



# Annual Pneumococcal Polysaccharide Vaccine Uptake Report in 65 years old and over for England

*Influenza Immunisation Uptake  
Monitoring Programme*

Report commissioned by the Department of Health  
and written by F Begum and R Pebody of the Health Protection Agency

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## Executive Summary

### **Objective:**

In August 2003 the Chief Medical Officer (CMO) made the recommendation that all those aged 65 years and over in England should receive the 23-valent pneumococcal polysaccharide vaccine (PPV). Since then the Health Protection Agency (HPA) has been monitoring the uptake of PPV (which protects against more than 90% of the serotypes that cause serious pneumococcal disease in the UK), in the elderly in England on behalf of the Department of Health (DH).<sup>1</sup>

The introduction of the national programme was staggered over three years and annual surveys of vaccine uptake collected from GP practices are used to assess the implementation of current recommendations. The data collected has provided information to measure how effective the vaccine has been in preventing disease in different age groups.\*

\* *This report covers vaccine uptake only and will not include vaccine effectiveness*

### **Methods:**

Data on PPV uptake were gathered via the Health Protection Informatics (HPI) website for the period 1st April 2007 to 31st March 2008 and anytime on or up until 31st March 2008 from a national survey of all general practitioners (GP) in England facilitated by NHS primary care trust (PCT) immunisation coordinators.

### **Key Results:**

#### **❖ *Percentage of practices providing a return***

The national GP response rate to the survey fell slightly in 2007/08 to 84% (7020 out of 8361 practices) compared to 85.5% the previous year. 61 out of 152 (40.1%) PCTs achieved a 100% GP response. The lowest GP response rate for a PCT was 3.4% (Kingston) with only one out of twenty-nine practices returning data.

#### **❖ *Received the pneumococcal vaccine anytime up until 31<sup>st</sup> March 2008***

69% of patients aged 65 years and over had been vaccinated anytime until 31st March 2008, an increase in uptake compared to last year's figure of 66.6%. The lowest uptake seen at PCT level was 40.1% (Barking & Dagenham) with 100% of practices providing data and the highest was 76.5% (Bath and North East Somerset). PPV uptake was highest in those aged 75 to 79 years at 77.3%. Overall coverage in the elderly male population (72.2%) was higher than in their female counterparts (70.6%).

#### **❖ *Received the pneumococcal vaccine between 1<sup>st</sup> April 2007 and 31<sup>st</sup> March 2008***

The incremental increase in vaccine uptake for those receiving the vaccine in the last year only, was 4.6% compared to 6.5% last year. The lowest uptake at PCT level was 2.6% (Bassetlaw) with 100% of practices providing data and the highest was 14.2% (City & Hackney) based on 22.4% of practices returning data. PPV uptake in

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the twelve months prior to 31st March 2008 was highest for those turning 65 years during the year at 18.2%.

### ❖ **Upload methods**

XML Bulk upload comprised 59.9% (4204 out of 7020 practices returning data); semi automated (URL Datastring) 10% (741 out of 7020 practices) and 7% (492 out of 7020 practices) used CHART or MIQUEST queries and typed in. The remaining 23.1% used manual methods (1625 out of 7020 practices returning data)

### **Conclusions:**

The 2007/08 PPV uptake survey in primary care saw another high GP response rate with data collected using the HPI website.

Overall coverage for PPV in the older population in England is encouraging, especially for the 75 to 79 year olds however vaccine coverage for newly turned 65 year olds was comparatively low. The reason for this is unclear, local strategies need to be developed to ensure this group is effectively targeted and uptake levels are increased.

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## Aims and Objectives

In August 2003, the Chief Medical Officer (CMO) made the recommendation that all those aged 65 years and over should receive PPV in England.

This policy was implemented in three distinct phases. Patients aged 80 years and over were initially recommended for PPV vaccination in August 2003. This was extended to include all those aged 75 years and over in April 2004 and the final stage, instigated from April 2005 onwards, recommended all those aged 65 years and over for vaccination.

For more details see the CMO Letter:-

[www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Professionalletters/Chiefmedicalofficerletters/DH\\_4032608](http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Professionalletters/Chiefmedicalofficerletters/DH_4032608)

The objectives of the annual PPV survey are as follows;

- ❖ To calculate the proportion of the population aged 65 years and over, including those aged 65 only, who have been vaccinated with PPV in:
  - The last twelve months (1<sup>st</sup> April 2007 to 31<sup>st</sup> March 2008)
  - At anytime on or up until 31<sup>st</sup> March 2008
- ❖ To assess the implementation of the PPV immunisation policy in older people by age-group and gender
- ❖ To provide coverage data with which to calculate PPV effectiveness

## Methods

Since the 2004/05 survey, data has been collected using a web-based reporting system known as the Health Protection Informatics (HPI) website, for all GP practices and their respective PCTs participating to upload data on-line.

The 2007/08 survey opened to GPs and PCTs on the 1<sup>st</sup> April 2008 for submission of data. Practices had one month (until 1<sup>st</sup> May) to enter data. PCTs had an additional two weeks (until 16<sup>th</sup> May but subsequently extended to 23<sup>rd</sup> May) during which they could enter data on behalf on their practices. They could also check the accuracy of data and amend if they wished. PCT coordinators were responsible for chasing non-responding practices. PCTs and GPs were also provided with User Guides with a “questions and answers” section and step-by-step instructions on how to log in, enter data and change passwords etc.

Data was collected on patients vaccinated between 1<sup>st</sup> April 2007 and 31<sup>st</sup> March 2008 and anytime up until 31<sup>st</sup> March 2008. The age breakdowns were therefore as follows:

- 65 years old
- 66 to 74 years
- 75 to 79 years
- 80 years old and over
- 65 years old and over

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Data was also collected by gender and was an optional addition for GP practices to complete:

- *Males aged 65 years and over*
- *Females aged 65 years and over*

Before the start of the monitoring period, the HPA invited input from PCT immunisation coordinators in the preparation aspects of the survey as well as the provision of data, for example collection dates and dataset requirements were sent to PCT pneumococcal coordinators for comment. IT suppliers were also contacted, along with PRIMIS+, as they play an important part in providing data extraction queries and tools to retrieve the data from GP practice systems.

### **HPI Website**

The Health Protection Informatics (HPI) Website, a web-based reporting system continued to facilitate the data collection process in 2007/08.

The HPI website allows automated and semi-automated data upload options as well as manual on-line returns for GP practices and PCTs, together with relevant survey information, reporting tools and guidance.

Data is extracted from GP practice computer systems. This is entered on to the HPI website, via a number of different methods. Appendix 1 outlines the data extraction/entry methods involved in the collection of pneumococcal vaccine uptake data.

The Health Protection Agency (HPA) coordinates and manages the collection and reporting of national data on behalf of the Department of Health (DH). The HPI system is designed and managed by the DH.

The website can be accessed via the following links:

<http://nww.vax.nhs.uk>

<http://www.vax.dh.gov.uk>

Returns were web-based and no paper returns accepted. However, a paper version of the data entry survey page in the form of a manual survey form, was made available for GP practices so they could fill it in and send it to their PCT coordinators for electronic submission on the HPI website.

The use of the on-line form allows validation of the data on entry, reducing the need for referring data back to the data provider and improving data accuracy.

## Results

### *Response Rates*

- ❖ All 152 PCTs in England responded to the survey. The national PCT response rate was slightly down on last year (85.5%). Of the 8361 GP practices participating, 7020 returned data (84%) (Table 1). The total number of practices providing data was a decrease of 196 compared to last year.
- ❖ The percentage of PCTs achieving 100% GP response rate has increased from 38% last year (58 out of 152) to 40.1% (61 out of 152) this year (Tables 1 and 3, Figure 3). The lowest GP response rate for a PCT was 3.4% (Kingston) with only one out of twenty-nine practices returning data. Table 1 also provides a comparison of GP response rates for recent years.
- ❖ 68.0% of GP practices who responded provided the optional field for gender data and 68.1% gave the optional field for the four specific age groups.
- ❖ Amongst the Strategic Health Authorities, the GP response rate ranged from 76.2% (South East Coast SHA) to 95.5% (North East SHA), (Table 2). Two out of ten SHAs achieved a response rate reaching 95% in 2007/08 more than the previous year, (Figure 2). Map 1 illustrates the GP response rate for the 2007/08 pneumococcal survey by SHA.
- ❖ In 2007/08, the use of automated extraction and upload facilities increased, with 69.8% of GP practices (4903 out of 7020) having their data automatically extracted and uploaded. This compares to 57.6% the previous year for PPV. Only 1625 GP practices out of the responding 7020 (23.1%) did not use any of the automated or semi-automated extraction options designed for their use.

### *PPV Uptake Anytime On or Until 31/03/08*

- ❖ The overall PPV uptake in those aged 65 years and over by PCT for the period until 31<sup>st</sup> March 2008 was 69.0% [range 40.1% - 86.5%]. (Table 3 and Figure 6).
- ❖ Total uptake by age was highest in those aged 75 to 79 years at 77.3% compared to 37.9% for those who had just turned 65 years, 70.1% for 66 to 74 years and 75.8% for 80 years and over. This data is based on 81.8% of GP practices providing data for these age ranges, a higher response rate compared with last year of 61.7% (Figure 8)
- ❖ For the 65 years old only age group, uptake at PCT level was lowest for Hammersmith and Fulham at 21.8% (based on a 54.8% response rate) and highest for Kingston at 64.7% (based on one practice returning data), the PCT to record the next highest uptake level was Calderdale at 52.6% (Table 3).
- ❖ Uptake of PPV anytime on or before 31<sup>st</sup> March 2008 was lower for women at 70.6% and higher for men at 72.2% compared to last year's uptake of 69.8% and 71.8% respectively (Table 5).

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- ❖ By PCT, the highest overall uptake was achieved by three PCTs; Bath and North East Somerset, Bournemouth & Poole and Isle of Wight Healthcare. All achieved high overall uptake at 76%.\* Barking & Dagenham PCT achieved the lowest uptake at 40.1%, with 100% response rate.
- ❖ The SHA with the highest uptake for this period was South Central SHA with a 74% uptake in the 65 years and over, compared to the lowest (63.7%) in London SHA, (Table 2, Figure 6). Figure 12 details the PPV uptake achieved in each SHA by age group. Map 2 gives a geographical representation of PPV uptake by SHA.

\* The highest uptake rate reached was Kingston PCT with 86.5%, but this cannot be considered statistically significant, as the denominator size is very small (it is based on a sample size of one practice out of twenty-nine returning data).

### **PPV Uptake between 01/04/07 – 31/03/08**

- ❖ The overall PPV uptake in those aged 65 years and over, in the twelve months until 31<sup>st</sup> March 2008, was 4.6% down from last year (6.5%) (Table 1 and Figure 6).
- ❖ By age group, vaccine uptake in these 12 months was highest for those reaching 65 years of age at 18.2% compared to last year's rate of 20.3%. In the other age bands, 5.2% for those aged 66 to 74 years, 2.7% for those aged 75 to 79 years and 2.1% for those aged 80 years and over were vaccinated in the previous twelve months. This is a reduction on last year for these age groups (Table 4 and Figure 9).
- ❖ For the 65 year old only group, the lowest uptake was seen in Swindon PCT which was 7.8%. The greatest uptake was 37.3% for Kingston, however this data is based on only one GP practice returning data and given that it is more than 10% higher than the uptake achieved in any other PCT, it is unlikely to be representative of the PCT overall.
- ❖ Uptake of PPV between 1<sup>st</sup> April 2007 and 31<sup>st</sup> March 2008 was lower for both men and women at 4.9% and 4.5% respectively (a decrease on last year's uptake of 6.7% and 6.3% respectively) (Table 5 and Figure 10).
- ❖ The SHA with the highest vaccination uptake was London SHA with an uptake of 5.8% in those aged 65 years and over. In comparison, the lowest was South East Coast with an uptake of 3.7%, (Table 2, Figure 7). Figure 19 details the PPV uptake achieved in each SHA by age breakdown (65 only, 66 to 74 years, 75 to 79 years and 80 years and over). Map 3 gives a geographical representation of PPV uptake in the last twelve months prior to 31<sup>st</sup> March 2008 by SHA.
- ❖ City and Hackney PCT achieved the highest uptake in the 65 years and over category vaccinated between April 2007 and March 2008, with an uptake of 14.2%. The lowest uptake seen at PCT level was 2.6% in Bassetlaw PCT, with 100% of practices providing data, (Table 3).

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## ***Discussion***

The annual pneumococcal polysaccharide vaccine survey in the elderly is now in its fifth year. The HPI web-based reporting system is functioning both efficiently and effectively with the survey now established as a routine collection exercise.

The national mean GP practice response rate at the end of the 2007/08 campaign for the population was 84.0%, down on last year's performance rate of 85.5% but still very high. The availability and use of fully automated and semi-automated data extraction and entry continues to increase. This has reduced the burden on practices and PCTs having to extract and collate the data themselves. It is understood that without purpose-built queries to extract the data, practices struggle to readily pull out the relevant data themselves, resulting in lower response rates. It is hoped that the use of automated and semi-automated extraction methods become even more widespread in future campaigns, leading to further increases in the overall response rates. To this end, the DH continues to work with GP software suppliers to extend automated extraction options for practices.

In 2007/08 the highest vaccine coverage achieved for those receiving the vaccine anytime until 31<sup>st</sup> March 2008 was 77.0% for the age group 75 to 79 year olds but only 39.7% of the new cohort of 65 year olds. Ideally, all patients above the age of 66 years would already have received the vaccine, so the only vaccines administered would be for the cohort of newly turned 65 year olds. These data indicate therefore that PCTs and GP practices are perhaps not specifically targeting the newly turned 65 year olds for PPV vaccine or, that this age group is declining to be vaccinated. Vaccine coverage in the older age groups continues to increase each year suggesting that vaccination is being given opportunistically to those over 65 years.

In all the age-ranges, vaccine uptake in the 12-month period prior to 31<sup>st</sup> March 2008 is lower than that achieved in 2006/07. It is important to note however that when monitoring uptake of a one-off vaccine, it is to be expected that the number of people requiring immunisation each year will decrease and eventually plateau. It was also noted that uptake of PPV by women between 1<sup>st</sup> April 2007 and 31<sup>st</sup> March 2008 was lower (4.5%) than men (4.9%). It is hoped that continued provision of data by gender will prove useful especially in evaluating the success of the vaccine uptake in terms of men and women for future campaigns.

The trend across all Strategic Health Authorities continues to show geographical variation in PPV uptake levels. With the highest response rate of practices returning data (95.5%), North East SHA had one of the lowest vaccine uptake levels in the 12 month vaccination period prior to 31<sup>st</sup> March 2008 (4%). In contrast, London SHA had the highest uptake level for the 12 month period before 31<sup>st</sup> March 2008 (5.8%) but the lowest overall vaccine uptake level (63.7%). Such variation in success again suggests difficulty in targeting the appropriate age cohorts for vaccination and/or possible problems in service delivery.

## **Conclusions and Recommendations**

- ❖ Actual uptake of pneumococcal polysaccharide vaccine is encouraging. The overall success of the pneumococcal campaign in the elderly is reflected in the mostly high levels of coverage achieved. In terms of vaccine uptake success by age group, the 75 to 79 year old cohort had the most extensive coverage at 77.3% ever vaccinated, whilst the greatest recent uptake rate (excluding the new 65 years cohort) was for the 66 to 74 year olds at 5.2%, vaccinated between 1<sup>st</sup> April 2007 and 31<sup>st</sup> March 2008.

Since the final phase of the three-step implementation of the policy to vaccinate all those aged 65 years and older took place in 2005/06, it is hoped GP practices concentrate more on targeting those not yet vaccinated but in particular, on the incoming cohort of newly turned 65 year olds. It is evident that the 2007/08 65 year olds cohort was not especially targeted for vaccination recording a relatively lower uptake level of 18.2% compared to last year of 20.3%.

- ❖ The Health Protection Informatics Website continues to be a successful tool for monitoring PPV uptake in primary care, as demonstrated by the high GP practice response rates now being achieved in recent years. With almost 70% of responding practices using automated or semi-automated data extraction processes in season 2007/08, it is a clear indication that these data providers have benefited by having a system that enables data input in the most efficient and timely manner.

By publicising the availability of automated options, it is hoped that the numbers of GP practices participating in future surveys will continue to rise. It is in the interest of all those participating in the survey for the options available for automated extraction and submission to be extended. It is recommended that where possible non-automated GP practices and their PCTs inform software suppliers of their desire for more automated and semi-automated extraction methods to be introduced in support of Cabinet Office guidelines, which recommend that data transfers between the Government and the NHS should be web based.

- ❖ The survey demonstrated geographical variation in PPV uptake levels across SHAs and PCTs, with certain areas achieving higher uptake than others. Success in uptake levels may be attributed to the implementation of good local practice such as regular audits and/or removing patients who have moved away, died or who are not responding to GP letters, from GP practice lists. It is difficult however to identify specific reasons accounting for individual performances but it is hoped PCT pneumococcal coordinators and SHA Immunisation Leads will find the data in this report helpful in identifying where further improvements can be made. In addition, with the experience of the Influenza vaccine uptake survey to consider, it is evident that employing a range of techniques as well as conducting publicity and awareness before hand, immunisation campaigns prove successful.

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## ***Acknowledgements***

- ❖ All those who participated in the Pneumococcal Polysaccharide Vaccine uptake Survey for season 2007/08 and who contributed data especially the PCT flu and pneumococcal immunisation co-ordinators and all participating GP practices in England.
  
- ❖ Colleagues at the Department of Health for their contribution namely Dr Karen Noakes, Principal Scientist of the Immunisation Policy, Monitoring and Surveillance team and Peter Gates, Project Manager, Immunisation Web Group Programme - IT lead for the Health Protection Informatics (HPI) website.

## Appendix 1

### **Data Extraction/Entry methods**

A range of software companies provided data extraction methods for GP practices in 2007/08. These options varied from queries that had to be run by the practice itself through to automated remote extraction and upload of data onto the HPI website which only required practices to authorise the collection on their system. Not all practices were able to use the most automated methods as they were only compatible with specific clinical systems. The Phoenix Partnership (TPP), Microtest and EMIS LV provided automated extraction and upload of data, for their practices. QMS also provided an XML extract for a small number of practices. PRIMIS+ produced CHART and MIQUEST queries and semi-automatic data extraction tools for CHART users.

Data could be entered onto the website in a number of ways:

1. The GP practice enters data manually (after running a query or manually extracting the data)
2. The GP practice runs a query and then uses software to generate a datastring appended to the HPI website URL. The practice logs on and the data is uploaded automatically
3. The GP practice sends the data to the PCT to enter (after running a query or manually extracted the data)
4. The data is automatically extracted and uploaded onto the website by the software supplier

### **Data Extraction Methods**

<b>Data extraction method</b>	<b>User</b>
Bulk upload from QMS	Website admin (fully automated process for GP practices)
Auto upload from Quest	GP required to log in (semi-automated process)
Bulk Upload Microtest	Website admin (fully automated process for GP practices)
Auto upload from CHART	GP required to log in (semi-automated process)
Bulk Upload TPP	Website admin (fully automated process for GP practices)
Used MIQUEST and typed data into the website	GP or PCT
Did not use MIQUEST. Typed or changed data directly into the website.	GP or PCT
Bulk Upload EMIS LV	Website admin (fully automated process for GP practices)

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Some practices may have written queries themselves, if they did not want to use one of the predefined data extraction methods, or if their system was not compatible with any of the methods available.

The dataset requirements in 2007/08 remained simple to allow for the easy provision of data. Only three fields were mandatory. If GP practices chose to participate in the survey, they were not able to submit data unless these fields had been completed.

Patient age on the 31 <sup>st</sup> March 2008 as defined using the Dates of Birth (DOB) below.	<b>A</b> - Number of patients registered on the day data is extracted	<b>B</b> - Number of registered patients (those included in column <b>A</b> ) that have received the pneumococcal vaccine between 1 <sup>st</sup> April 2007 and 31 <sup>st</sup> March 2008*	<b>C</b> – Number of registered patients (those included in column <b>A</b> ) that have received the pneumococcal vaccine at any time (including the last year) on or before the 31 <sup>st</sup> March 2008**	<b>D</b> - % Uptake (vaccinated in last year)  Calculated field	<b>E</b> - % Uptake (vaccinated anytime before 31 <sup>st</sup> March '08)  Calculated field
<b>Aged 65 and over</b> - DOB on or before 31st Mar 1943	A1 <b>mandatory</b>	B1 <b>mandatory</b>	C1 <b>mandatory</b>	D1 = (B1/A1)*100 <b>Calculated field</b>	E1 = (C1/A1)*100 <b>Calculated field</b>

\* Please note that patients in column B will be also included in column C

\*\* Please note that patients included in column B, should also be included in column C

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There were also a further 18 fields that were optional, aimed at GP practices with assistance in data extraction. The fields are listed below.

Patient age on the 31 <sup>st</sup> March 2008 as defined using the Dates of Birth (DOB) below.	<b>A</b> - Number of patients registered on the day data is extracted	<b>B</b> - - Number of registered patients (those included in column <b>A</b> ) that have received the pneumococcal vaccine between 1 <sup>st</sup> April 2007 and 31 <sup>st</sup> March 2008*	<b>C</b> – Number of registered patients (those included in column <b>A</b> ) that have received the pneumococcal vaccine at any time (including the last year) on or before the 31 <sup>st</sup> March 2008**	<b>D</b> - % Uptake (vaccinated in last year)  Calculated field	<b>E</b> - % Uptake (vaccinated anytime before 31 <sup>st</sup> March '08)  Calculated field
<b>Aged 65 only</b> - DOB on or between 1st Apr 1942 to 31st Mar 1943	A2 optional	B2 optional	C2 optional	D2 = (B2/A2)*100	E2 = (C2/A2)*100
<b>66-74 years</b> – DOB on or between 1st Apr 1933 to 31st Mar 1942	A3 optional	B3 optional	C3 optional	D3 = (B3/A3)*100	E3 = (C3/A3)*100
<b>75 - 79 years</b> - DOB on or between 1st Apr 1928 to 31st Mar 1933	A4 optional	B4 optional	C4 optional	D4 = (B4/A4)*100	E4 = (C4/A4)*100
<b>80+ years</b> -DOB on or before 31st Mar 1928	A5 optional	B5 optional	C5 optional	D5 = (B5/A5)*100	E5 = (C5/A5)*100
<b>Number of males aged 65 and over</b> - DOB on or before 31st Mar 1943	A6 optional	B6 optional	C6 optional	D6 = (B6/A6)*100	E6 = (C6/A6)*100
<b>Number of females aged 65 and over</b> - DOB on or before 31st Mar 1943	A7 optional	B7 optional	C7 optional	D7 = (B7/A7)*100	E7 = (C7/A7)*100

\* Please note that patients in column B will be also included in column C

\*\* Please note that patients included in column B, should also be included in column C

Once the data had been entered, PCTs could view their practice data using the reports listed below:

**65 And Over**: the number of patients aged 65 years and over registered, vaccinated and uptake % achieved

**All age ranges**: the number of patients registered, vaccinated and uptake % for patients by age breakdown (65 years old and those older)

**By Gender**: the number of patients registered, vaccinated and uptake % for patients by gender.

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**Datasource Breakdown**: the number of patients registered, vaccinated and uptake % for patients by method of data entry (e.g. Auto upload from CHART, Used MIQUEST and typed data into the web site, EMIS bulk upload etc.)

PCTs could also select a non-responder report allowing them to see a list of practices which had yet to respond. Such tools on the website would provide PCTs the means to target non-responding GP practices more easily and thus secure a higher response rate.

HPA/SHAs and PCT users also had the option to access the data in geographical and barchart views by age-group, gender, PCT etc.

The anonymous comparison function introduced in 2006/07, allowed GP practices to view a bar chart that details their practice in relation to other practices (anonymously) within the PCT. Similarly, PCTs were able to anonymously compare their uptake figures against other PCTs within their SHA and the SHAs were able to compare their uptake figures against other SHAs. Comparison bar charts were available for uptake rates by all age breakdown and gender so GP practices were able to compare how well they were doing in each area.

Other website functions of use; the News Item section enabled the HPA to put messages up for a certain time period which informed users of information in a timely fashion and receive reminders of deadlines. It also holds a short Frequently Asked Questions (FAQ) item on common issues

The Information Portal part of the HPI website was another tool that provided guidance relating to the various extraction and upload methods available to practices. Several documents were posted about all the software companies and the services they offered including numerous website addresses and help desk numbers. The Information Portal also contained general useful information including key correspondence between the HPA and PCT coordinators, links to websites (e.g. NHS Immunisation website), the CMO's letter, updated chapters of the Green Book and draft/finalised datasets, the GP/PCT User Guides and manual survey forms.

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**TABLES**

**Table 1: GP practice response rates, comparing last four survey years (2004-2008)**

<b>Data collected</b>	<b>Survey Year</b>			
	<b>2007/08</b>	<b>2006/07</b>	<b>2005/06</b>	<b>2004/05</b>
Number of PCTs that provided data / total 152 PCTs (%)	152/152 (100%)	152/152 (100%)	303/303 (100%)	292/303 (70.0%)
Total number of GPs	8361	8439	8503	8655
Total number of GPs providing data	7020	7216	7157	7096
<b>GP response rate (%)</b>	<b>84.0%</b>	<b>85.5%</b>	<b>84.2%</b>	<b>81.9%</b>
Lowest GP response rate from a PCT	3.4%	6.7%	6.7%	0.0%
Highest GP response rate from a PCT	100%	100%	100%	100%
Number of PCTs achieving 0% GP response rate / total (%)	0 (0%)	0 (0%)	0 (0%)	13 (4%)
Number of PCTs achieving 100% GP response rate / total (%)	61 (40.1%)	58 (38%)	146 (48%)	143 (47%)

Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
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**Table 2: PPV Uptake (%) in 65 years and over and GP practice response rate by SHA for 2007/08**

SHA Name	% Patients aged 65 years or over		% GP response rate
	Vaccinated between 1st April 2007 and 31st Mar 2008	Vaccinated anytime up until the 31st March 2008	
East Midlands SHA	4.1	70.3	94.5
London SHA	5.8	63.7	77.7
NHS East of England	4.4	66.1	88.6
North East SHA	4	69.6	95.5
North West SHA	4.6	71.2	84.3
South Central SHA	5	74	86.8
South East Coast SHA	3.7	65.7	76.2
South West SHA	5.1	70.5	79.3
West Midlands SHA	4.8	70	81.1
Yorkshire and The Humber SHA	4.6	70.4	89
<i>England</i>	<b>4.6%</b>	<b>69%</b>	<b>84%</b>
			<b>Median 85.5%</b>

# Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England 65 years old and over

**Table 3: PPV Uptake (%) in the 65 years and over and GP response rate by PCT for 2007/08**

PCT Name	Population 65 and Over	Vaccinated between 1st April 2007 and 31st Mar 2008		Vaccinated anytime up until the 31st March 2008		Number of responding practices	Number of practices	%GP Response Rate
		Number of patients	Total %Uptake	Number of patients	Total %Uptake			
ASHTON, LEIGH AND WIGAN PCT	48442	3313	6.8	33678	69.5	62	62	100
BARKING AND DAGENHAM PCT	31833	1929	6.1	12769	40.1	43	43	100
BARNET PCT	52118	2274	4.4	33146	63.6	71	74	95.9
BARNSELY PCT	38780	2066	5.3	26694	68.8	43	43	100
BASSETLAW PCT	18776	485	2.6	13637	72.1	11	11	100
BATH AND NORTH EAST SOMERSET PCT	25930	1403	5.4	19843	76.5	21	28	75
BEDFORDSHIRE PCT	70007	3111	4.4	46990	66.7	58	58	100
BERKSHIRE EAST PCT	51632	2762	5.3	38548	74.7	54	54	100
BERKSHIRE WEST PCT	61639	3722	6	46421	75.3	52	54	96.3
BEXLEY CARE TRUST (PCT based)	2685	96	3.6	1826	68	2	35	5.7
BIRMINGHAM EAST & NORTH PCT	66082	3304	5.1	43882	67.6	82	82	100
BLACKBURN WITH DARWEN PCT	16288	742	4.6	11335	69.6	24	30	80
BLACKPOOL PCT	18250	729	4	12357	71	17	24	70.8
BOLTON PCT	38677	1767	4.5	28749	72.5	52	56	92.9
BOURNMOUTH & POOLE PCT	66721	2591	3.9	50885	76.3	44	44	100
BRADFORD & AIRE DALE PCT	69716	2791	4	49922	71.6	87	87	100
BRENT TEACHING PCT	24462	1491	6.1	16518	67.5	51	72	70.8
BRIGHTON AND HOVE CITY PCT	37672	1276	3.4	25642	68.1	47	47	100
BRISTOL PCT	62046	2628	4.2	43734	70.5	57	57	100
BROMLEY PCT	52556	2163	4.1	34419	65.5	51	51	100
BUCKINGHAMSHIRE PCT	21639	1056	4.9	15202	70.3	16	60	26.7
BURY PCT	28060	877	3.1	17833	63.6	31	34	91.2
CALDERDALE PCT	32455	1687	5.2	22228	68.5	27	27	100
CAMBRIDGESHIRE PCT	112193	4546	4.1	63436	56.5	69	77	89.6
CAMDEN PCT	15917	1036	6.5	9989	62.8	28	42	66.7
CENTRAL & EASTERN CHESHIRE PCT	78858	3365	4.3	59240	75	52	52	100
CENTRAL LANCASHIRE PCT	66526	2946	4.4	47852	71.9	78	88	88.6
CITY AND HACKNEY TEACHING PCT	5452	773	14.2	3703	67.9	11	49	22.4
CORNWALL & ISLES OF SCILLY PCT	117242	7589	6.5	74638	63.7	71	71	100
COUNTY DURHAM PCT	98662	3095	3.1	60866	61.7	75	75	100
COVENTRY TEACHING PCT	50111	1838	3.7	32254	64.4	63	63	100
CROYDON PCT	47303	2597	5.5	30880	65.3	65	65	100
CUMBRIA PCT	94143	4242	4.5	68615	72.9	89	97	91.8
DARLINGTON PCT	20371	748	3.7	13275	65.2	11	11	100
DERBY CITY PCT	41971	1439	3.6	31589	75.3	33	35	94.3
DERBYSHIRE COUNTY PCT	116540	5489	4.7	85016	73	93	98	94.9
DEVON PCT	97047	5303	5.5	68573	70.7	67	107	62.6
DONCASTER PCT	10171	386	3.8	7482	73.7	9	46	19.6
DORSET PCT	70904	3456	4.9	52389	73.9	45	60	75
DUDLEY PCT	58030	2452	4.5	37083	67.4	55	55	100
EALING PCT	27416	1506	5.5	19589	71.5	59	88	71.1
EAST & NORTH HERTFORDSHIRE PCT	86125	4727	5.6	62589	73.5	56	62	90.3
EAST LANCASHIRE PCT	43662	2009	4.6	31496	72.1	44	65	67.7
EAST RIDING OF YORKSHIRE PCT	64320	2671	4.2	44304	68.9	38	38	100
EAST SUSSEX DOWNS & WEALD PCT	77757	2815	3.6	53469	68.8	44	45	97.8
EASTERN & COASTAL KENT PCT	84660	3305	3.9	59828	70.7	66	117	56.4
ENFIELD PCT	10212	375	3.7	7040	68.9	14	62	22.6
GATESHEAD PCT	34985	1754	5	25800	74	33	33	100
GLoucestershire PCT	75997	4788	6.3	57657	75.9	58	84	69
GREAT YARMOUTH & WAVENEY PCT	35089	1316	3.8	25885	73.8	18	26	69.2
GREENWICH TEACHING PCT	27021	1227	4.5	16441	60.8	46	46	100
HALTON & ST. HELENS PCT	50030	2222	4.4	35560	71.1	51	51	100
HAMMERSMITH AND FULHAM PCT	13745	574	4.2	8256	60.1	24	31	77.4
HAMPSHIRE PCT	219625	10446	4.8	162503	74	141	148	95.3
HARINGEY TEACHING PCT	24572	1637	6.9	15628	63.6	53	60	88.3
HARROW PCT	27525	1022	3.7	19189	69.7	34	39	87.2
HARTLEPOOL PCT	11951	532	4.5	8098	67.8	13	16	81.3
HASTINGS & ROTHER PCT	38876	1713	4.4	29439	74.8	34	34	100
HAVERING PCT	7343	274	3.7	5294	72.1	9	52	17.3
HEART OF BIRMINGHAM TEACHING PCT	27077	1651	6.1	18268	67.5	75	75	100
HEREFORDSHIRE PCT	24316	1113	4.6	17450	71.8	17	25	68

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FCT Name	Population 65 and Over	Vaccinated between 1st April 2007 and 31st Mar 2008		Vaccinated anytime up until the 31st March 2008		Number of responding practices	Number of practices	%GP Response Rate
		Number of patients	Total %Uptake	Number of patients	Total %Uptake			
HEYWOOD, MIDDLETON & ROO-DALE PCT	16940	595	3.5	10978	64.8	21	35	60
HILLINGDON PCT	36376	1617	4.6	23437	66.3	50	51	98
HOUNSLOW PCT	27911	1623	5.8	19216	68.8	57	59	96.6
HULL PCT	41003	1846	4.5	28680	69.9	56	56	100
ISLE OF WIGHT HEALTHCARE PCT	6835	548	8	5212	76.3	3	17	17.6
ISLINGTON PCT	21542	1231	5.7	11811	54.8	40	40	100
KENSINGTON AND CHESHAM PCT	22873	1023	4.5	10954	45.3	35	43	81.4
KINGSTON PCT	725	36	5	627	86.5	1	29	34
KIRKLEES PCT	30773	1417	4.6	20855	67.8	39	77	50.6
KNOXLEY PCT	22928	1117	4.9	16670	72.7	29	29	100
LAMBETH PCT	10838	741	7.2	6320	61.1	23	53	43.4
LEEDS PCT	97873	4756	4.9	72211	73.8	99	114	86.8
LEICESTER CITY PCT	33302	1284	3.9	22182	66.6	47	63	74.6
LEICESTERSHIRE COUNTY & RUTLAND PCT	107228	4918	4.6	78611	73.3	79	84	94
LEWISHAM PCT	27450	1108	4	16688	60.8	45	49	91.8
LINCOLNSHIRE PCT	144180	5497	3.8	92238	64	95	102	93.1
LIVERPOOL PCT	67859	4266	6.3	46001	67.8	98	100	98
LUTON PCT	21051	1160	5.5	13957	66.3	25	30	83.3
MANCHESTER PCT	50591	2114	4.2	36616	72.4	85	101	84.2
MEDWAY PCT	43886	1845	4.2	28516	65	67	67	100
MIDSEX PCT	61589	2727	4.4	37481	60.9	46	50	92
MIDDLESBROUGH PCT	19721	966	4.9	14278	72.4	19	22	86.4
MILTON KEYNES PCT	25456	1231	4.8	19084	75	27	27	100
NEWCASTLE PCT	30860	1094	3.4	22462	72.8	30	36	83.3
NEWHAM PCT	24465	1401	5.7	15044	61.5	63	66	95.5
NORFOLK PCT	115218	4244	3.7	75054	65.1	59	91	64.8
NORTHEAST ESSEX PCT	56681	2933	5.2	36814	63.3	38	44	86.4
NORTHEAST LINCOLNSHIRE CARE TRUST	28461	1230	4.3	19734	69.3	34	34	100
NORTH LANCASHIRE PCT	66087	2767	4.3	45663	70.1	33	39	84.6
NORTH LINCOLNSHIRE PCT	28489	1284	4.5	20669	72.5	21	21	100
NORTH SOMERSET PCT	31121	1365	4.5	22543	72.4	19	28	67.9
NORTH STAFFORDSHIRE PCT	37741	1491	4	24487	64.9	35	35	100
NORTH TEES PCT	30830	1334	4.4	20721	68.3	24	27	88.9
NORTH TYNESIDE PCT	37962	1547	4.1	27374	72.1	29	29	100
NORTH YORKSHIRE & YORK PCT	146688	8101	5.6	110142	75.6	100	100	100
NORTHAMPTONSHIRE PCT	101649	4614	4.5	71090	69.9	83	83	100
NORTHUMBERLAND CARE TRUST	61949	2577	4.2	43922	70.9	49	49	100
NOTTINGHAM CITY PCT	38886	1591	4.1	27866	72.6	62	62	100
NOTTINGHAMSHIRE COUNTY PCT	120289	4522	3.8	85542	71.1	95	95	100
OLDHAM PCT	32357	2088	6.5	22560	69.7	46	46	100
OXFORDSHIRE PCT	95580	4156	4.3	71872	75.2	82	82	100
PETERBOROUGH PCT	33880	1235	3.6	17480	51.6	27	27	100
PLYMOUTH TEACHING PCT	46271	2684	5.8	30044	64.9	44	45	97.8
FORTSMOUTH CITY TEACHING PCT	28491	1252	4.4	19754	69.3	28	28	100
REDBRIDGE PCT	35244	2200	6.2	23282	66.1	50	50	100
REDCAR & CLEVELAND PCT	21826	1131	5.2	16385	75.1	20	22	90.9
RICHMOND AND TWICKENHAM PCT	23588	951	4	16529	70.1	31	31	100
ROTHERHAM PCT	43385	1551	3.6	30608	70.5	39	39	100
SALFORD PCT	23468	1091	4.6	16864	72.3	38	57	66.7
SANDWELL PCT	47560	3364	7.1	32038	67.4	57	63	90.5
SEFTON PCT	24543	1071	4.4	16598	67.6	35	55	63.6
SHEFFIELD PCT	88831	3988	4.5	61585	69.3	93	93	100
SHROPSHIRE COUNTY PCT	58284	2830	4.9	41917	71.9	44	44	100
SOUTH LULLINGHAM CARE TRUST (FCT Based)	37948	1665	4.4	28299	74.6	31	31	100
SOMERSET PCT	60891	2620	4.3	43773	71.9	45	75	60
SOUTH BIRMINGHAM PCT	31659	2704	8.5	22661	71.6	34	64	53.1
SOUTHEAST ESSEX PCT	60762	2361	3.9	39254	64.6	63	70	90
SOUTH GLOUCESTERSHIRE PCT	38833	2159	5.4	29503	74.1	28	28	100
SOUTH STAFFORDSHIRE PCT	38985	1644	4.2	26930	69.1	30	96	31.3

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PCT Name	Population 65 and Over	Vaccinated between 1st April 2007 and 31st Mar 2008		Vaccinated anytime up until the 31st March 2008		Number of responding practices	Number of practices	% GP Response Rate
		Number of patients	Total % Uptake	Number of patients	Total % Uptake			
SOUTH TYNES DISTRICT PCT	27007	1057	4	20220	749	29	29	100
SOUTH WEST ESSEX PCT	62886	2688	43	48880	704	81	81	100
SOUTH HAMPTON CITY PCT	33228	2139	64	24143	727	36	36	100
SOUTH WARK PCT	22007	1265	57	12351	561	43	47	91.5
STOKE FORT PCT	25588	1127	44	18968	741	27	54	50
STOKE ON TRENT PCT	43480	1823	42	30865	689	55	56	98.2
SUFFOLK PCT	102652	4532	44	71291	684	62	69	88.9
SUNDERLAND TEACHING PCT	44801	1919	43	33000	735	53	54	98.1
SURREY PCT	213417	7077	33	120466	564	124	141	87.9
SUTTON AND MERTON PCT	48414	6129	127	34801	719	53	54	98.1
SANDWICH PCT	18194	524	29	12449	684	17	29	58.6
TAMESIDE AND GLOSSOP PCT	13780	563	41	10198	74	14	40	35
TELFORD AND WREKIN PCT	22648	1122	5	15175	67	20	20	100
TORBAY CARE TRUST (PCT Based)	31972	1536	48	19906	623	19	21	90.5
TOWER HAMLETS PCT	17231	942	55	11924	682	35	35	100
TRAFFORD PCT	29866	1219	41	19682	659	41	47	87.2
WAKEFIELD DISTRICT PCT	68088	2337	34	36640	582	40	40	100
WALSALL TEACHING PCT	13828	730	53	9127	703	16	65	24.6
WALTHAM FOREST PCT	28801	1663	62	17428	65	47	53	88.7
WANDSWORTH PCT	20050	1074	54	12547	626	35	49	71.4
WARRINGTON PCT	30740	1232	4	21944	714	29	29	100
WARWICKSHIRE PCT	90885	4263	47	67025	737	75	75	100
WEST GLOUCESTERSHIRE PCT	46354	1792	4	33767	745	39	39	100
WEST ESSEX PCT	44826	1673	38	30635	681	37	40	92.5
WEST HERTFORDSHIRE PCT	79219	3840	48	58406	737	63	67	94
WEST KENT PCT	22157	1146	52	16488	745	20	104	19.2
WEST SUSSEX PCT	160551	5735	36	112460	70	92	98	98.9
WESTMINSTER PCT	20574	1463	7.1	14023	682	45	49	91.8
WILTSHIRE PCT	74010	2847	38	50735	686	51	62	82.3
WIRRAL PCT	53047	2250	42	38110	71.8	53	60	88.3
WOLVERHAMPTON CITY PCT	24053	985	41	15820	65.8	33	57	57.9
WORCESTERSHIRE PCT	99928	3713	3.7	74460	74.5	67	67	100
<b>ENGLAND TOTAL</b>	<b>7442410</b>	<b>344271</b>	<b>46</b>	<b>5136976</b>	<b>69</b>	<b>700</b>	<b>861</b>	<b>84</b>
mean	7442410	344271	46	5136976	69.0	700	861	84.0
min	725	36	26	627	40.1	1	11	34.0
max	219625	10446	142	162303	86.5	141	148	100.0
median	37955	1700	45	26812	69.8	44	51.5	94.15

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**Table 4: PPV Uptake (%) by age group comparing last three survey years**

Survey Period		% PPV Uptake - last 12 months				
		65 years only	66 to 74 years	75 to 79 years	80 years and over	65 years and over
2007/08	% total uptake	18.2	5.2	2.7	2.1	4.6
Vaccinated between 01/04/07 and 31/03/08	Number of patients	65623	138074	31525	33507	344271
	Number of Patients registered	361515	2639386	1157060	1620491	7442410
2006/07	% total uptake	20.3	7.7	4.5	3.1	6.5
Vaccinated between 01/04/06 and 31/03/07	Number of patients	62054	190256	48928	45863	494074
	Number of Patients registered	306093	2483963	1082433	1500451	7617037
2005/06	% total uptake	n/a	38.1	20.6	9.5	26.2
Vaccinated between 01/04/05 and 31/03/06						

Survey Period		% PPV Uptake - ever vaccinated				
		65 years only	66 to 74 years	75 to 79 years	80 years and over	65 years and over
2007/08	% total uptake	37.9	70.1	77.3	75.8	69
Vaccinated anytime up until the 31st March 2008	Number of patients	136946	1851332	894666	1227864	5136976
	Number of Patients registered	361515	2639386	1157060	1620491	7442410
2006/07	% total uptake	39.7	69.8	76	74.6	66.6
Vaccinated anytime up until the 31st March 2007	Number of patients	121496	1734074	822929	1118600	5076600
	Number of Patients registered	306093	2483963	1082433	1500451	7617037
2005/06	% total uptake	n/a	62.4	68.8	68.1	64.4
Vaccinated anytime up until the 31st March 2006						

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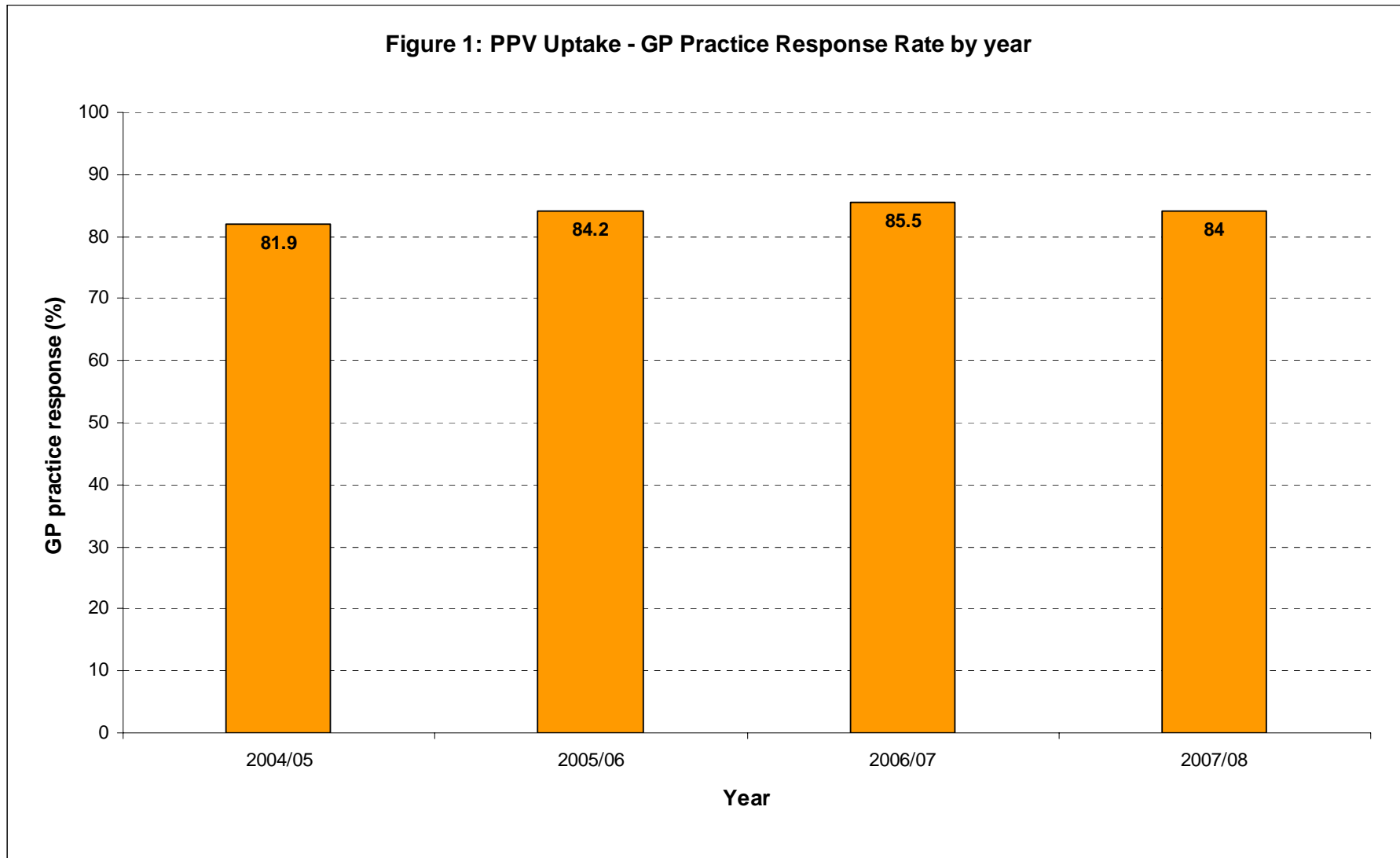
**Table 5: PPV Uptake (%) in the 65 years and over by Gender in 2007/08**

<b>Survey Period</b>	<b>Males Aged 65 and over</b>	<b>Females Aged 65 and over</b>
Total number of patients	2534943	3225174
Number vaccinated between 1st April 2007 and 31st Mar 2008	123260	144902
<b>% Uptake between 1st April 2007 and 31st March 2008</b>	<b>4.9</b>	<b>4.5</b>
Number vaccinated anytime up until the 31st March 2008	1829327	2276124
<b>% Uptake anytime until the 31st March 2008</b>	<b>72.2</b>	<b>70.6</b>
Number of practices completing this field	5687	5687
Total number of practices	8361	8361
% of responding practices providing data by gender	<b>68.1</b>	<b>68.1</b>

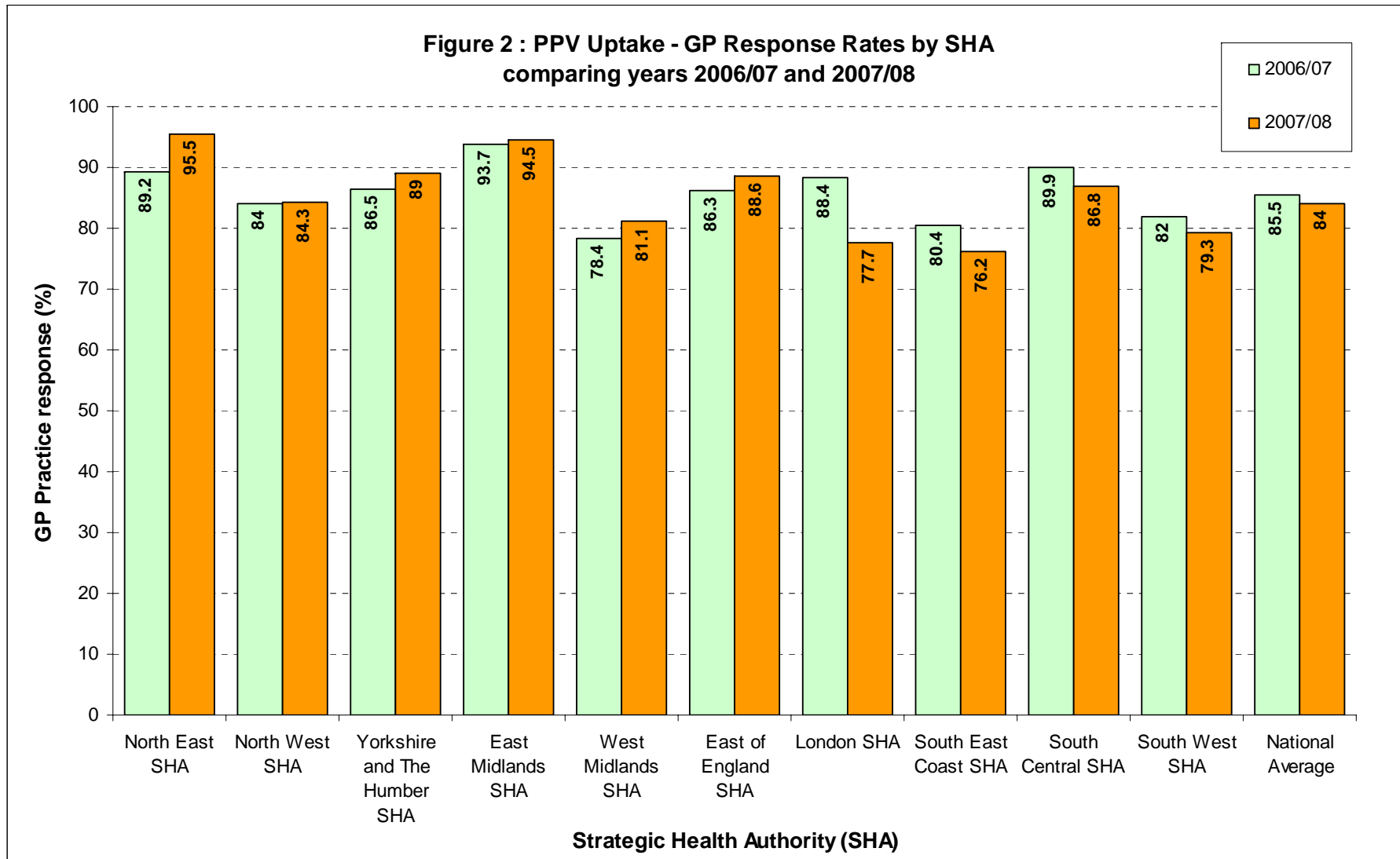
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**GRAPHS**

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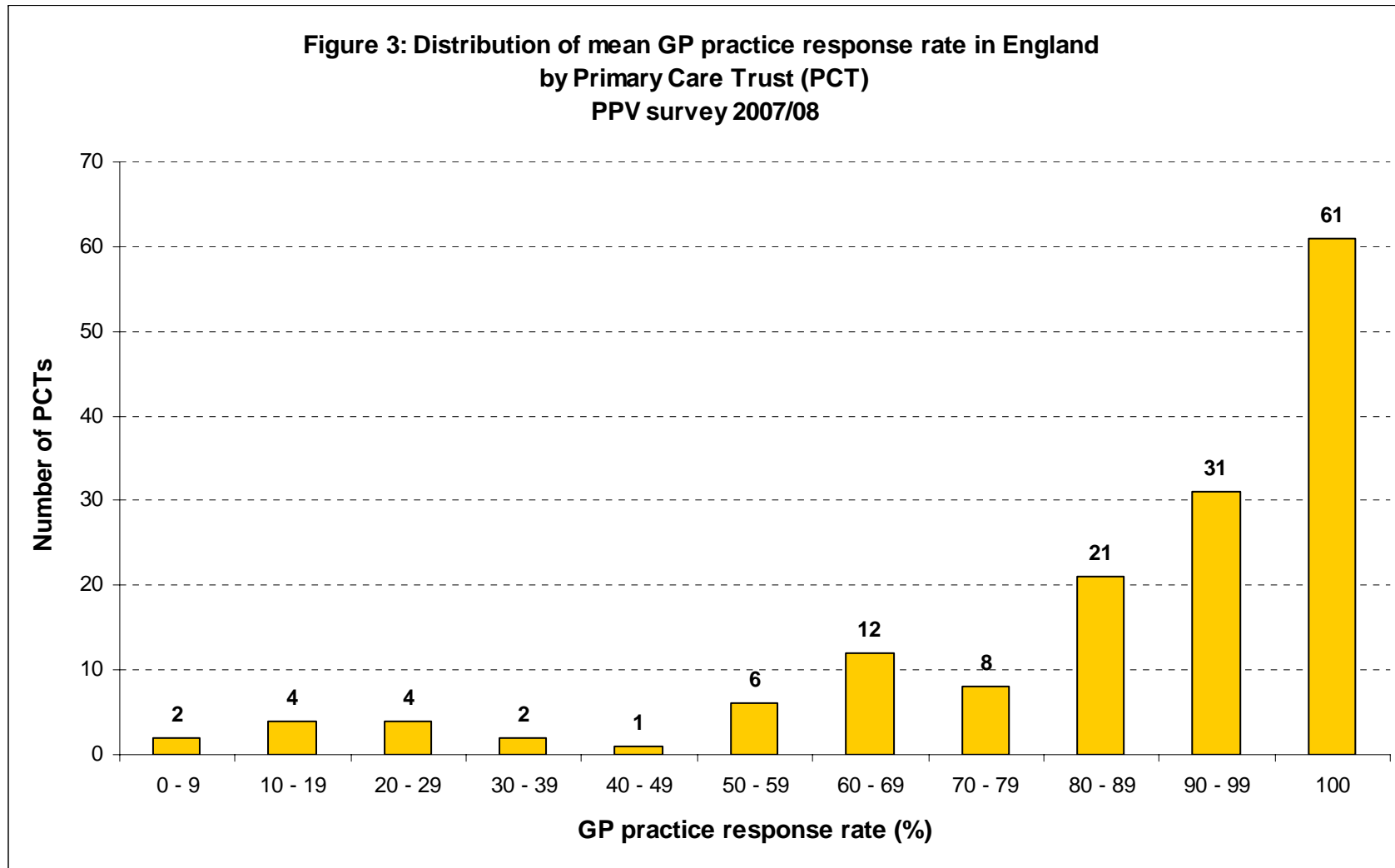


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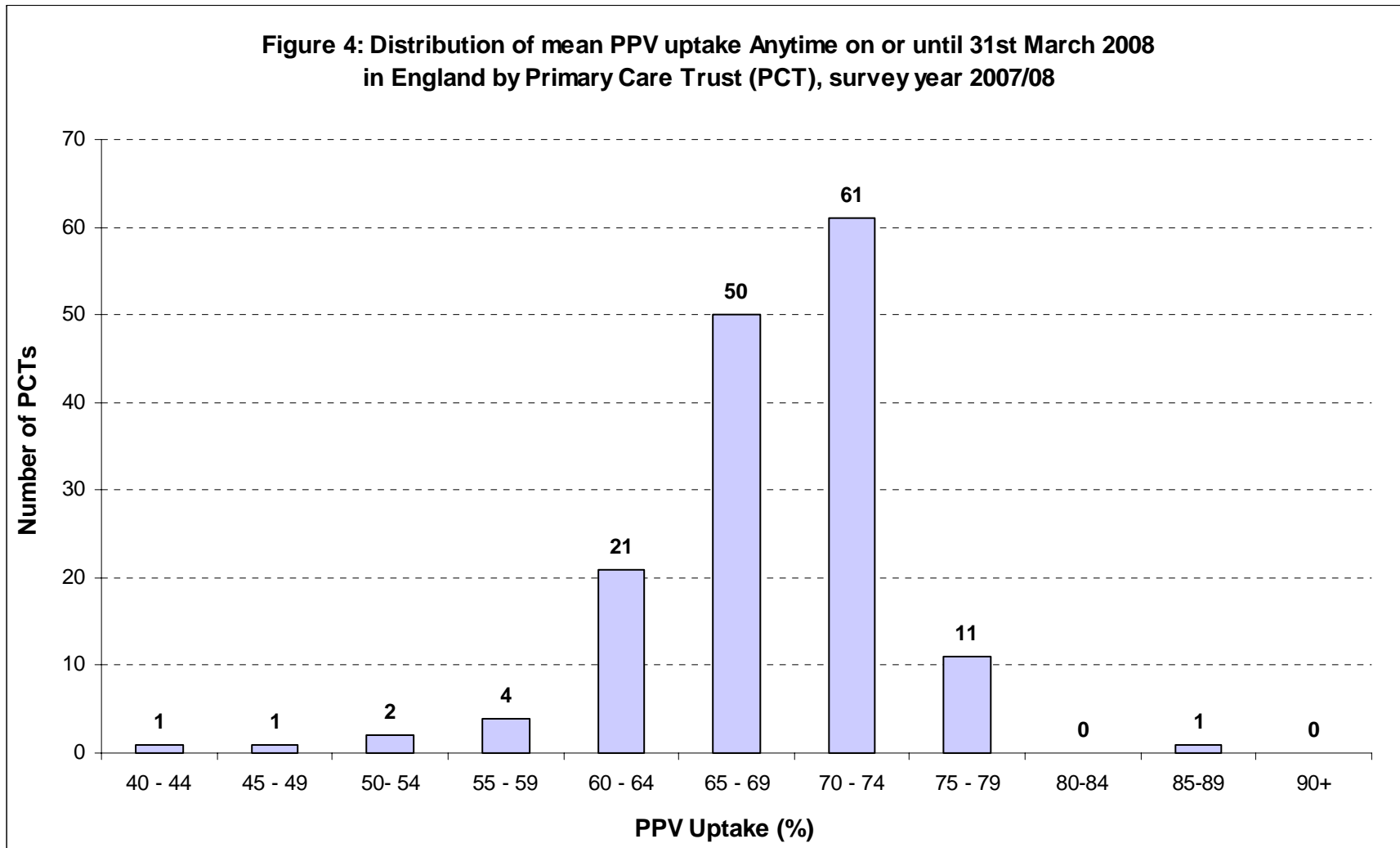
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**Figure 3: Distribution of mean GP practice response rate in England  
by Primary Care Trust (PCT)  
PPV survey 2007/08**

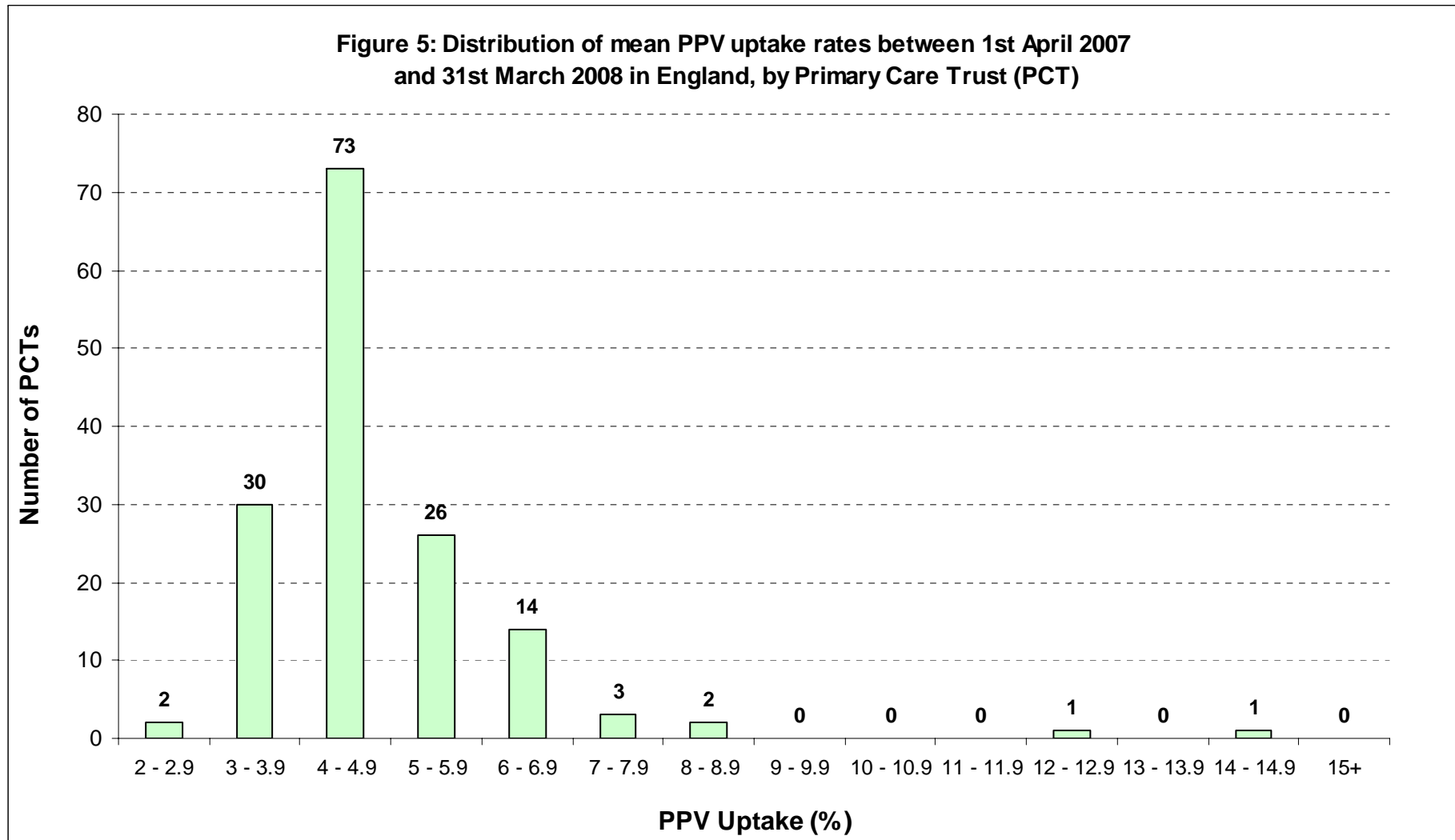


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**Figure 4: Distribution of mean PPV uptake Anytime on or until 31st March 2008  
in England by Primary Care Trust (PCT), survey year 2007/08**

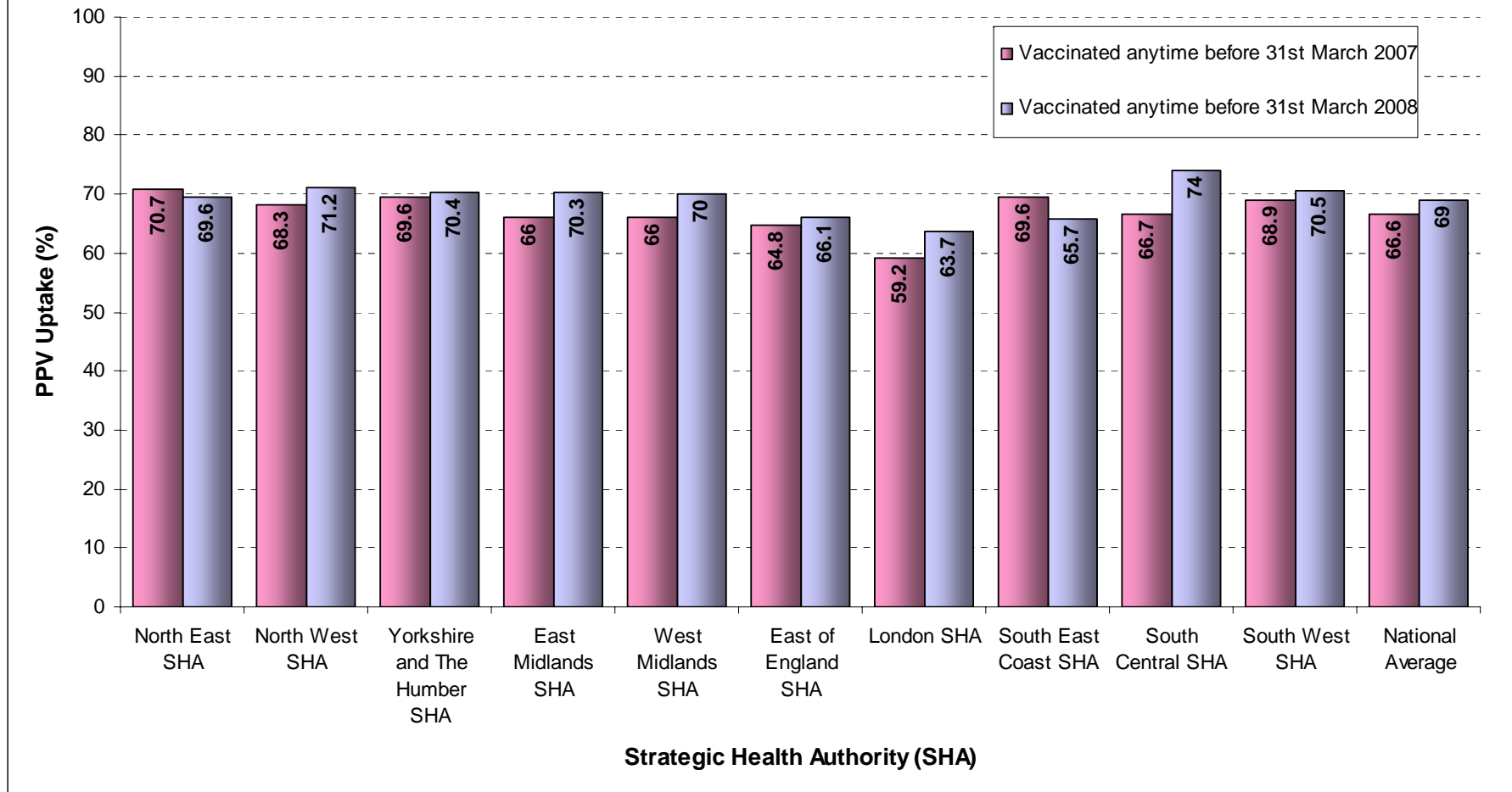


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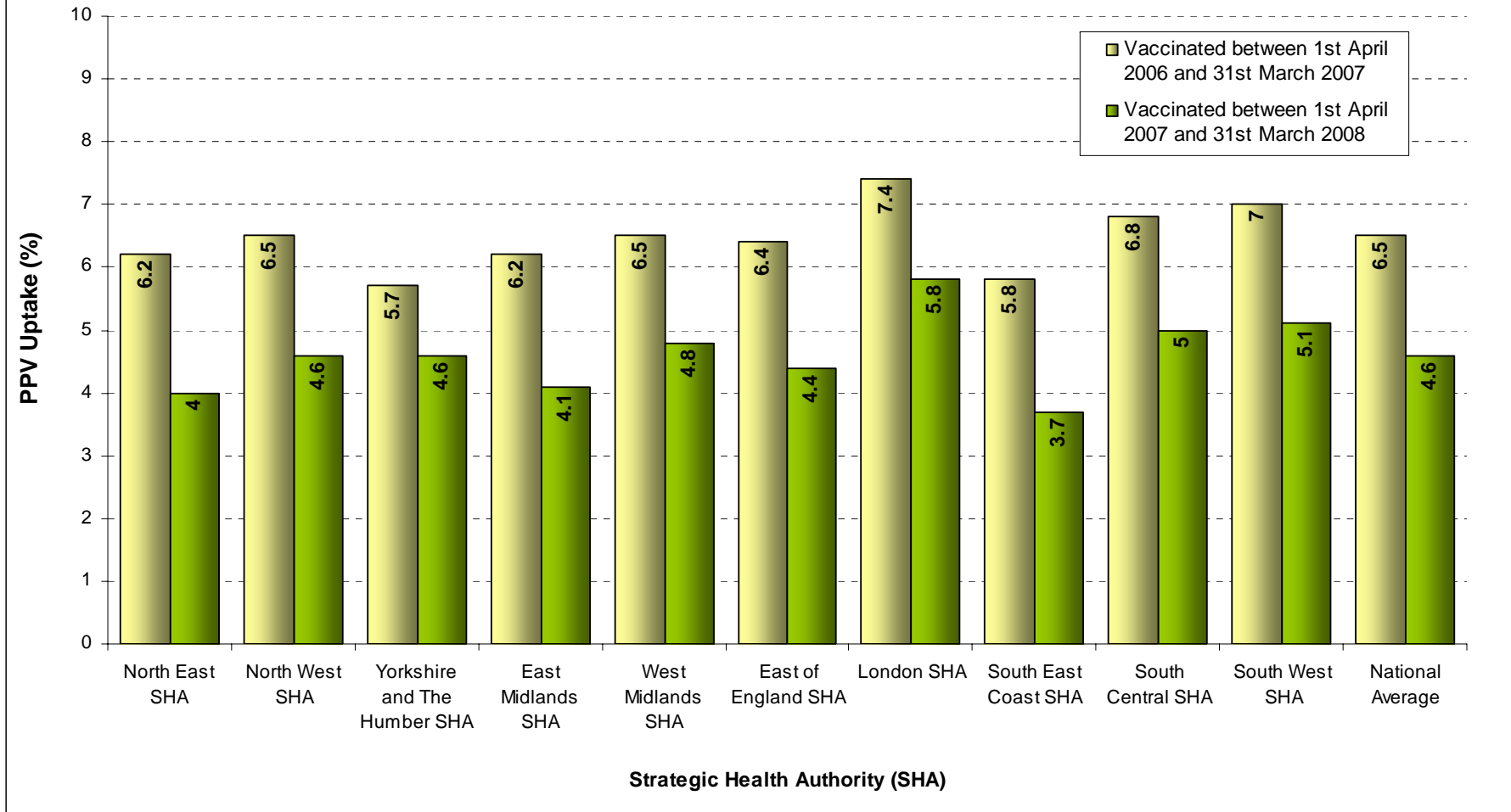
Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
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**Figure 6: PPV Uptake by Strategic Health Authority (SHA),  
Anytime until 31st March 2007 compared to Anytime until 31st March 2008**



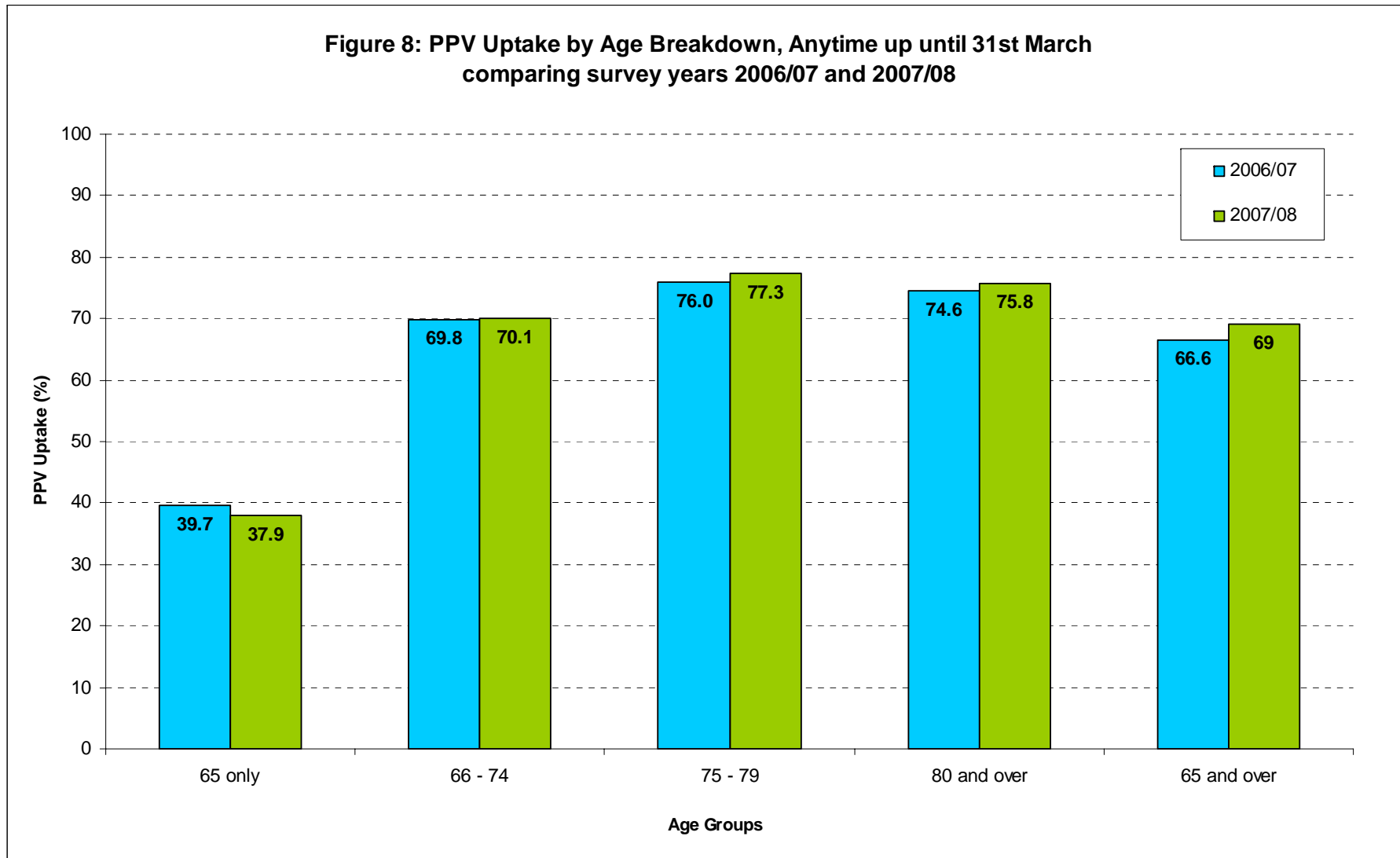
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**Figure 7: PPV Uptake by Strategic Health Authority (SHA) for  
1st April 2006 to 31st March 2007 compared to 1st April 2007 to 31st March 2008**



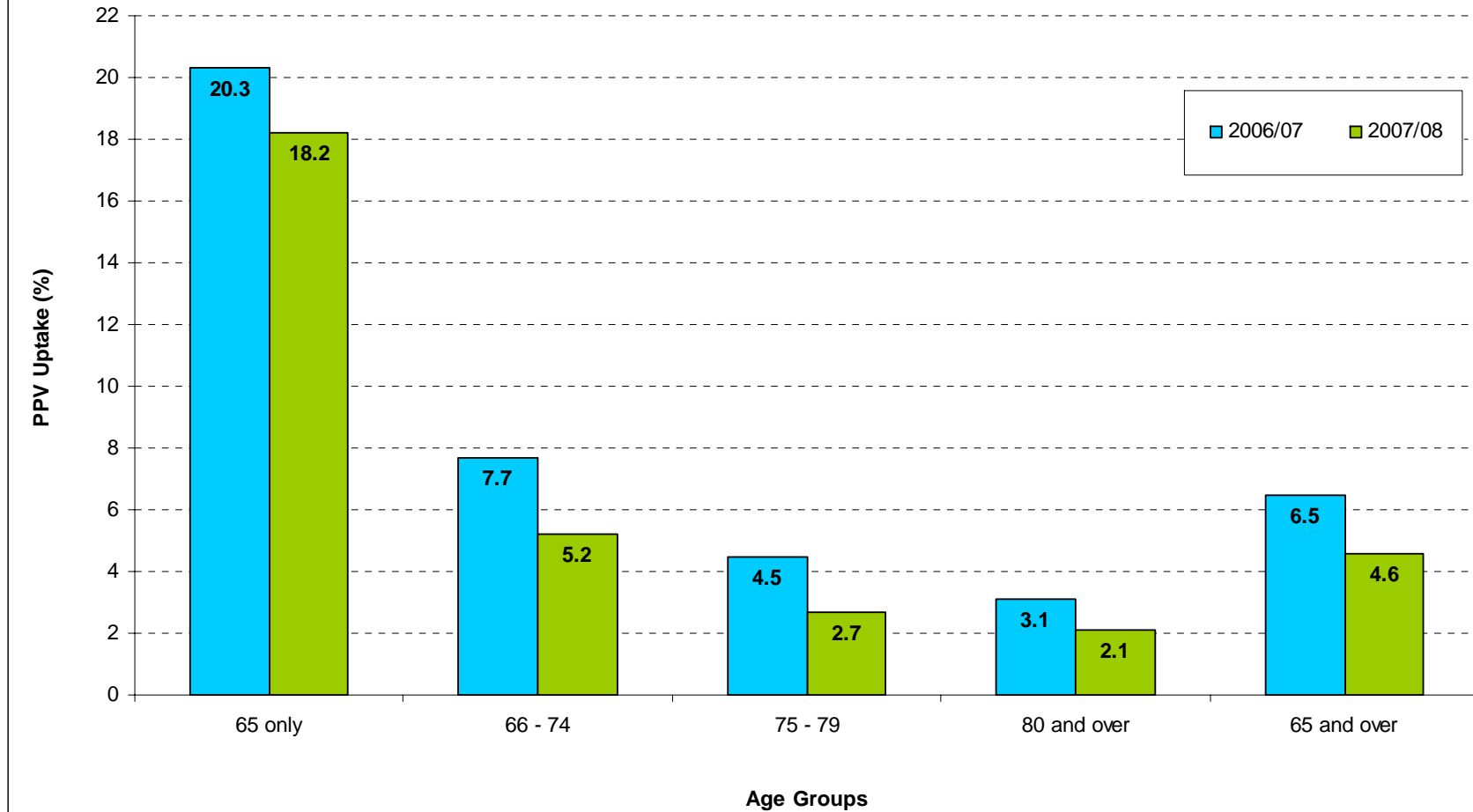
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**Figure 8: PPV Uptake by Age Breakdown, Anytime up until 31st March  
comparing survey years 2006/07 and 2007/08**

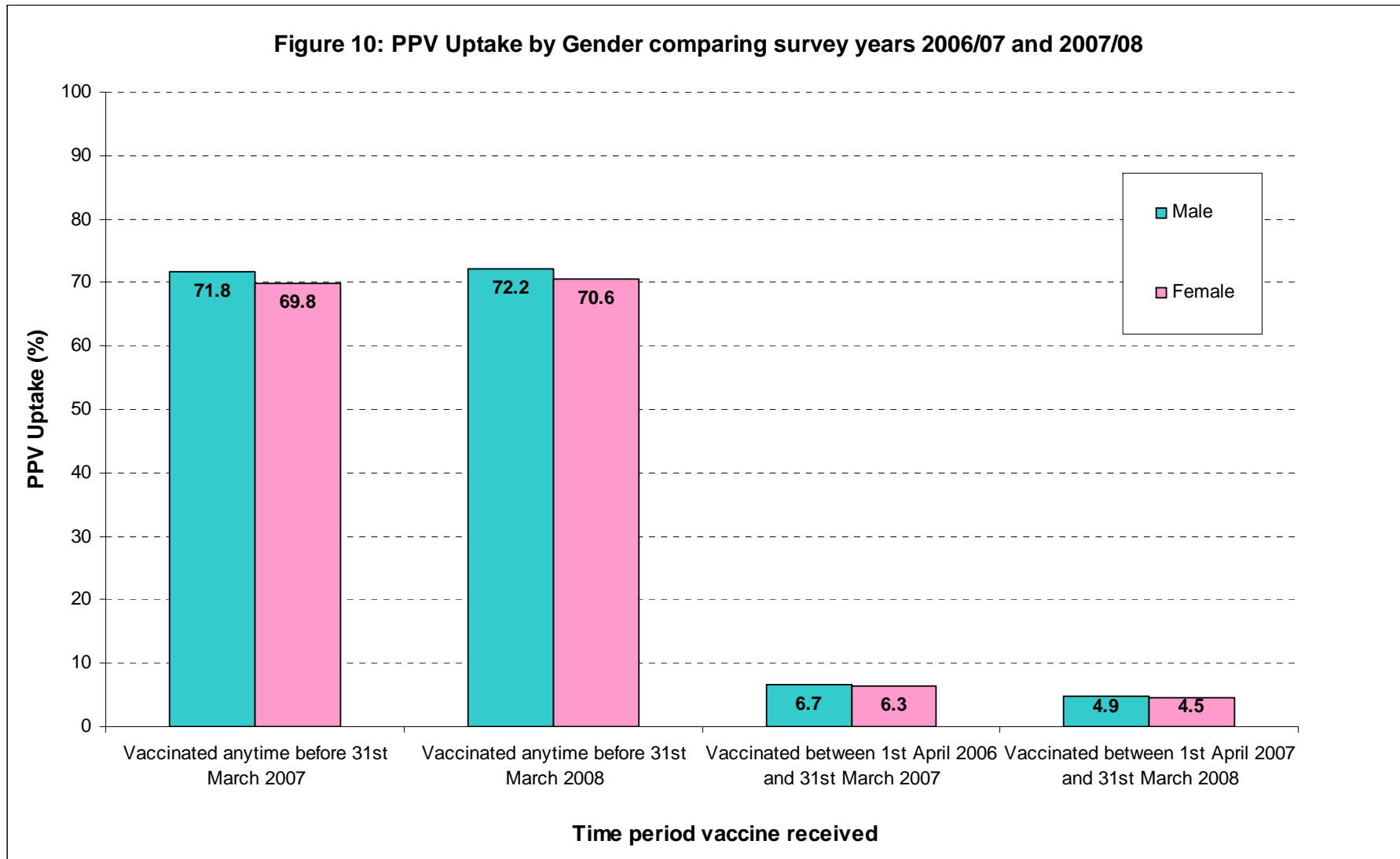


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65 years old and over

**Figure 9: PPV Uptake by Age Breakdown  
for 1st April 2006 to 31st March 2007 compared to 1st April 2007 to 31st March 2008**

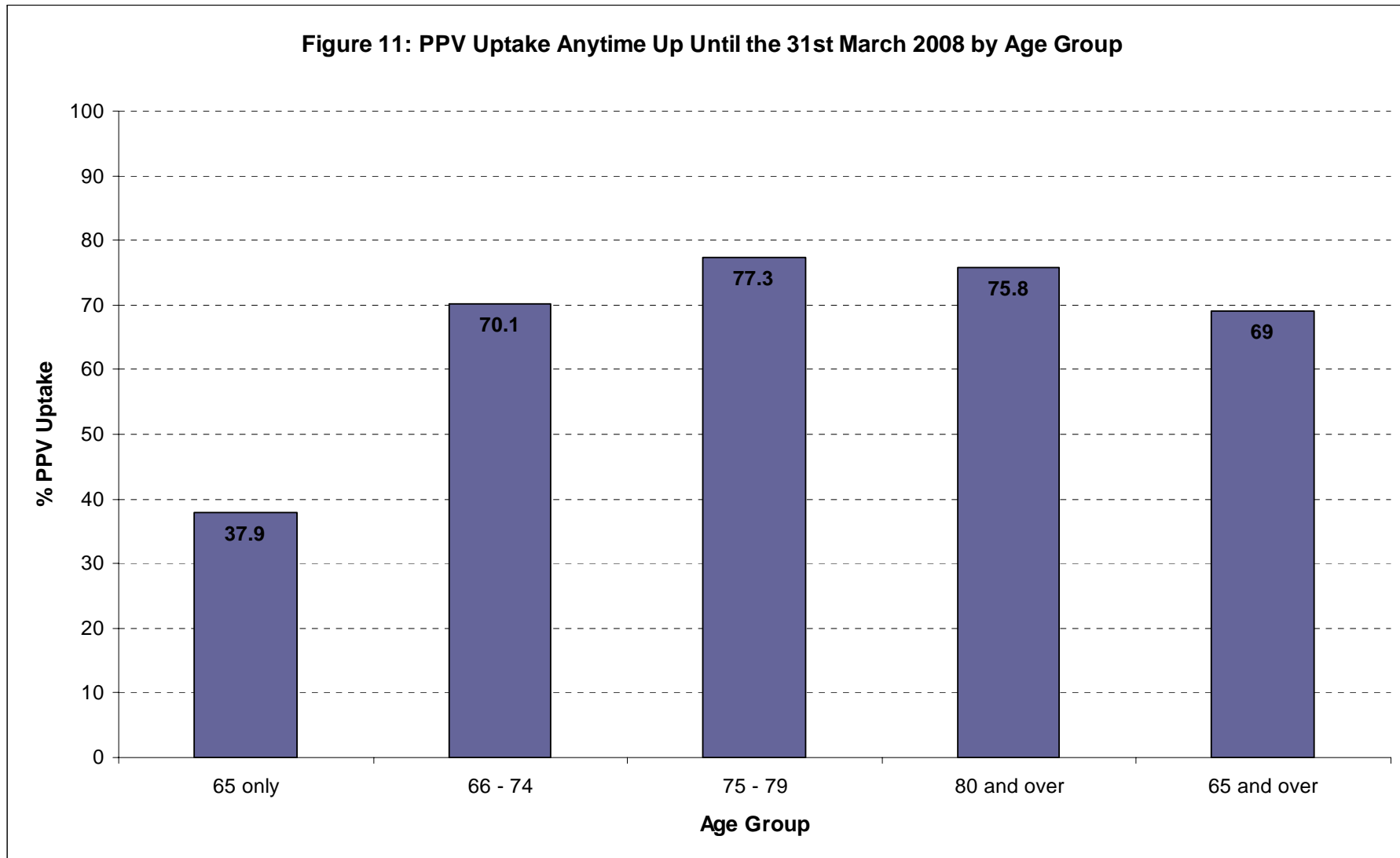


Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
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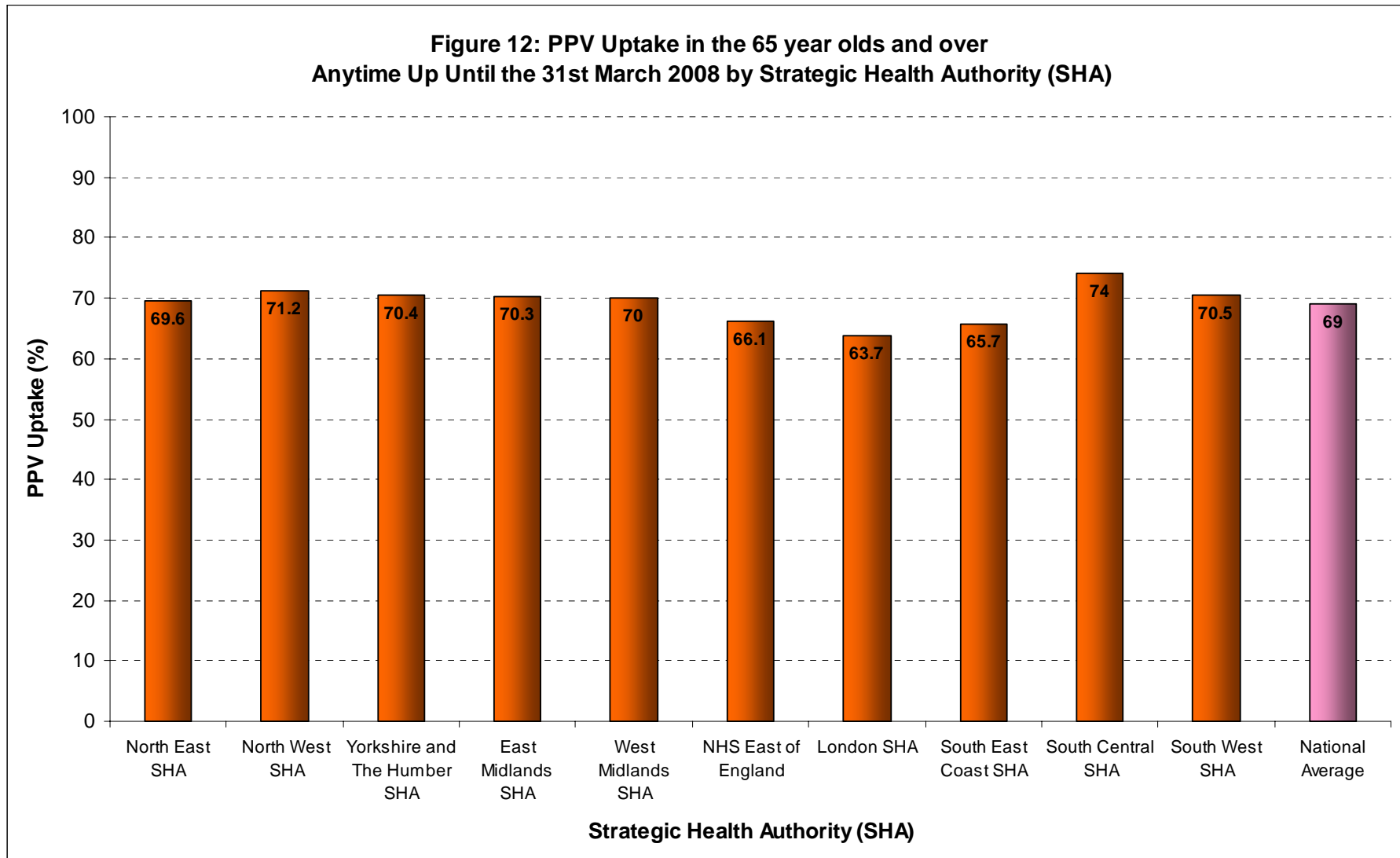
Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over

Figure 11: PPV Uptake Anytime Up Until the 31st March 2008 by Age Group



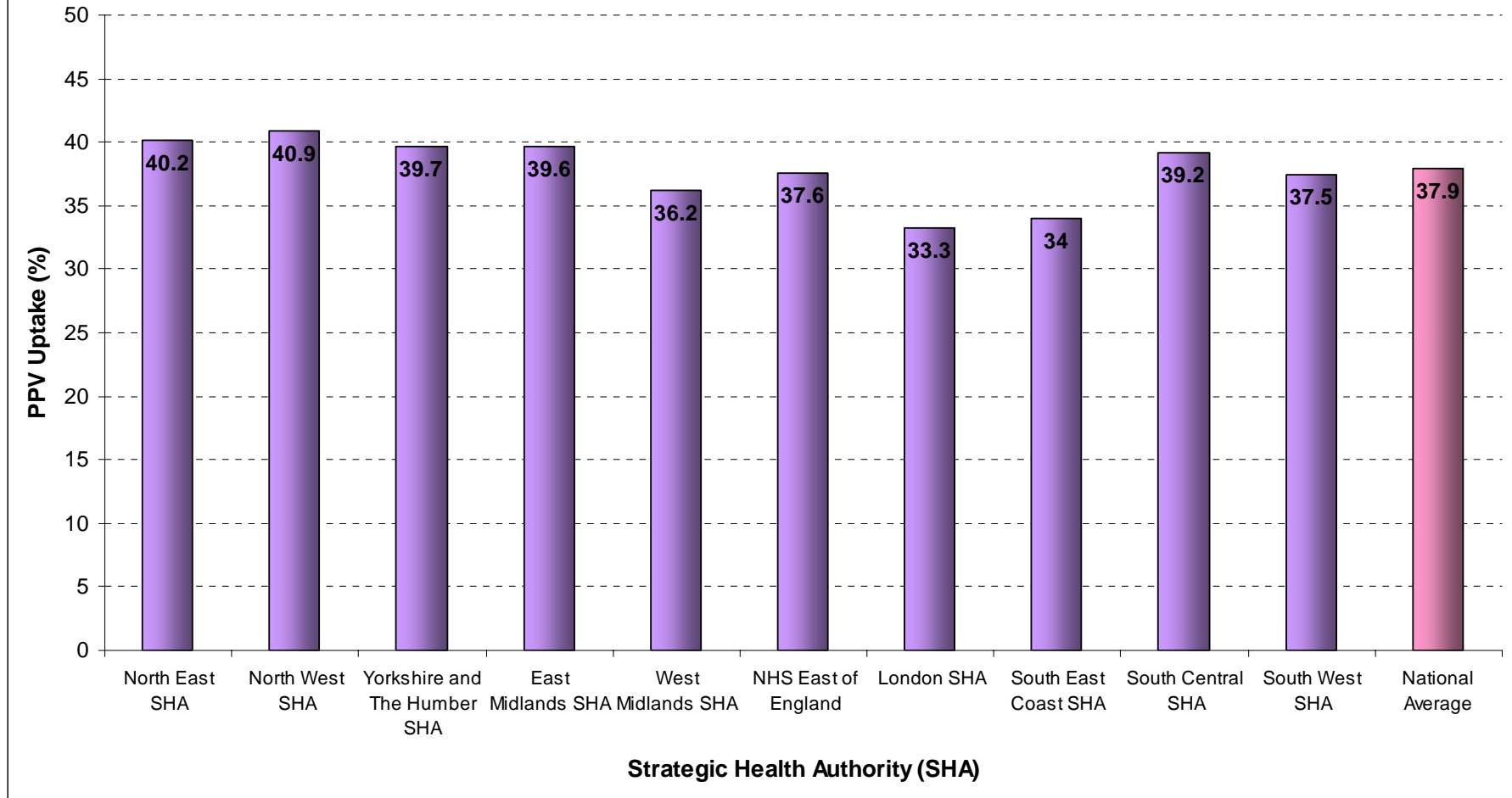
Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
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**Figure 12: PPV Uptake in the 65 year olds and over  
Anytime Up Until the 31st March 2008 by Strategic Health Authority (SHA)**

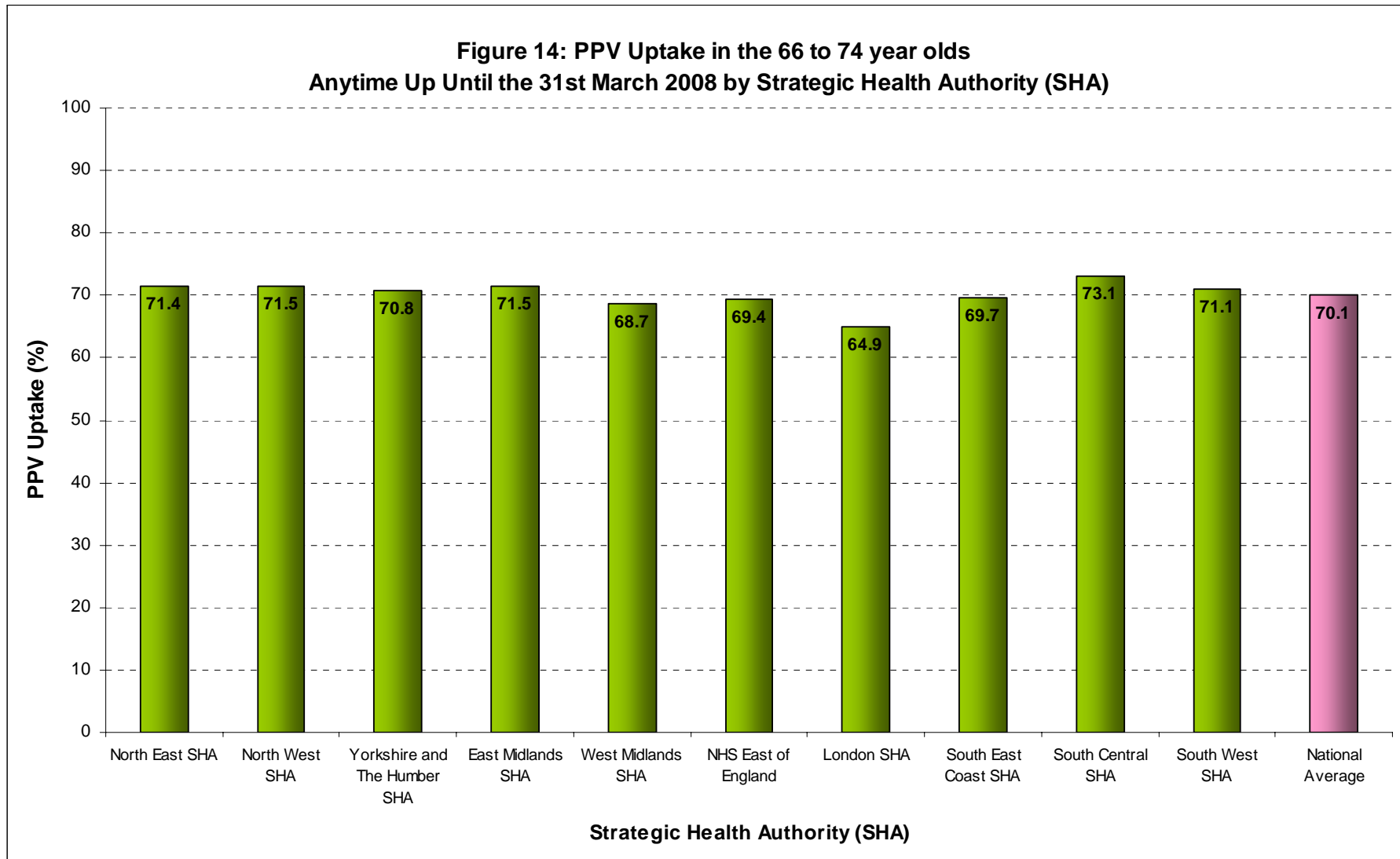


Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over

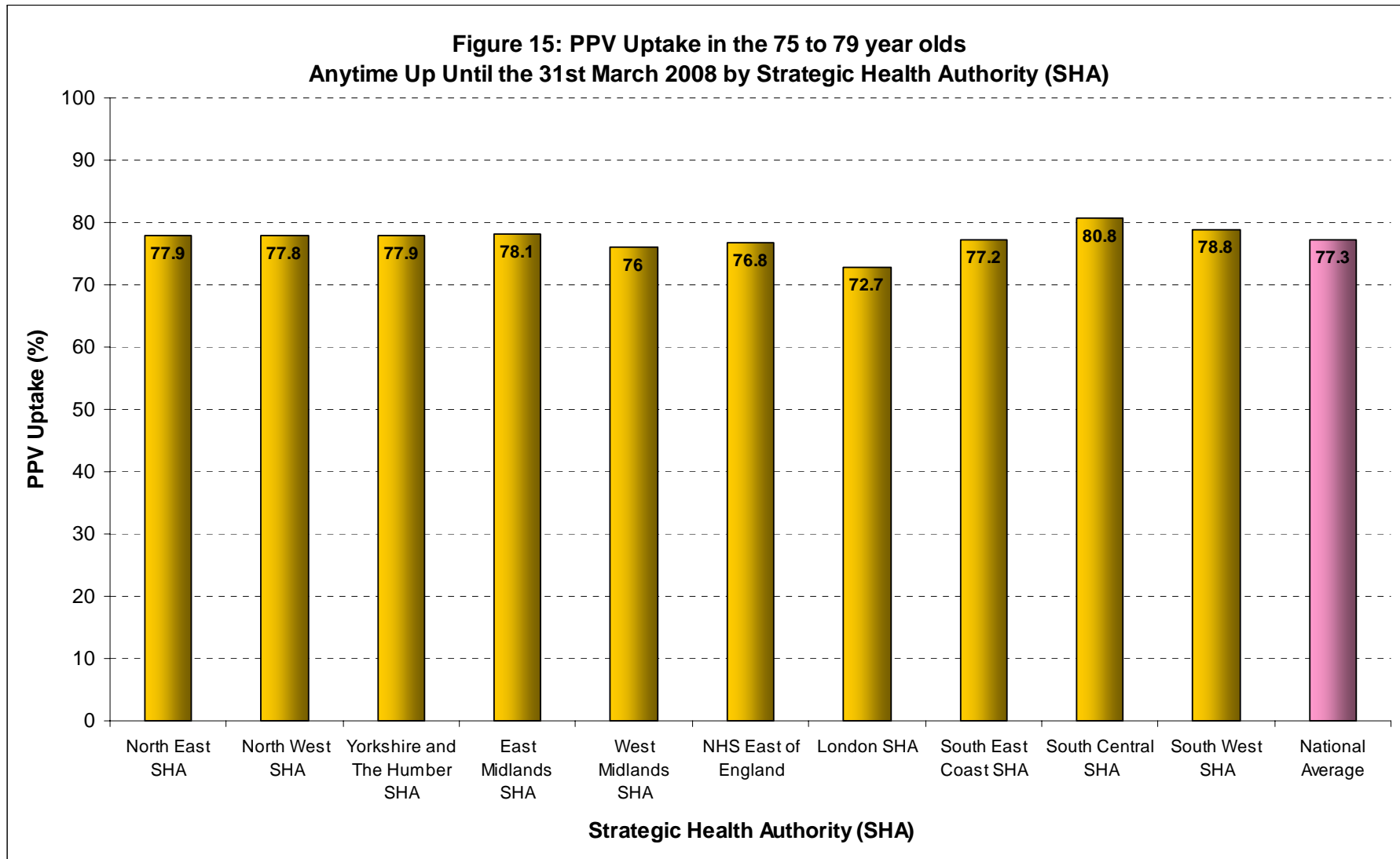
**Figure 13: PPV Uptake in the 65 year olds only  
Anytime up until the 31st March 2008 by Strategic Health Authority (SHA)**



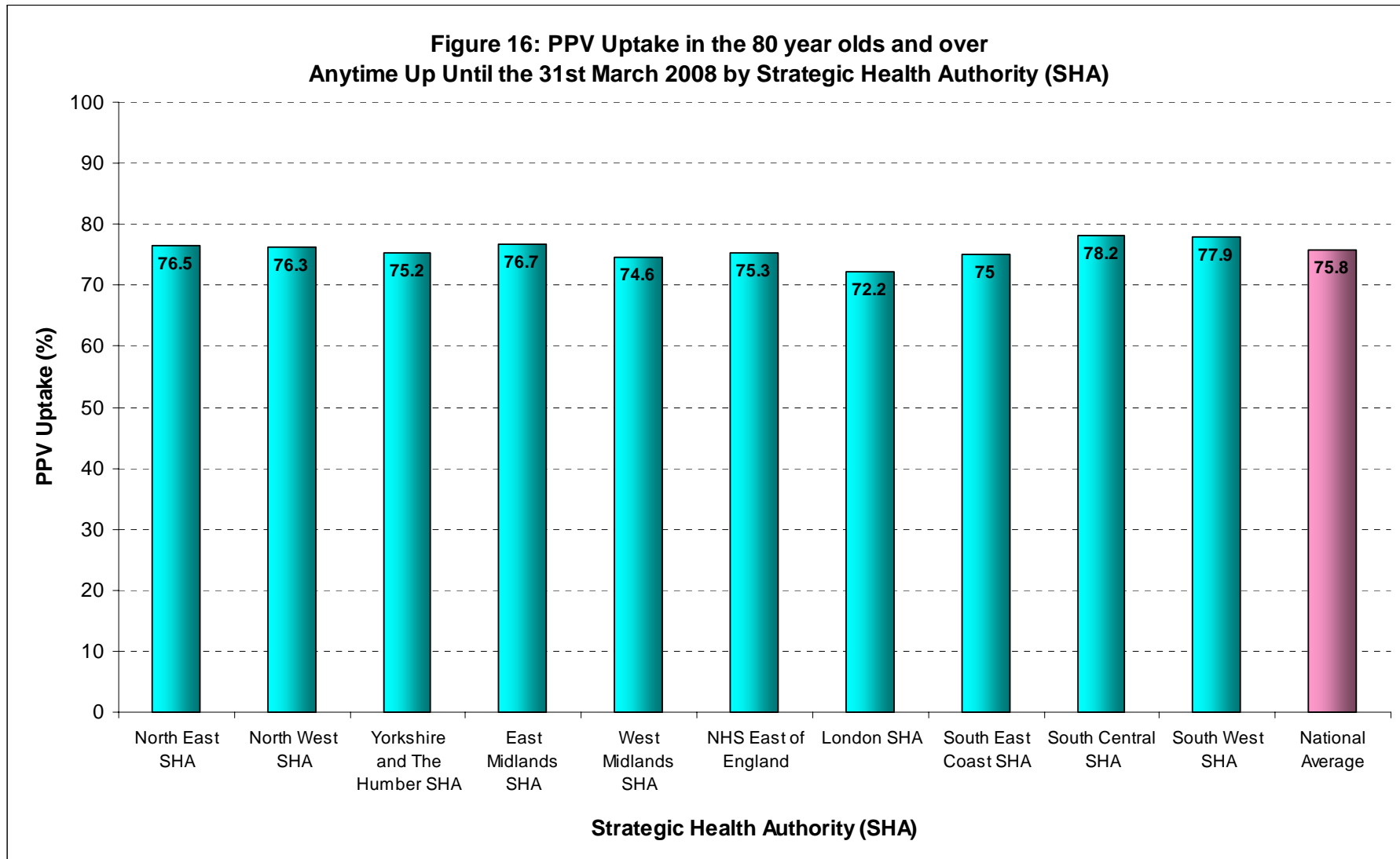
Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over



Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over

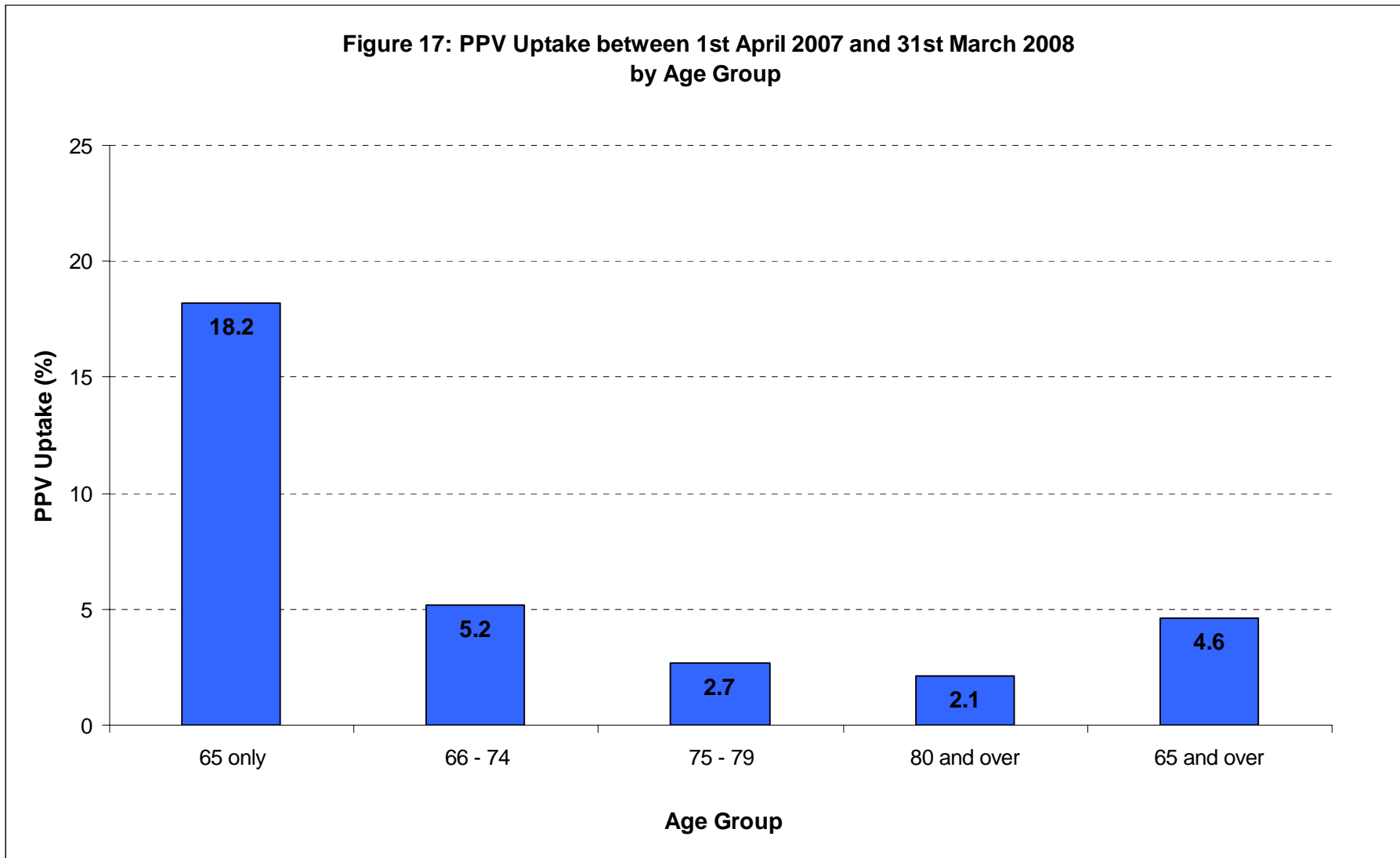


Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over



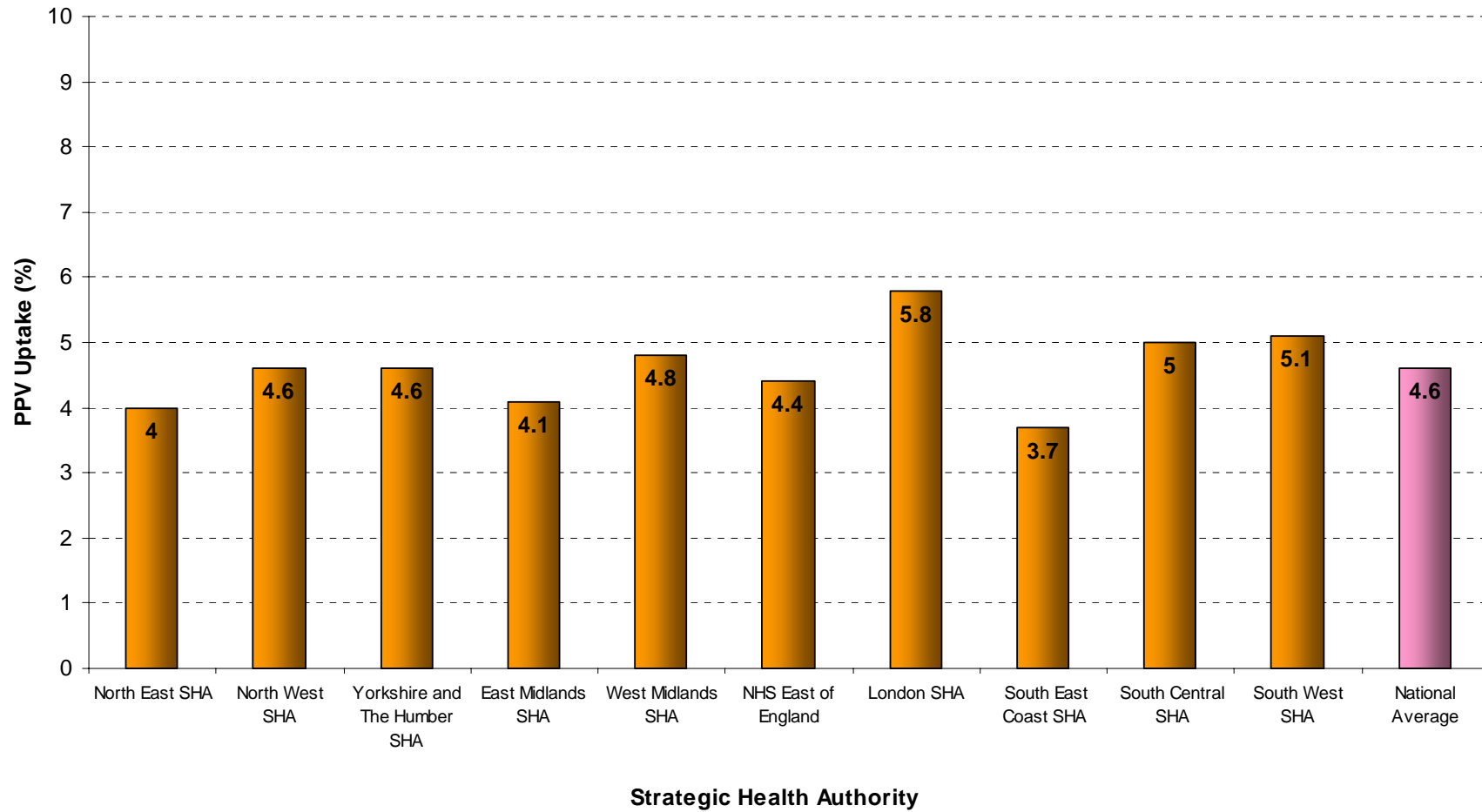
Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over

Figure 17: PPV Uptake between 1st April 2007 and 31st March 2008  
by Age Group



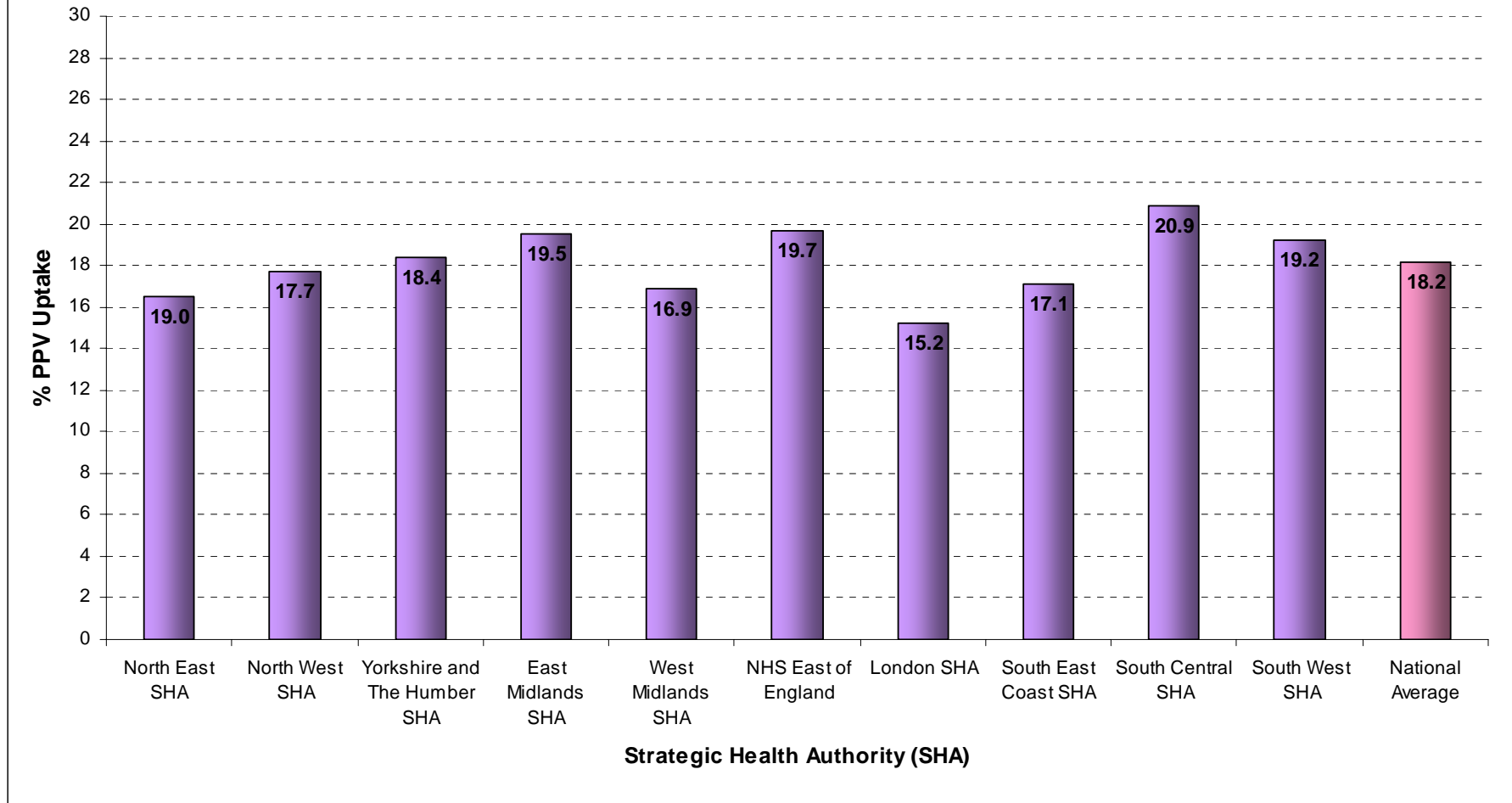
Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over

**Figure 18: PPV Uptake in the 65 year olds and over  
between 1st April 2007 and 31st March 2008 by Strategic Health Authority (SHA)**



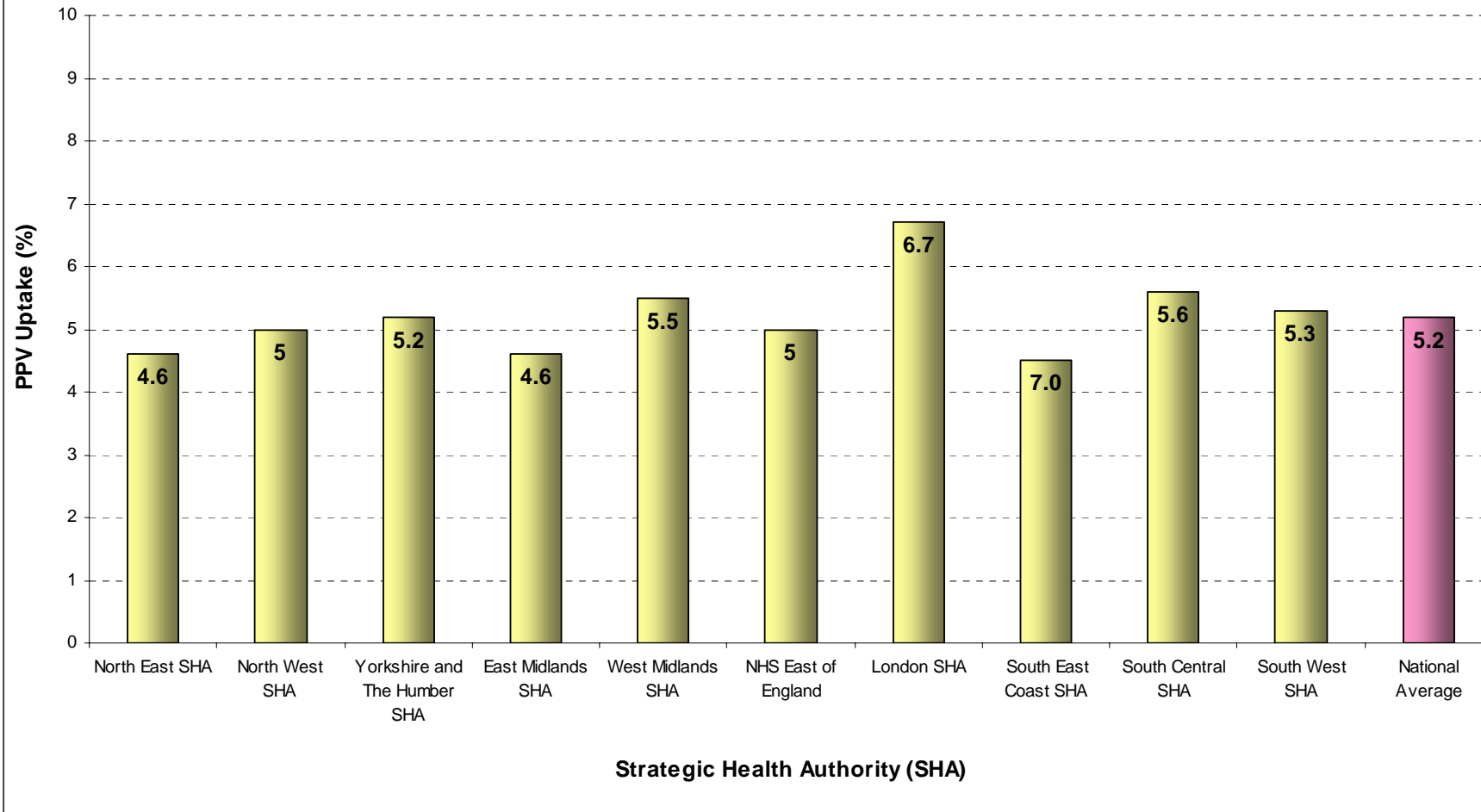
Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over

**Figure 19: PPV Uptake in the 65 year olds only  
between 1st April 2007 and 31st March 2008 by Strategic Health Authority (SHA)**



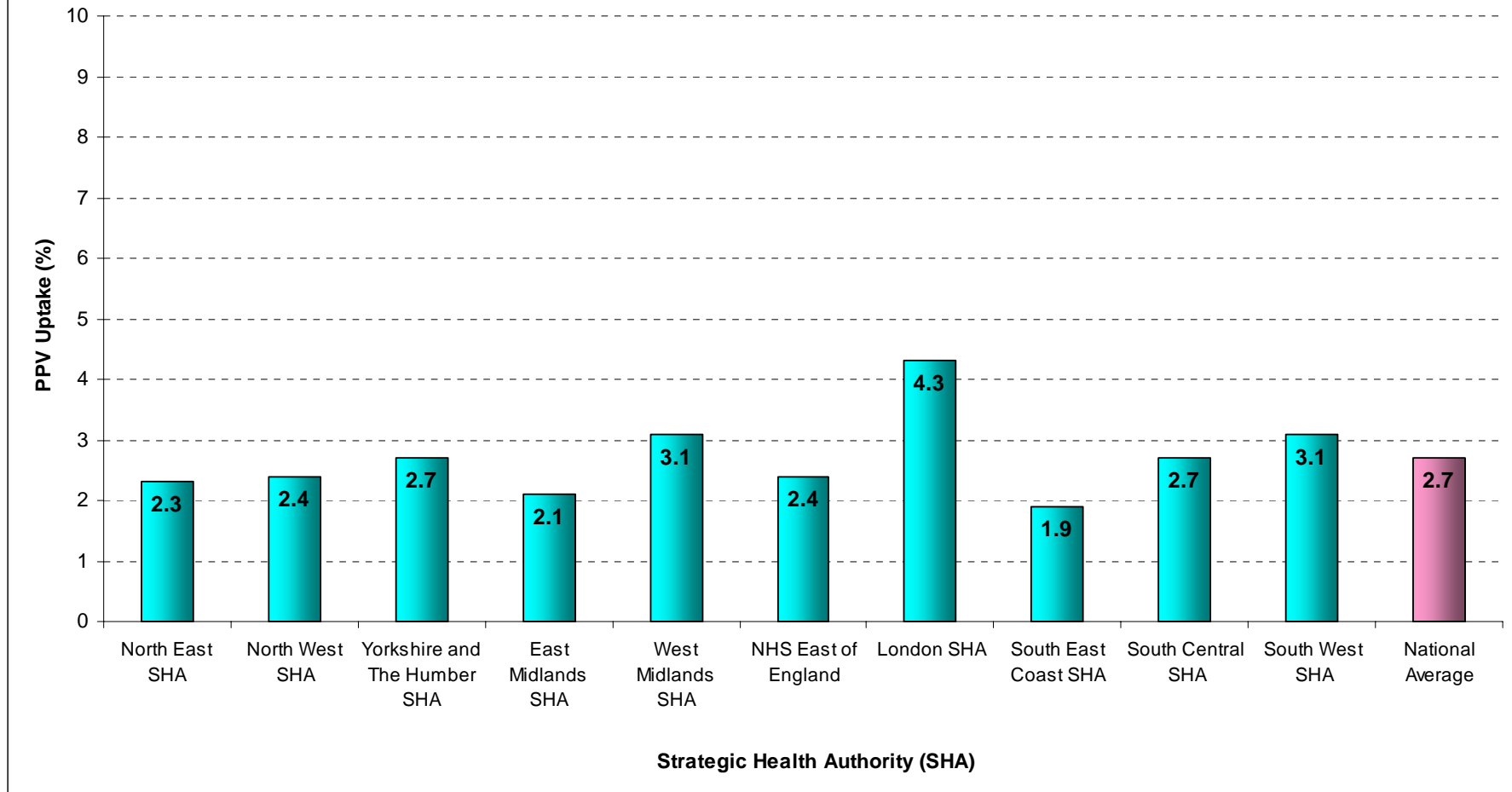
Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
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**Figure 20: PPV Uptake in the 66 to 74 year olds  
between 1st April 2007 and 31st March 2008 by Strategic Health Authority (SHA)**



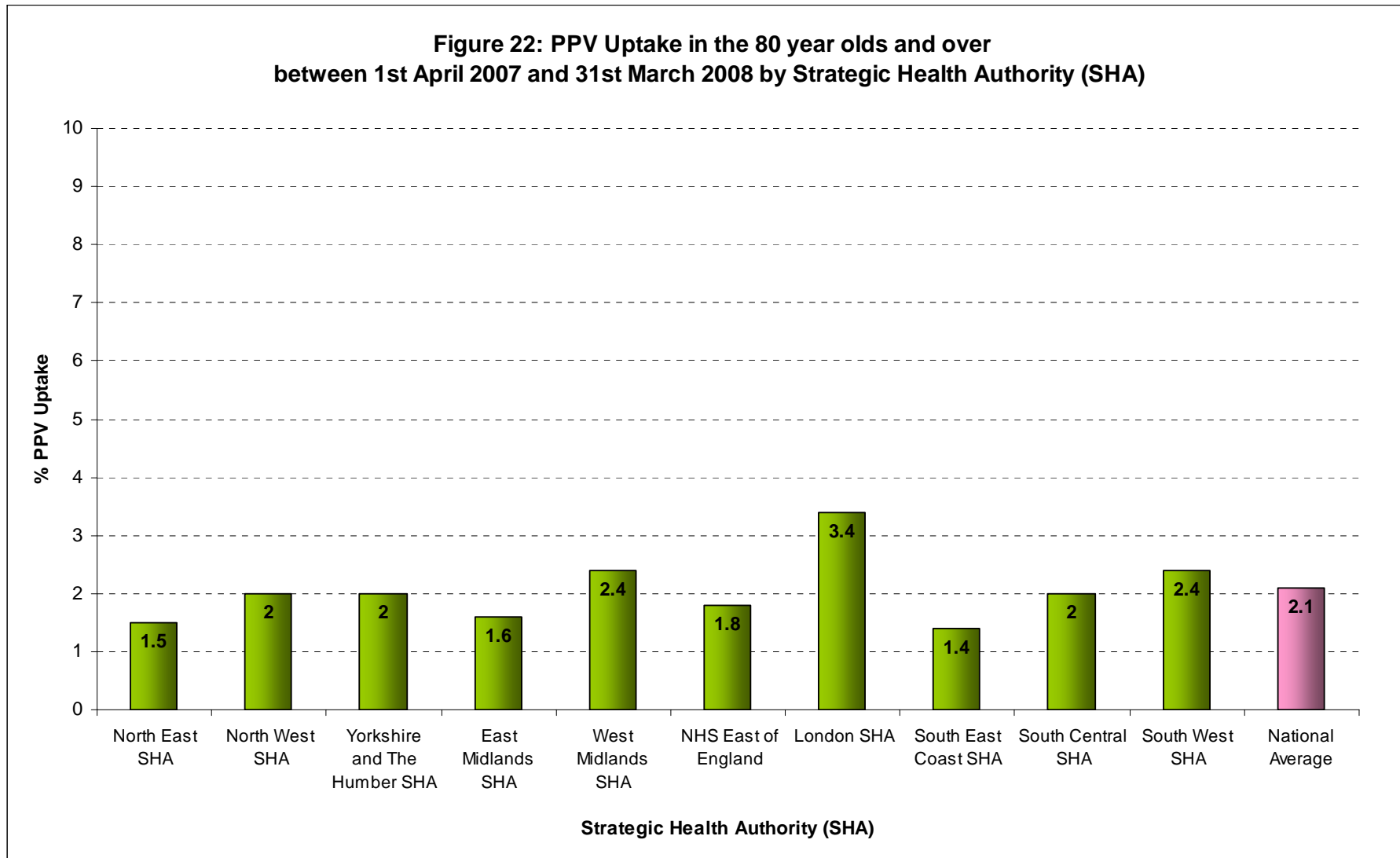
Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over

**Figure 21: PPV Uptake in the 75 to 79 year olds  
between 1st April 2007 and 31st March 2008 by Strategic Health Authority (SHA)**



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**Figure 22: PPV Uptake in the 80 year olds and over  
between 1st April 2007 and 31st March 2008 by Strategic Health Authority (SHA)**

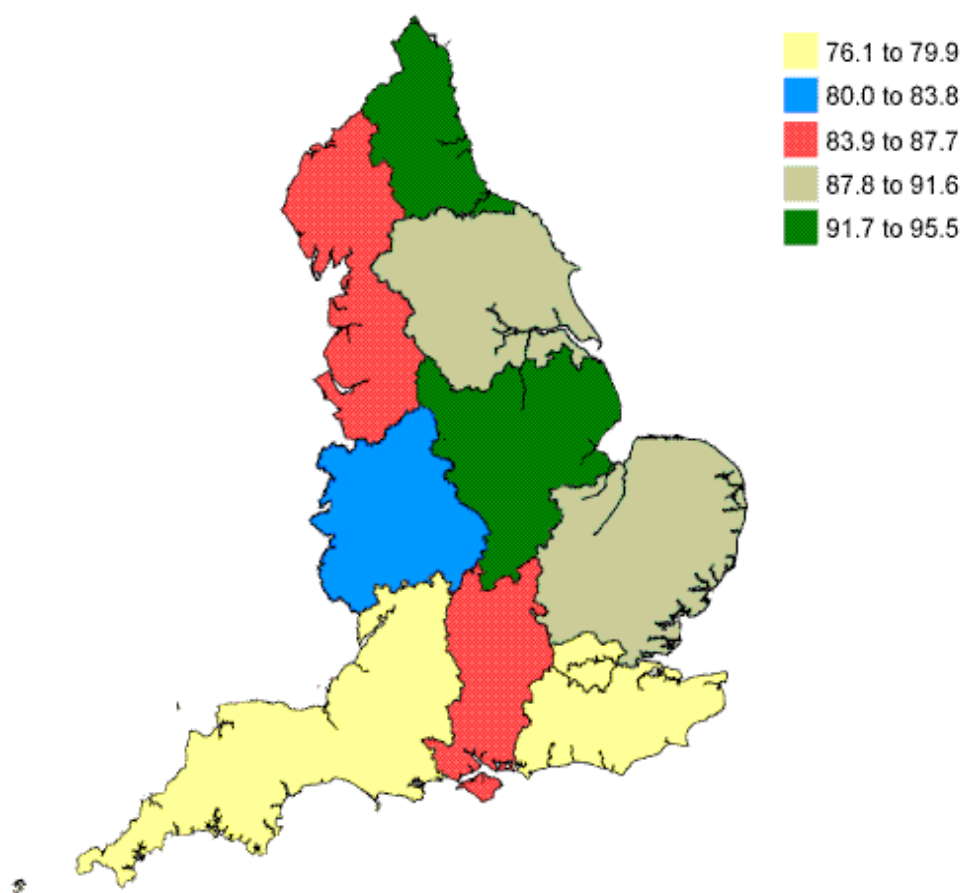


Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over

## MAPS

### Map 1

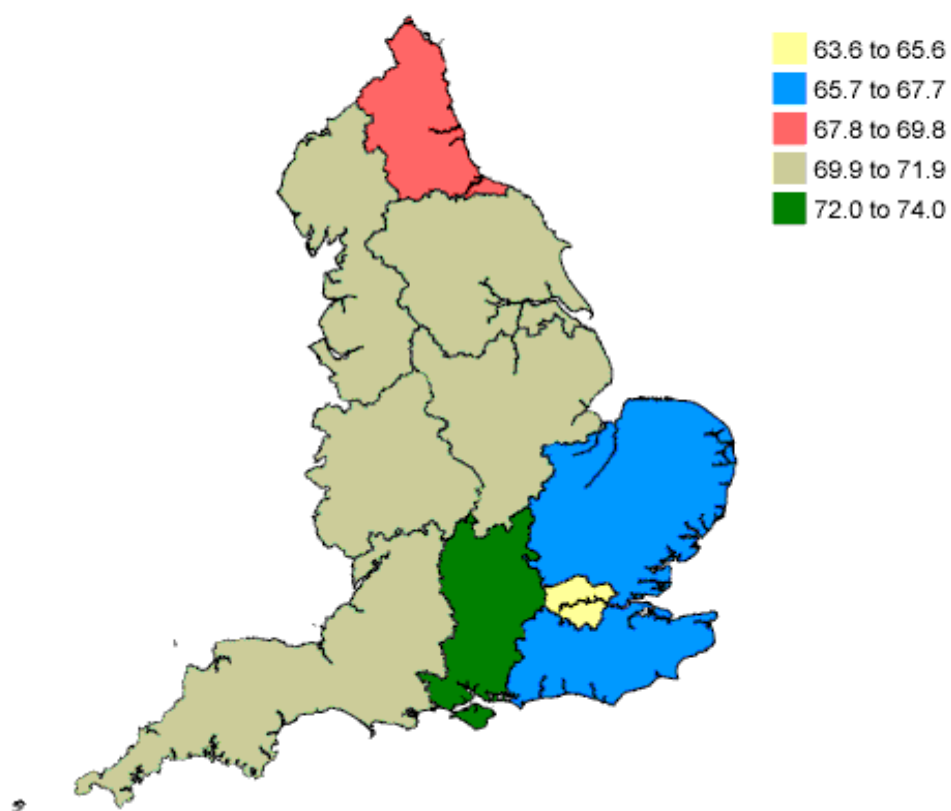
Map showing the GP Practice response rate (%) by SHA



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**Map 2**

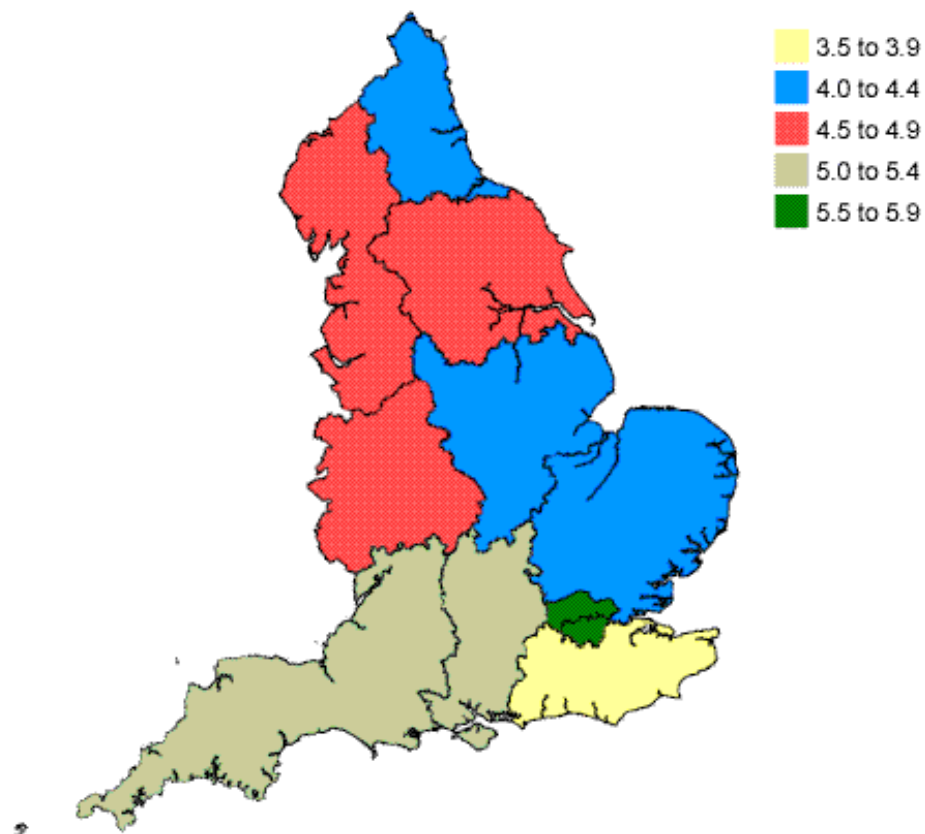
Map showing Pneumococcal Vaccine uptake (%) for those aged 65 years and over anytime up and until 31<sup>st</sup> March 2008 by SHA



Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over

**Map 3**

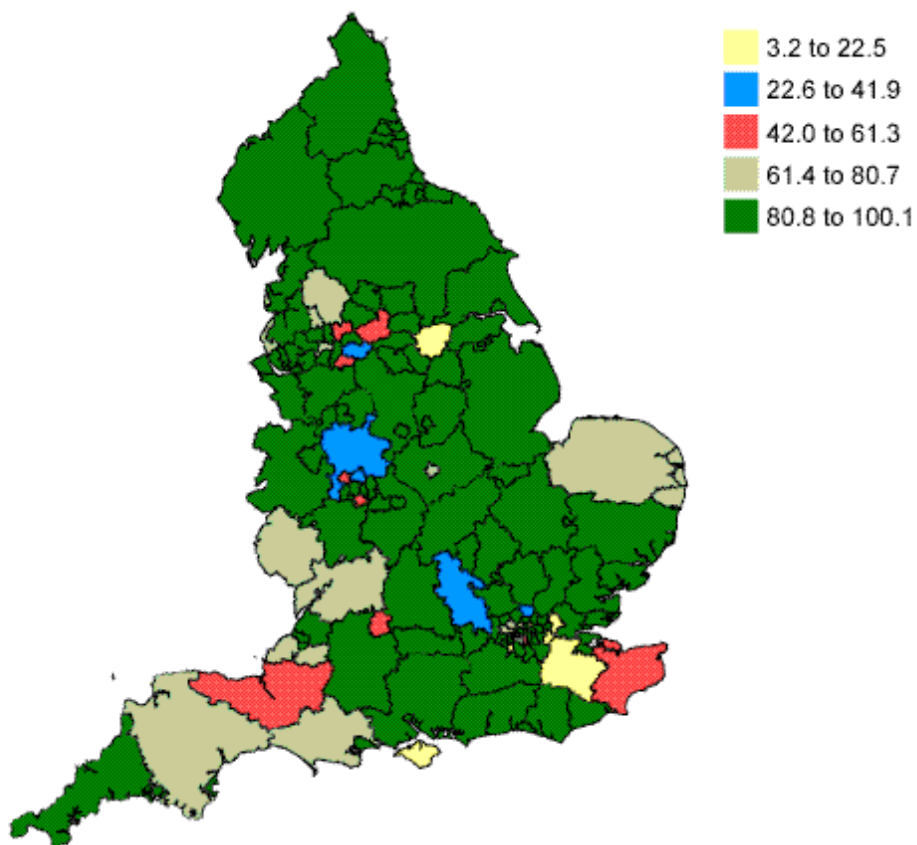
Map showing Pneumococcal Vaccine uptake (%) for those aged 65 years and over between 1<sup>st</sup> April 2007 and 31<sup>st</sup> March 2008 by SHA



Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over

**Map 4**

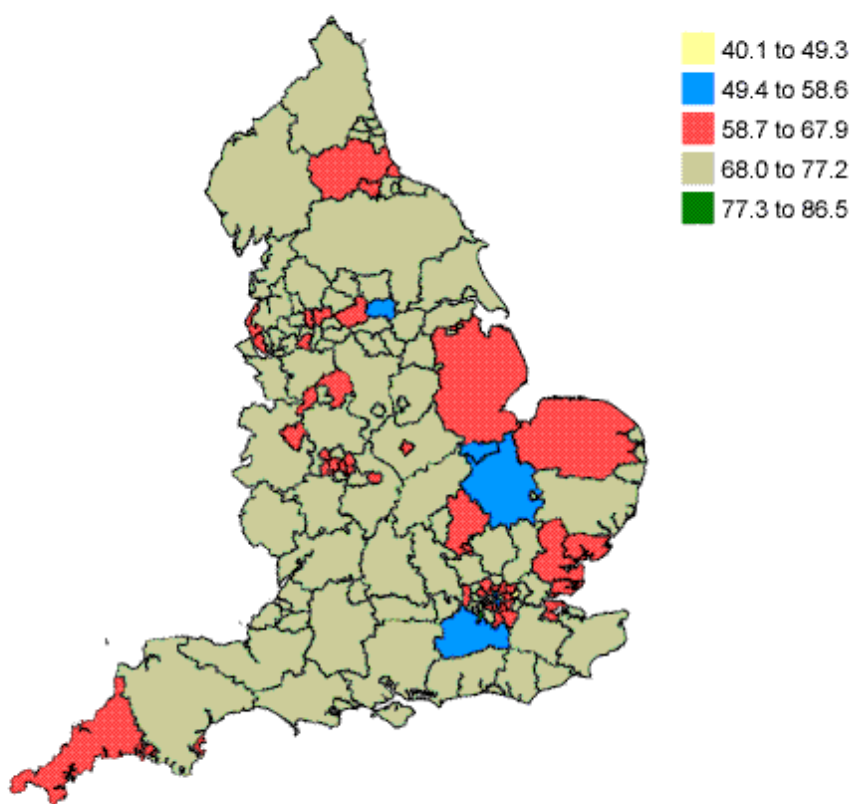
Map showing the GP Practice response rate (%) by PCT



Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
65 years old and over

**Map 5**

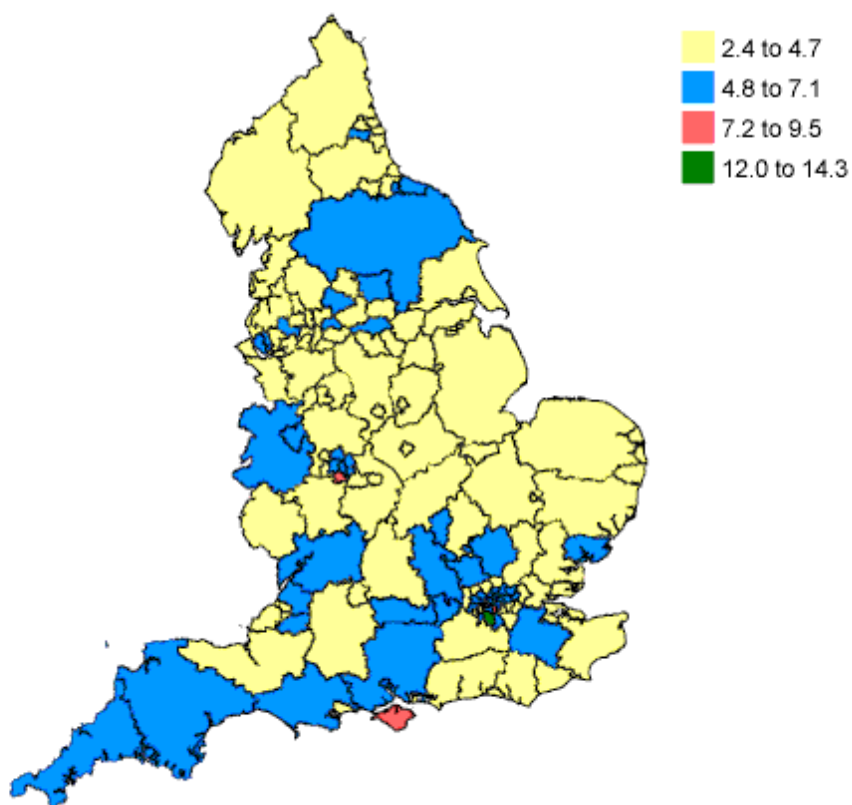
Map showing Pneumococcal Vaccine uptake (%) for those aged 65 years and over anytime on or before 31<sup>st</sup> March 2008 by PCT



Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England  
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**Map 6**

Map showing Pneumococcal Vaccine uptake (%) for those aged 65 years and over between 1<sup>st</sup> April 2007 and 31<sup>st</sup> March 2008 by PCT



# Annual Pneumococcal Polysaccharide Vaccine Uptake Report for England 65 years old and over

## References

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<sup>1</sup> *The vaccine protects against the following serotypes of the bacterium:*

*1, 2, 3, 4, 5, 6B, 7F, 8, 9N, 9V, 10A, 11A, 12F, 14, 15B, 17F, 18C, 19F, 19A, 20, 22F, 23F, 33F*

*In addition to being the most common cause of serious pneumonia, pneumococcal bacteria can cause middle ear infections, sinusitis and bronchitis (non invasive) as well as septicemia and meningitis (invasive). Indeed, invasive pneumococcal disease is a leading cause of morbidity and mortality in the UK, affecting in particular the elderly, the very young, those with an absent or non-functioning spleen and other causes of impaired immunity.*

*Currently, one dose of vaccination is recommended for groups at higher risk of invasive disease including those 65 years of age and over, with re-vaccination generally not required, except for specific groups with rapidly waning antibodies such as those with nephrotic syndrome. For further information on PPV and its indications, see the latest chapter in the Green Book<sup>2</sup>.*