonesia	3	754	10.18%	2.61%	17.74%	16	20,397	3.58%	2.88%	4.28%	0.089	n.s.
Myanmar	0	0	—	—	—	3	7,993	6.94%	5.15%	8.74%	—	—
Malaysia	3	1,077	10.02%	4.46%	15.58%	8	60,269	3.00%	2.03%	3.97%	0.015	males higher
Singapore	13	22,513	8.28%	6.32%	10.23%	9	77,016	3.43%	3.14%	3.73%	<0.001	males higher
South Central Asia	88	287,196				141	508,061					
India	22	99,828	3.11%	2.58%	3.63%	56	276,418	2.23%	1.97%	2.48%	0.003	Males Higher
Iran	21	64,214	2.99%	1.79%	4.19%	24	92,825	1.95%	1.28%	2.62%	0.138	n.s.
Pakistan	20	68,509	4.71%	3.40%	6.02%	31	83,093	3.13%	2.60%	3.67%	0.029	Males Higher
Bangladesh	8	47,532	5.75%	4.46%	7.04%	13	15,289	2.88%	2.04%	3.71%	<0.001	Males Higher
Afghanistan	2	524	9.92%	5.33%	14.50%	5	8,911	2.22%	1.41%	3.03%	0.001	Males Higher
Uzbekistan	0	0	—	—	—	3	8,220	5.92%	4.48%	7.36%	—	—
Nepal	13	5,468	3.07%	1.99%	4.15%	7	22,223	0.86%	0.35%	1.37%	<0.001	males higher
Sri Lanka	1	987	4.05%	2.82%	5.28%	1	926	0.86%	0.27%	1.45%	<0.001	males higher
Kazakhstan	1	134	3.70%	0.50%	6.90%	1	156	3.80%	0.80%	6.80%	0.960	n.s.
So Cen Asia, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Western Asia	59	316,727				114	510,479					
Iraq	1	69,658	2.32%	2.21%	2.43%	0	0	—	—	—	—	—
Israel	5	27,853	0.88%	0.58%	1.19%	9	65,179	0.75%	0.54%	0.95%	0.473	n.s.
Lebanon	2	17,938	1.71%	1.46%	1.96%	6	38,691	1.43%	0.90%	1.96%	0.346	n.s.
Turkey	24	169,141	5.38%	4.87%	5.88%	50	316,232	3.37%	2.90%	3.83%	<0.001	males higher
Armenia	0	0	—	—	—	2	15,245	0.34%	0.05%	0.63%	—	—
Syria	0	0	—	—	—	3	13,171	1.25%	0.82%	1.67%	—	—
Jordan	2	261	5.91%	1.40%	10.43%	3	1,172	3.25%	0.91%	5.59%	0.304	n.s.
Saudi Arabia	21	29,320	7.66%	6.17%	9.15%	30	52,847	3.74%	3.08%	4.39%	<0.001	males higher
Yemen	3	2,241	4.15%	3.34%	4.96%	6	2,418	10.04%	5.69%	14.39%	0.009	females higher
Kuwait	0	0	—	—	—	2	3,011	1.59%	-0.91%	4.10%	—	—
Azerbaijan	1	315	3.81%	1.70%	5.92%	2	2,013	2.46%	0.90%	4.02%	0.314	n.s.
Georgia	0	0	—	—	—	1	500	5.20%	3.25%	7.15%	—	—
Western Asia, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Asia, not specified	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA

Appendix Table A8—Continued

Country/Region	Male-Specific Rates					Female-Specific Rates					P-value	Rate Comparison
	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI		
Americas	35	55,498				97	302,422					
Central America	3	4,560				20	72,967					
Mexico	2	4,176	0.13%†	0.02%	0.23%	12	27,964	0.60%	0.38%	0.83%	<0.001	females higher
El Salvador	0	0	—	—	—	1	126	1.59%	-0.60%	3.77%	—	—
Guatemala	0	0	—	—	—	3	42,660	0.18%	0.14%	0.22%	—	—
Honduras	0	0	—	—	—	0	0	—	—	—	—	—
Nicaragua	0	0	—	—	—	1	1,180	0.30%	-0.01%	0.61%	—	—
Panama	1	384	1.40%	0.22%	2.58%	1	316	1.30%	0.05%	2.55%	0.909	n.s.
Costa Rica	0	0	—	—	—	1	179	0.58%	-0.53%	1.69%	—	—
Belize	0	0	—	—	—	1	542	0.20%	-0.18%	0.58%	—	—
Caribbean	2	278				16	63,551					
Cuba	0	0	—	—	—	1	550	0.40%	-0.13%	0.93%	—	—
Dominican Republic	0	0	—	—	—	4	615	6.92%	4.04%	9.80%	—	—
Jamaica	0	0	—	—	—	0	0	—	—	—	—	—
Haiti	2	278	13.51%†	9.49%	17.52%	11	62,386	3.70%	2.18%	5.23%	<0.001	males higher
Trinidad and Tobago	0	0	—	—	—	0	0	—	—	—	—	—
Barbados	0	0	—	—	—	0	0	—	—	—	—	—
Caribbean, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
South America	30	50,660				61	165,904					
Colombia	0	0	—	—	—	0	0	—	—	—	—	—
Ecuador	0	0	—	—	—	0	0	—	—	—	—	—
Peru	10	2,675	2.31%	1.21%	3.41%	10	4,704	1.39%	0.67%	2.10%	0.168	n.s.
Brazil	16	46,374	2.72%	1.77%	3.67%	39	152,245	0.81%	0.67%	0.94%	<0.001	males higher
Guyana	0	0	—	—	—	0	0	—	—	—	—	—
Argentina	2	1,177	1.48%	0.21%	2.75%	4	6,411	0.38%	0.06%	0.71%	0.100	n.s.
Venezuela	1	205	2.40%	0.30%	4.50%	5	1,267	2.89%	0.82%	4.95%	0.745	n.s.
Chile	1	229	0.90%	-0.32%	2.12%	3	1,277	0.37%	0.04%	0.71%	0.149	n.s.
Bolivia	0	0	—	—	—	0	0	—	—	—	—	—
Uruguay	0	0	—	—	—	0	0	—	—	—	—	—
Paraguay	0	0	—	—	—	0	0	—	—	—	—	—
South America, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Northern America	0	0				0	0					
Canada	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Northern America, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Americas, not specified	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Oceania	8	3,818				24	36,707					
Australia	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
New Zealand	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Fiji	1	310	2.26%	0.60%	3.91%	5	24,464	3.78%	1.31%	6.24%	0.316	n.s.
Tonga	1	207	23.00%	17.27%	28.73%	5	3,581	13.93%	9.87%	18.00%	0.011	males higher
Micronesia	4	3,102	23.84%	17.47%	30.22%	9	4,134	12.93%	9.04%	16.83%	0.004	males higher
Samoa	2	199	7.95%†	4.20%	11.71%	5	4,528	3.16%†	2.65%	3.67%	0.013	males higher
Oceania, not specified	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA

Appendix Table A8—Continued

Country/Region	Male-Specific Rates					Female-Specific Rates					P-value	Rate Comparison
	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI		
Africa	107	230,938				259	250,561					
Eastern Africa	40	29,068				85	38,500					
Ethiopia	11	14,677	8.31%	6.39%	10.23%	37	13,607	5.48%	4.74%	6.22%	0.007	males higher
Kenya	11	4,750	6.45%	4.14%	8.75%	13	8,813	5.00%	3.13%	6.88%	0.341	n.s.
Somalia	2	321	8.63%	-1.42%	18.67%	5	1,465	7.00%	3.12%	10.88%	0.767	n.s.
Uganda	6	3,803	11.81%	8.32%	15.30%	7	4,912	9.66%	7.09%	12.22%	0.330	n.s.
Eritrea	0	0	—	—	—	0	0	—	—	—	—	—
Tanzania	2	463	5.29%†	3.25%	7.33%	9	3,322	6.49%	4.79%	8.18%	0.375	n.s.
Zimbabwe	8	5,054	16.50%	10.48%	22.52%	14	6,381	10.40%	6.11%	14.69%	0.106	n.s.
Eastern Africa, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Middle Africa	5	5,227				26	30,431					
Cameroon	5	5,227	13.43%	9.20%	17.67%	26	30,431	8.56%	5.95%	11.18%	0.06	n.s.
Middle Africa, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Northern Africa	25	82,798				34	90,380					
Egypt	14	54,204	5.72%	4.26%	7.18%	18	61,004	4.63%	3.79%	5.48%	0.207	n.s.
Morocco	4	26,096	2.26%	1.81%	2.70%	4	23,291	1.27%	0.86%	1.67%	0.001	males higher
Sudan	6	2,447	23.52%	19.29%	27.75%	10	5,244	10.67%	7.68%	13.66%	<0.001	males higher
Algeria	1	51	11.80%	2.95%	20.65%	2	841	4.33%	-1.82%	10.48%	0.174	n.s.
Northern Africa, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Southern Africa	7	69,612				20	33,501					
South Africa	7	69,612	7.92%	5.54%	10.29%	20	33,501	3.68%	2.79%	4.57%	0.001	males higher
Southern Africa, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Western Africa	30	44,233				94	57,749					
Nigeria	15	6,783	11.26%	9.08%	13.44%	59	34,777	7.72%	6.53%	8.92%	0.005	males higher
Ghana	2	471	16.48%	10.90%	22.06%	19	11,689	9.85%	7.80%	11.90%	0.029	males higher
Liberia	0	0	—	—	—	1	436	7.57%	5.09%	10.05%	—	—
Cape Verde	1	89	8.99%	3.05%	14.93%	1	90	3.30%	-0.39%	6.99%	0.110	n.s.
Sierra Leone	3	13,822	15.55%	8.34%	22.75%	6	4,554	10.03%	7.65%	12.40%	0.154	n.s.
Senegal	7	22,096	14.59%	10.84%	18.34%	7	5,913	10.51%	8.70%	12.33%	0.055	n.s.
Guinea	2	972	15.80%†	13.51%	18.09%	1	290	14.10%	10.09%	18.11%	0.470	n.s.
Western Africa, other/ n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Africa, not specified	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA

Appendix Table A8—Continued

Country/Region	Male-Specific Rates					Female-Specific Rates					P-value	Rate Comparison
	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI	Number of Surveys	Sample Number	RE Pooled Prevalence	Lower 95% CI	Upper 95% CI		
Europe	19	37,943				54	515,645					
Eastern Europe	19	37,943				54	515,645					
Poland	2	2,465	1.46%	0.55%	2.37%	5	20,237	1.15%	0.79%	1.51%	0.541	n.s.
Russia	4	15,342	2.50%	1.25%	3.75%	8	275,644	2.85%	1.76%	3.95%	0.676	n.s.
Ukraine	0	0	—	—	—	1	23,065	0.72%	0.61%	0.83%	—	—
Romania	3	7,128	7.52%	5.01%	10.02%	9	16,714	6.26%	4.79%	7.72%	0.393	n.s.
Yugoslavia	0	0	—	—	—	1	63	4.76%	-0.50%	10.02%	—	—
Bosnia and Herzegovina	1	6,963	0.95%	0.72%	1.18%	1	1,263	0.63%	0.20%	1.07%	0.211	n.s.
Hungary	0	0	—	—	—	1	33,434	0.51%	0.43%	0.58%	—	—
Albania	5	2,107	14.65%	11.43%	17.86%	10	8,931	9.18%	6.89%	11.47%	0.007	males higher
Czech Republic & Slovakia	1	472	1.20%	0.22%	2.18%	6	31,453	1.06%	0.31%	1.82%	0.831	n.s.
Belarus	0	0	—	—	—	0	0	—	—	—	—	—
Bulgaria	0	0	—	—	—	5	46,199	2.70%	1.88%	3.52%	—	—
Moldova	0	0	—	—	—	1	1,098	9.70%	7.95%	11.45%	—	—
Croatia	1	1,130	1.95%	1.14%	2.76%	4	55,135	1.37%	0.66%	2.07%	0.287	n.s.
Former USSR	1	506	5.30%	3.35%	7.25%	2	2,409	3.95%	1.39%	6.50%	0.410	n.s.
Lithuania	1	1,830	1.97%	1.33%	2.61%	0	0	—	—	—	—	—
Latvia	0	0	—	—	—	0	0	—	—	—	—	—
Macedonia	0	0	—	—	—	0	0	—	—	—	—	—
Eastern Europe, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Southern Europe	0	0				0	0					
Italy	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Portugal	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Greece	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Spain	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Northern and Western Europe	0	0				0	0					
United Kingdom	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Germany	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
France	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Ireland	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Netherlands	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
No./West Europe, other/n.s.	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA
Europe, not specified	—	—	NA	NA	NA	—	—	NA	NA	NA	NA	NA

Abbreviations: CHB, chronic hepatitis B; CI, confidence interval; n.s., not statistically significant; RE, random effects.

P-value is for a Z-test comparing male-specific and female-specific RE pooled prevalence rates (15).

Male-specific rates are from male-only surveys and both-sex surveys which include sex-specific data (i.e., sample number and rate for males and for females).

Female-specific rates are from female-only surveys and both-sex surveys which include sex-specific data.

If only one study is available, rate is as reported with 95% CIs from standard error.

†Random effects rate cannot be calculated because $\tau^2 < 0$; fixed effect rate is shown.

Northern America = FB from Canada and Bermuda living in the U.S.

For Japan, northern America, Australia, New Zealand, and southern, northern, and western Europe, which have low CHB rates and relatively modest numbers of emigrants to the U.S., rates from reviews were used instead of rates from systematic review and meta-analyses. Male-specific data and female-specific data from the same survey are entered separately and counted as two surveys.

Appendix Table A9a. CHB Pooled Prevalence Rates and Prevalence of Foreign-Born with CHB Living in the U.S. in 2018 by Country of Origin and Decade of Arrival

Country/Region	FB Living in the U.S., 2018					CHB Prevalence Rate (%)											
	Total FB	Entry				Surveys Done before 1990			Surveys Done 1990–1999			Surveys Done 2000–2009			Surveys Done 2010–2019		
		before 1990	1990–1999	2000–2009	2010–2019	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI
Asia	14,785,266	4,256,429	2,799,162	3,371,832	4,357,843	8.44%	7.11%	9.78%	7.09%	5.63%	8.55%	5.28%	4.43%	6.12%	3.79%	2.99%	4.65%
Americas	24,410,150	7,514,243	5,628,412	6,558,933	4,708,562	2.64%	0.82%	4.55%	1.13%	0.42%	1.93%	1.02%	0.69%	1.37%	1.08%	0.56%	1.66%
Oceania	297,510	74,221	52,437	79,955	90,897	5.89%	3.96%	7.82%	4.51%	2.31%	6.71%	2.81%	1.54%	4.07%	2.14%	1.57%	2.70%
Africa	2,575,550	354,995	422,418	833,522	964,615	9.96%	6.51%	13.40%	10.93%	7.40%	14.47%	8.27%	4.71%	11.83%	6.49%	4.49%	8.48%
Europe	5,894,567	2,646,881	1,214,654	1,038,441	994,591	1.24%	0.92%	1.57%	2.24%	1.31%	3.19%	2.10%	1.52%	2.71%	1.26%	0.89%	1.64%
All regions	47,963,043	14,846,769	10,117,083	11,882,683	11,116,508	4.25%	2.79%	5.75%	3.34%	2.27%	4.46%	2.84%	2.11%	3.59%	2.63%	1.89%	3.43%

Appendix Table A9a—Continued

Country/Region	FB Living in the U.S., 2018					CHB Prevalence Rate (%)											
	Total FB	Surveys Done before 1990				Surveys Done 1990–1999			Surveys Done 2000–2009			Surveys Done 2010–2019					
		Entry before 1990	Entry 1990–1999	Entry 2000–2009	Entry 2010–2019	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI
Asia	14,785,266	4,256,429	2,799,162	3,371,832	4,357,843												
Eastern Asia	4,639,824	1,479,479	887,767	1,011,495	1,261,083												
China (including Hong Kong)	2,527,241	544,416	510,407	617,051	855,367	11.59%	10.50%	12.68%	10.47%	9.50%	11.43%	8.78%	8.26%	9.30%	7.06%	6.85%	7.28%
Taiwan	404,329	192,242	80,485	65,199	66,403	14.71%	14.33%	15.10%	15.53%	14.62%	16.44%	10.21%	9.29%	11.12%	10.60%	8.50%	12.70%
Korea	1,133,728	496,965	216,275	234,701	185,787	6.82%	5.84%	7.79%	5.15%	4.34%	5.95%	4.00%	3.47%	4.53%	3.19%	2.55%	3.83%
Japan	560,538	245,240	79,072	86,172	150,054	1.02%	1.01%	1.02%	1.02%	1.01%	1.02%	1.02%	1.01%	1.02%	1.02%	1.01%	1.02%
Eastern Asia, other/n.s.	13,988	616	1,528	8,372	3,472	—	—	—	—	—	—	—	—	—	—	—	—
South Eastern Asia	4,529,616	1,703,261	943,756	964,825	917,774												
Philippines	2,168,566	789,632	424,548	519,423	434,963	9.72%	7.85%	11.59%	5.00%	1.92%	8.08%	5.87%	4.82%	6.92%	1.35%†	-0.54%	3.24%
Vietnam	1,365,908	516,128	369,552	237,762	242,466	12.88%	11.37%	14.39%	13.50%	11.58%	15.42%	10.51%	9.42%	11.59%	9.29%	7.86%	10.72%
Thailand	289,335	100,878	46,525	69,743	72,189	10.78%	7.60%	13.97%	4.30%	3.72%	4.89%	5.73%	4.94%	6.52%	6.32%	3.84%	8.81%
Laos	189,131	132,657	26,320	19,366	10,788	14.58%	12.35%	16.81%	12.03%	5.44%	18.61%	8.58%	6.47%	10.70%	5.58%	4.43%	6.72%
Cambodia	144,093	86,372	15,876	24,517	17,328	13.95%	10.75%	17.14%	8.31%†	6.31%	10.31%	7.26%	4.65%	9.87%	6.28%	3.17%	9.39%
Indonesia	101,501	29,927	22,887	29,450	19,237	3.89%	2.39%	5.38%	4.50%	3.45%	5.56%	2.02%	1.65%	2.38%	7.28%	4.46%	10.11%
Myanmar	145,864	16,182	13,475	40,392	75,815	—	—	—	—	—	—	10.11%	7.37%	12.85%	6.69%	4.75%	8.64%
Malaysia	84,316	22,803	16,366	14,898	30,249	4.91%	3.68%	6.14%	4.44%	1.32%	7.56%	1.84%	1.09%	2.60%	—	—	—
Singapore	40,902	8,682	8,207	9,274	14,739	7.04%	5.83%	8.25%	3.44%	1.35%	5.52%	2.70%	2.35%	3.05%	3.60%	2.93%	4.27%
South Central Asia	4,264,431	759,093	728,500	1,089,574	1,687,264												
India	2,670,106	439,902	462,720	663,508	1,103,976	3.31%	2.62%	4.00%	4.15%	3.45%	4.84%	1.81%	1.58%	2.03%	2.17%	1.77%	2.57%
Iran	397,203	174,599	52,800	81,506	88,298	2.44%	2.01%	2.88%	2.20%	1.72%	2.68%	3.17%	2.33%	4.00%	1.25%	0.97%	1.52%
Pakistan	400,978	73,441	91,215	120,643	115,679	7.28%	2.75%	11.82%	4.00%	2.48%	5.51%	3.64%	3.01%	4.27%	3.61%	2.49%	4.72%
Bangladesh	281,578	29,555	63,249	78,855	109,919	5.63%	1.52%	9.75%	4.66%	3.74%	5.58%	5.36%	2.39%	8.34%	2.29%	0.38%	4.19%
Afghanistan	119,003	22,800	10,245	16,626	69,332	4.10%*	2.20%	6.00%	—	—	—	5.58%	3.75%	7.40%	3.16%	1.96%	4.36%
Uzbekistan	74,008	3,157	17,830	19,252	33,769	5.67%	4.49%	6.86%	12.70%	9.72%	15.67%	2.84%	-0.09%	5.77%	—	—	—
Nepal	151,248	4,209	7,576	47,634	91,829	3.15%	1.50%	4.81%	1.93%	1.27%	2.59%	4.28%	0.81%	7.74%	0.55%	0.13%	0.98%
Sri Lanka	52,894	9,126	9,120	16,406	18,242	—	—	—	2.41%	-0.72%	5.53%	—	—	—	—	—	—
Kazakhstan	30,431	728	9,238	11,110	9,355	6.34%†	3.98%	8.71%	—	—	—	3.75%†	1.57%	5.94%	—	—	—
So Central Asia, other/n.s.	86,982	1,576	4,507	34,034	46,865	—	—	—	—	—	—	—	—	—	—	—	—
Western Asia	1,257,218	285,931	223,478	285,478	462,331												
Iraq	250,435	34,837	41,652	57,552	116,394	—	—	—	—	—	—	1.42%	0.63%	2.22%	1.01%	0.00%	2.03%
Israel	163,156	56,907	25,740	37,118	43,391	2.34%	1.33%	3.35%	2.28%	0.48%	4.08%	0.51%*	0.26%	0.76%	0.61%	0.49%	0.73%
Lebanon	135,345	64,551	19,205	27,573	24,016	1.70%*	1.18%	2.22%	1.61%	0.59%	2.63%	0.99%	0.56%	1.42%	1.74%†	1.59%	1.88%
Turkey	150,341	39,787	25,710	34,712	50,132	8.55%	7.61%	9.50%	5.92%	5.16%	6.68%	3.95%	3.35%	4.55%	2.76%	2.09%	3.43%
Armenia	92,327	17,551	27,388	23,407	23,981	—	—	—	0.55%	0.17%	0.93%	1.40%	-1.28%	4.08%	3.16%	1.23%	5.09%
Syria	113,654	23,936	18,232	22,553	48,933	—	—	—	—	—	—	5.62%*	4.82%	6.42%	1.39%	1.14%	1.65%
Jordan	87,888	22,464	17,509	22,109	25,806	8.67%	5.55%	11.78%	—	—	—	3.13%	0.96%	5.30%	3.13%	0.96%	5.30%
Saudi Arabia	91,085	6,628	9,046	16,045	59,366	9.33%	8.03%	10.62%	5.75%	4.57%	6.92%	3.12%	2.12%	4.13%	3.09%	2.12%	4.06%
Yemen	64,556	8,482	10,531	16,877	28,666	12.63%	9.70%	15.55%	11.10%	7.19%	15.01%	12.42%	6.41%	18.43%	4.29%	0.02%	8.56%
Kuwait	39,318	5,666	8,551	9,582	15,519	2.90%	2.07%	3.73%	—	—	—	4.80%*	3.98%	5.62%	0.34%	0.04%	0.64%
Azerbaijan	23,015	1,964	9,189	5,232	6,630	2.54%	0.32%	4.76%	4.10%*	2.76%	5.44%	3.13%	2.46%	3.81%	4.38%	2.38%	6.37%
Georgia	20,125	1,659	6,699	4,950	6,817	—	—	—	—	—	—	3.89%	1.25%	6.54%	3.65%	1.67%	5.64%
Western Asia, other/n.s.	25,973	1,499	4,026	7,768	12,680	—	—	—	—	—	—	—	—	—	—	—	—
Asia, n.s.	94,177	28,665	15,661	20,460	29,391	—	—	—	—	—	—	—	—	—	—	—	—

Appendix Table A9a—Continued

Country/Region	FB Living in the U.S., 2018					CHB Prevalence Rate (%)											
	Total FB	Surveys Done before 1990				Surveys Done 1990–1999			Surveys Done 2000–2009			Surveys Done 2010–2019					
		Entry before 1990	Entry 1990–1999	Entry 2000–2009	Entry 2010–2019	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI
Americas	24,410,150	7,514,243	5,628,412	6,558,933	4,708,562												
Central America	15,275,916	4,651,113	3,854,937	4,400,620	2,369,246												
Mexico	11,549,703	3,668,563	3,099,538	3,318,852	1,462,750	2.17%	-0.02%	4.37%	0.21%	0.05%	0.38%	0.53%	0.34%	0.73%	0.19%*	-0.05%	0.43%
El Salvador	1,452,848	414,014	321,713	397,736	319,385	1.59%*	-0.60%	3.77%	0.47%	0.34%	0.59%	0.29%*	0.25%	0.33%	—	—	—
Guatemala	1,038,393	195,164	202,436	359,266	281,527	17.30%*	14.27%	20.33%	1.48%	1.01%	1.95%	0.18%	0.13%	0.24%	0.91%*	0.02%	1.80%
Honduras	663,876	97,225	121,109	218,836	226,706	—	—	—	0.60%	0.42%	0.78%	0.39%*	0.33%	0.45%	0.22%*	0.17%	0.26%
Nicaragua	270,471	131,181	51,092	48,944	39,254	—	—	—	0.68%	-0.41%	1.78%	—	—	—	—	—	—
Panama	153,402	87,495	30,320	22,461	13,126	1.45%	-0.01%	2.91%	0.77%	0.43%	1.11%	0.17%*	0.13%	0.21%	0.79%	-0.19%	1.78%
Costa Rica	96,525	33,066	20,224	25,821	17,414	0.57%†	-0.07%	1.20%	—	—	—	—	—	—	—	—	—
Belize	50,698	24,405	8,505	8,704	9,084	—	—	—	1.02%	0.06%	1.98%	1.45%	1.03%	1.86%	—	—	—
Caribbean	4,656,720	1,536,322	886,454	1,045,516	1,188,428												
Cuba	1,372,576	471,482	201,878	316,561	382,655	0.40%*	-0.13%	0.93%	0.92%	0.52%	1.32%	1.00%†	0.86%	1.13%	—	—	—
Dominican Republic	1,234,737	312,804	261,073	284,366	376,494	6.58%	3.53%	9.63%	5.21%	-1.74%	12.15%	0.95%*	0.36%	1.54%	—	—	—
Jamaica	776,242	294,082	154,908	170,556	156,696	—	—	—	0.39%	-0.35%	1.13%	12.00%	9.22%	14.78%	—	—	—
Haiti	718,111	216,058	137,908	171,327	192,818	7.46%	4.54%	10.37%	5.05%†	4.21%	5.89%	4.30%	3.33%	5.27%	2.37%	1.05%	3.69%
Trinidad and Tobago	229,145	94,851	62,256	46,848	25,190	—	—	—	—	—	—	0.71%	0.49%	0.94%	—	—	—
Barbados	58,522	33,440	11,187	7,426	6,469	1.40%	0.37%	2.43%	0.40%	0.17%	0.63%	0.30%	0.12%	0.48%	—	—	—
Caribbean, other/n.s.	267,387	113,605	57,244	48,432	48,106	—	—	—	—	—	—	—	—	—	—	—	—
South America	3,479,059	894,466	705,025	948,783	930,785												
Colombia	825,787	249,193	170,803	224,322	181,469	—	—	—	7.25%*	1.13%	13.37%	0.71%	-0.06%	1.48%	—	—	—
Ecuador	457,873	125,264	105,978	130,051	96,580	0.53%	0.44%	0.63%	0.41%	0.37%	0.45%	—	—	—	—	—	—
Peru	488,139	126,613	109,119	164,157	88,250	1.85%	0.52%	3.18%	2.68%	1.67%	3.69%	0.40%†	0.20%	0.61%	6.19%*	1.39%	10.98%
Brazil	513,965	73,402	94,039	144,575	201,949	0.99%	0.35%	1.62%	2.19%	1.76%	2.63%	1.32%	1.11%	1.53%	0.30%	0.15%	0.45%
Guyana	287,911	112,134	76,426	61,493	37,858	—	—	—	—	—	—	—	—	—	3.96%*	2.21%	5.70%
Argentina	203,915	68,316	37,284	61,862	36,453	0.46%	-0.20%	1.13%	2.17%†	1.45%	2.89%	0.23%†	0.10%	0.36%	0.22%†	0.07%	0.37%
Venezuela	422,418	46,830	58,032	85,362	232,194	0.86%	-0.08%	1.80%	2.66%	1.79%	3.53%	0.70%*	-0.67%	2.07%	—	—	—
Chile	111,774	39,832	22,450	23,349	26,143	0.34%†	0.01%	0.67%	0.57%†	-0.02%	1.15%	—	—	—	—	—	—
Bolivia	85,723	25,856	16,678	25,697	17,492	2.00%	-0.24%	4.24%	5.30%	2.09%	8.51%	2.80%	-3.00%	8.59%	—	—	—
Uruguay	50,626	16,260	5,505	21,262	7,599	—	—	—	0.40%	0.30%	0.49%	0.31%	0.28%	0.34%	—	—	—
Paraguay	20,806	6,158	7,114	3,767	3,767	—	—	—	0.87%	0.56%	1.18%	0.37%	0.31%	0.43%	—	—	—
South America, other/n.s.	10,122	4,608	1,597	2,886	1,031	—	—	—	—	—	—	—	—	—	—	—	—
Northern America	980,525	426,058	178,111	158,134	218,222												
Canada	963,388	415,801	176,236	155,292	216,059	0.76%	0.74%	0.79%	0.76%	0.74%	0.79%	0.76%	0.74%	0.79%	0.76%	0.74%	0.79%
Northern America, other/n.s.	17,137	10,257	1,875	2,842	2,163	0.76%	0.74%	0.79%	0.76%	0.74%	0.79%	0.76%	0.74%	0.79%	0.76%	0.74%	0.79%
Americas, n.s.	17,930	6,284	3,885	5,880	1,881	—	—	—	—	—	—	—	—	—	—	—	—
Oceania	297,510	74,221	52,437	79,955	90,897												
Australia	107,071	24,973	14,723	25,985	41,390	0.37%	0.36%	0.38%	0.37%	0.36%	0.38%	0.37%	0.36%	0.38%	0.37%	0.36%	0.38%
New Zealand	36,252	10,686	6,979	7,008	11,579	4.11%	4.04%	4.18%	4.11%	4.04%	4.18%	4.11%	4.04%	4.18%	4.11%	4.04%	4.18%
Fiji	49,573	13,498	12,603	14,511	8,961	7.52%	3.00%	12.03%	4.19%	2.16%	6.22%	2.70%	0.49%	4.90%	2.17%*	1.55%	2.78%
Tonga	17,636	8,216	2,838	4,720	1,862	20.36%	15.47%	25.25%	11.31%	6.85%	15.78%	8.97%	3.30%	14.65%	—	—	—
Micronesia	32,438	1,594	4,583	12,677	13,584	20.47%	16.01%	24.93%	15.06%	2.17%	27.95%	4.84%	2.90%	6.77%	—	—	—
Samoa	12,682	6,237	3,190	2,719	536	4.73%	2.08%	7.37%	4.50%†	4.21%	4.79%	3.19%	2.65%	3.74%	—	—	—
Oceania, n.s.	41,858	9,017	7,521	12,335	12,985	—	—	—	—	—	—	—	—	—	—	—	—

Appendix Table A9a—Continued

Country/Region	FB Living in the U.S., 2018					CHB Prevalence Rate (%)											
	Total FB	Surveys Done before 1990				Surveys Done 1990–1999			Surveys Done 2000–2009			Surveys Done 2010–2019					
		Entry before 1990	Entry 1990–1999	Entry 2000–2009	Entry 2010–2019	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI
Africa	2,575,550	354,995	422,418	833,522	964,615												
Eastern Africa	741,178	65,266	113,674	282,981	279,257												
Ethiopia	295,970	26,201	45,888	108,627	115,254	10.37%	8.64%	12.10%	10.10%	6.62%	13.58%	5.03%	2.83%	7.23%	5.57%	4.68%	6.45%
Kenya	163,398	12,415	23,448	72,641	54,894	5.38%	3.95%	6.80%	—	—	—	7.57%	3.54%	11.61%	3.83%*	1.61%	6.05%
Somalia	101,011	2,111	20,157	45,256	33,487	12.07%	7.12%	17.03%	19.76%	15.84%	23.69%	8.04%	1.10%	14.98%	7.07%	2.08%	12.06%
Uganda	35,836	4,976	3,864	9,196	17,800	8.20%	5.71%	10.69%	6.86%	3.05%	10.67%	10.08%	6.23%	13.93%	10.69%	4.39%	16.99%
Eritrea	45,878	6,098	4,255	12,805	22,720	—	—	—	15.52%	2.02%	29.02%	—	—	—	6.17%	1.96%	10.39%
Tanzania	21,483	4,484	4,371	8,992	3,636	6.80%	4.68%	8.93%	5.53%	4.03%	7.04%	5.08%	1.57%	8.59%	6.50%	4.49%	8.51%
Zimbabwe	29,875	5,138	6,306	8,967	9,464	14.68%	11.70%	17.66%	12.94%	5.64%	20.24%	7.20%	3.21%	11.19%	—	—	—
Eastern Africa, other/n.s.	47,727	3,843	5,385	16,497	22,002	—	—	—	—	—	—	—	—	—	—	—	—
Middle Africa	162,788	9,346	9,265	47,242	96,935												
Cameroon	81,190	4,329	5,879	30,034	40,948	14.51%	9.57%	19.46%	7.57%	5.59%	9.54%	13.49%	0.00%	26.99%	7.82%	5.54%	10.10%
Middle Africa, other/n.s.	81,598	5,017	3,386	17,208	55,987	14.51%	9.57%	19.46%	7.57%	5.59%	9.54%	13.49%	0.00%	26.99%	7.82%	5.54%	10.10%
Northern Africa	433,036	87,906	77,182	121,856	146,092												
Egypt	224,905	52,742	38,558	53,537	80,068	7.21%	5.60%	8.82%	3.54%	2.74%	4.34%	6.05%	3.17%	8.94%	2.60%	1.57%	3.64%
Morocco	84,690	16,482	16,355	26,600	25,253	4.51%	2.92%	6.10%	1.54%*	1.26%	1.82%	1.61%	0.95%	2.26%	1.79%	1.13%	2.46%
Sudan	70,223	4,977	14,025	30,667	20,554	22.23%	19.18%	25.27%	7.91%†	5.28%	10.53%	5.22%	4.36%	6.09%	7.15%	4.63%	9.68%
Algeria	23,307	4,356	3,889	3,782	11,280	8.79%†	4.63%	12.96%	1.60%*	0.68%	2.52%	—	—	—	—	—	—
Northern Africa, other/n.s.	29,911	9,349	4,355	7,270	8,937	—	—	—	—	—	—	—	—	—	—	—	—
Southern Africa	128,640	30,900	29,436	34,683	33,621												
South Africa	108,660	26,937	26,934	26,781	28,008	6.50%	4.60%	8.40%	5.40%	3.32%	7.49%	4.99%	2.29%	7.68%	3.30%	1.52%	5.09%
Southern Africa, other/n.s.	19,980	3,963	2,502	7,902	5,613	6.50%	4.60%	8.40%	5.40%	3.32%	7.49%	4.99%	2.29%	7.68%	3.30%	1.52%	5.09%
Western Africa	960,077	134,379	174,821	301,837	349,040												
Nigeria	397,555	53,552	68,513	111,085	164,405	11.35%	8.64%	14.06%	18.03%	14.31%	21.75%	9.82%	8.03%	11.62%	7.50%	6.45%	8.54%
Ghana	205,277	30,220	36,024	72,893	66,140	—	—	—	12.58%	5.30%	19.87%	12.31%	9.18%	15.44%	6.85%	4.54%	9.16%
Liberia	90,793	13,442	19,592	32,870	24,889	18.14%	10.62%	25.65%	15.00%	11.27%	18.73%	12.20%	9.12%	15.28%	—	—	—
Cape Verde	38,435	15,158	6,658	7,377	9,242	5.65%	0.16%	11.14%	—	—	—	—	—	—	—	—	—
Sierra Leone	54,671	10,372	12,922	16,935	14,442	—	—	—	13.49%	7.05%	19.92%	10.08%	5.61%	14.55%	13.68%	11.23%	16.13%
Senegal	32,863	3,721	7,262	8,957	12,923	11.72%	9.51%	13.92%	13.03%	7.87%	18.18%	12.32%	10.08%	14.56%	11.75%	7.13%	16.38%
Guinea	22,337	2,074	3,912	7,067	9,284	18.20%*	15.47%	20.93%	15.38%†	13.39%	17.37%	13.47%	11.77%	15.17%	—	—	—
Western Africa, other/n.s.	118,146	5,840	19,938	44,653	47,715	—	—	—	—	—	—	—	—	—	—	—	—
Africa, n.s.	149,831	27,198	18,040	44,923	59,670	—	—	—	—	—	—	—	—	—	—	—	—

Appendix Table A9a—Continued

Country/Region	FB Living in the U.S., 2018					CHB Prevalence Rate (%)											
	Total FB	Surveys Done before 1990				Surveys Done 1990–1999			Surveys Done 2000–2009			Surveys Done 2010–2019					
		Entry before 1990	Entry 1990–1999	Entry 2000–2009	Entry 2010–2019	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI	RE Pooled Rate	Lower 95% CI	Upper 95% CI
Europe	5,894,567	2,646,881	1,214,654	1,038,441	994,591												
Eastern Europe	2,166,197	522,169	708,413	573,738	361,877												
Poland	415,200	163,303	123,128	95,871	32,898	2.38%	1.22%	3.53%	1.21%	0.86%	1.55%	1.37%	0.76%	1.99%	0.99%†	0.72%	1.26%
Russia	396,680	48,493	145,509	120,738	81,940	2.96%	1.83%	4.09%	3.35%	0.70%	6.01%	2.50%	1.88%	3.12%	1.52%	0.78%	2.26%
Ukraine	343,192	52,939	120,216	96,852	73,185	—	—	—	1.60%*	0.49%	2.71%	1.94%	0.57%	3.31%	0.77%	0.66%	0.87%
Romania	170,493	50,506	49,371	46,081	24,535	9.80%	6.27%	13.34%	9.70%	7.41%	12.00%	5.19%	4.76%	5.63%	4.70%	4.20%	5.20%
Yugoslavia	36,223	22,749	6,363	4,579	2,532	4.76%	-0.50%	10.02%	4.26%	0.39%	8.13%	2.90%	1.47%	4.33%	—	—	—
Bosnia and Herzegovina	111,510	5,335	69,930	30,064	6,181	—	—	—	—	—	—	0.94%	0.74%	1.14%	2.27%*	0.80%	3.73%
Hungary	72,307	40,723	9,604	11,731	10,249	0.51%†	0.43%	0.58%	—	—	—	1.80%	0.98%	2.62%	—	—	—
Albania	95,436	5,946	33,130	29,870	26,490	—	—	—	14.69%	11.09%	18.28%	9.35%	8.19%	10.51%	6.48%†	5.79%	7.17%
Czech Republic & Slovakia	65,787	32,761	12,197	11,464	9,365	0.79%	0.35%	1.23%	2.01%	-1.50%	5.52%	1.09%	0.10%	2.08%	4.78%	1.36%	8.20%
Belarus	74,057	10,344	28,164	17,956	17,593	3.41%	1.69%	5.14%	2.00%*	-0.74%	4.74%	3.50%*	-1.27%	8.27%	2.02%*	0.06%	3.98%
Bulgaria	80,429	4,988	24,240	34,655	16,546	2.92%	1.97%	3.87%	3.90%*	3.09%	4.71%	9.74%	8.99%	10.50%	3.42%	0.93%	5.91%
Moldova	47,170	2,644	11,673	16,950	15,903	9.00%*	7.41%	10.59%	11.45%	6.45%	16.45%	8.62%	3.93%	13.30%	—	—	—
Croatia	38,807	20,279	10,058	4,405	4,065	—	—	—	1.47%	0.84%	2.10%	—	—	—	0.75%*	0.37%	1.12%
Former USSR	70,258	14,363	28,785	18,071	9,039	4.66%	3.69%	5.63%	3.44%	2.01%	4.88%	—	—	—	—	—	—
Lithuania	33,237	9,212	7,261	11,472	5,292	—	—	—	2.14%*	0.76%	3.52%	2.02%	1.32%	2.72%	—	—	—
Latvia	24,665	8,762	4,600	5,105	6,198	—	—	—	—	—	—	1.39%	1.10%	1.67%	—	—	—
Macedonia	25,940	11,820	4,115	5,465	4,540	—	—	—	—	—	—	—	—	—	5.75%*	3.56%	7.93%
Eastern Europe, other/n.s.	64,806	17,002	20,069	12,409	15,326	—	—	—	—	—	—	—	—	—	—	—	—
Southern Europe	878,517	582,569	83,439	79,165	133,344												
Italy	394,857	276,117	31,203	35,614	51,923	2.52%	2.49%	2.54%	2.52%	2.49%	2.54%	2.52%	2.49%	2.54%	2.52%	2.49%	2.54%
Portugal	183,628	139,846	19,198	12,171	12,413	1.02%	0.78%	1.31%	1.02%	0.78%	1.31%	1.02%	0.78%	1.31%	1.02%	0.78%	1.31%
Greece	141,937	106,872	11,218	10,771	13,076	0.97%	0.95%	1.00%	0.97%	0.95%	1.00%	0.97%	0.95%	1.00%	0.97%	0.95%	1.00%
Spain	158,095	59,734	21,820	20,609	55,932	0.34%	0.32%	0.37%	0.34%	0.32%	0.37%	0.34%	0.32%	0.37%	0.34%	0.32%	0.37%
Northern/Western Europe	2,816,583	1,526,501	417,737	378,088	494,257												
United Kingdom	882,828	430,322	138,977	141,862	171,667	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Germany	1,149,413	734,844	163,058	123,233	128,278	0.70%	0.65%	0.76%	0.70%	0.65%	0.76%	0.70%	0.65%	0.76%	0.70%	0.65%	0.76%
France	253,868	102,272	36,192	37,466	77,938	0.26%	0.25%	0.27%	0.26%	0.25%	0.27%	0.26%	0.25%	0.27%	0.26%	0.25%	0.27%
Ireland	141,434	73,614	23,928	18,225	25,667	0.03%	0.01%	0.07%	0.03%	0.01%	0.07%	0.03%	0.01%	0.07%	0.03%	0.01%	0.07%
Netherlands	104,658	54,643	13,916	13,766	22,333	0.40%	0.39%	0.41%	0.40%	0.39%	0.41%	0.40%	0.39%	0.41%	0.40%	0.39%	0.41%
No./West Europe, other/n.s.	284,382	130,806	41,666	43,536	68,374	—	—	—	—	—	—	—	—	—	—	—	—
Europe, other/n.s.	33,270	15,642	5,065	7,450	5,113	—	—	—	—	—	—	—	—	—	—	—	—

Appendix Table A9b. CHB Pooled Prevalence Rates and Prevalence of Foreign-Born with CHB Living in the U.S. in 2018 by Country of Origin and Decade of Arrival

Country/Region	Prevalence of FB with CHB in the U.S.														
	Entry before 1990			Entry 1990–1999			Entry 2000–2009			Entry 2010–2019			Sum of all Entry Decades		
	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI
Asia	359,415	302,575	416,299	198,438	157,525	239,286	177,904	149,522	206,628	165,050	130,089	202,622	900,807	739,710	1,064,835
Americas	198,547	61,515	341,752	63,396	23,839	108,897	66,687	45,366	90,073	50,777	26,518	78,113	379,406	157,238	618,834
Oceania	4,372	2,940	5,802	2,363	1,209	3,518	2,246	1,233	3,256	1,943	1,429	2,453	10,924	6,811	15,030
Africa	35,346	23,103	47,585	46,185	31,256	61,117	68,928	39,291	98,596	62,571	43,327	81,803	213,030	136,978	289,101
Europe	32,891	24,465	41,565	27,158	15,958	38,800	21,823	15,815	28,110	12,563	8,826	16,315	94,435	65,063	124,790
All regions	630,570	414,597	853,003	337,541	229,787	451,618	337,588	251,227	426,664	292,903	210,189	381,306	1,598,602	1,105,800	2,112,590

Appendix Table A9b—Continued

Country/Region	Prevalence of FB with CHB in the U.S.														
	Entry before 1990			Entry 1990–1999			Entry 2000–2009			Entry 2010–2019			Sum of all Entry Decades		
	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI
Asia	359,415	302,575	416,299	198,438	157,525	239,286	177,904	149,522	206,628	165,050	130,089	202,622	900,807	739,710	1,064,835
Eastern Asia	127,824	116,260	139,334	78,018	70,562	85,393	71,694	66,591	76,782	75,091	70,685	79,569	352,628	324,098	381,078
China (including Hong Kong)	63,098	57,164	69,032	53,440	48,489	58,340	54,177	50,968	57,386	60,389	58,593	62,271	231,103	215,213	247,028
Taiwan	28,279	27,548	29,029	12,499	11,767	13,232	6,657	6,057	7,250	7,039	5,644	8,433	54,474	51,016	57,944
Korea	33,893	29,023	38,714	11,138	9,386	12,868	9,388	8,144	10,632	5,927	4,738	7,116	60,346	51,291	69,330
Japan	2,501	2,477	2,501	807	799	807	879	870	879	1,531	1,516	1,531	5,717	5,661	5,717
Eastern Asia, other/n.s.	53	48	58	134	121	147	594	551	635	207	195	219	988	916	1,060
South Eastern Asia	190,025	157,258	222,791	81,004	57,219	104,793	68,120	57,115	79,101	42,209	28,078	58,708	381,359	299,670	465,394
Philippines	76,752	61,986	91,518	21,227	8,151	34,303	30,490	25,036	35,944	5,872	0	14,093	134,342	95,174	175,859
Vietnam	66,477	58,684	74,271	49,890	42,794	56,985	24,989	22,397	27,557	22,525	19,058	25,992	163,881	142,933	184,805
Thailand	10,875	7,667	14,093	2,001	1,731	2,275	3,996	3,445	4,547	4,562	2,772	6,360	21,434	15,615	27,275
Laos	19,341	16,383	22,300	3,166	1,432	4,898	1,662	1,253	2,072	602	478	725	24,771	19,546	29,995
Cambodia	12,049	9,285	14,804	1,319	1,002	1,637	1,780	1,140	2,420	1,088	549	1,627	16,236	11,976	20,488
Indonesia	1,164	715	1,610	1,030	790	1,273	595	486	701	1,400	858	1,945	4,189	2,849	5,528
Myanmar	1,636	1,193	2,079	1,362	993	1,732	4,084	2,977	5,190	5,072	3,601	6,550	12,154	8,764	15,552
Malaysia	1,120	839	1,400	727	216	1,237	274	162	387	557	330	786	2,677	1,547	3,811
Singapore	611	506	716	282	111	453	250	218	283	531	432	629	1,675	1,267	2,082
South Central Asia	27,401	18,277	36,618	30,699	24,007	37,399	28,425	19,698	37,217	37,234	26,042	48,565	123,759	88,024	159,798
India	14,561	11,525	17,596	19,203	15,964	22,396	12,009	10,483	13,469	23,956	19,540	28,372	69,729	57,513	81,833
Iran	4,260	3,509	5,028	1,162	908	1,415	2,584	1,899	3,260	1,104	856	1,342	9,109	7,173	11,046
Pakistan	5,347	2,020	8,681	3,649	2,262	5,026	4,391	3,631	5,151	4,176	2,880	5,460	17,563	10,794	24,318
Bangladesh	1,664	449	2,882	2,947	2,366	3,529	4,227	1,885	6,577	2,517	418	4,606	11,355	5,117	17,593
Afghanistan	935	502	1,368	572	384	758	928	623	1,230	2,191	1,359	3,023	4,625	2,868	6,379
Uzbekistan	179	142	217	2,264	1,733	2,794	547	0	1,111	959	0	1,948	3,949	1,875	6,070
Nepal	133	63	202	146	96	196	2,039	386	3,687	505	119	900	2,823	665	4,985
Sri Lanka	220	0	505	220	0	504	395	0	907	440	0	1,009	1,275	0	2,925
Kazakhstan	46	29	63	346	145	549	417	174	660	351	147	556	1,160	495	1,828
So Central Asia, other/n.s.	57	38	76	190	149	231	888	616	1,164	1,036	722	1,350	2,171	1,524	2,821
Western Asia	11,745	8,741	14,752	7,607	4,855	10,363	8,585	5,212	12,274	9,401	4,405	14,412	37,337	23,213	51,801
Iraq	495	219	773	591	262	925	817	363	1,278	1,176	0	2,363	3,079	844	5,339
Israel	1,332	757	1,906	587	124	1,050	189	97	282	265	213	317	2,372	1,190	3,555
Lebanon	1,097	762	1,433	309	113	505	273	154	392	418	382	452	2,097	1,411	2,781
Turkey	3,402	3,028	3,780	1,522	1,327	1,717	1,371	1,163	1,579	1,384	1,048	1,720	7,679	6,565	8,796
Armenia	97	30	163	151	47	255	328	0	955	758	295	1,221	1,333	371	2,594
Syria	1,345	1,154	1,537	1,025	879	1,170	1,267	1,087	1,448	680	558	807	4,317	3,677	4,962
Jordan	1,948	1,247	2,646	548	168	928	692	212	1,172	808	248	1,368	3,995	1,875	6,114
Saudi Arabia	618	532	704	520	413	626	501	340	663	1,834	1,259	2,410	3,474	2,544	4,403
Yemen	1,071	823	1,319	1,169	757	1,581	2,096	1,082	3,110	1,230	6	2,454	5,566	2,667	8,464
Kuwait	164	117	211	410	340	481	460	381	539	53	6	99	1,087	845	1,330
Azerbaijan	50	6	93	377	254	500	164	129	199	290	158	422	881	546	1,215
Georgia	65	21	108	261	84	438	193	62	324	249	114	384	767	280	1,255
Western Asia, other/n.s.	62	46	77	137	87	187	234	142	334	257	120	396	690	396	994
Asia, n.s.	2,419	2,038	2,803	1,110	882	1,339	1,080	906	1,252	1,114	879	1,367	5,724	4,705	6,761

Appendix Table A9b—Continued

Country/Region	Prevalence of FB with CHB in the U.S.														
	Entry before 1990			Entry 1990–1999			Entry 2000–2009			Entry 2010–2019			Sum of all Entry Decades		
	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI
Americas	198,547	61,515	341,752	63,396	23,839	108,897	66,687	45,366	90,073	50,777	26,518	78,113	379,406	157,238	618,834
Central America	123,135	28,273	222,121	12,527	5,332	20,226	20,888	13,586	28,777	7,368	1,334	14,311	163,918	48,525	285,435
Mexico	79,608	0	160,316	6,509	1,550	11,778	17,590	11,284	24,228	2,779	0	6,290	106,486	12,834	202,612
El Salvador	6,583	0	15,608	1,512	1,094	1,898	1,153	994	1,313	926	798	1,054	10,175	2,887	19,873
Guatemala	33,763	27,850	39,677	2,996	2,045	3,948	647	467	862	2,562	56	5,067	39,968	30,418	49,554
Honduras	583	408	758	727	509	945	853	722	985	499	385	589	2,662	2,025	3,277
Nicaragua	892	0	2,335	347	0	909	333	0	871	267	0	699	1,839	0	4,814
Panama	1,269	0	2,546	233	130	337	38	29	47	104	0	234	1,644	160	3,163
Costa Rica	188	0	397	115	0	243	147	0	310	99	0	209	550	0	1,158
Belize	249	15	483	87	5	168	126	90	162	132	94	169	594	203	982
Caribbean	44,135	23,155	66,882	25,140	7,678	48,017	35,712	26,650	44,742	30,084	20,773	39,358	135,071	78,256	198,999
Cuba	1,886	0	4,385	1,857	1,050	2,665	3,166	2,722	3,577	3,827	3,291	4,324	10,735	7,063	14,951
Dominican Republic	20,583	11,042	30,123	13,602	0	31,720	2,701	1,024	4,379	1,468	38	2,899	38,354	12,103	69,122
Jamaica	1,147	0	3,323	604	0	1,750	20,467	15,725	25,208	18,804	14,447	23,160	41,021	30,173	53,441
Haiti	16,118	9,809	22,405	6,964	5,806	8,123	7,367	5,705	9,029	4,570	2,025	7,115	35,019	23,345	46,672
Trinidad and Tobago	673	465	892	442	305	585	333	230	440	179	123	237	1,627	1,123	2,154
Barbados	468	124	813	45	19	70	22	9	36	19	8	31	555	159	950
Caribbean, other/n.s.	3,260	1,715	4,942	1,626	498	3,103	1,656	1,235	2,073	1,217	842	1,592	7,760	4,290	11,710
South America	27,872	6,883	49,097	24,332	9,494	39,172	8,825	3,918	15,224	11,647	2,785	22,689	72,675	23,081	126,182
Colombia	18,066	2,816	33,317	12,383	1,930	22,836	1,593	0	3,320	1,288	0	2,686	33,331	4,746	62,159
Ecuador	664	551	789	435	392	477	533	481	585	396	357	435	2,028	1,782	2,286
Peru	2,342	658	4,026	2,924	1,822	4,026	657	328	1,001	5,463	1,227	9,690	11,386	4,036	18,744
Brazil	727	257	1,189	2,059	1,655	2,473	1,908	1,605	2,212	606	303	909	5,300	3,820	6,783
Guyana	4,441	2,478	6,392	3,026	1,689	4,356	2,435	1,359	3,505	1,499	837	2,158	11,401	6,363	16,411
Argentina	314	0	772	809	541	1,078	142	62	223	80	26	135	1,346	628	2,207
Venezuela	403	0	843	1,544	1,039	2,049	598	0	1,767	1,625	0	4,806	4,169	1,039	9,465
Chile	135	4	267	128	0	258	133	0	269	149	0	301	545	4	1,094
Bolivia	517	0	1,096	884	349	1,419	720	0	2,207	490	0	1,503	2,610	349	6,226
Uruguay	65	49	80	22	17	27	66	60	72	24	21	26	177	146	205
Paraguay	54	34	73	62	40	84	14	12	16	14	12	16	143	98	189
South America, other/n.s.	144	35	253	55	22	89	27	12	46	13	3	25	239	72	413
Northern America	3,238	3,153	3,366	1,354	1,318	1,407	1,202	1,170	1,249	1,658	1,615	1,724	7,452	7,256	7,746
Canada	3,160	3,077	3,285	1,339	1,304	1,392	1,180	1,149	1,227	1,642	1,599	1,707	7,322	7,129	7,611
Northern America, other/n.s.	78	76	81	14	14	15	22	21	22	16	16	17	130	127	135
Americas, n.s.	166	52	286	44	16	75	60	41	81	20	11	31	290	119	473
Oceania	4,372	2,940	5,802	2,363	1,209	3,518	2,246	1,233	3,256	1,943	1,429	2,453	10,924	6,811	15,030
Australia	92	90	95	54	53	56	96	94	99	153	149	157	396	385	407
New Zealand	439	432	447	287	282	292	288	283	293	476	468	484	1,490	1,465	1,515
Fiji	1,015	405	1,624	528	272	784	392	71	711	194	139	249	2,129	887	3,368
Tonga	1,673	1,271	2,075	321	194	448	423	156	691	167	61	273	2,584	1,683	3,487
Micronesia	326	255	397	690	99	1,281	614	368	858	657	394	920	2,288	1,116	3,456
Samoa	295	130	460	144	134	153	87	72	102	17	14	20	542	350	734
Oceania, n.s.	531	357	705	339	174	505	347	190	502	278	204	351	1,495	925	2,062

Appendix Table A9b—Continued

Country/Region	Prevalence of FB with CHB in the U.S.														
	Entry before 1990			Entry 1990–1999			Entry 2000–2009			Entry 2010–2019			Sum of all Entry Decades		
	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI
Africa	35,346	23,103	47,585	46,185	31,256	61,117	68,928	39,291	98,596	62,571	43,327	81,803	213,030	136,978	289,101
Eastern Africa	6,432	4,381	8,483	12,452	8,285	16,620	18,500	7,855	29,153	16,404	9,409	23,391	53,788	29,930	77,646
Ethiopia	2,717	2,264	3,170	4,635	3,038	6,232	5,464	3,074	7,854	6,420	5,394	7,434	19,235	13,770	24,690
Kenya	668	490	844	1,262	926	1,594	5,499	2,571	8,434	2,102	884	3,321	9,531	4,872	14,193
Somalia	255	150	360	3,983	3,193	4,775	3,639	498	6,779	2,368	697	4,039	10,244	4,538	15,953
Uganda	408	284	532	265	118	412	927	573	1,281	1,903	781	3,024	3,503	1,756	5,249
Eritrea	946	123	1,770	660	86	1,235	790	251	1,330	1,402	445	2,361	3,799	905	6,695
Tanzania	305	210	400	242	176	308	457	141	772	236	163	309	1,240	690	1,790
Zimbabwe	754	601	907	816	356	1,276	646	288	1,003	681	304	1,059	2,897	1,548	4,246
Eastern Africa, other/n.s.	379	258	500	590	393	787	1,079	459	1,699	1,292	741	1,844	3,339	1,851	4,830
Middle Africa	1,356	894	1,819	701	518	884	6,373	0	12,751	7,580	5,370	9,790	16,011	6,783	25,244
Cameroon	628	414	842	445	329	561	4,052	0	8,106	3,202	2,269	4,136	8,327	3,011	13,645
Middle Africa, other/n.s.	728	480	976	256	189	323	2,321	0	4,644	4,378	3,102	5,655	7,684	3,771	11,598
Northern Africa	6,753	5,137	8,369	2,955	2,151	3,758	5,667	3,523	7,816	4,456	2,738	6,189	19,832	13,549	26,132
Egypt	3,803	2,954	4,652	1,365	1,056	1,673	3,239	1,697	4,786	2,082	1,257	2,914	10,488	6,964	14,026
Morocco	743	481	1,005	252	206	298	428	253	601	452	285	621	1,875	1,225	2,525
Sudan	1,106	955	1,258	1,109	741	1,477	1,601	1,337	1,868	1,470	952	1,990	5,286	3,984	6,592
Algeria	383	202	565	62	26	98	61	26	95	180	77	284	686	331	1,042
Northern Africa, other/n.s.	718	546	890	167	122	212	338	210	466	273	167	379	1,495	1,045	1,947
Southern Africa	2,009	1,421	2,596	1,590	977	2,205	1,731	794	2,664	1,109	511	1,711	6,438	3,704	9,175
South Africa	1,751	1,239	2,263	1,454	894	2,017	1,336	613	2,057	924	426	1,426	5,466	3,172	7,762
Southern Africa, other/n.s.	258	182	333	135	83	187	394	181	607	185	85	286	972	532	1,413
Western Africa	16,086	9,499	22,674	26,515	17,990	35,040	32,943	25,003	40,898	29,148	22,619	35,662	104,693	75,112	134,274
Nigeria	6,078	4,627	7,529	12,353	9,804	14,902	10,909	8,920	12,908	12,330	10,604	14,040	41,670	33,955	49,379
Ghana	3,802	1,602	6,005	4,532	1,909	7,158	8,973	6,692	11,255	4,531	3,003	6,058	21,837	13,205	30,476
Liberia	2,438	1,428	3,448	2,939	2,208	3,670	4,010	2,998	5,023	3,036	2,270	3,803	12,424	8,903	15,943
Cape Verde	856	24	1,689	376	11	742	417	12	822	522	15	1,030	2,172	61	4,282
Sierra Leone	1,399	731	2,066	1,743	911	2,574	1,707	950	2,464	1,976	1,622	2,329	6,825	4,214	9,434
Senegal	436	354	518	946	572	1,320	1,104	903	1,304	1,518	921	2,117	4,004	2,750	5,259
Guinea	377	321	434	602	524	680	952	832	1,072	1,251	1,093	1,408	3,182	2,769	3,594
Western Africa, other/n.s.	699	413	985	3,025	2,052	3,996	4,872	3,697	6,050	3,984	3,092	4,876	12,579	9,254	15,908
Africa, n.s.	2,709	1,771	3,645	1,972	1,335	2,610	3,715	2,116	5,314	3,873	2,679	5,060	12,268	7,901	16,629

Appendix Table A9b—Continued

Country/Region	Prevalence of FB with CHB in the U.S.														
	Entry before 1990			Entry 1990–1999			Entry 2000–2009			Entry 2010–2019			Sum of all Entry Decades		
	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI	Midrange Prevalence	Lower 95% CI	Upper 95% CI
Europe	32,891	24,465	41,565	27,158	15,958	38,800	21,823	15,815	28,110	12,563	8,826	16,315	94,435	65,063	124,790
Eastern Europe	16,843	9,355	24,429	24,422	13,434	35,819	19,300	13,461	25,391	9,333	5,767	12,888	69,898	42,018	98,526
Poland	3,887	1,992	5,765	1,490	1,059	1,908	1,313	729	1,908	326	237	415	7,016	4,017	9,995
Russia	1,435	887	1,983	4,875	1,019	8,745	3,018	2,270	3,767	1,245	639	1,852	10,574	4,815	16,347
Ukraine	847	259	1,435	1,923	589	3,258	1,879	552	3,206	564	483	637	5,213	1,884	8,535
Romania	4,950	3,167	6,738	4,789	3,658	5,925	2,392	2,193	2,594	1,153	1,030	1,276	13,283	10,049	16,532
Yugoslavia	1,083	0	2,279	271	25	517	133	67	198	73	37	110	1,560	129	3,105
Bosnia and Herzegovina	50	39	61	657	517	797	283	222	343	140	49	231	1,130	829	1,431
Hungary	208	175	236	173	94	252	211	115	307	184	100	269	776	485	1,064
Albania	873	659	1,087	4,867	3,674	6,056	2,793	2,446	3,139	1,717	1,534	1,899	10,250	8,314	12,182
Czech Republic & Slovakia	259	115	403	245	0	673	125	11	238	448	127	768	1,077	253	2,083
Belarus	353	175	532	563	0	1,335	628	0	1,485	355	11	700	1,900	185	4,052
Bulgaria	146	98	193	945	749	1,142	3,375	3,115	3,639	566	154	978	5,032	4,117	5,951
Moldova	238	196	280	1,337	753	1,920	1,461	666	2,254	1,371	625	2,115	4,406	2,240	6,570
Croatia	298	170	426	148	84	211	33	16	49	30	15	46	509	286	732
Former USSR	669	530	809	990	579	1,405	622	363	882	311	182	441	2,592	1,653	3,536
Lithuania	197	70	324	155	55	256	232	151	312	107	70	144	691	346	1,036
Latvia	122	96	146	64	51	77	71	56	85	86	68	104	343	271	412
Macedonia	680	421	937	237	146	326	314	195	433	261	162	360	1,492	923	2,057
Eastern Europe, other/n.s.	549	304	796	692	381	1,015	417	292	550	395	244	546	2,054	1,221	2,907
Southern Europe	9,624	9,173	10,135	1,165	1,103	1,237	1,196	1,150	1,248	1,752	1,693	1,819	13,738	13,119	14,439
Italy	6,958	6,875	7,013	786	777	793	897	887	905	1,308	1,293	1,319	9,950	9,832	10,029
Portugal	1,426	1,091	1,832	196	150	251	124	95	159	127	97	163	1,873	1,432	2,406
Greece	1,037	1,015	1,069	109	107	112	104	102	108	127	124	131	1,377	1,348	1,419
Spain	203	191	221	74	70	81	70	66	76	190	179	207	538	506	585
Northern/Western Europe	6,230	5,793	6,755	1,458	1,354	1,583	1,170	1,091	1,269	1,413	1,320	1,524	10,271	9,558	11,131
United Kingdom	43	43	43	14	14	14	14	14	14	17	17	17	88	88	88
Germany	5,144	4,776	5,585	1,141	1,060	1,239	863	801	937	898	834	975	8,046	7,471	8,736
France	266	256	276	94	90	98	97	94	101	203	195	210	660	635	685
Ireland	22	7	52	7	2	17	5	2	13	8	3	18	42	14	99
Netherlands	219	213	224	56	54	57	55	54	56	89	87	92	419	408	429
No./West Europe, other/n.s.	536	497	576	146	133	158	135	126	148	198	185	212	1,015	941	1,094
Europe, other/n.s.	194	144	246	113	66	162	156	113	202	64	46	84	528	369	693

Abbreviations: CHB, chronic hepatitis B; CI, confidence interval; FB, foreign-born; n.s., not specified; RE, random effects.

†Random effects rate cannot be calculated because $\tau^2 < 0$; fixed effect rate is shown.

* Only one study available; rates are as reported with 95% CIs from standard error.

If no survey data are available for the decade "Before 1990", the rate from "1990–1999" is used.

If no survey data are available for the decade "2010–2019", the rate from "2000–2009" is used.

Northern America = FB from Canada and Bermuda living in the U.S.

For Japan, northern America, Australia, New Zealand, and southern, northern, and western Europe, which have low CHB rates and relatively modest numbers of emigrants to the U.S., rates from reviews were used instead of rates from systematic review and meta-analyses. Male-specific data and female-specific data from the same survey are entered separately and counted as two surveys.