Clinical trial results:
A phase IIIb, open, multi-country, controlled, randomized study to demonstrate the immunogenicity and safety of GSK Biologicals' meningococcal conjugate vaccine, MenACWY-TT (GSK 134612) in healthy infants, given on a 3+1 primary and booster (2, 4, 6 and 15-18 months of age), a 1+1 primary and booster (6 and 15-18 months of age) or as a single dose at 15-18 months of age.

Summary

EudraCT number	2013-002537-37
Trial protocol	Outside EU/EEA
Global end of trial date	19 October 2015

Results information

Result version number	v2 (current)
This version publication date	26 May 2022
First version publication date	29 April 2016
Version creation reason	

Trial information

Trial identification

Sponsor protocol code	114858

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT01340898
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?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	18 November 2016
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	19 October 2015
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To demonstrate the immunogenicity of the MenACWY-TT conjugate vaccine in terms of bactericidal antibodies to N. meningitidis serogroups A, C, W-135 and Y one month post-dose 3 of MenACWY-TT at 7 months of age in healthy infants. Criteria for immunogenicity: For each serogroup, one month after dose 3 of MenACWY-TT vaccination, the lower limit of the two-sided exact 95% confidence interval (CI) for the percentage of subjects with rSBA titre ≥ 1:8 is greater than or equal to the pre-defined clinical limit of 80%.

Protection of trial subjects:

All subjects were supervised closely for at least 30 minutes following vaccination with appropriate medical treatment readily available. 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. Subjects were followed-up from the time the subject consents to participate in the study until she/he is discharged.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	27 January 2012
Long term follow-up planned	Yes
Long term follow-up rationale	Efficacy
Long term follow-up duration	6 Months
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Mexico: 351
Country: Number of subjects enrolled	Lebanon: 402
Worldwide total number of subjects	753
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	753

months)	
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

Subject disposition

Recruitment

Recruitment details:

Out of 753 subjects enrolled, 3 subjects were not vaccinated and hence not considered to have started the study.

Pre-assignment

Screening details:

During the screening the following steps occurred: check for inclusion/exclusion criteria, contraindications/precautions, medical history of the subjects and signing informed consent forms.

Pre-assignment period milestones

Number of subjects started	753
Number of subjects completed	750

Pre-assignment subject non-completion reasons

Reason: Number of subjects	No vaccination: 3

Period 1

Period 1 title	Primary Phase
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Not blinded

Arms

Are arms mutually exclusive?	Yes
Arm title	Nimenrix 3+1 Group

Arm description:

Subjects, male and female, received 4 doses of Nimenrix vaccine (3 doses at 2, 4 and 6 months of age followed by a booster dose at 15-18 months of age) and 4 doses of Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.

Arm type	Experimental
Investigational medicinal product name	Nimenrix
Investigational medicinal product code	
Other name	MenACWY-TT vaccine, GSK134612
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

The 3 vaccine doses were administered in the anterolateral region of the thigh at 2, 4 and 6 months of age.

Investigational medicinal product name	Synflorix
Investigational medicinal product code	
Other name	10Pn vaccine
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Synflorix at 2, 4 and 6 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Infanrix-IPV
Investigational medicinal product code	
Other name	

Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Infanrix-IPV vaccine at 2, 4 and 6 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Hiberix
Investigational medicinal product code	
Other name	Hib vaccine
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Hib vaccine at 2, 4 and 6 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Arm title	Nimenrix 1+1 Group

Arm description:

Subjects, male and female, received 2 doses of Nimenrix vaccine (1 dose at 6 months of age followed by a booster dose at 15-18 months of age) and 4 doses of Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.

Arm type	Experimental
Investigational medicinal product name	Synflorix
Investigational medicinal product code	
Other name	10Pn vaccine
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Synflorix at 2, 4 and 6 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Infanrix-IPV
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Infanrix-IPV vaccine at 2, 4 and 6 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Hiberix
Investigational medicinal product code	
Other name	Hib vaccine
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Hib vaccine at 2, 4 and 6 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Nimenrix
Investigational medicinal product code	
Other name	MenACWY-TT vaccine, GSK134612
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

The vaccine was administered in the anterolateral region of the thigh at 6 months of age.

Arm title	Nimenrix Control Group

Arm description:

Subjects, male and female, received 1 dose of Nimenrix at 15-18 months of age and 4 doses of

Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.

Arm type	Active comparator
Investigational medicinal product name	Synflorix
Investigational medicinal product code	
Other name	10Pn vaccine
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Synflorix at 2, 4 and 6 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Infanrix-IPV
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Infanrix-IPV vaccine at 2, 4 and 6 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Hiberix
Investigational medicinal product code	
Other name	Hib vaccine
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Hib vaccine at 2, 4 and 6 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Number of subjects in period 1[1]	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group
Started	376	187	187
Completed	360	178	181
Not completed	16	9	6
Consent withdrawn by subject	8	7	5
Migrated/moved from study area	4	1	-
Lost to follow-up	4	1	-
Serious Adverse Events	-	-	1

Notes:

[1] - 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: Not all subjects who completed a period entered in the next one. The number of subjects who started each period depends on the number of subjects available at the time.

Period 2

Period 2 title	Booster Phase
Is this the baseline period?	No
Allocation method	Randomised - controlled
Blinding used	Not blinded

Arms

Are arms mutually exclusive?	Yes
Arm title	Nimenrix 3+1 Group

Arm description:

Subjects who received booster 1 dose of Nimenrix vaccine at 15-18 months of age.

Arm type	Experimental
Investigational medicinal product name	Nimenrix
Investigational medicinal product code	
Other name	MenACWY-TT vaccine, GSK134612
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

The vaccine was administered in the anterolateral region of the thigh at 15-18 months of age.

Investigational medicinal product name	Synflorix
Investigational medicinal product code	
Other name	10Pn vaccine
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Synflorix at 15-18 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Infanrix-IPV
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Infanrix-IPV vaccine at 15-18 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Hiberix
Investigational medicinal product code	
Other name	Hib vaccine
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Hib vaccine at 15-18 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Arm title	Nimenrix 1+1 Group

Arm description:

Subjects who received booster 1 dose of Nimenrix vaccine 15-18 months of age.

Arm type	Experimental
Investigational medicinal product name	Nimenrix
Investigational medicinal product code	
Other name	MenACWY-TT vaccine, GSK134612
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

The vaccine was administered in the anterolateral region of the thigh at 15-18 months of age.

Investigational medicinal product name	Synflorix
Investigational medicinal product code	
Other name	10Pn vaccine
Pharmaceutical forms	Suspension for injection

Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Synflorix at 15-18 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Infanrix-IPV
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Infanrix-IPV vaccine at 15-18 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Hiberix
Investigational medicinal product code	
Other name	Hib vaccine
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Hib vaccine at 15-18 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Arm title	Nimenrix 1 Group

Arm description:

Subjects who received 1 dose of Nimenrix vaccine at 15-18 months of age.

Arm type	Active comparator
Investigational medicinal product name	Nimenrix
Investigational medicinal product code	
Other name	MenACWY-TT vaccine, GSK134612
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

The vaccine was administered in the anterolateral region of the thigh at 15-18 months of age.

Investigational medicinal product name	Synflorix
Investigational medicinal product code	
Other name	10Pn vaccine
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Synflorix at 15-18 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Investigational medicinal product name	Hiberix
Investigational medicinal product code	
Other name	Hib vaccine
Pharmaceutical forms	Powder and solvent for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

As part of the study all subjects received routine administration of Hib vaccine at 15-18 months of age, administered intramuscularly (IM) in the anterolateral region of the thigh.

Number of subjects in period 2[2]	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix 1 Group
Started	342	166	170
Completed	332	164	163
Not completed	10	2	7
Consent withdrawn by subject	3	-	4
Migrated/moved from study area	3	-	-
Lost to follow-up	4	2	3

Notes:

[2] - The number of subjects starting the period is not consistent with the number completing the preceding period. It is expected the number of subjects starting the subsequent period will be the same as the number completing the preceding period.
Justification: Not all subjects who completed a period entered in the next one. The number of subjects who started each period depends on the number of subjects available at the time.

Baseline characteristics

Reporting groups	
Reporting group title	Nimenrix 3+1 Group
Reporting group description:	
Subjects, male and female, received 4 doses of Nimenrix vaccine (3 doses at 2, 4 and 6 months of age followed by a booster dose at 15-18 months of age) and 4 doses of Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.	
Reporting group title	Nimenrix 1+1 Group
Reporting group description:	
Subjects, male and female, received 2 doses of Nimenrix vaccine (1 dose at 6 months of age followed by a booster dose at 15-18 months of age) and 4 doses of Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.	
Reporting group title	Nimenrix Control Group
Reporting group description:	
Subjects, male and female, received 1 dose of Nimenrix at 15-18 months of age and 4 doses of Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.	

Reporting group values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group
Number of subjects	376	187	187
Age categorical			
Units: Subjects			
Age continuous			
Units: weeks			
arithmetic mean	8.1	8.1	8.2
standard deviation	± 1.6	± 1.7	± 1.7
Gender categorical			
Units: Subjects			
Female	182	105	95
Male	194	82	92
Race/Ethnicity, Customized			
Units: Subjects			
White - Arabic / North African Heritage	199	100	99
White - Caucasian / European Heritage	1	0	1
Mixed Origin	176	87	87

Reporting group values	Total		
Number of subjects	750		
Age categorical			
Units: Subjects			
Age continuous			
Units: weeks			
arithmetic mean			
standard deviation	-		

Gender categorical Units: Subjects			
Female	382		
Male	368		
Race/Ethnicity, Customized Units: Subjects			
White - Arabic / North African Heritage	398		
White - Caucasian / European Heritage	2		
Mixed Origin	350		

End points

End points reporting groups

Reporting group title	Nimenrix 3+1 Group
Reporting group description:	
Subjects, male and female, received 4 doses of Nimenrix vaccine (3 doses at 2, 4 and 6 months of age followed by a booster dose at 15-18 months of age) and 4 doses of Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.	
Reporting group title	Nimenrix 1+1 Group
Reporting group description:	
Subjects, male and female, received 2 doses of Nimenrix vaccine (1 dose at 6 months of age followed by a booster dose at 15-18 months of age) and 4 doses of Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.	
Reporting group title	Nimenrix Control Group
Reporting group description:	
Subjects, male and female, received 1 dose of Nimenrix at 15-18 months of age and 4 doses of Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.	
Reporting group title	Nimenrix 3+1 Group
Reporting group description:	
Subjects who received booster 1 dose of Nimenrix vaccine at 15-18 months of age.	
Reporting group title	Nimenrix 1+1 Group
Reporting group description:	
Subjects who received booster 1 dose of Nimenrix vaccine 15-18 months of age.	
Reporting group title	Nimenrix 1 Group
Reporting group description:	
Subjects who received 1 dose of Nimenrix vaccine at 15-18 months of age.	

Primary: Number of subjects with serum bactericidal assay using rabbit complement against Neisseria meningitidis serogroups antibody titers greater than or equal to (≥) the cut-off value for the Nimenrix 3+1 Group

End point title	Number of subjects with serum bactericidal assay using rabbit complement against Neisseria meningitidis serogroups antibody titers greater than or equal to (≥) the cut-off value for the Nimenrix 3+1 Group[1][2]
End point description:	
The cut-off value for the rSBA titers was ≥ 1:8. Neisseria meningitidis serogroups A, C, W-135, Y (rSBA-MenA, rSBA-MenC, rSBA-MenW-135 and rSBA-MenY) antibodies were assessed. Immunogenicity was considered demonstrated if the lower limit of the two-sidedexact 95% confidence interval (CI) for the percentage of subjects with rSBA titre ≥1:8 was greater than or equal to the pre-defined clinical limit of 80%.	
End point type	Primary
End point timeframe:	
At Month 5 (one month post dose 3)	

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.
[2] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: Not all arms in the Baseline Period are applicable for this endpoint.

End point values	Nimenrix 3+1 Group			
Subject group type	Reporting group			
Number of subjects analysed	328			
Units: Participants				
rSBA-MenA [N=328]	328			
rSBA-MenC [N=328]	327			
rSBA-MenW-135 [N=327]	325			
rSBA-MenY [N=328]	327			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with rSBA-MenA, rSBA-MenC, rSBA-MenW-135 and rSBA-MenY antibody titers greater than or equal to (≥) the 1:8 for the Nimenrix 3+1 Group

End point title	Number of subjects with rSBA-MenA, rSBA-MenC, rSBA-MenW-135 and rSBA-MenY antibody titers greater than or equal to (≥) the 1:8 for the Nimenrix 3+1 Group[3]

End point description:

The cut-off value for the rSBA titers was ≥ 1:8

End point type	Secondary

End point timeframe:

At Month 13 (prior to booster dose) and at Month 14 (one month after booster dose)

Notes:

[3] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: Not all arms in the Baseline Period are applicable for this endpoint.

End point values	Nimenrix 3+1 Group			
Subject group type	Reporting group			
Number of subjects analysed	284			
Units: Participants				
rSBA-MenA,M13 [N=276]	225			
rSBA-MenA,M14 [N=283]	283			
rSBA-MenC,M13 [N=276]	190			
rSBA-MenC,M14 [N=283]	282			
rSBA-MenW-135,M13 [N=257]	225			
rSBA-MenW-135,M14 [N=284]	284			
rSBA-MenY,M13 [N=275]	240			
rSBA-MenY,M14[N=284]	284			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with rSBA-MenA, rSBA-MenC, rSBA-MenW-135 and

rSBA-MenY antibody titers greater than or equal to (≥) the 1:128 for the Nimenrix 3+1 Group

End point title	Number of subjects with rSBA-MenA, rSBA-MenC, rSBA-MenW-135 and rSBA-MenY antibody titers greater than or equal to (≥) the 1:128 for the Nimenrix 3+1 Group[4]

End point description:

The cut-off value for the rSBA titers was ≥ 1:128

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3), 13 (prior booster dose) and 14 (one month after booster dose)

Notes:

[4] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: Not all arms in the Baseline Period are applicable for this endpoint.

End point values	Nimenrix 3+1 Group			
Subject group type	Reporting group			
Number of subjects analysed	328			
Units: Participants				
rSBA-MenA, M5 [N=328]	321			
rSBA-MenA, M13 [N=276]	146			
rSBA-MenA, M14 [N=283]	282			
rSBA-MenC, M5 [N=328]	318			
rSBA-MenC, M13 [N=276]	93			
rSBA-MenC, M14 [N=283]	282			
rSBA-MenW-135, M5 [N=327]	313			
rSBA-MenW-135, M13 [N=275]	122			
rSBA-MenW-135, M14 [N=284]	284			
rSBA-MenY, M5 [N=328]	312			
rSBA-MenY, M13 [N=275]	121			
rSBA-MenY, M14 [N=284]	283			

Statistical analyses

No statistical analyses for this end point

Secondary: rSBA-MenA, rSBA-MenC, rSBA-MenW-135 and rSBA-MenY antibody titers for the Nimenrix 3+1 Group

End point title	rSBA-MenA, rSBA-MenC, rSBA-MenW-135 and rSBA-MenY antibody titers for the Nimenrix 3+1 Group[5]

End point description:

Antibody titers are presented as geometric mean titers (GMTs).

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3), 13 (prior booster dose) and 14 (one month after booster dose)

Notes:

[5] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: Not all arms in the Baseline Period are applicable for this endpoint.

End point values	Nimenrix 3+1 Group			
Subject group type	Reporting group			
Number of subjects analysed	328			
Units: Titers				
geometric mean (confidence interval 95%)				
rSBA-MenA, M5 [N=328]	577.5 (520.7 to 640.6)			
rSBA-MenA, M13 [N=276]	71.1 (56.6 to 89.3)			
rSBA-MenA, M14 [N=283]	2366.4 (2134.8 to 2623.1)			
rSBA-MenC, M5 [N=328]	803.1 (710.4 to 907.8)			
rSBA-MenC, M13 [N=276]	33.9 (27.4 to 41.9)			
rSBA-MenC, M14 [N=283]	2761.2 (2461.2 to 3097.9)			
rSBA-MenW-135, M5 [N=327]	1190.3 (1019.3 to 1390.1)			
rSBA-MenW-135, M13 [N=275]	52.0 (42.2 to 64.2)			
rSBA-MenW-135, M14 [N=284]	3696.9 (3242.8 to 4214.7)			
rSBA-MenY, M5 [N=328]	647.4 (566.6 to 739.6)			
rSBA-MenY, M13 [N=275]	66.3 (54.3 to 81.0)			
rSBA-MenY, M14 [N=284]	2778.6 (2472.5 to 3122.5)			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with rSBA-MenA, rSBA-MenC, rSBA-MenW-135 and rSBA-MenY antibody titers greater than or equal to (≥) the cut-off values for the Nimenrix 1+1 and Nimenrix Control Groups

End point title	Number of subjects with rSBA-MenA, rSBA-MenC, rSBA-MenW-135 and rSBA-MenY antibody titers greater than or equal to (≥) the cut-off values for the Nimenrix 1+1 and Nimenrix Control Groups[6]

End point description:

The cut-off values for the rSBA antibody titers were ≥ 1:8 and ≥ 1:128

End point type	Secondary

End point timeframe:

At Months 5 (one month post-primary dose for Nimenrix 1+1 Group), 13 (prior booster dose for Nimenrix 1+1 and prior primary dose for Nimenrix Control Group) and 14 (post booster dose for Nimenrix 1+1 and post-primary dose for Nimenrix Control Group)

Notes:

[6] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: Not all arms in the Baseline Period are applicable for this endpoint.

End point values	Nimenrix 1+1 Group	Nimenrix Control Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	163	163		
Units: Participants				
rSBA-MenA, M5, ≥ 1:8 [N=163;163]	161	6		
rSBA-MenA, M13, ≥ 1:8 [N=131;132]	107	19		
rSBA-MenA, M14, ≥ 1:8 [N=139;135]	138	133		
rSBA-MenC, M5, ≥ 1:8 [N=163;162]	162	6		
rSBA-MenC, M13, ≥ 1:8 [N=131;132]	86	3		
rSBA-MenC, M14, ≥ 1:8 [N=139;135]	138	130		
rSBA-MenW-135, M5, ≥ 1:8 [N=163;163]	153	4		
rSBA-MenW-135, M13, ≥ 1:8 [N=131;132]	102	7		
rSBA-MenW-135, M14, ≥ 1:8 [N=139;135]	139	131		
rSBA-MenY, M5, ≥ 1:8 [N=163;162]	161	16		
rSBA-MenY, M13, ≥ 1:8 [N=131;132]	116	24		
rSBA-MenY, M14, ≥ 1:8 [N=139;135]	139	131		
rSBA-MenA, M5, ≥ 1:128 [N=163;163]	155	6		
rSBA-MenA, M13, ≥ 1:128 [N=131;132]	88	16		
rSBA-MenA, M14, ≥ 1:128 [N=139;135]	138	132		
rSBA-MenC, M5, ≥ 1:128 [N=163;162]	151	5		
rSBA-MenC, M13, ≥ 1:128 [N=131;132]	39	1		
rSBA-MenC, M14, ≥ 1:128 [N=139;135]	137	128		
rSBA-MenW-135, M5, ≥ 1:128 [N=163;163]	151	4		
rSBA-MenW-135, M13, ≥ 1:128 [N=131;132]	65	7		
rSBA-MenW-135, M14, ≥ 1:128 [N=139;135]	138	131		
rSBA-MenY, M5, ≥ 1:128 [N=163;162]	159	16		
rSBA-MenY, M13, ≥ 1:128 [N=131;132]	70	23		
rSBA-MenY, M14, ≥ 1:128 [N=139;135]	137	131		

Statistical analyses

No statistical analyses for this end point

Secondary: rSBA-MenA, rSBA-MenC, rSBA-MenW-135 and rSBA-MenY antibody titers Nimenrix 1+1 and Nimenrix Control Groups

End point title	rSBA-MenA, rSBA-MenC, rSBA-MenW-135 and rSBA-MenY antibody titers Nimenrix 1+1 and Nimenrix Control Groups[7]

End point description:

Antibody titers are presented as geometric mean titers (GMTs).

End point type	Secondary

End point timeframe:

At Months 5 (one month post-primary dose for Nimenrix 1+1 Group), 13 (prior booster dose for Nimenrix 1+1 and prior primary dose for Nimenrix Control Group) and 14 (post booster dose Nimenrix 1+1 and post-primary dose for Nimenrix Control Group)

Notes:

[7] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: Not all arms in the Baseline Period are applicable for this endpoint.

End point values	Nimenrix 1+1 Group	Nimenrix Control Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	163	163		
Units: Titers				
geometric mean (confidence interval 95%)				
rSBA-MenA, M5, ≥ 1:8 [N=163;163]	1332.9 (1035.2 to 1716.2)	4.8 (4.1 to 5.5)		
rSBA-MenA, M13, ≥ 1:8 [N=131;132]	125.3 (84.4 to 186.1)	7.2 (5.5 to 9.3)		
rSBA-MenA, M14, ≥ 1:8 [N=139;135]	2762.3 (2310.3 to 3302.8)	2918.7 (2264.6 to 3761.7)		
rSBA-MenC, M5, ≥ 1:8 [N=163;162]	591.6 (482.3 to 725.8)	4.7 (4.1 to 5.4)		
rSBA-MenC, M13, ≥ 1:8 [N=131;132]	27.4 (20.6 to 36.6)	4.2 (3.9 to 4.4)		
rSBA-MenC, M14, ≥ 1:8 [N=139;135]	2525.2 (2102.1 to 3033.3)	768.1 (593.0 to 995.0)		
rSBA-MenW-135, M5, ≥ 1:8 [N=163;163]	1255.9 (917.0 to 1720.0)	4.6 (4.0 to 5.2)		
rSBA-MenW-135, M13, ≥ 1:8 [N=131;132]	63.3 (45.6 to 87.9)	5.0 (4.2 to 5.8)		
rSBA-MenW-135, M14, ≥ 1:8 [N=139;135	3144.7 (2636.9 to 3750.4)	5240.7 (3855.5 to 7123.7)		
rSBA-MenY, M5, ≥ 1:8 [N=163;162]	1469.9 (1186.5 to 1821.0)	6.3 (5.0 to 7.8)		
rSBA-MenY, M13, ≥ 1:8 [N=131;132]	106.4 (76.4 to 148.1)	9.4 (6.8 to 12.9)		
rSBA-MenY, M14, ≥ 1:8 [N=139;135]	2748.6 (2301.4 to 3282.6)	4202.5 (3219.9 to 5485.1)		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with booster responses for rSBA-MenA, C rSBA-MenC, Y rSBA-MenY and W-135 rSBA-MenW-135 in Nimenrix 3+1 and Nimenrix 1+1 Groups and With Vaccine Response in Nimenrix Control Group

End point title	Number of subjects with booster responses for rSBA-MenA, C rSBA-MenC, Y rSBA-MenY and W-135 rSBA-MenW-135 in Nimenrix 3+1 and Nimenrix 1+1 Groups and With Vaccine Response in Nimenrix Control Group

End point description:

Booster response defined as: for seronegative subjects, antibody titre ≥ 1:32 at post-booster vaccination; for seropositive subjects, antibody titre at post-booster vaccination ≥ 4-fold the pre-booster vaccination antibody titre; for initially seropositive subjects: antibody titre at M14 ≥ 4 fold the pre-vaccination antibody titre.

End point type	Secondary

End point timeframe:

At Month 14 (one month post-booster dose for Nimenrix 3+1 and Nimenrix 1+1 and post-primary dose for Nimenrix Control Group)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix 1 Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	275	131	132	
Units: Participants				
rSBA-MenA	248	108	125	
rSBA-MenC	210	129	126	
rSBA-MenW-135	272	122	128	
rSBA-MenY	267	121	125	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with serum bactericidal assay using human complement against Neisseria meningitidis serogroups A, C, W-135, Y antibody titers greater than or equal to (≥) the cut-off value

End point title	Number of subjects with serum bactericidal assay using human complement against Neisseria meningitidis serogroups A, C, W-135, Y antibody titers greater than or equal to (≥) the cut-off value[8]

End point description:

The cut-off value for the hSBA titers was ≥ 1:4 and ≥ 1:8.

End point type	Secondary

End point timeframe:

At Month 5 (One Month Post-primary for Nimenrix 3+1 and 1+1 Groups)

Notes:

[8] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: Not all arms in the Baseline Period are applicable for this endpoint.

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	147	66		
Units: Participants				
hSBA-MenA, ≥ 1:4 [N=136;59]	136	58		
hSBA-MenC, ≥ 1:4 [N=147;66]	147	66		
hSBA-MenW-135, ≥ 1:4 [N=107;47]	107	41		
hSBA-MenY, ≥ 1:4 [N=127;52]	127	48		

hSBA-MenA, ≥ 1:8 [N=136;59]	136	58		
hSBA-MenC, ≥ 1:8 [N=147;66]	147	66		
hSBA-MenW-135, ≥ 1:8 [N=107;47]	107	41		
hSBA-MenY, ≥ 1:8 [N=127;52]	127	48		

Statistical analyses

No statistical analyses for this end point

Secondary: hSBA-MenA, hSBA-MenC, hSBA-MenW-135, and hSBA-Men-Y antibody titers at month 5 (One Month Post-primary for Nimenrix3+1 and Nimenrix 1+1 Groups) -Randomized Subset of 50% of Subjects of All Three Groups

End point title	hSBA-MenA, hSBA-MenC, hSBA-MenW-135, and hSBA-Men-Y antibody titers at month 5 (One Month Post-primary for Nimenrix3+1 and Nimenrix 1+1 Groups) -Randomized Subset of 50% of Subjects of All Three Groups[9]

End point description:

Antibody titers are presented as geometric mean titers (GMTs).

End point type	Secondary

End point timeframe:

At Month 5 (one month post-primary for Nimenrix 3+1 and Nimenrix 1+1 Groups)

Notes:

[9] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: Not all arms in the Baseline Period are applicable for this endpoint.

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	147	66		
Units: Titers				
geometric mean (confidence interval 95%)				
hSBA-MenA [N=136;59]	808.0 (683.8 to 954.6)	270.5 (205.9 to 355.4)		
hSBA-MenC [N=147;66]	3970.8 (3144.0 to 5015.1)	523.1 (381.5 to 717.3)		
hSBA-MenW-135 [N=107;47]	1514.5 (1277.2 to 1795.8)	136.5 (78.4 to 237.6)		
hSBA-MenY [N=127;52]	1276.2 (1077.3 to 1511.8)	194.8 (117.6 to 322.9)		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with hSBA-MenA, hSBA-MenC, hSBA-MenW-135, and hSBA-Men-Y titers greater than or equal to (≥) the cut-off value (Pre- and Post-

booster for Nimenrix 3+1 and 1+1 Groups and Pre- and Post-vaccination for Nimenrix Control)

End point title	Number of subjects with hSBA-MenA, hSBA-MenC, hSBA-MenW-135, and hSBA-Men-Y titers greater than or equal to (≥) the cut-off value (Pre- and Post-booster for Nimenrix 3+1 and 1+1 Groups and Pre- and Post-vaccination for Nimenrix Control)[10]

End point description:

The cut-off value for the hSBA titers was ≥ 1:4 and ≥ 1:8.

End point type	Secondary

End point timeframe:

At Month 13 (pre-booster for Nimenrix 3+1 and Nimenrix 1+1 Groups and pre-vaccination for Nimenrix Control), and at Month 14 (post-booster for Nimenrix 3+1 and Nimenrix 1+1 Groups and post-vaccination for Nimenrix Control)

Notes:

[10] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: Not all arms in the Baseline Period are applicable for this endpoint.

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	198	92		
Units: Participants				
hSBA-MenA, ≥ 1:4, M13 [N=152;71]	131	48		
hSBA-MenA, ≥ 1:4, M14 [N=173;83]	173	83		
hSBA-MenC, ≥ 1:4, M13 [N=173;78]	168	76		
hSBA-MenC, ≥ 1:4, M14 [N=198;92]	198	92		
hSBA-MenW-135, ≥ 1:4, M13 [N=123;53]	123	53		
hSBA-MenW-135, ≥ 1:4, M14 [N=129;59]	129	59		
hSBA-MenY, ≥ 1:4, M13 [N=138;61]	137	60		
hSBA-MenY, ≥ 1:4, M14 [N=149;69]	149	69		
hSBA-MenA, ≥ 1:8, M13 [N=152;71]	130	47		
hSBA-MenA, ≥ 1:8, M14 [N=173;83]	173	83		
hSBA-MenC, ≥ 1:8, M13 [N=173;78]	168	75		
hSBA-MenC, ≥ 1:8, M14 [N=198;92]	198	92		
hSBA-MenW-135, ≥ 1:8, M13 [N=123;53]	123	53		
hSBA-MenW-135, ≥ 1:8, M14 [N=129;59]	129	59		
hSBA-MenY, ≥ 1:8, M13 [N=138;61]	137	60		
hSBA-MenY, ≥ 1:8, M14 [N=149;69]	149	69		

Statistical analyses

No statistical analyses for this end point

Secondary: hSBA-MenA, hSBA-MenC, hSBA-MenW-135, and hSBA-Men-Y antibody titers at month 13 and 14

End point title	hSBA-MenA, hSBA-MenC, hSBA-MenW-135, and hSBA-Men-Y

	antibody titers at month 13 and 14[11]

End point description:

Antibody titers are presented as geometric mean titers (GMTs).

End point type	Secondary

End point timeframe:

At Month 13 (pre-booster for Nimenrix 3+1 and Nimenrix 1+1 Groups and pre-vaccination for Nimenrix Control), and at Month 14 (post-booster for Nimenrix 3+1 and Nimenrix 1+1 Groups and post-vaccination for Nimenrix Control)

Notes:

[11] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: Not all arms in the Baseline Period are applicable for this endpoint.

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	198	92		
Units: Titers				
geometric mean (confidence interval 95%)				
hSBA-MenA, M13 [N=152;71]	64.6 (48.8 to 85.5)	20.8 (13.5 to 32.2)		
hSBA-MenA, M14 [N=173;83]	2318.6 (1991.7 to 2699.1)	1415.6 (1140.2 to 1757.5)		
hSBA-MenC, M13 [N=173;78]	209.0 (165.7 to 263.7)	150.8 (108.5 to 209.5)		
hSBA-MenC, M14 [N=198;92]	15919.1 (13965.3 to 18146.2)	13360.1 (10952.9 to 16296.4)		
hSBA-MenW-135, M13 [N=123;53]	307.9 (262.9 to 360.6)	428.6 (328.4 to 559.2)		
hSBA-MenW-135, M14 [N=129;59]	8761.8 (7431.3 to 10330.5)	9015.6 (7045.2 to 11537.1)		
hSBA-MenY, M13 [N=138;61]	363.2 (309.9 to 425.7)	389.2 (292.3 to 518.1)		
hSBA-MenY, M14 [N=149;69]	5989.3 (5281.0 to 6792.6)	5977.6 (4746.8 to 7527.6)		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with booster responses for hSBA-MenA, hSBA-MenC, hSBA-MenW-135 and hSBA-MenY in Nimenrix 3+1 and Nimenrix 1+1 Groups and With Vaccine Response in Nimenrix 1 Group

End point title	Number of subjects with booster responses for hSBA-MenA, hSBA-MenC, hSBA-MenW-135 and hSBA-MenY in Nimenrix 3+1 and Nimenrix 1+1 Groups and With Vaccine Response in Nimenrix 1 Group

End point description:

Booster response defined as: for seronegative subjects, antibody titre ≥ 1:8 at post-booster vaccination; for seropositive subjects, antibody titre at post-booster vaccination ≥ 4-fold the pre-booster vaccination antibody titre; for initially seropositive subjects: antibody titre at M14 ≥ 4 fold the pre-

vaccination antibody titre.

End point type	Secondary

End point timeframe:

At Month 14 (one month after the booster dose in Nimenrix 3+1 and Nimenrix 1+1 and post-vaccination in Nimenrix 1 Group)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix 1 Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	163	75	65	
Units: Participants				
hSBA-MenA, Total [N=137;64;58]	130	61	51	
hSBA-MenC, Total [N=163;75;65]	163	73	65	
hSBA-MenW-135, Total [N=107;42;38]	106	40	37	
hSBA-MenY, Total [N=122;49;34]	115	45	30	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-pneumococcal antibody concentrations greater than or equal to (≥) 0.15 micrograms per millilitre (µg/mL).

End point title	Number of subjects with anti-pneumococcal antibody concentrations greater than or equal to (≥) 0.15 micrograms per millilitre (µg/mL).

End point description:

The anti-pneumococcal serotypes assessed were 1, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F and 23F.

End point type	Secondary

End point timeframe:

At Month 5 (one month post-dose 3), Month 13 (prior booster dose) and Month 14 (one month after the booster dose)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	82	42	37	
Units: Participants				
anti-1, M5 [N=82;42;37]	82	42	37	
anti-1, M13 [N=57;32;27]	36	19	19	
anti-1, M14 [N=61;30;29]	61	29	29	
anti-4, M5 [N=82;42;37]	82	42	37	
anti-4, M13 [N=57;33;27]	38	22	20	
anti-4, M14 [N=61;30;29]	61	30	29	
anti-5, M5 [N=82;42;37]	81	42	37	
anti-5, M13 [N=57;33;27]	32	18	17	
anti-5, M14 [N=61;30;29]	60	29	27	

anti-6A, M5 [N=69;37;28]	51	31	22	
anti-6A, M13 [N=56;32;26]	44	26	16	
anti-6A, M14 [N=51;25;25]	51	25	24	
anti-6B, M5 [N=81;42;37]	81	41	37	
anti-6B, M13 [N=57;33;27]	55	31	22	
anti-6B, M14 [N=61;30;29]	61	30	28	
anti-7F, M5 [N=82;42;37]	82	42	37	
anti-7F, M13 [N=57;33;27]	55	32	23	
anti-7F, M14 [N=61;30;29]	61	29	29	
anti-9V, M5 [N=82;42;37]	82	42	37	
anti-9V, M13 [N=57;33;27]	47	24	17	
anti-9V, M14 [N=61;30;29]	61	29	29	
anti-14, M5 [N=82;42;36]	82	42	36	
anti-14, M13 [N=57;33;27]	56	33	25	
anti-14, M14 [N=61;30;29]	61	30	29	
anti-18C, M5 [N=82;42;37]	81	42	37	
anti-18C, M13 [N=57;33;27]	43	20	19	
anti-18C, M14 [N=61;30;29]	61	29	29	
anti-19A, M5 [N=82;42;37]	49	26	27	
anti-19A, M13 [N=57;33;27]	41	23	20	
anti-19A, M14 [N=61;29;29]	57	27	27	
anti-19F, M5 [N=81;42;37]	81	42	36	
anti-19F, M13 [N=57;33;27]	57	33	25	
anti-19F, M14 [N=61;30;29]	61	30	29	
anti-23F, M5 [N=71;42;36]	66	42	35	
anti-23F, M13 [N=57;33;26]	42	25	18	
anti-23F, M14 [N=45;24;21]	45	23	21	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-pneumococcal antibody concentrations greater than or equal to (≥) 0.35 micrograms per millilitre (µg/mL)

End point title	Number of subjects with anti-pneumococcal antibody concentrations greater than or equal to (≥) 0.35 micrograms per millilitre (µg/mL)

End point description:

The anti-pneumococcal serotypes assessed were 1, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F and 23F.

End point type	Secondary

End point timeframe:

At Month 5 (one month post-dose 3), Month 13 (prior booster dose) and Month 14 (one month after the booster dose)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	82	42	37	
Units: Participants				
anti-1, M5 [N=82;42;37]	76	41	34	
anti-1, M13 [N=57;32;27]	12	5	8	
anti-1, M14 [N=61;30;29]	61	29	28	
anti-4, M5 [N=82;42;37]	81	41	37	
anti-4, M13 [N=57;33;27]	17	5	10	
anti-4, M14 [N=61;30;29]	58	29	29	
anti-5, M5 [N=82;42;37]	72	32	28	
anti-5, M13 [N=57;33;27]	10	5	5	
anti-5, M14 [N=61;30;29]	49	23	26	
anti-6A, M5 [N=69;37;28]	36	20	13	
anti-6A, M13 [N=56;32;26]	26	10	11	
anti-6A, M14 [N=51;25;25]	47	22	23	
anti-6B, M5 [N=81;42;37]	73	40	35	
anti-6B, M13 [N=57;33;27]	37	23	15	
anti-6B, M14 [N=61;30;29]	61	28	28	
anti-7F, M5 [N=82;42;37]	81	42	37	
anti-7F, M13 [N=57;33;27]	38	17	14	
anti-7F, M14 [N=61;30;29]	61	29	28	
anti-9V, M5 [N=82;42;37]	79	40	36	
anti-9V, M13 [N=57;33;27]	19	10	9	
anti-9V, M14[N=61;30;29]	59	28	28	
anti-14, M5 [N=82;42;36]	80	41	36	
anti-14, M13 [N=57;33;27]	44	28	21	
anti-14, M14 [N=61;30;29]	61	29	28	
anti-18C, M5 [N=82;42;37]	79	41	36	
anti-18C, M13 [N=57;33;27]	18	9	11	
anti-18C, M14 [N=61;30;29]	61	27	29	
anti-19A, M5 [N=82;42;37]	28	14	13	
anti-19A, M13 [N=57;33;27]	25	15	5	
anti-19A, M14 [N=61;29;29]	52	21	22	
anti-19F, M5 [N=81;42;37]	80	42	36	
anti-19F, M13 [N=57;33;27]	52	30	20	
anti-19F, M14 [N=61;30;29]	61	30	29	
anti-23F, M5 [N=71;42;36]	62	42	32	
anti-23F, M13 [N=57;33;26]	28	14	12	
anti-23F, M14 [N=45;24;21]	45	23	20	

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-pneumococcal antibody concentrations

End point title	Anti-pneumococcal antibody concentrations

End point description:

Antibody concentrations were expressed as Geometric Mean Concentrations (GMCs) and measured in micrograms/millilitre (µg/mL)

End point type	Secondary

End point timeframe:

At Month 5 (one month post-dose 3), Month 13 (prior booster-dose) and Month 14 (one month after the booster dose)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	82	42	37	
Units: µg/mL				
geometric mean (confidence interval 95%)				
anti-1, M5 [N=82;42;37]	1.3 (1.1 to 1.6)	1.4 (1.1 to 1.8)	1.5 (1.1 to 2.1)	
anti-1, M13 [N=57;32;27]	0.2 (0.1 to 0.2)	0.2 (0.1 to 0.2)	0.2 (0.2 to 0.3)	
anti-1, M14 [N=61;30;29]	2.1 (1.6 to 2.6)	1.7 (1.2 to 2.5)	2.2 (1.5 to 3.2)	
anti-4, M5 [N=82;42;37]	1.7 (1.5 to 2.0)	1.8 (1.4 to 2.2)	1.8 (1.3 to 2.5)	
anti-4, M13 [N=57;33;27]	0.2 (0.2 to 0.3)	0.2 (0.2 to 0.3)	0.3 (0.2 to 0.4)	
anti-4, M14 [N=61;30;29]	2.4 (1.8 to 3.1)	2.4 (1.8 to 3.1)	3.1 (2.3 to 4.2)	
anti-5, M5 [N=82;42;37]	0.6 (0.6 to 0.7)	0.6 (0.5 to 0.7)	0.7 (0.5 to 0.9)	
anti-5, M13 [N=57;33;27]	0.2 (0.1 to 0.2)	0.2 (0.1 to 0.2)	0.2 (0.1 to 0.2)	
anti-5, M14 [N=61;30;29]	0.7 (0.6 to 0.9)	0.5 (0.4 to 0.7)	0.7 (0.5 to 1.0)	
anti-6A, M5 [N=69;37;28]	0.3 (0.3 to 0.4)	0.4 (0.3 to 0.6)	0.3 (0.2 to 0.4)	
anti-6A, M13 [N=56;32;26]	0.3 (0.2 to 0.4)	0.3 (0.2 to 0.4)	0.2 (0.2 to 0.4)	
anti-6A, M14 [N=51;25;25]	1.7 (1.3 to 2.3)	1.4 (0.9 to 2.1)	1.6 (1.0 to 2.5)	
anti-6B, M5 [N=81;42;37]	1.8 (1.4 to 2.3)	1.7 (1.3 to 2.4)	1.8 (1.3 to 2.5)	
anti-6B, M13 [N=57;33;27]	0.6 (0.4 to 0.7)	0.5 (0.4 to 0.7)	0.4 (0.3 to 0.7)	
anti-6B, M14 [N=61;30;29]	3.8 (3.1 to 4.8)	2.4 (1.7 to 3.5)	3.4 (2.2 to 5.2)	
anti-7F, M5 [N=82;42;37]	2.5 (2.2 to 3.0)	2.2 (1.8 to 2.7)	2.8 (2.1 to 3.7)	
anti-7F, M13 [N=57;33;27]	0.4 (0.4 to 0.5)	0.4 (0.3 to 0.5)	0.4 (0.3 to 0.6)	
anti-7F, M14 [N=61;30;29]	3.5 (2.9 to 4.2)	2.2 (1.6 to 3.1)	3.4 (2.4 to 4.9)	
anti-9V, M5 [N=82;42;37]	1.2 (1.0 to 1.4)	1.2 (1.0 to 1.5)	1.3 (1.0 to 1.7)	
anti-9V, M13 [N=57;33;27]	0.3 (0.2 to 0.4)	0.3 (0.2 to 0.4)	0.2 (0.1 to 0.3)	
anti-9V, M14 [N=61;30;29]	1.6 (1.3 to 2.0)	1.0 (0.8 to 1.4)	1.6 (1.2 to 2.2)	
anti-14, M5 [N=82;42;36]	5.2 (4.1 to 6.5)	6.0 (4.4 to 8.0)	7.0 (4.9 to 10.0)	
anti-14, M13 [N=57;33;27]	1.0 (0.7 to 1.3)	0.8 (0.6 to 1.0)	0.9 (0.5 to 1.4)	
anti-14, M14 [N=61;30;29]	8.4 (6.8 to 10.4)	6.8 (4.8 to 9.7)	9.0 (6.0 to 13.5)	
anti-18C, M5 [N=82;42;37]	2.3 (1.9 to 2.8)	2.0 (1.5 to 2.5)	2.9 (2.2 to 3.8)	
anti-18C, M13 [N=57;33;27]	0.2 (0.2 to 0.3)	0.2 (0.1 to 0.3)	0.3 (0.2 to 0.4)	
anti-18C, M14 [N=61;30;29]	3.6 (3.0 to 4.4)	2.3 (1.5 to 3.6)	3.4 (2.6 to 4.6)	
anti-19A, M5 [N=82;42;37]	0.2 (0.2 to 0.3)	0.2 (0.2 to 0.4)	0.2 (0.2 to 0.3)	
anti-19A, M13 [N=57;33;27]	0.3 (0.2 to 0.4)	0.3 (0.2 to 0.4)	0.2 (0.1 to 0.3)	
anti-19A, M14 [N=61;29;29]	1.2 (0.8 to 1.7)	1.1 (0.6 to 1.9)	0.8 (0.5 to 1.2)	
anti-19F, M5 [N=81;42;37]	3.7 (3.0 to 4.6)	3.8 (2.7 to 5.3)	4.7 (3.3 to 6.6)	
anti-19F, M13 [N=57;33;27]	0.9 (0.7 to 1.2)	0.9 (0.7 to 1.3)	0.9 (0.5 to 1.5)	
anti-19F, M14 [N=61;30;29]	8.0 (6.2 to 10.2)	6.9 (4.5 to 10.6)	9.8 (6.8 to 14.2)	

anti-23F, M5 [N=71;42;36]	1.4 (1.0 to 1.9)	1.8 (1.4 to 2.4)	1.5 (1.0 to 2.2)	
anti-23F, M13 [N=57;33;26]	0.3 (0.2 to 0.4)	0.3 (0.2 to 0.4)	0.2 (0.2 to 0.4)	
anti-23F, M14 [N=45;24;21]	3.4 (2.6 to 4.5)	2.1 (1.3 to 3.4)	2.9 (1.8 to 4.7)	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-diphtheria (anti-D) antibodies, by ATP cohort

End point title	Number of subjects with anti-diphtheria (anti-D) antibodies, by ATP cohort

End point description:

Cut-off values assessed were greater than or equal to (≥) 0.1 international units per millilitre (IU/mL). The analysis was performed in a randomized subset of 25% of subjects of all three groups.

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	72	34	38	
Units: Participants				
Participants	72	34	38	

Statistical analyses

No statistical analyses for this end point

Secondary: Concentration of antibodies against diphtheria antigens (anti-D), by ATP cohort

End point title	Concentration of antibodies against diphtheria antigens (anti-D), by ATP cohort

End point description:

Concentrations are presented as geometric mean concentrations (GMCs) expressed in international units per millilitre (IU/mL). The analysis was performed in a randomized subset of 25% of subjects of all three groups.

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	72	34	38	
Units: IU/mL				
geometric mean (confidence interval 95%)				
IU/mL	2.259 (1.820 to 2.804)	3.028 (2.177 to 4.213)	2.462 (1.700 to 3.565)	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-diphtheria (anti-D) antibodies, by TVC

End point title	Number of subjects with anti-diphtheria (anti-D) antibodies, by TVC

End point description:

Cut-off values assessed were greater than or equal to (≥) 0.1 international units per millilitre (IU/mL). The analysis was performed in a randomized subset of 25% of subjects of all three groups. Note: As the percentage of subjects with serological results excluded from the ATP cohorts was higher than 5%, a second analysis based on the total vaccinated cohorts (TVCs) (Primary and Booster) was performed to complement the ATP analysis.

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	76	36	39	
Units: Participants				
Participants	76	36	39	

Statistical analyses

No statistical analyses for this end point

Secondary: Concentration of antibodies against diphtheria antigens (anti-D), by TVC

End point title	Concentration of antibodies against diphtheria antigens (anti-D), by TVC

End point description:

Concentrations are presented as geometric mean concentrations (GMCs) expressed in international units per millilitre (IU/mL). The analysis was performed in a randomized subset of 25% of subjects of all three groups. Note: As the percentage of subjects with serological results excluded from the ATP cohorts was higher than 5%, a second analysis based on the total vaccinated cohorts (TVCs) (Primary and Booster) was performed to complement the ATP analysis.

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	76	36	39	
Units: IU/mL				
geometric mean (confidence interval 95%)				
IU/mL	2.435 (1.958 to 3.028)	3.069 (2.225 to 4.233)	2.423 (1.688 to 3.479)	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-pertussis toxoid (anti-PT), anti-filamentous haemagglutinin (anti-FHA), anti-pertactin (anti-PRN) Immunoglobulin G (IgG) antibodies, by ATP cohort

End point title	Number of subjects with anti-pertussis toxoid (anti-PT), anti-filamentous haemagglutinin (anti-FHA), anti-pertactin (anti-PRN) Immunoglobulin G (IgG) antibodies, by ATP cohort

End point description:

Cut-off values assessed were greater than or equal to ≥ 5 enzyme-linked immunosorbent assay (ELISA) units per millilitre (EL.U/ml). The analysis was performed in a randomized subset of 25% of subjects of all three groups.

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	73	34	39	
Units: Participants				
anti-PT, M5	73	34	39	
anti-FHA, M5	73	34	39	
anti-PRN, M5	73	34	38	

Statistical analyses

No statistical analyses for this end point

Secondary: Concentration of antibodies against pertussis toxoid (anti-PT), filamentous haemagglutinin (anti-FHA), pertactin (anti-PRN) antigens, by ATP cohort

End point title	Concentration of antibodies against pertussis toxoid (anti-PT), filamentous haemagglutinin (anti-FHA), pertactin (anti-PRN) antigens, by ATP cohort

End point description:

Concentrations are presented as geometric mean concentrations (GMCs) expressed in enzyme-linked immunosorbent assay (ELISA) units per millilitre (EL.U/ml).

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	73	34	39	
Units: EL.U/mL				
geometric mean (confidence interval 95%)				
anti-PT, M5	49.9 (43.3 to 57.6)	51.9 (40.8 to 66.0)	47.8 (38.3 to 59.7)	
anti-FHA, M5	126.2 (108.8 to 146.3)	134.2 (108.3 to 166.4)	132.6 (107.8 to 163.1)	
anti-PRN, M5	108.6 (88.8 to 132.9)	167.5 (117.6 to 238.7)	158.2 (106.5 to 235.1)	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-pertussis toxoid (anti-PT), anti-filamentous haemagglutinin (anti-FHA), anti-pertactin (anti-PRN) Immunoglobulin G (IgG) antibodies, by TVC

End point title	Number of subjects with anti-pertussis toxoid (anti-PT), anti-filamentous haemagglutinin (anti-FHA), anti-pertactin (anti-PRN) Immunoglobulin G (IgG) antibodies, by TVC

End point description:

Cut-off values assessed were greater than or equal to ≥ 5 enzyme-linked immunosorbent assay (ELISA) units per millilitre (EL.U/ml). The analysis was performed in a randomized subset of 25% of subjects of all three groups. Note: As the percentage of subjects with serological results excluded from the ATP cohorts was higher than 5%, a second analysis based on the total vaccinated cohorts (TVCs) (Primary and Booster) was performed to complement the ATP analysis.

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	77	36	40	
Units: Participants				
anti-PT, M5	77	36	40	
anti-FHA, M5	77	36	40	
anti-PRN, M5	77	36	39	

Statistical analyses

No statistical analyses for this end point

Secondary: Concentration of antibodies against pertussis toxoid (anti-PT), filamentous haemagglutinin (anti-FHA), pertactin (anti-PRN) antigens, by TVC

End point title	Concentration of antibodies against pertussis toxoid (anti-PT), filamentous haemagglutinin (anti-FHA), pertactin (anti-PRN) antigens, by TVC

End point description:

Concentrations are presented as geometric mean concentrations (GMCs) expressed in enzyme-linked immunosorbent assay (ELISA) units per millilitre (EL.U/ml) Note: As the percentage of subjects with serological results excluded from the ATP cohorts was higher than 5%, a second analysis based on the total vaccinated cohorts (TVCs) (Primary and Booster) was performed to complement the ATP analysis.

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	77	36	40	
Units: EL.U/mL				
geometric mean (confidence interval 95%)				
anti-PT, M5	50.4 (43.9 to 57.8)	54.7 (42.9 to 69.9)	46.4 (37.0 to 58.1)	
anti-FHA, M5	127.3 (110.6 to 146.6)	143.3 (114.4 to 179.4)	129.4 (105.1 to 159.2)	
anti-PRN, M5	116.7 (95.2 to 143.1)	178.9 (125.5 to 255.1)	154.8 (105.0 to 228.3)	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-poliovirus type 1, 2 and 3 antibodies, by ATP cohort

End point title	Number of subjects with anti-poliovirus type 1, 2 and 3

	antibodies, by ATP cohort

End point description:

Cut-off values assessed were greater than or equal to (≥) 1:8 titers. The analysis was performed in a randomized subset of 25% of subjects of all three groups.

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	69	29	33	
Units: Participants				
anti-Polio 1, M5 [N=69,28,29]	69	28	29	
anti-Polio 2, M5 [N=69;29;33]	69	29	33	
anti-Polio 3, M5 [N=68;26;30]	68	26	30	

Statistical analyses

No statistical analyses for this end point

Secondary: Antibody titers for anti-polio type 1, 2 and 3 antibodies, by ATP cohort

End point title	Antibody titers for anti-polio type 1, 2 and 3 antibodies, by ATP cohort

End point description:

Antibody titers are presented as geometric mean titers (GMTs). The analysis was performed in a randomized subset of 25% of subjects of all three groups.

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	69	29	33	
Units: Titers				
geometric mean (confidence interval 95%)				
anti-Polio 1, M5 [N=69,28,29]	788.8 (584.1 to 1065.2)	1102.9 (725.2 to 1677.2)	908.6 (549.1 to 1503.4)	
anti-Polio 2, M5 [N=69;29;33]	850.4 (647.3 to 1117.3)	953.3 (579.0 to 1569.5)	1079.2 (704.9 to 1652.1)	
anti-Polio 3, M5 [N=68;26;30]	1678.8 (1211.2 to 2326.9)	1676.7 (1011.1 to 2780.5)	1261.3 (720.8 to 2207.1)	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-poliovirus type 1, 2 and 3 antibodies, by TVC

End point title	Number of subjects with anti-poliovirus type 1, 2 and 3 antibodies, by TVC

End point description:

Cut-off values assessed were greater than or equal to (≥) 1:8 titers. The analysis was performed in a randomized subset of 25% of subjects of all three groups. Note: As the percentage of subjects with serological results excluded from the ATP cohorts was higher than 5%, a second analysis based on the total vaccinated cohorts (TVCs) (Primary and Booster) was performed to complement the ATP analysis.

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	73	31	34	
Units: Participants				
anti-Polio 1, M5 [N=73;30;30]	73	30	30	
anti-Polio 2, M5 [N=73;31;34]	73	31	34	
anti-Polio 3, M5 [N=71;28;31]	71	28	31	

Statistical analyses

No statistical analyses for this end point

Secondary: Antibody titers for anti-polio type 1, 2 and 3 antibodies, by TVC

End point title	Antibody titers for anti-polio type 1, 2 and 3 antibodies, by TVC

End point description:

Antibody titers are presented as geometric mean titers (GMTs). The analysis was performed in a randomized subset of 25% of subjects of all three groups. Note: As the percentage of subjects with serological results excluded from the ATP cohorts was higher than 5%, a second analysis based on the total vaccinated cohorts (TVCs) (Primary and Booster) was performed to complement the ATP analysis.

End point type	Secondary

End point timeframe:

At Month 5 (one month post dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	73	31	34	
Units: Titers				
geometric mean (confidence interval 95%)				
anti-Polio 1, M5 [N=73;30;30]	827.2 (618.7 to 1105.8)	1048.1 (681.1 to 1612.7)	861.0 (523.3 to 1416.8)	
anti-Polio 2, M5 [N=73;31;34]	931.3 (707.7 to 1225.6)	990.4 (606.5 to 1617.3)	1024.0 (668.6 to 1568.2)	
anti-Polio 3, M5 [N=71;28;31]	1709.5 (1245.4 to 2346.7)	1618.7 (963.7 to 2719.0)	1184.8 (679.9 to 2064.4)	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-tetanus (anti-T) antibodies, by ATP

End point title	Number of subjects with anti-tetanus (anti-T) antibodies, by ATP

End point description:

Cut-off values assessed were greater than or equal to (≥) 0.1 international units per millilitre (IU/mL). The analysis was performed in a randomized subset of 25% of subjects of all three groups.

End point type	Secondary

End point timeframe:

At Month 5 (one month post-dose 3), Month 13 (prior booster-dose) and Month 14 (one month after the booster dose)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	77	36	40	
Units: Participants				
anti-T, M5 [N=77;36;40]	77	36	40	
anti-T, M13 [N=59;29;26]	58	28	24	
anti-T, M14 [N=62;22;23]	62	22	23	

Statistical analyses

No statistical analyses for this end point

Secondary: Concentration of antibodies against tetanus antigens (anti-T), by ATP

End point title	Concentration of antibodies against tetanus antigens (anti-T), by ATP

End point description:

Concentrations are presented as geometric mean concentrations (GMCs) expressed in international units per millilitre (IU/mL). The analysis was performed in a randomized subset of 25% of subjects of all three groups.

End point type	Secondary

End point timeframe:

At Month 5 (one month post-dose 3), Month 13 (prior booster-dose) and Month 14 (one month after the booster dose)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	73	34	39	
Units: IU/mL				
geometric mean (confidence interval 95%)				
anti-T, M5 [N=73, 34, 39]	5.798 (4.998 to 6.726)	7.246 (5.305 to 9.897)	5.973 (4.818 to 7.406)	
anti-T, M13 [N=49, 24,21]	0.479 (0.398 to 0.576)	0.659 (0.427 to 1.018)	0.461 (0.297 to 0.716)	
anti-T, M14 [N=57,20,21]	18.977 (16.013 to 22.489)	16.813 (12.386 to 22.821)	35.835 (23.802 to 53.951)	

Statistical analyses

No statistical analyses for this end point

Secondary: Concentration of antibodies against tetanus antigens (anti-T), by TVC

End point title	Concentration of antibodies against tetanus antigens (anti-T), by TVC

End point description:

Concentrations are presented as geometric mean concentrations (GMCs) expressed in international units per millilitre (IU/mL). The analysis was performed in a randomized subset of 25% of subjects of all three groups. Note: As the percentage of subjects with serological results excluded from the ATP cohorts was higher than 5%, a second analysis based on the total vaccinated cohorts (TVCs) (Primary and Booster) was performed to complement the ATP analysis.

End point type	Secondary

End point timeframe:

At Month 5 (one month post-dose 3), 13 (prior booster-dose) and 14 (one month after the booster dose)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	77	36	40	
Units: IU/mL				
geometric mean (confidence interval 95%)				
anti-T, M5 [N=77;36;40]	6.099 (5.236 to 7.104)	7.402 (5.510 to 9.943)	5.901 (4.780 to 7.286)	
anti-T, M13 [N=58;29;24]	0.535 (0.450 to 0.636)	0.610 (0.414 to 0.899)	0.419 (0.287 to 0.610)	
anti-T, M14 [N=40;26;23]	18.889 (16.158 to 22.082)	16.809 (12.710 to 22.230)	36.593 (25.224 to 53.085)	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-tetanus (anti-T) antibodies, by TVC

End point title	Number of subjects with anti-tetanus (anti-T) antibodies, by TVC

End point description:

Cut-off values assessed were greater than or equal to (≥) 0.1 international units per millilitre (IU/mL). The analysis was performed in a randomized subset of 25% of subjects of all three groups. Note: As the percentage of subjects with serological results excluded from the ATP cohorts was higher than 5%, a second analysis based on the total vaccinated cohorts (TVCs) (Primary and Booster) was performed to complement the ATP analysis.

End point type	Secondary

End point timeframe:

At Month 5 (one month post-dose 3), Month 13 (prior booster-dose) and Month 14 (one month after the booster dose)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	77	36	40	
Units: Participants				
anti-T, M5 [N=77;36;40]	77	36	40	
anti-T, M13 [N=58;29;24]	58	28	24	
anti-T, 14 [N=40;26;23]	62	22	23	

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-PRP antibody concentrations (Geometric Mean Concentrations) in a randomized subset of 25% of the subjects

End point title	Anti-PRP antibody concentrations (Geometric Mean Concentrations) in a randomized subset of 25% of the subjects

End point description:

The endpoints evaluating immunogenicity of the Hib component (anti-polyribosyl ribitol phosphate [anti-PRP] antibody concentrations) has been cancelled owing to the extended delay in the re-development and re-validation of the PRP assay.

End point type	Secondary

End point timeframe:

At Month 5 (one month post-dose 3)

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	0[12]	0[13]	0[14]	
Units: µg/mL				
geometric mean (confidence interval 95%)	(to)	(to)	(to)	

Notes:

[12] - No subjects were analyzed because the Hib component immunogenicity assessment was cancelled.
[13] - No subjects were analyzed because the Hib component immunogenicity assessment was cancelled.
[14] - No subjects were analyzed because the Hib component immunogenicity assessment was cancelled.

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with solicited local symptoms (Primary Phase)

End point title	Number of subjects with solicited local symptoms (Primary Phase)

End point description:

Assessed solicited local symptoms were pain, redness and swelling. Any = occurrence of the symptom regardless of intensity grade. Grade 3 pain = pain that prevented normal activity. Grade 3 redness/swelling = redness/swelling spreading beyond 30 millimeters (mm) of injection site.

End point type	Secondary

End point timeframe:

Within 8 days (Day 0-7) post primary vaccination

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	369	182	184	
Units: Participants				
Any Pain Dose 1 [N=369;182;184]	220	115	108	
Grade 3 Pain Dose 1 [N=369;182;184]	38	25	14	
Any Redness Dose 1 [N=369;182;184]	94	39	43	
Grade 3 Redness Dose 1 [N=369;182;184]	1	0	0	
Any Swelling Dose 1 [N=369;182;184]	84	31	34	

Grade 3 Swelling Dose 1 [N=369;182;184]	0	3	0	
Any Pain Dose 2 [N=363;181;181]	177	92	101	
Grade 3 Pain Dose 2 [N=363;181;181]	33	11	16	
Any Redness Dose 2 [N=363;181;181]	93	51	48	
Grade 3 Redness Dose 2 [N=363;181;181]	2	0	1	
Any Swelling Dose 2 [N=363;181;181]	76	47	42	
Grade 3 Swelling Dose 2 [N=363;181;181]	2	2	0	
Any Pain Dose 3 [N=359;177;180]	148	73	93	
Grade 3 Pain Dose 3 [N=359;177;180]	16	18	9	
Any Redness Dose 3 [N=359;177;180]	74	46	42	
Grade 3 Redness Dose 3 [N=359;177;180]	1	1	1	
Any Swelling Dose 3 [N=359;177;180]	66	46	37	
Grade 3 Swelling Dose 3 [N=359;177;180]	1	0	0	
Any Pain Across Doses [N=369;182;184]	262	135	142	
Grade 3 Pain Across Doses [N=369;182;184]	65	36	33	
Any Redness Across Doses [N=369;182;184]	160	79	78	
Grade 3 Redness Across Doses [N=369;182;184]	4	1	2	
Any Swelling Across Doses [N=369;182;184]	147	74	70	
Grade 3 Swelling Across Doses [N=369;182;184]	3	4	0	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with solicited local symptoms (Booster Phase)

End point title	Number of subjects with solicited local symptoms (Booster Phase)

End point description:

Assessed solicited local symptoms were pain, redness and swelling. Any = occurrence of the symptom regardless of intensity grade. Grade 3 pain = pain that prevented normal activity. Grade 3 redness/swelling = redness/swelling spreading beyond 30 millimeters (mm) of injection site.

End point type	Secondary

End point timeframe:

Within 8 days (Day 0-7) post booster vaccination

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix 1 Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	338	165	167	
Units: Participants				
Any Pain	139	71	77	
Grade 3 Pain	21	19	14	
Any Redness	74	32	39	
Grade 3 Redness	1	1	3	
Any Swelling	55	29	33	
Grade 3 Swelling	2	1	3	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with solicited general symptoms (Primary Phase)

End point title	Number of subjects with solicited general symptoms (Primary Phase)

End point description:

Assessed solicited general symptoms were temperature [defined as rectally temperature equal to or above 38 degrees Celsius (°C)], drowsiness, irritability and loss of appetite. Any = occurrence of the symptom regardless of intensity grade. Grade 3 symptom = symptom that prevented normal activity. Grade 3 temperature = temperature > 40.0 °C. Related = symptom assessed by the investigator as related to the vaccination.

End point type	Secondary

End point timeframe:

Within 8 days (Day 0-7) post primary vaccination

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	369	182	184	
Units: Participants				
Any Drowsiness Dose 1 [N=369;182;184]	177	93	84	
Grade 3 Drowsiness Dose 1 [N=369;182;184]	18	10	2	
Related Drowsiness Dose 1 [N=369;182;184]	160	84	79	
Any Irritability Dose 1 [N=369;182;184]	200	107	99	
Grade 3 Irritability Dose 1 [N=369;182;184]	19	9	10	
Related Irritability Dose 1 [N=369;182;184]	188	96	89	
Any Loss of appetite Dose 1 [N=369;182;184]	109	62	42	
Grade 3 Loss of appetite Dose 1 [N=369;182;184]	7	5	3	
Related Loss of appetite Dose 1 [N=369;182;184]	99	55	35	

Any Temperature Dose 1 [N=369;182;184]	126	62	58	
Grade 3 Temperature Dose 1 [N=369;182;184]	0	0	1	
Related Temperature Dose 1 [N=369;182;184]	109	56	53	
Any Drowsiness Dose 2 [N=363;181;181]	116	72	67	
Grade 3 Drowsiness Dose 2 [N=363;181;181]	9	8	8	
Related Drowsiness Dose 2 [N=363;181;181]	109	69	62	
Any Irritability Dose 2 [N=363;181;181]	163	82	90	
Grade 3 Irritability Dose 2 [N=363;181;181]	20	14	10	
Related Irritability Dose 2 [N=363;181;181]	158	77	85	
Any Loss of appetite Dose 2 [N=363;181;181]	89	50	44	
Grade 3 Loss of appetite Dose 2 [N=363;181;181]	6	5	6	
Related Loss of appetite Dose 2 [N=363;181;181]	80	48	39	
Any Temperature Dose 2 [N=363;181;181]	119	64	63	
Grade 3 Temperature Dose 2 [N=363;181;181]	0	0	0	
Related Temperature Dose 2 [N=363;181;181]	116	59	54	
Any Drowsiness Dose 3 [N=359;177;180]	102	54	64	
Grade 3 Drowsiness Dose 3 [N=359;177;180]	11	8	4	
Related Drowsiness Dose 3 [N=359;177;180]	95	54	60	
Any Irritability Dose 3 [N=359;177;180]	140	73	73	
Grade 3 Irritability Dose 3 [N=359;177;180]	14	14	3	
Related Irritability Dose 3 [N=359;177;180]	132	72	69	
Any Loss of appetite Dose 3 [N=359;177;180]	76	43	50	
Grade 3 Loss of appetite Dose 3 [N=359;177;180]	7	6	3	
Related Loss of appetite Dose 3 [N=359;177;180]	63	41	46	
Any Temperature Dose 3 [N=359;177;180]	109	51	41	
Grade 3 Temperature Dose 3 [N=359;177;180]	2	0	0	
Related Temperature Dose 3 [N=359;177;180]	96	46	36	
Any Drowsiness Across Doses [N=369;182;184]	217	121	118	
Grade 3 Drowsiness Across Doses [N=369;182;184]	30	19	13	
Related Drowsiness Across Doses [N=369;182;184]	205	116	114	
Any Irritability Across Doses [N=369;182;184]	254	128	126	
Grade 3 Irritability Across Doses [N=369;182;184]	42	27	18	

Related Irritability Across Doses [N=369;182;184]	246	125	121	
Any Loss of appetite Across [N=369;182;184]	165	89	82	
Grade 3 Loss of appetite Across [N=369;182;184]	17	13	10	
Related Loss of appetite Across [N=369;182;184]	151	84	77	
Any Temperature Across Doses [N=369;182;184]	203	102	101	
Grade 3 Temperature Across Doses [N=369;182;184]	2	0	1	
Related Temperature Across Doses [N=369;182;184]	193	97	93	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with solicited general symptoms (Booster Phase)

End point title	Number of subjects with solicited general symptoms (Booster Phase)

End point description:

Assessed solicited general symptoms were temperature [defined as rectally temperature equal to or above 38 degrees Celsius (°C)], drowsiness, irritability and loss of appetite. Any = occurrence of the symptom regardless of intensity grade. Grade 3 symptom = symptom that prevented normal activity. Grade 3 temperature = temperature > 40.0 °C. Related = symptom assessed by the investigator as related to the vaccination.

End point type	Secondary

End point timeframe:

Within 8 days (Day 0-7) post booster vaccination

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix 1 Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	338	165	167	
Units: Participants				
Any Drowsiness	79	46	43	
Grade 3 Drowsiness	4	7	5	
Related Drowsiness	75	42	43	
Any Irritability	112	54	61	
Grade 3 Irritability	9	12	10	
Related Irritability	106	52	60	
Any Loss of appetite	69	37	39	
Grade 3 Loss of appetite	5	5	1	
Related Loss of appetite	60	34	37	
Any Temperature	68	35	27	
Grade 3 Temperature	2	1	0	
Related Temperature	62	32	24	

Statistical analyses

No statistical analyses for this end point

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

End point title	Number of subjects with unsolicited adverse events (AEs) (Primary Phase)

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 was defined as the occurrence of any unsolicited AE regardless of intensity grade or relation to vaccination.

End point type	Secondary

End point timeframe:

Within 31 days (Day 0-30) post each primary vaccine dose

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	376	187	187	
Units: Participants				
Any AE(s) Dose 1 [N=376;187;187]	67	36	34	
Any AE(s) Dose 2 [N=368;182;182]	70	34	28	
Any AE(s) Dose 3 [N=362;179;181]	97	49	45	

Statistical analyses

No statistical analyses for this end point

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

End point title	Number of subjects with unsolicited adverse events (AEs) (Booster phase)

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 was defined as the occurrence of any unsolicited AE regardless of intensity grade or relation to vaccination.

End point type	Secondary

End point timeframe:

Within 31 days (Day 0-30) post booster vaccination

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix 1 Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	342	166	170	
Units: Participants				
Participants	58	32	36	

Statistical analyses

No statistical analyses for this end point

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

End point title	Number of subjects with new onset of chronic illnesses (NOCIs)

End point description:

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

End point type	Secondary

End point timeframe:

From Day 0 to Month 18

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	376	187	187	
Units: Participants				
Participants	16	8	4	

Statistical analyses

No statistical analyses for this end point

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

End point title	Number of subjects with serious adverse events (SAEs)

End point description:

Serious adverse events (SAEs) assessed include medical occurrences that result in death, are life threatening, require hospitalization or prolongation of hospitalization or result in disability/incapacity.

End point type	Secondary

End point timeframe:

From Day 0 to Month 19

End point values	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	376	187	187	
Units: Participants				
Participants	35	14	14	

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Solicited local/general symptoms during the 8-day post-vaccination period (Days 0-7), Unsolicited AEs during the 31-day post-vaccination (Days 0-30), SAEs during the entire study period (Day 0 - Month 19).

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	18.1

Reporting groups

Reporting group title	Nimenrix 3+1 Group

Reporting group description:

Subjects, male and female, received 4 doses of Nimenrix vaccine (3 doses at 2, 4 and 6 months of age followed by a booster dose at 15-18 months of age) and 4 doses of Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.

Reporting group title	Nimenrix 1+1 Group

Reporting group description:

Subjects, male and female, received 2 doses of Nimenrix vaccine (1 dose at 6 months of age followed by a booster dose at 15-18 months of age) and 4 doses of Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.

Reporting group title	Nimenrix Control Group

Reporting group description:

Subjects, male and female, received 1 dose of Nimenrix at 15-18 months of age and 4 doses of Synflorix and Infanrix-IPV/Hiberix vaccines (at 2, 4, 6 and 15-18 months of age). All vaccines were administered intramuscularly (IM) in the anterolateral region of the thigh.

Serious adverse events	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group
Total subjects affected by serious adverse events			
subjects affected / exposed	35 / 376 (9.31%)	14 / 187 (7.49%)	14 / 187 (7.49%)
number of deaths (all causes)	0	0	1
number of deaths resulting from adverse events	0	0	0
Injury, poisoning and procedural complications			
Burns first degree			
subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Burns second degree			
subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Foreign body			
subjects affected / exposed	0 / 376 (0.00%)	0 / 187 (0.00%)	1 / 187 (0.53%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Head injury			
subjects affected / exposed	0 / 376 (0.00%)	2 / 187 (1.07%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 2	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Skull fracture			
subjects affected / exposed	0 / 376 (0.00%)	1 / 187 (0.53%)	0 / 187 (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
Subdural haematoma			
subjects affected / exposed	0 / 376 (0.00%)	1 / 187 (0.53%)	0 / 187 (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
Toxicity to various agents			
subjects affected / exposed	0 / 376 (0.00%)	0 / 187 (0.00%)	1 / 187 (0.53%)
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			
Epilepsy			
subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Febrile convulsion			
subjects affected / exposed	1 / 376 (0.27%)	1 / 187 (0.53%)	0 / 187 (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
Hyponatraemic seizure			
subjects affected / exposed	0 / 376 (0.00%)	0 / 187 (0.00%)	1 / 187 (0.53%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Seizure			

subjects affected / exposed	0 / 376 (0.00%)	1 / 187 (0.53%)	1 / 187 (0.53%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 2
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Blood and lymphatic system disorders			
Anaemia			
subjects affected / exposed	2 / 376 (0.53%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 2	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
General disorders and administration site conditions			
Sudden infant death syndrome			
subjects affected / exposed	0 / 376 (0.00%)	0 / 187 (0.00%)	1 / 187 (0.53%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 1
Immune system disorders			
Anaphylactic shock			
subjects affected / exposed	0 / 376 (0.00%)	1 / 187 (0.53%)	0 / 187 (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
Drug hypersensitivity			
subjects affected / exposed	1 / 376 (0.27%)	1 / 187 (0.53%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 2	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Milk allergy			
subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastrointestinal disorders			
Diarrhoea			
subjects affected / exposed	2 / 376 (0.53%)	0 / 187 (0.00%)	1 / 187 (0.53%)
occurrences causally related to treatment / all	0 / 2	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Ileus paralytic			

subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory, thoracic and mediastinal disorders			
Lung disorder			
subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Amoebic dysentery			
subjects affected / exposed	0 / 376 (0.00%)	1 / 187 (0.53%)	0 / 187 (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
Bronchiolitis			
subjects affected / exposed	5 / 376 (1.33%)	1 / 187 (0.53%)	3 / 187 (1.60%)
occurrences causally related to treatment / all	0 / 7	0 / 1	0 / 3
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Bronchitis			
subjects affected / exposed	3 / 376 (0.80%)	0 / 187 (0.00%)	1 / 187 (0.53%)
occurrences causally related to treatment / all	0 / 3	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Conjunctivitis			
subjects affected / exposed	0 / 376 (0.00%)	0 / 187 (0.00%)	1 / 187 (0.53%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Ear infection			
subjects affected / exposed	0 / 376 (0.00%)	0 / 187 (0.00%)	1 / 187 (0.53%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Escherichia urinary tract infection			
subjects affected / exposed	1 / 376 (0.27%)	2 / 187 (1.07%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 2	0 / 2	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Gastroenteritis			
subjects affected / exposed	4 / 376 (1.06%)	1 / 187 (0.53%)	3 / 187 (1.60%)
occurrences causally related to treatment / all	0 / 4	0 / 1	0 / 3
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastroenteritis rotavirus			
subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastroenteritis viral			
subjects affected / exposed	2 / 376 (0.53%)	0 / 187 (0.00%)	1 / 187 (0.53%)
occurrences causally related to treatment / all	0 / 2	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Measles			
subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Nasopharyngitis			
subjects affected / exposed	0 / 376 (0.00%)	0 / 187 (0.00%)	2 / 187 (1.07%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 2
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Neurological infection			
subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Otitis media			
subjects affected / exposed	0 / 376 (0.00%)	1 / 187 (0.53%)	0 / 187 (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
Pharyngitis			
subjects affected / exposed	1 / 376 (0.27%)	1 / 187 (0.53%)	0 / 187 (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
Pharyngotonsillitis			

subjects affected / exposed	1 / 376 (0.27%)	1 / 187 (0.53%)	0 / 187 (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
Pneumonia			
subjects affected / exposed	13 / 376 (3.46%)	2 / 187 (1.07%)	3 / 187 (1.60%)
occurrences causally related to treatment / all	0 / 16	0 / 2	0 / 3
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pneumonia viral			
subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Roseola			
subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Upper respiratory tract infection			
subjects affected / exposed	0 / 376 (0.00%)	1 / 187 (0.53%)	0 / 187 (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
Urinary tract infection			
subjects affected / exposed	2 / 376 (0.53%)	2 / 187 (1.07%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 2	0 / 2	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Viral infection			
subjects affected / exposed	1 / 376 (0.27%)	0 / 187 (0.00%)	0 / 187 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Metabolism and nutrition disorders			
Dehydration			
subjects affected / exposed	2 / 376 (0.53%)	1 / 187 (0.53%)	1 / 187 (0.53%)
occurrences causally related to treatment / all	0 / 2	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

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

Non-serious adverse events	Nimenrix 3+1 Group	Nimenrix 1+1 Group	Nimenrix Control Group
Total subjects affected by non-serious adverse events			
subjects affected / exposed	334 / 376 (88.83%)	169 / 187 (90.37%)	169 / 187 (90.37%)
Nervous system disorders			
Somnolence			
subjects affected / exposed	224 / 376 (59.57%)	124 / 187 (66.31%)	120 / 187 (64.17%)
occurrences (all)	475	265	258
General disorders and administration site conditions			
Pain			
subjects affected / exposed	273 / 376 (72.61%)	142 / 187 (75.94%)	145 / 187 (77.54%)
occurrences (all)	684	351	379
Pyrexia			
subjects affected / exposed	215 / 376 (57.18%)	112 / 187 (59.89%)	111 / 187 (59.36%)
occurrences (all)	426	214	192
Swelling			
subjects affected / exposed	157 / 376 (41.76%)	83 / 187 (44.39%)	78 / 187 (41.71%)
occurrences (all)	281	153	146
Gastrointestinal disorders			
Diarrhoea			
subjects affected / exposed	36 / 376 (9.57%)	15 / 187 (8.02%)	10 / 187 (5.35%)
occurrences (all)	38	16	10
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	23 / 376 (6.12%)	8 / 187 (4.28%)	5 / 187 (2.67%)
occurrences (all)	25	8	5
Skin and subcutaneous tissue disorders			
Erythema			
subjects affected / exposed	177 / 376 (47.07%)	87 / 187 (46.52%)	87 / 187 (46.52%)
occurrences (all)	335	168	172
Psychiatric disorders			
Irritability			
subjects affected / exposed	262 / 376 (69.68%)	130 / 187 (69.52%)	130 / 187 (69.52%)
occurrences (all)	616	316	323
Infections and infestations			

Nasopharyngitis			
subjects affected / exposed	65 / 376 (17.29%)	27 / 187 (14.44%)	26 / 187 (13.90%)
occurrences (all)	83	42	35
Pharyngitis			
subjects affected / exposed	39 / 376 (10.37%)	17 / 187 (9.09%)	27 / 187 (14.44%)
occurrences (all)	42	25	32
Metabolism and nutrition disorders			
Decreased appetite			
subjects affected / exposed	185 / 376 (49.20%)	95 / 187 (50.80%)	95 / 187 (50.80%)
occurrences (all)	343	192	175

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
26 July 2011	Amendment 1 One of the participating countries has requested that the subjects enrolled in that country be vaccinated with acellualr pertussis vaccine instead of whole cell pertussis vaccine in order to align with the national recommendation. On account of this request the following changes have been made in the protocol as part of this amendment. • All subjects will be co-administrated with Infanrix-IPV/Hiberix instead of Tritanrix-HepB/Hiberix that was foreseen in the original protocol. Consequently, changes have been made in the exclusion and elimination criteria, assays, secondary endpoints and the statistical analysis section. - HepB, and whole cell pertussis assays have been removed and assays for the evaluation of acellular pertussis and polio type 1, 2 and 3 have been included. - Secondary endpoints and the statistical analysis sections have been modified to remove whole cell pertussis and HepB analysis and to include acellular pertussis and polio type 1, 2 and 3 analysis. - Exclusion and elimination criteria have been revised based on the change in the co-administered vaccines • Subjects will receive both primary and booster doses of Infanrix- IPV/Hiberix • Interval during which concomitant vaccinations are allowed has been clarified in the exclusion and elimination criteria to ensure that no concomitant vaccination is given during the period between a study vaccine administration and the subsequent blood sampling visit, if applicable.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported