



Clinical trial results:

A phase 3 open label trial to assess the safety, tolerability, and immunogenicity of 13-valent pneumococcal conjugate vaccine in infants and young children in China who are naive to pneumococcal vaccination

Summary

EudraCT number	2019-000926-23
Trial protocol	Outside EU/EEA
Global end of trial date	13 October 2023

Results information

Result version number	v2 (current)
This version publication date	07 December 2024
First version publication date	11 April 2024
Version creation reason	

Trial information

Trial identification

Sponsor protocol code	B1851178
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Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT03574389
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Pfizer Inc.
Sponsor organisation address	235 E 42nd Street, New York, United States, NY 10017
Public contact	Pfizer ClinicalTrials.gov Call Center, Pfizer Inc., 001 8007181021, ClinicalTrials.gov_Inquiries@pfizer.com
Scientific contact	Pfizer ClinicalTrials.gov Call Center, Pfizer Inc., 001 8007181021, ClinicalTrials.gov_Inquiries@pfizer.com

Notes:

Paediatric regulatory details

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

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	31 March 2022
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	13 October 2023
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To assess the immune responses to the 13 pneumococcal serotypes induced by 13vPnC in infants and children 7 months to <6 years of age (Cohorts 2, 3, and 4) compared to immune responses in infants 6 weeks to 2 months of age (Cohort 1). To evaluate the safety profile of 13vPnC in infants and children 7 months to <6 years of age (Cohorts 2, 3, and 4) as measured by the incidence rates of local reactions, systemic events (including the use of antipyretic medication, and adverse events (AEs).

Protection of trial subjects:

The study was in compliance with the ethical principles derived from the Declaration of Helsinki and in compliance with all International Council for Harmonization (ICH) Good Clinical Practice (GCP) Guidelines. All the local regulatory requirements pertinent to safety of trials subjects were followed.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	23 June 2018
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	China: 932
Worldwide total number of subjects	932
EEA total number of subjects	0

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	726
Children (2-11 years)	206
Adolescents (12-17 years)	0
Adults (18-64 years)	0
From 65 to 84 years	0

85 years and over	0
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Subject disposition

Recruitment

Recruitment details:

This study presents results following completion of all vaccinations, including data from 6-month follow-up after the last study vaccination. This study was conducted in China.

Pre-assignment

Screening details:

A total of 986 subjects were screened in this study, of whom 936 subjects were enrolled or randomized, and 932 of 936 subjects were vaccinated.

Period 1

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

Arms

Are arms mutually exclusive?	Yes
Arm title	Cohort 1: 13vPnC

Arm description:

Subjects vaccinated with 4 doses of 13vPnC (13-valent Pneumococcal Conjugate) vaccine (single intramuscular injection): Vaccination 1 (Visit 1): 42 to 56 days of age; Vaccination 2 (Visit 2): 42 to 70 days after Visit 1; Vaccination 3 (Visit 3): 42 to 70 days after Visit 2; Vaccination 4: 365 to 455 days of age.

Arm type	Experimental
Investigational medicinal product name	13vPnC
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Subjects received 13-valent pneumococcal conjugate vaccine intramuscularly into a left limb (left anterolateral thigh muscle or deltoid of the left arm).

Arm title	Cohort 2: 13vPnC
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Arm description:

Subjects vaccinated with 3 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2 (Visit 2): at least 28 days after Visit 1; Vaccination 3: 365 days to <450 days of age and at least 56 days after Visit 2.

Arm type	Experimental
Investigational medicinal product name	13vPnC
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Subjects received 13-valent pneumococcal conjugate vaccine intramuscularly into a left limb (left anterolateral thigh muscle or deltoid of the left arm).

Arm title	Cohort 2: Hib Vaccine
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Arm description:

Subjects vaccinated with 2 doses of Hib (Haemophilus influenzae type B) Vaccine (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2: at least 28 days after Visit 1.

Arm type	Active comparator
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Investigational medicinal product name	Hib vaccine
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use
Dosage and administration details:	
A 0.5 mL dose of Hib vaccine was administered intramuscularly into a left limb (left anterolateral thigh muscle or deltoid of the left arm).	
Arm title	Cohort 3: 13vPnC
Arm description:	
Subjects vaccinated with 2 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): ≥ 1 to < 2 years of age; Vaccination 2: at least 56 days after Visit 1.	
Arm type	Experimental
Investigational medicinal product name	13vPnC
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use
Dosage and administration details:	
Subjects received 13-valent pneumococcal conjugate vaccine intramuscularly into a left limb (left anterolateral thigh muscle or deltoid of the left arm).	
Arm title	Cohort 3: Hib Vaccine
Arm description:	
Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: ≥ 1 to < 2 years of age.	
Arm type	Active comparator
Investigational medicinal product name	Hib vaccine
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use
Dosage and administration details:	
A 0.5 mL dose of Hib vaccine was administered intramuscularly into a left limb (left anterolateral thigh muscle or deltoid of the left arm).	
Arm title	Cohort 4: 13vPnC
Arm description:	
Subjects vaccinated with 1 dose of 13vPnC (single intramuscular injection): Vaccination 1: ≥ 2 to < 6 years of age.	
Arm type	Experimental
Investigational medicinal product name	13vPnC
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use
Dosage and administration details:	
Subjects received 13-valent pneumococcal conjugate vaccine administered intramuscularly into a left limb (left anterolateral thigh muscle or deltoid of the left arm).	
Arm title	Cohort 4: Hib Vaccine
Arm description:	
Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: ≥ 2 to < 6 years of age.	
Arm type	Active comparator

Investigational medicinal product name	Hib vaccine
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

A 0.5 mL dose of Hib vaccine was administered intramuscularly into a left limb (left anterolateral thigh muscle or deltoid of the left arm).

Number of subjects in period 1	Cohort 1: 13vPnC	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine
Started	125	236	117
Vaccination 1	125	236	117
Vaccination 2	114	219	107
Vaccination 3	111	214	0 ^[1]
Vaccination 4	92	0 ^[2]	0 ^[3]
Completed	90	214	107
Not completed	35	22	10
Noncompliance With Investigational Product	3	-	-
Adverse event	-	1	-
Withdrawal by Parent/guardian	26	21	10
Unspecified	6	-	-

Number of subjects in period 1	Cohort 3: 13vPnC	Cohort 3: Hib Vaccine	Cohort 4: 13vPnC
Started	165	83	138
Vaccination 1	165	83	138
Vaccination 2	146	0 ^[4]	0 ^[5]
Vaccination 3	0 ^[6]	0 ^[7]	0 ^[8]
Vaccination 4	0 ^[9]	0 ^[10]	0 ^[11]
Completed	146	83	138
Not completed	19	0	0
Noncompliance With Investigational Product	-	-	-
Adverse event	-	-	-
Withdrawal by Parent/guardian	19	-	-
Unspecified	-	-	-

Number of subjects in period 1	Cohort 4: Hib Vaccine
Started	68
Vaccination 1	68
Vaccination 2	0 ^[12]
Vaccination 3	0 ^[13]

Vaccination 4	0 [14]
Completed	68
Not completed	0
Noncompliance With Investigational Product	-
Adverse event	-
Withdrawal by Parent/guardian	-
Unspecified	-

Notes:

[1] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[2] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[3] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[4] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[5] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[6] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[7] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[8] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[9] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[10] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[11] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that

completed, minus those who left.

Justification: Not all participants received all vaccines.

[12] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[13] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

[14] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Not all participants received all vaccines.

Period 2

Period 2 title	Follow-up Period
Is this the baseline period?	No
Allocation method	Not applicable
Blinding used	Not blinded

Arms

Are arms mutually exclusive?	Yes
Arm title	Cohort 1: 13vPnC

Arm description:

Subjects vaccinated with 4 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): 42 to 56 days of age; Vaccination 2 (Visit 2): 42 to 70 days after Visit 1; Vaccination 3 (Visit 3): 42 to 70 days after Visit 2; Vaccination 4: 365 to 455 days of age.

Arm type	No intervention
No investigational medicinal product assigned in this arm	
Arm title	Cohort 2: 13vPnC

Arm description:

Subjects vaccinated with 3 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2 (Visit 2): at least 28 days after Visit 1; Vaccination 3: 365 days to <450 days of age and at least 56 days after Visit 2.

Arm type	No intervention
No investigational medicinal product assigned in this arm	
Arm title	Cohort 2: Hib Vaccine

Arm description:

Subjects vaccinated with 2 doses of Hib Vaccine (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2: at least 28 days after Visit 1.

Arm type	No intervention
No investigational medicinal product assigned in this arm	
Arm title	Cohort 3: 13vPnC

Arm description:

Subjects vaccinated with 2 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): >=1 to <2 years of age; Vaccination 2: at least 56 days after Visit 1.

Arm type	No intervention
No investigational medicinal product assigned in this arm	
Arm title	Cohort 3: Hib Vaccine

Arm description:

Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: >=1 to <2 years of age.

Arm type	No intervention
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No investigational medicinal product assigned in this arm	
Arm title	Cohort 4: 13vPnC
Arm description:	
Subjects vaccinated with 1 dose of 13vPnC (single intramuscular injection): Vaccination 1: ≥ 2 to < 6 years of age.	
Arm type	No intervention
No investigational medicinal product assigned in this arm	
Arm title	Cohort 4: Hib Vaccine
Arm description:	
Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: ≥ 2 to < 6 years of age.	
Arm type	No intervention
No investigational medicinal product assigned in this arm	

Number of subjects in period 2	Cohort 1: 13vPnC	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine
Started	90	214	107
Completed	89	201	98
Not completed	1	13	9
Withdrawal by Parent/guardian	1	13	9

Number of subjects in period 2	Cohort 3: 13vPnC	Cohort 3: Hib Vaccine	Cohort 4: 13vPnC
Started	146	83	138
Completed	137	76	131
Not completed	9	7	7
Withdrawal by Parent/guardian	9	7	7

Number of subjects in period 2	Cohort 4: Hib Vaccine
Started	68
Completed	67
Not completed	1
Withdrawal by Parent/guardian	1

Baseline characteristics

Reporting groups

Reporting group title	Cohort 1: 13vPnC
Reporting group description:	
Subjects vaccinated with 4 doses of 13vPnC (13-valent Pneumococcal Conjugate) vaccine (single intramuscular injection): Vaccination 1 (Visit 1): 42 to 56 days of age; Vaccination 2 (Visit 2): 42 to 70 days after Visit 1; Vaccination 3 (Visit 3): 42 to 70 days after Visit 2; Vaccination 4: 365 to 455 days of age.	
Reporting group title	Cohort 2: 13vPnC
Reporting group description:	
Subjects vaccinated with 3 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2 (Visit 2): at least 28 days after Visit 1; Vaccination 3: 365 days to <450 days of age and at least 56 days after Visit 2.	
Reporting group title	Cohort 2: Hib Vaccine
Reporting group description:	
Subjects vaccinated with 2 doses of Hib (Haemophilus influenzae type B) Vaccine (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2: at least 28 days after Visit 1.	
Reporting group title	Cohort 3: 13vPnC
Reporting group description:	
Subjects vaccinated with 2 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): >=1 to <2 years of age; Vaccination 2: at least 56 days after Visit 1.	
Reporting group title	Cohort 3: Hib Vaccine
Reporting group description:	
Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: >=1 to <2 years of age.	
Reporting group title	Cohort 4: 13vPnC
Reporting group description:	
Subjects vaccinated with 1 dose of 13vPnC (single intramuscular injection): Vaccination 1: >=2 to <6 years of age.	
Reporting group title	Cohort 4: Hib Vaccine
Reporting group description:	
Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: >=2 to <6 years of age.	

Reporting group values	Cohort 1: 13vPnC	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine
Number of subjects	125	236	117
Age categorical			
Units: Subjects			
In utero	0	0	0
Preterm newborn infants (gestational age < 37 wks)	0	0	0
Newborns (0-27 days)	0	0	0
Infants and toddlers (28 days-23 months)	125	236	117
Children (2-11 years)	0	0	0
Adolescents (12-17 years)	0	0	0
Adults (18-64 years)	0	0	0
From 65-84 years	0	0	0
85 years and over	0	0	0

Age Continuous			
The ages of subjects in Cohort 3 and 4 were counted in different 'Unit of Measures' from Cohort 1 and 2, and thus they were reported in separated 'Baseline Measures'. Cohort 1 and 2 were reported here. "0" signifies data was measured in years for subjects in this Cohort.			
Units: days			
arithmetic mean	49.1	286.0	285.9
standard deviation	± 3.78	± 41.06	± 40.40
Sex: Female, Male			
Units: Subjects			
Female	59	115	50
Male	66	121	67
Race			
Units: Subjects			
Asian	125	236	117
Ethnicity			
Units: Subjects			
Non-Hispanic/Non-Latino	125	236	117
Age Continuous			
The ages of subjects in Cohort 1 and 2 were counted in different 'Unit of Measures' from Cohort 3 and 4, and thus they were reported in separated 'Baseline Measures'. Cohort 3 and 4 were reported here. "0" signifies data was measured in days for subjects in this Cohort.			
Units: Years			
arithmetic mean	0	0	0
standard deviation	± 0	± 0	± 0

Reporting group values	Cohort 3: 13vPnC	Cohort 3: Hib Vaccine	Cohort 4: 13vPnC
Number of subjects	165	83	138
Age categorical			
Units: Subjects			
In utero	0	0	0
Preterm newborn infants (gestational age < 37 wks)	0	0	0
Newborns (0-27 days)	0	0	0
Infants and toddlers (28 days-23 months)	162	78	0
Children (2-11 years)	3	5	138
Adolescents (12-17 years)	0	0	0
Adults (18-64 years)	0	0	0
From 65-84 years	0	0	0
85 years and over	0	0	0
Age Continuous			
The ages of subjects in Cohort 3 and 4 were counted in different 'Unit of Measures' from Cohort 1 and 2, and thus they were reported in separated 'Baseline Measures'. Cohort 1 and 2 were reported here. "0" signifies data was measured in years for subjects in this Cohort.			
Units: days			
arithmetic mean	0	0	0
standard deviation	± 0	± 0	± 0
Sex: Female, Male			
Units: Subjects			
Female	83	36	56
Male	82	47	82

Race			
Units: Subjects			
Asian	165	83	138
Ethnicity			
Units: Subjects			
Non-Hispanic/Non-Latino	165	83	138
Age Continuous			
The ages of subjects in Cohort 1 and 2 were counted in different 'Unit of Measures' from Cohort 3 and 4, and thus they were reported in separated 'Baseline Measures'. Cohort 3 and 4 were reported here. "0" signifies data was measured in days for subjects in this Cohort.			
Units: Years			
arithmetic mean	1.5	1.6	3.3
standard deviation	± 0.27	± 0.30	± 1.11

Reporting group values	Cohort 4: Hib Vaccine	Total	
Number of subjects	68	932	
Age categorical			
Units: Subjects			
In utero	0	0	
Preterm newborn infants (gestational age < 37 wks)	0	0	
Newborns (0-27 days)	0	0	
Infants and toddlers (28 days-23 months)	0	718	
Children (2-11 years)	68	214	
Adolescents (12-17 years)	0	0	
Adults (18-64 years)	0	0	
From 65-84 years	0	0	
85 years and over	0	0	
Age Continuous			
The ages of subjects in Cohort 3 and 4 were counted in different 'Unit of Measures' from Cohort 1 and 2, and thus they were reported in separated 'Baseline Measures'. Cohort 1 and 2 were reported here. "0" signifies data was measured in years for subjects in this Cohort.			
Units: days			
arithmetic mean	0		
standard deviation	± 0	-	
Sex: Female, Male			
Units: Subjects			
Female	37	436	
Male	31	496	
Race			
Units: Subjects			
Asian	68	932	
Ethnicity			
Units: Subjects			
Non-Hispanic/Non-Latino	68	932	
Age Continuous			
The ages of subjects in Cohort 1 and 2 were counted in different 'Unit of Measures' from Cohort 3 and 4, and thus they were reported in separated 'Baseline Measures'. Cohort 3 and 4 were reported here. "0" signifies data was measured in days for subjects in this Cohort.			
Units: Years			
arithmetic mean	3.3		
standard deviation	± 1.04	-	

End points

End points reporting groups

Reporting group title	Cohort 1: 13vPnC
Reporting group description: Subjects vaccinated with 4 doses of 13vPnC (13-valent Pneumococcal Conjugate) vaccine (single intramuscular injection): Vaccination 1 (Visit 1): 42 to 56 days of age; Vaccination 2 (Visit 2): 42 to 70 days after Visit 1; Vaccination 3 (Visit 3): 42 to 70 days after Visit 2; Vaccination 4: 365 to 455 days of age.	
Reporting group title	Cohort 2: 13vPnC
Reporting group description: Subjects vaccinated with 3 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2 (Visit 2): at least 28 days after Visit 1; Vaccination 3: 365 days to <450 days of age and at least 56 days after Visit 2.	
Reporting group title	Cohort 2: Hib Vaccine
Reporting group description: Subjects vaccinated with 2 doses of Hib (Haemophilus influenzae type B) Vaccine (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2: at least 28 days after Visit 1.	
Reporting group title	Cohort 3: 13vPnC
Reporting group description: Subjects vaccinated with 2 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): ≥ 1 to <2 years of age; Vaccination 2: at least 56 days after Visit 1.	
Reporting group title	Cohort 3: Hib Vaccine
Reporting group description: Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: ≥ 1 to <2 years of age.	
Reporting group title	Cohort 4: 13vPnC
Reporting group description: Subjects vaccinated with 1 dose of 13vPnC (single intramuscular injection): Vaccination 1: ≥ 2 to <6 years of age.	
Reporting group title	Cohort 4: Hib Vaccine
Reporting group description: Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: ≥ 2 to <6 years of age.	
Reporting group title	Cohort 1: 13vPnC
Reporting group description: Subjects vaccinated with 4 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): 42 to 56 days of age; Vaccination 2 (Visit 2): 42 to 70 days after Visit 1; Vaccination 3 (Visit 3): 42 to 70 days after Visit 2; Vaccination 4: 365 to 455 days of age.	
Reporting group title	Cohort 2: 13vPnC
Reporting group description: Subjects vaccinated with 3 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2 (Visit 2): at least 28 days after Visit 1; Vaccination 3: 365 days to <450 days of age and at least 56 days after Visit 2.	
Reporting group title	Cohort 2: Hib Vaccine
Reporting group description: Subjects vaccinated with 2 doses of Hib Vaccine (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2: at least 28 days after Visit 1.	
Reporting group title	Cohort 3: 13vPnC
Reporting group description: Subjects vaccinated with 2 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): ≥ 1 to <2 years of age; Vaccination 2: at least 56 days after Visit 1.	
Reporting group title	Cohort 3: Hib Vaccine
Reporting group description: Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: ≥ 1 to <2 years of age.	

Reporting group title	Cohort 4: 13vPnC
Reporting group description:	
Subjects vaccinated with 1 dose of 13vPnC (single intramuscular injection): Vaccination 1: ≥ 2 to < 6 years of age.	
Reporting group title	Cohort 4: Hib Vaccine
Reporting group description:	
Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: ≥ 2 to < 6 years of age.	
Subject analysis set title	Cohort 1: Infant Series
Subject analysis set type	Sub-group analysis
Subject analysis set description:	
Subjects vaccinated with 3 infant series doses of 13vPnC (single intramuscular injection): Vaccination 1: 42 to 56 days of age; Vaccination 2: 42 to 70 days after Visit 1; Vaccination 3: 42 to 70 days after Visit 2.	
Subject analysis set title	Cohort 1: Toddler Dose
Subject analysis set type	Sub-group analysis
Subject analysis set description:	
Subjects vaccinated with 4 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): 42 to 56 days of age; Vaccination 2 (Visit 2): 42 to 70 days after Visit 1; Vaccination 3 (Visit 3): 42 to 70 days after Visit 2; Vaccination 4: 365 to 455 days of age.	

Primary: The Serotype-specific Immunoglobulin G (IgG) Geometric Mean Concentrations (GMCs) for Each of the Pneumococcal Serotypes Measured in Cohorts 2, 3 and 4 Compared to IgG GMCs Measured in Cohort 1

End point title	The Serotype-specific Immunoglobulin G (IgG) Geometric Mean Concentrations (GMCs) for Each of the Pneumococcal Serotypes Measured in Cohorts 2, 3 and 4 Compared to IgG GMCs Measured in Cohort 1 ^{[1][2]}
End point description:	
Serotype-specific IgG concentrations to the 13 pneumococcal serotypes(1,3,4,5,6A,6B,7F,9V,14,18C,19A,19F, and 23F)were determined in all subjects from blood samples taken 1 month after the infant series in Cohort 1 and the last dose 13vPnC in Cohorts 2, 3, 4.GMC and corresponding 2-sided 95%confidence intervals(CI)were evaluated.Geometric means were calculated using all subjects with available data for the specified blood draw.Evaluable analysis set included all subjects evaluable for the study at randomization;received all study vaccinations for Cohort 2-4,received all 3 infant series doses for Cohort 1;had blood drawn for assay testing within 27-56 days after third vaccination,visit 3,visit 2 and visit 1 for Cohort 1,2,3 and 4,respectively and the sample from this blood drawn provided at least 1 valid and determinate assay result;received no prohibited vaccine;had no major protocol violation."Number of Subjects Analyzed" =the number of subjects who	
End point type	Primary
End point timeframe:	
Cohort 1: 1 month after the third dose of 13vPnC (infant series dose). Cohort 2, 3, 4: 1 month after the last dose of 13vPnC	

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: No statistical analysis was planned

[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: Statistics are reported for the arms specified

End point values	Cohort 2: 13vPnC	Cohort 3: 13vPnC	Cohort 4: 13vPnC	Cohort 1: Infant Series
Subject group type	Reporting group	Reporting group	Reporting group	Subject analysis set
Number of subjects analysed	176	127	131	72
Units: microgram/milliliter (mcg/mL)				
geometric mean (confidence interval 95%)				

Serotype 1	3.75 (3.26 to 4.32)	4.38 (3.75 to 5.11)	4.40 (3.76 to 5.14)	5.40 (4.43 to 6.58)
Serotype 3	1.19 (1.08 to 1.32)	1.32 (1.16 to 1.51)	1.12 (0.97 to 1.29)	0.63 (0.54 to 0.75)
Serotype 4	2.97 (2.60 to 3.40)	4.04 (3.48 to 4.68)	4.47 (3.92 to 5.10)	3.96 (3.24 to 4.84)
Serotype 5	3.07 (2.73 to 3.46)	2.57 (2.26 to 2.92)	2.92 (2.57 to 3.32)	3.50 (2.91 to 4.19)
Serotype 6A	3.12 (2.74 to 3.57)	3.19 (2.69 to 3.78)	3.39 (2.80 to 4.09)	5.35 (4.44 to 6.44)
Serotype 6B	2.20 (1.91 to 2.54)	2.47 (2.06 to 2.96)	2.96 (2.44 to 3.59)	4.62 (3.76 to 5.69)
Serotype 7F	5.73 (5.10 to 6.44)	7.87 (6.90 to 8.96)	7.08 (6.19 to 8.10)	7.14 (6.00 to 8.50)
Serotype 9V	2.24 (1.99 to 2.51)	3.31 (2.90 to 3.77)	3.68 (3.22 to 4.21)	3.66 (2.99 to 4.50)
Serotype 14	10.89 (9.59 to 12.35)	9.79 (8.40 to 11.41)	6.94 (5.53 to 8.70)	15.09 (11.39 to 20.00)
Serotype 18C	2.25 (1.98 to 2.57)	3.88 (3.25 to 4.64)	5.60 (4.74 to 6.62)	4.94 (4.11 to 5.94)
Serotype 19A	3.62 (3.30 to 3.97)	5.55 (4.86 to 6.34)	11.62 (9.75 to 13.86)	3.44 (2.85 to 4.16)
Serotype 19F	4.50 (3.98 to 5.09)	5.04 (4.28 to 5.92)	5.44 (4.46 to 6.64)	4.95 (3.91 to 6.26)
Serotype 23F	2.04 (1.76 to 2.37)	2.26 (1.90 to 2.67)	2.80 (2.33 to 3.36)	4.36 (3.23 to 5.88)

Statistical analyses

No statistical analyses for this end point

Primary: Number of Subjects With Local Reactions and Systemic Events Within 7 Days After Each Vaccination in Cohort 2

End point title	Number of Subjects With Local Reactions and Systemic Events Within 7 Days After Each Vaccination in Cohort 2 ^[3] ^[4]
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End point description:

Local reactions (redness, swelling, and tenderness) at the site of the investigational product injection were monitored daily for 7 days after each vaccination. Temperature were collected at bedtime daily for 7 days and at any time during the 7 days that fever is suspected. Fever is defined as temperature of greater than or equal to 38.0 degree Celsius (100.4°F). Other systemic events (decreased appetite, drowsiness and irritability) were recorded for 7 days after each investigational product vaccination. The safety population included all subjects who received at least 1 dose of the investigational product.99999 indicates data could not be calculated as no subjects received vaccination 3 for Cohort 2 Hib vaccine. 'n' = subjects evaluable for specified rows.

End point type	Primary
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End point timeframe:

Day 1 to Day 7 after vaccination 1, 2 and 3

Notes:

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

Justification: No statistical analysis was planned

[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: Statistics are reported for the arms specified

End point values	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	236	117		
Units: Subjects				
Local Reactions- Vaccination 1 (n=236, 117)	66	18		
Local Reactions- Vaccination 2 (n=219,107)	20	14		
Local Reactions- Vaccination 3 (n=194,0)	4	99999		
Systemic Events- Vaccination 1 (n=236,117)	23	7		
Systemic Events- Vaccination 2 (n=219,107)	23	5		
Systemic Events- Vaccination 3 (n=194,0)	1	99999		

Statistical analyses

No statistical analyses for this end point

Primary: Number of Subjects With Local Reactions and Systemic Events Within 7 Days After Each Vaccination in Cohort 3

End point title	Number of Subjects With Local Reactions and Systemic Events Within 7 Days After Each Vaccination in Cohort 3 ^[5] ^[6]
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End point description:

Local reactions (redness, swelling, and tenderness) at the site of the investigational product injection were monitored daily for 7 days after each vaccination. Temperature were collected at bedtime daily for 7 days and at any time during the 7 days that fever is suspected. Fever is defined as temperature of greater than or equal to 38.0°C (100.4°F). Other systemic events (decreased appetite, drowsiness and irritability) were recorded for 7 days after each investigational product vaccination. The safety population included all subjects who received at least 1 dose of the investigational product. 99999 indicates data could not be calculated as no subjects received vaccination 2 for Cohort 3 Hib vaccine. 'n' = subjects evaluable for specified rows.

End point type	Primary
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End point timeframe:

Day 1 to Day 7 after vaccination 1 and 2

Notes:

[5] - 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: No statistical analysis was planned

[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: Statistics are reported for the arms specified

End point values	Cohort 3: 13vPnC	Cohort 3: Hib Vaccine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	164	83		
Units: Subjects				
Local Reactions- Vaccination 1 (n=164,83)	45	10		
Local Reactions- Vaccination 2 (n=146,0)	9	99999		

Systemic Events- Vaccination 1 (n=164,83)	26	7		
Systemic Events- Vaccination 2 (n=146,0)	4	99999		

Statistical analyses

No statistical analyses for this end point

Primary: Number of Subjects With Local Reactions and Systemic Events Within 7 Days After Each Vaccination in Cohort 4

End point title	Number of Subjects With Local Reactions and Systemic Events Within 7 Days After Each Vaccination in Cohort 4 ^[7] ^[8]
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End point description:

Local reactions (redness, swelling, and tenderness) at the site of the investigational product injection were monitored daily for 7 days after each vaccination. Temperature were collected at bedtime daily for 7 days and at any time during the 7 days that fever is suspected. Fever is defined as temperature of greater than or equal to 38.0°C (100.4°F). Other systemic events (fatigue, headache, vomiting, diarrhea, muscle pain and joint pain) were recorded for 7 days after each investigational product vaccination. The safety population included all subjects who received at least 1 dose of the investigational product. 'n' = subjects evaluable for specified rows.

End point type	Primary
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End point timeframe:

Within 7 Days After Vaccination 1

Notes:

[7] - 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: No statistical analysis was planned

[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: Statistics are reported for the arms specified

End point values	Cohort 4: 13vPnC	Cohort 4: Hib Vaccine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	138	68		
Units: Subjects				
Local Reactions- Vaccination 1 (n=138,67)	48	21		
Systemic Events- Vaccination 1 (n=138,68)	17	10		

Statistical analyses

No statistical analyses for this end point

Primary: Number of Subjects With Adverse Events (AE) From the Signing of the Informed Consent Document (ICD) to 1 Month After the Last Vaccination in Cohorts 2, 3, 4

End point title	Number of Subjects With Adverse Events (AE) From the Signing of the Informed Consent Document (ICD) to 1 Month After the Last Vaccination in Cohorts 2, 3, 4 ^[9] ^[10]
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End point description:

An AE was any untoward medical occurrence in a study subject administered a product or medical device; the event need not necessarily have a causal relationship with the treatment or usage. The safety population included all subjects who received at least 1 dose of the investigational product.

End point type	Primary
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End point timeframe:

From the signing of ICD to 1 month after the last vaccination (13vPnC or Hib) in Cohort 2, 3 and 4

Notes:

[9] - 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: No statistical analysis was planned

[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: Statistics are reported for the arms specified

End point values	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine	Cohort 3: 13vPnC	Cohort 3: Hib Vaccine
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	236	117	165	83
Units: Subjects	76	29	21	1

End point values	Cohort 4: 13vPnC	Cohort 4: Hib Vaccine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	138	68		
Units: Subjects	11	1		

Statistical analyses

No statistical analyses for this end point

Primary: Number of Subjects With Newly Diagnosed Chronic Medical Conditions (NDCMCs) From 1 Month to 6 Months After the Last Vaccination in Cohorts 2, 3, 4

End point title	Number of Subjects With Newly Diagnosed Chronic Medical Conditions (NDCMCs) From 1 Month to 6 Months After the Last Vaccination in Cohorts 2, 3, 4 ^{[11][12]}
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End point description:

Number of subjects with NDCMCs from 1 month after the last study vaccination (13vPnC or Hib vaccine) to 6 months after the last study vaccination in Cohorts 2, 3, and 4. An NDCMC was defined as a disease or medical condition that was not identified prior to study start and was expected to be persistent or otherwise long-lasting in its effects. The safety population included all subjects who received at least 1 dose of the investigational product.

End point type	Primary
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End point timeframe:

From 1 month after last vaccination to 6 months after the last vaccination in Cohorts 2,3,4

Notes:

[11] - 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: No statistical analysis was planned

[12] - 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: Statistics are reported for the arms specified

End point values	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine	Cohort 3: 13vPnC	Cohort 3: Hib Vaccine
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	236	117	165	83
Units: Subjects	0	0	0	0

End point values	Cohort 4: 13vPnC	Cohort 4: Hib Vaccine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	138	68		
Units: Subjects	0	0		

Statistical analyses

No statistical analyses for this end point

Primary: Number of Subjects With SAE From the Signing of the ICD to 6 Months After the Last Vaccination in Cohorts 2, 3, 4

End point title	Number of Subjects With SAE From the Signing of the ICD to 6 Months After the Last Vaccination in Cohorts 2, 3, 4 ^[13] ^[14]
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End point description:

An SAE was any untoward medical occurrence at any dose that resulted in death, was life-threatening (immediate risk of death), required inpatient hospitalization or prolongation of existing hospitalization, resulted in persistent or significant disability/incapacity (substantial disruption of the ability to conduct normal life functions), resulted in congenital anomaly/birth defect or considered to be an important medical event. The safety population included all subjects who received at least 1 dose of the investigational product.

End point type	Primary
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End point timeframe:

From the signing of ICD to 6 months after the last vaccination (13vPnC or Hib) in Cohorts 2, 3 and 4

Notes:

[13] - 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: No statistical analysis was planned

[14] - 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: Statistics are reported for the arms specified

End point values	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine	Cohort 3: 13vPnC	Cohort 3: Hib Vaccine
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	236	117	165	83
Units: Subjects	5	1	2	0

End point values	Cohort 4: 13vPnC	Cohort 4: Hib Vaccine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	138	68		
Units: Subjects	2	1		

Statistical analyses

No statistical analyses for this end point

Secondary: The Serotype-Specific Opsonophagocytic Activity (OPA) Geometric Mean Titers (GMTs) for Each of the Pneumococcal Serotypes Measured in Cohorts 2, 3 and 4 Compared to IgG GMTs Measured in Cohort 1

End point title	The Serotype-Specific Opsonophagocytic Activity (OPA) Geometric Mean Titers (GMTs) for Each of the Pneumococcal Serotypes Measured in Cohorts 2, 3 and 4 Compared to IgG GMTs Measured in Cohort 1 ^[15]
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End point description:

Serotype-specific OPA titers to the 13 pneumococcal serotypes(1,3,4,5,6A,6B,7F,9V,14,18C,19A,19F,23F)were determined in randomly selected subset of subjects receiving 13vPnC from the blood samples taken 1 month after the infant series in Cohort 1 and the last 13vPnC vaccination in each of the 3 cohorts.GMT and corresponding 2-sided 95%CI were evaluated.GMs were calculated using all subjects with available data for the specified blood draw.Evaluable analysis set included all subjects evaluable for the study at randomization; received all study vaccinations for Cohort 2-4,received all 3 infant series doses for Cohort1;had blood draw for assay testing within 27-56 days after third vaccination for Cohort 1,visit 3 for Cohort 2,visit 2 for Cohort 3,visit 1 for Cohort 4 and the sample from this blood drawn provided at least 1 valid and determinate assay result; received no prohibited vaccine;had no major protocol violation."Number of Subjects

End point type	Secondary
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End point timeframe:

Cohort 1: 1 month after the third dose of 13vPnC. Cohort 2, 3, 4: 1 month after the last dose of 13vPnC

Notes:

[15] - 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: Statistics are reported for the arms specified

End point values	Cohort 2: 13vPnC	Cohort 3: 13vPnC	Cohort 4: 13vPnC	Cohort 1: Infant Series
Subject group type	Reporting group	Reporting group	Reporting group	Subject analysis set
Number of subjects analysed	87	78	71	37
Units: Titers				
geometric mean (confidence interval 95%)				
Serotype 1	142.7 (103.4 to 196.9)	93.3 (70.1 to 124.1)	40.9 (31.3 to 53.4)	201.7 (134.8 to 301.8)
Serotype 3	249.0 (205.7 to 301.5)	332.3 (273.3 to 404.1)	244.8 (192.0 to 312.1)	112.9 (82.5 to 154.4)
Serotype 4	2172.2 (1740.7 to 2710.7)	2682.8 (2210.4 to 3256.2)	4236.3 (3489.6 to 5142.8)	1857.8 (1264.8 to 2728.8)

Serotype 5	286.3 (214.5 to 382.0)	164.5 (131.5 to 205.7)	79.3 (57.7 to 109.0)	645.9 (452.6 to 921.8)
Serotype 6A	6042.7 (4830.2 to 7559.6)	7661.8 (6116.0 to 9598.4)	5849.3 (4364.0 to 7840.2)	5996.2 (4337.5 to 8289.3)
Serotype 6B	2181.6 (1350.1 to 3525.2)	4986.3 (3717.6 to 6687.9)	3775.2 (2825.1 to 5044.9)	2331.6 (1481.3 to 3670.0)
Serotype 7F	10234.6 (8612.2 to 12162.8)	14963.5 (12367.6 to 18104.4)	17107.3 (13842.7 to 21141.8)	10413.4 (7373.1 to 14707.3)
Serotype 9V	4154.1 (3358.6 to 5138.0)	7220.1 (5620.9 to 9274.2)	10533.5 (7811.9 to 14203.4)	5386.5 (3634.0 to 7984.3)
Serotype 14	4108.0 (3342.6 to 5048.8)	6885.4 (5642.6 to 8402.0)	7504.5 (5718.2 to 9848.9)	2859.4 (1688.9 to 4899.3)
Serotype 18C	1486.6 (1124.6 to 1965.2)	1890.4 (1429.0 to 2500.6)	2111.9 (1630.6 to 2735.2)	2677.9 (2000.3 to 3585.0)
Serotype 19A	2611.3 (2071.6 to 3291.6)	3560.0 (2867.8 to 4419.1)	3055.1 (2154.1 to 4333.1)	1677.3 (1159.9 to 2425.5)
Serotype 19F	1158.4 (937.0 to 1432.1)	1854.0 (1520.3 to 2260.8)	1629.7 (1292.9 to 2054.2)	744.4 (506.7 to 1093.6)
Serotype 23F	5640.0 (3590.5 to 8859.4)	6693.6 (4464.2 to 10036.4)	4234.7 (2916.1 to 6149.5)	3833.2 (2216.2 to 6630.1)

Statistical analyses

No statistical analyses for this end point

Secondary: The Serotype-Specific IgG GMCs for Each of the Pneumococcal Serotypes in Cohorts 2, 3, 4 Vaccinated With 13 vPnC Compared to Cohorts 2, 3 and 4 Vaccinated With Hib Vaccine

End point title	The Serotype-Specific IgG GMCs for Each of the Pneumococcal Serotypes in Cohorts 2, 3, 4 Vaccinated With 13 vPnC Compared to Cohorts 2, 3 and 4 Vaccinated With Hib Vaccine ^[16]
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End point description:

Serotype-specific IgG concentrations to the 13 pneumococcal serotypes (1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, and 23F) were determined in all subjects from the blood samples taken before vaccination (BV) and 1 month after vaccination (1MAV) in each of the 3 cohorts. GMC and corresponding 2-sided 95% CI were evaluated. GMs were calculated using all subjects with available data for the specified blood draw. Evaluable analysis set included all subjects evaluable for the study at randomization; received all study vaccinations for Cohort 2-4; had blood drawn for assay testing within 27-56 days after visit 3 for Cohort 2, visit 2 for Cohort 3 and visit 1 for Cohort 4 and the sample from this blood drawn provided at least 1 valid and determinate assay result; received no prohibited vaccine; had no major protocol violation. Here "Number of Subjects Analyzed" signifies the number of subjects who were evaluable for this endpoint.

End point type	Secondary
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End point timeframe:

Cohort 2, 3, 4: Before Vaccination and 1 Month After the Last Dose

Notes:

[16] - 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.

End point values	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine	Cohort 3: 13vPnC	Cohort 3: Hib Vaccine
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	176	72	127	77
Units: mcg/mL				
geometric mean (confidence interval 95%)				
Serotype 1- BV (n=176,72,126,77,131,67)	0.02 (0.01 to 0.02)	0.02 (0.01 to 0.03)	0.07 (0.05 to 0.09)	0.07 (0.05 to 0.10)
Serotype 1 - 1MAV (n=176,72,127,77,131,67)	3.75 (3.26 to 4.32)	0.04 (0.03 to 0.06)	4.38 (3.75 to 5.11)	0.07 (0.04 to 0.11)
Serotype 3 - BV (n=176,72,125,77,131,67)	0.03 (0.03 to 0.04)	0.03 (0.02 to 0.04)	0.07 (0.05 to 0.09)	0.07 (0.05 to 0.09)
Serotype 3 - 1MAV (n=176,72,127,77,131,67)	1.19 (1.08 to 1.32)	0.04 (0.03 to 0.05)	1.32 (1.16 to 1.51)	0.09 (0.06 to 0.13)
Serotype 4 - BV (n=176,72,127,77,131,67)	0.01 (0.01 to 0.01)	0.01 (0.01 to 0.01)	0.03 (0.02 to 0.04)	0.04 (0.03 to 0.06)
Serotype 4 - 1MAV (n=176,72,127,77,131,67)	2.97 (2.60 to 3.40)	0.02 (0.01 to 0.02)	4.04 (3.48 to 4.68)	0.03 (0.02 to 0.05)
Serotype 5 - BV (n=176,72,127,77,131,67)	0.38 (0.34 to 0.43)	0.36 (0.31 to 0.42)	0.69 (0.60 to 0.78)	0.63 (0.54 to 0.74)
Serotype 5 - 1MAV (n=176,72,127,77,131,67)	3.07 (2.73 to 3.46)	0.51 (0.43 to 0.61)	2.57 (2.26 to 2.92)	0.74 (0.62 to 0.88)
Serotype 6A - BV (n=174,72,127,77,129,67)	0.15 (0.13 to 0.18)	0.16 (0.13 to 0.20)	0.30 (0.26 to 0.35)	0.36 (0.30 to 0.42)
Serotype 6A - 1MAV (n=176,72,127,76,129,67)	3.12 (2.74 to 3.57)	0.20 (0.15 to 0.26)	3.19 (2.69 to 3.78)	0.42 (0.34 to 0.51)
Serotype 6B - BV (n=176,72,127,77,131,67)	0.15 (0.12 to 0.17)	0.15 (0.11 to 0.19)	0.30 (0.26 to 0.35)	0.35 (0.30 to 0.41)
Serotype 6B - 1MAV (n=176,72,127,77,131,67)	2.20 (1.91 to 2.54)	0.21 (0.16 to 0.26)	2.47 (2.06 to 2.96)	0.38 (0.32 to 0.46)
Serotype 7F - BV (n=175,72,127,76,130,64)	0.03 (0.03 to 0.04)	0.03 (0.02 to 0.04)	0.10 (0.08 to 0.12)	0.11 (0.08 to 0.15)
Serotype 7F - 1MAV (n=176,71,127,76,131,67)	5.73 (5.10 to 6.44)	0.05 (0.03 to 0.07)	7.87 (6.90 to 8.96)	0.13 (0.09 to 0.20)
Serotype 9V - BV (n=176,72,126,77,131,67)	0.13 (0.11 to 0.16)	0.16 (0.12 to 0.22)	0.25 (0.20 to 0.31)	0.27 (0.23 to 0.33)
Serotype 9V - 1MAV (n=176,72,127,76,131,67)	2.24 (1.99 to 2.51)	0.20 (0.14 to 0.27)	3.31 (2.90 to 3.77)	0.34 (0.26 to 0.43)
Serotype 14 - BV (n=175,72,127,77,130,67)	0.03 (0.02 to 0.04)	0.02 (0.02 to 0.03)	0.03 (0.03 to 0.05)	0.05 (0.03 to 0.09)
Serotype 14 - 1MAV (n=176,72,127,77,131,67)	10.89 (9.59 to 12.35)	0.02 (0.02 to 0.03)	9.79 (8.40 to 11.41)	0.07 (0.04 to 0.11)
Serotype 18C - BV (n=176,72,127,77,130,67)	0.01 (0.01 to 0.01)	0.01 (0.01 to 0.02)	0.04 (0.03 to 0.06)	0.05 (0.04 to 0.08)
Serotype 18C - 1MAV (n=176,72,127,77,131,66)	2.25 (1.98 to 2.57)	0.02 (0.01 to 0.03)	3.88 (3.25 to 4.64)	0.07 (0.04 to 0.12)
Serotype 19A - BV (n=176,72,127,77,131,67)	0.36 (0.31 to 0.41)	0.38 (0.31 to 0.46)	0.65 (0.55 to 0.76)	0.69 (0.58 to 0.83)
Serotype 19A -1MAV (n=176,72,127,77,131,67)	3.62 (3.30 to 3.97)	0.50 (0.41 to 0.60)	5.55 (4.86 to 6.34)	0.88 (0.71 to 1.10)
Serotype 19F - BV (n=173,72,127,77,131,67)	0.08 (0.07 to 0.11)	0.11 (0.08 to 0.16)	0.23 (0.18 to 0.29)	0.23 (0.17 to 0.31)
Serotype 19F - 1MAV (n=176,72,127,77,131,67)	4.50 (3.98 to 5.09)	0.13 (0.09 to 0.19)	5.04 (4.28 to 5.92)	0.27 (0.18 to 0.39)
Serotype 23F - BV (n=176,72,126,76,131,67)	0.11 (0.10 to 0.13)	0.11 (0.09 to 0.14)	0.19 (0.17 to 0.23)	0.22 (0.19 to 0.26)

Serotype 23F - 1MAV (n=176,71,127,77,131,67)	2.04 (1.76 to 2.37)	0.17 (0.14 to 0.21)	2.26 (1.90 to 2.67)	0.27 (0.22 to 0.34)
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End point values	Cohort 4: 13vPnC	Cohort 4: Hib Vaccine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	131	67		
Units: mcg/mL				
geometric mean (confidence interval 95%)				
Serotype 1- BV (n=176,72,126,77,131,67)	0.18 (0.14 to 0.22)	0.21 (0.15 to 0.28)		
Serotype 1 - 1MAV (n=176,72,127,77,131,67)	4.40 (3.76 to 5.14)	0.16 (0.12 to 0.23)		
Serotype 3 - BV (n=176,72,125,77,131,67)	0.14 (0.10 to 0.18)	0.13 (0.08 to 0.22)		
Serotype 3 - 1MAV (n=176,72,127,77,131,67)	1.12 (0.97 to 1.29)	0.12 (0.07 to 0.20)		
Serotype 4 - BV (n=176,72,127,77,131,67)	0.07 (0.05 to 0.10)	0.07 (0.05 to 0.11)		
Serotype 4 - 1MAV (n=176,72,127,77,131,67)	4.47 (3.92 to 5.10)	0.06 (0.04 to 0.08)		
Serotype 5 - BV (n=176,72,127,77,131,67)	1.04 (0.92 to 1.17)	0.97 (0.83 to 1.13)		
Serotype 5 - 1MAV (n=176,72,127,77,131,67)	2.92 (2.57 to 3.32)	0.89 (0.73 to 1.07)		
Serotype 6A - BV (n=174,72,127,77,129,67)	0.79 (0.68 to 0.93)	0.79 (0.64 to 0.97)		
Serotype 6A - 1MAV (n=176,72,127,76,129,67)	3.39 (2.80 to 4.09)	0.80 (0.65 to 0.98)		
Serotype 6B - BV (n=176,72,127,77,131,67)	0.80 (0.69 to 0.94)	0.70 (0.58 to 0.84)		
Serotype 6B - 1MAV (n=176,72,127,77,131,67)	2.96 (2.44 to 3.59)	0.62 (0.49 to 0.79)		
Serotype 7F - BV (n=175,72,127,76,130,64)	0.25 (0.21 to 0.31)	0.25 (0.18 to 0.33)		
Serotype 7F - 1MAV (n=176,71,127,76,131,67)	7.08 (6.19 to 8.10)	0.21 (0.16 to 0.29)		
Serotype 9V - BV (n=176,72,126,77,131,67)	0.55 (0.47 to 0.65)	0.41 (0.31 to 0.55)		
Serotype 9V - 1MAV (n=176,72,127,76,131,67)	3.68 (3.22 to 4.21)	0.45 (0.37 to 0.54)		
Serotype 14 - BV (n=175,72,127,77,130,67)	0.19 (0.12 to 0.29)	0.20 (0.11 to 0.36)		
Serotype 14 - 1MAV (n=176,72,127,77,131,67)	6.94 (5.53 to 8.70)	0.20 (0.11 to 0.36)		
Serotype 18C - BV (n=176,72,127,77,130,67)	0.20 (0.15 to 0.27)	0.20 (0.12 to 0.29)		
Serotype 18C - 1MAV (n=176,72,127,77,131,66)	5.60 (4.74 to 6.62)	0.18 (0.11 to 0.29)		
Serotype 19A - BV (n=176,72,127,77,131,67)	1.72 (1.46 to 2.02)	1.44 (1.13 to 1.83)		
Serotype 19A -1MAV (n=176,72,127,77,131,67)	11.62 (9.75 to 13.86)	1.33 (1.04 to 1.70)		
Serotype 19F - BV (n=173,72,127,77,131,67)	0.62 (0.49 to 0.78)	0.57 (0.41 to 0.80)		
Serotype 19F - 1MAV (n=176,72,127,77,131,67)	5.44 (4.46 to 6.64)	0.53 (0.38 to 0.73)		

Serotype 23F - BV (n=176,72,126,76,131,67)	0.54 (0.46 to 0.64)	0.45 (0.35 to 0.57)		
Serotype 23F - 1MAV (n=176,71,127,77,131,67)	2.80 (2.33 to 3.36)	0.44 (0.34 to 0.56)		

Statistical analyses

No statistical analyses for this end point

Secondary: The Serotype-Specific OPA GMT for Each of the Pneumococcal Serotypes in Cohorts 2, 3, 4 Vaccinated With 13 vPnC Compared to Cohorts 2, 3 and 4 Vaccinated With Hib Vaccine

End point title	The Serotype-Specific OPA GMT for Each of the Pneumococcal Serotypes in Cohorts 2, 3, 4 Vaccinated With 13 vPnC Compared to Cohorts 2, 3 and 4 Vaccinated With Hib Vaccine ^[17]
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End point description:

Serotype-Specific OPA titers to the 13 pneumococcal serotypes (1, 3, 4, 5,6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, and 23F) were determined in a randomly selected subset of subjects receiving 13vPnC and approximately Hib vaccine from the blood samples taken before vaccination and 1 month after the last 13vPnC/Hib vaccination in each of the 3 cohorts. Evaluable analysis set included all subjects evaluable for the study at randomization; received all study vaccinations for Cohort 2-4; had blood drawn for assay testing within 27-56 days after visit 3 for Cohort 2, visit 2 for Cohort 3 and visit 1 for Cohort 4 and the sample from this blood draw provided at least 1 valid and determinate assay result; received no prohibited vaccine; had no major protocol violation. Here "Number of Subjects Analyzed" signifies the number of subjects who were evaluable for this endpoint.

End point type	Secondary
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End point timeframe:

Cohort 2, 3, 4: Before Vaccination and 1 Month After the Last Dose

Notes:

[17] - 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: Statistics are reported for the arms specified

End point values	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine	Cohort 3: 13vPnC	Cohort 3: Hib Vaccine
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	87	34	78	42
Units: Titers				
geometric mean (confidence interval 95%)				
Serotype 1 - Before Vaccination	4.1 (3.9 to 4.4)	4.2 (3.8 to 4.6)	4.0 (4.0 to 4.0)	4.2 (3.8 to 4.7)
Serotype 1 - 1 Month After the Last Dose	142.7 (103.4 to 196.9)	4.9 (3.6 to 6.8)	93.3 (70.1 to 124.1)	4.8 (3.8 to 6.0)
Serotype 3 - Before Vaccination	5.8 (5.0 to 6.7)	6.7 (4.5 to 10.0)	11.9 (8.6 to 16.5)	11.3 (6.9 to 18.5)
Serotype 3 - 1 Month After the Last Dose	249.0 (205.7 to 301.5)	7.4 (4.9 to 11.3)	332.3 (273.3 to 404.1)	13.4 (7.7 to 23.4)
Serotype 4 - Before Vaccination	5.5 (4.3 to 6.9)	5.0 (3.6 to 6.9)	6.3 (4.8 to 8.3)	9.5 (5.6 to 16.2)
Serotype 4 - 1 Month After the Last Dose	2172.2 (1740.7 to 2710.7)	10.3 (5.2 to 20.3)	2682.8 (2210.4 to 3256.2)	10.6 (5.7 to 19.6)
Serotype 5 - Before Vaccination	4.3 (3.8 to 4.9)	4.0 (4.0 to 4.0)	4.2 (3.9 to 4.4)	4.1 (3.9 to 4.4)
Serotype 5 - 1 Month After the Last Dose	286.3 (214.5 to 382.0)	6.2 (4.0 to 9.7)	164.5 (131.5 to 205.7)	5.1 (3.6 to 7.2)

Serotype 6A - Before Vaccination	5.0 (4.1 to 6.3)	4.0 (4.0 to 4.0)	6.9 (4.9 to 9.8)	8.2 (4.7 to 14.3)
Serotype 6A - 1 Month After the Last Dose	6042.7 (4830.2 to 7559.6)	5.9 (4.0 to 8.8)	7661.8 (6116.0 to 9598.4)	17.8 (8.1 to 39.1)
Serotype 6B - Before Vaccination	5.1 (4.1 to 6.4)	4.0 (4.0 to 4.0)	8.2 (5.5 to 12.2)	9.7 (5.6 to 16.8)
Serotype 6B - 1 Month After the Last Dose	2181.6 (1350.1 to 3525.2)	5.7 (3.8 to 8.6)	4986.3 (3717.6 to 6687.9)	20.2 (9.3 to 43.8)
Serotype 7F - Before Vaccination	63.0 (35.8 to 111.0)	29.6 (12.4 to 70.4)	195.8 (114.5 to 334.9)	432.7 (213.8 to 875.8)
Serotype 7F - 1 Month After the Last Dose	10234.6 (8612.2 to 12162.8)	94.0 (37.2 to 237.3)	14963.5 (12367.6 to 18104.4)	707.1 (361.9 to 1381.6)
Serotype 9V - Before Vaccination	9.3 (6.3 to 13.8)	11.3 (5.9 to 21.5)	59.5 (34.1 to 103.7)	74.5 (31.0 to 179.0)
Serotype 9V - 1 Month After the Last Dose	4154.1 (3358.6 to 5138.0)	20.6 (9.1 to 46.8)	7220.1 (5620.9 to 9274.2)	154.3 (69.9 to 340.9)
Serotype 14 - Before Vaccination	9.8 (6.5 to 14.7)	12.7 (6.2 to 26.3)	30.0 (16.1 to 56.1)	19.1 (8.5 to 43.0)
Serotype 14 - 1 Month After the Last Dose	4108.0 (3342.6 to 5048.8)	26.6 (11.4 to 62.3)	6885.4 (5642.6 to 8402.0)	39.0 (16.3 to 93.2)
Serotype 18C - Before Vaccination	4.3 (3.8 to 4.9)	4.4 (3.8 to 5.1)	6.1 (5.0 to 7.4)	6.3 (4.4 to 8.9)
Serotype 18C - 1 Month After the Last Dose	1486.6 (1124.6 to 1965.2)	6.5 (4.1 to 10.3)	1890.4 (1429.0 to 2500.6)	7.9 (4.8 to 13.1)
Serotype 19A - Before Vaccination	5.3 (4.5 to 6.3)	5.8 (4.1 to 8.1)	11.1 (7.8 to 15.8)	13.8 (7.8 to 24.3)
Serotype 19A - 1 Month After the Last Dose	2611.3 (2071.6 to 3291.6)	6.4 (4.6 to 8.9)	3560.0 (2867.8 to 4419.1)	15.5 (8.6 to 28.2)
Serotype 19F - Before Vaccination	4.3 (3.9 to 4.8)	4.6 (3.7 to 5.7)	6.2 (4.9 to 7.8)	6.1 (4.5 to 8.3)
Serotype 19F - 1 Month After the Last Dose	1158.4 (937.0 to 1432.1)	5.9 (4.1 to 8.6)	1854.0 (1520.3 to 2260.8)	9.5 (5.6 to 16.2)
Serotype 23F - Before Vaccination	5.1 (4.1 to 6.3)	4.7 (3.4 to 6.4)	15.0 (8.8 to 25.6)	11.1 (5.6 to 22.0)
Serotype 23F - 1 Month After the Last Dose	5640.0 (3950.5 to 8859.4)	20.2 (8.5 to 47.7)	6693.6 (4464.2 to 10036.4)	19.4 (8.8 to 42.8)

End point values	Cohort 4: 13vPnC	Cohort 4: Hib Vaccine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	71	36		
Units: Titers				
geometric mean (confidence interval 95%)				
Serotype 1 - Before Vaccination	4.6 (4.2 to 5.0)	5.5 (4.5 to 6.7)		
Serotype 1 - 1 Month After the Last Dose	40.9 (31.3 to 53.4)	4.4 (3.8 to 5.1)		
Serotype 3 - Before Vaccination	27.1 (19.2 to 38.4)	40.0 (22.7 to 70.7)		
Serotype 3 - 1 Month After the Last Dose	244.8 (192.0 to 312.1)	28.4 (16.2 to 49.7)		

Serotype 4 - Before Vaccination	23.4 (13.8 to 39.7)	15.9 (8.4 to 30.1)		
Serotype 4 - 1 Month After the Last Dose	4236.3 (3489.6 to 5142.8)	19.2 (10.0 to 36.6)		
Serotype 5 - Before Vaccination	4.7 (4.1 to 5.3)	4.2 (3.9 to 4.6)		
Serotype 5 - 1 Month After the Last Dose	79.3 (57.7 to 109.0)	4.8 (4.0 to 5.8)		
Serotype 6A - Before Vaccination	45.5 (26.5 to 78.0)	137.4 (63.3 to 297.9)		
Serotype 6A - 1 Month After the Last Dose	5849.3 (4364.0 to 7840.2)	101.8 (45.7 to 226.8)		
Serotype 6B - Before Vaccination	53.6 (30.4 to 94.5)	94.9 (43.0 to 209.3)		
Serotype 6B - 1 Month After the Last Dose	3775.2 (2825.1 to 5044.9)	117.7 (51.9 to 267.1)		
Serotype 7F - Before Vaccination	1155.2 (852.6 to 1565.2)	892.7 (515.3 to 1546.5)		
Serotype 7F - 1 Month After the Last Dose	17107.3 (13842.7 to 21141.8)	1090.7 (696.2 to 1708.8)		
Serotype 9V - Before Vaccination	458.9 (280.9 to 749.8)	850.2 (469.4 to 1539.9)		
Serotype 9V - 1 Month After the Last Dose	10533.5 (7811.9 to 14203.4)	795.1 (472.6 to 1337.6)		
Serotype 14 - Before Vaccination	132.6 (64.8 to 271.5)	210.6 (87.7 to 505.5)		
Serotype 14 - 1 Month After the Last Dose	7504.5 (5718.2 to 9848.9)	294.9 (126.5 to 687.1)		
Serotype 18C - Before Vaccination	12.7 (8.4 to 19.1)	20.3 (10.0 to 41.3)		
Serotype 18C - 1 Month After the Last Dose	2111.9 (1630.6 to 2735.2)	24.6 (12.1 to 50.1)		
Serotype 19A - Before Vaccination	60.3 (37.6 to 96.7)	52.0 (24.2 to 111.6)		
Serotype 19A - 1 Month After the Last Dose	3055.1 (2154.1 to 4333.1)	54.3 (27.6 to 107.1)		
Serotype 19F - Before Vaccination	24.7 (15.7 to 38.9)	38.5 (18.1 to 81.8)		
Serotype 19F - 1 Month After the Last Dose	1629.7 (1292.9 to 2054.2)	41.1 (19.4 to 86.8)		
Serotype 23F - Before Vaccination	106.0 (59.5 to 188.9)	70.5 (29.5 to 168.3)		
Serotype 23F - 1 Month After the Last Dose	4234.7 (2916.1 to 6149.5)	97.2 (40.8 to 231.2)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Subjects Achieving Pneumococcal Serotype-Specific IgG

Concentration ≥ 0.35 mcg/mL for 1 Month After the Last Vaccination in Cohorts 2,3,4 (13vPnC and Hib Vaccine) and 1 Month After the Infant Series in Cohort 1 (13vPnC)

End point title	Percentage of Subjects Achieving Pneumococcal Serotype-Specific IgG Concentration ≥ 0.35 mcg/mL for 1 Month After the Last Vaccination in Cohorts 2,3,4 (13vPnC and Hib Vaccine) and 1 Month After the Infant Series in Cohort 1 (13vPnC) ^[18]
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End point description:

Serotype-specific IgG concentrations to the 13 pneumococcal serotypes (1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, and 23F) were determined in all subjects from the blood samples taken 1 month after the infant series in Cohort 1 and the last dose of vaccination (13vPnC or Hib vaccine) in Cohorts 2, 3, 4. Evaluable analysis set included all subjects evaluable for the study at randomization; received all study vaccinations for Cohort 2-4, received all 3 infant series doses for Cohort 1; had blood draw for assay testing within 27-56 days after 3rd vaccination for Cohort 1, visit 3 for Cohort 2, visit 2 for Cohort 3 and visit 1 for Cohort 4 and the sample from this blood draw provided at least 1 valid and determinate assay result; received no prohibited vaccine; had no major protocol violation. Here "Number of Subjects Analyzed" signifies the number of subjects who were evaluable for this endpoint.

End point type	Secondary
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End point timeframe:

Cohort 1: 1 month after the third dose (infant series) of 13vPnC. Cohorts 2, 3, 4: 1 month after the last dose of 13vPnC and Hib Vaccine

Notes:

[18] - 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: Statistics are reported for the arms specified

End point values	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine	Cohort 3: 13vPnC	Cohort 3: Hib Vaccine
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	176	72	127	77
Units: Percentage of Subjects				
number (confidence interval 95%)				
Serotype 1 (n=176,72,127,77,131,67,72)	99.4 (96.9 to 100.0)	4.2 (0.9 to 11.7)	97.6 (93.3 to 99.5)	10.4 (4.6 to 19.4)
Serotype 3 (n=176,72,127,77,131,67,72)	97.7 (94.3 to 99.4)	4.2 (0.9 to 11.7)	94.5 (89.0 to 97.8)	11.7 (5.5 to 21.0)
Serotype 4 (n=176,72,127,77,131,67,72)	99.4 (96.9 to 100.0)	5.6 (1.5 to 13.6)	97.6 (93.3 to 99.5)	6.5 (2.1 to 14.5)
Serotype 5 (n=176,72,127,77,131,67,72)	100.0 (97.9 to 100.0)	69.4 (57.5 to 79.8)	100.0 (97.1 to 100.0)	85.7 (75.9 to 92.6)
Serotype 6A (n=176,72,127,76,129,67,72)	97.7 (94.3 to 99.4)	33.3 (22.7 to 45.4)	97.6 (93.3 to 99.5)	56.6 (44.7 to 67.9)
Serotype 6B (n=176,72,127,77,131,67,72)	96.0 (92.0 to 98.4)	23.6 (14.4 to 35.1)	97.6 (93.3 to 99.5)	50.6 (39.0 to 62.2)
Serotype 7F (n=176,71,127,76,131,67,72)	99.4 (96.9 to 100.0)	4.2 (0.9 to 11.9)	98.4 (94.4 to 99.8)	21.1 (12.5 to 31.9)
Serotype 9V (n=176,72,127,76,131,67,72)	98.3 (95.1 to 99.6)	31.9 (21.4 to 44.0)	99.2 (95.7 to 100.0)	40.8 (29.6 to 52.7)
Serotype 14 (n=176,72,127,77,131,67,72)	99.4 (96.9 to 100.0)	6.9 (2.3 to 15.5)	98.4 (94.4 to 99.8)	22.1 (13.4 to 33.0)
Serotype 18C (n=176,72,127,77,131,66,72)	97.7 (94.3 to 99.4)	5.6 (1.5 to 13.6)	98.4 (94.4 to 99.8)	15.6 (8.3 to 25.6)
Serotype 19A (n=176,72,127,77,131,67,72)	100.0 (97.9 to 100.0)	63.9 (51.7 to 74.9)	100.0 (97.1 to 100.0)	90.9 (82.2 to 96.3)
Serotype 19F (n=176,72,127,77,131,67,72)	98.9 (96.0 to 99.9)	29.2 (19.0 to 41.1)	97.6 (93.3 to 99.5)	44.2 (32.8 to 55.9)
Serotype 23F (n=176,71,127,77,131,67,72)	95.5 (91.2 to 98.0)	14.1 (7.0 to 24.4)	97.6 (93.3 to 99.5)	26.0 (16.6 to 37.2)

End point values	Cohort 4: 13vPnC	Cohort 4: Hib Vaccine	Cohort 1: Infant Series	
Subject group type	Reporting group	Reporting group	Subject analysis set	
Number of subjects analysed	131	67	72	
Units: Percentage of Subjects				
number (confidence interval 95%)				
Serotype 1 (n=176,72,127,77,131,67,72)	99.2 (95.8 to 100.0)	23.9 (14.3 to 35.9)	100.0 (95.0 to 100.0)	
Serotype 3 (n=176,72,127,77,131,67,72)	98.5 (94.6 to 99.8)	19.4 (10.8 to 30.9)	83.3 (72.7 to 91.1)	
Serotype 4 (n=176,72,127,77,131,67,72)	99.2 (95.8 to 100.0)	4.5 (0.9 to 12.5)	100.0 (95.0 to 100.0)	
Serotype 5 (n=176,72,127,77,131,67,72)	99.2 (95.8 to 100.0)	88.1 (77.8 to 94.7)	100.0 (95.0 to 100.0)	
Serotype 6A (n=176,72,127,76,129,67,72)	100.0 (97.2 to 100.0)	86.6 (76.0 to 93.7)	100.0 (95.0 to 100.0)	
Serotype 6B (n=176,72,127,77,131,67,72)	99.2 (95.8 to 100.0)	77.6 (65.8 to 86.9)	100.0 (95.0 to 100.0)	
Serotype 7F (n=176,71,127,76,131,67,72)	99.2 (95.8 to 100.0)	37.3 (25.8 to 50.0)	100.0 (95.0 to 100.0)	
Serotype 9V (n=176,72,127,76,131,67,72)	100.0 (97.2 to 100.0)	59.7 (47.0 to 71.5)	100.0 (95.0 to 100.0)	
Serotype 14 (n=176,72,127,77,131,67,72)	100.0 (97.2 to 100.0)	41.8 (29.8 to 54.5)	97.2 (90.3 to 99.7)	
Serotype 18C (n=176,72,127,77,131,66,72)	100.0 (97.2 to 100.0)	40.9 (29.0 to 53.7)	100.0 (95.0 to 100.0)	
Serotype 19A (n=176,72,127,77,131,67,72)	100.0 (97.2 to 100.0)	94.0 (85.4 to 98.3)	100.0 (95.0 to 100.0)	
Serotype 19F (n=176,72,127,77,131,67,72)	100.0 (97.2 to 100.0)	70.1 (57.7 to 80.7)	98.6 (92.5 to 100.0)	
Serotype 23F (n=176,71,127,77,131,67,72)	96.9 (92.4 to 99.2)	52.2 (39.7 to 64.6)	95.8 (88.3 to 99.1)	

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Subjects Achieving Serotype-Specific Pneumococcal OPA titer \geq Lower Limit of Quantitation (LLOQ) for 1 Month After the Last Vaccination in Cohorts 2,3,4 (13vPnC and Hib Vaccine) and 1 Month After the Infant Series in Cohort 1 (13vPnC)

End point title	Percentage of Subjects Achieving Serotype-Specific Pneumococcal OPA titer \geq Lower Limit of Quantitation (LLOQ) for 1 Month After the Last Vaccination in Cohorts 2,3,4 (13vPnC and Hib Vaccine) and 1 Month After the Infant Series in Cohort 1 (13vPnC) ^[19]
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End point description:

Serotype-specific OPA titers to the 13 pneumococcal serotypes (1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, and 23F) were determined in a randomly selected subset of about 50 subjects receiving 13vPnC from the blood samples taken 1 month after the infant series in Cohort 1 and the last vaccination (13vPnC or Hib vaccine) in each of the 3 cohorts. Evaluable analysis set included all subjects evaluable for the study at randomization; received all study vaccinations for Cohort 2-4, received all 3 infant series doses for Cohort 1; had blood draw for assay testing within 27-56 days after 3rd vaccination for Cohort 1, visit 3 for Cohort 2, visit 2 for Cohort 3 and visit 1 for Cohort 4 and the sample from this blood draw

provided at least 1 valid and determinate assay result; received no prohibited vaccine; had no major protocol violation. Here "Number of Subjects Analyzed" signifies the number of subjects who were evaluable for this endpoint.

End point type	Secondary
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End point timeframe:

Cohort 1: 1 month after the 3rd dose (infant series) of 13vPnC. Cohorts 2, 3, 4: 1 month after the last dose of 13vPnC and Hib Vaccine

Notes:

[19] - 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: Statistics are reported for the arms specified

End point values	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine	Cohort 3: 13vPnC	Cohort 3: Hib Vaccine
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	87	34	78	42
Units: Percentage of Subjects				
number (confidence interval 95%)				
Serotype 1	96.6 (90.3 to 99.3)	5.9 (0.7 to 19.7)	96.2 (89.2 to 99.2)	7.1 (1.5 to 19.5)
Serotype 3	100.0 (95.8 to 100.0)	29.4 (15.1 to 47.5)	100.0 (95.4 to 100.0)	38.1 (23.6 to 54.4)
Serotype 4	100.0 (95.8 to 100.0)	23.5 (10.7 to 41.2)	100.0 (95.4 to 100.0)	23.8 (12.1 to 39.5)
Serotype 5	100.0 (95.8 to 100.0)	14.7 (5.0 to 31.1)	100.0 (95.4 to 100.0)	4.8 (0.6 to 16.2)
Serotype 6A	100.0 (95.8 to 100.0)	14.7 (5.0 to 31.1)	100.0 (95.4 to 100.0)	31.0 (17.6 to 47.1)
Serotype 6B	94.3 (87.1 to 98.1)	11.8 (3.3 to 27.5)	98.7 (93.1 to 100.0)	35.7 (21.6 to 52.0)
Serotype 7F	100.0 (95.8 to 100.0)	61.8 (43.6 to 77.8)	100.0 (95.4 to 100.0)	90.5 (77.4 to 97.3)
Serotype 9V	100.0 (95.8 to 100.0)	41.2 (24.6 to 59.3)	100.0 (95.4 to 100.0)	76.2 (60.5 to 87.9)
Serotype 14	100.0 (95.8 to 100.0)	41.2 (24.6 to 59.3)	100.0 (95.4 to 100.0)	45.2 (29.8 to 61.3)
Serotype 18C	98.9 (93.8 to 100)	14.7 (5.0 to 31.1)	98.7 (93.1 to 100.0)	21.4 (10.3 to 36.8)
Serotype 19A	100.0 (95.8 to 100.0)	26.5 (12.9 to 44.4)	100.0 (95.4 to 100.0)	47.6 (32.0 to 63.6)
Serotype 19F	100.0 (95.8 to 100.0)	17.6 (6.8 to 34.5)	100.0 (95.4 to 100.0)	26.2 (13.9 to 42.0)
Serotype 23F	95.4 (88.6 to 98.7)	35.3 (19.7 to 53.5)	96.2 (89.2 to 99.2)	33.3 (19.6 to 49.5)

End point values	Cohort 4: 13vPnC	Cohort 4: Hib Vaccine	Cohort 1: Infant Series	
Subject group type	Reporting group	Reporting group	Subject analysis set	
Number of subjects analysed	71	36	37	
Units: Percentage of Subjects				
number (confidence interval 95%)				
Serotype 1	95.8 (88.1 to 99.1)	5.6 (0.7 to 18.7)	100.0 (90.5 to 100.0)	
Serotype 3	100.0 (94.9 to 100.0)	80.6 (64.0 to 91.8)	100.0 (90.5 to 100.0)	

Serotype 4	100.0 (94.9 to 100.0)	55.6 (38.1 to 72.1)	100.0 (90.5 to 100.0)
Serotype 5	98.6 (92.4 to 100.0)	11.1 (3.1 to 26.1)	100.0 (90.5 to 100.0)
Serotype 6A	100.0 (94.9 to 100.0)	80.6 (64.0 to 91.8)	100.0 (90.5 to 100.0)
Serotype 6B	100.0 (94.9 to 100.0)	80.6 (64.0 to 91.8)	100.0 (90.5 to 100.0)
Serotype 7F	100.0 (94.9 to 100.0)	100.0 (90.3 to 100.0)	100.0 (90.5 to 100.0)
Serotype 9V	100.0 (94.9 to 100.0)	97.2 (85.5 to 99.9)	100.0 (90.5 to 100.0)
Serotype 14	100.0 (94.9 to 100.0)	83.3 (67.2 to 93.6)	100.0 (90.5 to 100.0)
Serotype 18C	100.0 (94.9 to 100.0)	52.8 (35.5 to 69.6)	100.0 (90.5 to 100.0)
Serotype 19A	100.0 (94.9 to 100.0)	83.3 (67.2 to 93.6)	100.0 (90.5 to 100.0)
Serotype 19F	100.0 (94.9 to 100.0)	63.9 (46.2 to 79.2)	97.3 (85.8 to 99.9)
Serotype 23F	97.2 (90.2 to 99.7)	72.2 (54.8 to 85.8)	97.3 (85.8 to 99.9)

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Subjects with AE From the Signing of the ICD to 1 Month After the Infant Series in Cohort 1

End point title	Number of Subjects with AE From the Signing of the ICD to 1 Month After the Infant Series in Cohort 1
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End point description:

An AE was any untoward medical occurrence in a study subjects administered a product or medical device; the event need not necessarily have a causal relationship with the treatment or usage. The safety population included all subjects who received at least 1 dose of the investigational product.

End point type	Secondary
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End point timeframe:

From the signing of ICD to 1 month after the third dose (infant series) of 13vPnC in Cohort 1

End point values	Cohort 1: Infant Series			
Subject group type	Subject analysis set			
Number of subjects analysed	125			
Units: Subjects	14			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Subjects With SAE From the Signing of the ICD to 6 Months After the Toddler Dose in Cohort 1

End point title	Number of Subjects With SAE From the Signing of the ICD to 6 Months After the Toddler Dose in Cohort 1 ^[20]
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End point description:

Number of subjects With SAEs from the signing of the ICD to 6 months after vaccination 4. An SAE was any untoward medical occurrence at any dose that resulted in death, was life-threatening (immediate risk of death), required inpatient hospitalization or prolongation of existing hospitalization, resulted in persistent or significant disability/incapacity (substantial disruption of the ability to conduct normal life functions), resulted in congenital anomaly/birth defect or considered to be an important medical event. The safety population included all subjects who received at least 1 dose of the investigational product.

End point type	Secondary
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End point timeframe:

From the signing of the ICD to 6 Months After the Vaccination 4

Notes:

[20] - 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: Statistics are reported for the arms specified

End point values	Cohort 1: 13vPnC			
Subject group type	Reporting group			
Number of subjects analysed	125			
Units: Subjects	9			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Subjects With NDCMCs From 1 Month to 6 Months After the Toddler Dose in Cohort 1

End point title	Number of Subjects With NDCMCs From 1 Month to 6 Months After the Toddler Dose in Cohort 1
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End point description:

Number of subjects With NDCMCs from 1 month after vaccination 4 to 6 months after vaccination 4 in Cohort 1. An NDCMC was defined as a disease or medical condition that was not identified prior to study start and was expected to be persistent or otherwise long-lasting in its effects. The safety population included all subjects who received at least 1 dose of the investigational product.

End point type	Secondary
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End point timeframe:

From 1 month to 6 months (5 months) after Vaccination 4 in Cohort 1

End point values	Cohort 1: Toddler Dose			
Subject group type	Subject analysis set			
Number of subjects analysed	90			
Units: Subjects	0			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Subjects With AE From Toddler Dose Until 1 Month After the Toddler Dose in Cohort 1

End point title	Number of Subjects With AE From Toddler Dose Until 1 Month After the Toddler Dose in Cohort 1
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End point description:

Number of subjects With AEs from vaccination 4 to 1 month after vaccination 4 in Cohort 1. An AE was any untoward medical occurrence in a study subjects administered a product or medical device; the event need not necessarily have a causal relationship with the treatment or usage. The safety population included all subjects who received at least 1 dose of the investigational product.

End point type	Secondary
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End point timeframe:

From Vaccination 4 (toddler dose) to 1 month after vaccination 4 in Cohort 1

End point values	Cohort 1: Toddler Dose			
Subject group type	Subject analysis set			
Number of subjects analysed	90			
Units: Subjects	5			

Statistical analyses

No statistical analyses for this end point

Secondary: Serotype-specific IgG GMCs for Each of the Pneumococcal Serotypes in Cohort 1 at 12, 24, 36 and 48 Months After Last Vaccination in Cohort 1 (Infant Series)

End point title	Serotype-specific IgG GMCs for Each of the Pneumococcal Serotypes in Cohort 1 at 12, 24, 36 and 48 Months After Last Vaccination in Cohort 1 (Infant Series)
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End point description:

Serotype-specific IgG concentrations to the 13 pneumococcal serotypes (1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, and 23F) were determined in all subjects from the blood samples taken after last vaccination (Vac) in Cohort 1. GMC and corresponding 2-sided 95% CI were evaluated. GMs were calculated using all subjects with available data for the specified blood draw. Evaluable analysis set was analysed. Here, 'Number of Subjects Analysed' signifies subjects evaluable for this endpoint and 'Number Analysed (n)' signifies subjects evaluable at specific rows.

End point type	Secondary
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End point timeframe:

Cohort 1 (infant series): 12, 24, 36 and 48 Months (M) After Last Vaccination in Cohort 1

End point values	Cohort 1: Infant Series			
Subject group type	Subject analysis set			
Number of subjects analysed	75			
Units: Microgram/milliliter				
geometric mean (confidence interval 95%)				
Serotype 1:12M After Last Vac in Cohort 1(n=75)	1.35 (1.10 to 1.65)			
Serotype 1:24M After Last Vac in Cohort 1(n=70)	0.88 (0.75 to 1.03)			
Serotype 1: 36 M After Last Vac in Cohort 1 (n=67)	0.77 (0.67 to 0.90)			
Serotype 1: 48 M After Last Vac in Cohort 1 (n=65)	0.79 (0.69 to 0.91)			
Serotype 3: 12 M After Last Vac in Cohort 1 (n=75)	0.27 (0.24 to 0.31)			
Serotype 3: 24 M After Last Vac in Cohort 1 (n=70)	0.22 (0.17 to 0.28)			
Serotype 3: 36 M After Last Vac in Cohort 1 (n=67)	0.18 (0.14 to 0.21)			
Serotype 3: 48 M After Last Vac in Cohort 1 (n=65)	0.19 (0.13 to 0.26)			
Serotype 4: 12 M After Last Vac in Cohort 1 (n=75)	1.10 (0.90 to 1.35)			
Serotype 4: 24M After Last Vac in Cohort 1(n=70)	0.54 (0.41 to 0.71)			
Serotype 4:36 M After Last Vac in Cohort 1(n=67)	0.58 (0.45 to 0.75)			
Serotype 4:48 M After Last Vac in Cohort 1(n=65)	0.32 (0.23 to 0.44)			
Serotype 5: 12M After Last Vac in Cohort 1 (n=75)	1.56 (1.35 to 1.81)			
Serotype 5: 24M After Last Vac in Cohort 1 (n=70)	1.03 (0.91 to 1.17)			
Serotype 5: 36 M After Last Vac in Cohort 1 (n=67)	1.03 (0.91 to 1.17)			
Serotype 5: 48 M After Last Vac in Cohort 1 (n=65)	1.19 (1.05 to 1.34)			
Serotype 6A:12M After Last Vac in Cohort 1(n=75)	2.10 (1.71 to 2.59)			
Serotype 6A:24M After Last Vac in Cohort 1(n=70)	1.40 (1.12 to 1.74)			
Serotype 6A:36M After Last Vac in Cohort 1(n=67)	2.79 (2.04 to 3.80)			
Serotype 6A:48M After Last Vac in Cohort 1(n=65)	3.06 (2.30 to 4.06)			
Serotype 6B:12M After Last Vac in Cohort 1(n=75)	2.40 (1.94 to 2.95)			
Serotype 6B:24M After Last Vac in Cohort 1(n=70)	2.12 (1.69 to 2.66)			
Serotype 6B:36M After Last Vac in Cohort 1(n=67)	3.29 (2.57 to 4.21)			
Serotype 6B:48M After Last Vac in Cohort 1(n=65)	3.73 (2.95 to 4.71)			
Serotype 7F:12M After Last Vac in Cohort 1(n=75)	1.55 (1.31 to 1.82)			

Serotype 7F:24M After Last Vac in Cohort 1(n=70)	0.77 (0.67 to 0.88)			
Serotype 7F:36M After Last Vac in Cohort 1(n=67)	0.62 (0.56 to 0.70)			
Serotype 7F:48M After Last Vac in Cohort 1(n=65)	0.53 (0.41 to 0.68)			
Serotype 9V:12M After Last Vac in Cohort 1(n=75)	1.32 (1.11 to 1.57)			
Serotype 9V:24M After Last Vac in Cohort 1(n=70)	0.88 (0.74 to 1.04)			
Serotype 9V:36M After Last Vac in Cohort 1(n=67)	0.84 (0.72 to 0.99)			
Serotype 9V:48M After Last Vac in Cohort 1(n=65)	0.95 (0.78 to 1.16)			
Serotype 14:12M After Last Vac in Cohort 1(n=75)	2.77 (2.30 to 3.34)			
Serotype 14:24M After Last Vac in Cohort 1(n=70)	2.03 (1.52 to 2.70)			
Serotype 14:36M After Last Vac in Cohort 1(n=67)	2.49 (1.76 to 3.51)			
Serotype 14:48M After Last Vac in Cohort 1(n=64)	2.14 (1.34 to 3.42)			
Serotype18C:12M After Last Vac in Cohort 1(n=75)	1.24 (1.07 to 1.43)			
Serotype18C:24M After Last Vac in Cohort 1(n=70)	0.72 (0.58 to 0.89)			
Serotype18C:36M After Last Vac in Cohort 1(n=67)	0.67 (0.54 to 0.81)			
Serotype18C:48M After Last Vac in Cohort 1(n=65)	0.60 (0.47 to 0.78)			
Serotype19A:12M After Last Vac in Cohort 1(n=75)	2.92 (2.29 to 3.74)			
Serotype19A:24M After Last Vac in Cohort 1(n=70)	3.52 (2.68 to 4.63)			
Serotype19A:36M After Last Vac in Cohort 1(n=67)	6.39 (4.79 to 8.51)			
Serotype19A:48M After Last Vac in Cohort 1(n=65)	7.53 (6.14 to 9.22)			
Serotype19F:12M After Last Vac in Cohort 1(n=75)	2.88 (2.32 to 3.57)			
Serotype19F:24M After Last Vac in Cohort1(n=70)	2.73 (2.01 to 3.72)			
Serotype19F:36M After Last Vac in Cohort 1(n=67)	4.06 (2.92 to 5.66)			
Serotype19F:48M After Last Vac in Cohort1(n=65)	3.51 (2.56 to 4.80)			
Serotype23F:12M After Last Vac in Cohort1(n=75)	2.14 (1.76 to 2.59)			
Serotype23F:24M After Last Vac in Cohort1(n=70)	1.72 (1.44 to 2.04)			
Serotype23F:36M After Last Vac in Cohort1(n=67)	1.92 (1.58 to 2.34)			
Serotype23F:48M After Last Vac in Cohort1(n=65)	2.15 (1.75 to 2.63)			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Subjects With NDCMCs From 1 Month After Vaccination 3 to Vaccination 4 in Cohort 1

End point title	Number of Subjects With NDCMCs From 1 Month After Vaccination 3 to Vaccination 4 in Cohort 1
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End point description:

Number of subjects with NDCMCs from 1 month after vaccination 3 to vaccination 4 in Cohort 1. An NDCMC was defined as a disease or medical condition that was not identified prior to study start and was expected to be persistent or otherwise long-lasting in its effects. The safety population included all subjects who received at least 1 dose of the investigational product.

End point type	Secondary
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End point timeframe:

From 1 month after Vaccination 3 to Vaccination 4

End point values	Cohort 1: Infant Series			
Subject group type	Subject analysis set			
Number of subjects analysed	125			
Units: Subjects	0			

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Cohort 1 AEs: From signing of ICD to 1 month(M) after Vaccination 3 & from Vaccination 4 to 1 M after Vaccination 4. Cohorts 2,3,4 AEs: From signing of ICD to 1 M after last vaccination. Cohort 1,2,3,4 SAEs: From signing of ICD to 6 M after last vaccination.

Adverse event reporting additional description:

Same event may appear as both an AE and SAE but what is presented are distinct events. An event may be categorized as serious in one subject and as non-serious in another, or one subject may have experienced both a serious and non-serious event during study. Safety population: subjects who received at least 1 dose of investigational product.

Assessment type	Non-systematic
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Dictionary used

Dictionary name	MedDRA
Dictionary version	27.0

Reporting groups

Reporting group title	Cohort 1: 13vPnC
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Reporting group description:

Subjects vaccinated with 4 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): 42 to 56 days of age; Vaccination 2 (Visit 2): 42 to 70 days after Visit 1; Vaccination 3: 42 to 70 days after Visit 2; Vaccination 4: 365 to 455 days of age.

Reporting group title	Cohort 2: 13vPnC
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Reporting group description:

Subjects vaccinated with 3 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2 (Visit 2): at least 28 days after Visit 1; Vaccination 3: 365 days to <450 days of age and at least 56 days after Visit 2.

Reporting group title	Cohort 2: Hib Vaccine
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Reporting group description:

Subjects vaccinated with 2 doses of Hib Vaccine (single intramuscular injection): Vaccination 1 (Visit 1): 7 to <12 months of age; Vaccination 2: at least 28 days after Visit 1.

Reporting group title	Cohort 4: Hib Vaccine
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Reporting group description:

Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: ≥ 2 to <6 years of age.

Reporting group title	Cohort 3: Hib Vaccine
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Reporting group description:

Subjects vaccinated with 1 dose of Hib vaccine (single intramuscular injection): Vaccination 1: ≥ 1 to <2 years of age.

Reporting group title	Cohort 4: 13vPnC
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Reporting group description:

Subjects vaccinated with 1 dose of 13vPnC (single intramuscular injection): Vaccination 1: ≥ 2 to <6 years of age.

Reporting group title	Cohort 3: 13vPnC
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Reporting group description:

Subjects vaccinated with 2 doses of 13vPnC (single intramuscular injection): Vaccination 1 (Visit 1): ≥ 1 to <2 years of age; Vaccination 2: at least 56 days after Visit 1.

Serious adverse events	Cohort 1: 13vPnC	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine
Total subjects affected by serious adverse events			
subjects affected / exposed	9 / 125 (7.20%)	5 / 236 (2.12%)	1 / 117 (0.85%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events	0	0	0
Nervous system disorders			
Febrile convulsion			
subjects affected / exposed	0 / 125 (0.00%)	0 / 236 (0.00%)	0 / 117 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Toxic encephalopathy			
subjects affected / exposed	0 / 125 (0.00%)	0 / 236 (0.00%)	0 / 117 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Blood and lymphatic system disorders			
Lymphadenitis			
subjects affected / exposed	0 / 125 (0.00%)	0 / 236 (0.00%)	0 / 117 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
General disorders and administration site conditions			
Pyrexia			
subjects affected / exposed	0 / 125 (0.00%)	3 / 236 (1.27%)	0 / 117 (0.00%)
occurrences causally related to treatment / all	0 / 0	3 / 3	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory, thoracic and mediastinal disorders			
Asthma			
subjects affected / exposed	1 / 125 (0.80%)	0 / 236 (0.00%)	0 / 117 (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
Sleep apnoea syndrome			
subjects affected / exposed	0 / 125 (0.00%)	0 / 236 (0.00%)	0 / 117 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			

Lower respiratory tract infection bacterial			
subjects affected / exposed	1 / 125 (0.80%)	0 / 236 (0.00%)	0 / 117 (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 / 125 (0.00%)	0 / 236 (0.00%)	0 / 117 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pneumonia			
subjects affected / exposed	7 / 125 (5.60%)	1 / 236 (0.42%)	0 / 117 (0.00%)
occurrences causally related to treatment / all	0 / 7	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Upper respiratory tract infection			
subjects affected / exposed	0 / 125 (0.00%)	1 / 236 (0.42%)	1 / 117 (0.85%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Serious adverse events	Cohort 4: Hib Vaccine	Cohort 3: Hib Vaccine	Cohort 4: 13vPnC
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 68 (1.47%)	0 / 83 (0.00%)	2 / 138 (1.45%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events	0	0	0
Nervous system disorders			
Febrile convulsion			
subjects affected / exposed	0 / 68 (0.00%)	0 / 83 (0.00%)	0 / 138 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Toxic encephalopathy			
subjects affected / exposed	0 / 68 (0.00%)	0 / 83 (0.00%)	0 / 138 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Blood and lymphatic system disorders			
Lymphadenitis			

subjects affected / exposed	1 / 68 (1.47%)	0 / 83 (0.00%)	0 / 138 (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
General disorders and administration site conditions			
Pyrexia			
subjects affected / exposed	0 / 68 (0.00%)	0 / 83 (0.00%)	0 / 138 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory, thoracic and mediastinal disorders			
Asthma			
subjects affected / exposed	0 / 68 (0.00%)	0 / 83 (0.00%)	0 / 138 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Sleep apnoea syndrome			
subjects affected / exposed	0 / 68 (0.00%)	0 / 83 (0.00%)	1 / 138 (0.72%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Lower respiratory tract infection bacterial			
subjects affected / exposed	0 / 68 (0.00%)	0 / 83 (0.00%)	0 / 138 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Otitis media			
subjects affected / exposed	0 / 68 (0.00%)	0 / 83 (0.00%)	1 / 138 (0.72%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pneumonia			
subjects affected / exposed	1 / 68 (1.47%)	0 / 83 (0.00%)	1 / 138 (0.72%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Upper respiratory tract infection			

subjects affected / exposed	0 / 68 (0.00%)	0 / 83 (0.00%)	0 / 138 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Serious adverse events	Cohort 3: 13vPnC		
Total subjects affected by serious adverse events			
subjects affected / exposed	2 / 165 (1.21%)		
number of deaths (all causes)	0		
number of deaths resulting from adverse events	0		
Nervous system disorders			
Febrile convulsion			
subjects affected / exposed	1 / 165 (0.61%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Toxic encephalopathy			
subjects affected / exposed	1 / 165 (0.61%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Blood and lymphatic system disorders			
Lymphadenitis			
subjects affected / exposed	0 / 165 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
General disorders and administration site conditions			
Pyrexia			
subjects affected / exposed	0 / 165 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Respiratory, thoracic and mediastinal disorders			
Asthma			
subjects affected / exposed	0 / 165 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Sleep apnoea syndrome			

subjects affected / exposed	0 / 165 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Infections and infestations			
Lower respiratory tract infection bacterial			
subjects affected / exposed	0 / 165 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Otitis media			
subjects affected / exposed	0 / 165 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Pneumonia			
subjects affected / exposed	1 / 165 (0.61%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Upper respiratory tract infection			
subjects affected / exposed	0 / 165 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		

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

Non-serious adverse events	Cohort 1: 13vPnC	Cohort 2: 13vPnC	Cohort 2: Hib Vaccine
Total subjects affected by non-serious adverse events			
subjects affected / exposed	0 / 125 (0.00%)	177 / 236 (75.00%)	74 / 117 (63.25%)
General disorders and administration site conditions			
Fatigue (FATIGUE)			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 125 (0.00%)	0 / 236 (0.00%)	0 / 117 (0.00%)
occurrences (all)	0	0	0
Pyrexia (FEVER)			
alternative assessment type: Systematic			

subjects affected / exposed	0 / 125 (0.00%)	121 / 236 (51.27%)	37 / 117 (31.62%)
occurrences (all)	0	146	40
Tenderness (TENDERNESS)			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 125 (0.00%)	18 / 236 (7.63%)	2 / 117 (1.71%)
occurrences (all)	0	20	2
Pyrexia			
subjects affected / exposed	0 / 125 (0.00%)	31 / 236 (13.14%)	13 / 117 (11.11%)
occurrences (all)	0	31	13
Swelling (SWELLING)			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 125 (0.00%)	38 / 236 (16.10%)	5 / 117 (4.27%)
occurrences (all)	0	42	5
Respiratory, thoracic and mediastinal disorders			
Rhinorrhoea			
subjects affected / exposed	0 / 125 (0.00%)	22 / 236 (9.32%)	9 / 117 (7.69%)
occurrences (all)	0	25	9
Cough			
subjects affected / exposed	0 / 125 (0.00%)	22 / 236 (9.32%)	6 / 117 (5.13%)
occurrences (all)	0	22	6
Skin and subcutaneous tissue disorders			
Erythema (REDNESS)			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 125 (0.00%)	68 / 236 (28.81%)	27 / 117 (23.08%)
occurrences (all)	0	79	32
Metabolism and nutrition disorders			
Decreased appetite (DECREASED APPETITE)			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 125 (0.00%)	0 / 236 (0.00%)	0 / 117 (0.00%)
occurrences (all)	0	0	0

Non-serious adverse events	Cohort 4: Hib Vaccine	Cohort 3: Hib Vaccine	Cohort 4: 13vPnC
Total subjects affected by non-serious adverse events			
subjects affected / exposed	28 / 68 (41.18%)	25 / 83 (30.12%)	58 / 138 (42.03%)
General disorders and administration site conditions			

Fatigue (FATIGUE) alternative assessment type: Systematic subjects affected / exposed occurrences (all)	6 / 68 (8.82%) 6	0 / 83 (0.00%) 0	7 / 138 (5.07%) 7
Pyrexia (FEVER) alternative assessment type: Systematic subjects affected / exposed occurrences (all)	16 / 68 (23.53%) 16	16 / 83 (19.28%) 16	20 / 138 (14.49%) 20
Tenderness (TENDERNESS) alternative assessment type: Systematic subjects affected / exposed occurrences (all)	15 / 68 (22.06%) 15	3 / 83 (3.61%) 3	26 / 138 (18.84%) 26
Pyrexia subjects affected / exposed occurrences (all)	0 / 68 (0.00%) 0	0 / 83 (0.00%) 0	0 / 138 (0.00%) 0
Swelling (SWELLING) alternative assessment type: Systematic subjects affected / exposed occurrences (all)	16 / 68 (23.53%) 16	3 / 83 (3.61%) 3	27 / 138 (19.57%) 27
Respiratory, thoracic and mediastinal disorders Rhinorrhoea subjects affected / exposed occurrences (all)	0 / 68 (0.00%) 0	0 / 83 (0.00%) 0	0 / 138 (0.00%) 0
Cough subjects affected / exposed occurrences (all)	0 / 68 (0.00%) 0	0 / 83 (0.00%) 0	0 / 138 (0.00%) 0
Skin and subcutaneous tissue disorders Erythema (REDNESS) alternative assessment type: Systematic subjects affected / exposed occurrences (all)	15 / 68 (22.06%) 15	10 / 83 (12.05%) 10	36 / 138 (26.09%) 36
Metabolism and nutrition disorders Decreased appetite (DECREASED APPETITE) alternative assessment type: Systematic			

subjects affected / exposed	0 / 68 (0.00%)	3 / 83 (3.61%)	0 / 138 (0.00%)
occurrences (all)	0	3	0

Non-serious adverse events	Cohort 3: 13vPnC		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	88 / 165 (53.33%)		
General disorders and administration site conditions			
Fatigue (FATIGUE)			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 165 (0.00%)		
occurrences (all)	0		
Pyrexia (FEVER)			
alternative assessment type: Systematic			
subjects affected / exposed	55 / 165 (33.33%)		
occurrences (all)	63		
Tenderness (TENDERNESS)			
alternative assessment type: Systematic			
subjects affected / exposed	18 / 165 (10.91%)		
occurrences (all)	21		
Pyrexia			
subjects affected / exposed	0 / 165 (0.00%)		
occurrences (all)	0		
Swelling (SWELLING)			
alternative assessment type: Systematic			
subjects affected / exposed	21 / 165 (12.73%)		
occurrences (all)	23		
Respiratory, thoracic and mediastinal disorders			
Rhinorrhoea			
subjects affected / exposed	0 / 165 (0.00%)		
occurrences (all)	0		
Cough			
subjects affected / exposed	0 / 165 (0.00%)		
occurrences (all)	0		
Skin and subcutaneous tissue disorders			

Erythema (REDNESS) alternative assessment type: Systematic subjects affected / exposed occurrences (all)	42 / 165 (25.45%) 46		
Metabolism and nutrition disorders Decreased appetite (DECREASED APPETITE) alternative assessment type: Systematic subjects affected / exposed occurrences (all)	13 / 165 (7.88%) 13		

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
07 February 2019	Protocol amendment 2: Updated Protocol Summary, Section 1.2,Section 3.4, Section 7.5.1, Section 7.5.2, Section 9.4: Added the enrollment of additional 280 subjects from country CDCs. To provide additional data in the event that only subjects recruited at municipal and county level CDCs should be included in vaccine clinical studies.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported