

Table 4: Summary of Surveys Included in Meta-Analysis: Philippines South Eastern Asia

Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg positive (%)	95% lower CI	95% upper CI	RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
Philippines	Yanase, 2002-2004	migrants	Overseas work visa applicants; HBV testing required only for some countries; data collected from accredited hospitals and clinics	males	30,484	4.5%	4.28%	4.74%	8.67%	32.3%	Yanase, Y., T. Ohida, et al. (2007). "The prevalence of HIV, HBV and HCV among Filipino blood donors and overseas work visa applicants." <i>Bull World Health Organ</i> 85(2): 131-7.	17308734	323
Philippines	Lingao, 1974	five rural areas	Adults from five rural areas; controls for patients with cirrhosis and HCC; asymptomatic age and sex matched subjects from five different rural areas of the country where population-based surveys were previously conducted	males	274	10.9%	7.21%	14.59%	4.15%	0.1%	Lingao, A. L. (1989). "The relationship of hepatocellular carcinoma and liver cirrhosis to hepatitis B virus infection in the Philippines." <i>Gastroenterol Jpn</i> 24(4): 425-33.	2476358	317
Philippines	Stevens 1985*	migrants to New York, San Francisco, LA	Pregnant women immigrants to New York, San Francisco, Los Angeles; screened as part of a vaccination study	females	1,478	5.1%	3.98%	6.22%	7.90%	1.4%	Stevens, C. E., P. T. Toy, et al. (1985). "Perinatal hepatitis B virus transmission in the United States. Prevention by passive-active immunization." <i>JAMA</i> 253(12): 1740-5.	3974052	387
Philippines	Euler 1990-1993	migrants to US	Immigrant pregnant women in 4 urban areas in U.S.; multicenter, retrospective chart review	females	130	2.5%	-0.18%	5.20%	5.50%	0.2%	Euler GL, Wooten KG, Baughman AL, Williams WW. (2003) Hepatitis B surface antigen prevalence among pregnant women in urban areas: implications for testing, reporting, and preventing perinatal transmission. <i>Pediatrics</i> . 2003 May; 111(5 Part 2):1192-7	12728137	389
Philippines	Lin 1996-2005	migrants to Taiwan	Pregnant women from Philippines living in Taiwan; receiving routine antenatal care at Fooyin University Hospital	females	71	9.9%	2.95%	16.85%	1.78%	0.0%	Lin, C. C., H. S. Hsieh, et al. (2008). "Hepatitis B virus infection among pregnant women in Taiwan: comparison between women born in Taiwan and other southeast countries." <i>BMC Public Health</i> 8: 49.	18254978	388
Philippines	Yanase 2002-2004	migrants	Overseas work visa applicants; HBV testing required only for some countries; data collected from accredited hospitals and clinics	females	49,186	4.0%	3.80%	4.14%	8.68%	58.8%	Yanase, Y., T. Ohida, et al. (2007). "The prevalence of HIV, HBV and HCV among Filipino blood donors and overseas work visa applicants." <i>Bull World Health Organ</i> 85(2): 131-7.	17308734	323
Philippines	Lingao 1974	five rural areas	Adults from five rural areas; controls for patients with cirrhosis and HCC; asymptomatic age and sex matched subjects from five different rural areas of the country where population-based surveys were previously conducted	females	84	8.3%	2.42%	14.24%	2.28%	0.1%	Lingao, A. L. (1989). "The relationship of hepatocellular carcinoma and liver cirrhosis to hepatitis B virus infection in the Philippines." <i>Gastroenterol Jpn</i> 24(4): 425-33.	2476358	317
Philippines	Lingao, 1981-1982	Manila and surrounding areas	Pregnant women attending antenatal clinic Manila and surrounding areas; no selection or response rate provided; most from lower socioeconomic groups	females	527	8.5%	6.12%	10.88%	5.97%	0.3%	Lingao, A. L., N. T. Torres, et al. (1989). "Mother to child transmission of hepatitis B virus in the Philippines." <i>Infection</i> 17(5): 275-9.	2599650	316
Philippines	Sy 1982-1983	Manila and surrounding areas	Pregnant women attending antenatal clinics in Manila and surrounding areas; no selection or response rate provided; most from lower socioeconomic groups	females	5,684	7.6%	6.91%	8.29%	8.38%	3.7%	Sy, N. E., V. Basaca-Sevilla, et al. (1986). "HBsAG and HBeAG markers among pregnant women in Manila, Philippines." <i>Trans R Soc Trop Med Hyg</i> 80(5): 767-70.	3603615	320
Philippines	Richards 1996*	Manila	Pregnant women attending antenatal clinic at Dr Jose Fabella Memorial Hospital, Manila; no selection or participation rate described	females	502	5.6%	3.59%	7.61%	6.56%	0.4%	Richards, A. L., J. G. Perrault, et al. (1996). "A non-invasive assessment of hepatitis B virus carrier status using saliva samples." <i>Southeast Asian J Trop Med Public Health</i> 27(1): 80-4.	9031406	386

Philippines	Agdamag, 2002	Metro Cebu	Pregnant women attending antenatal clinic; no selection described, voluntary; Metro Cebu	females	100	3.0%	-0.34%	6.34%	4.58%	0.2%	Agdamag, D. M., S. Kageyama, et al. (2005). "Rapid spread of hepatitis C virus among injecting-drug users in the Philippines: Implications for HIV epidemics." <i>J Med Virol</i> 77(2): 221-6.	16121359	315
Philippines	Marineau, 2007*	migrants to Hawaii	Filipino immigrants to Hawaii recruited through health fair in the Filipino community	both	167	3.0%	0.41%	5.59%	5.65%	0.3%	Marineau, M., A. D. Tice, et al. (2007). "Culturally sensitive strategies designed to target the silent epidemic of hepatitis B in a Filipino community." <i>Hawaii Med J</i> 66(6): 154-6.	17621862	322
Philippines	Basaca-Seville, 1979	"different areas"	General population of different areas; infectious disease survey; no info on sampling method; collaborative with US Naval Medical Research Unit	both	426	10.1%	7.23%	12.95%	5.25%	0.2%	Basaca-Seville V, Pastrana EP, Balagot RG, et. Al. (1981) The prevalence of hepatitis B surface antigen in the Philippines. <i>Phil J Microbiol Infect Dis</i> 10(2):83-92	NPM	324
Philippines	Basaca-Seville, 1979	Manila	General population of Manila; infectious disease survey; no info on sampling method; collaborative with US Naval Medical Research Unit	both	695	11.8%	9.40%	14.20%	5.95%	0.3%	Basaca-Seville V, Pastrana EP, Balagot RG, et. Al. (1981) The prevalence of hepatitis B surface antigen in the Philippines. <i>Phil J Microbiol Infect Dis</i> 10(2):83-92	NPM	324
Philippines	Basaca-Seville, 1979	rural areas	General population of five rural areas; infectious disease survey; no info on sampling method; collaborative with US Naval Medical Research Unit	both	500	10.0%	7.37%	12.63%	5.59%	0.3%	Basaca-Seville V, Pastrana EP, Balagot RG, et. Al. (1981) The prevalence of hepatitis B surface antigen in the Philippines. <i>Phil J Microbiol Infect Dis</i> 10(2):83-92	NPM	324
Philippines	Lingao, 1979-82	Kinalaglagan, Batangas province; Tagumpay, Laguna province; the four villages Agoho, Capiz province; Santa Rosa, Leyte province	Villagers and urban residents; lower socioeconomic; blood collection preceded by intensive educational campaign; participation rate 85%, 84%, 57%, and 41% of population in	both	2,842	12.0%	10.81%	13.19%	7.81%	1.2%	Lingao, A. L., E. O. Domingo, et al. (1986). "Seroepidemiology of hepatitis B virus in the Philippines." <i>Am J Epidemiol</i> 123(3): 473-80.	3946393	319
Philippines	Domingo, 1983*	Santa Rosa, Barugo, Leyte	Barrio population; each household numbered and demographic data collected on all inhabitants >1 yo; 55% of samples from an earlier study were randomly selected	both	561	13.5%	10.67%	16.33%	5.29%	0.2%	Domingo, E. O., A. L. Lingao, et al. (1983). "HBV exposure and HBsAg positivity rates in schistosomiasis japonica: study in a Philippine community endemic for both infections." <i>Southeast Asian J Trop Med Public Health</i> 14(4): 456-62.	6673120	321
				total studies	17	93,711				100.00%	100.00%		
				males	2								
				females	9								
				both	6								

* indicates publication year; survey year not reported

Table 5: Summary of Surveys Included in Meta-Analysis: Vietnam												South Eastern Asia	
Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg positive (%)	95% lower CI	95% upper CI	RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
Vietnam	Banffer, 1979	refugees to Netherlands	Vietnamese refugees to Netherlands; first 541 refugees who arrived in the Netherlands; males	males	289	19.4%	14.84%	23.96%	1.62%	0.4%	Banffer, J. R. (1982). "Markers of hepatitis B in a group of Vietnamese boat-refugees in the Netherlands." <i>Trop Geogr Med</i> 34(3): 251-5.	7179464	411
Vietnam	Chaudhary, 1979-1980	refugees to Montreal	Indochinese refugees arriving Montreal 1979-1980, no selection described; male	males	7,796	14.0%	13.23%	14.77%	2.36%	13.7%	Chaudhary, R. K., E. S. Nicholls, et al. (1981). "Prevalence of hepatitis B markers in Indochinese refugees." <i>Can Med Assoc J</i> 125(11): 1243-6.	7332883	412
Vietnam	Skinhoj, 1979	refugees to Denmark	Refugees arriving Denmark all screened Sept 1979 male	males	290	15.0%	10.89%	19.11%	1.73%	0.5%	Skinhoj, P., J. Aldershvile, et al. (1981). "Viral hepatitis in southeast Asian refugees." <i>J Med Virol</i> 7(2): 149-55.	6267189	413
Vietnam	Judson, 1981-1982	refugees to Denver	Vietnamese refugees arriving 1981-1982; 95% screened; identified by notifications to INS, US Quarantine Service, voluntary agencies, and refuge social service centers. CO Dept Public Health noticed Denver Public Health who did screenings; male	males	174	16.1%	10.64%	21.56%	1.42%	0.3%	Judson, F. N., D. M. Linco, et al. (1984). "Health status of Southeast Asian refugees." <i>West J Med</i> 141(2): 183-8.	6495722	417
Vietnam	Katsumata, 1989-1991	refugees to Japan	Vietnamese refugees to Japan screened at medical exam within one month of resettlement; male	males	607	18.0%	14.94%	21.06%	1.97%	0.9%	Katsumata, T., S. Kohno, et al. (1993). "Health problems among Vietnamese refugees resettled in Japan." <i>Southeast Asian J Trop Med Public Health</i> 24(4): 647-53.	7939934	407
Vietnam	Hipgrave, 1998	Thanh Hoa province (18 rural villages)	General population infants multi-stage, stratified, random sampling males	males	275	12.4%	8.50%	16.30%	1.78%	0.5%	Hipgrave, D. B., T. V. Nguyen, et al. (2003). "Hepatitis B infection in rural Vietnam and the implications for a national program of infant immunization." <i>Am J Trop Med Hyg</i> 69(3): 288-94.	14628946	401
Vietnam	Hipgrave, 1998	Thanh Hoa province (18 rural villages)	General population children multi-stage, stratified, random sampling; males	males	122	18.0%	11.18%	24.82%	1.16%	0.2%	Hipgrave, D. B., T. V. Nguyen, et al. (2003). "Hepatitis B infection in rural Vietnam and the implications for a national program of infant immunization." <i>Am J Trop Med Hyg</i> 69(3): 288-94.	14628946	401
Vietnam	Hipgrave, 1998	Thanh Hoa province (18 rural villages)	General population adolescents multi-stage, stratified, random sampling; males	males	95	26.3%	17.45%	35.15%	0.86%	0.1%	Hipgrave, D. B., T. V. Nguyen, et al. (2003). "Hepatitis B infection in rural Vietnam and the implications for a national program of infant immunization." <i>Am J Trop Med Hyg</i> 69(3): 288-94.	14628946	401
Vietnam	Hipgrave, 1998	Thanh Hoa province (18 rural villages)	General population adults multi-stage, stratified, random sampling; males	males	482	19.5%	15.96%	23.04%	1.86%	0.7%	Hipgrave, D. B., T. V. Nguyen, et al. (2003). "Hepatitis B infection in rural Vietnam and the implications for a national program of infant immunization." <i>Am J Trop Med Hyg</i> 69(3): 288-94.	14628946	401
Vietnam	Nguyen, 2002	northern Vietnam; two rural districts of Thai Binh province	Rural population randomly selected using multistage sampling from list; males	males	412	21.1%	17.16%	25.04%	1.77%	0.5%	Nguyen, V. T., M. L. McLaws, et al. (2007). "Highly endemic hepatitis B infection in rural Vietnam." <i>J Gastroenterol Hepatol</i> 22(12): 2093-100.	17645465	398
Vietnam	Duong, 2006	five hamlets in the Linhson village of Thainguyen province	Residents of five rural villages selected by two-stage, random sampling Linhson province; males	males	137	11.7%	6.32%	17.08%	1.44%	0.3%	Duong, T. H., P. H. Nguyen, et al. (2009). "Risk factors for hepatitis B infection in rural Vietnam." <i>Asian Pac J Cancer Prev</i> 10(1): 97-102.	19469633	400
Vietnam	Banffer, 1979	refugees to Netherlands	Vietnamese refugees to Netherlands; first 541 refugees who arrived in the Netherlands; females	females	252	13.5%	9.28%	17.72%	1.70%	0.5%	Banffer, J. R. (1982). "Markers of hepatitis B in a group of Vietnamese boat-refugees in the Netherlands." <i>Trop Geogr Med</i> 34(3): 251-5.	7179464	411

Vietnam	Chaudhary, 1979-1980	refugees to Montreal	Indochinese refugees arriving Montreal 1979-1980, no selection described; females	females	6,551	8.8%	8.11%	9.49%	2.37%	17.3%	Chaudhary, R. K., E. S. Nicholls, et al. (1981). "Prevalence of hepatitis B markers in Indochinese refugees." <i>Can Med Assoc J</i> 125(11): 1243-6.	7332883	412
Vietnam	Skinhoj, 1979	refugees to Denmark	All adult refugees went through health screening on arrival; females	females	274	6.0%	3.19%	8.81%	2.03%	1.0%	Skinhoj, P., J. Aldershvile, et al. (1981). "Viral hepatitis in southeast Asian refugees." <i>J Med Virol</i> 7(2): 149-55.	6267189	413
Vietnam	Judson, 1981-1982	refugees to Denver	Vietnamese refugees arriving 1981-1982; 95% screened; identified by notifications to INS, US Quarantine Service, voluntary agencies, and refuge social service centers. CO Dept Public Health noticed Denver Public Health who did screenings; female	females	120	17.5%	10.70%	24.30%	1.16%	0.2%	Judson, F. N., D. M. Lince, et al. (1984). "Health status of Southeast Asian refugees." <i>West J Med</i> 141(2): 183-8.	6495722	417
Vietnam	Klontz, 1984-1985	migrants to US	Pregnant Vietnamese women delivering at Oakland hospital	females	96	7.0%	1.90%	12.10%	1.50%	0.3%	Klontz, K. C. (1987). "A program to provide hepatitis B immunoprophylaxis to infants born to HBsAg-positive Asian and Pacific Island women." <i>West J Med</i> 146(2): 195-9.	3825119	429
Vietnam	Katsumata, 1989-1991	refugees to Japan	Vietnamese refugees to Japan screened at medical exam within one month of resettlement; female	females	292	6.5%	3.67%	9.33%	2.02%	1.0%	Katsumata, T., S. Kohno, et al. (1993). "Health problems among Vietnamese refugees resettled in Japan." <i>Southeast Asian J Trop Med Public Health</i> 24(4): 647-53.	7939934	407
Vietnam	Euler, 1990-1993	4 urban areas (Hartford and New Haven Co CT; DeKalb and Fulton Co GA; Wayne Co MI; Dallas Co TX)	Pregnant Vietnamese women delivering in the US.; multicenter retrospective study	females	260	8.2%	4.83%	11.49%	1.91%	0.7%	Euler GL, Wooten KG, Baughman AL, Williams WW. (2003) Hepatitis B surface antigen prevalence among pregnant women in urban areas: implications for testing, reporting, and preventing perinatal transmission. <i>Pediatrics</i> . 2003 May;111(5 Part 2):1192-7.	12728137	430
Vietnam	Mahoney, 1991-1992	migrants to New Orleans, Louisiana	Pregnant women immigrants from randomly selected community households	females	656	9.1%	6.90%	11.30%	2.15%	1.7%	Mahoney FJ, Lawrence M, Scott C, et al. (1995) Continuing risk for hepatitis B virus transmission among Southeast Asian infants in Louisiana. <i>Pediatrics</i> 96(6):1113-1116	7491231	432
Vietnam	Hill, 1991*	migrants to San Diego	Pregnant immigrant women receiving antenatal care at Loma Linda community clinic San Diego, CA	females	120	13.3%	7.22%	19.38%	1.30%	0.2%	Hill, L. L., M. Hovell, et al. (1991). "Prevention of hepatitis B transmission in Indo-Chinese refugees with active and passive immunization." <i>Am J Prev Med</i> 7(1): 29-32.	1831031	422
Vietnam	Lin, 1996-2005	migrants to Tawan	Vietnamese immigrant pregnant women in Taiwan	females	1,114	8.9%	7.23%	10.57%	2.25%	2.9%	Lin, C. C., H. S. Hsieh, et al. (2008). "Hepatitis B virus infection among pregnant women in Taiwan: comparison between women born in Taiwan and other southeast countries." <i>BMC Public Health</i> 8: 49.	18254978	425
Vietnam	Liu, 2004-2006,	migrants to Hsin-Chu County, Taiwan	Pregnant Vietnamese women in Hsin-Chu Taiwan antenatal screening	females	662	7.4%	5.41%	9.39%	2.19%	2.0%	Liu, C. Y., N. T. Chang, et al. (2007). "Seroprevalence of HBV in immigrant pregnant women and coverage of HBIG vaccine for neonates born to chronically infected immigrant mothers in Hsin-Chu County, Taiwan." <i>Vaccine</i> 25(44): 7706-10.	17767981	397
Vietnam	Tran, 1989-1991	Ho Chi Minh City	Pregnant women from maternity hospital Ho Chi Minh City; from a wide range of social backgrounds	females	1,000	9.9%	8.05%	11.75%	2.22%	2.4%	Tran, V. B., M. Buu, et al. (1993). "Hepatitis B in Ho Chi Minh City, Viet Nam." <i>Trans R Soc Trop Med Hyg</i> 87(3): 262.	8236385	408
Vietnam	Milne, 1998-1999	Bihn Dinh province	Pregnant women Bihn Dinh province; mothers of infants to enter vacc program; enrollment offered to all babies delivered at 2 hospitals	females	2,002	10.5%	9.16%	11.84%	2.30%	4.5%	Milne, A., D. J. West, et al. (2002). "Field evaluation of the efficacy and immunogenicity of recombinant hepatitis B vaccine without HBIG in newborn Vietnamese infants." <i>J Med Virol</i> 67(3): 327-33.	12116022	402

Vietnam	Hipgrave, 1998	Thanh Hoa province (18 rural villages)	General population infants; multi-stage, stratified, random sampling; females	females	261	12.6%	8.57%	16.63%	1.75%	0.5%	Hipgrave, D. B., T. V. Nguyen, et al. (2003). "Hepatitis B infection in rural Vietnam and the implications for a national program of infant immunization." Am J Trop Med Hyg 69(3): 288-94.	14628946	401
Vietnam	Hipgrave, 1998	Thanh Hoa province (18 rural villages)	General population children multi-stage, stratified, random sampling; females	females	106	18.9%	11.45%	26.35%	1.05%	0.1%	Hipgrave, D. B., T. V. Nguyen, et al. (2003). "Hepatitis B infection in rural Vietnam and the implications for a national program of infant immunization." Am J Trop Med Hyg 69(3): 288-94.	14628946	401
Vietnam	Hipgrave, 1998	Thanh Hoa province (18 rural villages)	General population adolescents; multi-stage, stratified, random sampling; females)	females	124	16.1%	9.63%	22.57%	1.22%	0.2%	Hipgrave, D. B., T. V. Nguyen, et al. (2003). "Hepatitis B infection in rural Vietnam and the implications for a national program of infant immunization." Am J Trop Med Hyg 69(3): 288-94.	14628946	401
Vietnam	Hipgrave, 1998	Thanh Hoa province (18 rural villages)	General population adults; multi-stage, stratified, random sampling; females	females	114	15.8%	9.10%	22.50%	1.18%	0.2%	Hipgrave, D. B., T. V. Nguyen, et al. (2003). "Hepatitis B infection in rural Vietnam and the implications for a national program of infant immunization." Am J Trop Med Hyg 69(3): 288-94.	14628946	401
Vietnam	Goto, 2003,	north central coast; 10 communes in Nghe An Province	Pregnant women 10 communes in Nghe An Province	females	505	10.0%	7.38%	12.62%	2.07%	1.2%	Goto, A., Q. V. Nguyen, et al. (2005). "Prevalence of and factors associated with reproductive tract infections among pregnant women in ten communes in Nghe An Province, Vietnam." J Epidemiol 15(5): 163-72.	16195636	415
Vietnam	Lan, 2006	north; Bavi district	Women of childbearing age; community-based cross-sectional; randomly selected	females	1,012	8.3%	6.60%	10.00%	2.24%	2.8%	Lan, P. T., C. S. Lundborg, et al. (2008). "Reproductive tract infections including sexually transmitted infections: a population-based study of women of reproductive age in a rural district of Vietnam." Sex Transm Infect 84(2): 126-32.	18003708	414
Vietnam	Nguyen, 2002	northern Vietnam; two rural districts of Thai Binh province	Rural population randomly selected using multistage sampling from list; females	females	425	16.9%	13.34%	20.46%	1.85%	0.6%	Nguyen, V. T., M. L. McLaws, et al. (2007). "Highly endemic hepatitis B infection in rural Vietnam." J Gastroenterol Hepatol 22(12): 2093-100.	17645465	398
Vietnam	Duong, 2006	five hamlets in the Linhson village of Thainguyen province	Residents of five rural villages selected by two-stage, random sampling Linhson province; females	females	228	7.9%	4.40%	11.40%	1.87%	0.7%	Duong, T. H., P. H. Nguyen, et al. (2009). "Risk factors for hepatitis B infection in rural Vietnam." Asian Pac J Cancer Prev 10(1): 97-102.	19469633	400
Vietnam	CDC, 1979-1991	refugees to US	Refugees to US; programs that screened all incoming refugees and had data for HBsAg; special refugee health clinics, local health department clinics, or offices of private-practice physician	both	10,561	13.8%	13.14%	14.46%	2.37%	18.8%	CDC (1991) Screening for hepatitis B virus infection among refugees arriving in the United States, 1979-1991. MMWR 40(45):784-6	1944126	424
Vietnam	Chadwick, 1979-1980	refugees to UK	Refugees from Vietnam consecutive admissions to resettlement camp in UK; 72% of refugees agreed to provide serum	both	632	15.0%	12.22%	17.78%	2.03%	1.1%	Chadwick, R. G., A. J. Hall, et al. (1982). "Hepatitis B among Indochinese refugees in Great Britain." Postgrad Med J 58(685): 676-9.	7170264	410
Vietnam	Goldenring, 1979-1982	migrants to US	Vietnamese teenage immigrants; chart review of intake screening for teens enrolled at Federally funded Vocational Training Center for youth in Hollywood and LA	both	63	19.0%	9.31%	28.69%	0.76%	0.1%	Goldenring, J. M. and G. F. Castle (1983). "Prevalence of disease in Southeast Asian teenagers. Results of screening medical examination at a residential vocational training facility." J Adolesc Health Care 4(4): 266-9.	6643205	395

Vietnam	Phillips, 1979-1980	migrants to UK	Vietnamese refugees to UK; all in resettlement camp screened	both	62	14.8%	5.96%	23.64%	0.86%	0.1%	Phillips, S. J. and R. J. Pearson (1981). "Dealing with Vietnamese refugees. What we found." Br Med J (Clin Res Ed) 282(6264): 613-6.	6781595	420
Vietnam	Skinhoj, 1979-1980	refugees to Denmark	All child refugees went through health screening on arrival in Denmark	both	301	10.0%	6.61%	13.39%	1.89%	0.7%	Skinhoj, P., J. Aldershvile, et al. (1983). "Hepatitis B infection in Vietnamese families." J Med Virol 11(2): 125-9.	6842191	409
Vietnam	Skinhoj, 1979-1980	refugees to Denmark	All adult refugees went through health screening on arrival	both	232	10.8%	6.81%	14.79%	1.75%	0.5%	Skinhoj, P., J. Aldershvile, et al. (1983). "Hepatitis B infection in Vietnamese families." J Med Virol 11(2): 125-9.	6842191	409
Vietnam	Catanzaro, 1980-1981	migrants to San Diego	Vietnamese immigrants screening program UCSD	both	93	15.1%	7.82%	22.38%	1.08%	0.2%	Catanzaro, A. and R. J. Moser (1982). "Health status of refugees from Vietnam, Laos, and Cambodia." JAMA 247(9): 1303-8.	7062547	419
Vietnam	Samuda, 1982	refugees to Hong Kong	Refugees to Hong Kong in resettlement camp	both	241	25.0%	19.53%	30.47%	1.42%	0.3%	Samuda, G. M., S. P. Chan, et al. (1988). "Vietnamese child health in a Hong Kong closed camp." Aust Paediatr J 24(2): 115-7.	3395304	423
Vietnam	Hill, 1991*	migrants to San Diego	General patients at Loma Linda community clinic located in a low-income residential area of San Diego, CA	both	245	18.8%	13.91%	23.69%	1.55%	0.3%	Hill, L. L., M. Hovell, et al. (1991). "Prevention of hepatitis B transmission in Indo-Chinese refugees with active and passive immunization." Am J Prev Med 7(1): 29-32.	1831031	422
Vietnam	Meropol, 1991-1993	migrants to Buffalo, NY	Pediatric refugees arriving 1991-1993; chart review of screening visits; majority of refugees undergo screening on arrival	both	66	12.1%	4.23%	19.97%	0.99%	0.1%	Meropol SB (1995). "Health status of pediatric refugees in Buffalo, NY." Arch Pediatr Adolesc Med 149 (8): 887-92	7633543	418
Vietnam	Patel, 1991-1999	migrants to Midwest (Quad Cities, IA-IL)	Vietnamese immigrants to 4 Midwest cities; all who attended clinic for state-mandated health screening	both	743	13.9%	11.38%	16.34%	2.10%	1.3%	Patel, P. A. and M. D. Voigt (2002). "Prevalence and interaction of hepatitis B and latent tuberculosis in Vietnamese immigrants to the United States." Am J Gastroenterol 97(5): 1198-203.	12014728	403
Vietnam	Nelson, 1994-1995	migrants to Boston	Consecutive new Vietnamese immigrants presenting for first primary care med visit in US to neighborhood health center	both	96	14.0%	7.06%	20.94%	1.14%	0.2%	Nelson, K. R., H. Bui, et al. (1997). "Screening in special populations: a "case study" of recent Vietnamese immigrants." Am J Med 102(5): 435-40.	9217639	416
Vietnam	Shuler, 2001-2004	migrants to US	Foreign-born Vietnamese living in Georgia US; initially identified by linking vital records data to the state Refugee Health program of the DHR; mailed invite to eligible families; solicited at religious festivals, worksites, and health fairs, clinics	both	288	12.5%	8.68%	16.32%	1.79%	0.6%	Shuler, C. M., A. E. Fiore, et al. (2009). "Reduction in hepatitis B virus seroprevalence among U.S.-born children of foreign-born Asian parents -- benefit of universal infant hepatitis B vaccination." Vaccine 27(43): 5942-7.	19679217	426
Vietnam	[No author], 2003*	migrants to California	Vietnamese immigrants living in "Little Saigon" in Orange County CA	both	828	13.0%	10.71%	15.29%	2.14%	1.6%	(2003). "Hepatitis B and U.S. Asians." AIDS Patient Care STDS 17(7): 369.	14663866	431
Vietnam	Hsu, 2005-2006	migrants to Montgomery Co, MD	Immigrants (95% born in Vietnam); convenience sample recruited through faith-based and community orgs	both	108	6.5%	1.85%	11.15%	1.60%	0.4%	Hsu, C. E., L. C. Liu, et al. (2007). "Reducing liver cancer disparities: a community-based hepatitis-B prevention program for Asian-American communities." J Natl Med Assoc 99(8): 900-7.	17722668	421
Vietnam	Lee, 2006-2008	migrants to US	Vietnamese migrants to Michigan tested at health fair; 96% of participants were foreign-born	both	129	7.8%	3.14%	12.36%	1.61%	0.4%	Lee, J., A. S. Lok, et al. "Hepatitis B Prevalence Among Asian Americans in Michigan: An Assessment to Guide Future Education and Intervention Strategies." J Community Health.	20300810	427
Vietnam	Rein, 2006-2008	0	Refugees arriving in the US 2006-2008; information from states with an active refugee health coordinator	both	231	3.2%	0.93%	5.47%	2.14%	1.6%	Rein DB, Lesesne SB, O'Fallon A, Weinbaum CM (2009) Prevalence of hepatitis B surface antigen among refugees entering the United States between 2006 and 2008. Hepatology. 2010 Feb;51(2):431-4	19902482	428

Vietnam	Lin, 2007-2008	migrants to San Jose	Vietnamese migrants to San Jose CA provided free HBV testing	both	376	15.7%	12.02%	19.38%	1.83%	0.6%	Lin, S. Y., E. T. Chang, et al. (2009). "Stopping a silent killer in the underserved asian and pacific islander community: a chronic hepatitis B and liver cancer prevention clinic by medical students." <i>Asian Pac J Cancer Prev</i> 10(3): 383-6.	19640178	399
Vietnam	Kallman, 2010	migrants to Northern Virginia	Vietnamese immigrants to the US tested in physicians' office and health fair	both	322	9.3%	6.13%	12.47%	1.94%	0.8%	Kallman, J. B., S. Tran, et al. (2010). "Vietnamese community screening for hepatitis B virus and hepatitis C virus." <i>J Viral Hepat.</i>	20196807	396
Vietnam	Tran, 1989-1993	Ho Chi Minh City	Farm workers samples to screen for parasite infections; no other info provided	both	1,806	9.2%	7.87%	10.53%	2.30%	4.6%	Tran, V. B., M. Buu, et al. (1993). "Hepatitis B in Ho Chi Minh City, Viet Nam." <i>Trans R Soc Trop Med Hyg</i> 87(3): 262.	8236385	408
Vietnam	Tran, 1989-1993	Ho Chi Minh City	City workers in light industry no selection described	both	1,018	14.4%	12.24%	16.56%	2.16%	1.8%	Tran, V. B., M. Buu, et al. (1993). "Hepatitis B in Ho Chi Minh City, Viet Nam." <i>Trans R Soc Trop Med Hyg</i> 87(3): 262.	8236385	408
Vietnam	Tran, 1989-1993	Ho Chi Minh City	College students; no selection described	both	163	11.7%	6.77%	16.63%	1.54%	0.3%	Tran, V. B., M. Buu, et al. (1993). "Hepatitis B in Ho Chi Minh City, Viet Nam." <i>Trans R Soc Trop Med Hyg</i> 87(3): 262.	8236385	408
Vietnam	Nakata, 1993	Ho Chi Minh City	Persons with low risk for HBV in Ho Chi Minh City ; 95 pregnant women and 198 hospital patients with tropical diseases, without liver disease	both	292	12.0%	8.27%	15.73%	1.82%	0.6%	Nakata, S., P. Song, et al. (1994). "Hepatitis C and B virus infections in populations at low or high risk in Ho Chi Minh and Hanoi, Vietnam." <i>J Gastroenterol Hepatol</i> 9(4): 416-9.	7524723	406
Vietnam	Nakata, 1993	Hanoi	Persons with low risk for HBV in Hanoi ; 95 pregnant women and 198 hospital patients with tropical diseases, without liver disease	both	299	16.1%	11.93%	20.27%	1.71%	0.5%	Nakata, S., P. Song, et al. (1994). "Hepatitis C and B virus infections in populations at low or high risk in Ho Chi Minh and Hanoi, Vietnam." <i>J Gastroenterol Hepatol</i> 9(4): 416-9.	7524723	406
Vietnam	Kamumu, 1994-1996	rural area near Ho Chi Minh City (Dalat City)	"Cohort of the general population selected at random"	both	890	5.7%	4.18%	7.22%	2.27%	3.5%	Kakumu, S., K. Sato, et al. (1998). "Prevalence of hepatitis B, hepatitis C, and GB virus C/hepatitis G virus infections in liver disease patients and inhabitants in Ho Chi Minh, Vietnam." <i>J Med Virol</i> 54(4): 243-8.	9557289	404
Vietnam	Katellaris, 1995*	rural area 100 mi north of Ho Chi Minh city	Children randomly selected from the commune population registry	both	87	19.5%	11.17%	27.83%	0.92%	0.1%	Katellaris, P. H., G. Robertson, et al. (1995). "Seroprevalence of hepatitis viruses in children in rural Viet Nam." <i>Trans R Soc Trop Med Hyg</i> 89(5): 487.	8560517	405
				total studies	58	47,025			100.00%	100.00%			
				males	11								
				females	21								
				both	26								

* indicates publication year; survey year not reported

Table 6: Summary of Surveys Included in Meta-Analysis: Thailand South Eastern Asia

Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg positive (%)	95% lower CI	95% upper CI	RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
Thailand	Johnson, 1976	Ban Tablan, a rural village in NE	Rural villagers Ban Tablan; samples collected from 76% of village (73-89% of each age group except pre-school age children; male	males	387	10.6%	7.53%	13.67%	1.50%	0.1%	Johnson, D. E., R. Snitbhan, et al. (1980). "Hepatitis B in the rural tropics." Int J Epidemiol 9(2): 123-9.	7409962	365
Thailand	Sobeslavsky, 1980*	Bangkok	Apparently healthy non-institutionalized population of Bangkok; individuals of different age groups; male	males	291	12.5%	8.70%	16.30%	1.20%	0.0%	Sobeslavsky O. (1980) Prevalence of markers of hepatitis B virus infection in various countries: a WHO collaborative study. 58(4):621-8	6969134	371
Thailand	Assadamongkol, 1987-88		School children randomly selected from Phythai school; males	males	79	5.1%	0.23%	9.89%	0.89%	0.0%	Assadamongkol, K., P. Phuapradit, et al. (1989). "Liver size and serum alkaline phosphatase in normal Thai school-aged children." J Med Assoc Thai 72 Suppl 1: 88-93.	2732655	363
Thailand	Nelson, 1989-90	villages in Chang Mai, northern Thailand	Rural villagers selected because of convenience and willingness to cooperate; 44% of population took part; villages typical of most of northern Thailand: Chang Mai; males	males	455	25.9%	21.87%	29.93%	1.12%	0.0%	Nelson, K. E., V. Suriyanon, et al. (1994). "The incidence of HIV-1 infections in village populations of northern Thailand." AIDS 8(7): 951-5.	7946105	360
Thailand	Supanaranond, 1990*1)	northern Thailand	Male volunteers for cholera trial; no sampling information; northern Thailand	males	171	6.0%	2.44%	9.56%	1.29%	0.0%	Supanaranond, W., S. Migasena, et al. (1990). "Health status of Thai volunteers in a cholera vaccine trial." J Med Assoc Thai 73(10): 548-51.	2280201	361
Thailand	Suwanagool, 1993-1994		General population drawn from apparently healthy persons attending the outpatient clinics; no hx LD, jaundice or transfusion in past 10 yrs; no needle marks or hx IDU; males	males	307	2.3%	0.61%	3.95%	2.23%	0.2%	Suwanagool, S., S. Tieangrim, et al. (1995). "Seroprevalence of anti-HCV among HIV-infected persons and general population." J Med Assoc Thai 78(11): 611-7.	8576673	358
Thailand	Luksamijarulkul, 1995*	Din-Daeng, Bangkok	School children; cross-sectional study in government housing area in a socioeconomically depressed community; four duplex buildings containing 91 housing units were included in the study; no selection or participation rate reported; Din-Daeng, Bangkok; males	males	93	5.4%	0.79%	9.97%	0.95%	0.0%	Luksamijarulkul, P., P. Maneesri, et al. (1995). "Hepatitis B sero-prevalence and risk factors among school-age children in a low socioeconomic community, Bangkok." Asia Pac J Public Health 8(3): 158-61.	10050181	359
Thailand	Jutavijittum, 1998-2000	Chaing Mai	School children 4-9 yo; 65% vaccinated for HBV in a model vaccination program; males	males	332	1.5%	0.20%	2.82%	2.42%	0.3%	Jutavijittum, P., Y. Jiviriyawat, et al. (2005). "Evaluation of a hepatitis B vaccination program in Chiang Mai, Thailand." Southeast Asian J Trop Med Public Health 36(1): 207-12.	15906670	342
Thailand	Louisirirotechanakul, 2000	Northern	Thai Hmong villagers; samples collected during a comprehensive health survey of ethnic Hmong by Chaing Mai Univ and UCS; males	males	165	20.6%	14.43%	26.77%	0.62%	0.0%	Louisirirotechanakul, S., K. S. Myint, et al. (2002). "The prevalence of viral hepatitis among the Hmong people of northern Thailand." Southeast Asian J Trop Med Public Health 33(4): 837-44.	12757235	348
Thailand	Wiwanitkit, 2000	Mae Jam District near Myanmar border; northern	Minority Hilltribers; no selection described; Mae Jam District near Myanmar border; represent a small minority of the general rural population; generally receive substandard health care; males	males	86	10.5%	4.02%	16.98%	0.57%	0.0%	Wiwanitkit, V. and A. Suyaphan (2002). "High prevalence of HBsAg seropositivity in Hilltribers in the Mae Jam district in northern Thailand." MedGenMed 4(3): 26.	12466769	350
Thailand	Luksamijarulkul, 2002-2004	Bangkok	Married males age 15-44 yrs; selected from 6 provinces in multistage sampling; 1,412 individuals participated; only 166 agreed to blood test; Bangkok; males	males	82	6.1%	0.92%	11.28%	0.80%	0.0%	Luksamijarulkul, P., S. T. Drph, et al. (2007). "Risk behaviors and life skills towards sexually transmitted and blood-borne infections among Thai married couples." J Med Assoc Thai 90(5): 962-70.	17596053	339

Thailand	Luksamijarulkul, 2004-05	Bangkok	General population age >40 yrs; selected from 6 provinces in multistage sampling; 87/1069 agreed to blood testing; Bangkok male (187)	males	187	4.3%	1.39%	7.21%	1.57%	0.1%	Luksamijarulkul, P., W. Kaepan, et al. (2007). "Hepatitis B virus sero-markers, hepatitis C virus antibody and risk behaviors among middle age and older Thai males." Southeast Asian J Trop Med Public Health 38(1): 45-52.	17539245	340
Thailand	Johnson, 1976	Ban Tablan, a rural village in NE	Rural villagers; samples collected from 76% of village (73-89% of each age group except pre-school age children (approx 45%); females	females	387	5.2%	2.99%	7.41%	1.93%	0.1%	Johnson, D. E., R. Sniibhan, et al. (1980). "Hepatitis B in the rural tropics." Int J Epidemiol 9(2): 123-9.	7409962	365
Thailand	Sobeslavsky, 1980*	Bangkok	Apparently healthy non-institutionalized population of Bangkok; individuals of different age groups; females	females	343	6.7%	4.05%	9.35%	1.70%	0.1%	Sobeslavsky O. (1980) Prevalence of markers of hepatitis B virus infection in various countries: a WHO collaborative study. 58(4):621-8	6969134	371
Thailand	Assadamongkol, 1987-88	0	School children randomly selected from Phyathai school; no sampling method described; females	females	80	2.5%	-0.92%	5.92%	1.35%	0.0%	Assadamongkol, K., P. Phuapradit, et al. (1989). "Liver size and serum alkaline phosphatase in normal Thai school-aged children." J Med Assoc Thai 72 Suppl 1: 88-93.	2732655	363
Thailand	Nelson, 1989-1990	villages in Chang Mai, northern Thailand	Rural villagers selected because of convenience and willingness to cooperate; 44% of population took part; villages typical of most of northern Thailand; Chang Mai; females	females	506	23.7%	19.99%	27.41%	1.24%	0.0%	Nelson, K. E., V. Suriyanon, et al. (1994). "The incidence of HIV-1 infections in village populations of northern Thailand." AIDS 8(7): 951-5.	7946105	360
Thailand	Thomas, 1991-1993	Bangkok	Healthy controls for women with HPV; age-matched women admitted to otolaryngology and general surgery wards of Siriraj Hosp; excluded for circulatory or cardiac dz, diabetes, benign breast dz, liver dz, any OBGYN condition, previously dx cancer; females	females	239	5.0%	2.24%	7.76%	1.64%	0.1%	Thomas, D. B., R. M. Ray, et al. (2001). "Human papillomaviruses and cervical cancer in Bangkok. I. Risk factors for invasive cervical carcinomas with human papillomavirus types 16 and 18 DNA." Am J Epidemiol 153(8): 723-31.	11296143	352
Thailand	Taechowisan, 1992-1995	Bangkok	Pregnant; every 10th woman attending antenatal clinic at Siriraj Hospital Bangkok	females	350	6.0%	3.51%	8.49%	1.78%	0.1%	Taechowisan, T., R. Sutthent, et al. (1997). "Immune status in congenital infections by TORCH agents in pregnant Thais." Asian Pac J Allergy Immunol 15(2): 93-7.	9346273	356
Thailand	Suwanagool, 1993-1994	0	General population drawn from apparently healthy persons attending the outpatient clinics; no hx LD, jaundice or transfusion in past 10 yrs; no needle marks or hx IDU; females	females	309	1.6%	0.21%	3.03%	2.37%	0.3%	Suwanagool, S., S. Tieangrim, et al. (1995). "Seroprevalence of anti-HCV among HIV-infected persons and general population." J Med Assoc Thai 78(11): 611-7.	8576673	358
Thailand	Luksamijarulkul, 1995*	Din-Daeng, Bangkok	School children; cross-sectional study in government housing area in a socioeconomically depressed community; Din-Daeng, four duplex buildings containing 91 housing units were included in the study; no selection or participation rate reported; Bangkok; females	females	72	1.4%	-1.31%	4.09%	1.67%	0.1%	Luksamijarulkul, P., P. Maneesri, et al. (1995). "Hepatitis B sero-prevalence and risk factors among school-age children in a low socioeconomic community, Bangkok." Asia Pac J Public Health 8(3): 158-61.	10050181	359
Thailand	Chotnopparatpattara, 1995-1996	Bangkok	Pregnant women attending antenatal clinic Bangkok	females	1,304	3.9%	2.85%	4.95%	2.55%	0.5%	Chotnopparatpattara, P., S. Limpongsanurak, et al. (2003). "The prevalence and risk factors of anemia in pregnant women." J Med Assoc Thai 86(11): 1001-7.	14696781	345
Thailand	Jutavijittum, 1998-2000	Chaing Mai	School children 4-9 yo; 65% vaccinated for HBV in a model vaccination program; randomly selected from 7 rural and 3 urban schools; females	females	348	0.9%	-0.11%	1.83%	2.58%	0.6%	Jutavijittum, P., Y. Jiviriyawat, et al. (2005). "Evaluation of a hepatitis B vaccination program in Chiang Mai, Thailand." Southeast Asian J Trop Med Public Health 36(1): 207-12.	15906670	342
Thailand	Pichainarong, 1999	Mae Suai district, Chiang Mai province	Women of reproductive age Chiang Mai; voluntary participation; 540/625 married women participated; 70% Akha and 30% Lisaw (ethnicity)	females	540	8.2%	5.84%	10.46%	1.88%	0.1%	Pichainarong, N., W. Chaveepojnkamjorn, et al. (2003). "Hepatitis B carrier among married hilltribe women in northern Thailand." Southeast Asian J Trop Med Public Health 34(1): 114-9.	12971523	347

Thailand	Nathalang, 2000*	0	Pregnant women; no selection in abstract	females	500	5.6%	3.58%	7.62%	2.04%	0.1%	Nathalang, O., P. Arnutti, et al. (2000). "Comparison of the RPHA and EIA techniques for the detection of HBs antigen among pregnant Thai women." <i>Asian Pac J Allergy Immunol</i> 18(2): 115-7.	10928625	367
Thailand	Louisirirotchanakul, 2000	Northern	Thai Hmong villagers; samples collected during a comprehensive health survey of ethnic Hmong by Chaing Mai Univ and UCS; females	females	254	9.8%	6.18%	13.50%	1.25%	0.0%	Louisirirotchanakul, S., K. S. Myint, et al. (2002). "The prevalence of viral hepatitis among the Hmong people of northern Thailand." <i>Southeast Asian J Trop Med Public Health</i> 33(4): 837-44.	12757235	348
Thailand	Wiwanitkit, 2000	Mae Jam District near Myanmar border; northern	Minority Hilltribers; no selection described; Mae Jam District near Myanmar border; represent a small minority of the general rural population; generally receive substandard health care; females	females	114	7.0%	2.33%	11.71%	0.92%	0.0%	Wiwanitkit, V. and A. Suyaphan (2002). "High prevalence of HBsAg seropositivity in Hilltribers in the Mae Jam district in northern Thailand." <i>MedGenMed</i> 4(3): 26.	12466769	350
Thailand	Luksamijarulkul, 2002-2004	Bangkok	Selected from 6 provinces in multistage sampling; 1,412 individuals participated; only 166 agreed to blood test; Bangkok; females	females	84	7.1%	1.63%	12.65%	0.74%	0.0%	Luksamijarulkul, P., S. T. Drph, et al. (2007). "Risk behaviors and life skills towards sexually transmitted and blood-borne infections among Thai married couples." <i>J Med Assoc Thai</i> 90(5): 962-70.	17596053	339
Thailand	Srisupanant, 1994	Thai workers going abroad	Workers going abroad; screening serology from a tertiary hospital Bangkok	both	20,773	5.6%	5.28%	5.90%	2.78%	5.8%	Srisupanant, M. and V. Wiwanitkit (2008). "Prevalence of hepatitis B seropositivity among Thai workers in screening program before going abroad." <i>Ann Hepatol</i> 7(4): 389.	19034244	337
Thailand	Srisupanant, 1995,	Thai workers going abroad	Workers going abroad 1995; screening serology from a tertiary hospital Bangkok	both	26,352	4.8%	4.57%	5.09%	2.79%	8.5%	Srisupanant, M. and V. Wiwanitkit (2008). "Prevalence of hepatitis B seropositivity among Thai workers in screening program before going abroad." <i>Ann Hepatol</i> 7(4): 389.	19034244	337
Thailand	Srisupanant, 1996	Thai workers going abroad	Workers going abroad 1996; screening serology from a tertiary hospital Bangkok (24,230)	both	24,230	6.1%	5.77%	6.37%	2.79%	6.3%	Srisupanant, M. and V. Wiwanitkit (2008). "Prevalence of hepatitis B seropositivity among Thai workers in screening program before going abroad." <i>Ann Hepatol</i> 7(4): 389.	19034244	337
Thailand	Srisupanant, 1997	Thai workers going abroad	Workers going abroad 1997; screening serology from a tertiary hospital Bangkok	both	24,909	4.7%	4.42%	4.94%	2.79%	8.3%	Srisupanant, M. and V. Wiwanitkit (2008). "Prevalence of hepatitis B seropositivity among Thai workers in screening program before going abroad." <i>Ann Hepatol</i> 7(4): 389.	19034244	337
Thailand	Srisupanant, 1998	Thai workers going abroad	Workers going abroad 1998; screening serology from a tertiary hospital Bangkok	both	27,364	3.9%	3.63%	4.09%	2.80%	10.9%	Srisupanant, M. and V. Wiwanitkit (2008). "Prevalence of hepatitis B seropositivity among Thai workers in screening program before going abroad." <i>Ann Hepatol</i> 7(4): 389.	19034244	337
Thailand	Srisupanant, 1999	Thai workers going abroad	Workers going abroad 1999; screening serology from a tertiary hospital Bangkok	both	28,023	3.9%	3.62%	4.08%	2.80%	11.2%	Srisupanant, M. and V. Wiwanitkit (2008). "Prevalence of hepatitis B seropositivity among Thai workers in screening program before going abroad." <i>Ann Hepatol</i> 7(4): 389.	19034244	337
Thailand	Srisupanant, 2000	Thai workers going abroad	Workers going abroad 2000; screening serology from a tertiary hospital Bangkok	both	43,493	2.9%	2.73%	3.05%	2.80%	23.0%	Srisupanant, M. and V. Wiwanitkit (2008). "Prevalence of hepatitis B seropositivity among Thai workers in screening program before going abroad." <i>Ann Hepatol</i> 7(4): 389.	19034244	337
Thailand	Srisupanant, 2001	Thai workers going abroad	Workers going abroad 2001 ; screening serology from a tertiary hospital Bangkok	both	25,950	2.8%	2.63%	3.03%	2.80%	14.0%	Srisupanant, M. and V. Wiwanitkit (2008). "Prevalence of hepatitis B seropositivity among Thai workers in screening program before going abroad." <i>Ann Hepatol</i> 7(4): 389.	19034244	337
Thailand	Rein, 2006-2008	migrants to US	Refugees arriving in the US 2006-2008; information from states with an active refugee health coordinator	both	555	6.1%	4.11%	8.09%	2.05%	0.1%	Rein DB, Lesesne SB, O'Fallon A, Weinbaum CM (2010) Prevalence of hepatitis B surface antigen among refugees entering the United States between 2006 and 2008. <i>Hepatology</i> . 2010 Feb;51(2):431-4	19902482	390

Thailand	Peerakome, 1981	Chaing Mai province	School children Chaing Mai; no selection described	both	63	27.0%	16.02%	37.94%	0.23%	0.0%	Peerakome, S., S. Suprasert, et al. (1985). "Epidemiological survey of hepatitis B virus infection in Chiang Mai, 1981-1982." <i>Nippon Ika Daigaku Zasshi</i> 52(1): 3-9.	3972975	364
Thailand	Peerakome, 1982	Chaing Mai province	School children; under the care of the Comprehensive Child Care Clinic, Chaing Mai University	both	53	7.5%	0.43%	14.65%	0.49%	0.0%	Peerakome, S., S. Suprasert, et al. (1985). "Epidemiological survey of hepatitis B virus infection in Chiang Mai, 1981-1982." <i>Nippon Ika Daigaku Zasshi</i> 52(1): 3-9.	3972975	364
Thailand	Wakayama, 1983-1984	Chaing Mai province	Adults and children under the care of the Comprehensive Child Care Clinic, Chaing Mai University	both	648	6.8%	4.85%	8.73%	2.08%	0.2%	Wakayama Y, Taguchi H, Yunoki H, Suprasert S, Pongprot B, Supawadee J, Suzuki H, Ogawa Y, Hirano S, Yamaji Y. (1985) An epidemiologic study on hepatitis B virus infection in Chiang Mai, 1983-1984. <i>Nippon Ika Daigaku Zasshi</i> 52(3):360-1	4019725	346
Thailand	Chunsuttiwat, 1988	Chonburi and Chaing Mai provinces	Preschool children born before routine immunization; Chonburi and Chaing Mai provinces	both	3,188	5.5%	4.69%	6.27%	2.66%	0.9%	Chunsuttiwat, S., B. A. Biggs, et al. (1997). "Integration of hepatitis B vaccination into the expanded programme on immunization in Chonburi and Chiangmai provinces, Thailand." <i>Vaccine</i> 15(6-7): 769-74.	9178480	368
Thailand	Kozik, 1989	Northern; Kamphaeng Province	School children 28 rural communities; random sample of primary school children; "should be representative of all children in the province"	both	1,903	15.8%	14.16%	17.44%	2.25%	0.2%	Kozik, C. A., D. W. Vaughn, et al. (2000). "Hepatitis B virus infection in Thai children." <i>Trop Med Int Health</i> 5(9): 633-9.	11044278	354
Thailand	Phuapradit, 1989	Bangkok	Non-institutionalized children attending well-babab clinics Bangkok	both	100	2.0%	-0.74%	4.74%	1.65%	0.1%	Phuapradit, P., P. Riantaworn, et al. (1989). "HBsAg carrier rate among institutionalised children from Phyathai Institute." <i>J Med Assoc Thai</i> 72 Suppl 1: 94-7.	2732656	370
Thailand	Kietduriyakul, 1989*	Wat Srakaew	Adopted children in Thailand low socioeconomic; no selection described	both	249	12.5%	8.39%	16.61%	1.09%	0.0%	Kietduriyakul, V., K. Chamruengsri, et al. (1989). "Prevalence of hepatitis B surface antigen in Wat Srakaew school children." <i>J Med Assoc Thai</i> 72(8): 433-5.	2809445	362
Thailand	Srivatanakul, 1991*	north-east	Hospital-based case controls for patients with HCC; age- and sex-matched for HCC patients from 3 hospitals	both	65	8.4%	1.66%	15.14%	0.54%	0.0%	Srivatanakul P, Parkin DM, Khlut M, Chenvidhya D, Chotiwan P, Insiripong S, L'Abbé KA, Wild CP. (1991) Liver cancer in Thailand. II. A case-control study of hepatocellular carcinoma. <i>Int J Cancer</i> 48(3):329-32	1645698	344
Thailand	Ishida, 1996-1998	Northern	Seven rural ethnic minority groups; northern Thailand; no info on selection	both	658	10.3%	7.98%	12.62%	1.87%	0.1%	Ishida, T., S. Takao, et al. (2002). "Prevalence of hepatitis B and C virus infection in rural ethnic populations of Northern Thailand." <i>J Clin Virol</i> 24(1-2): 31-5.	11744426	351
Thailand	Issaragrisil, 1997*	Bangkok and two rural regions	Healthy controls for aplastic anemic; hospitalized for trauma, acute infections such as pneumonia, bronchitis, abdominal emergencies, elective surgery	both	183	4.0%	1.16%	6.84%	1.61%	0.1%	Issaragrisil, S., D. Kaufman, et al. (1997). "Association of seropositivity for hepatitis viruses and aplastic anemia in Thailand." <i>Hepatology</i> 25(5): 1255-7.	9141447	357
Thailand	Vinitketkumnuen, 1997*	Chaing Mai, Muang district	Vegetarians and meat eaters; purpose of study was to compare aflatoxin levels in vegetarians and non-vegetarians; Chaing Mai, Muang district	both	160	16.3%	10.53%	21.97%	0.70%	0.0%	Vinitketkumnuen, U., T. Chewonarin, et al. (1997). "Aflatoxin exposure is higher in vegetarians than nonvegetarians in Thailand." <i>Nat Toxins</i> 5(4): 168-71.	9407561	369
Thailand	Chub-uppakarn, 1998*	Songkhla province, south	Children hospitalized for acute illness; randomly selected from children who attended Hat Yai hospital for acute illness affecting neither the liver nor the immune system; 72% had completed full HBV vaccination series	both	180	0.6%	-0.53%	1.63%	2.54%	0.5%	Chub-uppakarn, S., P. Panichart, et al. (1998). "Impact of the hepatitis B mass vaccination program in the southern part of Thailand." <i>Southeast Asian J Trop Med Public Health</i> 29(3): 464-8.	10437940	355
Thailand	Wiwanitkit, 1998-2000	Bangkok	Workers in Bangkok; mandatory new employee health exams; retrospective study of screening check-up exams at outpatient clinics at King Chulalongkorn Memorial Hosp	both	650	9.8%	7.51%	12.09%	1.89%	0.1%	Wiwanitkit, V. (2002). "An overview of hepatitis B serology screening check-up program among Thai workers." <i>Viral Immunol</i> 15(4): 647-9.	12516578	349

Thailand	Jutavijittum, 1998-2000	Chaing Mai province	School children age 4-16 yrs; from 7 rural schools and 3 urban schools; no info on selection or participation rate; Chaing Mai province	both	1,231	4.5%	3.34%	5.66%	2.50%	0.4%	Jutavijittum, P., A. Yousukh, et al. (2008). "Genotypes of hepatitis B virus among children in Chiang Mai, Thailand." <i>Southeast Asian J Trop Med Public Health</i> 39(3): 394-7.	18564677	338
Thailand	Poovorawan, 1999	5 provinces	Children 1-18 yrs; study to establish effect of vaccination program; locations selected to represent every region of Thailand; excluded for any signs of illness, including HIV	both	2,229	2.3%	1.67%	2.91%	2.71%	1.5%	Poovorawan, Y., A. Theamboonlers, et al. (2000). "Impact of hepatitis B immunisation as part of the EPI." <i>Vaccine</i> 19(7-8): 943-9.	11115720	353
Thailand	Ratanasuwan, 2000-2002	Bangkok and six provinces of Central Region	General population Bangkok and 6 provinces selected by multistage stratified randomization	both	1,514	4.2%	3.15%	5.17%	2.57%	0.6%	Ratanasuwan, W., A. Sonji, et al. (2004). "Serological survey of viral hepatitis A, B, and C at Thai Central Region and Bangkok: a population base study." <i>Southeast Asian J Trop Med Public Health</i> 35(2): 416-20.	15691148	343
Thailand	Chongsrisawat, 2004	4 provinces: Chiangrai (north), Udon Thani (NE), Chonburi (Center), Nakhon Si Thammarat (South)	Healthy children randomly recruited at wellbaby and outpt clinics; 4 provinces: Chiangrai (north), Udon Thani (NE), Chonburi (Center), Nakhon Si Thammarat (South)	both	2,887	1.4%	0.97%	1.83%	2.76%	3.1%	Chongsrisawat, V., P. Yoocharoen, et al. (2006). "Hepatitis B seroprevalence in Thailand: 12 years after hepatitis B vaccine integration into the national expanded programme on immunization." <i>Trop Med Int Health</i> 11(10): 1496-502.	17002723	341
Thailand	Chongsrisawat, 2004	4 provinces: Chiangrai (north), Udon Thani (NE), Chonburi (Center), Nakhon Si Thammarat (South)	Healthy adultsrandomly recruited at wellbaby and outpt clinics; 4 provinces: Chiangrai (north), Udon Thani (NE), Chonburi (Center), Nakhon Si Thammarat (South)	both	3,325	6.2%	5.35%	6.99%	2.65%	0.9%	Chongsrisawat, V., P. Yoocharoen, et al. (2006). "Hepatitis B seroprevalence in Thailand: 12 years after hepatitis B vaccine integration into the national expanded programme on immunization." <i>Trop Med Int Health</i> 11(10): 1496-502.	17002723	341
Thailand	Louisirirotchanakul, 2004*	Bangkok	Hospital pts routine HBV screening; residual samples from pts undergoing routine HBV screening at Siriraj Hopsital; tested using two different assays	both	1,003	14.3%	12.13%	16.47%	1.96%	0.1%	Louisirirotchanakul, S., C. Kanoksinsombat, et al. (2004). "Mutation of the "a" determinant of HBsAg with discordant HBsAg diagnostic kits." <i>Viral Immunol</i> 17(3): 440-4.	15357910	366
					total studies	55	250,003		100.00%	100.00%			
					males	12							
					females	15							
					both	28							

* indicates publication year; survey year not reported

Table 7: Summary of Surveys Included in Meta-Analysis: Laos											South Eastern Asia		
Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg positive (%)	95% lower CI	95% upper CI	RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
Laos	Sheikh, 2006-2008	migrants to California	Hmong immigrants living in Fresno County CA; recruited from popular Hmong locations in Fresno area; newspaper, radio, flyers, churches; screening at Hmong New Year Festival; males	males	245	16.7%	12.03%	21.37%	6.20%	1.22%	Sheikh MY, Mouanoutoua M, Walvick MD, Khang L, Singh J, Stoltz S, Mills PK. (2010) Prevalence of Hepatitis B Virus (HBV) Infection Among Hmong Immigrants in the San Joaquin Valley. J Community Health	20532597	306
Laos	Hill, 1980-X	refugees to San Diego	Pregnant women Laotian immigrants to San Diego Hmong; pregnant women to Linda Vista Health Care Center, a community clinic located in a low-income residential area of San Diego	females	95	20.0%	11.96%	28.04%	3.77%	0.41%	Hill, L. L., M. Hovell, et al. (1991). "Prevention of hepatitis B transmission in Indo-Chinese refugees with active and passive immunization." Am J Prev Med 7(1): 29-32.	1831031	304
Laos	Klontz, 1984-1985	migrants to Oakland Ca	Pregnant Laotian immigrant women; study cohort selected from birth certificate files at Alameda Co. Office of Vital records; list of names of all moms born in Asia; medical records reviewed for results of HBsAg prenatal testing	females	100	13.0%	6.41%	19.59%	4.68%	0.61%	Klontz, K. C. (1987). "A program to provide hepatitis B immunoprophylaxis to infants born to HBsAg-positive Asian and Pacific Island women." West J Med 146(2): 195-9.	3825119	380
Laos	Euler, 1990-1993	migrants to 4 urban areas (Hartford and New Haven Co CT; DeKalb and Fulton Co GA; Wayne Co MI; Dallas Co TX	Pregnant women Laotian immigrants; pregnant women delivering live infants in the US. during 1990-1993; multicenter, retrospective chart review	females	113	8.2%	3.11%	13.19%	5.88%	1.04%	Euler GL, Wooten KG, Baughman AL, Williams WW. (2003) Hepatitis B surface antigen prevalence among pregnant women in urban areas: implications for testing, reporting, and preventing perinatal transmission. Pediatrics. 2003 May;111(5 Part 2):1192-7	12728137	384
Laos	Sheikh, 2006-2008	Hmong migrants to California	Hmong immigrants living in Fresno County CA; recruited from popular Hmong locations in Fresno area; newspaper, radio, flyers, churches; screening at Hmong New Year Festival; females	females	289	16.6%	12.31%	20.89%	6.53%	1.44%	Sheikh MY, Mouanoutoua M, Walvick MD, Khang L, Singh J, Stoltz S, Mills PK. (2010) Prevalence of Hepatitis B Virus (HBV) Infection Among Hmong Immigrants in the San Joaquin Valley. J Community Health	20532597	306
Laos	CDC, 1979-1991	refugees to US	Laotian refugees to US non-Hmong; programs that screened all incoming refugees and had data for HBsAg; special refugee health clinics, local health department clinics, or offices of private-practice physicians	both	4,238	11.7%	10.73%	12.67%	9.03%	28.39%	CDC (1991) Screening for hepatitis B virus infection among refugees arriving in the United States, 1979-1991. MMWR 40(45):784-6	1944126	382
Laos	CDC, 1979-1991	refugees to US	Laotian refugees to US Hmong; programs that screened all incoming refugees and had data for HBsAg; special refugee health clinics, local health department clinics, or offices of private-practice physicians	both	8,879	15.5%	14.75%	16.25%	9.10%	46.92%	CDC (1991) Screening for hepatitis B virus infection among refugees arriving in the United States, 1979-1991. MMWR 40(45):784-6	1944126	382
Laos	Hill, 1980-?,	refugees to San Diego	Laotian immigrants to San Diego non-Hmong; outpatients and pregnant women to Linda Vista Health Care Center, a community clinic located in a low-income residential area of San Diego	both	73	11.0%	3.82%	18.18%	4.29%	0.52%	Hill, L. L., M. Hovell, et al. (1991). "Prevention of hepatitis B transmission in Indo-Chinese refugees with active and passive immunization." Am J Prev Med 7(1): 29-32.	1831031	304
Laos	Hill, 1980-?,	refugees to San Diego	General outpatients Laotian immigrants to San Diego, Hmong; outpatients and pregnant women to Linda Vista Health Care Center, a community clinic located in a low-income residential area of San Diego (146)	both	146	19.9%	13.42%	26.38%	4.76%	0.63%	Hill, L. L., M. Hovell, et al. (1991). "Prevention of hepatitis B transmission in Indo-Chinese refugees with active and passive immunization." Am J Prev Med 7(1): 29-32.	1831031	304
Laos	Paulson, 1980-1981	migrants to Minnesota	Hmong refugees to Minnesota; recently arrived in St Paul from rural highland of Laos and had medical screening; no selection described	both	469	13.1%	10.05%	16.15%	7.63%	2.85%	Paulson, R. R., K. L. Duvall, et al. (1984). "Splenomegaly in Hmong refugees." Arch Intern Med 144(2): 257-60.	6696560	303

Laos	Judson, 1981-1982	refugees to Colorado	Laotian refugees to Colorado; identified by notifications to Colorado Dept of Health from US INS, US Quarantine Service, voluntary agencies, and refugee social centers	both	84	9.5%	3.24%	15.80%	4.90%	0.67%	Judson, F. N., D. M. Lince, et al. (1984). "Health status of Southeast Asian refugees." West J Med 141(2): 183-8.	6495722	381
Laos	Hurie, 1984-1989	migrants to US	Hmong migrants to Wisconsin; Asian-born family members of Hmong children born in Wisconsin; data from chart reviews at three local health care agencies	both	754	18.7%	15.92%	21.48%	7.86%	3.43%	Hurie MB, Mast EE, Davis JP. (1992) Horizontal transmission of hepatitis B virus infection to United States-born children of Hmong refugees. Pediatrics 89(2):269-73	1734395	307
Laos	Gjerdengen, 1994-1995	refugees in Minnesota	Hmong refugees to Minnesota; clinical records reviewed of patients attending a St. Paul family practice residency clinic; all refugees and pregnant women have been routinely screened since the 1980s	both	434	17.7%	14.11%	21.29%	7.16%	2.06%	Gjerdengen, D. K. and V. Lor (1997). "Hepatitis B status of Hmong patients." J Am Board Fam Pract 10(5): 322-8.	9297656	305
Laos	Caruana, 1998,	migrants to Melbourne	Immigrants to Australia; "convenience sample from the Laotian community in Melbourne"; letters sent to 216 Laotian households selected from databases of participating GPs inviting subjects	both	95	9.5%	3.58%	15.36%	5.20%	0.77%	Caruana, S. R., H. A. Kelly, et al. (2005). "Knowledge about hepatitis and previous exposure to hepatitis viruses in immigrants and refugees from the Mekong Region." Aust N Z J Public Health 29(1): 64-8.	15782875	379
Laos	Shuler, 2001-2004	migrants to US	Foreign-born Laotians living in Georgia US; initially identified by linking vital records data to the state Refugee Health program of the DHR; mailed invite to eligible families; solicited at religious festivals, worksites, and health fairs, clinics	both	75	10.7%	3.70%	17.70%	4.40%	0.54%	Shuler, C. M., A. E. Fiore, et al. (2009). "Reduction in hepatitis B virus seroprevalence among U.S.-born children of foreign-born Asian parents -- benefit of universal infant hepatitis B vaccination." Vaccine 27(43): 5942-7.	19679217	383
Laos	Sa-Nguanmoo, 2010*	migrants to Thailand	Migrant workers from Laos in Thailand; serum samples collected for a routine health check-up	both	787	6.9%	5.13%	8.67%	8.61%	8.48%	Sa-Nguanmoo, P., P. Tangkijvanich, et al. (2010). "Molecular epidemiological study of hepatitis B virus among migrant workers from Cambodia, Laos, and Myanmar to Thailand." J Med Virol 82(8): 1341-1349.	20572086	378
					total studies	16	16,876		100.00%	100.00%			
					males	1							
					females	4							
					both	11							

* indicates publication year; survey year not reported

Table 8: Summary of Surveys Included in Meta-Analysis: Cambodia												South Eastern Asia	
Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg positive (%)	95% lower CI	95% upper CI	RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
Cambodia	Judson 1981-1982	refugees to Colorado	Cambodian refugees to Colorado; identified by notifications to INS, US Quarantine Service, voluntary agencies, and refuge social service centers. CO Dept Public Health noticed Denver Public Health who did screenings; about 95% of refugees screened; males	males	68	17.6%	8.55%	26.65%	4.65%	0.4%	Judson, F. N., D. M. Lince, et al. (1984). "Health status of Southeast Asian refugees." West J Med 141(2): 183-8.	6495722	284
Cambodia	Thuring, 1990-1991	rural area of Takeo	Men in hospital for surgery; men in hospital for surgery; no signs of jaundice or overt liver or kidney disease; males	males	151	9.0%	4.44%	13.56%	6.34%	1.5%	Thuring, E. G., H. I. Joller-Jemelka, et al. (1993). "Prevalence of markers of hepatitis viruses A, B, C and of HIV in healthy individuals and patients of a Cambodian province." Southeast Asian J Trop Med Public Health 24(2): 239-49.	7505485	280
Cambodia	Seoung, 2006	all 24 provinces	Children <5 yo, nationwide survey using a simple and rapid test for HBsAg and multi-stage stratified cluster sampling design; males	males	754	4.8%	3.27%	6.33%	7.13%	13.1%	Seoung, S. C., M. Rani, et al. (2009). "Results from nationwide hepatitis B serosurvey in Cambodia using simple and rapid laboratory test: implications for National Immunization Program." Am J Trop Med Hyg 81(2): 252-7.	19635879	286
Cambodia	Judson, 1981-1982	refugees to Colorado	Cambodian refugees to Colorado; identified by notifications to INS, US Quarantine Service, voluntary agencies, and refuge social service centers. CO Dept Public Health noticed Denver Public Health who did screenings; about 95% of refugees screened; females	females	70	10.0%	2.97%	17.03%	5.42%	0.6%	Judson, F. N., D. M. Lince, et al. (1984). "Health status of Southeast Asian refugees." West J Med 141(2): 183-8.	6495722	284
Cambodia	Klontz, 1984-1985,	migrants to Oakland Ca	Pregnant Cambodian immigrant women to Oakland; study cohort selected from birth certificate files at Alameda Co. Office of Vital records: list of names of all moms born in Asia	females	135	8.2%	3.53%	12.77%	6.33%	1.4%	Klontz, K. C. (1987). "A program to provide hepatitis B immunoprophylaxis to infants born to HBsAg-positive Asian and Pacific Island women." West J Med 146(2): 195-9.	3825119	281
Cambodia	Euler, 1990-1993	migrants to 4 urban areas (Hartford and New Haven Co CT; DeKalb and Fulton Co GA; Wayne Co MI; Dallas Co TX	Pregnant Cambodian women in US cities; multicenter, retrospective chart review	females	61	11.1%	3.19%	18.93%	5.09%	0.5%	Euler GL, Wooten KG, Baughman AL, Williams WW. (2003) Hepatitis B surface antigen prevalence among pregnant women in urban areas: implications for testing, reporting, and preventing perinatal transmission. Pediatrics. 2003 May;111(5 Part 2):1192-7	12728137	377
Cambodia	Thuring, 1990-1991	rural area of Takeo	Pregnant women participating in mother-child program rural area of Takeo	females	154	6.0%	2.25%	9.75%	6.61%	2.2%	Thuring, E. G., H. I. Joller-Jemelka, et al. (1993). "Prevalence of markers of hepatitis viruses A, B, C and of HIV in healthy individuals and patients of a Cambodian province." Southeast Asian J Trop Med Public Health 24(2): 239-49.	7505485	280
Cambodia	Seoung, 2006	all 24 provinces	Children <5 yo, nationwide survey using a simple and rapid test for HBsAg and multi-stage stratified cluster sampling design; females	females	894	2.2%	1.24%	3.16%	7.20%	33.1%	Seoung, S. C., M. Rani, et al. (2009). "Results from nationwide hepatitis B serosurvey in Cambodia using simple and rapid laboratory test: implications for National Immunization Program." Am J Trop Med Hyg 81(2): 252-7.	19635879	286
Cambodia	CDC, 1979-91	refugees to US	Cambodian refugees to US; programs that screened all incoming refugees and had data for HBsAg; special refugee health clinics, local health department clinics, or offices of private-practice physicians	both	4,748	15.2%	14.18%	16.22%	7.19%	29.3%	CDC (1991) Screening for hepatitis B virus infection among refugees arriving in the United States, 1979-1991. MMWR 40(45):784-6	1944126	288

Cambodia	Erickson, 1979-1980	refugees to US	Cambodian refugees to Connecticut; refugees seen at Univ Conn Burgdorf Clinic, Hartford; screening of all newly arrived refugees to the area in cooperation with local sponsoring agencies	both	194	20.0%	14.37%	25.63%	5.96%	1.0%	Erickson RV, Hoang GN.	7406083	287
Cambodia	Catanzaro, 1980-1981	migrants to San Diego	Refugees to San Diego; participants in health screening program at Center for Indochinese Health Education at UCSD; refugees referred to the center from resettlement agencies, mutual assistance association, and community college	both	156	13.5%	8.14%	18.86%	6.06%	1.1%	Catanzaro, A. and R. J. Moser (1982). "Health status of refugees from Vietnam, Laos, and Cambodia." JAMA 247(9): 1303-8.	7062547	283
Cambodia	Shuler, 2001-2004	migrants to US	Foreign-born Cambodians living in Georgia US; initially identified by linking vital records data to the state Refugee Health program of the DHR; mailed invite to eligible families; solicited at religious festivals, worksites, and health fairs, clinics	both	89	14.6%	7.26%	21.94%	5.30%	0.6%	Shuler, C. M., A. E. Fiore, et al. (2009). "Reduction in hepatitis B virus seroprevalence among U.S.-born children of foreign-born Asian parents -- benefit of universal infant hepatitis B vaccination." Vaccine 27(43): 5942-7.	19679217	376
Cambodia	Caruana, 2002	migrants to Australia	Migrants to Australia; "convenience sample from the Cambodian community in Melbourne"; letters sent to 250 Cambodian households selected from databases of participating GPs	both	232	8.1%	4.61%	11.63%	6.68%	2.5%	Caruana, S. R., H. A. Kelly, et al. (2005). "Knowledge about hepatitis and previous exposure to hepatitis viruses in immigrants and refugees from the Mekong Region." Aust N Z J Public Health 29(1): 64-8.	15782875	282
Cambodia	Sa-Nguanmoo, 2010*	migrants to Thailand	Migrant workers from Cambodia in Thailand; serum samples collected for a routine health check-up	both	1,119	10.8%	8.98%	12.62%	7.09%	9.3%	Sa-Nguanmoo, P., P. Tangkijvanich, et al. (2010). "Molecular epidemiological study of hepatitis B virus among migrant workers from Cambodia, Laos, and Myanmar to Thailand." J Med Virol 82(8): 1341-1349.	20572086	285
Cambodia	Thuring, 1990-1991	rural area of Takeo	Healthy children in rural area; children participating in mother-child care program or who underwent minor surgical procedures	both	200	9.0%	5.03%	12.97%	6.54%	1.9%	Thuring, E. G., H. I. Joller-Jemelka, et al. (1993). "Prevalence of markers of hepatitis viruses A, B, C and of HIV in healthy individuals and patients of a Cambodian province." Southeast Asian J Trop Med Public Health 24(2): 239-49.	7505485	280
Cambodia	Sarmati, 1997	Sdau village	Village population, Sdau; volunteers originally part of study of Schistosomiasis mekongi; no selection described	both	164	9.2%	4.74%	13.56%	6.40%	1.6%	Sarmati, L., M. Andreoni, et al. (2003). "Infection with human herpesvirus-8 and its correlation with hepatitis B virus and hepatitis C virus markers among rural populations in Cambodia." Am J Trop Med Hyg 68(4): 501-2.	12875304	279
				total studies	16	9,189			100.00%	100.00%			
				males	3								
				females	5								
				both	8								

* indicates publication year; survey year not reported

Table 9: Summary of Surveys Included in Meta-Analysis: Indonesia South Eastern Asia

Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg positive (%)	95% lower CI	95% upper CI	RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
Indonesia	Breguet, 1978	Tenganan, an isolated community of Bali	Children and adults Tenganan, an isolated community of Bali; selection and eligibility not described; sample was 54% of the total population of the village; males	males	160	3.8%	0.81%	6.69%	4.41%	0.82%	Breguet, G., R. Ney, et al. (1982). "Genetic survey of an isolated community in Bali, Indonesia. I. Blood groups, serum proteins and hepatitis B serology." <i>Hum Hered</i> 32(1): 52-61.	7068159	294
Indonesia	Akbar, 1994	urban subdistrict of Central Jakarta	General population adults Central Jakarta; randomly selected 340 households (of 7017) in the area; all household members ≥15 yo asked to participate; 89% of invited agreed; male	males	456	4.8%	2.85%	6.79%	6.27%	1.83%	Akbar, N., B. Basuki, et al. (1997). "Ethnicity, socioeconomic status, transfusions and risk of hepatitis B and hepatitis C infection." <i>J Gastroenterol Hepatol</i> 12(11): 752-7.	9430042	296
Indonesia	Liu, 2004-2006	migrants to Hsin-Chu County, Taiwan	Pregnant Indonesian women in Taiwan; all pregnant women in Hsin-Chu county; from info systems of antenatal screening program (nationwide mandatory reporting system); females	females	426	3.5%	1.75%	5.25%	6.75%	2.32%	Liu, C. Y., N. T. Chang, et al. (2007). "Seroprevalence of HBV in immigrant pregnant women and coverage of HBIG vaccine for neonates born to chronically infected immigrant mothers in Hsin-Chu County, Taiwan." <i>Vaccine</i> 25(44): 7706-10.	17767981	299
Indonesia	Lin, 1996-2005	migrants to Taiwan (Fooyin Hospital)	Pregnant Indonesian women in Taiwan; antenatal screening at Fooyin Hospital	females	171	8.8%	4.55%	13.05%	2.80%	0.39%	Lin, C. C., H. S. Hsieh, et al. (2008). "Hepatitis B virus infection among pregnant women in Taiwan: comparison between women born in Taiwan and other southeast countries." <i>BMC Public Health</i> 8: 49.	18254978	302
Indonesia	Breguet, 1978	Tenganan, an isolated community of Bali	Children and adults Tenganan, an isolated community of Bali; sample was 54% of the total population of the village; females	females	141	4.3%	0.93%	7.59%	3.83%	0.64%	Breguet, G., R. Ney, et al. (1982). "Genetic survey of an isolated community in Bali, Indonesia. I. Blood groups, serum proteins and hepatitis B serology." <i>Hum Hered</i> 32(1): 52-61.	7068159	294
Indonesia	Reniers, 1985	Bandung, West Java	Pregnant women; consecutive women screened at prenatal consultation during 10 day period Bandung, West Java; females	females	302	4.7%	2.31%	7.09%	5.40%	1.24%	Reniers, J., R. Vranckx, et al. (1987). "Prevalence and determinants of hepatitis B virus markers in pregnant women in West Java, Indonesia." <i>J Trop Med Hyg</i> 90(5): 249-53.	3669127	292
Indonesia	Wiharta, 1986	Jakarta	Pregnant women antenatal clinic Jakarta; women who visited Dr Cipto Mangunkusumo Hospital Jakarta; females	females	739	5.2%	3.60%	6.80%	7.07%	2.76%	Wiharta, A. S., A. Sulaiman, et al. (1986). "The prevalence of HBsAg and anti HBs in pregnant women and young generation in Jakarta, Indonesia." <i>Paediatr Indones</i> 26(7-8): 156-60.	3774343	293
Indonesia	Vranckx, 1986	Bandung, West Java	Pregnant women at antenatal clinics at two hospitals (Hasan Sadikan and Boromeus) in Bandung; 85% came from Bandung area, 11% from other parts of Java, and 4 % from other islands"	females	926	2.8%	1.75%	3.87%	8.23%	6.25%	Vranckx, R., J. Reniers, et al. (1988). "Prevalence of anti-delta antibodies in pregnant women in Bandung, Indonesia." <i>Trop Geogr Med</i> 40(1): 17-9.	3381311	301
Indonesia	Akbar, 1994	urban subdistrict of Central Jakarta	General population adults Central Jakarta; randomly selected from households; all household members ≥15 yo asked to participate; 89% of invited agreed; females	females	529	3.2%	1.71%	4.71%	7.29%	3.14%	Akbar, N., B. Basuki, et al. (1997). "Ethnicity, socioeconomic status, transfusions and risk of hepatitis B and hepatitis C infection." <i>J Gastroenterol Hepatol</i> 12(11): 752-7.	9430042	296
Indonesia	Richards, 1996*	Jakarta	Pregnant women Jakarta; no selection described in abstract	females	502	5.7%	3.63%	7.67%	6.15%	1.74%	Richards, A. L., J. G. Perrault, et al. (1996). "A non-invasive assessment of hepatitis B virus carrier status using saliva samples." <i>Southeast Asian J Trop Med Public Health</i> 27(1): 80-4.	9031406	295

Indonesia	Surya, 2003	eight jurisdictions of Bali	Pregnant women; routine antenatal surveys at major hospitals in 8 jurisdictions of Bali	females	2,450	1.9%	1.36%	2.44%	9.11%	24.22%	Surya, I. G., K. Kornia, et al. (2005). "Serological markers of hepatitis B, C, and E viruses and human immunodeficiency virus type 1 infections in pregnant women in Bali, Indonesia." <i>J Med Virol</i> 75(4): 499-503.	15714491	298
Indonesia	Brown, 1985*	Bali (4 villages)	General population; convenience sample of students, hospitalized patients (non-hepatic illness), and villagers	both	286	2.1%	0.44%	3.76%	6.94%	2.56%	Brown, P., G. Breguet, et al. (1985). "Serologic markers of hepatitis A and B in the population of Bali, Indonesia." <i>Am J Trop Med Hyg</i> 34(3): 616-9.	2988352	291
Indonesia	Lubis, 1985	Jakarta and Medan	Mobil Oil employees and dependents randomly selected from Medan office; 20-50% of employees at the the two offices in Jakarta and Medan	both	403	1.2%	0.14%	2.26%	8.24%	6.26%	Lubis, C. P. and A. Judin (1990). "Study on hepatitis B virus (HBV) infection and hepatitis B virus carrier state in children at two Mobil Oil Indonesia locations in Indonesia." <i>Paediatr Indones</i> 30(5-6): 162-7.	2075016	290
Indonesia	Wiharta, 1986	Jakarta	Children inpatients and outpatients at Dept of Child Health, Mangunkusumo Hopsital, Jakarta	both	360	9.2%	6.19%	12.15%	4.35%	0.80%	Wiharta, A. S., A. Sulaiman, et al. (1986). "The prevalence of HBsAg and anti HBs in pregnant women and young generation in Jakarta, Indonesia." <i>Paediatr Indones</i> 26(7-8): 156-60.	3774343	293
Indonesia	van Hattum, 1997	Riau province; Batam (near Singapore) and surroundign islands	General population Batam, Riau province near Singapore; part of a large HBV vaccination study to described distribution of HBV markers and find a basis for advice on vaccination measures	both	9,314	4.0%	3.63%	4.43%	9.27%	44.38%	van Hattum, J., G. J. Boland, et al. (2003). "Transmission profile of hepatitis B virus infection in the Batam region, Indonesia. Evidence for a predominantly horizontal transmission profile." <i>Adv Exp Med Biol</i> 531: 177-83.	12916789	297
Indonesia	Achwan, 2005	Tahuna, capital city of Sangihe-Talaud Archipelago, islands in the NE tip of Indonesia	General population adults Tahuna, NE islands; no selection described	both	164	4.9%	1.58%	8.18%	3.88%	0.65%	Achwan, W. A., Z. Muttaqin, et al. (2007). "Epidemiology of hepatitis B, C, and E viruses and human immunodeficiency virus infections in Tahuna, Sangihe-Talaud Archipelago, Indonesia." <i>Intervirolology</i> 50(6): 408-11.	18185013	300
				total studies	16	17,329			100.00%	100.00%			
				males	2								
				females	9								
				both	5								

* indicates publication year; survey year not reported

Table 10: Summary of Surveys Included in Meta-Analysis: Myanmar South Eastern Asia

Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg positive (%)	95% lower CI	95% upper CI	RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
Myanmar	Rein, 2006-2008	migrants to US	Refugees arriving in the US 2006-2008; information from states with an active refugee health coordinator	both	2,436	12.4%	11.09%	13.71%	44.1%	60.9%	Rein DB, Lesesne SB, O'Fallon A, Weinbaum CM (2009) Prevalence of hepatitis B surface antigen among refugees entering the United States between 2006 and 2008. <i>Hepatology</i> . 2010 Feb;51(2):431-4	19902482	391
Myanmar	Denburg, 2006	refugees to Canada	Ethnic Karen refugees to Canada; had been living along the Thai-Myanmar border; chart review of exams after arrival in Toronto	both	64	14.1%	5.57%	22.63%	5.4%	1.4%	Denburg A, Rashid M, Brophy J, Curtis T, Malloy P, Audley J, Pegg W, Hoffman S, Banerji A (2007) Initial health screening results for Karen refugees: a retrospective review. <i>Can Commun Dis Rep</i> 33(13):16-22	18161207	392
Myanmar	Chaves, 2004-2008	refugees to Australia	Burmese refugees to Australia; retrospective cohort study of all Burmese refugees who attended the Victorian Infectious Diseases Service outpatient clinics at the Royal Melbourne Hospital 2004-2008)	both	156	14.0%	8.55%	19.45%	11.6%	3.5%	Chaves NJ, Gibney KB, Leder K, O'Brien DP, Marshall C, Biggs BA. (2009) Screening practices for infectious diseases among Burmese refugees in Australia. <i>Emerg Infect Dis</i> 5(11):1769-72	19891864	393
Myanmar	Sa-Nguanmoo, 2010*	migrants to Thailand	Migrant workers from Myanmar in Thailand; serum samples collected for a routine health check-up	both	1,103	9.7%	7.95%	11.45%	38.9%	34.2%	Sa-Nguanmoo, P., P. Tangkijvanich, et al. (2010). "Molecular epidemiological study of hepatitis B virus among migrant workers from Cambodia, Laos, and Myanmar to Thailand." <i>J Med Virol</i> 82(8): 1341-1349.	20572086	394
				total studies	4	3,759			100.00%	100.00%			
				males	0								
				females	0								
				both	4								

* indicates publication year; survey year not reported

Table 11: Summary of Surveys Included in Meta-Analysis: Malaysia												South Eastern Asia	
Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg positive (%)	95% lower CI	95% upper CI	RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
Malaysia	Tan, 1986*		Medical patients admitted with illnesses other than overt hepatitis to medical wards of rural and urban hospitals; different age groups, sex and racial groups were represented; no participation rate; no other sampling info; males	males	272	16.5%	12.09%	20.91%	5.14%	0.0%	Tan, D. S., M. Zaini Rahman, et al. (1986). "Hepatitis B markers in non-icteric medical patients in Malaysia." Southeast Asian J Trop Med Public Health 17(2): 214-8.	3538435	310
Malaysia	Ross, 1988*		Males among 472 blood donors; 160 rural volunteers (5-67 yrs); 198 children 3 mos-12 yrs; no sampling info	males	721	8.9%	6.80%	10.96%	9.47%	0.0%	Ross, I. N., P. K. Dass, et al. (1988). "Epidemiological features of hepatitis B virus infection in Malaysians." Med J Malaysia 43(4): 278-83.	3241593	309
Malaysia	Gan, 1991*	Kuala Lumpur	Patients at family planning clinic; pts seeking care at private family practice clinic for illness other than STD; male	males	84	4.8%	0.23%	9.37%	4.93%	0.0%	Gan, C. Y., S. F. Yap, et al. (1991). "Hepatitis B infection among Chinese STD patients in Kuala Lumpur, Malaysia." Sex Transm Dis 18(2): 84-8.	1862464	308
Malaysia	Lopez, 1984	Kuala Lumpur	Pregnant women Kuala Lumpur; National Blood Services Center data; females	females	6,899	3.5%	3.08%	3.94%	12.29%	0.5%	Lopez, C. G. (1985). "Epidemiology of persistent hepatitis B virus infection." Malays J Pathol 7: 7-10.	3843253	311
Malaysia	Tan, 1986*		Medical patients; "admitted with illnesses other than overt hepatitis to medical wards of rural and urban hospitals"; different age groups, sex and racial groups were represented"; no participation rate; no other sampling info; females	females	222	19.8%	14.56%	25.04%	4.14%	0.0%	Tan, D. S., M. Zaini Rahman, et al. (1986). "Hepatitis B markers in non-icteric medical patients in Malaysia." Southeast Asian J Trop Med Public Health 17(2): 214-8.	3538435	310
Malaysia	Ross, 1988*		Females among: 605 pregnant women; 472 blood donors; 160 rural volunteers (5-67 yrs); 198 children 3mos-12 yrs; no sampling info; females	females	705	5.4%	3.72%	7.06%	10.35%	0.0%	Ross, I. N., P. K. Dass, et al. (1988). "Epidemiological features of hepatitis B virus infection in Malaysians." Med J Malaysia 43(4): 278-83.	3241593	309
Malaysia	Gan, 1991*	Kuala Lumpur	Patients at family planning clinic; pts seeking care at private family practice clinic for illness other than STD; females	females	150	8.0%	3.66%	12.34%	5.24%	0.0%	Gan, C. Y., S. F. Yap, et al. (1991). "Hepatitis B infection among Chinese STD patients in Kuala Lumpur, Malaysia." Sex Transm Dis 18(2): 84-8.	1862464	308
Malaysia	Wan, 2005-2007	migrants to US	Malaysian immigrants to NYC; newly screened at a community-based large-scale screening conducted by Asian American Hepatitis Program in NYC	both	349	3.9%	1.87%	5.93%	9.57%	0.0%	Wan K, Peng CH, Sherman A, Tsang T, et al. (2008) Hepatitis B infection in Malaysian immigrants of New York City. American Public Health Association 136th Annual Meeting, October 25-29, 2008 abstract 187313	NPM	314
Malaysia	Rein, 2006-2008	migrants to US	Refugees arriving in the US 2006-2008; information from states with an active refugee health coordinator	both	34	8.8%	-0.72%	18.32%	1.63%	0.0%	Rein DB, Lesesne SB, O'Fallon A, Weinbaum CM (2010) Prevalence of hepatitis B surface antigen among refugees entering the United States between 2006 and 2008. Hepatology. 2010 Feb;51(2):431-4	19902482	385
Malaysia	Ng, 1985	all states	Schoolchildren born 1985-1988 BEFORE introduction of nationwide Expanded Immunization Program (EPI) in 1989	both	25,066	1.7%	1.54%	1.86%	12.44%	3.4%	Ng, K. P., T. L. Saw, et al. (2005). "Impact of the Expanded Program of Immunization against hepatitis B infection in school children in Malaysia." Med Microbiol Immunol 194(3): 163-8.	15834754	312
Malaysia	Ng, 1997	all states	Schoolchildren 1989-1996 AFTER introduction of nationwide Expanded Immunization Program (EPI) in 1989	both	164,961	0.4%	0.37%	0.43%	12.46%	95.2%	Ng, K. P., T. L. Saw, et al. (2005). "Impact of the Expanded Program of Immunization against hepatitis B infection in school children in Malaysia." Med Microbiol Immunol 194(3): 163-8.	15834754	312
Malaysia	Merican, 1997		Merican 1997, general population; healthy volunteers; no selection in abstract	both	17,048	5.2%	4.91%	5.57%	12.36%	0.8%	Merican I, et. Al (1999) Epidemiology of hepatitis B and C in Malaysia. J Hepat Biliary Pancre Cancer 6 (Supple 1):4, 20: 1999	NPM	313

* indicates publication year; survey year not reported	total studies	12	216,511	100.00%	100.00%
	males	3			
	females	4			
	both	5			

Table 12: Summary of Surveys Included in Meta-Analysis: Singapore												South Eastern Asia	
Country	Study (survey year*)	Region	Population and sampling method	Sex	Sample (n)	HBsAg positive (%)	95% lower CI	95% upper CI	RE weight (%)	FE weight (%)	Reference	Access No	Ref No.
Singapore	Ha, 1978-82		Children; all new pediatric admissions into a general pediatric ward; no eligibility, selection, or participation rate; males	males	266	15.0%	10.71%	19.29%	2.55%	0.1%	Ha, C. S., G. C. Ngoh, et al. (1983). "Immune status of various populations to hepatitis B virus in Singapore and a strategy for its prevention and immunoprophylaxis." <i>Dev Biol Stand</i> 54: 295-305.	6653887	332
Singapore	Ha, 1978-82	not reported	General population; factory workers, routine health screening, women from family planning clinics, blood donors; no further info; males	males	112	6.3%	1.77%	10.73%	2.44%	0.1%	Ha, C. S., G. C. Ngoh, et al. (1983). "Immune status of various populations to hepatitis B virus in Singapore and a strategy for its prevention and immunoprophylaxis." <i>Dev Biol Stand</i> 54: 295-305.	6653887	332
Singapore	Phoon, 1979-84	Chinese in Singapore	Chinese professional workers ongoing prospective cohort study of association of HBV and HCC; males	males	1,232	8.5%	6.94%	10.06%	4.37%	0.6%	Phoon, W. O., N. P. Fong, et al. (1987). "A study on the prevalence of hepatitis B surface antigen among Chinese adult males in Singapore." <i>Int J Epidemiol</i> 16(1): 74-8.	3570625	329
Singapore	Phoon, 1979-84	Chinese in Singapore	Chinese clerical workers ongoing prospective cohort study of association of HBV and HCC since 1979; selection not specified; males	males	1,529	9.7%	8.22%	11.18%	4.42%	0.6%	Phoon, W. O., N. P. Fong, et al. (1987). "A study on the prevalence of hepatitis B surface antigen among Chinese adult males in Singapore." <i>Int J Epidemiol</i> 16(1): 74-8.	3570625	329
Singapore	Phoon, 1979-84	Chinese in Singapore	Chinese agricultural and factory workers; unskilled laborers; ongoing prospective cohort study of association of HBV and HCC since 1979; males	males	2,277	10.3%	9.05%	11.55%	4.55%	0.9%	Phoon, W. O., N. P. Fong, et al. (1987). "A study on the prevalence of hepatitis B surface antigen among Chinese adult males in Singapore." <i>Int J Epidemiol</i> 16(1): 74-8.	3570625	329
Singapore	Phoon, 1979-84	Chinese in Singapore	Chinese unemployed or retired; ongoing prospective cohort study of association of HBV and HCC since 1979; selection not specified; males	males	3,791	10.5%	9.52%	11.48%	4.68%	1.4%	Phoon, W. O., N. P. Fong, et al. (1987). "A study on the prevalence of hepatitis B surface antigen among Chinese adult males in Singapore." <i>Int J Epidemiol</i> 16(1): 74-8.	3570625	329
Singapore	Quak, 1981	Singapore	All children admitted to Singapore General Hospital Jun-Aug; males	males	282	13.5%	9.51%	17.49%	2.73%	0.1%	Quak, S. H., R. Singh, et al. (1983). "The immune status of Singapore children to hepatitis B virus." <i>Aust Paediatr J</i> 19(2): 100-3.	6605143	331
Singapore	[no author] 1984		National servicemen; no selection described; males	males	1,172	7.9%	6.36%	9.44%	4.38%	0.6%	(1990). "Hepatitis B. Prevalence of HBV markers in various population groups." <i>Wkly Epidemiol Rec</i> 65(11): 81-3.	2386666	326
Singapore	Phoon, 1988*		Apparently healthy persons and first time blood donors; 303 first time blood donors; 358 apparently healthy persons; 5,324 non-hepatic hospital patients; 343 non-hepatic outpatients; males	males	6,328	9.9%	9.16%	10.64%	4.77%	2.5%	Phoon, W. O., N. P. Fong, et al. (1988). "History of blood transfusion, tattooing, acupuncture and risk of hepatitis B surface antigenaemia among Chinese men in Singapore." <i>Am J Public Health</i> 78(8): 958-60.	3389434	328
Singapore	Mah, 1988-89		Persons presenting for vaccination at four private clinics; no information on eligibility, selection, or participation rate; males	males	748	6.7%	4.89%	8.47%	4.22%	0.4%	Mah, G. K. and A. Yeo (1990). "Preimmunisation hepatitis B screening in Singapore--a viewpoint from private sector clinics." <i>Ann Acad Med Singapore</i> 19(3): 339-43.	2144101	325
Singapore	Heng, 1990-91		Healthy students and govt employees whose blood was collected for other health surveys; males	males	418	4.5%	2.51%	6.49%	4.09%	0.3%	Heng, B. H., K. T. Goh, et al. (1995). "Prevalence of hepatitis B virus (HBV) infection in Singapore men with sexually transmitted diseases and HIV infection: role of sexual transmission in a city state with intermediate HBV endemicity." <i>J Epidemiol Community Health</i> 49(3): 309-13.	7629470	333

Singapore	James, 1999		General Singapore population 18-69 yrs; participants in National Health Survey 2004; selected by combination of disproportionate stratified sampling and systematic sampling from the reference population..."; males	males	2,356	4.5%	3.66%	5.34%	4.74%	1.9%	James, L., C. W. Fong, et al. (2001). "Hepatitis B Seroprevalence Study 1999." Singapore Med J 42(9): 420-4.	11811609	336
Singapore	Ha, 1978-82		General population; factory workers, routine health screening, women from family planning clinics, blood donors; females	females	331	3.6%	1.62%	5.64%	4.07%	0.3%	Ha, C. S., G. C. Ngoh, et al. (1983). "Immune status of various populations to hepatitis B virus in Singapore and a strategy for its prevention and immunoprophylaxis." Dev Biol Stand 54: 295-305.	6653887	332
Singapore	Ha, 1978-82		Children; all new pediatric admissions into a general pediatric ward; no eligibility, selection, or participation rate; females	females	165	4.2%	1.17%	7.31%	3.33%	0.1%	Ha, C. S., G. C. Ngoh, et al. (1983). "Immune status of various populations to hepatitis B virus in Singapore and a strategy for its prevention and immunoprophylaxis." Dev Biol Stand 54: 295-305.	6653887	332
Singapore	Chan, 1980-1982		Pregnant women attending an antenatal clinic at a major maternity hospital	females	2,273	4.4%	3.56%	5.24%	4.73%	1.9%	Chan, S. H., K. L. Tan, et al. (1985). "Maternal-child hepatitis B virus transmission in Singapore." Int J Epidemiol 14(1): 173-7.	3988432	330
Singapore	Quak, 1981	Singapore	All children admitted to Singapore General Hospital Jun-Aug; females	females	176	6.8%	3.08%	10.52%	2.89%	0.1%	Quak, S. H., R. Singh, et al. (1983). "The immune status of Singapore children to hepatitis B virus." Aust Paediatr J 19(2): 100-3.	6605143	331
Singapore	Goh, 1985-1987		Pregnant women; women attending govt maternal and child health clinics were screened as part of a vaccination program	females	52,191	3.5%	3.38%	3.70%	4.90%	53.6%	Goh, K. T., S. Doraisingham, et al. (1989). "The hepatitis B immunization programme in Singapore." Bull World Health Organ 67(1): 65-70.	2523251	327
Singapore	Goh, 1987-1988		Pregnant women; women attending govt maternal and child health clinics were screened as part of a vaccination program	females	16,654	3.4%	3.14%	3.70%	4.88%	17.7%	Phoon, W. O., N. P. Fong, et al. (1988). "History of blood transfusion, tattooing, acupuncture and risk of hepatitis B surface antigenaemia among Chinese men in Singapore." Am J Public Health 78(8): 958-60.	3389434	328
Singapore	Mah, 1988-1989		Persons presenting for HBV vaccination at four private clinics; presenting for vaccination at four private clinics; no information on eligibility, selection, or participation rate; females	females	852	3.2%	1.99%	4.35%	4.58%	1.0%	Mah, G. K. and A. Yeo (1990). "Preimmunisation hepatitis B screening in Singapore--a viewpoint from private sector clinics." Ann Acad Med Singapore 19(3): 339-43.	2144101	325
Singapore	James, 1998		General Singapore population 18-69 yrs; participants in National Health Survey 2004; selected by combination of disproportionate stratified sampling and systematic sampling from the reference population..."; females	females	2,342	3.0%	2.31%	3.69%	4.79%	2.8%	James, L., C. W. Fong, et al. (2001). "Hepatitis B Seroprevalence Study 1999." Singapore Med J 42(9): 420-4.	11811609	336
Singapore	[no author], 1987		Office workers, no selection described	both	906	4.1%	2.81%	5.39%	4.52%	0.8%	(1990). "Hepatitis B. Prevalence of HBV markers in various population groups." Wkly Epidemiol Rec 65(11): 81-3.	2386666	326
Singapore	Goh, 1993		General population, unvaccinated; "the 1993 national seroepidemiological survey"; no further info provided	both	303	5.6%	3.01%	8.19%	3.67%	0.2%	Goh, K. T. (1996). "Hepatitis B immunisation in Singapore." Lancet 348(9038): 1385-6.	8918300	334
Singapore	Goh, 1993,		General population vaccinated; "the 1993 national seroepidemiological survey"; no further info provided	both	575	0.3%	-0.15%	0.75%	4.85%	6.7%	Goh, K. T. (1996). "Hepatitis B immunisation in Singapore." Lancet 348(9038): 1385-6.	8918300	335
Singapore	James, 2004		General Singapore population 18-69 yrs; participants in National Health Survey 2004; selected by combination of disproportionate stratified sampling and systematic sampling from the reference population..."	both	4,034	2.7%	2.20%	3.20%	4.84%	5.4%	Ang LW (2009) Seroprevalence of hepatitis B virus infection in adults in Singapore. Epidemiological News Bulletin 35(1):10-14	NPM	336
				total studies	24	101,313			100.00%	100.00%			
				males	12								
				females	8								
				both	4								

* indicates publication year; survey year not reported