Supplemental Table 1. ICD codes for infections

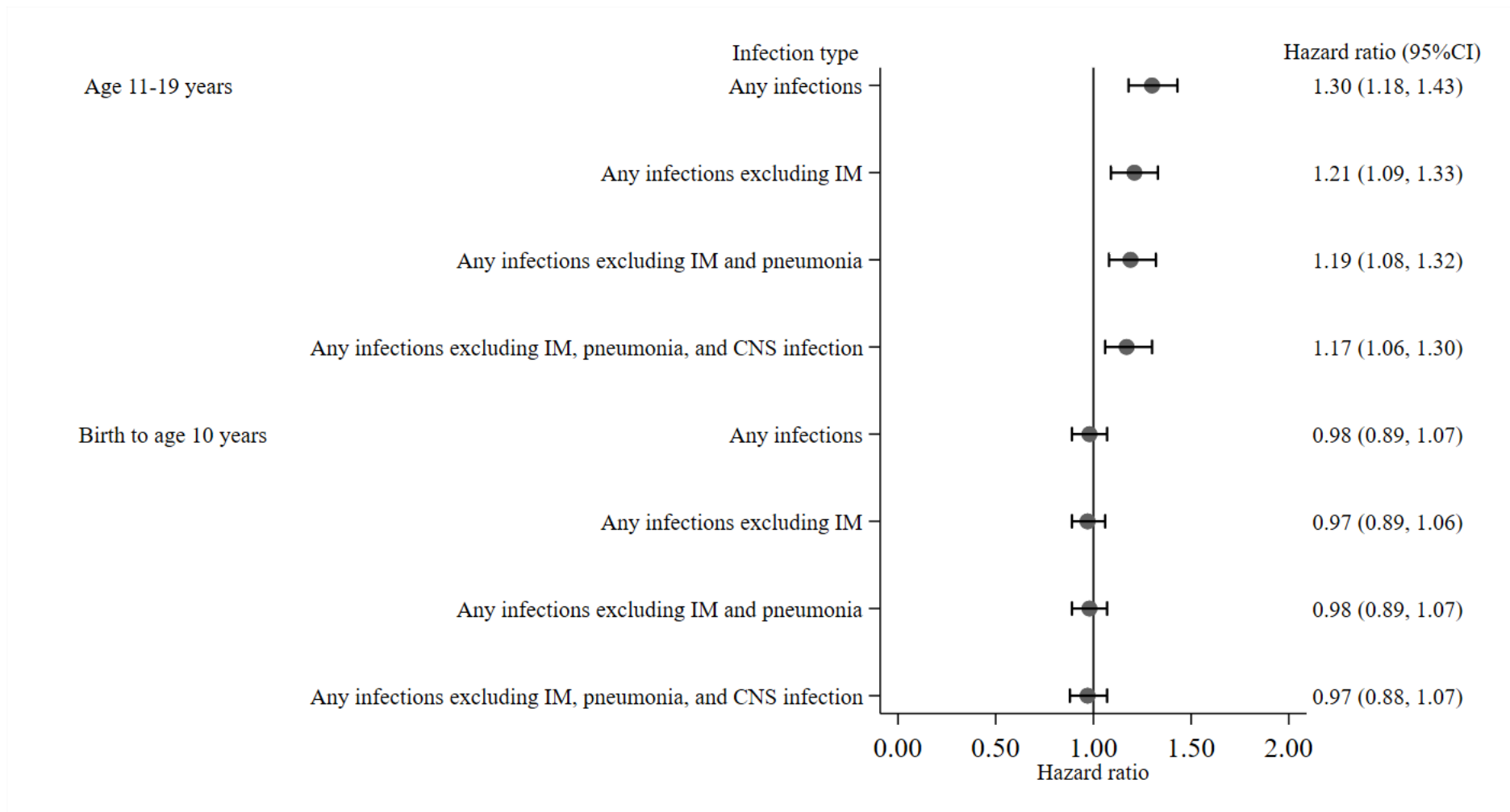| Infection	ICD version	ICD
Infectious mononucleosis	ICD-8	075
	ICD-9	075
	ICD-10	B27
Pneumonia	ICD-8	480-486
	ICD-9	480-486
	ICD-10	J12-J18, P23
CNS	ICD-8	013,062,063,064,065,066,071,094,292,320,323,324, 390,474,040-046
	ICD-9	013,062,063,064,071,094,320,323,326,392,045-049
	ICD-10	A17,A80-A89,G00,G01,G02,G04,G05,I02
Gastrointestinal	ICD-8	014,123,127,129,540,567,000-009
	ICD-9	014,123,127,129,540,567,000-009
	ICD-10	A00-A09,B71,B81,B82,K35,K65,K67
Genitourinary	ICD-8	016,590,595,597
	ICD-9	016,590,595,597
	ICD-10	N30,N34,O23
Respiratory	ICD-8	010,011,012,033,034,075,115,116,490,501,503,510, 460-466,470-474,480-486
	ICD-9	010,011,012,033,034,075,115,116,473,475,487,490,510, 460-466,480-486
	ICD-10	A15,A16,A37,A38,B27,B39,B40,B41,B42,B44,B59, J00-J06,J10,J12-J18,J20-J22,J32,J36,J40-J42,J86,P23
Skin	ICD-8	110,111,050-057,680-686
	ICD-9	110,111,050-057,680-686
	ICD-10	B00-B09,B35,B36,B43,L00-L08
Bacterial	ICD-8	000,001,002,003,004,005,073,076,080,081,082,083,320, 362,380,381,382,383,421,461,481,482,501,510,567,590, 595,597,612,613,614,616,620,622,630,635,670,678,680, 681,682,684,710,720,010-019,020-027,030-039, 090-099,100-104,390-392
	ICD-9	001,002,003,004,005,073,076,077,078,079,080,081, 082,083,320,381,382,383,383,421,461,475,481,482,510, 567,590,595,597,670,730,010-018,020-027,030-041, 090-099,100-104,390-392,614-616,680-686
	ICD-10	A00,A01,A02,A03,A04,A05,A15-A19,A20-A28, A30-A49,A50-A58,A65-A69,A70-A74, A75-A79,B95,B96,G00,G01,H60,H70,I00-I02,I33,J01, J13,J14,J15,J36,J86,K65,L00-L08,M00,M86,N30,N34, N70-N77,O23,O85,O86,P36
Viral	ICD-8	075,360,420,422,460,464,465,466,480, 040-046,050-057,060-068,070-079,470-474

	ICD-9	070,071,072,074,075,077,078,079,372,420,422,460,464, 465,466,480,487,647,711,045-049,050-057,060-066
	ICD-10	A08,A60,A80-A89,A90-A99,B00-B09,B15-B19, B20-B24,B25-B34,B27,B97,B99,H10,I30,I40,J00,J04, J05,J06,J10,J12,J20,J21,O98,P35,Z21
Other	ICD-8	084,085,086,087,088,089,112,113,114,117,120,121,122, 124, 125,126,128,130, 131,132,133,134,135,136,363,610,611, 615,732,763,Y41
	ICD-9	084,085,086,087,088,112,113,114,117,118,120,121,122, 124,125,126,128,130,131,132,133,134,135,136,370,675, 771,137-139
	ICD-10	V02,B37,B38,B45,B46,B47,B48,B49,B50-B58,B60-B64, B65-B70,B72-B80,B83,B85-B89,B90-B94,H16,H32, M01,M02,M03,O91,P37,P38,P39,Z22, A59,A63 ,A64 ,

Abbreviations: ICD = International Classification of Diseases

Supplemental Table 2. Tetrachoric correlations among infections by type and site at ages 11-19 years

	CNS	Genitourinary	Respiratory	Skin	Gastrointestinal	Bacterial	Viral	Other
CNS	-							
Genitourinary	0.10	-						
Respiratory	0.21	0.25	-					
Skin	0.18	0.21	0.27	-				
Gastrointestinal	0.10	0.12	0.14	0.10	-			
Bacterial	0.38	1.00	0.65	0.78	0.23	-		
Viral	0.68	0.27	0.80	0.59	0.19	0.45	-	
Other	0.10	0.31	0.22	0.26	0.08	0.49	0.32	-

	Infection type		Hazard ratio (95%CI)
Age 11-19 years	Any infections		1.30 (1.18, 1.43)
	Any infections excluding IM		1.21 (1.09, 1.33)
	Any infections excluding IM and pneumonia		1.19 (1.08, 1.32)
	Any infections excluding IM, pneumonia, and CNS infection		1.17 (1.06, 1.30)
Birth to age 10 years	Any infections		0.98 (0.89, 1.07)
	Any infections excluding IM		0.97 (0.89, 1.06)
	Any infections excluding IM and pneumonia		0.98 (0.89, 1.07)
	Any infections excluding IM, pneumonia, and CNS infection		0.97 (0.88, 1.07)

Hazard ratio axis: 0.00 0.50 1.00 1.50 2.00

Supplemental figure 1. Hazard ratio and 95% confidence interval for risk of a multiple sclerosis diagnosis associated with all infections stratified by age period and models.

Abbreviations: IM = infectious mononucleosis; CI = confidence interval.

Hazard ratios are from the three-step multivariable regression with encephalomyelitis and infectious mononucleosis (step 1), pneumonia (step 2), and CNS infection (step 3) was excluded from the definition of infection. All models included measures of any infections in earlier childhood (from birth to age 10 years) and adolescence (age 11 to 19 years), with adjustment for sex and parental socioeconomic position. No infection in earlier childhood and adolescence were the reference groups.