

Review of over 15 years post-marketing safety surveillance spontaneous data for the human rotavirus vaccine (*Rotarix*) on intussusception

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Electronic supplementary material 1 Incidence rates of intussusception (IS), first year of life, from selected studies or data sources

Country or region	Population & methods (Period)	Rate /100,000 PY	% surgery (curative)	Total number of IS cases	Reference or data source
Latin America					
Brazil	<i>Prospective hospital-based surveillance (2003–2005)</i>	3.8	-	±29	[1]
Costa Rica	Prospective hospital-based surveillance (2003–2005)	18.9	-	±27	[1]
Nicaragua	Prospective hospital-based surveillance (2003–2005)	19.6	-	±11	[1]
Peru	Prospective hospital-based surveillance (2003–2005)	25.1	-	±40	[1]
Panama	Retrospective review discharge (1998–2002)	30	68	103	[2]
Honduras	Prospective hospital-based surveillance (2003–2005)	30.4	-	±40	[1]
Venezuela	Hospital data (1998–2001)	35	88	59	[3]
Colombia	Prospective hospital-based surveillance (2003–2005)	37.4	-	±37	[1]
Dominican Republic	Prospective hospital-based surveillance (2003–2005)	37.8	-	±36	[1]
Latin America (+Finland)	Twelve countries (2003–2005)	40.4	±84	±350	[1]
Chile	Prospective hospital-based surveillance (2003–2005)	47.0	-	57	[1]
Chile	HealthCare database of six hospitals (2000–2001)	51	78	71	[4]
Panama	Prospective hospital-based surveillance (2003–2005)	69.4	-	55	[1]
Mexico	Prospective hospital-based surveillance (2003–2005)	87.8	-	113	[1]
Argentina	<i>Prospective hospital-based surveillance</i>	105.3	-	±42	[1]

Country or region	Population & methods (Period)	Rate /100,000 PY	% surgery (curative)	Total number of IS cases	Reference or data source
<i>(2003–2005)</i>					
Asia					
Malaysia	Hospital discharge from three hospitals (covering 20% of the population) over a three-year period (2000–2003)	17.8	17.7	46	[5]
Singapore	Observational, retrospective hospital-based study; children <1 YoA (2002–2010)	29	20%	98	[6]
Singapore	Hospitals (1997–2007)	53.1	-	232	[7]
Bahrain	Medical chart review in one hospital (2004–2006)	35.4–56.3	-	21	[8]
Singapore	Hospital discharge (1997–2004)	60.3	-	194	[9]
Taiwan	Data from National Insurance Health System (1999–2001)	68.4	±31	554	[10]
Kingdom of Bahrain	Retrospective, hospital-based, single-centre (1999–2003)	74.2	±29.6	44	[8]
Taiwan	National Health Insurance (1998–2007)	77	-	±2,400	[11]
Hong Kong	Discharge from government hospitals (1997–1999)	88.2	23	101	[12]
Israel	Observational, retrospective, hospital-based study; children <1 YoA (1992–2009)	106	27%	134	[13]
Hong Kong	A six-year period; ICD-9-CM (1997–2003)	107.5	31	297	[14]
Japan	<i>Retrospective health claims database study (2005–2011)</i>	143.5	-	51	[15, 16]
Japan	Hospital-Based Retrospective Survey (2001–2010)	158	-	122	[17]
Japan	<i>Inpatient database analysis (2007–2008)</i>	179 (2007) 191 (2008)	-	2,427	[18]
Japan	Hospital records (1978–2002)	185	±13	41	[19]
Vietnam	Observational, retrospective and prospective hospital-	296	3%	869	[20]

Country or region	Population & methods (Period)	Rate /100,000 PY	% surgery (curative)	Total number of IS cases	Reference or data source
Vietnam	based study; children <1 YoA (2007–2009) Observational, retrospective, hospital-based study; children <1 YoA (2009–2011)	296	1%	187	[21]
Vietnam	Single hospital (2002–2003)	302	12	533	[22]
South Korea	A three-year period; eight medical facilities; ICD-10 (2000–2002)	328.3	±21.6	214	[23]
Europe					
United Kingdom	Prospective study (2008–2009)	24.8	-	250	[24]
Ireland	Prospective study (2008–2009)	24.2	-	250	[24]
Germany	Hospital-based, prospective, multicentre surveillance (2006–2007)	26.6	-	358	[25]
Netherlands	Retrospective cohort (2008–2012)	27.9 (primary care)	-	15	[26]
England	Retrospective hospital data (2002–2012)	35 (hospital) 28.1	-	539 -	[27]
England	Retrospective hospital data (2008–2009)	28.9	-	227	[28]
	Retrospective hospital and paediatric surveillance unit data (1995–2009)	34–86		4,868	
France	Prospective study (2008–2012)	29.8 (BCL1) 37.5 (BC L1–4)	-	145 (115 BCL1)	[29]
Italy	Hospital data (2002–2012)	39	-	2,344	[30]
Switzerland	Surveillance network + capture-recapture adj. (2003–2006)	47.1	23	83	[31]
United Kingdom	Data on National Health Service Hospitals (1993–1995)	66	-	833	[32]
Germany	Inpatient database analysis (2005–2006)	72	-	518	[33]
Denmark	Complete birth cohort + hospital discharge	78.2	-	624	[34]

Country or region	Population & methods (Period)	Rate /100,000 PY	% surgery (curative)	Total number of IS cases	Reference or data source
Belgium	(1990–2001) Health Insurance; whole country	82	-	672	Unpublished work
Germany	(2000–2006) <i>Federal Health statistics; whole country (2000–2005)</i>	96.7	-	665/year	<i>Unpublished work</i>
North America					
Canada	Retropective hospital data (1995–2010)	29 (2010)	-	-	[35]
US	<i>DTaP; claims database (2001–2005)</i>	33	-	22	[36]
US	Hospitalisations; claims database (1993–2004)	34	51 (2002–2004)	±10,000	[37]
US	Retrospective hospital data (2000–2005)	35.9	±50	±6,300	[38]
US (Ohio, Tennessee, and New York)	Hospitals database (2001–2006)	49.3	37.2	156	[39]
<i>New York</i>	<i>Hospital discharge data (1989–1998)</i>	54	50.6	1,450	[40]
Africa					
South Africa	Retrospective study; <2 YoA (1998–2003)	31	-	346	[41]
Tunisia	Retrospective study (1984–2003)	62	±28	416	[42]
Zambia	Retrospective and prospective study; <2 YoA (2007–2012)	61	-	105	[41]
Oceania					
New Zealand	Retrospective hospital data (1998–2013)	56.1	-	531	[43]
	(1998–2003)	58.9		181	
	(2003–2013)	54.8		350	
New Zealand	All public hospitals (1998–2003)	65	-	200	[44]
Australia	Single hospital (2002–2004)	71	8	51	[22]
Australia	Hospitals, nationwide (1994–2000)	101	-	3,274	[45]

BCL, Brighton Collaboration Working Group level; DTaP, diphtheria, tetanus, and acellular pertussis; ESPED, German Paediatric Surveillance Unit; ICD-9-CM, International Classification of Diseases, Ninth Revision, Clinical Modification;

ICD-10, International Classification of Diseases, Tenth Revision; OPS, Operation and Procedure Classification System; PY, person years; US, United States; YoA, years of age.

The data in this table were collected during a literature search and were used to establish background incidence rates. Italic text indicates studies including the minimum and maximum values of the background incidence range.

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