



Volume 8 Number 8 Published on: 28 February 2014

Current News

Confirmed measles cases in England to end-December 2013

Evaluation of the 2013 MMR “catch-up” vaccination campaign

Good coverage achieved during first five months of shingles vaccination programme

ECDC technical report on chlamydia in Europe

Infection Reports

Immunisation

Laboratory confirmed cases of measles, mumps and rubella (England): October to December 2013

Laboratory reports of *Haemophilus influenzae* by age group and serotype (England and Wales): October to December 2013

Herpes zoster (shingles) vaccine programme 2013/14: provisional coverage data for England to end-January 2014

News

Volume 8 Number 8 Published on: 28 February 2014

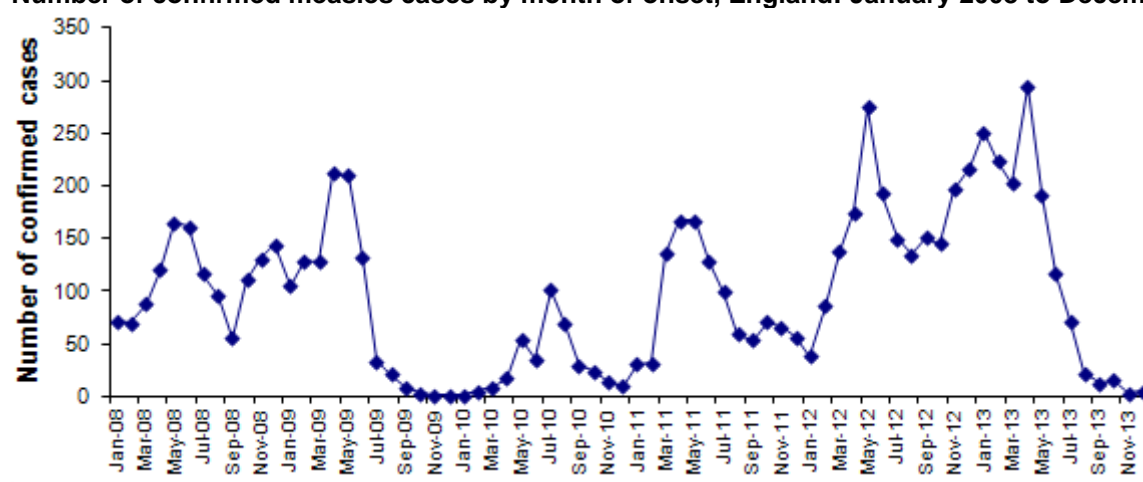
Confirmed measles cases in England to end-December 2013

Only eight laboratory-confirmed cases of measles were reported in England in November and December (three and five cases, respectively), a steep declining since the peak in April 2013 when nearly 300 cases were reported in one month (see table), bringing the total measles cases in 2013 to 1,413 – lower than the previous year's total of 1,912 [1]. Only sporadic cases and small family clusters were observed nationally in the last few months of the year.

Regional distribution of laboratory confirmed cases of measles in England, 2013

Month of onset in 2013	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total 2013
London	29	30	15	28	29	29	14	4	2	8	1	3	192
E Midlands	9	4	3	18	10	5	–	–	1	–	–	1	51
East of England	13	7	12	17	13	7	5	1	1	1	–	–	77
N East	56	73	82	110	47	2	5	1	–	–	–	–	376
N West	86	62	51	64	59	42	9	2	1	2	–	–	378
S East	–	7	6	7	3	3	–	–	–	–	–	–	26
S West	30	14	9	25	12	20	32	8	7	4	1	1	163
W Midlands	3	11	7	20	14	3	–	–	–	1	–	–	59
Yorkshire & Humberside	25	15	17	8	5	6	7	6	1	–	1	–	91
Total	251	223	202	297	192	117	72	22	13	16	3	5	1413

Number of confirmed measles cases by month of onset, England: January 2008 to December 2013



Reference

1. PHE. Laboratory confirmed cases of measles, mumps and rubella (England): October to December 2013, *HPR* 8(8): immunisation, 28 February 2014.

Evaluation of the 2013 MMR “catch-up” vaccination campaign

The effectiveness and impact of the measles, mumps and rubella vaccination campaign launched in April 2013 to raise immunisation levels among under-vaccinated 10-16 year-olds in England and Wales, has been the subject of a study [1] which suggests that the principal aim of the campaign was achieved, ie to ensure that 95% of children aged 10-16 years received at least one dose of MMR vaccine by 30 September 2013.

The campaign – run by NHS England and Public Health England, with support from directors of public health in local government – was a response to evidence, early in the year, of a marked increase in measles cases in (and outbreaks among) secondary school children who were vulnerable to the infections, a result of the fall in overall vaccine coverage that occurred between 1999 and 2005 [2].

The study's aims included providing baseline data about the proportion of 10-16 years-olds who were unvaccinated at the start of the campaign; and, secondly, making an assessment of the proportion of children who had received at least one dose of MMR vaccine, and the number who remained unvaccinated, by the mid-point to inform the need for any further public health action to increase coverage. This was the first attempt to estimate MMR vaccine coverage in England outside the routine data collection systems covering 2-5 year olds.

The study concluded that

- the coverage of one dose of MMR before the campaign was higher than previously estimated;
- the 95% coverage target was achieved, overall, in England;
- the catch-up campaign was shown to have had a bigger impact outside London, partly a result of the higher population mobility and difficulties associated with gathering accurate data within the capital;
- overall, the percentage of previously unvaccinated children who were reached by the 2013 intervention was approximately 11%; and
- there is variation in vaccine coverage across local areas.

Further work is underway as part of the evaluation of the campaign's effectiveness including: work to identify factors associated with acceptance of the vaccine during the campaign and to understand the on-going barriers to vaccination for the children that remained unvaccinated at the end of the campaign.

References

1. “Evaluation of vaccine uptake during the 2013 MMR catch-up campaign in England: report for the national measles oversight group”, PHE website, 28 February 2014.
2. Measles in England (data to end-May 2013) and impact of MMR catch-up programme, *HPR* 7(28), 12 July 2013.

Good coverage achieved during first five months of shingles vaccination programme

Good coverage was achieved during the first five months of the shingles vaccination programme for the elderly that commenced in September 2013, according to a provisional assessment of available data published in the Infection Reports section of this issue of HPR [1].

The report indicates that coverage for the two age-cohorts that have been eligible for the vaccine has been increasing during the five-month period. Over the period as a whole, 46.6% of the routine (70 year old) cohort and 45.5% of the catch-up cohort (79 year old) received the vaccine.

It is anticipated that coverage will continue to rise during the remaining seven months of the 2013/14 programme.

Reference

1. Herpes zoster (shingles) vaccine programme 2013/14: cumulative coverage data (provisional) for England to end-January 2104 , *HPR* 8(8): immunisation, 28 February 2014.

ECDC technical report on chlamydia in Europe

The European Centre for Disease Prevention and Control has published a technical report presenting the findings of four literature reviews on chlamydia in Europe [1] considering, respectively: the prevalence of the infection in EU/EEA member states; reproductive complications associated with the infection; the efficacy and effectiveness of screening interventions; and the cost-effectiveness of screening programmes.

On disease prevalence, the ECDC report notes that only four EU states – France, Germany, Slovenia and the UK – produce national estimates of population prevalence for chlamydia. In these four countries, disease prevalence in women ranged from 0.4% (in 16–17 year olds in Germany) to 4.7% (in 18–24 year olds in Slovenia). The report notes that selection bias in prevalence surveys is likely; surveys with lower response rates are associated with higher prevalence estimates.

Since the literature studies reviewed by ECDC were carried out, updated estimates of chlamydia prevalence in Britain have been published in the Third National Survey of Sexual Attitudes and Lifestyles [2]. This provides estimates of the prevalence of chlamydia among sexually active adults living in Britain in the period 2010 to 2012 and concludes that during this

period, the disease prevalence among 16–24 year - olds was 3.1% in women* and 2.3% in men†.

On reproductive complications, the ECDC report provides a narrative review of the female reproductive complications of chlamydia infection, and estimates the incidence of clinical pelvic inflammatory disease (PID) following untreated asymptomatic chlamydia to be 9%*†. This is based on the findings from the Prevention of Pelvic Infection (POPI) trial [3]. In a recently published paper by Price *et al*, which combined these findings with several other studies, it was estimated that a chlamydia episode would cause clinical PID in 16%** of cases [4].

On the efficacy and effectiveness of chlamydia screening, the ECDC report combined the results from four randomised controlled trials [3-6] that have investigated the effect of chlamydia screening on the development of PID in women within one year. When the results of the trials were combined, women invited to have a chlamydia screen were 36% lower risk of PID after one year of follow up compared to a control group ††. The proportion of participants in the intervention group who were screened for chlamydia as part of the trial ranged from 29% [5] to 100% [3]. Two completed [6,7] and one ongoing trial examining the effect of screening on the frequency of chlamydia infection were also reviewed, and the uncertainties concerning this outcome are discussed.

On the cost-effectiveness of chlamydia screening programmes, the ECDC report compiles results from 10 economic evaluation studies in high income countries, which quantified cost effectiveness in terms of additional cost per quality-adjusted life year (QALY, a measure of the benefit of health interventions) gained. Nine out of 10 of these studies found at least one of the different chlamydia strategies examined to be within national thresholds for cost effectiveness in terms of additional cost per QALY gained. Cost effectiveness analyses were sensitive to the kind of mathematical used, and the assumptions about the rate of progression from chlamydia infection to PID. Lower rates of progression from chlamydia infection to PID decreased the cost effectiveness of screening. For example in the study by Adams *et al*, which estimated cost effectiveness before the full implementation of the National Chlamydia Screening Programme in England, chlamydia screening was considered unlikely to be cost effective if the progression rate from chlamydia to PID was less than 10% [8].

PHE remains committed to educating the public on how to reduce the risk of getting or transmitting chlamydia – through screening young adults annually and between partners, condom use with new or casual partners, avoiding overlapping sexual relationships and reducing the number of sexual partners.

Notes

* 95% CI 2.2-4.3%; † 95% CI 1.5-3.4%; *† 95% CI 4-19%; * 95% CI 6-25%.
†† Risk ratio 0.64 (95% CI 45-90%).

References

1. "Chlamydia control in Europe: literature review", ECDC Technical Report [[2.5 MB PDF](#)] , February 2014.
 2. Sonnenberg P, Clifton S, Beddows S, Field N, Soldan K, Tanton C *et al.* Prevalence, risk factors, and uptake of interventions for sexually transmitted infections in Britain: findings from the National Surveys of Sexual Attitudes and Lifestyles (Natsal). *Lancet* 2013; **382**(9907): 1795-1806.
 3. Oakeshott P, Kerry S, Aghaizu A, Atherton H, Hay S, Taylor-Robinson D *et al.* Randomised controlled trial of screening for *Chlamydia trachomatis* to prevent pelvic inflammatory disease: the POPI (prevention of pelvic infection) trial. *BMJ* 2010; **340**: c1642.
 4. Price MJ, Ades AE, De AD, Welton NJ, Macleod J, Soldan K *et al.* Risk of pelvic inflammatory disease following *Chlamydia trachomatis* infection: analysis of prospective studies with a multistate model. *Am J Epidemiol* 2013; **178**(3): 484-492.
 5. Andersen B, van V, I, Sokolowski I, Moller JK, Ostergaard L, Olesen F. Impact of intensified testing for urogenital *Chlamydia trachomatis* infections: a randomised study with 9-year follow-up. *Sex Transm Infect* 2010.
 6. van dB, IV, van Bergen JE, Brouwers EE, Fennema JS, Gotz HM, Hoebe CJ *et al.* Effectiveness of yearly, register based screening for chlamydia in the Netherlands: controlled trial with randomised stepped wedge implementation. *BMJ* 2012; **345**: e4316.
-



Public Health
England

Health Protection Report

weekly report

Infection reports

Volume 8 Numbers 8 Published on: 28 February 2014

Immunisation

Laboratory confirmed cases of measles, mumps and rubella (England): October to December 2013

Laboratory reports of *Haemophilus influenzae* by age group and serotype (England and Wales): October to December 2013

Herpes zoster (shingles) vaccine programme 2013/14: provisional coverage data for England to end-January 2014

Laboratory confirmed Laboratory confirmed cases of measles, mumps and rubella (England): October to December 2013

Data presented here are for the fourth quarter of 2013 (ie October to December). Cases include those confirmed by oral fluid testing (IgM antibody tests and/or PCR) at the Virus Reference Department (Colindale) and national routine laboratory reports (mumps infections only) (see table 1). Analyses are by date of onset. Regional breakdown figures relate to Government Office Regions rather than regional health authorities.

Quarterly figures for cases confirmed by oral fluid antibody detection only from 1995 and annual total numbers of confirmed cases by health region and age are available from:

- ▶ http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733778332
- ▶ http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733841496
- ▶ http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733752351.

Table 1. Total confirmed cases of measles, mumps and rubella, and oral fluid IgM antibody tests in notified cases: weeks 40-53/2013

Notified and investigated cases		Confirmed cases						
Infecting virus	Cases reported in England*	Oral fluid testing				Confirmed infections	Other samples	Total
		Number tested	% of reported cases tested	Total positive	Recently vaccinated			
Measles	535	620	116% #	28	11	17	7	24
Mumps	2365	1771	75%	456	3	453	67	520
Rubella	88	31	35%	1	0	1	2	3

* This figure represents the number of infections reported as possible cases and investigated by individual PHE Centres in England.

Some oral fluid specimens were submitted early from suspected cases and may not have been subsequently reported, thus the proportion tested is artificially high for this quarter.

Measles

Only 24 cases of measles were confirmed in England with onset dates in between October and December 2013 compared to 103 cases reported in the previous quarter [1]. This brings the total number of confirmed measles infections in England for 2013 to 1,413, lower than the 2012 total of 1,912.

In the current quarter all regions except North East and South East reported cases, with London identifying the greatest proportion (11 cases). Across the UK, an additional 25 infections were confirmed by oral fluid testing for cases from Wales and further two cases were confirmed from Northern Ireland.

The majority (17/24, 71%) of the English measles cases this quarter were in children and adolescents: one (4%) under one year; four (17%) aged 1-4 years; five (21%) aged 5-9 year, five (21%) aged 10-14 years; and two (8%) aged 15-18 years. The remaining seven cases (29%) were adults aged 20-52 years. Two cases reported receiving one dose and one case reported receiving two doses of a measles-containing vaccine.

Two cases reported a history of recent travel; one each to Egypt and the Philippines [2].

In the twelve-month period November 2012 to October 2013, five countries (including the UK) within the European Union and European Economic Area (EU/EEA) accounted for the majority (94%) of measles cases observed: the Dutch authorities reported 2,332 measles cases between May and October 2013 although the actual number of cases is estimated to be much

higher; and Germany, Italy and Romania are also experiencing measles outbreaks [3]. In the year up to October 2013, only 11/30 EU/EEA countries have met the elimination target of less than one case of measles per million of population. In EU neighbouring countries, measles outbreaks are on-going in the Russian federation, Turkey and Georgia [3].

Mumps

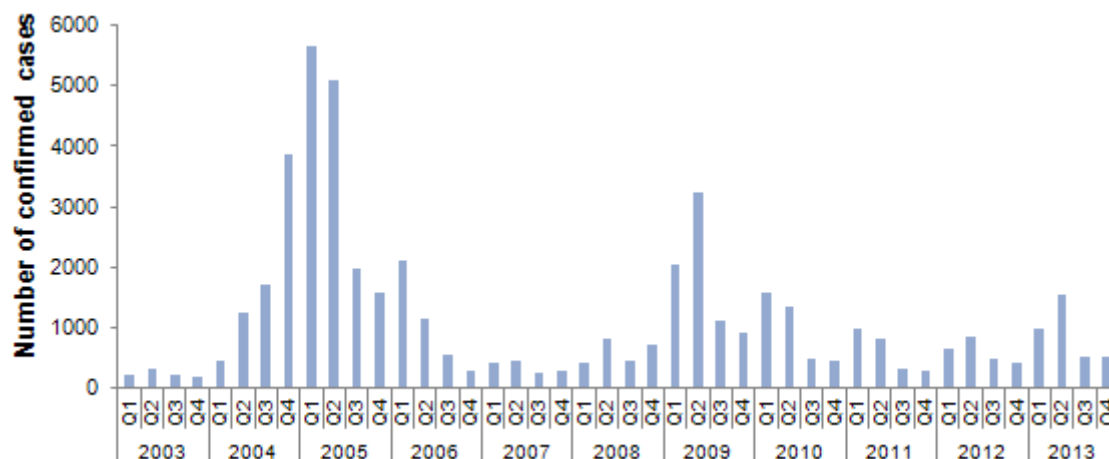
There were 520 laboratory confirmed cases of mumps with onset in the last quarter of the year, similar to the 506 cases reported in the previous quarter [1]. The total number of confirmed infections in England in 2013 was 3,524, higher than the previous year's total of 2,476. Cases continue to be identified predominantly in young adults between 15 and 28 years of age (384/521, 74%, see table 2). More than half of all cases this quarter have received at least one dose of MMR vaccination in childhood, suggesting that some waning immunity may be contributing to transmission. Mumps cases were identified in all regions of England although the majority were reported from the London and South West regions (table 2).

Table 2. Laboratory confirmed cases of mumps by age group and region, England: weeks 40-53/2013

Month of onset in 2013	<1	1-4	5-9	10-14	15-19	20-24	25+	Total 2013
North East	–	–	2	–	30	17	13	62
North West	–	2	2	5	8	6	10	33
Yorkshire & Humber	–	–	2	–	10	5	10	27
East Midlands	–	1	–	–	6	4	3	14
West Midlands	–	–	1	4	9	12	13	39
East of England	–	1	1	2	10	12	8	34
London	–	2	3	6	19	21	48	99
South East	–	–	2	6	36	22	24	90
South West	–	1	1	7	53	45	15	122
Total	–	7	14	30	181	144	144	520

The figure shows that the level of mumps confirmed in this quarter is similar to that reported in the fourth quarter of non-peak years since 2003. With the exception of 2004, the number of cases reported in the second half of each year has been lower than in the first half.

Laboratory confirmed cases of mumps by quarter: England, 2003-2013



Rubella

Three cases of rubella were confirmed in the last quarter of 2013, the same as in the previous quarter, bringing the total infected individuals for the year to 12 (including one infection in pregnancy which affected both a mother and her baby, who had no features of congenital rubella) [1]. Two adult males and the child born following the infection in pregnancy were confirmed this quarter.

Within the EU/EEA countries, Poland reported 99% of the 39,122 rubella cases in the 12 month period to October 2013.

References

1. PHE. [Laboratory confirmed cases of measles, mumps and rubella \(England and Wales\): July to September 2013](#), *HPR* 7(47): immunisation, 22 November 2013.
 2. PHE. [UK measles cases in travellers returning from the Philippines](#). *HPR* 8(5): news, 7 February 2014.
 3. ECDC. [Measles and rubella monitoring: October 2013](#) (updated 6 February 2014).
-

Haemophilus influenzae by age group and serotype (England and Wales): October to December 2013

- ▶ Laboratory reports of Hib by age group and serotype: Q4/2013
- ▶ 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 2013

During 2013 (January to December inclusive) there were a total of 643 laboratory reports of invasive *Haemophilus influenzae*. This represents a 2% increase in cases compared to the previous year (n=633).

Of the samples which underwent serotyping (n=529; 81%), 84% were non-capsulated *Haemophilus influenzae* (ncHi), a further 12% were serotype a, e, or f, and 3% were serotype b (Hib). These results were similar to those reported last year, where 82% of serotyped samples were ncHi, 15% were serotype a, e, or f, and 3% were Hib.

Age-group was well reported (table). During 2013, 86% of cases were aged 15 years and over; 8% were under one year of age; and 3% were among 1-4 year olds and 5-14 year olds respectively. The majority of serotyped cases in children under 15 years were ncHi (n=69/80; 86%).

This age distribution was similar to cases confirmed in 2012, where: 85% were aged 15 years and over; 9% were under one year of age; 4% were among 1-4 year olds; and 2% were among 5-14 year olds.

Age distribution of laboratory-confirmed cases of *Haemophilus influenzae* by serotype and age group, England and Wales, fourth quarter 2013 (and 2012)

Serotype	Age-group					Total, fourth quarter 2013 (2012)
	<1y	1-4y	5-14y	15+	nk	
b	– (–)	– (–)	– (–)	5(9)	– (–)	5 (9)
nc	10 (17)	4 (7)	5 (2)	111 (85)	– (1)	130 (113)
a,e,f	1 (3)	3 (4)	1 (1)	21 (22)	1 (–)	27 (30)
not typed	– (3)	– (1)	2 (–)	26 (30)	– (2)	28 (36)
Total	11(23)	7 (12)	8 (3)	163 (147)	1 (3)	190 (188)

Note: "–" 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 2013

During 2013 (January to December inclusive) there were a total of 643 laboratory reports of invasive *Haemophilus influenzae*. This represents a 2% increase in cases compared to the previous year (n=633).

Of the samples which underwent serotyping (n=529; 81%), 84% were non-capsulated *Haemophilus influenzae* (ncHi), a further 12% were serotype a, e, or f, and 3% were serotype b (Hib). These results were similar to those reported last year, where 82% of serotyped samples were ncHi, 15% were serotype a, e, or f, and 3% were Hib.

Age-group was well reported (table). During 2013, 86% of cases were aged 15 years and over; 8% were under one year of age; and 3% were among 1-4 year olds and 5-14 year olds respectively. The majority of serotyped cases in children under 15 years were ncHi (n=69/80; 86%).

Laboratory-confirmed cases of *Haemophilus influenzae*, by serotype and age group, England and Wales, 2013 (and 2012)

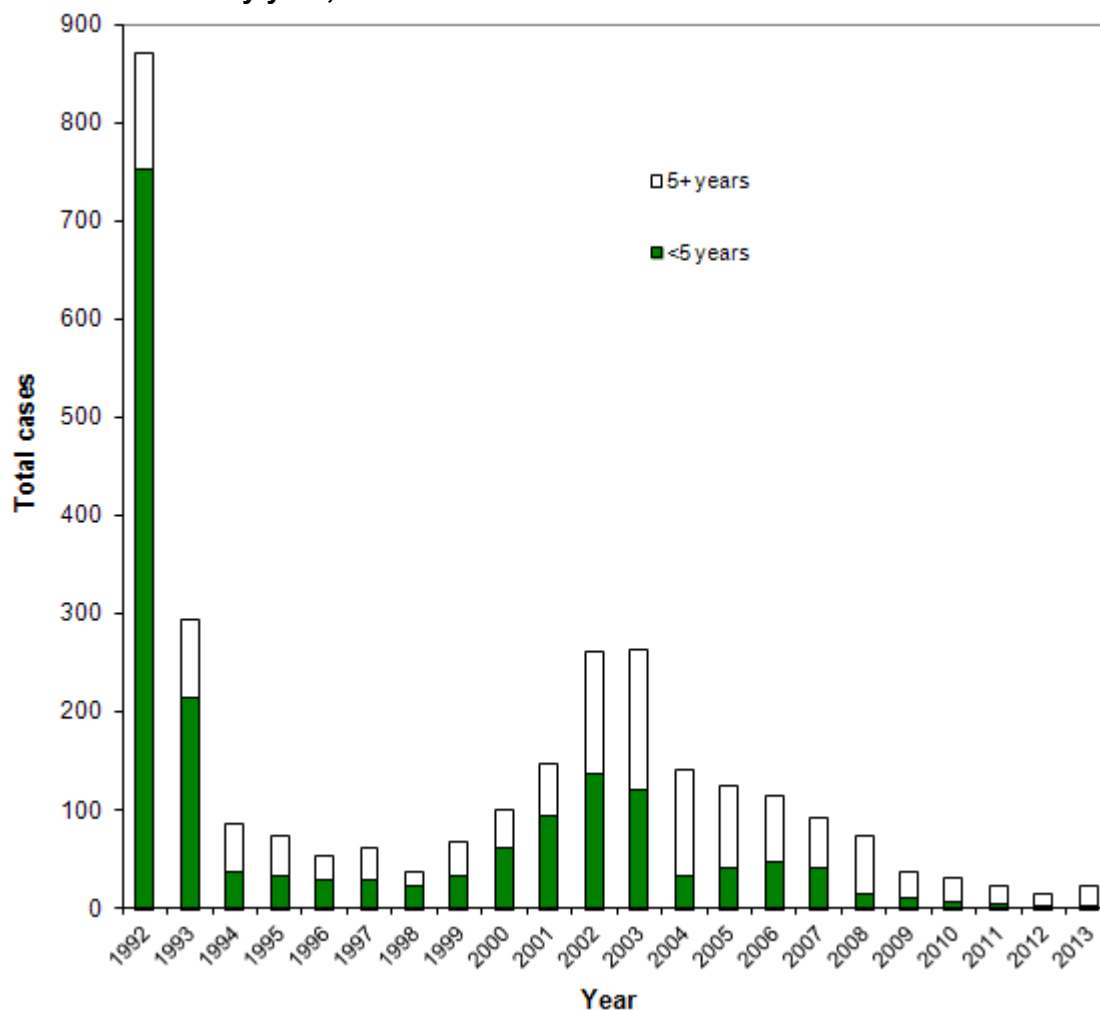
Serotype	Total, all quarters 2013 (2012) by age-group					Total, all quarters 2013 (2012)
	<1y	1-4y	5-14y	15+	nk	
b	2 (1)	– (1)	– (–)	17 (13)	– (–)	19 (15)
nc	41 (41)	15 (16)	13 (6)	375 (341)	2 (4)	446 (408)
a,e,f	1 (5)	5 (5)	3 (4)	54 (62)	1 (–)	64 (76)
not typed	6 (7)	1 (5)	5 (–)	102 (120)	– (2)	114 (134)
Total	50 (54)	21 (27)	21 (10)	548 (536)	3 (6)	643 (633)

Note: "–" 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 2013, invasive Hib disease continued to be well controlled across all age groups.

During 2013, there were two cases of Hib in age appropriately immunised infants, one presented with meningitis, the other with cellulitis, both subsequently recovered. There were no deaths attributed to invasive Hib disease in 2013. In 2012, there were two deaths attributed to invasive Hib disease both among adults aged 65 plus years; the most recent death in a child aged under 16 years attributed to invasive Hib disease was in 2011.

Total Hib cases by year, 1992-2013



References

1. Laboratory reports of *Haemophilus influenzae* by age group and serotype (England and Wales): annual report for 2012, 7(12): immunisation. Available at: <http://www.hpa.org.uk/hpr/archives/2013/hpr1213.pdf>.

Herpes zoster (shingles) vaccine programme 2013/14: provisional coverage data for England to end-January 2014

This report presents provisional vaccine coverage data for the first five months of the Herpes zoster (shingles) vaccination programme that commenced in September 2013. These data show a good start to the programme, with nearly 47% of the routine cohort and over 44% of the catch-up cohort having been vaccinated in the first five months of the programme.

Background

Following recommendation by the Joint Committee on Vaccine and Immunisation, routine vaccination of 70-year-olds with shingles vaccine started on 1 September 2013 [1]. Eligible individuals for the routine cohort are those who were aged 70 on 1 September 2013 (i.e. born between 2 September 1942 and 1 September 1943). A catch-up programme is also running, and in the first year is aimed at those aged 79 on 1 September 2013 (i.e. born between 2 September 1933 and 1 September 1934).

Shingles vaccine supply was subject to temporary limitations due to vaccine availability between September and December [2-4], requiring the capping of orders from individual practices [5]. These problems have now been resolved, though there remains a weekly cap on shingles vaccine orders. The temporary supply problem is not expected to impact on the overall programme as the large number of pre-orders meant that even during the restrictions, significant quantity of vaccine was available in the system, and the programme is annual, rather than seasonal, so eligible patients have until 31 August 2014 to be vaccinated.

Data on vaccine coverage are submitted through the ImmForm website and are monitored, validated and analysed by PHE. This is being carried out via 11 monthly automatic data uploads, and will be followed by an annual survey, to be completed after the first full year of the programme ends on 31 August 2014.

Caveats

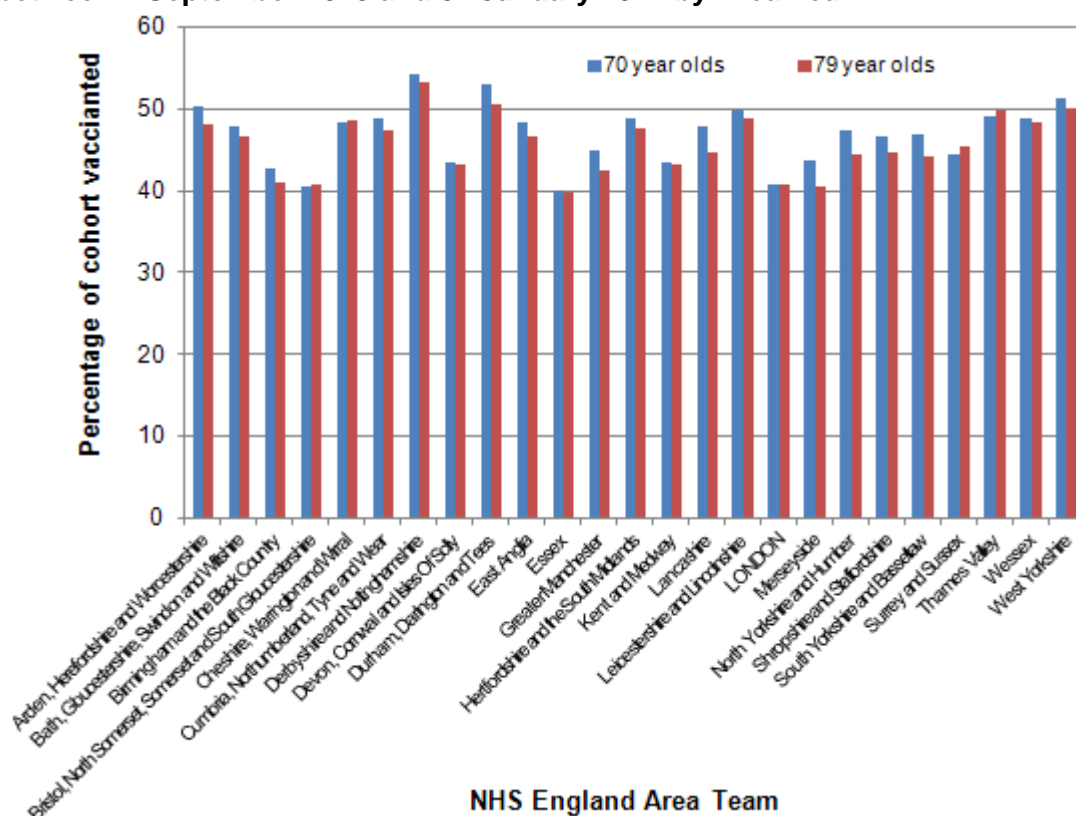
These data are provisional and subject to revision. Only data from those GP practices able to participate in automatic uploading are represented, this varies by AT and ranges between 74.6% and 99.1% of all practices in the AT. The coverage estimate is based on whole population denominator (i.e. all patients registered with the practice and aged either 70 years or 79 years on 1 September 2013), and has not been adjusted to take into account the number of patients who have contraindications to the vaccine. This implies that coverage amongst those who are truly eligible may be higher than that recorded here.

Provisional coverage data

Cumulative shingles vaccine coverage data for the first five months are presented in the figure and table below by NHS England Area Team (AT). The data show:

- the percentage of English GP practices providing data;
- vaccine coverage for each AT for both the routine and catch-up cohorts; and
- vaccine coverage among individuals not eligible for vaccine in the first year of the programme but who are likely to be included in future cohorts.

Percentage of the routine (70 years) and catch-up (79 years) cohorts receiving shingles vaccine between 1 September 2013 and 31 January 2014 by Area Team



Between 1 September 2013 and 31 January 2014, 348,992 doses of Zostavax© were administered by the 90.5% of English general practices that participate in the automatic reporting (table).

The overall coverage has been good in the first five months of the campaign, with 46.6% of the routine (70 year old) cohort and 45.5% of the catch-up cohort (79 year old) having received the shingles vaccine (table). Compared to preliminary data available at 31 December 2013, this is an increase of 6% for the routine cohort and 5.5% for the catch-up cohort, demonstrating continued increase in coverage in the new year.

Vaccine coverage is relatively similar across most ATs ranging between 40% and 50% for the routine cohort (figure). In four ATs, coverage exceeded 50%: Derbyshire and Nottinghamshire; Durham Darlington and Tees; Arden, Hertfordshire and Worcestershire; and West Yorkshire.

Since the start of the programme, the number of practices represented in the automatic upload has increased from 64.7% to 90.5%.

A very small proportion of vaccine has been given to future cohorts (67-69 year olds and 71-78 year olds) across England (table). This represents approximately 4.3% of all vaccine administered since the start of the campaign. Vaccination of non-eligible individuals is highest amongst 69 and 78 year olds at 1.3% and 1.7% respectively. This may be because individuals in these cohorts will turn 70 or 79 during the course of the campaign year, and are mistakenly called up for vaccination. However it is important to remember that as eligibility is based on age on 1 September, these patients are not eligible as part of the 2013/14 campaign, but would have been eligible for the 2014/15 campaign. As only one dose is recommended, those patients who received the vaccine when in a future cohort should not be called up for vaccination again.

Cumulative shingles vaccine coverage in England by age cohorts and Area Team: 1 September 2013 to 31 January 2014

Area Team (code)	Per cent of practices reporting	Percentage of age cohort vaccinated		
		70 year old	79 year old	Future cohorts (67-69 yrs and 71-78 yrs)
Cheshire, Warrington and Wirral (Q44)	91.1	48.5	48.7	0.3
Durham, Darlington and Tees (Q45)	93.1	53.1	50.5	0.3
Greater Manchester (Q46)	74.6	44.9	42.5	0.3
Lancashire (Q47)	96.1	47.8	44.6	0.2
Merseyside (Q48)	75.7	43.8	40.6	0.3
Cumbria, Northumberland, Tyne and Wear (Q49)	83.6	48.9	47.3	0.3
N Yorkshire and Humber (Q50)	87.6	47.4	44.5	0.4
S Yorkshire and Bassetlaw (Q51)	90.3	46.9	44.1	0.3
W Yorkshire (Q52)	99.1	51.4	50.1	0.4
Arden, Herefordshire and Worcestershire (Q53)	92.2	50.3	48.2	0.3
Birmingham and Black Country (Q54)	92.6	42.7	41.0	0.4
Derbyshire and Notts. (Q55)	98.6	54.2	53.2	0.3
East Anglia (Q56)	94.2	48.5	46.7	0.3
Essex (Q57)	97.0	40.1	39.8	0.3
Hertfordshire and the S Midlands (Q58)	94.6	49.0	47.6	0.4
Leicestershire and Lincolnshire (Q59)	97.6	49.8	48.9	0.4
Shropshire and Staffordshire (Q60)	79.4	46.6	44.7	0.2
Bath, Gloucestershire, Swindon and Wiltshire (Q64)	93.4	48.0	46.6	0.3
Bristol, N Somerset, Somerset and S Gloucestershire (Q65)	88.3	40.6	40.9	0.3
Devon, Cornwall and Scilly Isles (Q66)	92.2	43.5	43.2	0.4
Kent and Medway (Q67)	86.6	43.5	43.3	0.2
Surrey and Sussex (Q68)	94.4	44.5	45.5	0.3
Thames Valley (Q69)	93.0	49.1	49.9	0.3
Wessex (Q70)	90.7	49.0	48.5	0.3
London (Q71)	91.3	40.7	40.7	0.6
ENGLAND	90.5	46.6	45.5	0.4

Conclusions

Due to the continued work of all those involved in the delivery of the shingles programme, coverage achieved in the first five months has been good for both the routine and catch-up cohorts. It is anticipated that coverage will continue to rise during the remaining seven months of the 2013/14 programme.

In future, provisional cumulative coverage data will be published on a quarterly basis, with the finalised annual coverage data due to be published in autumn 2014.

References

1. Introduction of shingles vaccine for people aged 70. *HPR 7(35): news*, 30 August 2013. See also: "Introduction of shingles vaccine for people aged 70 and 79 years", DH/PHE guidance, 12 July 2013.
 2. Vaccine Update no 207, <https://www.gov.uk/government/publications/vaccine-update-issue-207-september-2013>.
 3. Vaccine Update no 208, <https://www.gov.uk/government/publications/vaccine-update-issue-208-october-2013>
 4. Vaccine Update no 209, <https://www.gov.uk/government/publications/vaccine-update-issue-209-november-2013>
 5. Vaccine Update no 210, <https://www.gov.uk/government/publications/vaccine-update-issue-210-december-2013--2>.
-