Public Health England

Health Protection Report
weekly report

Infection report

Volume 9 Number 7 Published on: 27 February 2015

Immunisation

Laboratory reports of *Haemophilus influenzae* by age group and serotype (England and Wales): October to December 2014, and consolidated annual report for 2014

- Laboratory reports of Hib by age group and serotype: Q4/2014
- Laboratory reports of Hib by age group and serotype, annual report

Laboratory reports of *Haemophilus influenzae* by age group and serotype, England and Wales: fourth quarter 2014

In the fourth quarter of 2014 (October to December) there was a total of 176 laboratory confirmed cases of invasive *Haemophilus influenzae* (Hi). This represents an 8% decrease in the number of cases compared to the fourth quarter of 2013 (n=192). There were 96 cases in the third quarter of 2014.

Of the samples which underwent serotyping (n=145), 86% were non-capsulated *Haemophilus influenzae* (ncHi), a further 13% were serotype a, e, or f, and 1% were serotype b (Hib). There was a 6% increase (from 80% in 2013 to 86% in 2014) in the proportion of ncHi cases and 53% decrease (from 3% in 2013 to 1.4% in 2014) in the proportion of Hib cases compared to the third quarter of 2013 when; 80% of serotyped samples were ncHi, 16% were serotype a, e, or f and 3% were Hib.

Age-group was well reported (see table). Of the laboratory confirmed cases during the fourth quarter of 2014: 80% were aged 15 years and over; 10% were under one year of age, 9% were 1-4 years old, and 3% were among 5-14 year olds. In the third quarter of 2013: 86% were aged 15 years and over; 6% were under 1 year of age, and 4% were among both the 1-4 and 5-14 year olds. There was a 33% increase (from 27 in 2013 to 36 in 2014) in Hi cases among children aged 1-14 years compared to the fourth quarter of 2013; this was due to an increase in the number of ncHi cases from 19 to 27. Among those aged 15 years and over there was 15% decrease (from 165 in 2013 to 140 in 2014).

During this quarter, 90% of cases in children under 15 years were ncHi (n=27/30).There were no cases of Hib this age-group during the fourth quarter of 2014 or the fourth quarter of 2013.

Age distribution of laboratory-confirmed cases of *Haemophilus influenzae* by serotype England and Wales, fourth quarter 2014 (and 2013)

Serotype	Age-group					Total, third quarter 2014 *(2013)*
	<1y	1-4y	5-14y	15+	nk	
b	– *(–)*	1 *(–)*	1 *(–)*	*2 (5)*	– *(–)*	*2 (5)*
nc	*15 (10)*	*10 (4)*	*2 (5)*	97 *(113)*	– *(–)*	**124** *(132)*
a,e,f	1 *(2)*	*2 (3)*	– *(1)*	16 *(21)*	– *(–)*	**19** *(27)*
not typed	2 *(–)*	*3 (–)*	*1 (2)*	1 *(2)*	– *(–)*	**13** *(28)*
Total	***18(12)***	**15** *(7)*	**3** *(8)*	**140** *(165)*	**–** *(–)*	**176** *(192)*

Notes: " –" Indicates that testing yielded no positives. Percentages may not add up to 100 due to rounding.

Laboratory reports of *Haemophilus influenzae* by age group and serotype, England and Wales: annual report for 2014

During 2014 (January to December inclusive) there was a total of 665 laboratory confirmed cases of invasive *Haemophilus influenzae* (Hi). This was similar to the 644 cases confirmed in 2013 (3% increase). Of the samples which underwent serotyping (n=541; 81%), 85% were non-capsulated *Haemophilus influenzae* (ncHi), a further 13% were serotype a, e, or f, and 2% were serotype b (Hib). In comparison, in 2013; 84% of serotyped samples (n=528, 82%) were ncHi, 12% were serotype a, e, or f, and 4% were Hib. The reduction in cases of Hib was due to a decline in the number of cases among those aged 15 years and over from 17 in 2013 to 9 in 2014 (47% decrease).

Age-group was well reported (Table). During 2014, 81% of all Hi cases were aged 15 years and over; 9% were under one year of age; 6% were 1-4 years old; and 3% were 5-14 years old. The majority of serotyped cases in children under 15 years were ncHi (n=93/106; 89%). This differed from 2013, where: 86% were aged 15 years and over; 8% were under one year of age; 3% were among 1-4 year olds and 5-14 year olds respectively.

The 44% (from 72 in 2013 to 106 in 2014) increase in cases among children under five years old was due to a two-fold (from 14 to 30 cases) increase in the number of ncHi cases among children aged 1-4 years old and a 20% (from 41 to 49 cases) increase in ncHi cases among those aged under one year in 2014 compared to 2013.

Annual distribution by serotype and age group 2014 (*and 2013*)

Serotype	Age-group					Total, 2014 *(2013)*
	<1y	1-4y	5-14y	15+	nk	
b	1 *(2)*	1 *(–)*	1 *(–)*	*9 (17)*	– *(–)*	**12** *(19)*
nc	49 *(41)*	30 *(14)*	14 *(14)*	367 *(376)*	– *(–)*	**460** *(445)*
a,e,f	6 *(2)*	4 *(5)*	– *(3)*	59 *(54)*	– *(–)*	**69** *(64)*
not typed	7 *(6)*	8 *(2)*	3 *(4)*	106 *(104)*	– *(–)*	**69** *(64)*
Total	**63** *(51)*	**43** *(21)*	**18** *(21)*	**541** *(551)*	**–** *(–)*	**665** *(644)*

Notes: " –" Indicates that testing yielded no positives. Percentages may not add up to 100 due to rounding.

As reported previously (1), cases of invasive Hib disease have declined since the introduction of the Hib conjugate vaccine in 1992 and remained at low levels since the introduction of a fourth dose of vaccine in 2006 (Figure). In 2014, invasive Hib disease continued to be well controlled across all age groups. Compared to 2013, Hib cases declined by 36% (from 19 to 12 cases); this was due to the decrease in cases among those aged 15 years and over.

During 2014, there were three cases of Hib among children who were eligible for immunisation; none of whom had been immunised. One child presented with pneumonia, one with bacteraemic-tonsillitis, and one with bacteraemia; all subsequently recovered. In 2013, there were two cases of Hib among age-appropriately immunised infants; one presented with meningitis and the other with cellulitis; both fully recovered.

There were no deaths attributed to invasive Hib disease in 2014 or 2013; the most recent death in a child aged under 16 years attributed to invasive Hib disease was in 2011.

Reference

1. Public Health England (2014). Laboratory reports of *Haemophilus influenzae* by age group and serotype (England and Wales): annual report for 2013, *HPR* **8**(8): immunisation. Available at: http://webarchive.nationalarchives.gov.uk/20140505162355/http://www.hpa.org.uk/hpr/archives/2014/hpr0814.pdf