



Clinical trial results:

Immunogenicity of GlaxoSmithKline Biologicals' MMR vaccine (209762) vs. M-M-R® II, when co-administered with hepatitis A, varicella and pneumococcal conjugate vaccines to children 12-15 months of age

Summary

EudraCT number	2011-005860-31
Trial protocol	Outside EU/EEA
Global end of trial date	18 June 2012

Results information

Result version number	v1
This version publication date	11 May 2016
First version publication date	31 July 2015

Trial information

Trial identification

Sponsor protocol code	111870
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Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT00861744
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	GlaxoSmithKline Biologicals
Sponsor organisation address	Rue de l'Institut 89, Rixensart, Belgium, B-1330
Public contact	Clinical Trials Call Center, GlaxoSmithKline Biologicals, 44 2089904466, GSKClinicalSupportHD@gsk.com
Scientific contact	Clinical Trials Call Center, GlaxoSmithKline Biologicals, 44 2089904466, GSKClinicalSupportHD@gsk.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	Yes

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	14 June 2013
Is this the analysis of the primary completion data?	Yes
Primary completion date	21 July 2010
Global end of trial reached?	Yes
Global end of trial date	18 June 2012
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To assess GSK's candidate MMR vaccine formulated with a range of mumps virus potencies, co-administered with HAV, VV and PCV in contrast to MMRII co-administered with HAV, VV and PCV with respect to the seroresponse[†] rate for antibodies to measles virus, mumps virus and rubella virus at Day 42.

Protection of trial subjects:

Vaccines were administered by qualified and trained personnel. Vaccines were administered only to eligible subjects that had no contraindications to any components of the vaccines.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	03 June 2009
Long term follow-up planned	Yes
Long term follow-up rationale	Efficacy
Long term follow-up duration	23 Months
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	United States: 1259
Worldwide total number of subjects	1259
EEA total number of subjects	0

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	1259
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	0
From 65 to 84 years	0

85 years and over	0
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Subject disposition

Recruitment

Recruitment details:

The study was divided in 3 phases: the active phase (up to Day 42), the extended safety follow-up (ESFU) phase (up to Day 180) and the antibody persistence phase (up to Day 730).

Pre-assignment

Screening details:

The number of subjects enrolled was 1259. 39 subjects were enrolled in the study but did not receive a subject number and were never vaccinated.

Pre-assignment period milestones

Number of subjects started	1259
Number of subjects completed	1220

Pre-assignment subject non-completion reasons

Reason: Number of subjects	Not allocated to a study group: 35
Reason: Number of subjects	No vaccine received: 4

Period 1

Period 1 title	Overall study (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind ^[1]
Roles blinded	Subject, Carer, Assessor

Blinding implementation details:

The study was conducted in an observer blind manner in which the subject and the study personnel involved in the clinical evaluation of the subjects were blinded while other study personnel (investigator) were aware of the treatment allocation.

Arms

Are arms mutually exclusive?	Yes
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Arm title	Priorix 1 Group
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Arm description:

Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 1) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Prevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Prevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.

Arm type	Experimental
Investigational medicinal product name	Priorix™
Investigational medicinal product code	
Other name	MMR
Pharmaceutical forms	Powder and solution for solution for injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subcutaneous injection, one dose, in the right upper arm.

Investigational medicinal product name	Varivax®
Investigational medicinal product code	
Other name	VV
Pharmaceutical forms	Powder and solvent for suspension for injection

Routes of administration	Subcutaneous use
Dosage and administration details:	
Subcutaneous injection, one dose, in the left upper arm.	
Investigational medicinal product name	Havrix®
Investigational medicinal product code	
Other name	HAV
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use
Dosage and administration details:	
Intramuscular injection, one dose, in the left thigh.	
Investigational medicinal product name	Prevnar®
Investigational medicinal product code	
Other name	PCV
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use
Dosage and administration details:	
Intramuscular injection, one dose, in the right thigh.	
Arm title	Priorix 2 Group
Arm description:	
Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 2) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Pevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Pevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.	
Arm type	Experimental
Investigational medicinal product name	Priorix™
Investigational medicinal product code	
Other name	MMR
Pharmaceutical forms	Powder and solution for solution for injection
Routes of administration	Subcutaneous use
Dosage and administration details:	
Subcutaneous injection, one dose, in the right upper arm.	
Investigational medicinal product name	Varivax®
Investigational medicinal product code	
Other name	VV
Pharmaceutical forms	Powder and solvent for suspension for injection
Routes of administration	Subcutaneous use
Dosage and administration details:	
Subcutaneous injection, one dose, in the left upper arm.	
Investigational medicinal product name	Havrix®
Investigational medicinal product code	
Other name	HAV
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use
Dosage and administration details:	
Intramuscular injection, one dose, in the left thigh.	
Investigational medicinal product name	Pevnar®
Investigational medicinal product code	
Other name	PCV
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Intramuscular injection, one dose, in the right thigh.

Arm title	Priorix 3 Group
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Arm description:

Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 3) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Prevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Prevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.

Arm type	Experimental
Investigational medicinal product name	Priorix™
Investigational medicinal product code	
Other name	MMR
Pharmaceutical forms	Powder and solution for solution for injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subcutaneous injection, one dose, in the right upper arm.

Investigational medicinal product name	Varivax®
Investigational medicinal product code	
Other name	VV
Pharmaceutical forms	Powder and solvent for suspension for injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subcutaneous injection, one dose, in the left upper arm.

Investigational medicinal product name	Prevnar®
Investigational medicinal product code	
Other name	PCV
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Intramuscular injection, one dose, in the right thigh.

Investigational medicinal product name	Havrix®
Investigational medicinal product code	
Other name	HAV
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Intramuscular injection, one dose, in the left thigh.

Arm title	MMR-II Group
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Arm description:

Subjects between 12 and 15 months of age at the time of study vaccination who randomly received one dose of one of three different commercially-available lot of M-M-R II (Merck and Co.) vaccine subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Prevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Prevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.

Arm type	Active comparator
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Investigational medicinal product name	Pprevnar®
Investigational medicinal product code	
Other name	PCV
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Intramuscular injection, one dose, in the right thigh.

Investigational medicinal product name	Havrix®
Investigational medicinal product code	
Other name	HAV
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Intramuscular injection, one dose, in the left thigh.

Investigational medicinal product name	Varivax®
Investigational medicinal product code	
Other name	VV
Pharmaceutical forms	Powder and solvent for suspension for injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subcutaneous injection, one dose, in the left upper arm.

Investigational medicinal product name	M-M-R® II
Investigational medicinal product code	
Other name	MMR-II
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subcutaneous injection, one dose, in the right upper arm.

Notes:

[1] - The roles blinded appear to be inconsistent with a double blind trial.

Justification: The study was conducted in an observer blind manner in which the subject and the study personnel involved in the clinical evaluation of the subjects were blinded while other study personnel (investigator) were aware of the treatment allocation.

Number of subjects in period 1^[2]	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group
Started	304	304	304
Completed	287	275	280
Not completed	17	29	24
Consent withdrawn by subject	10	6	6
Blood draws	-	-	-
Adverse event, non-fatal	-	-	-
Lost to follow-up	7	19	17
Migration from study area	-	3	1
Protocol deviation	-	1	-

Number of subjects in period 1^[2]	MMR-II Group
Started	308

Completed	275
Not completed	33
Consent withdrawn by subject	19
Blodd draws	1
Adverse event, non-fatal	1
Lost to follow-up	12
Migration from study area	-
Protocol deviation	-

Notes:

[2] - The number of subjects reported to be in the baseline period are not the same as the worldwide number enrolled in the trial. It is expected that these numbers will be the same.

Justification: The number of subjects enrolled was 1259. 39 subjects were enrolled in the study but did not receive a subject number and were never vaccinated.

Baseline characteristics

Reporting groups

Reporting group title	Priorix 1 Group
Reporting group description:	
Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 1) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Prevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Prevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.	
Reporting group title	Priorix 2 Group
Reporting group description:	
Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 2) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Prevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Prevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.	
Reporting group title	Priorix 3 Group
Reporting group description:	
Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 3) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Prevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Prevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.	
Reporting group title	MMR-II Group
Reporting group description:	
Subjects between 12 and 15 months of age at the time of study vaccination who randomly received one dose of one of three different commercially-available lot of M-M-R II (Merck and Co.) vaccine subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Prevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Prevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.	

Reporting group values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group
Number of subjects	304	304	304
Age categorical Units: Subjects			
In utero Preterm newborn infants (gestational age < 37 wks) Newborns (0-27 days) Infants and toddlers (28 days-23 months) Children (2-11 years) Adolescents (12-17 years) Adults (18-64 years) From 65-84 years 85 years and over			
Age continuous Units: months arithmetic mean	12.4	12.4	12.2

standard deviation	± 0.75	± 0.73	± 0.56
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Gender categorical Units: Subjects			
Female	156	144	157
Male	148	160	147

Reporting group values	MMR-II Group	Total	
Number of subjects	308	1220	
Age categorical Units: Subjects			
In utero		0	
Preterm newborn infants (gestational age < 37 wks)		0	
Newborns (0-27 days)		0	
Infants and toddlers (28 days-23 months)		0	
Children (2-11 years)		0	
Adolescents (12-17 years)		0	
Adults (18-64 years)		0	
From 65-84 years		0	
85 years and over		0	
Age continuous Units: months			
arithmetic mean	12.4		
standard deviation	± 0.75	-	
Gender categorical Units: Subjects			
Female	139	596	
Male	169	624	

End points

End points reporting groups

Reporting group title	Priorix 1 Group
Reporting group description: Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 1) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Pevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Pevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.	
Reporting group title	Priorix 2 Group
Reporting group description: Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 2) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Pevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Pevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.	
Reporting group title	Priorix 3 Group
Reporting group description: Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 3) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Pevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Pevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.	
Reporting group title	MMR-II Group
Reporting group description: Subjects between 12 and 15 months of age at the time of study vaccination who randomly received one dose of one of three different commercially-available lot of M-M-R II (Merck and Co.) vaccine subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Pevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Pevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.	

Primary: Number of subjects with Anti-measles virus antibody concentration equal to or above the cut-off-value.

End point title	Number of subjects with Anti-measles virus antibody concentration equal to or above the cut-off-value. ^[1]
End point description: Anti-measles virus antibody cut-off-value assessed was ≥ 200 milli-International Units per milliliter (mIU/mL). The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-measles virus antibody concentrations <150 mIU/mL prior to vaccination.	
End point type	Primary
End point timeframe: At Day 42 after administration of a dose of Priorix vaccine.	
Notes: [1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point. Justification: The analysis of the primary endpoint was descriptive i.e. no statistical hypothesis test was performed.	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	247	240	240	249
Units: Subjects	245	236	236	248

Statistical analyses

No statistical analyses for this end point

Primary: Number of subjects with Anti-mumps virus antibody titer equal to or above the cut-off-value.

End point title	Number of subjects with Anti-mumps virus antibody titer equal to or above the cut-off-value. ^[2]
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End point description:

Anti-mumps virus antibody cut-off-value assessed was ≥ 51 Estimated Dose 50 (ED50). The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-measles virus antibody concentrations <24 ED50 prior to vaccination.

End point type	Primary
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End point timeframe:

At Day 42 after administration of a dose of Priorix vaccine.

Notes:

[2] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.

Justification: The analysis of the primary endpoint was descriptive i.e. no statistical hypothesis test was performed.

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	193	202	195	192
Units: Subjects	175	183	175	175

Statistical analyses

No statistical analyses for this end point

Primary: Number of subjects with Anti-rubella virus antibody concentrations equal to or above the cut-off-value.

End point title	Number of subjects with Anti-rubella virus antibody concentrations equal to or above the cut-off-value. ^[3]
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End point description:

Anti-rubella virus antibody cut-off-value assessed was ≥ 10 International Units per milliliter (IU/mL).

End point type	Primary
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End point timeframe:

At Day 42 after administration of a dose of Priorix vaccine.

Notes:

[3] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.

Justification: The analysis of the primary endpoint was descriptive i.e. no statistical hypothesis test was performed.

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	247	238	239	249
Units: Subjects	244	235	233	249

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with Anti-varicella antibody concentration equal to or above the cut-off-value.

End point title	Number of subjects with Anti-varicella antibody concentration equal to or above the cut-off-value.
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End point description:

Anti-varicella virus antibody cut-off-value assessed was ≥ 75 milli-International Units per milliliter (mIU/mL).

End point type	Secondary
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End point timeframe:

At Day 42 after administration of a dose of Varivax vaccine.

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	245	238	240	246
Units: Subjects	240	230	230	241

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-measles virus antibody concentrations

End point title	Anti-measles virus antibody concentrations
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End point description:

Antibody concentrations are expressed as Geometric Mean Concentrations (GMCs) in mIU/mL. The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-measles virus antibody concentrations <150 mIU/mL prior to vaccination.

End point type	Secondary
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End point timeframe:

At Day 42 after administration of a dose of Priorix vaccine.

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	247	240	240	249
Units: mIU/mL				
geometric mean (confidence interval 95%)	2798.7 (2544.8 to 3077.9)	2878.2 (2607 to 3177.7)	2593.1 (2350.3 to 2861.1)	2949.5 (2698.4 to 3224)

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-mumps virus antibody concentrations

End point title	Anti-mumps virus antibody concentrations
End point description: Antibody concentrations are expressed as Geometric Mean Titer (GMT). The analysis was performed on seronegative subjects. Seronegative subjects are subjects with antibody titer < 24 ED50 prior to vaccination.	
End point type	Secondary
End point timeframe: At Day 42 after administration of a dose of Priorix vaccine.	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	193	202	195	192
Units: Titers				
geometric mean (confidence interval 95%)	242 (204.5 to 286.5)	265 (221.8 to 316.5)	253.4 (213.4 to 300.9)	267.6 (224.2 to 319.5)

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-rubella virus antibody concentrations

End point title	Anti-rubella virus antibody concentrations
End point description: Antibody concentrations are expressed as Geometric Mean Concentrations (GMCs) in IU/mL. The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-rubella virus antibody concentrations <4 IU/mL prior to vaccination.	
End point type	Secondary
End point timeframe: At Day 42 after administration of a dose of Priorix vaccine.	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	247	238	239	249
Units: IU/mL				
geometric mean (confidence interval 95%)	72.2 (65.6 to 79.6)	77.7 (70.4 to 85.7)	68.2 (61.8 to 75.3)	89.4 (81.4 to 98.2)

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-S. pneumoniae antibody concentrations (by serotype).

End point title	Anti-S. pneumoniae antibody concentrations (by serotype).
End point description:	Antibody concentrations are expressed as Geometric Mean Concentrations (GMCs) in µg/mL.
End point type	Secondary
End point timeframe:	At Day 42 after vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	128	127	128	126
Units: µg/mL				
geometric mean (confidence interval 95%)				
Anti-S.PNEU-4	3.57 (3.04 to 4.2)	3.72 (3.21 to 4.31)	3.4 (2.88 to 4)	3.8 (3.17 to 4.56)
Anti-S. PNEU-6B	5.68 (4.78 to 6.76)	5.87 (5.02 to 6.87)	5.41 (4.66 to 6.28)	7.22 (6.28 to 8.29)
Anti-S.PNEU 9V	6.56 (5.66 to 7.6)	7.3 (6.35 to 8.38)	5.81 (4.97 to 6.78)	7.8 (6.81 to 8.93)
Anti-S.PNEU-14	9.23 (8.03 to 10.61)	8.33 (7.3 to 9.51)	7.58 (6.55 to 8.76)	7.97 (6.95 to 9.14)
Anti-S.PNEU-18 C	6.2 (5.3 to 7.26)	6.62 (5.76 to 7.6)	6.15 (5.25 to 7.21)	6.73 (5.74 to 7.91)
Anti-S.PNEU-19 F	2.42 (2.05 to 2.85)	2.46 (2.11 to 2.88)	2.34 (2 to 2.73)	2.59 (2.23 to 3)
Anti-S.PNEU-23 F	9.34 (7.76 to 11.25)	9.27 (7.82 to 10.99)	8.33 (6.88 to 10.1)	11.49 (9.67 to 13.66)

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-varicella antibody concentrations.

End point title	Anti-varicella antibody concentrations.
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End point description:

Antibody concentrations are expressed as Geometric Mean Titers (GMT). The analysis was performed on seronegative subjects. Seronegative subjects are subjects with antibody concentration < 25 mIU/mL prior to vaccination.

End point type	Secondary
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End point timeframe:

At Day 42 after administration of a dose of Varivax vaccine.

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	245	238	240	246
Units: mIU/mL				
geometric mean (confidence interval 95%)	245.5 (229 to 263.3)	235.2 (217.4 to 254.4)	236 (218 to 255.5)	255.9 (240.4 to 272.4)

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-hepatitis A virus antibody concentrations.

End point title	Anti-hepatitis A virus antibody concentrations.
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End point description:

Antibody concentrations are expressed as Geometric Mean Concentrations (GMCs) in mIU/mL. The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-hepatitis A virus antibody concentrations <15 mIU/mL prior to vaccination.

End point type	Secondary
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End point timeframe:

At Day 42 after administration of a dose of Havrix vaccine.

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	117	112	111	124
Units: mIU/mL				
geometric mean (confidence interval 95%)	33.8 (28.8 to 39.6)	39.2 (33.1 to 46.5)	39.4 (32.7 to 47.5)	42.1 (35.8 to 49.6)

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with Anti-hepatitis A antibody concentrations equal to or above the cut-off-value.

End point title	Number of subjects with Anti-hepatitis A antibody concentrations equal to or above the cut-off-value.
End point description: Anti-hepatitis A antibody cut-off-value assessed was ≥ 15 milli-International Units per milliliter (mIU/mL).	
End point type	Secondary
End point timeframe: At Day 42 after administration of a dose of Havrix vaccine.	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	117	112	111	124
Units: Subjects	98	99	94	110

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-S. pneumoniae antibody concentrations (by serotype).

End point title	Anti-S. pneumoniae antibody concentrations (by serotype).
End point description: Antibody concentrations are expressed as Geometric Mean Concentrations (GMCs) in $\mu\text{g/mL}$.	
End point type	Secondary
End point timeframe: At Day 0 before vaccination	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	129	130	130	119
Units: $\mu\text{g/mL}$				
geometric mean (confidence interval 95%)				
Anti-S.PNEU-4	0.54 (0.46 to 0.65)	0.61 (0.52 to 0.72)	0.67 (0.58 to 0.78)	0.67 (0.56 to 0.81)
Anti-S.PNEU-6B	0.53 (0.43 to 0.66)	0.57 (0.46 to 0.7)	0.52 (0.43 to 0.64)	0.67 (0.56 to 0.8)
Anti-S.PNEU-9V	1.01 (0.85 to 1.2)	1.13 (0.97 to 1.32)	1.04 (0.88 to 1.23)	1.26 (1.06 to 1.49)
Anti-S.PNEU-14	3.01 (2.6 to 3.47)	2.82 (2.42 to 3.28)	2.54 (2.21 to 2.92)	2.76 (2.38 to 3.2)

Anti-S.PNEU-18C	0.88 (0.74 to 1.03)	0.97 (0.83 to 1.13)	0.97 (0.83 to 1.14)	1 (0.86 to 1.15)
Anti-S.PNEU-19F	0.4 (0.32 to 0.5)	0.4 (0.33 to 0.5)	0.44 (0.36 to 0.53)	0.45 (0.37 to 0.56)
Anti-S.PNEU-23 F	0.64 (0.51 to 0.82)	0.63 (0.51 to 0.77)	0.65 (0.52 to 0.81)	0.85 (0.67 to 1.08)

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-measles virus antibody concentration equal to or above the cut-off-value

End point title	Number of subjects with anti-measles virus antibody concentration equal to or above the cut-off-value
End point description: Anti-measles virus antibody cut-off-value assessed was ≥ 200 milli-International Units per milliliter (mIU/mL).	
End point type	Secondary
End point timeframe: At 1 year post-vaccination	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	213	215	218	210
Units: Subjects	211	211	218	209

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-measles virus antibody concentration equal to or above the cut-off-value

End point title	Number of subjects with anti-measles virus antibody concentration equal to or above the cut-off-value
End point description: Anti-measles virus antibody cut-off-value assessed was ≥ 200 milli-International Units per milliliter (mIU/mL).	
End point type	Secondary
End point timeframe: At 2 years post-vaccination	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	171	159	169	166
Units: Subjects	171	159	168	166

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-measles virus antibody concentrations

End point title	Anti-measles virus antibody concentrations
End point description: Antibody concentrations are expressed as Geometric Mean Concentrations (GMCs) in mIU/mL. The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-measles virus antibody concentrations <150 mIU/mL prior to vaccination.	
End point type	Secondary
End point timeframe: At 2 years post-vaccination	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	171	159	169	166
Units: mIU/mL				
geometric mean (confidence interval 95%)	3361.1 (2922.3 to 3865.6)	3963.8 (3479.3 to 4515.7)	3360.3 (2923.3 to 3862.7)	4022.1 (3507.7 to 4611.9)

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-measles virus antibody concentrations

End point title	Anti-measles virus antibody concentrations
End point description: Antibody concentrations were expressed as Geometric Mean Concentrations (GMCs) in mIU/mL. The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-measles virus antibody concentrations <150 mIU/mL prior to vaccination.	
End point type	Secondary
End point timeframe: At 1 year post-vaccination	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	213	215	218	210
Units: mIU/mL				
geometric mean (confidence interval 95%)	3224.3 (2840.1 to 3660.5)	3708.2 (3226.2 to 4262.2)	3534.7 (3139.9 to 3979.1)	3828.1 (3371.3 to 4346.7)

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects reporting investigator-confirmed measles/rubella-like rash and varicella-like rash.

End point title	Number of subjects reporting investigator-confirmed measles/rubella-like rash and varicella-like rash.
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End point description:

End point type	Secondary
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End point timeframe:

During the 43-day (Days 0-42) post-vaccination period

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	283	275	283	277
Units: Subjects				
Varicella like	0	4	0	0
Measles/Rubella like	6	7	5	5

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects reporting febrile convulsions

End point title	Number of subjects reporting febrile convulsions
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End point description:

Timing of febrile convulsions: events occurred on Day 29 in the Priorix 2 Group and Day 0 in the MMR II Group. All cases of febrile convulsions were case of meningism.

End point type	Secondary
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End point timeframe:

During the 43-day (Days 0-42) post-vaccination period

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	283	275	283	277
Units: Subjects	0	1	0	1

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-mumps virus antibody titers (enhanced Plaque Reduction Neutralization (PRN))

End point title	Anti-mumps virus antibody titers (enhanced Plaque Reduction Neutralization (PRN))
End point description: Antibody titers were expressed as Geometric Mean Titer (GMT). The analysis was performed on seronegative subjects. Seronegative subjects are subjects with antibody titer < 24 ED50 prior to vaccination.	
End point type	Secondary
End point timeframe: At 1 year post-vaccination	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	189	186	189	183
Units: Titers				
geometric mean (confidence interval 95%)	162.8 (141.8 to 186.9)	188.3 (162.4 to 218.3)	176.2 (152.6 to 203.3)	185.5 (163.5 to 210.6)

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects reporting other rash.

End point title	Number of subjects reporting other rash.
End point description: Other rash = not confirmed by the investigator to be either measles/rubella-like or varicella-like in nature	
End point type	Secondary
End point timeframe: During the 43-day (Days 0-42) post-vaccination period	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	283	275	283	277
Units: Subjects				
Localized or generalized	72	74	60	60
With fever	26	29	23	23
Grade 3	11	10	6	6
Related	9	14	6	6

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-mumps virus antibody titers above the cut-off value (enhanced PRN)

End point title	Number of subjects with anti-mumps virus antibody titers above the cut-off value (enhanced PRN)
End point description:	
Anti-mumps virus antibody cut-off-value assessed was \geq 51 ED50.	
End point type	Secondary
End point timeframe:	
At 1 year post-vaccination	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	189	186	189	183
Units: Subjects	169	170	171	170

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with Anti-rubella virus antibody concentrations equal to or above the cut-off-value.

End point title	Number of subjects with Anti-rubella virus antibody concentrations equal to or above the cut-off-value.
End point description:	
Anti-rubella virus antibody cut-off-value assessed was \geq 10 International Units per milliliter (IU/mL). The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-rubella virus antibody concentrations <4 IU/mL prior to vaccination.	
End point type	Secondary
End point timeframe:	
At 1 year post-vaccination	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	213	214	218	210
Units: Subjects	212	213	217	210

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-rubella virus antibody concentrations equal to or above the cut-off-value.

End point title	Number of subjects with anti-rubella virus antibody concentrations equal to or above the cut-off-value.
End point description:	Anti-rubella virus antibody cut-off-value assessed was ≥ 10 International Units per milliliter (IU/mL).
End point type	Secondary
End point timeframe:	At 2 years post-vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	171	158	168	166
Units: Subjects	171	158	168	166

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-rubella virus antibody concentrations

End point title	Anti-rubella virus antibody concentrations
End point description:	Antibody concentrations are expressed as Geometric Mean Concentrations (GMCs) in IU/mL. The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-rubella virus antibody concentrations <4 IU/mL prior to vaccination.
End point type	Secondary
End point timeframe:	At 1 year post-vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	213	214	218	210
Units: IU/mL				
geometric mean (confidence interval 95%)	138.1 (125.3 to 152.2)	145.4 (132 to 160.1)	136.5 (123.5 to 150.9)	166.8 (151.5 to 183.6)

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-rubella virus antibody concentrations

End point title	Anti-rubella virus antibody concentrations
End point description: Antibody concentrations are expressed as Geometric Mean Concentrations (GMCs) in IU/mL. The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-rubella virus antibody concentrations <4 IU/mL prior to vaccination.	
End point type	Secondary
End point timeframe: At 2 years post-vaccination	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	171	158	168	166
Units: IU/mL				
geometric mean (confidence interval 95%)	78 (69.7 to 87.2)	79.5 (71.7 to 88.2)	81.7 (73.8 to 90.4)	93.1 (83.6 to 103.6)

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects reporting fever.

End point title	Number of subjects reporting fever.
End point description: fever is assessed for temperature $\geq 38^{\circ}\text{C}/100.4^{\circ}\text{F}$ and $>39.5^{\circ}\text{C}/103.1^{\circ}\text{F}$ as measured rectally.	
End point type	Secondary
End point timeframe: During the 15-day (Days 0-14) and 43 days (Days 0-42) post-vaccination period	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	283	275	283	277
Units: Subjects				
Day 15 (N= 283; 275; 283; 277) ≥38.0°C	65	79	64	56
Day 15 (N= 283; 275; 283; 277) >39.5°C	10	7	9	8
Day 43 (N= 283; 275; 283; 277) ≥38.0°C	103	104	104	85
Day 43 (N= 283; 275; 283; 277) >39.5°C	20	14	18	13

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with solicited local symptoms.

End point title	Number of subjects with solicited local symptoms.
End point description:	
Solicited local symptoms assessed were pain, redness and swelling.	
End point type	Secondary
End point timeframe:	
During the 4-day (Days 0-3) post-vaccination period	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	282	274	282	274
Units: Subjects				
Pain	70	70	79	67
Redness	45	47	41	47
Swelling	20	26	19	15

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects reporting Medically attended visit (MAEs)

End point title	Number of subjects reporting Medically attended visit (MAEs)
End point description:	
MAEs were defined as events for which the subject received medical attention defined as hospitalization, an emergency room visit, or a visit to or from medical personnel (medical doctor) for any reason. Any MAE(s) = Occurrence of any MAE(s) regardless of intensity grade or relation to vaccination.	
End point type	Secondary

End point timeframe:

During the 43-day (Days 0-42) post-vaccination period

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	304	304	304	308
Units: Subjects				
Any MAE(s)	99	99	97	107

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with unsolicited adverse events (AEs).

End point title	Number of subjects with unsolicited adverse events (AEs).
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End point description:

An unsolicited AE covers any untoward medical occurrence in a clinical investigation subject temporally associated with the use of a medicinal product, whether or not considered related to the medicinal product and reported in addition to those solicited during the clinical study and any solicited symptom with onset outside the specified period of follow-up for solicited symptoms. Any = the occurrence of any unsolicited AE regardless of intensity grade or relation to vaccination.

End point type	Secondary
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End point timeframe:

During the 43-day (Days 0-42) post-vaccination period

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	304	304	304	308
Units: Subjects				
Any AEs	170	153	164	169

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects reporting investigator-confirmed parotid/salivary gland swelling.

End point title	Number of subjects reporting investigator-confirmed parotid/salivary gland swelling.
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End point description:

Swelling with accompanying general symptoms

End point type	Secondary
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End point timeframe:
During the 43-day (Days 0-42) post-vaccination period

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	283	275	283	277
Units: Subjects				
Subjects with parotid gland swelling	3	3	5	2

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with solicited general symptoms.

End point title	Number of subjects with solicited general symptoms.
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End point description:

Assessed solicited general symptoms were drowsiness, irritability and loss of appetite. Any = occurrence of the symptom regardless of intensity grade.

End point type	Secondary
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End point timeframe:

During the 15-day (Days 0-14) post-vaccination period

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	283	275	283	277
Units: Subjects				
Any drowsiness	133	106	113	109
Any irritability	180	141	150	153
Any loss of appetite	111	77	110	94

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects reporting new onset chronic illnesses (NOCIs).

End point title	Number of subjects reporting new onset chronic illnesses (NOCIs).
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End point description:

NOCIs included autoimmune disorders, asthma, type I diabetes, allergies.

End point type	Secondary
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End point timeframe:

From Day 0 to Day 180 after vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	304	304	304	308
Units: Subjects				
NOCIs	5	2	4	2

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects reporting serious adverse events (SAEs)

End point title	Number of subjects reporting serious adverse events (SAEs)
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End point description:

SAEs assessed include medical occurrences that result in death, are life threatening, require hospitalization or prolongation of hospitalization, result in disability/incapacity or are a congenital anomaly/birth defect in the offspring of a study subject.

End point type	Secondary
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End point timeframe:

From Day 0 to Day 180 after vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	304	304	304	308
Units: Subjects				
SAEs	1	6	7	9

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects reporting serious adverse events (SAEs).

End point title	Number of subjects reporting serious adverse events (SAEs).
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End point description:

SAEs assessed include medical occurrences that result in death, are life threatening, require hospitalization or prolongation of hospitalization, result in disability/incapacity or are congenital anomaly/birth defect in the offspring of a study subject.

End point type	Secondary
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End point timeframe:
From Day 180 to Day 730 after vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	304	304	304	308
Units: Subjects				
SAEs	0	0	0	1

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects reporting conditions prompting emergency room (ER) visits.

End point title	Number of subjects reporting conditions prompting emergency room (ER) visits.
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End point description:

End point type	Secondary
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End point timeframe:

From Day 0 to Day 180 after vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	304	304	304	308
Units: Subjects				
AE prompting ER visits	27	28	22	26

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-mumps virus antibody titers (unenhanced PRN)

End point title	Anti-mumps virus antibody titers (unenhanced PRN)
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End point description:

Antibody titers were expressed as Geometric Mean Titer (GMT).

End point type	Secondary
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End point timeframe:

At 1 year post-vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	196	205	211	195
Units: Titer				
geometric mean (confidence interval 95%)	31 (24.1 to 39.9)	46.1 (36.2 to 58.7)	39.3 (31 to 50)	46.6 (36.6 to 59.3)

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-mumps virus antibody titers above the cut-off value (unenhanced PRN)

End point title	Number of subjects with anti-mumps virus antibody titers above the cut-off value (unenhanced PRN)
End point description:	Anti-mumps virus antibody cut-off-value assessed was ≥ 4 Estimated Dose 50 (ED50).
End point type	Secondary
End point timeframe:	At 1 year post-vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	196	205	211	195
Units: Subjects	173	186	184	173

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-mumps virus antibody titers (unenhanced PRN)

End point title	Anti-mumps virus antibody titers (unenhanced PRN)
End point description:	Antibody concentrations are expressed as Geometric Mean Titer (GMT).
End point type	Secondary
End point timeframe:	At 2 years post-vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	157	144	157	152
Units: Titer				
geometric mean (confidence interval 95%)	43.4 (33.4 to 56.3)	48.9 (37.7 to 63.5)	57.4 (45.7 to 72.2)	60.7 (47.6 to 77.5)

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-mumps virus antibody titers above the cut-off value (unenhanced PRN)

End point title	Number of subjects with anti-mumps virus antibody titers above the cut-off value (unenhanced PRN)
End point description:	Anti-mumps virus antibody cut-off-value assessed was ≥ 4 Estimated Dose 50 (ED50).
End point type	Secondary
End point timeframe:	At 2 years post-vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	157	144	157	152
Units: Subjects	144	134	152	144

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-mumps virus antibody concentrations (Pharmaceutical Product Development (PPD) ELISA)

End point title	Anti-mumps virus antibody concentrations (Pharmaceutical Product Development (PPD) ELISA)
End point description:	Antibody concentrations are expressed as Geometric Mean Concentrations (GMC) in ELISA units per milliliter (EU/mL). The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-rubella virus antibody concentrations <5 EU/mL prior to vaccination.
End point type	Secondary
End point timeframe:	At 1 year post-vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	170	173	179	170
Units: EU/mL				
geometric mean (confidence interval 95%)	47.3 (39.2 to 57.1)	42.9 (36.4 to 50.6)	42.5 (35.9 to 50.3)	58.6 (50.6 to 67.8)

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-mumps virus antibody concentrations above the cut-off value (PPD ELISA)

End point title	Number of subjects with anti-mumps virus antibody concentrations above the cut-off value (PPD ELISA)
End point description:	Anti-mumps virus antibody cut-off-value assessed was ≥ 10 ELISA units per milliliter (EU/mL)
End point type	Secondary
End point timeframe:	At 1 year post-vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	170	173	179	170
Units: Subjects	155	159	162	164

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-mumps virus antibody concentrations (PPD ELISA)

End point title	Anti-mumps virus antibody concentrations (PPD ELISA)
End point description:	Antibody concentrations are expressed as Geometric Mean Concentrations (GMC) in ELISA units per milliliter (EU/mL). The analysis was performed on seronegative subjects. Seronegative subjects are subjects with anti-rubella virus antibody concentrations <5 EU/mL prior to vaccination.
End point type	Secondary
End point timeframe:	At 2 years post-vaccination

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	136	130	141	140
Units: EU/mL				
geometric mean (confidence interval 95%)	47.8 (40.2 to 56.9)	50.2 (42.1 to 59.9)	54 (46.1 to 63.3)	59.2 (50.1 to 70)

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-mumps virus antibody concentrations above the cut-off value (PPD ELISA)

End point title	Number of subjects with anti-mumps virus antibody concentrations above the cut-off value (PPD ELISA)
End point description:	
Anti-mumps virus antibody cut-off-value assessed was ≥ 10 ELISA units per milliliter (EU/mL)	
End point type	Secondary
End point timeframe:	
At 2 years post-vaccination	

End point values	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group	MMR-II Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	136	130	141	140
Units: Subjects	128	125	136	134

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Solicited symptoms: During the 4-day (Days 0-3) post-vaccination period. Unsolicited AEs: During the 43-day (Days 0-42) post vaccination period. SAEs: the entire study period (Day 0-Day 730).

Adverse event reporting additional description:

The number of occurrences reported for solicited symptoms, adverse events, and serious adverse events were not available for posting. The number of subjects affected by each specific event was indicated as the number of occurrences. Solicited symptoms were only assessed on subjects returning the symptom sheet.

Assessment type	Non-systematic
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Dictionary used

Dictionary name	MedDRA
Dictionary version	16.0

Reporting groups

Reporting group title	Priorix 1 Group
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Reporting group description:

Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 1) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Pevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Pevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.

Reporting group title	Priorix 2 Group
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Reporting group description:

Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 2) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Pevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Pevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.

Reporting group title	Priorix 3 Group
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Reporting group description:

Subjects between 12 and 15 months of age at the time of study vaccination who received one dose of Priorix investigational vaccine (Lot 3) subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Pevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Pevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.

Reporting group title	MMR-II Group
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Reporting group description:

Subjects between 12 and 15 months of age at the time of study vaccination who randomly received one dose of one of three different commercially-available lot of M-M-R II (Merck and Co.) vaccine subcutaneously in the right upper arm. Subjects concomitantly received one dose of Havrix and Pevnar vaccines intramuscularly in the left and the right thigh, respectively and one dose of Varivax vaccine subcutaneously in the left upper arm. Subjects had previously received three doses of Pevnar vaccine within the first year of life with the third dose administered at least 30 days prior to enrollment and vaccination with study vaccines.

Serious adverse events	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 304 (0.33%)	7 / 304 (2.30%)	8 / 304 (2.63%)
number of deaths (all causes)	0	0	0

number of deaths resulting from adverse events			
Neoplasms benign, malignant and unspecified (incl cysts and polyps) Nephroblastoma (Persistence Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Injury, poisoning and procedural complications			
Thermal burn (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Nervous system disorders			
Febrile convulsion (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Ataxia (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Febrile convulsion (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Blood and lymphatic system disorders			
Idiopathic thrombocytopenic purpura (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	1 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Leukocytosis (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Lymphadenitis (Active Phase)			

subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Idiopathic thrombocytopenic purpura (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	1 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Leukocytosis (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Lymphadenitis (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
General disorders and administration site conditions			
Hypoxia (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Influenza like illness (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pyrexia (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Influenza like illness (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pyrexia (ESFU Phase)			

subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pharyngotonsillitis (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastrointestinal disorders			
Intussusception (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Intussusception (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory, thoracic and mediastinal disorders			
Asthma (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Nasal congestion (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Bronchial hyperreactivity (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Bronchial hyperreactivity (ESFU Phase)			

subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Hypoxia (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Nasal congestion (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Skin and subcutaneous tissue disorders			
Petechiae (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Petechiae (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Rash (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Extremity necrosis (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Extremity necrosis (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Musculoskeletal and connective tissue disorders			

Ataxia (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Bronchiolitis (Active Phase)			
subjects affected / exposed	1 / 304 (0.33%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Bronchitis (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pneumonia (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cellulitis (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Coxsackie viral infection (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Croup infectious (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastroenteritis viral (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

H1N1 influenza (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Influenza (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Otitis media acute (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pneumonia respiratory syncytial viral (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Rash (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory syncytial virus infection (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Staphylococcal infection (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Upper respiratory tract infection (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Urinary tract infection (Active Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Bronchiolitis (ESFU Phase)			
subjects affected / exposed	1 / 304 (0.33%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Bronchitis (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cellulitis (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Coxsackie viral infection (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastroenteritis viral (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	1 / 304 (0.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
H1N1 influenza (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Influenza (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pharyngotonsillitis (ESFU Phase)			

subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pneumonia (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pneumonia respiratory syncytial viral (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory syncytial virus infection (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Staphylococcal infection (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	1 / 304 (0.33%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Upper respiratory tract infection (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Urinary tract infection (ESFU Phase)			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	0 / 304 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Serious adverse events	MMR-II Group		
Total subjects affected by serious adverse events			
subjects affected / exposed	10 / 308 (3.25%)		
number of deaths (all causes)	0		
number of deaths resulting from			

adverse events			
Neoplasms benign, malignant and unspecified (incl cysts and polyps) Nephroblastoma (Persistence Phase) subjects affected / exposed occurrences causally related to treatment / all deaths causally related to treatment / all	1 / 308 (0.32%) 0 / 1 0 / 0		
Injury, poisoning and procedural complications Thermal burn (Active Phase) subjects affected / exposed occurrences causally related to treatment / all deaths causally related to treatment / all	0 / 308 (0.00%) 0 / 0 0 / 0		
Nervous system disorders Febrile convulsion (Active Phase) subjects affected / exposed occurrences causally related to treatment / all deaths causally related to treatment / all	1 / 308 (0.32%) 1 / 1 0 / 0		
Ataxia (ESFU Phase) subjects affected / exposed occurrences causally related to treatment / all deaths causally related to treatment / all	0 / 308 (0.00%) 0 / 0 0 / 0		
Febrile convulsion (ESFU Phase) subjects affected / exposed occurrences causally related to treatment / all deaths causally related to treatment / all	1 / 308 (0.32%) 1 / 1 0 / 0		
Blood and lymphatic system disorders Idiopathic thrombocytopenic purpura (Active Phase) subjects affected / exposed occurrences causally related to treatment / all deaths causally related to treatment / all	0 / 308 (0.00%) 0 / 0 0 / 0		
Leukocytosis (Active Phase) subjects affected / exposed occurrences causally related to treatment / all deaths causally related to treatment / all	0 / 308 (0.00%) 0 / 0 0 / 0		
Lymphadenitis (Active Phase)			

subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Idiopathic thrombocytopenic purpura (ESFU Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Leukocytosis (ESFU Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Lymphadenitis (ESFU Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
General disorders and administration site conditions			
Hypoxia (Active Phase)			
subjects affected / exposed	2 / 308 (0.65%)		
occurrences causally related to treatment / all	0 / 2		
deaths causally related to treatment / all	0 / 0		
Influenza like illness (Active Phase)			
subjects affected / exposed	1 / 308 (0.32%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Pyrexia (Active Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Influenza like illness (ESFU Phase)			
subjects affected / exposed	1 / 308 (0.32%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Pyrexia (ESFU Phase)			

subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Pharyngotonsillitis (Active Phase)			
subjects affected / exposed	1 / 308 (0.32%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Gastrointestinal disorders			
Intussusception (Active Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Intussusception (ESFU Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Respiratory, thoracic and mediastinal disorders			
Asthma (Active Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Nasal congestion (Active Phase)			
subjects affected / exposed	1 / 308 (0.32%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Bronchial hyperreactivity (Active Phase)			
subjects affected / exposed	1 / 308 (0.32%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Bronchial hyperreactivity (ESFU Phase)			

subjects affected / exposed	1 / 308 (0.32%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Hypoxia (ESFU Phase)			
subjects affected / exposed	2 / 308 (0.65%)		
occurrences causally related to treatment / all	0 / 2		
deaths causally related to treatment / all	0 / 0		
Nasal congestion (ESFU Phase)			
subjects affected / exposed	1 / 308 (0.32%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Skin and subcutaneous tissue disorders			
Petechiae (Active Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Petechiae (ESFU Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Rash (ESFU Phase)			
subjects affected / exposed	1 / 308 (0.32%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Extremity necrosis (Active Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Extremity necrosis (ESFU Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Musculoskeletal and connective tissue disorders			

Ataxia (Active Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Infections and infestations			
Bronchiolitis (Active Phase)			
subjects affected / exposed	2 / 308 (0.65%)		
occurrences causally related to treatment / all	0 / 2		
deaths causally related to treatment / all	0 / 0		
Bronchitis (Active Phase)			
subjects affected / exposed	1 / 308 (0.32%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Pneumonia (Active Phase)			
subjects affected / exposed	1 / 308 (0.32%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Cellulitis (Active Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Coxsackie viral infection (Active Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Croup infectious (Active Phase)			
subjects affected / exposed	1 / 308 (0.32%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Gastroenteritis viral (Active Phase)			
subjects affected / exposed	0 / 308 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		

H1N1 influenza (Active Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Influenza (Active Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Otitis media acute (Active Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Pneumonia respiratory syncytial viral (Active Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Rash (Active Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Respiratory syncytial virus infection (Active Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Staphylococcal infection (Active Phase)				
subjects affected / exposed	0 / 308 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Upper respiratory tract infection (Active Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			

Urinary tract infection (Active Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Bronchiolitis (ESFU Phase)				
subjects affected / exposed	2 / 308 (0.65%)			
occurrences causally related to treatment / all	0 / 2			
deaths causally related to treatment / all	0 / 0			
Bronchitis (ESFU Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Cellulitis (ESFU Phase)				
subjects affected / exposed	0 / 308 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Coxsackie viral infection (ESFU Phase)				
subjects affected / exposed	0 / 308 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Gastroenteritis viral (ESFU Phase)				
subjects affected / exposed	0 / 308 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
H1N1 influenza (ESFU Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Influenza (ESFU Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Pharyngotonsillitis (ESFU Phase)				

subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Pneumonia (ESFU Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Pneumonia respiratory syncytial viral (ESFU Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Respiratory syncytial virus infection (ESFU Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Staphylococcal infection (ESFU Phase)				
subjects affected / exposed	0 / 308 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Upper respiratory tract infection (ESFU Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			
Urinary tract infection (ESFU Phase)				
subjects affected / exposed	1 / 308 (0.32%)			
occurrences causally related to treatment / all	0 / 1			
deaths causally related to treatment / all	0 / 0			

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	Priorix 1 Group	Priorix 2 Group	Priorix 3 Group
Total subjects affected by non-serious adverse events			
subjects affected / exposed	180 / 304 (59.21%)	141 / 304 (46.38%)	150 / 304 (49.34%)
General disorders and administration site conditions			
Pain			
alternative assessment type: Systematic			
subjects affected / exposed	70 / 304 (23.03%)	70 / 304 (23.03%)	79 / 304 (25.99%)
occurrences (all)	70	70	79
Redness			
alternative assessment type: Systematic			
subjects affected / exposed	45 / 304 (14.80%)	47 / 304 (15.46%)	41 / 304 (13.49%)
occurrences (all)	45	47	41
Swelling			
alternative assessment type: Systematic			
subjects affected / exposed	20 / 304 (6.58%)	26 / 304 (8.55%)	19 / 304 (6.25%)
occurrences (all)	20	26	19
Drowsiness			
alternative assessment type: Systematic			
subjects affected / exposed	133 / 304 (43.75%)	106 / 304 (34.87%)	113 / 304 (37.17%)
occurrences (all)	133	106	113
Irritability			
alternative assessment type: Systematic			
subjects affected / exposed	180 / 304 (59.21%)	141 / 304 (46.38%)	150 / 304 (49.34%)
occurrences (all)	180	141	150
Loss of appetite			
alternative assessment type: Systematic			
subjects affected / exposed	111 / 304 (36.51%)	77 / 304 (25.33%)	110 / 304 (36.18%)
occurrences (all)	111	77	110
Gastrointestinal disorders			
Teething			
subjects affected / exposed	35 / 304 (11.51%)	35 / 304 (11.51%)	37 / 304 (12.17%)
occurrences (all)	35	35	37
Diarrhoea			
subjects affected / exposed	25 / 304 (8.22%)	24 / 304 (7.89%)	19 / 304 (6.25%)
occurrences (all)	25	24	19

Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	25 / 304 (8.22%)	21 / 304 (6.91%)	0 / 304 (0.00%)
occurrences (all)	25	21	0
Rhinorrhoea			
subjects affected / exposed	0 / 304 (0.00%)	0 / 304 (0.00%)	21 / 304 (6.91%)
occurrences (all)	0	0	21
Infections and infestations			
Upper respiratory tract infection			
subjects affected / exposed	40 / 304 (13.16%)	22 / 304 (7.24%)	39 / 304 (12.83%)
occurrences (all)	40	22	39
Otitis media			
subjects affected / exposed	25 / 304 (8.22%)	25 / 304 (8.22%)	29 / 304 (9.54%)
occurrences (all)	25	25	29

Non-serious adverse events	MMR-II Group		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	153 / 308 (49.68%)		
General disorders and administration site conditions			
Pain			
alternative assessment type: Systematic			
subjects affected / exposed	67 / 308 (21.75%)		
occurrences (all)	67		
Redness			
alternative assessment type: Systematic			
subjects affected / exposed	47 / 308 (15.26%)		
occurrences (all)	47		
Swelling			
alternative assessment type: Systematic			
subjects affected / exposed	15 / 308 (4.87%)		
occurrences (all)	15		
Drowsiness			
alternative assessment type: Systematic			
subjects affected / exposed	109 / 308 (35.39%)		
occurrences (all)	109		
Irritability			

alternative assessment type: Systematic subjects affected / exposed occurrences (all)	153 / 308 (49.68%) 153		
Loss of appetite alternative assessment type: Systematic subjects affected / exposed occurrences (all)	94 / 308 (30.52%) 94		
Gastrointestinal disorders Teething subjects affected / exposed occurrences (all)	35 / 308 (11.36%) 35		
Diarrhoea subjects affected / exposed occurrences (all)	21 / 308 (6.82%) 21		
Respiratory, thoracic and mediastinal disorders Cough subjects affected / exposed occurrences (all)	19 / 308 (6.17%) 19		
Rhinorrhoea subjects affected / exposed occurrences (all)	0 / 308 (0.00%) 0		
Infections and infestations Upper respiratory tract infection subjects affected / exposed occurrences (all)	43 / 308 (13.96%) 43		
Otitis media subjects affected / exposed occurrences (all)	24 / 308 (7.79%) 24		

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
29 June 2010	<ul style="list-style-type: none">•Update Sponsor contact details for reporting SAEs and for emergency unblinding.•Clarify the timeframe to which medications, treatments and/or vaccinations are to be recorded in the eCRF.•Clarify the that the second dose of Havrix® is not a part of the study procedures, but is recorded in the eCRF
29 April 2011	Clarify/require the collection of any subsequent MMR vaccinations through visit 5. Change/update the interim analysis from a yearly persistence analysis to a 2 year analysis.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported