



Clinical trial results:

A phase III open study to assess the safety, reactogenicity and immunogenicity following booster administration of GlaxoSmithKline (GSK) Biologicals' 10-valent pneumococcal conjugate vaccine, co-administered with a booster dose of DTPa-IPV/Hib (Infanrix-IPV/Hib) vaccine in preterm born children at 16-18 months of age following primary immunisation in study 10PN-PD-DIT-015 (107737).

Summary

EudraCT number	2007-000596-42
Trial protocol	GR ES
Global end of trial date	30 March 2009

Results information

Result version number	v2 (current)
This version publication date	19 April 2023
First version publication date	14 June 2015
Version creation reason	<ul style="list-style-type: none">• Correction of full data set Correction of full data set and alignment between registries.

Trial information

Trial identification

Sponsor protocol code	109621
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Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT00609492
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	GlaxoSmithKline Biologicals
Sponsor organisation address	Rue de l'Institut 89, Rixensart, Belgium, B-1330
Public contact	Clinical Trials Call Center, GlaxoSmithKline Biologicals, 044 2089904466, GSKClinicalSupportHD@gsk.com
Scientific contact	Clinical Trials Call Center, GlaxoSmithKline Biologicals, 044 2089904466, GSKClinicalSupportHD@gsk.com

Notes:

Paediatric regulatory details

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

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	28 April 2009
Is this the analysis of the primary completion data?	No
Global end of trial reached?	Yes
Global end of trial date	30 March 2009
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To evaluate the safety and reactogenicity of a booster dose of GSK Biologicals' 10-valent pneumococcal conjugate vaccine co-administered with a booster dose of DTPa-IPV/Hib vaccine in preterm born children at 16-18 months of age.

Protection of trial subjects:

In the purely scientific application of medical research carried out on a human being, it was the duty of the physician to remain the protector of the life and health of that person on whom biomedical research is being carried out.

All subjects were supervised closely for at least 30 minutes following vaccination with appropriate medical treatment readily available. Vaccines were administered by qualified and trained personnel. Vaccines were administered only to eligible subjects that had no contraindications to any components of the vaccines. Subjects were followed-up from the time the subject consents to participate in the study until she/he is discharged.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	03 January 2008
Long term follow-up planned	Yes
Long term follow-up rationale	Safety
Long term follow-up duration	6 Months
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Spain: 167
Country: Number of subjects enrolled	Greece: 78
Worldwide total number of subjects	245
EEA total number of subjects	245

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37	0

wk	
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	245
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

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

Period 1

Period 1 title	Active Phase (overall period)
Is this the baseline period?	Yes
Allocation method	Non-randomised - controlled
Blinding used	Not blinded

Arms

Are arms mutually exclusive?	Yes
Arm title	Preterm I Group

Arm description:

Children born after a gestation period of 27-30 weeks (189-216 days) who were previously primed with three doses of 10Pn-PD-DiT (Synflorix) co-administered with DTPa-HBV-IPV/Hib (Infanrix hexa) in the primary vaccination study 10PN-PD-DIT-015.

Arm type	Experimental
Investigational medicinal product name	10-valent streptococcus pneumoniae conjugate vaccine
Investigational medicinal product code	
Other name	10Pn-PD-DiT vaccine, Synflorix
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Single booster dose, administered intramuscularly in the right thigh or right deltoid, at 16-18 months of age, following the primary vaccination administered in the study 10PN-PD-DIT-015(107737).

Investigational medicinal product name	Infanrix IPV/Hib
Investigational medicinal product code	
Other name	DTPa -IPV/Hib
Pharmaceutical forms	Powder and solvent for suspension for injection in pre-filled syringe
Routes of administration	Intramuscular use

Dosage and administration details:

Single dose, administered intramuscularly in the left thigh or left deltoid.

Arm title	Preterm II Group
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Arm description:

Children born after a gestation period of 31-36 weeks (217-258 days) who were previously primed with three doses of Synflorix co-administered with DTPa-HBV-IPV/Hib (Infanrix hexa) in the primary vaccination study 10PN-PD-DIT-015.

Arm type	Experimental
Investigational medicinal product name	10-valent streptococcus pneumoniae conjugate vaccine
Investigational medicinal product code	
Other name	10Pn-PD-DiT vaccine
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Single booster dose, administered intramuscularly in the right thigh or right deltoid, at 16-18 months of age, following the primary vaccination administered in the study 10PN-PD-DIT-015(107737).

Investigational medicinal product name	Infanrix IPV/Hib
Investigational medicinal product code	
Other name	DTPa -IPV/Hib
Pharmaceutical forms	Powder and solvent for suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Single dose, administered intramuscularly in the left thigh or left deltoid.

Arm title	Full term Group
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Arm description:

Children born after a gestation period of more than 36 weeks (more than 258 days) who were previously primed with three doses of Synflorix co-administered with DTPa-HBV-IPV/Hib (Infanrix hexa) in the primary vaccination study 10PN-PD-DIT-015.

Arm type	Experimental
Investigational medicinal product name	10-valent streptococcus pneumoniae conjugate vaccine
Investigational medicinal product code	
Other name	10Pn-PD-DiT vaccine
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Single booster dose, administered intramuscularly in the right thigh or right deltoid, at 16-18 months of age, following the primary vaccination administered in the study 10PN-PD-DIT-015(107737).

Investigational medicinal product name	Infanrix IPV/Hib
Investigational medicinal product code	
Other name	DTPa -IPV/Hib
Pharmaceutical forms	Powder and solvent for suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

Single dose, administered intramuscularly in the left thigh or left deltoid.

Number of subjects in period 1	Preterm I Group	Preterm II Group	Full term Group
Started	44	72	129
Completed	43	69	122
Not completed	1	3	7
Consent withdrawn by subject	-	2	3
Lost to follow-up	1	1	4

Baseline characteristics

Reporting groups

Reporting group title	Preterm I Group
Reporting group description: Children born after a gestation period of 27-30 weeks (189-216 days) who were previously primed with three doses of 10Pn-PD-DiT (Synflorix) co-administered with DTPa-HBV-IPV/Hib (Infanrix hexa) in the primary vaccination study 10PN-PD-DIT-015.	
Reporting group title	Preterm II Group
Reporting group description: Children born after a gestation period of 31-36 weeks (217-258 days) who were previously primed with three doses of Synflorix co-administered with DTPa-HBV-IPV/Hib (Infanrix hexa) in the primary vaccination study 10PN-PD-DIT-015.	
Reporting group title	Full term Group
Reporting group description: Children born after a gestation period of more than 36 weeks (more than 258 days) who were previously primed with three doses of Synflorix co-administered with DTPa-HBV-IPV/Hib (Infanrix hexa) in the primary vaccination study 10PN-PD-DIT-015.	

Reporting group values	Preterm I Group	Preterm II Group	Full term Group
Number of subjects	44	72	129
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)	44	72	129
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 Units: months			
arithmetic mean	16.8	17.2	16.6
standard deviation	± 0.63	± 0.68	± 0.73
Gender categorical Units: Subjects			
Female	16	29	50
Male	28	43	79

Reporting group values	Total		
Number of subjects	245		
Age categorical Units: Subjects			
In utero	0		
Preterm newborn infants (gestational age < 37 wks)	0		
Newborns (0-27 days)	0		

Infants and toddlers (28 days-23 months)	245		
Children (2-11 years)	0		
Adolescents (12-17 years)	0		
Adults (18-64 years)	0		
From 65-84 years	0		
85 years and over	0		
Age continuous Units: months arithmetic mean standard deviation	-		
Gender categorical Units: Subjects			
Female	95		
Male	150		

End points

End points reporting groups

Reporting group title	Preterm I Group
Reporting group description: Children born after a gestation period of 27-30 weeks (189-216 days) who were previously primed with three doses of 10Pn-PD-DiT (Synflorix) co-administered with DTPa-HBV-IPV/Hib (Infanrix hexa) in the primary vaccination study 10PN-PD-DIT-015.	
Reporting group title	Preterm II Group
Reporting group description: Children born after a gestation period of 31-36 weeks (217-258 days) who were previously primed with three doses of Synflorix co-administered with DTPa-HBV-IPV/Hib (Infanrix hexa) in the primary vaccination study 10PN-PD-DIT-015.	
Reporting group title	Full term Group
Reporting group description: Children born after a gestation period of more than 36 weeks (more than 258 days) who were previously primed with three doses of Synflorix co-administered with DTPa-HBV-IPV/Hib (Infanrix hexa) in the primary vaccination study 10PN-PD-DIT-015.	
Subject analysis set title	Preterm Group
Subject analysis set type	Sub-group analysis
Subject analysis set description: Pooled group with subjects of the Preterm I Group and the Preterm II Group.	

Primary: Number of subjects reporting fever with rectal temperature above (>) 39.0 degrees Celsius (°C)

End point title	Number of subjects reporting fever with rectal temperature above (>) 39.0 degrees Celsius (°C) ^{[1][2]}
End point description: Fever was measured as rectal temperature. Assessment of occurrences of fever > 39.0 °C was performed within 4-days (Days 0-3) after booster vaccination of Synflorix and Infanrix-IPV/Hib vaccine.	
End point type	Primary
End point timeframe: Within 4-days (Days 0-3) after booster vaccination	

Notes:

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

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

[2] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.

Justification: This endpoint is only reporting values for the Full term Group and the Preterm Group.

End point values	Full term Group	Preterm Group		
Subject group type	Reporting group	Subject analysis set		
Number of subjects analysed	122	112		
Units: Subjects				
Fever>39°C	6	8		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any and Grade 3 solicited local symptoms

End point title	Number of subjects with any and Grade 3 solicited local symptoms ^[3]
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End point description:

Solicited local symptoms assessed include pain, redness and swelling. Grade 3 pain was defined as crying when limb was moved/spontaneously painful. Grade 3 swelling/redness was defined as swelling/redness larger than (>) 30 millimeters (mm). "Any" is defined as incidence of the specified symptom regardless of intensity.

End point type	Secondary
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End point timeframe:

Within 4-days (Days 0-3) after booster vaccination

Notes:

[3] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: This endpoint is only reporting values for the Full term Group and the Preterm Group.

End point values	Full term Group	Preterm Group		
Subject group type	Reporting group	Subject analysis set		
Number of subjects analysed	122	112		
Units: Subjects				
Any Pain	67	47		
Grade 3 Pain	4	5		
Any Redness	65	35		
Grade 3 Redness	19	3		
Any Swelling	55	27		
Grade 3 Swelling	14	1		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any and Grade 3 solicited general symptoms

End point title	Number of subjects with any and Grade 3 solicited general symptoms ^[4]
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End point description:

Solicited general symptoms assessed include drowsiness, fever (defined as rectal temperature $\geq 38.0^{\circ}\text{C}$), irritability, and loss of appetite. Grade 3 drowsiness = drowsiness which prevented normal everyday activities. Grade 3 fever = fever above (>) 40.0°C . Grade 3 irritability = crying that could not be comforted/preventing normal activity. Grade 3 loss of appetite = the subject not eating at all. "Any" is defined as incidence of the specified symptom regardless of intensity or relationship to study vaccination.

End point type	Secondary
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End point timeframe:

Within 4-days (Days 0-3) after booster vaccination

Notes:

[4] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: This endpoint is only reporting values for the Full term Group and the Preterm Group.

End point values	Full term Group	Preterm Group		
Subject group type	Reporting group	Subject analysis set		
Number of subjects analysed	122	112		
Units: Subjects				
Any Drowsiness	33	21		
Grade 3 Drowsiness	1	1		
Any Fever	39	34		
Grade 3 Fever	1	0		
Any Irritability	49	36		
Grade 3 Irritability	2	2		
Any Loss of appetite	35	26		
Grade 3 Loss of appetite	1	0		

Statistical analyses

No statistical analyses for this end point

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

End point title	Number of subjects with unsolicited adverse events (AEs) ^[5]
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End point description:

An AE is any untoward medical occurrence in a clinical investigation subject, temporally associated with the use of a medicinal product, whether or not considered related to the medicinal product. "Any" is defined as incidence of an unsolicited AE regardless of intensity or relationship to study vaccination.

End point type	Secondary
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End point timeframe:

Within 31-days (Days 0-30) after booster vaccination

Notes:

[5] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.

Justification: This endpoint is only reporting values for the Full term Group and the Preterm Group.

End point values	Full term Group	Preterm Group		
Subject group type	Reporting group	Subject analysis set		
Number of subjects analysed	129	116		
Units: Subjects				
Any AE(s)	24	17		

Statistical analyses

No statistical analyses for this end point

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

End point title	Number of subjects with serious adverse events (SAEs) ^[6]
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End point description:

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

End point type	Secondary
End point timeframe:	
Throughout the active phase of the study (Month 0 to Month 1)	
Notes:	
[6] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.	
Justification: This endpoint is only reporting values for the Full term Group and the Preterm Group.	

End point values	Full term Group	Preterm Group		
Subject group type	Reporting group	Subject analysis set		
Number of subjects analysed	129	116		
Units: Subjects				
Any SAE(s)	0	0		

Statistical analyses

No statistical analyses for this end point

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

End point title	Number of subjects with serious adverse events (SAEs) ^[7]
End point description:	
Serious adverse events (SAEs) assessed include medical occurrences that result in death, are life threatening, require hospitalization or prolongation of hospitalization or result in disability/incapacity.	
End point type	Secondary
End point timeframe:	
Throughout the entire study period starting from Month 0 up to the end of the extended safety follow-up (Month 6)	
Notes:	
[7] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.	
Justification: This endpoint is only reporting values for the Full term Group and the Preterm Group.	

End point values	Full term Group	Preterm Group		
Subject group type	Reporting group	Subject analysis set		
Number of subjects analysed	129	116		
Units: Subjects				
Any SAE(s)	1	3		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F antibody concentrations above or equal to (\geq) 0.20 microgram per millilitre ($\mu\text{g/mL}$)

End point title	Number of subjects with anti-pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F antibody concentrations above or equal to (\geq) 0.20 microgram per millilitre ($\mu\text{g/mL}$)
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End point description:

A seroprotected subject was defined as a subject who had anti-pneumococcal serotypes antibody concentrations greater than or equal to (\geq) the threshold value of 0.20 micrograms per milliliter ($\mu\text{g/mL}$). The anti-pneumococcal serotypes assessed were 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F.

End point type

Secondary

End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of Synflorix vaccine co-administered with the booster dose of Infanrix-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	43	69	125	
Units: Subjects				
Anti-1, Pre-booster [N=43;66;121]	16	28	53	
Anti-1, Post-booster [N=43;66;119]	43	66	118	
Anti-4, Pre-booster [N=43;69;123]	23	40	82	
Anti-4, Post-booster [N=43;66;119]	43	66	119	
Anti-5, Pre-booster [N=43;68;124]	27	43	105	
Anti-5, Post-booster [N=43;66;119]	43	66	119	
Anti-6B, Pre-booster [N=43;67;124]	28	41	99	
Anti-6B, Post-booster [N=42;66;119]	42	65	119	
Anti-7F, Pre-booster [N=43;65;123]	34	56	115	
Anti-7F, Post-booster [N=43;66;118]	43	66	118	
Anti-9V, Pre-booster [N=43;69;123]	39	59	115	
Anti-9V, Post-booster [N=43;66;119]	43	66	119	
Anti-14, Pre-booster [N=43;68;124]	41	55	105	
Anti-14, P-booster [N=43;66;119]	43	66	119	
Anti-18C, Pre-booster [N=43;68;125]	36	60	106	
Anti-18C, Post-booster [N=43;66;119]	43	66	118	
Anti-19F, Pre-booster [N=43;68;125]	38	66	120	
Anti-19F, Post-booster [N=43;66;119]	43	66	119	
Anti-23F, Pre-booster [N=43;69;123]	30	45	99	
Anti-23F, Post-booster [N=42;66;119]	41	66	118	

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F antibody concentrations**End point title**

Anti-pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F antibody concentrations

End point description:

Seropositivity status, defined as anti-pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F antibody concentrations ≥ 0.05 microgram per millilitre ($\mu\text{g/mL}$). Antibody concentrations were measured by 22F enzyme-linked immunosorbent assay (ELISA), presented as geometric mean concentrations (GMCs).

End point type

Secondary

End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of Synflorix vaccine co-administered with the booster dose of Infanrix-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	43	69	125	
Units: µg/mL				
geometric mean (confidence interval 95%)				
Anti-1, Pre-booster [N=43;66;121]	0.15 (0.11 to 0.2)	0.14 (0.11 to 0.18)	0.17 (0.15 to 0.21)	
Anti-1, Post-booster [N=43;66;119]	1.57 (1.2 to 2.05)	1.74 (1.41 to 2.15)	1.98 (1.66 to 2.37)	
Anti-4, Pre-booster [N=43;69;123]	0.25 (0.18 to 0.35)	0.24 (0.2 to 0.3)	0.3 (0.25 to 0.35)	
Anti-4, Post-booster [N=43;66;119]	2.98 (2.31 to 3.85)	3.67 (3.07 to 4.39)	4.23 (3.67 to 4.88)	
Anti-5, Pre-booster [N=43;68;124]	0.24 (0.18 to 0.33)	0.27 (0.21 to 0.34)	0.4 (0.34 to 0.48)	
Anti-5, Post-booster [N=43;66;119]	1.84 (1.43 to 2.38)	2.38 (1.93 to 2.94)	2.58 (2.2 to 3.02)	
Anti-6B, Pre-booster [N=43;67;124]	0.28 (0.21 to 0.38)	0.3 (0.23 to 0.37)	0.37 (0.31 to 0.45)	
Anti-6B, Post-booster [N=42;66;119]	2.44 (1.87 to 3.17)	2.46 (1.97 to 3.06)	2.67 (2.27 to 3.13)	
Anti-7F, Pre-booster [N=43;65;123]	0.42 (0.31 to 0.56)	0.46 (0.37 to 0.58)	0.66 (0.57 to 0.77)	
Anti-7F, Post-booster [N=43;66;118]	3.11 (2.48 to 3.9)	4.16 (3.52 to 4.9)	3.93 (3.45 to 4.47)	
Anti-9V, Pre-booster [N=43;69;123]	0.51 (0.39 to 0.67)	0.42 (0.35 to 0.52)	0.59 (0.51 to 0.69)	
Anti-9V, Post-booster [N=43;66;119]	2.87 (2.23 to 3.7)	3.47 (2.86 to 4.2)	4.17 (3.6 to 4.83)	
Anti-14, Pre-booster [N=43;68;124]	0.78 (0.54 to 1.11)	0.48 (0.37 to 0.61)	0.68 (0.55 to 0.84)	
Anti-14, P-booster [N=43;66;119]	4.88 (3.42 to 6.98)	5.14 (4.22 to 6.25)	5.98 (5.1 to 7.02)	
Anti-18C, Pre-booster [N=43;68;125]	0.58 (0.42 to 0.8)	0.56 (0.45 to 0.7)	0.6 (0.49 to 0.73)	
Anti-18C, Post-booster [N=43;66;119]	9.51 (7.36 to 12.29)	13.2 (10.97 to 15.89)	12.38 (10.21 to 15)	
Anti-19F, Pre-booster [N=43;68;125]	0.86 (0.58 to 1.3)	1.07 (0.78 to 1.46)	1.27 (1.02 to 1.59)	
Anti-19F, Post-booster [N=43;66;119]	6.83 (5.24 to 8.89)	9.78 (8.19 to 11.68)	9.72 (8.38 to 11.29)	
Anti-23F, Pre-booster [N=43;69;123]	0.27 (0.2 to 0.36)	0.3 (0.24 to 0.38)	0.42 (0.35 to 0.51)	
Anti-23F, Post-booster [N=42;66;119]	2.7 (1.91 to 3.81)	3.45 (2.93 to 4.06)	3.3 (2.74 to 3.99)	

Statistical analyses

No statistical analyses for this end point

Secondary: Antibody concentrations against pneumococcal cross-reactive serotypes 6A and 19A

End point title	Antibody concentrations against pneumococcal cross-reactive serotypes 6A and 19A
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End point description:

Seropositivity status, defined as anti-pneumococcal cross-reactive serotypes 6A and 19A antibody concentrations ≥ 0.05 microgram per millilitre ($\mu\text{g/mL}$).

End point type	Secondary
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End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of Synflorix vaccine co-administered with the booster dose of Infanrix-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	43	67	122	
Units: $\mu\text{g/mL}$				
geometric mean (confidence interval 95%)				
Anti-6A, Pre-booster [N=42;67;122]	0.12 (0.08 to 0.17)	0.12 (0.09 to 0.16)	0.14 (0.12 to 0.18)	
Anti-6A, Post-booster [N=42;66;118]	0.7 (0.47 to 1.05)	0.77 (0.55 to 1.07)	0.79 (0.61 to 1.02)	
Anti-19A, Pre-booster [N=43;67;121]	0.14 (0.08 to 0.24)	0.15 (0.1 to 0.22)	0.16 (0.12 to 0.22)	
Anti-19A, Post-booster [N=42;66;118]	0.65 (0.4 to 1.04)	0.93 (0.64 to 1.37)	1.1 (0.82 to 1.47)	

Statistical analyses

No statistical analyses for this end point

Secondary: Antibody concentrations to protein D (Anti-PD)

End point title	Antibody concentrations to protein D (Anti-PD)
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End point description:

Seropositivity status, defined as anti-PD antibody concentrations ≥ 100 ELISA units per millilitre (EL.U/mL). Antibody concentrations were measured by 22F enzyme-linked immunosorbent assay (ELISA), presented as geometric mean concentrations (GMCs).

End point type	Secondary
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End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	43	67	123	
Units: EL.U/mL				
geometric mean (confidence interval 95%)				
Anti-PD Pre-booster [N=42;67;123]	478.3 (361.4 to 633.1)	340 (258.1 to 447.9)	383.7 (317.6 to 463.5)	
Anti-PD Post-booster [N=43;66;118]	1892.9 (1415.1 to 2532.2)	1576.5 (1232.7 to 2016.1)	1533.6 (1278.2 to 1840.1)	

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-diphtheria (Anti-DT) and anti-tetanus toxoids (Anti-TT) antibody concentrations

End point title	Anti-diphtheria (Anti-DT) and anti-tetanus toxoids (Anti-TT) antibody concentrations
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End point description:

Seroprotection status, defined as anti-diphtheria toxoid or anti-tetanus toxoid antibody concentrations ≥ 0.1 IU/mL. Antibody concentrations were measured by 22F enzyme-linked immunosorbent assay (ELISA), presented as geometric mean concentrations (GMCs).

End point type	Secondary
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End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	23	34	60	
Units: IU/mL				
geometric mean (confidence interval 95%)				
Anti-DT Pre-booster [N=23;31;59]	0.381 (0.21 to 0.689)	0.674 (0.38 to 1.196)	0.481 (0.324 to 0.716)	
Anti-DT Post-booster [N=21;34;60]	6.252 (4.572 to 8.551)	9.982 (7.392 to 13.478)	6.73 (5.254 to 8.62)	
Anti-TT Pre-booster [N=23;32;59]	0.821 (0.591 to 1.141)	0.726 (0.601 to 0.877)	0.918 (0.711 to 1.184)	
Anti-TT Post-booster [N=21;34;60]	12.374 (9.629 to 15.903)	14.392 (11.717 to 17.676)	13.026 (11.176 to 15.183)	

Statistical analyses

Secondary: Anti-polyribosyl-ribitol-phosphate (Anti-PRP) antibody concentrations

End point title	Anti-polyribosyl-ribitol-phosphate (Anti-PRP) antibody concentrations
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End point description:

Seroprotection status, defined as anti-PRP antibody concentrations $\geq 0.15 \mu\text{g/mL}$ and $\geq 1.0 \mu\text{g/mL}$. Antibody concentrations were measured by 22F enzyme-linked immunosorbent assay (ELISA), presented as geometric mean concentrations (GMCs).

End point type	Secondary
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End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	23	34	59	
Units: $\mu\text{g/mL}$				
geometric mean (confidence interval 95%)				
Anti-PRP Pre-booster [N=23;32;59]	0.376 (0.196 to 0.719)	0.509 (0.312 to 0.832)	0.577 (0.372 to 0.896)	
Anti-PRP Post-booster [N=20;34;59]	33.731 (17.907 to 63.54)	36.902 (25.148 to 54.148)	38.713 (27.736 to 54.034)	

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-pertussis toxoid (Anti-PT), anti- filamentous haemagglutinin (Anti-FHA) and anti-pertactin (Anti-PRN) antibody concentrations

End point title	Anti-pertussis toxoid (Anti-PT), anti- filamentous haemagglutinin (Anti-FHA) and anti-pertactin (Anti-PRN) antibody concentrations
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End point description:

Seropositivity status, defined as anti-PT, anti-FHA, anti-PRN antibody concentrations $\geq 5 \text{ EL.U/mL}$. Antibody concentrations were measured by 22F enzyme-linked immunosorbent assay (ELISA), presented as geometric mean concentrations (GMCs).

End point type	Secondary
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End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	23	34	60	
Units: EL.U/mL				
geometric mean (confidence interval 95%)				
Anti-PT Pre-booster [N=22;32;58]	5.7 (3.3 to 9.8)	3.8 (3 to 4.7)	5.5 (4.4 to 6.9)	
Anti-PT Post-booster [N=21;34;59]	38.4 (29.8 to 49.5)	32.7 (24.2 to 44.2)	45.1 (37 to 54.9)	
Anti-FHA Pre-booster [N=20;27;47]	39.4 (18.4 to 84.2)	13.7 (9.3 to 20.1)	17 (12.4 to 23.3)	
Anti-FHA Post-booster [N=21;34;59]	250.3 (162.4 to 385.8)	275.3 (207 to 366.1)	229 (188.1 to 278.9)	
Anti-PRN Pre-booster [N=23;32;59]	16.7 (9.4 to 29.9)	10.3 (7.4 to 14.2)	11.3 (8.7 to 14.8)	
Anti-PRN Post-booster [N=21;34;60]	259.7 (151.5 to 445.2)	286.5 (192.6 to 426)	264.5 (200.2 to 349.5)	

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-polio type 1, 2 and 3 antibody titers

End point title	Anti-polio type 1, 2 and 3 antibody titers
End point description:	Seroprotection status, defined as Anti-polio type 1, Anti-polio type 2 and Anti-polio type 3 antibody titers ≥ 8 presented as geometric mean titers (GMTs).
End point type	Secondary
End point timeframe:	Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	17	29	53	
Units: Titers				
geometric mean (confidence interval 95%)				
Anti-Polio 1 Pre-booster [N=17;29;53]	52.3 (31.2 to 87.6)	34.8 (19.4 to 62.7)	54.7 (37.7 to 79.3)	
Anti-Polio 1 Post-booster [N=3;8;20]	512 (115.3 to 2274)	1386.7 (456.6 to 4210.9)	1327.9 (795.4 to 2217.1)	
Anti-Polio 2 Pre-booster [N=17;29;53]	65.2 (37.4 to 113.7)	47.3 (26.2 to 85.3)	50.9 (33.7 to 76.6)	
Anti-Polio 2 Post-booster [N=3;8;20]	1290.1 (147.8 to 11259.3)	2048 (759.7 to 5520.9)	1116.9 (600.9 to 2076.1)	
Anti-Polio 3 Pre-booster [N=17;29;53]	23 (10 to 53.2)	31.3 (16.8 to 58.4)	84.3 (59 to 120.4)	

Anti-Polio 3 Post-booster [N=3;8;20]	574.7 (36.1 to 9148.9)	1448.1 (464 to 4519.2)	1692.5 (1147.7 to 2495.9)	
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Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F antibody concentrations $\geq 0.05 \mu\text{g/mL}$

End point title	Number of subjects with anti-pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F antibody concentrations $\geq 0.05 \mu\text{g/mL}$
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End point description:

A seropositive subject was defined as a subject who had the anti-pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F concentrations greater than or equal to (\geq) the cut-off value of 0.05 micrograms per milliliter ($\mu\text{g/mL}$).

End point type	Secondary
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End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	43	69	125	
Units: Subjects				
Anti-1, Pre-booster [N=43;66;121]	39	56	111	
Anti-1, Post-booster [N=43;66;119]	43	66	119	
Anti-4, Pre-booster [N=43;69;123]	40	68	120	
Anti-4, Post-booster [N=43;66;119]	43	66	119	
Anti-5, Pre-booster [N=43;68;124]	41	66	122	
Anti-5, Post-booster [N=43;66;119]	43	66	119	
Anti-6B, Pre-booster [N=43;67;124]	41	66	119	
Anti-6B, Post-booster [N=42;66;119]	42	65	119	
Anti-7F, Pre-booster [N=43;65;123]	42	65	123	
Anti-7F, Post-booster [N=43;66;118]	43	66	118	
Anti-9V, Pre-booster [N=43;69;123]	43	69	123	
Anti-9V, Post-booster [N=43;66;119]	43	66	119	
Anti-14, Pre-booster [N=43;68;124]	43	68	121	
Anti-14, P-booster [N=43;66;119]	43	66	119	
Anti-18C, Pre-booster [N=43;68;125]	43	68	123	
Anti-18C, Post-booster [N=43;66;119]	43	66	118	
Anti-19F, Pre-booster [N=43;68;125]	43	68	125	
Anti-19F, Post-booster [N=43;66;119]	43	66	119	
Anti-23F, Pre-booster [N=43;69;123]	41	68	122	
Anti-23F, Post-booster [N=42;66;119]	41	66	118	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with concentrations of antibodies against cross-reactive pneumococcal serotypes 6A and 19A ≥ 0.05 $\mu\text{g/mL}$

End point title	Number of subjects with concentrations of antibodies against cross-reactive pneumococcal serotypes 6A and 19A ≥ 0.05 $\mu\text{g/mL}$
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End point description:

A seropositive subject was defined as a subject who had the anti-pneumococcal serotypes 6A and 19A concentrations greater than or equal to (\geq) the cut-off value of 0.05 micrograms per milliliter ($\mu\text{g/mL}$).

End point type	Secondary
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End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	43	67	122	
Units: Subjects				
Anti-6A, Pre-booster [N=42;67;122]	34	51	98	
Anti-6A, Post-booster [N=42;66;118]	41	63	115	
Anti-19A, Pre-booster [N=43;67;121]	28	49	95	
Anti-19A, Post-booster [N=42;66;118]	40	63	113	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with antibody concentrations against protein D (Anti-PD) ≥ 100 EL.U/mL

End point title	Number of subjects with antibody concentrations against protein D (Anti-PD) ≥ 100 EL.U/mL
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End point description:

A seropositive subject was defined as a subject who had anti-PD concentration greater than or equal to (\geq) the value of 100 ELISA units per milliliter (EL.U/mL).

End point type	Secondary
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End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	43	67	123	
Units: Subjects				
Anti-PD Pre-booster [N=42;67;123]	39	58	114	
Anti-PD Post-booster [N=43;66;118]	43	66	117	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-pertussis toxoid (Anti-PT), anti-filamentous haemagglutinin (Anti-FHA) and anti-pertactin (Anti-PRN) antibody concentrations ≥ 5 ELISA units per millilitre (EL.U/mL)

End point title	Number of subjects with anti-pertussis toxoid (Anti-PT), anti-filamentous haemagglutinin (Anti-FHA) and anti-pertactin (Anti-PRN) antibody concentrations ≥ 5 ELISA units per millilitre (EL.U/mL)
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End point description:

A seropositive subject was defined as a subject who had anti-PT, anti-FHA and anti-PRN concentrations greater than or equal to (\geq) the value of 5 ELISA units per milliliter (EL.U/mL).

End point type	Secondary
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End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	23	34	60	
Units: Subjects				
Anti-PT Pre-booster [N=22;32;58]	10	11	30	
Anti-PT Post-booster [N=21;34;59]	21	34	59	
Anti-FHA Pre-booster [N=20;27;47]	19	24	43	
Anti-FHA Post-booster [N=21;34;59]	21	34	59	
Anti-PRN Pre-booster [N=23;32;59]	20	28	47	
Anti-PRN Post-booster [N=21;34;60]	21	34	60	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-diphtheria (Anti-DT) and anti-tetanus toxoids (Anti-TT) antibody concentrations ≥ 0.1 international units per millilitre (IU/mL)

End point title	Number of subjects with anti-diphtheria (Anti-DT) and anti-tetanus toxoids (Anti-TT) antibody concentrations ≥ 0.1 international units per millilitre (IU/mL)
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End point description:

A seroprotected subject was defined as a subject who had anti-DT and anti-TT concentrations greater than or equal to (\geq) the value of 0.1 international units per milliliter (IU/mL).

End point type	Secondary
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End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	23	34	60	
Units: Subjects				
Anti-DT Pre-booster [N=23;31;59]	20	27	51	
Anti-DT Post-booster [N=21;34;60]	21	34	60	
Anti-TT Pre-booster [N=23;32;59]	23	32	59	
Anti-TT Post-booster [N=21;34;60]	21	34	60	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-polyribosyl-ribitol phosphate (anti-PRP) antibody concentration ≥ 0.15 μ g/mL

End point title	Number of subjects with anti-polyribosyl-ribitol phosphate (anti-PRP) antibody concentration ≥ 0.15 μ g/mL
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End point description:

A seroprotected subject was defined as a subject who had anti-PRP concentrations greater than or equal to (\geq) the value of 0.15 micrograms per milliliter (μ g /mL).

End point type	Secondary
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End point timeframe:

Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	23	34	59	
Units: Subjects				
Anti-PRP Pre-booster [N=23;32;59]	16	26	50	
Anti-PRP Post-booster [N=20;34;59]	20	34	59	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-polyribosyl-ribitol phosphate (anti-PRP) antibody concentration $\geq 1.0 \mu\text{g/mL}$

End point title	Number of subjects with anti-polyribosyl-ribitol phosphate (anti-PRP) antibody concentration $\geq 1.0 \mu\text{g/mL}$
End point description: The concentration of anti-polyribosyl-ribitol phosphate (Anti-PRP) antibody assessed was greater than or equal to (\geq) the value of 1.0 micrograms per milliliter ($\mu\text{g/mL}$).	
End point type	Secondary
End point timeframe: Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine	

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	23	34	59	
Units: Subjects				
Anti-PRP Pre-booster [N=23;32;59]	6	9	20	
Anti-PRP Post-booster [N=20;34;59]	20	34	59	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with anti-polio type 1, 2 and 3 (Anti-Polio 1, 2 and 3) antibody titers ≥ 8

End point title	Number of subjects with anti-polio type 1, 2 and 3 (Anti-Polio 1, 2 and 3) antibody titers ≥ 8
End point description: A seroprotected subject was defined as a subject who had anti-polio types 1, 2 and 3 titers greater than or equal to (\geq) the value of 8.	
End point type	Secondary
End point timeframe: Prior to (Pre-booster) and one month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine	

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	17	29	53	
Units: Subjects				
Anti-Polio 1 Pre-booster [N=17;29;53]	17	22	49	
Anti-Polio 1 Post-booster [N=3;8;20]	3	8	20	
Anti-Polio 2 Pre-booster [N=17;29;53]	17	26	47	
Anti-Polio 2 Post-booster [N=3;8;20]	3	8	20	
Anti-Polio 3 Pre-booster [N=17;29;53]	12	23	51	
Anti-Polio 3 Post-booster [N=3;8;20]	3	8	20	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with vaccine response for anti-PT, anti-FHA and anti-PRN antibodies

End point title	Number of subjects with vaccine response for anti-PT, anti-FHA and anti-PRN antibodies
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End point description:

Vaccine response defined as :

For initially seronegative subjects(S-)(with concentrations < 5 EL.U/mL), antibody concentration \geq 5 EL.U/mL at post-Booster

For initially seropositive subjects (S+) (with concentrations \geq 5 EL.U/mL): antibody concentration at post-Booster \geq 2 fold the pre-vaccination antibody concentration

End point type	Secondary
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End point timeframe:

One month after (Post-booster) the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	19	28	45	
Units: Subjects				
Anti-PT, S- [N=11;21;27]	11	21	27	
Anti-PT, S+ [N=9;11;27]	9	11	24	
Anti-FHA, S- [N=1;3;4]	1	3	4	
Anti-FHA, S+ [N=17;24;39]	17	24	37	
Anti-PRN, S- [N=2;4;11]	2	4	11	
Anti-PRN, S+ [N=19;28;45]	19	28	44	

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-hepatitis B surface antigen (HBs) antibody concentrations

End point title Anti-hepatitis B surface antigen (HBs) antibody concentrations

End point description:

Seroprotection status, defined as Anti-HBs antibody concentrations ≥ 10 mIU/mL.

End point type Secondary

End point timeframe:

Prior to the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	2	1	12	
Units: mIU/mL				
geometric mean (confidence interval 95%)				
Anti-HBs	21.9 (1.9 to 246.8)	117.2 (117.2 to 117.2)	37.2 (15.6 to 88.8)	

Statistical analyses

No statistical analyses for this end point

Secondary: Opsonophagocytic activity (OPA) titers against pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F

End point title Opsonophagocytic activity (OPA) titers against pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F

End point description:

Seropositivity status, defined as Opsonophagocytic activity against pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F ≥ 8 presented as geometric mean titers (GMTs).

End point type Secondary

End point timeframe:

One month after the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	38	55	100	
Units: Titers				
geometric mean (confidence interval 95%)				

OPA Anti-1, [N=37;52;99]	125 (74.1 to 210.8)	143.6 (93.1 to 221.3)	170.9 (124.6 to 234.3)	
OPA Anti-4 ,[N=36;55;100]	971.8 (623.7 to 1514.1)	1307.2 (1070 to 1596.9)	1479.3 (1259.6 to 1737.3)	
OPA Anti-5,[N=34;50;93]	69.2 (45 to 106.4)	120 (81.2 to 177.1)	176.9 (138.1 to 226.5)	
OPA Anti-6B, [N=35;51;98]	659 (353.9 to 1227.3)	459.1 (286.7 to 735.3)	635 (437.3 to 922.1)	
OPA Anti-7F, [N=37;49;99]	6008.9 (4318.7 to 8360.5)	4851.1 (3954.4 to 5951.1)	4372.6 (3658.8 to 5225.5)	
OPA Anti-9V,[N=38;47;100]	1666.4 (1218.1 to 2279.6)	2192.5 (1724.3 to 2787.8)	1798.8 (1522.8 to 2124.7)	
OPA Anti-14,[N=36;52;99]	1489.5 (980.7 to 2262.3)	1895.3 (1477.3 to 2431.7)	1342.7 (1095.4 to 1646)	
OPA Anti-18C, [N=37;50;100]	1656 (1005.6 to 2727)	1672.4 (1154.4 to 2422.9)	1561.9 (1251.2 to 1949.8)	
OPA Anti-19F,[N=36;52;96]	379.3 (241.3 to 596.2)	486.3 (327.9 to 721.3)	626.8 (473.1 to 830.3)	
OPA Anti-23F,[N=37;54;99]	2881.8 (1956.7 to 4244.3)	2510.2 (2076.2 to 3035)	3208.6 (2667.3 to 3859.8)	

Statistical analyses

No statistical analyses for this end point

Secondary: Opsonophagocytic activity (OPA) against pneumococcal cross-reactive serotypes 6A and 19A

End point title	Opsonophagocytic activity (OPA) against pneumococcal cross-reactive serotypes 6A and 19A
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End point description:

Seropositivity status, defined as Opsonophagocytic activity against pneumococcal cross-reactive serotypes 6A and 19A ≥ 8 presented as geometric mean titers (GMTs).

End point type	Secondary
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End point timeframe:

One month after the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	38	52	95	
Units: Titers				
geometric mean (confidence interval 95%)				
OPA Anti-6A [N=34;50;95]	270.6 (152.9 to 478.6)	218.2 (137.4 to 346.6)	207.4 (136.8 to 314.4)	
OPA Anti-19A [N=38;52;95]	31.9 (16 to 63.6)	41.4 (22 to 77.8)	51.7 (32.1 to 83.5)	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with opsonophagocytic activity (OPA) titers against pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F ≥ 8

End point title	Number of subjects with opsonophagocytic activity (OPA) titers against pneumococcal serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F ≥ 8
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End point description:

A seropositive subject was defined as a subject with opsonophagocytic activity cut-off value greater than or equal to (\geq) the value of 8. The vaccine pneumococcal serotypes investigated were 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F.

End point type	Secondary
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End point timeframe:

One month after the administration of the booster dose of 10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	38	55	100	
Units: Subjects				
OPA Anti-1,[N=37;52;99]	34	49	93	
OPA Anti-4,[N=36;55;100]	35	55	100	
OPA Anti-5,[N=34;50;93]	32	48	92	
OPA Anti-6B,[N=35;51;98]	33	49	92	
OPA Anti-7F,[N=37;49;99]	37	49	99	
OPA Anti-9V,[N=38;47;100]	38	47	100	
OPA Anti-14,[N=36;52;99]	36	52	99	
OPA Anti-18C,[N=37;50;100]	37	50	100	
OPA Anti-19F,[N=36;52;96]	36	51	96	
OPA Anti-23F,[N=37;54;99]	37	54	99	

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with opsonophagocytic activity (OPA) against pneumococcal cross-reactive serotypes 6A and 19A ≥ 8

End point title	Number of subjects with opsonophagocytic activity (OPA) against pneumococcal cross-reactive serotypes 6A and 19A ≥ 8
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End point description:

A seropositive subject was defined as a subject with opsonophagocytic activity against pneumococcal cross-reactive serotypes 6A and 19A greater than or equal to (\geq) the cut-off value of 8.

End point type	Secondary
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End point timeframe:

One month after the administration of the booster dose of 10Pn10Pn-PD-DiT vaccine co-administered with the booster dose of DTPa-IPV/Hib vaccine

End point values	Preterm I Group	Preterm II Group	Full term Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	38	52	95	
Units: Subjects				
OPA Anti-6A ,[N=34;50;95]	31	45	79	
OPA Anti-19A,[N=38;52;95]	23	30	56	

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Solicited local and general symptoms: during the 4- days (Days 0-3) after booster vaccination.

Unsolicited AEs: within 31- days (Days 0-30) after booster vaccination; SAEs: throughout the entire study period starting from Month 0 up to the end of study

Adverse event reporting additional description:

The occurrence of reported AEs (all/related) was not available and is encoded as equal to the number of subjects affected.

Assessment type	Non-systematic
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Dictionary used

Dictionary name	MedDRA
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Dictionary version	11.1
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Reporting groups

Reporting group title	Preterm Group
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Reporting group description: -

Reporting group title	Full term Group
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Reporting group description: -

Serious adverse events	Preterm Group	Full term Group	
Total subjects affected by serious adverse events			
subjects affected / exposed	3 / 116 (2.59%)	1 / 129 (0.78%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events			
Nervous system disorders			
Febrile convulsion			
subjects affected / exposed	1 / 116 (0.86%)	0 / 129 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory, thoracic and mediastinal disorders			
Bronchospasm			
subjects affected / exposed	1 / 116 (0.86%)	0 / 129 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Latent tuberculosis			
subjects affected / exposed	0 / 116 (0.00%)	1 / 129 (0.78%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Pyelonephritis acute			
subjects affected / exposed	1 / 116 (0.86%)	0 / 129 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

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

Non-serious adverse events	Preterm Group	Full term Group	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	71 / 116 (61.21%)	98 / 129 (75.97%)	
General disorders and administration site conditions			
Pain			
alternative assessment type: Systematic			
subjects affected / exposed ^[1]	47 / 112 (41.96%)	67 / 122 (54.92%)	
occurrences (all)	47	67	
Redness			
alternative assessment type: Systematic			
subjects affected / exposed ^[2]	35 / 112 (31.25%)	65 / 122 (53.28%)	
occurrences (all)	35	65	
Swelling			
alternative assessment type: Systematic			
subjects affected / exposed ^[3]	27 / 112 (24.11%)	55 / 122 (45.08%)	
occurrences (all)	27	55	
Drowsiness			
alternative assessment type: Systematic			
subjects affected / exposed ^[4]	21 / 112 (18.75%)	33 / 122 (27.05%)	
occurrences (all)	21	33	
Fever (rectal temperature measurement)			
alternative assessment type: Systematic			
subjects affected / exposed ^[5]	34 / 112 (30.36%)	39 / 122 (31.97%)	
occurrences (all)	34	39	
Irritability			
alternative assessment type: Systematic			

subjects affected / exposed ^[6]	36 / 112 (32.14%)	49 / 122 (40.16%)	
occurrences (all)	36	49	
Loss of appetite			
alternative assessment type: Systematic			
subjects affected / exposed ^[7]	26 / 112 (23.21%)	35 / 122 (28.69%)	
occurrences (all)	26	35	

Notes:

[1] - The number of subjects exposed to this adverse event is less than the total number of subjects exposed for the reporting group. These numbers are expected to be equal.

Justification: Assessment for this event for this phase was performed solely on subjects with their symptom sheets completed.

[2] - The number of subjects exposed to this adverse event is less than the total number of subjects exposed for the reporting group. These numbers are expected to be equal.

Justification: Assessment for this event for this phase was performed solely on subjects with their symptom sheets completed.

[3] - The number of subjects exposed to this adverse event is less than the total number of subjects exposed for the reporting group. These numbers are expected to be equal.

Justification: Assessment for this event for this phase was performed solely on subjects with their symptom sheets completed.

[4] - The number of subjects exposed to this adverse event is less than the total number of subjects exposed for the reporting group. These numbers are expected to be equal.

Justification: Assessment for this event for this phase was performed solely on subjects with their symptom sheets completed.

[5] - The number of subjects exposed to this adverse event is less than the total number of subjects exposed for the reporting group. These numbers are expected to be equal.

Justification: Assessment for this event for this phase was performed solely on subjects with their symptom sheets completed.

[6] - The number of subjects exposed to this adverse event is less than the total number of subjects exposed for the reporting group. These numbers are expected to be equal.

Justification: Assessment for this event for this phase was performed solely on subjects with their symptom sheets completed.

[7] - The number of subjects exposed to this adverse event is less than the total number of subjects exposed for the reporting group. These numbers are expected to be equal.

Justification: Assessment for this event for this phase was performed solely on subjects with their symptom sheets completed.

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported