Annual HPV vaccine coverage in England in 2009/2010

Routine programme for year 8 females (12- to 13-years-old)
Catch-up campaign for year 10 females (14- to 15-years-old)
Catch-up campaign for year 11 females (15- to 16-years-old)
Catch-up campaign for year 12 females (16- to17-years-old)
Catch-up campaign for year 13 females (17- to 18-years-old)

This collection has received approval from the Review of Central Returns Steering Committee (ROCR) – ROCR/OR/0228/001MAND

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1 Contents

2 Executive summary

Human papillomavirus (HPV) vaccine was introduced into the United Kingdom (UK) immunisation programme from September 2008 for females up to the age of 18 years.

To assess the coverage of HPV vaccine in England, aggregated primary care trust (PCT) level data were collected using the Department of Health (DH) ImmForm website. Data were collected on the number of females vaccinated by the 152 PCTs (including PCT-based care trusts). ImmForm is designed and managed by DH and the Health Protection Agency (HPA) coordinates and manages the collection and reporting of national data on behalf of DH.

This second annual report on HPV vaccine coverage in England presents data for the academic year 2009/10 (Table 1) and provides a comparison with vaccine coverage achieved during the first year of the programme (academic year 2008/09), and with published data from selected international HPV vaccine programmes.

Key points:

- During the first two years of the HPV programme over 60% of all females born between 1 September 1990 and 31 August 1997 completed the three-dose course of HPV vaccination (Table 1), with the highest coverage achieved in the youngest cohorts.

- The high level of coverage achieved in 2008/09 for the routine cohort has been maintained in 2009/10 with 76.4% of 12- to 13-year-old females completing the three-dose course.

- More than 3 million doses of vaccine were given through the routine and catch-up programmes during 2009/10.

- HPV vaccination status is increasingly being routinely entered onto child health information systems (CHIS) for vaccinations delivered through schools enabling automated extraction of coverage data in some PCTs.

Table 1 HPV vaccine coverage in routine and catch-up cohorts in England: 2008/09 and 2009/10 academic years.

Cohorts			Vaccine coverage %		
Cohort (dates of birth)	Age in academic year 2009/10 (years)	Number in cohort	At least 1 dose	At least 2 doses	3 doses
2009/10 final estimates					
Routine cohort 7 (1 Sep 1996 to 31 Aug 1997)	**12-13**	**304073**	**84.3**	**82.3**	**76.4**
Catch-up cohort 6 (1 Sep 1994 to 31 Aug 1995)	**14-15**	**305232**	**77.5**	**75.2**	**68.5**
Catch-up cohort 5 (1 Sep 1993 to 31 Aug 1994)	**15-16**	**309727**	**77.6**	**75.0**	**68.6**
Catch-up cohort 4 (1 Sep 1992 to 31 Aug 1993)	**16-17**	**319340**	**58.1**	**53.1**	**41.7**
Catch-up cohort 3 (1 Sep 1991 to 31 Aug 1992)	**17-18**	**323826**	**55.6**	**50.3**	**38.9**
Updated final 2008/09 estimates					
2008/09 Routine cohort 1 (1 Sep 1995 to 31 Aug 1996)	**13-14**	**304035**	**89.8**	**87.7**	**84.1**
2008/09 Catch-up cohort 2 (1 Sep 1990 to 31 Aug 1991)	**18-19**	**328004**	**66.1**	**59.3**	**47.4**
2008/09 and 2009/10 combined					
All cohorts 2008/09 - 2009/10 (1 Sep 1990 to 31 Aug 1997)	**12-19**	**2194237**	**72.4**	**68.6**	**60.4**

3 Introduction

The aim of the HPV vaccination programme is to reduce the incidence of cervical cancer in women. The objective of the HPV vaccination programme is to provide three doses of HPV vaccine to females before they reach an age when the risk of HPV infection increases and they are at subsequent risk of cervical cancer.[1]

The programme was implemented following advice from the Joint Committee on Vaccination and Immunisation (JCVI). The JCVI recommended that the HPV vaccine should be offered routinely to females aged 12 to 13 years.[2] The committee also recommended a time-limited catch up vaccination of girls aged 13 to 17 years.[2]

Initially, catch-up campaigns targeting all girls aged from 14 up to 18 years were planned for the academic years 2009/10 and 2010/11. However, in January 2009 these plans were brought forward and PCTs were informed that they could start vaccinating any of the catch-up cohorts as part of an accelerated catch-up campaign from 1 April 2009, completing within the academic year 2009/10.[3] Five PCTs chose not to, or were unable to, accelerate the campaign.

The HPV vaccine used in the UK immunisation programme is Cervarix®, which protects against HPV types 16 and 18. HPV is one of the most common sexually transmitted infections. It is the main cause of cervical cancer and is responsible for nearly 3000 cases every year in the UK, with HPV types 16 and 18 causing over 70% of cases.[4] Immunising females before they become infected will reduce cases of cervical cancer and could eventually prevent up to 400 deaths every year in the UK.[5] A more recent mathematical modelling study of the potential impact of the English vaccination programme projected an eventual reduction in invasive cervical cancer of 63% in women aged 20 to 29 years.[6]

In England, a routine immunisation programme targeting 12- to13-year-old females (school year 8) and a catch-up programme for females aged 17 to 18 years (school year 13) were undertaken during the academic year 2008/09. The majority of PCTs started a phased catch-up programme for females in school years 10 to 13 (born 1 September 1991 to 31 August 1995) during the 2009/10 academic year. Five PCTs will continue to complete part of the catch-up programme during the 2010/2011 academic year. Data were collected over an academic year because the majority of PCTs, 150 of 152, chose to offer the vaccine in school for females in years 8, 10 and 11. For females in years 12 and 13, PCTs chose to offer the vaccine in GP practices and community health clinics or a mix of GPs, schools and clinics.

This second annual report on HPV vaccine coverage in England presents data for the academic year 2009/10, and provides a comparison with HPV vaccine coverage achieved during the first year of the programme, academic year 2008/09, and with published data from selected international HPV vaccine programmes. The report also summarises the methods used for data collection, validation and analysis.

4 Methods

Data

Data sources

The HPV vaccine coverage collection was facilitated by the ImmForm website. The ImmForm system provides a manual on-line data submission function for PCTs, together with relevant survey information and guidance. It is designed and managed by DH. The HPA coordinates and manages the collection, validation, reporting and analysis of national data on behalf of DH. A more detailed explanation of the website and the collection form can be found in Appendices 1 and 2.

Data on HPV immunisations given in schools were collected by school nurses or administrative support staff and passed to the PCT HPV data-provider for collation and data entry. Data on females vaccinated in GP surgeries were collated by PCTs from information submitted by fax, email or telephone. Additionally, some PCTs made use of the optional GP data entry tool on the ImmForm website, which allows GP practices to submit data in the same format as the PCT monthly data submission. PCTs are encouraged to enter vaccination data on to a child health information system (CHIS) prior to submitting data to the ImmForm website and this has become standard practice for an increasing number of PCTs over the course of the first two years of the programme. PCTs have also been urged to ensure that each female's vaccination status is recorded on her GP records and Open Exeter ensuring a link is established with future cervical screening.[7-9]

Data on HPV vaccine coverage were entered manually by a nominated PCT HPV data-provider on to the ImmForm website. During 2009/10, PCTs submitted monthly cumulative data for females who had received at least one, at least two, or all three doses of vaccine in the routine cohort (school year 8, 12- to 13-year-olds) and the catch-up cohorts (years 10 to 13, 14- to 18-year-olds). The cohort denominators for each cohort for each PCT were estimated and fixed for the monthly collections, based on 2008/09 PCT school-roll data for each school year received from the Department for Education (formally the Department for Children, Schools and Families), modified as appropriate, if requested by a PCT. Additionally, PCTs provided an update on the vaccination of two cohorts from the 2008/09 campaign, now school year 9, 13- to 14-year-olds and out of school 18- to 19-year-olds.

PCTs completed the annual survey on the ImmForm website at the end of the 2009/10 academic year. PCTs were required to provide an actual denominator, where possible. Appropriate algorithms were developed for either a schools- or GP-based programme according to the guidance on completing the annual return provided on the DH website.[10]

The annual survey also required PCTs to provide a breakdown of the number of vaccinations given in different settings (i.e. school/GP practice/clinic etc.). These data were also based on manual records collated centrally by PCT HPV data-providers. The monthly surveys were considered as provisional, estimated data. The annual survey is considered as the final data and provides the data for this report.

Data quality

All 152 PCTs in England submitted annual returns. Any PCT that had locally provided annual denominators that varied from the original estimated monthly denominators by +/- 5% was contacted via email and asked to verify their data as part of data validation and quality assurance. The results of this process are provided in Appendix 3.

Definitions

2009/10 cohorts

During the second year of the HPV vaccination campaign, five cohorts were targeted for vaccination:

(i) **The routine cohort** (school year 8): females aged 12-13 years, born between 1 September 1996 and 31 August 1997.

(ii) **Four catch-up cohorts** (school years 10-13): females aged 14-18 years, born between 1 September 1991 and 31 August 1995.

Annual survey denominator

Depending on the type of programme the PCT ran, annual denominators for each cohort could be derived from one of three methods:

Schools-based programme denominator: the school roll for the PCT as of 31 August 2010 was used. This was defined as all females in the appropriate school year attending school in the PCT (including those from the PCT's 'responsible population' and other PCTs), PLUS females in the PCT's 'responsible population' not otherwise offered the vaccine, such as those not on any school roll or those attending a school in another PCT without a schools based programme.

Non-schools-based programme denominator: all females in the appropriate birth cohort as of 31 August 2010 from the PCT's 'responsible population' only, EXCLUDING those on the school roll of neighbouring PCTs with schools-based programmes.

Schools/non-schools mixed approach denominator: all females in the appropriate birth cohort as of 31 August 2010 from the PCT's 'responsible population' only, PLUS females not registered in the PCT that attend schools targeted for vaccination and EXCLUDING those on the school roll of neighbouring PCTs with similar schools based programmes.

A more detailed description of how the annual denominator was determined is available via the DH immunisation website[11]

The PCT 'responsible population' for the HPV data collection is defined as:

- all females in the appropriate age cohort registered with a GP practice whose practice forms part of the PCT, regardless of where they are resident, plus
- any females in the appropriate age cohort not registered with a GP, who are resident within the PCT's statutory geographical boundary.

For the purposes of the data collection, the term 'schools' includes all schools managed by a local authority, voluntary or private agents, grant maintained schools, sixth form colleges, pupil referral units, young offender units and residential units. An up-to-date list of Educational Establishments in England and Wales, maintained by the Department for Education can be found at www.edubase.gov.uk

Annual survey numerators

Three numerators were collected for the number of females who received at least one, at least two, or all three doses, respectively within the period of 1 September 2008 to 31 August 2010. These were used to calculate vaccine coverage by dose, using the appropriate denominator as defined above.

To minimise the numbers of missed or double counted females, providing a more accurate estimate of HPV coverage, the numerators were corrected (where possible) by PCTs to record the number of vaccinations given to females included in the denominator irrespective of who delivered the vaccinations.

A detailed description of how annual numerators were determined is available via the DH immunisation website.[11]

The numerators for the setting in which vaccinations were given (e.g. school, GP practice, community clinic, or other settings) were a simple count of doses administered per location, irrespective of whether dose 1, dose 2 or dose 3.

Coverage

In the 2008/09 report, the term 'uptake' was used to describe the proportion of the eligible population who are vaccinated. In this year's report, the term 'uptake' has been replaced with 'coverage' as this is more widely used in reporting the proportion of a target population known to have received the appropriate vaccine(s).

User feedback

The DH and the HPA welcome feedback on this publication. This can be done either via the ImmForm website login (use the feedback facility, selecting HPV surveys) or alternatively email hpv@hpa.org.uk for comments on the data collection process, immform@dh.gsi.gov.uk for comments on the website or other technical issues or dhmail@dh.gsi.gov.uk for comments regarding policy.

5 Analysis and commentary

Annual data returns were received from all 152 PCTs. For each PCT, the reported annual denominators were compared with the fixed monthly denominator estimates and ONS population estimates for mid-2008. Differences greater than +/– 5% were queried with the PCT data-provider and any anomalies corrected.

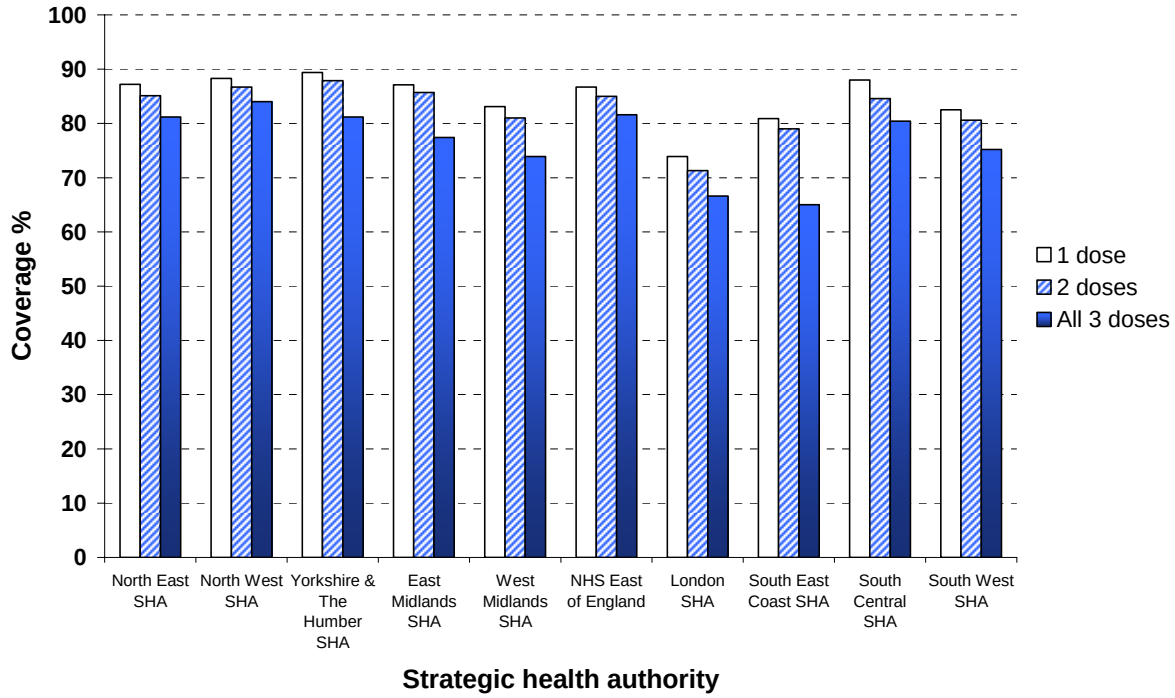
The data tables (pages 19-27) show the reported annual denominators and vaccine coverage of the first, second and third dose of HPV vaccine for females in England by SHA and PCT for the routine and catch-up cohorts. The range of vaccine coverage by dose is given at the national and SHA levels.

Routine cohort 2009/10

In England, **76.4%** of females aged 12-13 years who were eligible to routinely receive HPV vaccine in the academic year 2009/10 completed the three dose course (PCT range 15.4%* to 95.6%). **82.3%** received at least two doses and **84.3%** received at least one dose (Table 1).

Coverage varied by SHA across England ranging from 84% for third dose coverage (North West) to 65% (South East Coast). First dose SHA coverage ranged from 89.4% to 73.9%; second dose from 87.9% to 71.3% (Figure 1).

Figure 1 HPV vaccine coverage for 12- to 13-year-old females in England by dose and SHA in 2009/10



* Rotherham PCT (15.4%) chose to offer HPV vaccine to year 10 and 11 before vaccinating year 8, consequently they were unable to complete vaccinating this cohort before the end of the academic year.

Setting for HPV vaccination delivery

Data were also provided on the setting in which vaccinations were given (e.g. school, GP practice, community clinic, or other settings). One hundred and fifty of the 152 PCTs followed JCVI advice to vaccinate the routine cohort using a schools-based programme. For the routine cohort, 94.4% of vaccinations given to 12- to 13-year-olds were delivered in schools. Most of the 3.9% of 12- to 13-year-olds vaccinated in GP practices were from two PCTs (Derbyshire County and Cornwall and the Isles of Scilly) that chose to offer HPV vaccine through GP practices rather than in schools. A further 1.4% of 12- to 13-year-olds were vaccinated in health clinics, and further 0.3% were vaccinated in 'other' settings.

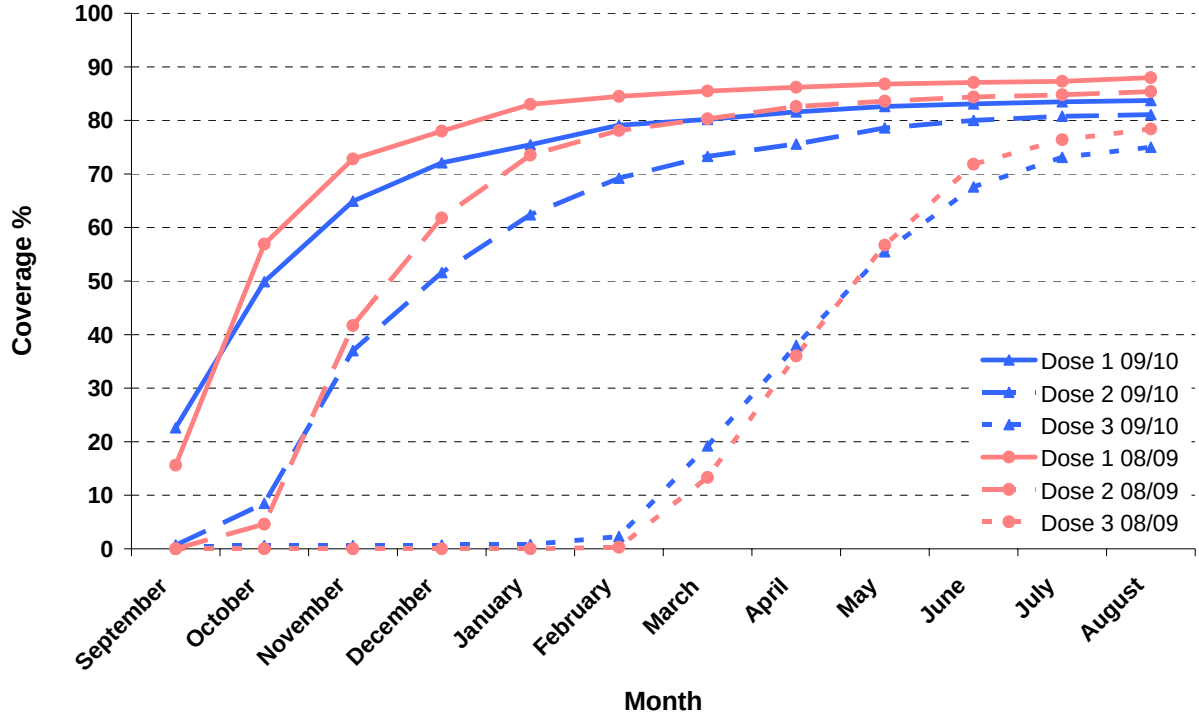
Comparison of 2008/09 and 2009/10 routine cohort vaccine coverage

Vaccine coverage for the 2009/10 routine cohort was 3.6% lower than that achieved in 2008/09.[12] Factors that may have had an impact on the vaccine coverage achieved for the 2009/10 academic year include:

- **the scale of the programme** - during 2009/10 PCTs were asked to accelerate the catch-up programme and vaccinate five school year cohorts rather than two, as in the previous year. Consequently, over 3,000,000 doses of vaccine were administered over the 2009/10 academic year compared with 1,360,000 doses given in 2008/09.
- **H1N1 pandemic vaccination programme** - PCTs had to introduce a pandemic influenza vaccination programme at the same time as running the first and second dose HPV vaccination sessions in schools and GP practices at the beginning of the 2009/10 academic year; this may have had logistical and resourcing implications for the HPV vaccination programmes.
- **adverse media publicity** - at the end of September 2009 there was media coverage of the death of a Coventry school-girl soon after receiving an HPV vaccine. Although this death was subsequently found to be entirely unrelated to the vaccine, many PCTs reported anecdotally that adverse publicity was a major reason given by parents for non-consent around the time of the publicity.
- **data quality** - for the first year of the programme many PCTs were unable to provide an adjusted denominator for their annual return as only manual data systems were available, possibly resulting in over-estimates of vaccine coverage for some PCTs. Data quality has improved for 2009/10 as more PCTs were able to provide an adjusted denominator for their annual return using child health information systems (see page 6 and Appendix 3).

A comparison of provisional monthly coverage data collected over the course of the first two years of the programme shows a slower increase in coverage of the first and second doses in 2009/10 in the winter months, although from April 2010 onwards coverage was closer to that achieved in 2008/09 (Figure 2).

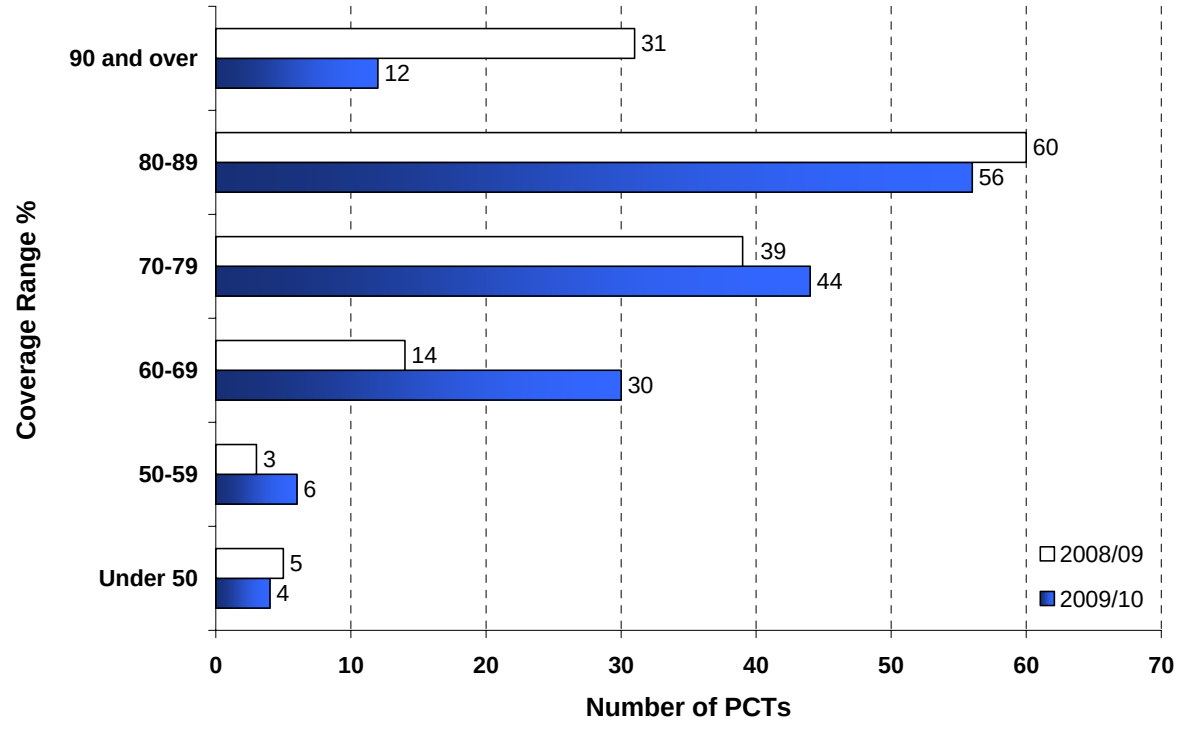
Figure 2 Comparison of HPV vaccine coverage for routine cohorts in 2008/09 and 2009/10 (provisional monthly data)



PCT coverage

As previously mentioned, a number of factors may have contributed to the slightly lower national vaccine coverage for three doses achieved in 2009/10 compared with the previous year.[12] Although fewer than in 2008/09, many PCTs recorded high coverage in the routine cohort: 12 (7.9%) reported 90% coverage or greater, 56 (36.8%) reported 80 to 89%, and 44 (28.9%) reported 70 to79%. Forty PCTs (26.3%) reported coverage below 70% (Figure 3).

Figure 3 PCT coverage for third dose in the routine cohort (12- to 13-year-olds) in 2008/09 and 2009/10



Catch-up cohorts 2009/10

The accelerated catch-up programme targeted all females aged between 14 and 18 years of age. PCTs were given the option to start vaccinating any of the catch-up cohorts from 1 April 2009 and complete within the academic year 2009/10.[3] Five PCTs chose not to implement the entire accelerated catch-up programme during 2009/10; three PCTs offered HPV vaccine to 16- to 18-year-olds only and two PCTs offered the vaccine to 15 to 18 year olds only. All five PCTs will run catch-up campaigns to complete vaccinations during the 2010/11 academic year and therefore vaccine coverage achieved for these catch-up cohorts is expected to increase during the coming year. Updated coverage data will be collected in the annual survey in September 2011 and will be reported on and published in the third annual report.

All 152 PCTs submitted annual data on the catch-up cohorts 3 and 4, 149 PCTs submitted data on catch-up cohort 5 and 147 PCTs submitted data on catch-up cohort 6. In the two younger cohorts (cohorts 5 and 6), coverage of three doses was very similar at just under 70% and for cohorts 4 and 3 third dose coverage was 41.7% and 38.9% respectively (Table 2).

Table 2 HPV vaccine coverage: final estimates for catch-up cohorts in England in 2009/10

Cohorts			Vaccine coverage %		
Cohort (dates of birth)	**Age (years)**	**Number in cohort**	**At least 1 dose**	**At least 2 doses**	**3 doses**
Catch-up cohort 6 (1 Sep 1994 to 31 Aug 1995)	**14-15**	**305232**	**77.5**	**75.2**	**68.5**
Catch-up cohort 5 (1 Sep 1993 to 31 Aug 1994)	**15-16**	**309727**	**77.6**	**75.0**	**68.6**
Catch-up cohort 4 (1 Sep 1992 to 31 Aug 1993)	**16-17**	**319340**	**58.1**	**53.1**	**41.7**
Catch-up cohort 3 (1 Sep 1991 to 31 Aug 1992)	**17-18**	**323826**	**55.6**	**50.3**	**38.9**
All catch-up cohorts 2009/10 (1 Sep 1991 to 31 Aug 1995)	**14-18**	**1258125**	**67.0**	**63.2**	**54.1**

Setting for HPV vaccination delivery

A PCT's HPV programme was classified as either a school or GP-based programme when at least 60% of vaccinations were in that setting; those PCTs where less than 60% were vaccinated in one setting were classified as having a mixed programme. Over 90% of females in years 10 and 11 (14- to 16-year-olds) received their vaccinations in schools/colleges (Table 3). A more mixed approach was taken by PCTs for the years 12 and 13 (16- to 18-year-olds) with these older cohorts predominantly receiving vaccine in general practice as many of these individuals were not in full-time education.

Table 3 HPV vaccine delivery settings for the catch-up cohorts in England in 2009/10

Cohorts		Total number of doses administered by location type							
		In schools / colleges		In GP-practices		In health centres / community clinics		In other	
Cohort	Age (years)	No.	%	No.	%	No.	%	No.	%
Catch-up cohort 6	14-15	611601	90.9	47478	7.1	12035	1.8	1896	0.3
Catch-up cohort 5	15-16	615579	90.1	52012	7.6	12833	1.9	2534	0.4
Catch-up cohort 4	16-17	201443	41.2	252021	51.5	31742	6.5	4198	0.9
Catch-up cohort 3	17-18	162461	34.6	267679	57.0	35350	7.5	4119	0.9

Figures 4 and 5 show the PCT programme (school, GP or mixed delivery model) and HPV vaccination coverage by PCTs as defined by third dose coverage, for the 16- to 17-year-old and 17- to 18-year-old catch-up cohorts respectively.

Figure 4 PCT third dose HPV vaccine coverage achieved by PCT programme-delivery model: 16- to 17-year-olds in 2009/10

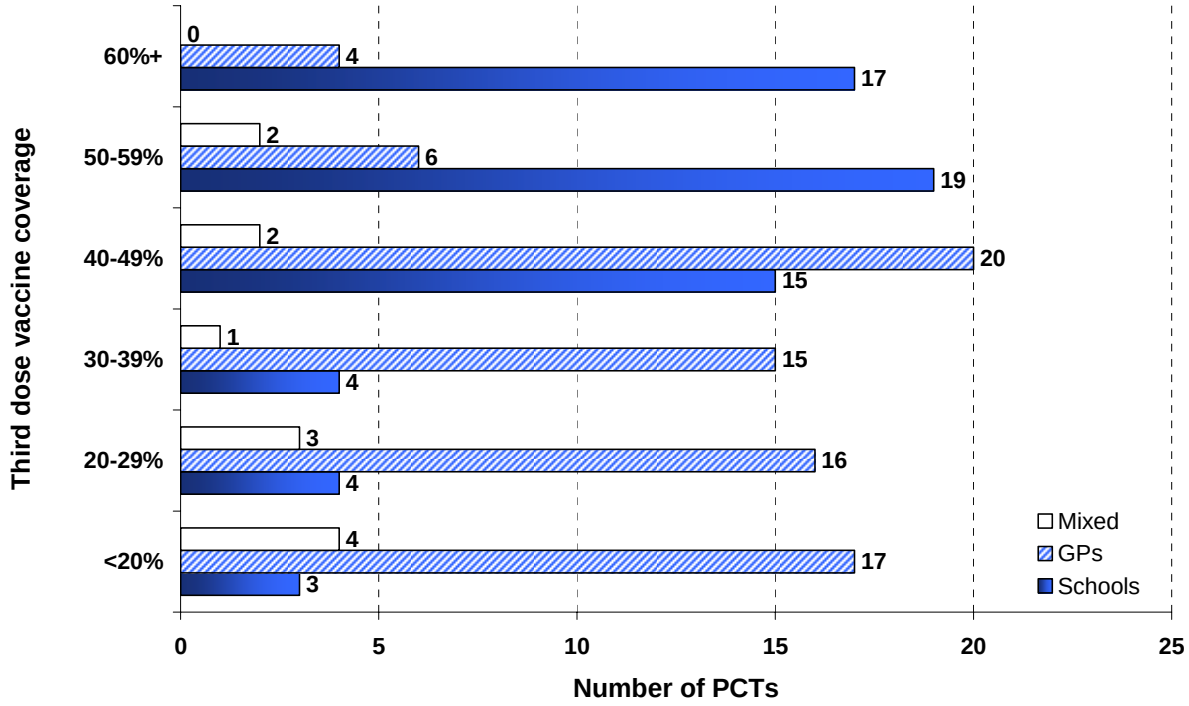
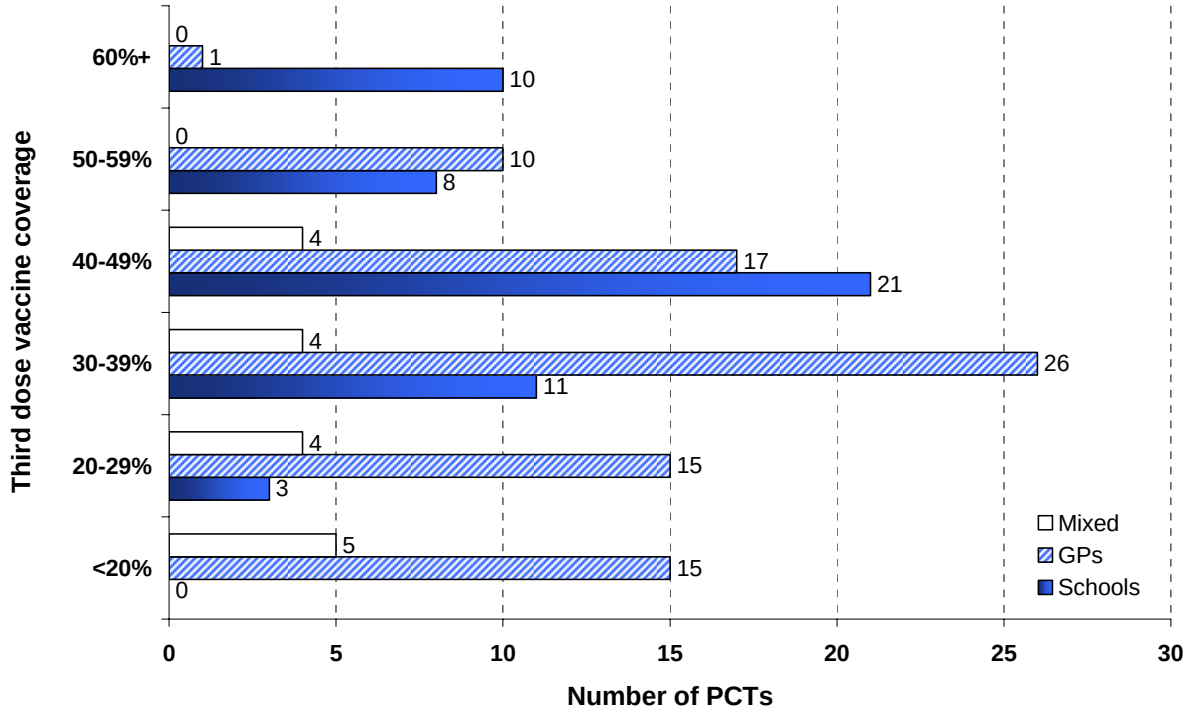


Figure 5 PCT third dose HPV vaccine coverage achieved by PCT programme-delivery model: 17- to 18-year-olds in 2009/10



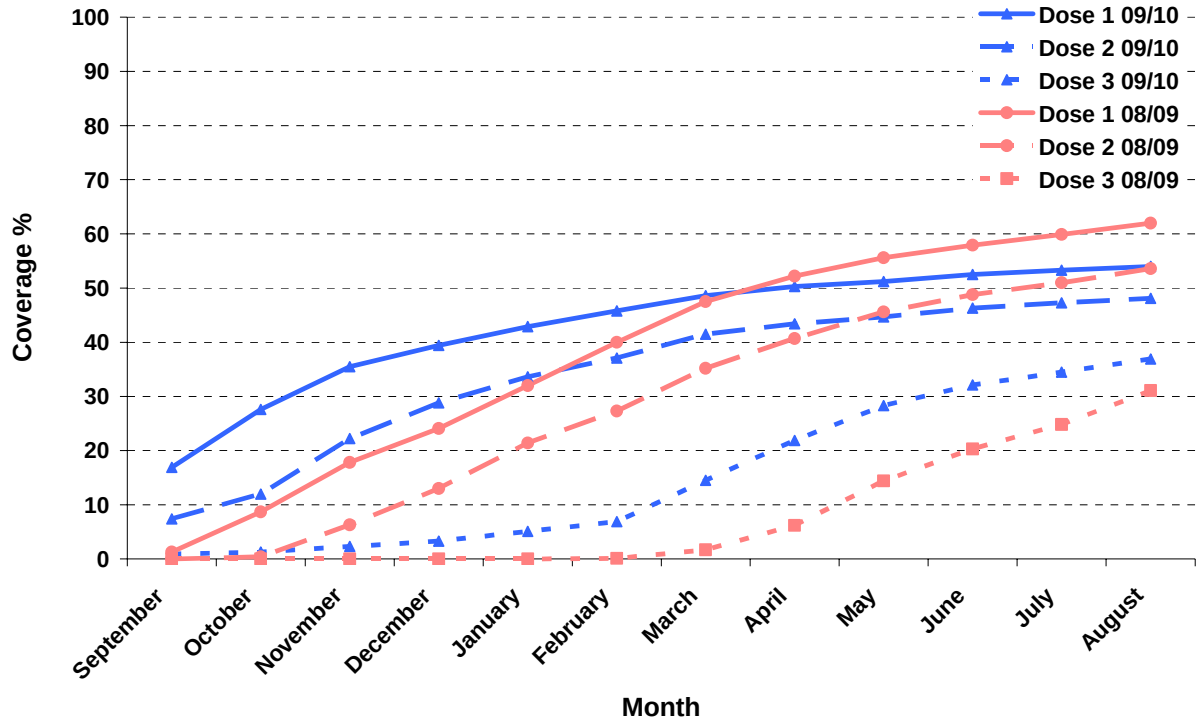
Comparison of year 13 (aged 17 to 18 years) catch-up cohorts in 2008/09 and 2009/10

The proportion of year 13 females (aged 17 to 18 years) completing the three-dose HPV vaccination course in 2009/10 was 7.8% higher than that achieved in 2008/09, despite 5.7% fewer females receiving the first dose.[12] Several factors may have contributed to the differences in vaccine coverage for 17- to 18-year-old females during the second year of the programme:

- the 2008/09 catch-up programme for year 13 was announced in July 2008 (later than the routine programme announcement). PCTs and GPs were better prepared at the start of the second year in September 2009 and more PCTs were able to deliver part of this programme through schools and colleges
- some of the factors that contributed to lower vaccine coverage in the routine cohort (see earlier) may have also contributed to the slowdown in vaccine coverage of the first and second dose for the year 13 cohort from March 2010. In particular, the H1N1 pandemic vaccination programme which was delivered through GP practices may have had an impact
- third dose coverage was less affected as this was scheduled later in the school year and therefore remained consistently higher than in the previous year.

A comparison of provisional monthly coverage data collected over the course of the first two years of the programme shows the increased coverage of the third dose of HPV for year 13 in 2009/10 compared with 2008/09 (Figure 6).

Figure 6 Comparison of HPV vaccine coverage for year 13 (aged 17 to 18 years) catch-up cohorts in 2008/09 and 2009/10 (provisional monthly data)



Updated vaccine coverage for 2008/09 routine and catch-up cohorts

Some females who were due to receive HPV during 2008/09 actually received vaccine during 2009/10 in mop-up sessions. To quantify this, PCTs also provided updated annual coverage data on the two 2008/09 cohorts; these were the routine year 8 cohort (born 1 September 1995 to 31 August 1996) and the year 13 catch-up cohort (born 1 September 1990 to 31 August 1991). During 2009/10 third dose coverage increased by 4.1% to 84.2% for the routine cohort (Figure 7) and by 15.6% to 47.4% for the catch-up cohort (Figure 8).

Figure 7 Improvement in vaccine coverage during 2009/10 for the 2008/09 routine cohort (born 1 September 1995 to 31 August 1996)

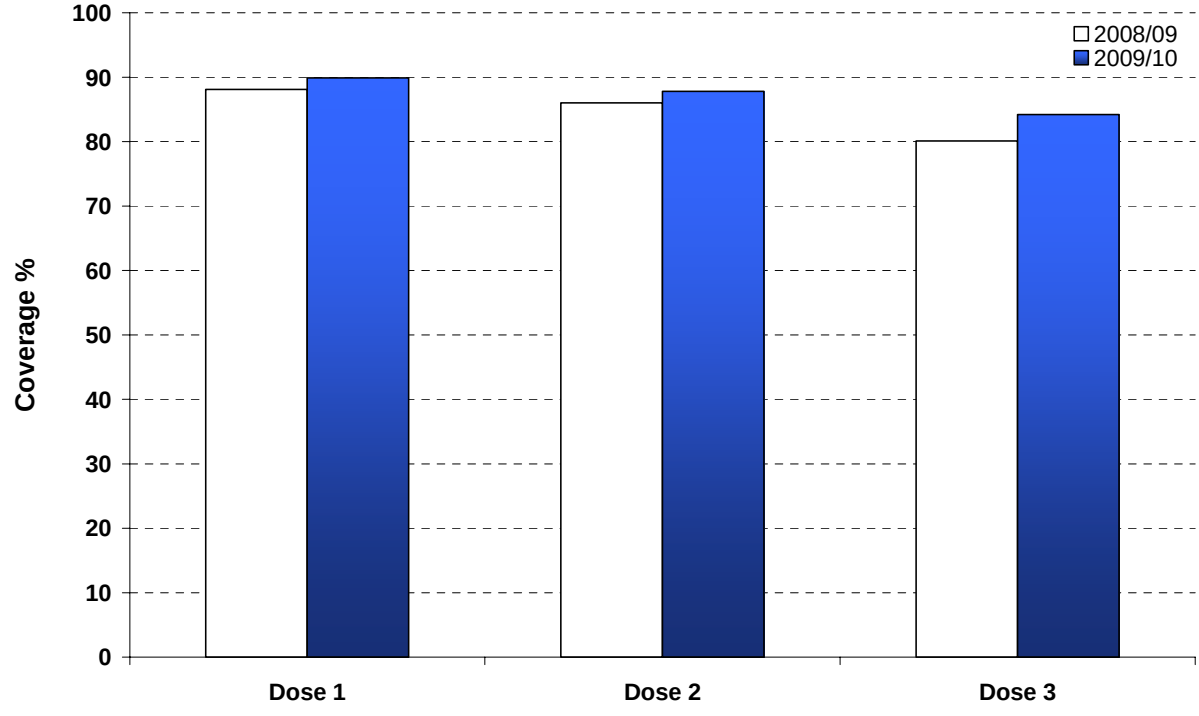
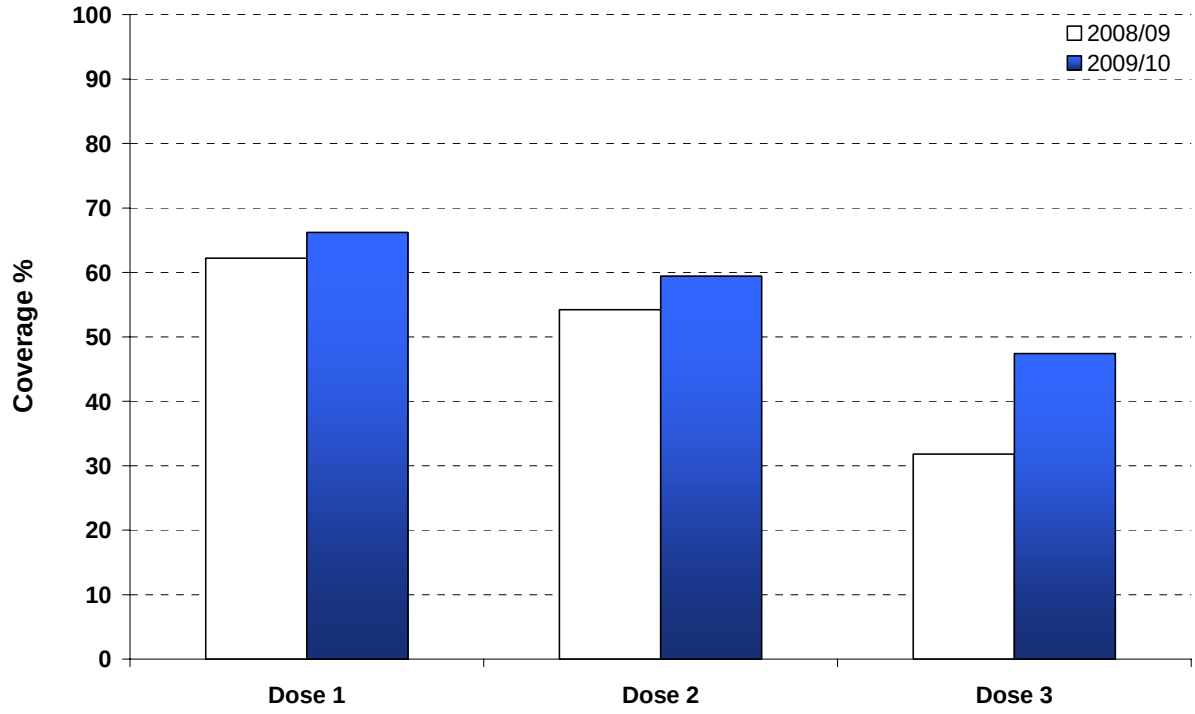


Figure 8 Improvement in vaccine coverage during 2009/10 for the 2008/09 catch-up cohort (born 1 September 1990 to 31 August 1991)



Annual UK HPV vaccine coverage 2009/10

Annual HPV vaccine coverage data for the routine cohort of females aged 12-13 years are available from equivalent reporting systems in all countries in the UK as shown in Table 4.[13-15] Published data for 2008/09 are shown in brackets.[12]

Table 4 Annual UK HPV vaccine coverage for females aged 12-13 years (year 8) by country in 2009/10 (2008/09)

	2009/10 HPV vaccine coverage % (2008/09)		
Country	**At least 1 dose**	**At least 2 doses**	**3 doses**
England	84.3 (88.1)	82.3 (86.0)	76.4 (80.1)
Scotland	92.6 (93.7)	91.1 (92.7)	86.9 (89.4)
Wales	84.5 (87.9)	82.6 (87.0)	77.3 (78.8)
N.I.	86.5 (89.6)	85.3 (85.9)	83.4 (83.9)
UK	**85.0 (88.4)**	**83.1 (86.6)**	**77.5 (80.9)**

International HPV vaccine coverage

Coverage of HPV vaccine for the routine England and UK programmes compares favourably with estimates recorded in other European countries that have introduced HPV vaccination and have a monitoring system implemented. Only Portugal reports coverage similar to that achieved the UK for 2009 (81%).[16] In British Columbia, Canada, third dose coverage for 11- to 12-year-olds for 2009/10 is 62%.[17]

Data for the catch-up programme as presented in this report, shows that England has one of the most successful European programmes to date.[16] It also exceeds estimates of coverage in 2009 for similar age groups in the US where HPV vaccine coverage with one or more doses of HPV among female adolescents aged 13 to 17

years was 44.3%, and with three or more doses was 26.7%[18] and for British Columbian 14- to 15-year-olds where coverage in 2009/10 was around 62%.[17]

6 References

1. Department of Health (2009) The 'Green Book' chapter on Human papillomavirus (HPV). *www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_087787.pdf.* Accessed: Dec. 2010.

2. JCVI (2008) *Statement on HPV vaccination* . www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@ab/documents/digitalasset/dh_094739.pdf. Accessed: Dec. 2010.

3. Salisbury D (2009) Acceleration of the HPV vaccination catch-up campaign . *www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_094026.pdf.* Accessed: Dec. 2010.

4. Department of Health (2008) The human papillomavirus vaccine. The virus, the diseases and the new HPV vaccine. *www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_114262.pdf.* Accessed: Dec. 2010.

5. Jit M, Choi YH and Edmunds WJ (2008) Economic evaluation of human papillomavirus vaccination in the United Kingdom. *BMJ* **337** a769.

6. Cuzick J, Castanon A and Sasieni P (2010) Predicted impact of vaccination against human papillomavirus 16/18 on cancer incidence and cervical abnormalities in women aged 20-29 in the UK. *Br J Cancer* **102**(5): 933-9.

7. Department of Health (2008) Introduction of human papillomavirus vaccine into the national immunisation programme. *www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Professionalletters/Chiefmedicalofficerletters/DH_084542?IdcService=GET_FILE&dID=164669&Rendition=Web.* Accessed: Dec. 2008.

8. Department of Health (2008) Statutory directions for the routine HPV vaccination programme. *www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_087340.pdf.* Accessed: Dec. 2010.

9. Department of Health (2009) HPV vaccination record keeping and reporting. *Vaccine Update* **161**.

10. Department of Health (2010) Human papillomavirus (HPV) vaccine uptake annual survey 2009/10: PCT user guide for determining annual denominators and HPV vaccine uptake on the ImmForm website . *www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_118055.pdf.* Accessed: Dec. 2010.

11. Department of Health (2009) Measuring HPV vaccine uptake: determining the annual denominator. *www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_117147.pdf*. Accessed: Dec. 2010.

12. Sheridan A and White J (2010) Annual HPV vaccine uptake in England: 2008/09 . *www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_111676.pdf*. Accessed: Dec. 2010.

13. Data for Northern Ireland supplied by Dr Neil Irvine Consultant in Health Protection, Public Health Agency, Northern Ireland.

14. Data for Scotland supplied by Information Services Division of Health Protection Scotland Interim data can be found at: www.isdscotland.org/isd/5921.html.

15. Data for Wales supplied by Public Health Wales quarterly immunisation data for third quarter of 2009/10 can be found at : www2.nphs.wales.nhs.uk:8080/VaccinationsImmunisationProgsDocs.nsf/3c04669c9e1eaa880257062003b246b/3e538c1741ff083d802577dc00500080/$FILE/Cov10q3%20(report96).pdf.

16. Dorleans F, Giambi C, Dematte L *et al.* (2010) The current state of introduction of human papillomavirus vaccination into national immunisation schedules in Europe: first results of the VENICE2 2010 survey. *Euro Surveill* **15**(47): 2-5.

17. British Columbia CDC (2010) Grade 6 students with up-to-date immunizations, British Columbia. *www.bccdc.ca/NR/rdonlyres/BDD8BBD7-2C78-4369-B5B1-69D4B039BC3D/0/EPI_Report_PublicGrade6Results_20101103.pdf*. Accessed: Dec. 2010.

18. Stokley S, Dorell C and Yankey D (2010) National, state, and local area vaccination coverage among adolescents aged 13-17 years --- United States, 2009. *MMWR Morb Mortal Wkly Rep* **59**(32): 1018-23.

19. HPA (2009) HPA survey of primary care trusts teenage vaccination programmes (2008) and Health Protection Agency survey of primary care trust teenage vaccination programmes December (2009). *www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/VaccineCoverageAndCOVER/*. Accessed: Dec. 2010.

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8 Data table

Table 5: Annual data, as submitted by PCTs, for first, second and third dose vaccine uptake by 31 August 2010

Organisation name	Cohort 7 (routine vaccination - 12- to 13-year-olds – school year 8)				Cohort 3 (catch-up – 17- to 18-year-olds – school year 13)				Cohort 4 (catch-up – 16- to 17-year-olds – school year 12)				Cohort 5 (catch-up – 15- to -16-year-olds – school year 11)				Cohort 6 (catch-up – 14- to 15-year-olds – school year 10)			
	Total no. in cohort 7	Doses given since 1 Sept 2009			Total no. in cohort 3	Doses given since 1 April 2009			Total no. in cohort 4	Doses given since 1 April 2009			Total no. in cohort 5	Doses given since 1 April 2009			Total no. in cohort 6	Doses given since 1 April 2009		
		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses
		%	%	%		%	%	%		%	%	%		%	%	%		%	%	%
England	**304073**	**84.3**	**82.3**	**76.4**	**323826**	**55.6**	**50.3**	**38.9**	**319340**	**58.1**	**53.3**	**41.7**	**309727**	**77.6**	**75.0**	**68.6**	**305232**	**77.5**	**75.2**	**68.5**
National vaccine uptake range		**36.0-100.0**	**34.2-96.3**	**15.4-95.6**		**0.9-99.0**	**0.9-95.2**	**0.1-74.8**		**0.8-98.9**	**0.4-89.3**	**0.3-76.8**		**0.0-97.3**	**0.0-96.0**	**0.0-95.4**		**0.0-99.1**	**0.0-98.1**	**0.0-94.8**
North East SHA	**15063**	**87.2**	**85.1**	**81.2**	**15852**	**64.9**	**55.2**	**46.0**	**15878**	**71.3**	**63.7**	**46.4**	**15618**	**80.0**	**74.2**	**62.2**	**15393**	**81.2**	**77.3**	**65.1**
SHA vaccine uptake range		**74.5-96.4**	**69.3-94.2**	**66.6-91.1**		**49.3-84.0**	**41.3-64.4**	**34.9-55.7**		**53.8-97.8**	**49.5-73.8**	**29.8-64.6**		**57.9-94.9**	**54.8-89.6**	**32.2-80.7**		**61.6-92.2**	**52.1-91.0**	**34.0-85.5**
NEWCASTLE PCT	1432	93.6	91.1	87.6	1555	55.8	52.4	50.7	1555	71.1	70.1	64.6	1850	63.4	63.4	61.7	1850	70.3	67.8	65.8
NORTH TYNESIDE PCT	1155	86.3	85.6	82.9	1149	51.6	49.3	40.3	1149	62.5	60.1	50.1	1098	84.5	84.1	77.0	1098	88.0	86.2	80.3
HARTLEPOOL PCT	585	96.4	94.2	90.8	450	62.4	61.3	36.2	655	62.7	49.5	29.8	611	90.0	86.3	80.7	619	92.2	91.0	85.5
STOCKTON-ON-TEES tPCT	1139	86.4	86.1	81.9	960	68.6	55.9	45.6	1090	53.8	51.7	38.7	1195	83.3	78.7	74.1	1199	87.2	86.1	74.4
DARLINGTON PCT	709	74.5	69.3	66.6	643	61.6	59.4	47.7	643	72.9	70.0	38.4	541	93.9	89.6	32.2	541	87.1	82.6	34.0
GATESHEAD PCT	1091	93.1	93.0	91.1	1478	49.3	41.3	34.9	1249	54.2	50.1	35.5	1224	61.8	55.6	38.5	1219	61.6	52.1	39.2
SOUTH TYNESIDE PCT	864	84.6	82.6	74.2	1034	56.1	49.5	38.5	996	59.7	57.6	40.0	990	57.9	54.8	33.8	883	75.3	66.7	42.6
SUNDERLAND TEACHING PCT	1700	84.6	83.4	81.4	1623	72.2	64.4	55.7	1573	79.3	65.9	49.7	1557	81.2	69.5	53.1	1478	81.4	74.6	53.7
MIDDLESBROUGH PCT	760	85.9	81.7	75.8	970	65.8	55.9	43.3	970	97.8	72.6	42.0	879	84.1	81.3	71.7	832	87.5	83.7	74.8
COUNTY DURHAM PCT	2840	84.0	82.0	79.5	3024	84.0	58.4	48.0	3024	87.8	73.8	44.8	2800	94.9	80.8	64.3	2800	86.0	82.4	67.8
REDCAR & CLEVELAND PCT	921	84.9	80.1	73.9	995	63.0	57.5	44.4	995	60.6	56.4	37.9	974	79.3	74.6	66.7	969	80.3	77.4	65.0
NORTHUMBERLAND	1867	91.8	89.4	83.2	1971	61.1	56.7	51.0	1979	65.6	63.5	58.5	1899	82.9	80.8	77.1	1905	84.8	82.8	79.4

Table 5 (Continued)

Organisation name	Cohort 7 (routine vaccination - 12- to 13-year-olds – school year 8)				Cohort 3 (catch-up – 17- to 18-year-olds – school year 13)				Cohort 4 (catch-up – 16- to 17-year-olds – school year 12)				Cohort 5 (catch-up – 15- to -16-year-olds – school year 11)				Cohort 6 (catch-up – 14- to 15-year-olds – school year 10)			
	Total no. in cohort 7	Doses given since 1 Sept 2009			Total no. in cohort 3	Doses given since 1 April 2009			Total no. in cohort 4	Doses given since 1 April 2009			Total no. in cohort 5	Doses given since 1 April 2009			Total no. in cohort 6	Doses given since 1 April 2009		
		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses
		%	%	%		%	%	%		%	%	%		%	%	%		%	%	%
North West SHA	**41888**	**88.3**	**86.7**	**84.0**	**46995**	**51.3**	**45.4**	**32.5**	**45281**	**53.7**	**48.0**	**33.4**	**42500**	**84.6**	**82.2**	**78.3**	**41660**	**77.3**	**75.7**	**72.7**
SHA vaccine uptake range		**81.1-95.8**	**79.9-94.4**	**76.7-91.5**		**21.0-79.0**	**18.7-79.0**	**5.1-65.4**		**22.0-94.9**	**17.9-89.3**	**5.5-76.8**		**46.8-97.3**	**40.8-96.0**	**26.1-91.8**		**1.0-95.1**	**0.7-93.8**	**0.2-92.2**
BLACKBURN WITH DARWEN	1103	85.2	83.3	80.3	1374	58.5	51.6	36.9	1117	94.9	89.3	66.1	1058	83.5	80.8	75.0	1086	87.8	85.5	80.6
SALFORD PCT	1198	81.1	79.9	77.5	1200	35.4	34.7	32.5	1256	36.1	34.6	30.3	1290	69.9	67.9	64.5	1232	75.6	73.6	71.1
STOCKPORT PCT	1631	88.5	87.7	87.0	1992	63.7	55.7	34.8	1763	59.0	49.5	22.5	1652	84.8	83.8	82.7	1583	89.5	89.5	89.5
ASHTON, LEIGH & WIGAN †	2008	82.9	82.0	79.4	2120	67.3	60.9	45.7	2073	68.7	61.6	47.3	2069	76.2	74.8	70.1	1997	3.0	2.3	1.0
BLACKPOOL PCT	827	92.1	90.3	89.5	884	34.5	30.3	19.9	884	39.3	33.6	22.7	858	79.1	77.7	75.3	858	84.3	83.4	83.3
BOLTON PCT	1887	90.9	89.6	83.7	1975	61.0	53.5	19.2	1959	65.4	58.4	22.1	1968	90.1	88.3	83.0	1869	87.6	85.9	77.7
WARRINGTON PCT	1209	82.5	81.2	80.8	1251	53.2	46.6	35.3	1280	47.4	38.4	28.1	1192	86.8	85.1	82.2	1271	83.0	82.2	79.9
KNOWSLEY PCT	710	90.4	87.6	77.5	1145	27.3	22.1	12.0	1099	22.0	17.9	7.4	793	90.8	87.6	82.0	778	88.2	83.0	73.1
OLDHAM PCT	1555	94.4	90.2	88.0	1617	46.4	39.5	13.1	1598	51.7	43.6	14.1	1509	91.6	88.3	86.5	1480	92.9	89.5	87.8
BURY PCT	1151	95.5	94.4	86.8	1225	47.1	40.0	25.1	1154	48.6	41.1	26.4	1129	46.8	40.8	26.1	1203	86.5	83.3	79.1
TAMESIDE AND GLOSSOP	1530	92.8	92.4	91.5	1776	44.2	36.0	5.1	1560	57.7	45.7	5.5	1530	96.8	86.3	79.1	1530	88.8	86.5	80.0
CUMBRIA PCT	2803	95.8	93.0	91.2	2932	76.6	68.9	65.4	2664	88.4	84.0	76.8	2940	91.2	85.8	83.4	2720	95.1	93.8	92.2
NORTH LANCASHIRE PCT	1723	86.4	84.9	81.2	2064	53.6	47.5	32.3	2064	48.5	43.9	30.2	1880	77.1	76.4	71.5	1880	74.3	68.3	68.3
CENTRAL LANCASHIRE PCT	2600	89.0	87.0	82.8	2974	56.1	49.9	36.0	2785	57.1	51.3	37.8	2450	97.3	96.0	91.8	2450	92.4	91.0	85.0
EAST LANCASHIRE PCT	2199	90.3	89.7	88.4	2680	21.0	18.7	15.4	2642	31.6	30.6	23.2	2269	90.1	88.5	85.7	2189	89.9	88.9	87.2
SEFTON PCT	1819	90.5	89.0	87.2	1766	54.4	48.3	41.4	1720	55.7	51.7	40.5	1850	87.9	86.2	84.2	1810	87.7	86.0	83.9
WIRRAL PCT	2018	89.0	88.5	87.9	2191	58.9	52.5	40.6	2264	61.6	54.5	42.4	2126	84.1	82.8	81.0	2078	86.0	85.2	84.6
LIVERPOOL PCT	2647	82.4	80.4	77.3	3034	37.9	33.0	21.5	3042	34.0	29.6	18.0	2505	77.0	75.3	70.8	2512	79.8	77.6	72.9
HALTON & ST. HELENS PCT	1825	85.4	80.7	78.9	2177	10.9	10.9	7.4	1943	13.0	12.2	8.8	1807	79.2	77.0	74.4	1717	78.2	77.1	74.7
WEST CHESHIRE PCT	1245	94.9	94.4	90.5	1558	68.4	55.8	48.8	1458	68.3	64.6	49.5	1304	91.0	89.7	84.3	1302	92.1	92.1	85.5

Table 5 (Continued)

Organisation name	Cohort 7 (routine vaccination - 12- to 13-year-olds – school year 8)				Cohort 3 (catch-up – 17- to 18-year-olds – school year 13)				Cohort 4 (catch-up – 16- to 17-year-olds – school year 12)				Cohort 5 (catch-up – 15- to -16-year-olds – school year 11)				Cohort 6 (catch-up – 14- to 15-year-olds – school year 10)			
	Total no. in cohort 7	Doses given since 1 Sept 2009			Total no. in cohort 3	Doses given since 1 April 2009			Total no. in cohort 4	Doses given since 1 April 2009			Total no. in cohort 5	Doses given since 1 April 2009			Total no. in cohort 6	Doses given since 1 April 2009		
		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses
		%	%	%		%	%	%		%	%	%		%	%	%		%	%	%
CENTRAL & EASTERN CHESHIRE	2790	87.8	86.4	83.3	3010	75.3	70.0	62.1	2795	78.5	73.7	64.6	2875	87.5	85.7	81.4	2746	87.1	85.5	82.5
HEYWOOD, MDLT'N & ROCHDALE	1340	91.9	91.6	88.8	1470	62.7	54.6	39.2	1385	61.0	53.0	34.8	1302	90.0	89.2	87.9	1314	92.0	91.1	90.0
TRAFFORD PCT	1472	83.8	83.8	81.5	1434	50.7	50.6	32.1	1434	50.8	42.3	33.2	1471	80.1	79.5	78.3	1463	82.2	82.2	76.9
MANCHESTER PCT †	2598	81.9	80.2	76.7	3146	43.7	36.9	25.2	3342	41.2	34.4	22.1	2673	82.5	79.6	74.9	2592	1.0	0.7	0.2
Yorkshire & The Humber SHA	**30875**	**89.4**	**87.9**	**81.2**	**33475**	**63.0**	**55.4**	**43.3**	**32741**	**64.9**	**58.5**	**47.5**	**32107**	**80.7**	**78.1**	**72.6**	**31315**	**82.9**	**80.7**	**74.1**
SHA Vaccine uptake range		**82.3-93.5**	**79.9-92.5**	**15.4-92.5**		**47.8-75.8**	**42.8-71.8**	**23.9-60.6**		**42.3-85.4**	**42.3-81.3**	**20.0-67.2**		**56.8-96.8**	**54.7-95.4**	**49.8-95.4**		**55.3-99.1**	**54.1-98.1**	**9.0-94.8**
NORTH LINCOLNSHIRE PCT	965	93.4	92.3	89.9	1027	58.7	54.8	40.2	964	58.0	52.6	29.8	1025	85.5	83.2	79.2	993	84.1	80.3	9.0
ROTHERHAM PCT	1827	82.3	79.9	15.4	1698	61.1	58.0	46.0	1698	66.3	63.7	55.9	1827	89.1	87.6	83.2	1827	88.0	87.2	85.5
CALDERDALE PCT	1357	89.7	88.7	83.7	1500	61.9	57.3	42.8	1351	68.3	64.0	52.3	1261	91.7	88.7	78.9	1296	91.4	89.7	83.0
BARNSLEY PCT	1294	92.5	91.1	90.5	1294	54.8	52.1	38.0	1294	71.4	66.8	51.0	1294	91.2	90.3	88.9	1294	96.1	90.9	87.2
LEEDS PCT	4035	92.8	91.8	86.8	4269	56.3	50.0	40.7	4192	71.0	65.3	50.2	4536	83.2	82.0	76.1	4303	89.6	88.4	83.4
KIRKLEES PCT	2385	87.5	86.0	83.8	2481	75.8	71.8	57.1	2471	85.4	81.3	65.3	2504	79.0	76.8	70.4	2434	84.5	82.9	77.6
WAKEFIELD DISTRICT PCT	2199	88.0	87.0	84.0	2452	61.6	56.3	45.2	2279	71.2	64.7	52.7	2330	80.6	78.3	71.7	2244	83.3	82.0	78.3
SHEFFIELD PCT	2895	93.4	88.3	85.6	3292	71.4	47.0	44.1	3211	84.0	52.1	49.0	3160	78.3	68.1	56.5	3039	84.8	77.2	69.5
DONCASTER PCT	1758	93.5	92.5	92.5	2004	63.1	55.2	42.5	2004	58.8	55.1	39.8	1758	96.8	95.4	95.4	1758	99.1	98.1	94.8
NORTH YORKSHIRE & YORK	4636	90.3	88.8	84.8	4986	74.6	62.6	45.5	4986	42.3	42.3	41.6	4636	56.8	54.7	49.8	4636	55.3	54.1	50.1
EAST RIDING OF YORKSHIRE	2079	88.6	88.0	86.1	1911	68.1	66.1	60.6	1894	75.3	73.2	67.2	1824	86.5	85.3	81.2	2146	86.6	85.6	83.3
HULL PCT	1330	87.2	85.9	81.4	1868	52.4	48.8	40.5	1799	64.1	60.9	53.5	1795	81.7	80.1	73.5	1384	82.7	81.2	74.1
BRADFORD & AIREDALE PCT	3144	83.8	83.5	80.9	3336	52.7	48.8	33.0	3241	54.9	50.6	33.1	3147	86.8	85.4	81.8	3029	86.8	85.2	81.2
N.E. LINCOLNSHIRE TRUST	971	86.7	86.4	85.4	1357	47.8	42.8	23.9	1357	48.7	43.9	20.0	1010	83.4	82.6	78.8	932	84.1	82.6	79.7

Table 5 (Continued)

Organisation name	Cohort 7 (routine vaccination - 12- to 13-year-olds – school year 8)				Cohort 3 (catch-up – 17- to 18-year-olds – school year 13)				Cohort 4 (catch-up – 16- to 17-year-olds – school year 12)				Cohort 5 (catch-up – 15- to -16-year-olds – school year 11)				Cohort 6 (catch-up – 14- to 15-year-olds – school year 10)			
	Total no. in cohort 7	Doses given since 1 Sept 2009			Total no. in cohort 3	Doses given since 1 April 2009			Total no. in cohort 4	Doses given since 1 April 2009			Total no. in cohort 5	Doses given since 1 April 2009			Total no. in cohort 6	Doses given since 1 April 2009		
		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses
		%	%	%		%	%	%		%	%	%		%	%	%		%	%	%
East Midlands SHA	**25956**	**87.1**	**85.7**	**77.4**	**28249**	**58.3**	**54.4**	**42.2**	**27533**	**62.1**	**58.4**	**48.3**	**26786**	**85.2**	**82.2**	**73.6**	**25955**	**85.2**	**83.7**	**76.7**
SHA vaccine uptake range		**83.2-100.0**	**79.3-90.5**	**63.3-90.3**		**12.1-78.4**	**10.2-72.9**	**7.2-57.9**		**29.6-81.4**	**25.3-76.8**	**15.6-64.8**		**75.6-89.3**	**74.1-87.5**	**65.2-85.1**		**79.4-92.0**	**77.9-91.0**	**63.0-88.5**
NOTTINGHAM CITY PCT	1467	86.6	85.5	82.5	1937	12.1	10.2	7.2	1690	29.6	25.3	15.6	1719	75.6	74.1	70.6	1591	79.4	77.9	76.1
BASSETLAW PCT	698	100.0	90.5	90.3	701	46.9	45.2	38.9	701	52.4	52.4	37.9	635	88.2	87.1	77.5	635	82.5	82.5	77.3
DERBYSHIRE COUNTY PCT	4126	83.2	79.3	64.8	4479	78.4	72.9	57.9	4174	81.4	76.8	64.8	4150	83.3	79.3	66.5	4150	85.3	82.6	71.3
DERBY CITY PCT	1584	89.1	87.6	81.8	1906	59.4	59.4	40.8	1880	61.2	55.5	29.8	1567	87.7	87.4	80.3	1462	83.0	83.0	75.0
NOTTINGHAMSHIRE COUNTY	3774	89.4	87.6	63.3	4050	48.0	45.0	27.2	4055	47.5	47.5	47.5	3861	83.2	81.6	65.2	3791	85.8	81.1	63.0
LINCOLNSHIRE PCT	4193	85.5	85.4	79.2	4341	60.6	54.6	46.5	4431	58.0	53.5	44.9	4310	84.9	82.5	70.8	4184	87.3	87.3	78.7
LEICESTERSHIRE & RUTLND	4188	90.2	89.6	85.8	4258	74.6	67.6	51.1	4258	73.4	67.0	51.1	4258	89.3	87.5	85.1	4188	92.0	91.0	88.5
LEICESTER CITY PCT	1722	86.5	86.5	84.1	1899	42.7	42.7	30.0	1964	51.2	47.4	35.2	1802	82.6	82.6	76.6	1667	83.4	82.7	81.8
NORTHAMPTONSHIRE PCT	4204	84.7	84.7	84.3	4678	57.7	55.2	48.9	4380	69.8	67.4	61.9	4484	88.3	80.7	76.4	4287	79.6	79.5	79.5
West Midlands SHA	**33246**	**83.1**	**81.0**	**73.9**	**35831**	**57.8**	**52.6**	**37.6**	**34867**	**58.4**	**53.1**	**39.6**	**33886**	**76.6**	**73.9**	**65.3**	**33539**	**78.3**	**75.5**	**67.3**
SHA vaccine uptake range		**63.4-95.3**	**60.8-90.8**	**53.3-85.3**		**37.6-98.2**	**31.0-95.2**	**5.8-67.0**		**14.8-92.9**	**12.7-83.0**	**7.1-74.0**		**57.1-94.2**	**53.3-86.8**	**41.2-81.3**		**60.4-95.6**	**55.3-88.7**	**42.4-80.3**
HEREFORDSHIRE PCT	1014	75.3	74.3	67.1	1184	77.1	72.0	55.8	1184	14.8	12.7	9.0	1014	80.3	78.2	68.3	1014	77.5	74.1	67.7
SOUTH BIRMINGHAM PCT	2747	81.9	79.3	73.8	2248	53.6	47.8	33.9	2154	49.4	46.9	35.5	2788	82.1	79.9	72.7	2804	81.2	77.9	70.8
SHROPSHIRE COUNTY PCT	1758	84.8	83.8	81.5	1750	59.8	55.7	35.4	1640	62.8	56.2	40.5	1734	60.1	55.7	41.2	1704	62.5	58.5	42.4
WALSALL TEACHING PCT	1792	85.7	83.8	73.1	1883	55.2	49.2	39.1	1803	83.0	73.6	59.3	1886	85.3	82.2	71.9	1812	84.2	81.8	64.0
COVENTRY TEACHING PCT	1913	87.3	83.4	69.9	1918	98.2	95.2	67.0	1918	92.9	83.0	74.0	1913	84.5	79.4	67.1	1913	77.8	72.8	63.0
TELFORD AND WREKIN PCT	1027	90.8	87.6	83.2	1154	51.9	47.8	34.0	1137	77.0	58.4	50.8	1117	74.8	73.6	67.9	1084	76.0	73.9	67.9
WOLVERHAMPTON CITY PCT	1452	95.3	90.8	73.7	1461	70.6	62.7	47.9	1494	77.4	68.8	49.2	1475	94.2	86.8	67.8	1403	95.6	88.7	71.6

Table 5 (Continued)

Organisation name	Cohort 7 (routine vaccination - 12- to 13-year-olds – school year 8)				Cohort 3 (catch-up – 17- to 18-year-olds – school year 13)				Cohort 4 (catch-up – 16- to 17-year-olds – school year 12)				Cohort 5 (catch-up – 15- to -16-year-olds – school year 11)				Cohort 6 (catch-up – 14- to 15-year-olds – school year 10)			
	Total no. in cohort 7	Doses given since 1 Sept 2009			Total no. in cohort 3	Doses given since 1 April 2009			Total no. in cohort 4	Doses given since 1 April 2009			Total no. in cohort 5	Doses given since 1 April 2009			Total no. in cohort 6	Doses given since 1 April 2009		
		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses
		%	%	%		%	%	%		%	%	%		%	%	%		%	%	%
HEART OF BIRMINGHAM PCT	1687	63.4	60.8	53.3	1984	30.2	19.8	1.8	1984	8.0	5.3	2.0	1724	57.1	53.3	44.3	1748	60.4	55.3	44.8
DUDLEY PCT	1924	77.8	76.9	76.3	2203	42.8	40.2	28.3	2059	47.1	44.2	28.1	1946	81.9	80.3	77.7	1916	79.9	79.5	78.5
SANDWELL PCT	1620	78.4	72.5	59.4	1818	37.6	31.0	21.2	1813	42.3	31.5	22.8	1693	67.2	62.8	43.2	1692	69.4	64.3	51.5
BIRMINGHAM EAST & NORTH	2281	75.6	72.8	64.7	3053	41.2	34.5	23.0	3029	44.2	39.8	27.1	2281	65.2	61.1	51.1	2178	68.0	64.1	55.5
NORTH STAFFORDSHIRE PCT	1318	86.5	86.4	85.0	1249	72.0	67.3	46.4	1210	75.4	69.3	51.0	1319	82.9	82.8	81.3	1321	82.4	81.8	79.4
STOKE ON TRENT PCT	1362	84.4	84.4	82.7	1629	68.1	62.0	45.4	1656	71.0	64.6	47.9	1353	83.4	83.0	80.3	1352	80.8	80.5	78.0
SOUTH STAFFORDSHIRE PCT	3388	88.5	88.5	75.2	3738	64.4	61.0	47.6	3616	65.0	65.0	46.2	3510	83.7	81.3	68.9	3436	83.4	81.6	70.3
WORCESTERSHIRE PCT	3221	79.7	78.2	74.4	3645	55.9	50.9	38.7	3360	60.4	56.6	42.2	3382	76.0	73.9	68.9	3407	78.6	76.6	71.7
WARWICKSHIRE PCT	3181	85.3	85.3	85.3	3362	64.6	60.0	44.0	3362	64.1	60.7	45.1	3181	66.2	64.9	64.9	3181	83.2	81.3	80.3
SOLIHULL CARE TRUST	1561	94.9	86.0	74.2	1552	57.8	53.5	38.5	1448	63.3	58.1	42.0	1570	84.1	83.6	72.4	1574	85.9	85.0	76.7
NHS East of England	**34127**	**86.7**	**85.0**	**81.6**	**35283**	**60.0**	**55.2**	**46.8**	**35701**	**68.0**	**64.1**	**55.2**	**35017**	**71.5**	**69.8**	**65.4**	**34800**	**70.6**	**68.8**	**66.0**
SHA vaccine uptake range		**72.3-97.8**	**71.9-96.3**	**66.9-95.6**		**35.0-71.6**	**34.4-66.3**	**29.8-63.5**		**51.9-81.4**	**48.5-75.7**	**38.5-71.8**		**0.0-91.6**	**0.0-90.1**	**0.0-83.2**		**0.0-93.8**	**0.0-91.3**	**0.0-88.5**
LUTON PCT ††	1296	84.4	81.6	66.9	1269	35.0	34.4	29.8	1269	55.8	55.6	42.5	1056	4.7	2.8	1.3	1056	4.8	3.0	0.2
SOUTH EAST ESSEX PCT	2281	79.8	78.8	75.6	2680	61.0	57.5	49.8	2658	72.3	68.8	61.1	2313	77.7	76.3	72.2	2279	80.6	79.1	74.6
BEDFORDSHIRE PCT	2274	97.8	94.8	92.7	2575	53.9	46.6	36.6	2645	52.6	48.5	38.5	2445	85.5	83.4	72.5	2360	86.4	81.9	79.5
E & N HERTFORDSHIRE PCT	3291	81.6	80.7	79.2	3570	64.8	58.3	44.9	3492	69.4	63.3	51.0	3606	78.5	77.1	74.1	3434	79.7	78.5	76.2
WEST HERTFORDSHIRE PCT	4018	72.3	71.9	69.9	3276	59.0	56.2	46.2	3677	62.8	59.3	53.0	3952	75.5	74.4	71.3	3896	73.3	72.3	70.5
PETERBOROUGH PCT	1274	77.9	77.2	74.3	1062	42.8	42.0	38.5	1254	51.9	49.8	45.0	1150	89.0	84.1	79.6	1303	75.4	71.6	71.5
CAMBRIDGESHIRE PCT ††	3277	92.0	91.8	90.1	3683	61.7	59.2	55.7	3520	74.8	72.6	68.5	3553	0.0	0.0	0.0	3553	0.0	0.0	0.0
NORFOLK PCT	4154	87.3	85.6	82.1	4245	64.9	58.4	50.8	4245	74.4	68.2	55.7	4267	84.6	80.3	75.7	4267	82.5	81.3	75.4

Table 5 (Continued)

Organisation name	Cohort 7 (routine vaccination - 12- to 13-year-olds – school year 8)				Cohort 3 (catch-up – 17- to 18-year-olds – school year 13)				Cohort 4 (catch-up – 16- to 17-year-olds – school year 12)				Cohort 5 (catch-up – 15- to -16-year-olds – school year 11)				Cohort 6 (catch-up – 14- to 15-year-olds – school year 10)			
	Total no. in cohort 7	Doses given since 1 Sept 2009			Total no. in cohort 3	Doses given since 1 April 2009			Total no. in cohort 4	Doses given since 1 April 2009			Total no. in cohort 5	Doses given since 1 April 2009			Total no. in cohort 6	Doses given since 1 April 2009		
		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses
		%	%	%		%	%	%		%	%	%		%	%	%		%	%	%
GT YARMOUTH & WAVENEY	1196	97.4	96.3	95.6	1339	68.9	66.3	63.5	1339	77.9	74.2	71.8	1196	85.2	83.8	83.0	1196	90.6	89.6	88.5
SUFFOLK PCT	3465	89.4	89.0	86.7	3377	61.9	57.1	40.5	3417	63.2	60.3	45.5	3473	86.7	85.3	81.5	3532	86.7	86.2	83.9
WEST ESSEX PCT	1495	85.7	81.3	73.4	1705	45.5	45.0	33.2	1725	65.5	61.9	58.4	1381	82.5	82.5	65.7	1435	59.0	58.7	55.3
NORTH EAST ESSEX PCT	1729	94.6	85.9	79.6	1899	71.6	62.7	60.2	1899	81.4	75.7	69.0	2013	79.4	76.5	71.5	2013	83.9	75.9	71.7
MID ESSEX PCT	1924	90.9	90.3	89.1	2315	65.4	53.5	48.7	2315	62.7	60.7	53.5	2174	76.0	76.0	74.4	2174	78.0	76.4	76.4
SOUTH WEST ESSEX PCT	2453	93.9	90.3	84.8	2288	56.9	54.7	46.8	2246	77.8	72.9	62.2	2438	91.6	90.1	83.2	2302	93.8	91.3	85.4
London SHA	**41679**	**73.9**	**71.3**	**66.6**	**43963**	**39.6**	**35.3**	**26.6**	**43911**	**40.2**	**35.6**	**26.8**	**42310**	**62.7**	**60.0**	**54.7**	**41850**	**64.8**	**62.2**	**56.6**
SHA vaccine uptake range		**36.0-95.6**	**34.2-89.1**	**29.9-81.6**		**0.9-99.0**	**0.9-81.0**	**0.1-67.7**		**0.8-98.9**	**0.4-81.8**	**0.3-64.9**		**0.0-95.1**	**0.0-95.1**	**0.0-95.1**		**0.0-97.5**	**0.0-94.1**	**0.0-80.6**
HAVERING PCT	1495	86.8	85.5	81.6	1506	70.0	69.3	61.5	1618	73.4	70.6	64.9	1585	84.1	82.5	78.9	1511	85.0	80.6	80.6
KINGSTON PCT	996	51.0	45.6	44.6	1092	62.6	62.0	55.0	1092	63.2	61.3	57.5	996	71.4	67.3	65.8	996	73.5	70.6	69.9
BROMLEY PCT	1925	81.7	81.5	77.0	1827	42.6	37.8	27.3	1827	47.1	40.2	28.3	1925	73.2	70.6	61.2	1925	69.7	67.8	64.7
GREENWICH TEACHING PCT	1358	74.7	70.4	67.8	1550	59.3	33.9	12.8	1155	65.6	60.6	49.9	1304	67.3	64.3	60.7	1336	65.7	62.4	57.9
BARNET PCT	1842	68.9	61.6	59.4	2054	16.5	14.7	5.0	2115	17.6	15.2	2.9	1848	58.7	56.6	52.5	1849	58.9	57.7	53.4
HILLINGDON PCT	1490	83.1	81.4	76.6	1620	25.8	25.8	17.5	1620	28.7	25.8	17.5	1506	82.2	79.7	73.8	1454	81.2	80.0	73.9
ENFIELD PCT	1709	70.1	69.0	65.7	1740	44.4	43.0	37.9	1740	41.8	41.8	10.4	1710	65.6	59.8	57.0	1647	63.5	62.6	58.7
BARKING AND DAGENHAM	1073	69.2	69.0	66.3	1206	30.9	30.9	30.9	685	83.2	72.6	62.3	1066	95.1	95.1	95.1	1054	80.7	80.7	40.3
CITY & HACKNEY TEACHING	1274	71.4	64.4	63.3	1213	66.2	42.0	21.8	1108	40.6	30.6	17.1	1215	59.8	55.8	55.4	1289	66.5	54.8	48.3
TOWER HAMLETS PCT	1274	86.7	84.5	75.0	1250	53.2	46.7	33.9	1250	48.2	42.4	31.1	1208	91.6	85.8	78.8	1146	97.5	94.1	79.6
NEWHAM PCT	1760	72.0	70.7	68.0	1660	34.4	30.1	25.4	1660	8.3	7.2	7.2	1760	63.4	60.7	53.2	1760	71.9	70.7	65.8

Table 5 (Continued)

Organisation name	Cohort 7 (routine vaccination - 12- to 13-year-olds – school year 8)				Cohort 3 (catch-up – 17- to 18-year-olds – school year 13)				Cohort 4 (catch-up – 16- to 17-year-olds – school year 12)				Cohort 5 (catch-up – 15- to -16-year-olds – school year 11)				Cohort 6 (catch-up – 14- to 15-year-olds – school year 10)			
	Total no. in cohort 7	Doses given since 1 Sept 2009			Total no. in cohort 3	Doses given since 1 April 2009			Total no. in cohort 4	Doses given since 1 April 2009			Total no. in cohort 5	Doses given since 1 April 2009			Total no. in cohort 6	Doses given since 1 April 2009		
		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses
		%	%	%		%	%	%		%	%	%		%	%	%		%	%	%
HARINGEY TEACHING PCT ††	1205	63.2	61.4	59.5	1272	34.1	32.6	27.2	1307	37.0	34.9	26.7	1155	0.0	0.0	0.0	1155	0.0	0.0	0.0
HAMMERSMITH & FULHAM	948	58.3	56.8	55.5	791	0.4	0.4	0.4	791	1.4	1.4	1.3	889	46.5	45.6	43.3	886	51.7	50.3	48.5
EALING PCT	1458	70.6	68.4	67.6	1647	29.8	28.5	21.0	1647	33.1	31.1	27.7	1683	45.7	43.3	42.7	1683	50.1	47.9	47.7
HOUNSLOW PCT	1500	95.6	89.1	68.0	1265	58.7	54.9	34.9	1265	49.9	46.1	34.9	1359	50.0	46.4	28.2	1359	49.1	45.0	36.0
BRENT TEACHING PCT	1298	82.6	81.5	79.5	1579	44.7	42.3	40.2	1579	57.2	52.1	50.2	1499	76.7	73.7	71.4	1499	78.1	77.1	70.9
HARROW PCT	1206	67.3	67.1	63.5	1422	21.9	21.2	19.0	1422	24.2	24.1	22.9	1120	40.8	39.9	37.7	1057	44.0	43.5	40.4
CAMDEN PCT	907	68.8	67.6	63.5	900	37.0	32.8	22.7	1100	35.3	29.8	21.3	929	59.6	56.3	42.8	904	57.3	57.3	49.4
ISLINGTON PCT	671	85.5	82.0	78.8	909	1.2	1.0	0.1	909	0.8	0.4	0.3	751	61.5	58.9	58.9	751	59.5	59.0	59.0
CROYDON PCT	2046	73.0	71.0	63.5	2208	29.7	24.9	13.3	2208	31.4	25.7	15.1	2046	65.2	63.0	57.5	2046	67.2	65.2	60.1
KENSINGTON AND CHELSEA	720	36.0	34.2	29.9	675	27.9	26.5	23.0	675	32.1	29.6	22.4	720	30.0	29.3	25.3	720	31.1	30.6	26.5
WESTMINSTER PCT	1030	74.1	68.9	62.1	1066	14.4	13.5	8.0	881	20.9	17.1	10.6	1040	58.6	54.5	48.1	996	63.8	58.0	47.3
LAMBETH PCT	1030	76.4	75.3	71.0	1345	14.8	9.7	6.2	1345	13.4	10.5	6.2	1024	62.8	58.7	56.8	984	69.0	68.3	68.3
SOUTHWARK PCT	1417	77.3	73.5	63.6	1400	35.5	28.6	20.1	1465	30.0	24.8	17.4	1463	66.7	62.1	53.0	1513	80.2	76.5	68.5
LEWISHAM PCT	1194	69.4	67.3	61.9	1200	26.7	22.6	14.3	1200	23.8	22.0	11.2	1209	69.6	69.6	69.6	1130	64.3	62.7	57.2
WANDSWORTH PCT	1105	70.6	68.2	67.1	1028	56.2	56.1	48.0	1028	66.9	44.3	44.3	1500	43.2	43.1	39.5	1500	48.1	44.5	43.3
RICHMOND & TWICKENHAM	830	78.9	78.9	78.9	930	60.1	51.3	28.2	900	58.0	49.6	16.9	790	60.0	60.0	60.0	800	53.9	53.9	53.9
SUTTON AND MERTON PCT	2277	74.5	71.8	63.9	2202	40.6	35.5	22.5	2202	47.1	42.6	29.4	2274	63.0	56.6	41.6	2277	66.6	63.3	52.7
REDBRIDGE PCT	1621	72.9	70.5	67.2	1675	87.0	81.0	67.7	1675	69.0	57.3	46.5	1621	72.3	67.1	61.8	1621	71.5	69.6	63.4
WALTHAM FOREST PCT	1375	68.5	67.4	64.8	2280	41.2	37.8	31.5	2991	46.0	41.8	35.6	1470	59.4	57.8	54.4	1357	68.2	66.9	64.4
BEXLEY CARE TRUST	1645	81.3	76.2	69.8	1451	39.8	37.7	35.3	1451	50.3	45.3	41.0	1645	67.4	67.4	57.4	1645	79.3	70.4	65.4

Table 5 (Continued)

Organisation name	Cohort 7 (routine vaccination - 12- to 13-year-olds – school year 8)				Cohort 3 (catch-up – 17- to 18-year-olds – school year 13)				Cohort 4 (catch-up – 16- to 17-year-olds – school year 12)				Cohort 5 (catch-up – 15- to -16-year-olds – school year 11)				Cohort 6 (catch-up – 14- to 15-year-olds – school year 10)			
	Total no. in cohort 7	Doses given since 1 Sept 2009			Total no. in cohort 3	Doses given since 1 April 2009			Total no. in cohort 4	Doses given since 1 April 2009			Total no. in cohort 5	Doses given since 1 April 2009			Total no. in cohort 6	Doses given since 1 April 2009		
		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses
		%	%	%		%	%	%		%	%	%		%	%	%		%	%	%
South East Coast SHA	**26392**	**80.9**	**79.0**	**65.0**	**27597**	**50.0**	**46.3**	**33.7**	**27206**	**48.0**	**44.1**	**30.6**	**25802**	**77.1**	**74.8**	**66.2**	**25685**	**77.5**	**75.4**	**59.9**
SHA vaccine uptake range		**74.1-94.0**	**72.4-92.7**	**41.5-90.0**		**34.4-61.8**	**34.0-56.3**	**10.4-45.9**		**19.4-64.7**	**19.4-59.2**	**10.1-46.1**		**71.3-86.2**	**66.9-84.7**	**50.5-81.1**		**70.0-84.0**	**62.1-82.2**	**39.8-77.9**
MEDWAY PCT	1670	84.4	80.8	76.7	1882	56.7	50.2	34.9	1757	57.4	51.8	33.8	1713	81.9	78.1	69.3	1709	84.0	80.9	75.2
BRIGHTON AND HOVE CITY	1165	94.0	92.7	90.0	1396	52.7	44.0	28.5	1396	50.7	43.5	28.7	1177	86.2	84.7	81.1	1177	80.7	80.0	77.0
SURREY PCT	6908	74.1	72.4	61.8	6786	45.8	42.3	29.0	6847	45.6	42.2	30.1	6646	75.3	72.0	62.3	6643	72.6	71.0	62.3
WEST SUSSEX PCT	4651	79.8	78.6	74.1	5116	60.6	56.1	43.5	4765	62.2	58.0	45.6	4594	79.9	79.4	75.4	4484	82.7	80.8	77.9
E SUSSEX DOWNS & WEALD	2086	75.9	74.4	70.8	2062	46.6	45.9	12.6	2086	46.2	40.0	12.2	2086	73.1	70.8	66.7	2086	72.9	71.6	45.6
HASTINGS & ROTHER PCT	1125	80.0	79.7	79.6	1130	39.3	34.0	10.4	1130	43.4	38.0	10.1	1125	75.2	73.5	70.9	1125	70.0	62.1	48.7
WEST KENT PCT	4137	87.8	86.1	41.5	4452	61.8	56.3	45.9	4452	64.7	59.2	46.1	4137	81.1	80.5	71.8	4137	83.2	82.2	39.8
EASTERN & COASTAL KENT	4650	83.8	80.6	64.8	4773	34.4	34.4	34.4	4773	19.4	19.4	14.0	4324	71.3	66.9	50.5	4324	74.8	71.8	55.9
South Central SHA	**24040**	**88.0**	**84.6**	**80.4**	**25467**	**60.3**	**56.1**	**44.9**	**25122**	**61.8**	**58.3**	**47.7**	**24313**	**84.5**	**82.5**	**78.5**	**24194**	**85.5**	**82.2**	**76.9**
SHA vaccine uptake range		**85.0-90.9**	**81.5-89.7**	**73.8-88.3**		**36.0-74.9**	**34.9-71.1**	**25.8-56.7**		**31.7-81.7**	**30.0-78.1**	**23.3-63.8**		**81.4-88.2**	**79.8-86.6**	**73.4-84.1**		**81.1-91.1**	**77.9-89.6**	**70.4-87.8**
MILTON KEYNES PCT	1421	89.6	87.1	82.8	1571	48.3	44.2	34.0	1571	55.1	51.7	42.1	1346	85.1	82.7	73.4	1348	90.3	87.4	80.7
PORTSMOUTH CITY PCT	1093	90.1	88.7	84.6	994	46.1	42.9	25.8	963	44.7	42.9	24.4	1167	84.4	83.1	78.5	1131	88.1	86.6	81.8
SOUTHAMPTON CITY PCT	1194	86.3	84.8	73.8	1441	53.7	47.4	38.4	1380	60.1	52.4	42.9	1196	85.3	81.6	74.4	1227	85.7	83.5	73.8
HAMPSHIRE PCT	7659	86.2	83.0	75.7	8088	69.4	64.5	55.0	8088	70.7	66.6	56.7	7623	81.9	79.8	75.0	7623	81.1	77.9	70.4
BUCKINGHAMSHIRE PCT	3257	90.9	81.5	79.9	3260	61.3	57.8	44.6	3260	61.1	61.1	52.9	3257	86.0	83.2	80.1	3257	88.6	78.9	72.0
OXFORDSHIRE PCT	3562	90.6	89.7	88.3	3873	74.9	71.1	56.7	3757	81.7	78.1	63.8	3675	88.2	86.6	84.1	3549	91.1	89.6	87.8
BERKSHIRE WEST PCT	2763	86.8	83.6	82.2	2956	46.8	41.3	30.6	2842	47.6	41.4	29.7	2869	86.9	84.7	82.9	2920	83.2	81.4	80.4
BERKSHIRE EAST PCT	2364	86.7	84.0	81.8	2434	36.0	34.9	27.2	2434	31.7	30.0	23.3	2355	81.4	81.4	77.5	2355	84.6	83.2	78.9
ISLE OF WIGHT PCT	727	85.0	83.5	82.3	850	71.2	65.5	50.7	827	59.9	56.3	45.7	825	85.3	83.0	80.4	784	88.4	85.1	82.5

Table 5 (Continued)

Organisation name	Cohort 7 (routine vaccination - 12- to 13-year-olds – school year 8)				Cohort 3 (catch-up – 17- to 18-year-olds – school year 13)				Cohort 4 (catch-up – 16- to 17-year-olds – school year 12)				Cohort 5 (catch-up – 15- to -16-year-olds – school year 11)				Cohort 6 (catch-up – 14- to 15-year-olds – school year 10)			
	Total no. in cohort 7	Doses given since 1 Sept 2009			Total no. in cohort 3	Doses given since 1 April 2009			Total no. in cohort 4	Doses given since 1 April 2009			Total no. in cohort 5	Doses given since 1 April 2009			Total no. in cohort 6	Doses given since 1 April 2009		
		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses		Dose 1	Dose 1&2	All 3 doses
		%	%	%		%	%	%		%	%	%		%	%	%		%	%	%
South West SHA	**30807**	**82.5**	**80.6**	**75.2**	**31114**	**63.0**	**57.6**	**47.1**	**31100**	**66.4**	**62.1**	**52.2**	**31388**	**80.3**	**77.5**	**70.7**	**30841**	**81.7**	**79.2**	**73.1**
SHA vaccine uptake range		**72.7-91.3**	**70.5-90.8**	**56.9-89.6**		**35.1-96.4**	**29.7-89.2**	**15.1-74.8**		**33.5-90.3**	**28.9-85.1**	**14.2-76.2**		**67.6-90.9**	**63.9-90.7**	**55.0-89.1**		**69.8-93.5**	**66.8-92.9**	**57.3-92.1**
SOUTH GLOUCESTERSHIRE	1540	83.0	81.6	76.7	1528	37.4	31.9	20.2	1544	35.7	31.3	17.7	1617	77.2	74.5	67.2	1633	82.4	80.1	72.4
PLYMOUTH TEACHING PCT	1514	83.6	80.3	73.7	1560	69.2	57.1	34.6	1551	73.6	69.5	56.9	1526	82.2	78.8	67.4	1544	78.1	75.0	66.4
BATH & N. E. SOMERSET PCT	1407	79.5	78.4	76.3	1175	55.1	48.7	35.6	1079	59.9	53.9	40.1	1474	81.4	80.0	75.4	1383	80.0	79.0	77.2
SWINDON PCT	1119	91.3	90.8	89.6	1043	67.0	66.3	62.7	1062	72.7	71.7	69.6	1161	90.9	90.7	89.1	1161	93.5	92.9	92.1
NORTH SOMERSET PCT	1160	82.3	81.4	78.1	1270	47.6	43.1	36.0	1270	51.6	47.9	41.3	1160	80.8	79.2	74.1	1160	87.3	86.1	80.9
GLOUCESTERSHIRE PCT	3639	84.3	82.7	81.3	2563	96.4	89.2	74.8	2868	90.3	85.1	76.2	3760	77.6	75.5	69.6	3660	77.2	76.1	69.3
BRISTOL PCT	2069	72.7	70.5	62.8	2385	35.1	29.7	15.1	2259	33.5	28.9	14.2	2003	67.6	63.9	55.0	1969	69.8	66.8	57.3
WILTSHIRE PCT	3330	76.6	74.6	69.3	3205	51.2	49.5	41.6	3214	61.4	60.7	51.6	3318	76.9	73.2	65.8	3298	76.3	75.8	69.2
SOMERSET PCT	3105	86.7	83.8	77.2	3401	72.7	63.5	49.6	3369	76.3	67.1	53.4	3398	84.6	80.1	72.4	3191	85.5	81.7	74.1
DORSET PCT	2443	84.6	83.3	78.3	2382	64.9	59.8	52.0	2461	66.3	62.0	52.7	2117	89.4	85.1	76.2	2215	88.7	79.1	76.9
BOURNEMOUTH & POOLE	1668	85.0	84.2	82.3	2020	61.0	57.2	47.2	1976	63.3	60.0	49.4	1814	79.0	77.8	75.6	1725	83.6	82.6	80.0
CORNWALL & ISLES OF SCILLY	3066	78.4	74.6	56.9	3369	71.1	67.3	57.6	3262	76.0	72.5	62.6	3128	80.6	78.3	70.5	3052	82.8	79.9	70.9
DEVON PCT	4029	86.0	84.7	82.8	4489	62.7	58.6	53.6	4465	67.7	63.4	58.9	4192	79.9	77.2	71.5	4130	83.4	81.6	77.8
TORBAY CARE TRUST	718	85.7	84.3	77.9	724	81.1	73.2	60.1	720	84.2	82.8	64.0	720	87.4	85.3	74.9	720	85.1	82.8	68.9

†† PCT did not accelerate catch-up campaign; did not offer vaccine to cohorts 5 and 6

† PCT partially accelerated catch-up campaign: did not offer vaccine to cohort 6

9 Appendices

Appendix 1 ImmForm website

The HPV vaccine-uptake collection was facilitated by the ImmForm website. The ImmForm system provides a manual on-line data submission function for PCTs, together with relevant survey information and guidance, designed and managed by DH. The HPA coordinates and manages the collection, reporting and analysis of national data on behalf of DH. The website can be accessed at www.immform.dh.gov.uk. Further information about the ImmForm website can be found at www.dh.gov.uk/en/Publichealth/Immunisation/immform/index.htm.

All returns from PCTs were web-based (manual entry on-line) and no paper returns were accepted. An on-line version of the data entry survey page was made available to GPs to allow them to complete and send it to their PCT data-provider for manual submission via the ImmForm website.

A letter sent to all PCT HPV data-providers before the start of the monitoring period outlined the collection and dataset requirements. In addition, PCTs and GPs were sent a user guide on the HPV survey, with a 'questions and answers' section and a step-by-step guide on how to log-on, enter data and change their password. The user guide was updated and re-issued for the 2010/11 campaign and can be found at:
www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_120004.pdf.

The website was open to GPs and PCTs at the start of each month, in line with the schedule shown in Table 6. PCTs and GPs had ten working days to provide cumulative data on their vaccine uptake.

Data entered for each collection month was cumulative. GPs and PCTs could view their data at any time but only had read/write access when the survey was open for data submission. PCTs could see which practices had entered (or failed to enter) data by running a non-responder report at any time before the data entry window closed for each monthly collection, enabling follow-up of any outstanding data. In addition, PCTs could extract data into Excel for analysis, view uptake rates and compare its own performance anonymously with other PCTs/SHAs, validate the data on point of entry and correct any errors before making a final submission.

Table 6 Dates for data collection for PCTs and GP practices

Monthly survey

Month	Start collection	End collection
September 2009	Thursday 01 October 2009	Wednesday 14 October 2009
October 2009	Monday 02 November 2009	Friday 13 November 2009
November 2009	Tuesday 01 December 2009	Monday 14 December 2009
December 2009	Monday 04 January 2010	Friday 15 January 2010
January 2010	Monday 01 February 2010	Friday 12 February 2010
February 2010	Monday 01 March 2010	Friday 12 March 2010
March 2010	Thursday 01 April 2010	Friday 16 April 2010
April 2010	Tuesday 04 May 2010	Monday 17 May 2010
May 2010	Tuesday 01 June 2010	Monday 14 June 2010
June 2010	Thursday 01 July 2010	Wednesday 14 July 2010
July 2010	Monday 02 August 2010	Friday 13 August 2010
August 2010	Wednesday 01 September 2010	Tuesday 14 September 2010

Annual survey

Year	Start collection	End collection
1/9/2009 to 31/8/2010	Wednesday 01 September 2010	Tuesday 28 September 2010

Appendix 2 PCT ImmForm data entry form

Academic Year: 1 September 2009 - 31 August 2010
COHORT 1: Mop-Up Vaccinations 13-14 Year Olds (Year 9)
COHORT 2: Mop-Up Vaccinations 18-19 Year Olds (Not in school)
COHORT 3: Catch-up Vaccinations 17-18 Year Olds (Year 13/Not in school)
COHORT 4: Catch-up Vaccinations 16-17 Year Olds (Year 12/Not in school)
COHORT 5: Catch-up Vaccinations 15-16 Year Olds (Year 11)
COHORT 6: Catch-up Vaccinations 14-15 Year Olds (Year 10)
COHORT 7: Routine Vaccinations 12-13 Year Olds (Year 8)

To record any changes you make to this form, press the submit button

Vaccine Summary Data (Mandatory)

COHORT 1: Mop-Up Vaccinations 13-14 Year Olds (Year 9)
Birth Cohort: 1 September 1995 - 31 August 1996

Annual Denominator	1432

Doses Administered (Cumulative from 1/9/2009)

	Number
Number received 1st dose since 1 September 2009	1326
Number received 1st and 2nd doses since 1 September 2009	1315
Number received all three doses since 1 September 2009	1311
Total Number of doses administered since 1 September 2009 (automatically calculated)	3952

Location Where Vaccines Administered (Mandatory)

Location	Number of Doses Administered	% cal
Schools / Colleges	3932	99.
GP Practices	0	-
Health Centres/Community Clinics	14	0.4
Other	6	0.2
Total Number of doses administered by location (automatically calculated)	3952	

COHORT 2: Mop-Up Vaccinations 18-19 Year Olds (Not in school)
Birth Cohort: 1 September 1990 - 31 August 1991

Annual Denominator	1555

Doses Administered (Cumulative from 1/9/2009)

	Number
Number received 1st dose since 1 September 2009	1015
Number received 1st and 2nd doses since 1 September 2009	1008
Number received all three doses since 1 September 2009	1003
Total Number of doses administered since 1 September 2009 (automatically calculated)	3026

Location Where Vaccines Administered (Mandatory)

Location	Number of Doses Administered	% cal
Schools / Colleges	2247	74.
GP Practices	0	-
Health Centres/Community Clinics	190	6.3
Other	589	19.
Total Number of doses administered by location(automatically calculated)	3026	

COHORT 3: Catch-up Vaccinations 17-18 Year Olds (Year 13/Not in school)
Birth Cohort: 1 September 1991 - 31 August 1992

Annual Denominator	1555

Doses Administered (Cumulative from 1/9/2009)

	Number
Number received 1st dose since 1 September 2009	868
Number received 1st and 2nd doses since 1 September 2009	815
Number received all three doses since 1 September 2009	788
Total Number of doses administered since 1 September 2009 (automatically calculated)	2471

Location Where Vaccines Administered (Mandatory)

Location	Number of Doses Administered	% (cal
Schools / Colleges	1795	72.
GP Practices	0	-
Health Centres/Community Clinics	154	6.2
Other	522	21.
Total Number of doses administered by location(automatically calculated)	2471	

COHORT 4: Catch-up Vaccinations 16-17 Year Olds (Year 12/Not in school)
Birth Cohort: 1 September 1992 - 31 August 1993

Annual Denominator	1555

Doses Administered (Cumulative from 1/9/2009)

	Number
Number received 1st dose since 1 September 2009	1105
Number received 1st and 2nd doses since 1 September 2009	1090
Number received all three doses since 1 September 2009	1004
Total Number of doses administered since 1 September 2009 (automatically calculated)	3199

Location Where Vaccines Administered (Mandatory)

Location	Number of Doses Administered	% (cal
Schools / Colleges	2554	79.
GP Practices	0	-
Health Centres/Community Clinics	131	4.1
Other	514	16.
Total Number of doses administered by location(automatically calculated)	3199	

COHORT 5: Catch-up Vaccinations 15-16 Year Olds (Year 11)
Birth Cohort: 1 September 1993 - 31 August 1994

Annual Denominator	1850

Doses Administered (Cumulative from 1/9/2009)

	Number
Number received 1st dose since 1 September 2009	1172
Number received 1st and 2nd doses since 1 September 2009	1172
Number received all three doses since 1 September 2009	1142
Total Number of doses administered since 1 September 2009 (automatically calculated)	3486

Location Where Vaccines Administered (Mandatory)

Location	Number of Doses Administered	% (cal
Schools / Colleges	3349	96.
GP Practices	0	-
Health Centres/Community Clinics	90	2.6

Other	47	1.3
Total Number of doses administered by location(automatically calculated)	3486	

COHORT 6: Catch-up Vaccinations 14-15 Year Olds (Year 10)
Birth Cohort: 1 September 1994 - 31 August 1995

Annual Denominator	1850

Doses Administered (Cumulative from 1/9/2009)

	Number
Number received 1st dose since 1 September 2009	1301
Number received 1st and 2nd doses since 1 September 2009	1255
Number received all three doses since 1 September 2009	1217
Total Number of doses administered since 1 September 2009 (automatically calculated)	3773

Location Where Vaccines Administered (Mandatory)

Location	Number of Doses Administered	% (cal
Schools / Colleges	3655	96.
GP Practices	0	-
Health Centres/Community Clinics	76	2%
Other	42	1.1
Total Number of doses administered by location(automatically calculated)	3773	

COHORT 7: Routine Vaccinations 12-13 Year Olds (Year 8)
Birth Cohort: 1 September 1996 - 31 August 1997

Annual Denominator	1432

Doses Administered (Cumulative from 1/9/2009)

	Number
Number received 1st dose since 1 September 2009	1341
Number received 1st and 2nd doses since 1 September 2009	1304
Number received all three doses since 1 September 2009	1255
Total Number of doses administered since 1 September 2009 (automatically calculated)	3900

Location Where Vaccines Administered (Mandatory)

Location	Number of Doses Administered
Schools / Colleges	3819
GP Practices	0
Health Centres/Community Clinics	54
Other	27
Total Number of doses administered by location(automatically calculated)	3900

Comments (Optional)

Audit Records

Date of Action User Action

Submit Cancel

Appendix 3 Denominator data quality

Seventy-six PCTs were asked to indicate which of the following statements explained the variance in its denominator(s) and take any appropriate action:

a) The denominator/s have been provided by your child health system and should be considered more accurate than the original estimate

b) The incorrect algorithm was used (please recalculate using appropriate algorithm for school based, GP-based or mixed approach to vaccine delivery)

c) Partial data provided; this may be as a result of a provider/commissioning split (please provide full data from both arms of the PCT)

d) Human or system error (please resubmit after recalculating)

e) Other (please give explanation).

PCTs were then grouped by their response to the email, the variance between its own denominator and the original estimate, and the delivery model used by the PCT.

For predominantly schools-based programmes (years 8, 10 and 11), PCTs fell into one of the following groups:

- the PCT was unable to provide an adjusted denominator and used the original estimate as its child health system was unable to provide accurate data. (41-44%)
- the PCT was able to provide an adjusted denominator from their child health system and this remained within 5% of the original estimate (30-40%)
- the PCT was able to provide an adjusted denominator from its child health system although this was more than 5% in variance with the original estimate (18-22%)
- the PCT denominator was in variance with the original estimate as it had used the incorrect algorithm, this was corrected and an amended denominator was calculated (2%).

Where a GP or GP/school mixed approach was used (school year 12 and 13), PCTs fell into one of the following groups:

- the PCT was unable to provide an adjusted denominator and used the original estimate as their child health information system was unable to provide accurate data (46%)
- the PCT was able to provide an adjusted denominator from its child health information system and this remained within 5% of the original estimate (23-26%)
- the PCT was able to provide an adjusted denominator from its child health information system although this was more than 5% in variance with the original estimate (22-23%)
- the PCT denominator was in variance with the original estimate as it had used the incorrect algorithm, this was corrected and an amended denominator was calculated (1.5%)
- the PCT did not have complete data as the school programme was run by the provider arm and the GP programme by the commissioner arm. Complete data were later supplied and the denominator amended (6.5%).

This analysis supports the findings of previous PCT surveys[19] that many child health information systems now hold data for school-aged children but there are still a number that do not hold data beyond 16 years of age. It also identified problems with reporting where separate programmes are run by the two arms of the PCT, i.e. provider and commissioning.