



## Clinical trial results:

**A phase IV study to evaluate the primary and booster immune responses of UK infants receiving a licensed 6-in-1 DTaP/IPV/Hib/HBV vaccine (Infanrix-Hexa™) with a 13-valent pneumococcal conjugate vaccine and incorporating a randomisation study of a single dose of 3 different meningococcal group C conjugate vaccines at 3 months of age.**

### Summary

EudraCT number	2012-003026-25
Trial protocol	GB
Global end of trial date	30 June 2017

### Results information

Result version number	v1 (current)
This version publication date	07 February 2019
First version publication date	07 February 2019

### Trial information

#### Trial identification

Sponsor protocol code	RSRSG12-03
-----------------------	------------

#### Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT01896596
WHO universal trial number (UTN)	-

Notes:

### Sponsors

Sponsor organisation name	Public Health England
Sponsor organisation address	Wellington House, London, United Kingdom, SE1 8UG
Public contact	Dr Elizabeth Coates PHE, SE1 8UG, Public Health England Wellington House, SE1 8UG, +44 01980612922, elizabeth.coates@phe.gov.uk
Scientific contact	Dr Elizabeth Coates PHE, SE1 8UG, Public Health England Wellington House, SE1 8UG, +44 01980612922, elizabeth.coates@phe.gov.uk

Notes:

### Paediatric regulatory details

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

Notes:

## Results analysis stage

Analysis stage	Final
Date of interim/final analysis	30 June 2017
Is this the analysis of the primary completion data?	Yes
Primary completion date	30 June 2017
Global end of trial reached?	Yes
Global end of trial date	30 June 2017
Was the trial ended prematurely?	No

Notes:

## General information about the trial

Main objective of the trial:

This study will assess the immune responses of infants receiving a licensed 6-in-1 vaccine (Infanrix-Hexa™) instead of the current 5-in-1 vaccine (Pediace™) when given at the UK schedule of 2-3-4 months when given with one of three licensed meningococcal group C (MenC) vaccines at 3 months and the pneumococcal vaccine at 2 and 4 months of age.

The study will primarily ensure that this new schedule protects infants against Haemophilus influenzae group B (Hib) and Meningococcal group C (MenC) disease as responses to these components of the vaccine have been shown in the past to be susceptible to changes in vaccine type and dosing schedule.

Protection of trial subjects:

Venepuncture by experience paediatric nurses and anaesthetic cream offered

Background therapy:

None

Evidence for comparator: -

Actual start date of recruitment	01 June 2012
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	United Kingdom: 171
Worldwide total number of subjects	171
EEA total number of subjects	171

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)	171

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:

171 infants offered hepatitis B containing DTaP/IPV vaccine

### Pre-assignment

Screening details:

History of infection with Haemophilus influenzae serotype b (Hib), pneumococcal or meningococcal disease, pertussis, polio, diphtheria, tetanus or hepatitis B. History of maternal acute or chronic hepatitis B infection. Confirmed or suspected immunosuppressive or immunodeficient condition (including HIV). Bleeding disorders and/or prolonged bleeding

### Period 1

Period 1 title	PERIOD 1 (overall period)
Is this the baseline period?	Yes
Allocation method	Not applicable
Blinding used	Not blinded

### Arms

Arm title	ARM 1
-----------	-------

Arm description:

Infants receiving Infanrix hexa

Arm type	Experimental
Investigational medicinal product name	Infanrix hexa
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

0.5ml

<b>Number of subjects in period 1</b>	ARM 1
Started	171
Completed	171

## Baseline characteristics

### Reporting groups

Reporting group title	PERIOD 1
-----------------------	----------

Reporting group description: -

Reporting group values	PERIOD 1	Total	
Number of subjects	171	171	
Age categorical			
Infants age			
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)	171	171	
Children (2-11 years)	0	0	
Adolescents (12-17 years)	0	0	
Adults (18-64 years)	0	0	
From 65-84 years	0	0	
85 years and over	0	0	
Gender categorical			
SEX			
Units: Subjects			
Female	82	82	
Male	89	89	

## End points

### End points reporting groups

Reporting group title	ARM 1
Reporting group description: Infants receiving Infanrix hexa	

### Primary: Proportion with Protective Hib Antibody levels

End point title	Proportion with Protective Hib Antibody levels <sup>[1]</sup>
End point description:	

End point type	Primary
End point timeframe: 4-6 weeks after primary 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: Descriptive analysis only

End point values	ARM 1			
Subject group type	Reporting group			
Number of subjects analysed	165			
Units: Percentage				
Greater than 0.15 ug/ml	147			

### Statistical analyses

No statistical analyses for this end point

## Adverse events

### Adverse events information<sup>[1]</sup>

Timeframe for reporting adverse events:

From 1st dose until 4 weeks after the last dose

Assessment type	Non-systematic
-----------------	----------------

### Dictionary used

Dictionary name	MedDRA
-----------------	--------

Dictionary version	10
--------------------	----

### Reporting groups

Reporting group title	ARM1
-----------------------	------

Reporting group description: -

Notes:

[1] - There are no non-serious adverse events recorded for these results. It is expected that there will be at least one non-serious adverse event reported.

Justification: This was an immunogenicity study

Serious adverse events	ARM1		
Total subjects affected by serious adverse events			
subjects affected / exposed	9 / 171 (5.26%)		
number of deaths (all causes)	0		
number of deaths resulting from adverse events	0		
Surgical and medical procedures			
surgical			
subjects affected / exposed	2 / 171 (1.17%)		
occurrences causally related to treatment / all	0 / 2		
deaths causally related to treatment / all	0 / 0		
Infections and infestations			
Infection			
subjects affected / exposed	7 / 171 (4.09%)		
occurrences causally related to treatment / all	0 / 7		
deaths causally related to treatment / all	0 / 0		

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

Non-serious adverse events	ARM1		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	0 / 171 (0.00%)		





## More information

### Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
18 May 2012	Participant Information Leaflet simplified as per ethics committee request
25 May 2012	Minor typographical changes following sponsorship submission
25 March 2013	HPA replaced with PHE throughout text Rotavirus added to schedule 6.2. Schedule Table updated 6.3.1. Inclusion criteria amended 6.3.2. Exclusion criteria amended 6.4.5 Booster vaccine sites amended Appendix 1.2 – amended Appendix 1.6. Consent form amended
11 July 2014	The protocol has been updated throughout to reflect the addition of St George's as a site and that study procedures may be carried out by both medics and nurses there. A detailed description of the recruitment process there is given on p.28 as well as associated patient information in appendix 1.
19 June 2015	1. Menjugate is no longer available in the UK so this arm has to be closed. 2. Addition of Bexsero vaccine as per national schedule change, announced by DH for commencement 1 Sept 2015
24 November 2015	Minor typographical corrections, no systematic changes throughout and no material changes to conduct of the study. Clarification that Bexsero was introduced in Sept 2015, previous wording indicated Dept Health's intent to introduce the vaccine. Minor amendment to REC.
04 April 2016	Identification of a lack of mention of pertussis testing in objectives, though already mentioned in endpoints section. Agreed with PHE R&D Office this was an administrative amendment as did not materially alter any procedures already in place and was for clarification only.

Notes:

### Interruptions (globally)

Were there any global interruptions to the trial? No

### Limitations and caveats

None reported