

**WebTable 1.** Included outcome events with ICD-10 codes.

<b>Outcome</b>	<b>ICD-10 codes</b>
<b>Autoimmune</b>	
Thyroid	
Graves' disease	E05.0
Hashimoto's thyroiditis	E06.3
Other hyperthyroidism	E05.1-5, E05.8-9
Hypothyroidism	E03
Gastrointestinal	
Celiac disease	K90.0
Crohn's disease	K50
Ulcerative colitis	K51
Pancreatitis	K85
Primary biliary cirrhosis	K74.3
Musculoskeletal/systemic	
Ankylosing spondylitis	M08.1, M45
Behcet's syndrome	M35.2
Henoch-Schönlein's purpura	D69.0
Juvenile arthritis	M08.0, M08.2-9
Kawasaki disease	M30.3
Myositis	M60
Polyarteritis nodosa	M30.0
Polymyositis/dermatomyositis	M33
Reiter's syndrome	M02.3
Rheumatoid arthritis	M05, M06
Sjögren's syndrome	M35.0
Systemic lupus erythematosus	M32
Systemic sclerosis (scleroderma)	M34
Vasculitis, unspecified	M30-1 (not M30.0, M30.3, M31.3), I77.6, L95
Wegener's granulomatosis	M31.3
Hematologic	
Autoimmune hemolytic anemia	D59.0-1
Idiopathic thrombocytopenic purpura	D69.3
Pernicious anaemia	D51.0
Dermatologic	
Erythema nodosum	L52
Localised lupus erythematosus	L93
Localised scleroderma	L94.0-1, L94.3
Pemphigoid	L12
Pemphigus foliaceus	L10.2
Pemphigus vulgaris	L10.0
Psoriasis	L40
Vitiligo	L80
Miscellaneous	
Acute rheumatic fever	I00-1
Addison's disease	E27.1-2
Raynaud's disease	I73.0
Sarcoidosis	D86
Type 1 diabetes	E10
<b>Neurologic</b>	
Acute disseminating encephalitis	G04.0
Bell's palsy	G51.0
Epilepsy	G40-1
Guillain-Barré syndrome	G61.0
Multiple sclerosis	G35
Myasthenia gravis	G70.0
Narcolepsy	G47.4
Optical neuritis	G36.0, H46
Other demyelinating disorders	G36-7 (not G36.0, G37.3)
Other encephalitis, myelitis, encephalomyelitis	G04.8
Paralysis	G80-3
Transverse myelitis	G37.3
<b>Venous thromboembolism</b>	<b>I26, I80.1-I80.9, I81-2</b>

**WebTable 2.** Adverse events according to qHPV vaccination status, bi-nationwide cohort of girls 10-17 years of age in Denmark and Sweden, October 2006 - December 2010.

**Outcomes with less than 5 vaccine-exposed cases.**

Event	Unvaccinated		Within 180 days following qHPV vaccination	
	Events	IR (95% CI)	Events	IR (95% CI)
<b>Autoimmune</b>				
Gastrointestinal				
Primary biliary cirrhosis	0	-	0	-
Musculoskeletal/systemic				
Kawasaki disease	7	0.29 (0.14-0.62)	1	0.43 (0.06-3.09)
Polyarteritis nodosa	13	0.55 (0.32-0.94)	0	-
Polymyositis/dermatomyositis	23	0.97 (0.64-1.46)	0	-
Reiter's syndrome	1	0.04 (0.01-0.30)	0	-
Sjögren's syndrome	20	0.84 (0.54-1.31)	2	0.87 (0.22-3.48)
Systemic sclerosis (scleroderma)	18	0.76 (0.48-1.20)	2	0.87 (0.22-3.48)
Wegener's granulomatosis	18	0.76 (0.48-1.20)	0	-
Hematologic				
Autoimmune hemolytic anemia	23	0.97 (0.64-1.46)	0	-
Pernicious anemia	9	0.38 (0.20-0.73)	2	0.87 (0.22-3.48)
Dermatologic				
Localised lupus erythematosus	25	1.05 (0.71-1.56)	2	0.87 (0.22-3.48)
Pemphigoid	14	0.59 (0.35-1.00)	1	0.43 (0.06-3.09)
Pemphigus foliaceus	1	0.04 (0.01-0.30)	0	-
Pemphigus vulgaris	5	0.21 (0.09-0.51)	1	0.43 (0.06-3.09)
Miscellaneous				
Acute rheumatic fever	1	0.04 (0.01-0.30)	0	-
Addison's disease	27	1.14 (0.78-1.66)	1	0.43 (0.06-3.09)
Sarcoidosis	34	1.43 (1.02-2.00)	4	1.74 (0.65-4.63)
<b>Neurologic</b>				
Acute disseminating encephalitis	7	0.29 (0.14-0.62)	1	0.43 (0.06-3.09)
Guillain-Barré syndrome	28	1.18 (0.81-1.71)	0	-
Multiple sclerosis	68	2.86 (2.26-3.63)	4	1.74 (0.65-4.63)
Myasthenia gravis	13	0.55 (0.32-0.94)	0	-
Other demyelinating disorders	19	0.80 (0.51-1.25)	2	0.87 (0.22-3.48)
Other encephalitis, myelitis, encephalomyelitis	11	0.46 (0.26-0.84)	1	0.43 (0.06-3.09)
Transverse myelitis	9	0.38 (0.20-0.73)	1	0.43 (0.06-3.09)

qHPV: quadrivalent human papillomavirus; IR: incidence rate per 100,000 person-years

**WebTable 3.** Additional analyses of selected outcomes events with risk window from day 181 onwards following qHPV vaccine exposure.

	<b>Person-years</b>	<b>Events</b>	<b>IR (95% CI)</b>	<b>Adjusted rate ratio (95% CI)<sup>a</sup></b>
Behcet's syndrome	193,162	4	2.07 (0.78-5.52)	3.18 (0.83-12.19)
Raynaud's disease	193,077	28	14.50 (10.01-21.00)	1.50 (0.95-2.37)
Type 1 diabetes	192,291	74	38.48 (30.64-48.33)	1.18 (0.91-1.55)

qHPV: quadrivalent human papillomavirus; IR: incidence rate per 100,000 person-years

<sup>a</sup>The rate ratio as compared with the unvaccinated (events and rates shown in Table 2) and adjusted for country, age in 2-year intervals, calendar year, parental country of birth, parental education, and paternal socioeconomic status.

**WebTable 4.** Post-hoc sensitivity analysis of narcolepsy with risk window from day 181 onwards following qHPV vaccine exposure.

	<b>Person-years</b>	<b>Events</b>	<b>IR (95% CI)</b>	<b>Adjusted rate ratio (95% CI)<sup>a</sup></b>
Narcolepsy	193,151	8	4.14 (2.07-8.28)	0.64 (0.26-1.57)

qHPV: quadrivalent human papillomavirus; IR: incidence rate per 100,000 person-years

<sup>a</sup>The rate ratio as compared with the unvaccinated (events and rates shown in Table 2) and adjusted for country, age in 2-year intervals, calendar year, parental country of birth, parental education, and paternal socioeconomic status.