

SDR 139/2012

28 August 2012

NHS IMMUNISATION STATISTICS, WALES, 2011-12

This release summarises information about NHS routine immunisations given during the year ended 31 March 2012. The information in this release is primarily for childhood immunisations, but also includes information about influenza and pneumococcal immunisation for older people or 'at risk' groups considered to be more at risk of developing complications from contracting flu. It also includes a new section on childhood immunisation courses by age. Some information for earlier years is also included.

Further detail on the uptake of scheduled childhood immunisation in Wales is recorded in the [COVER](#) reports, which are produced by Public Health Wales Health Protection Division on a quarterly and annual basis. The annual reports detail uptake of the immunisations in the UK routine childhood schedule in children reaching key birthdays during the reporting year. Currently the World Health Organization (WHO) recommends that on a national basis at least 95% of children receive three primary doses of diphtheria, tetanus, polio and pertussis in their first year and more than 95% receive one dose of a measles, mumps and rubella vaccine by two years of age. The current UK immunisation schedule is shown on page 11. Please see notes at the end of this release, or view the Quality Report [here](#).

Key Facts:

- Immunisation coverage rates for the main childhood vaccinations have maintained a high level for some years. For the year ended 31 March 2012:
 - More than 95 per cent of the children who reached their 1st birthday in the year had received their 5 in 1¹ immunisation, and were immunised against meningitis C and pneumococcal (PCV);
 - 97 per cent of the children who reached their 2nd birthday in the year had received their 5 in 1¹ immunisation, and 96 per cent were immunised against meningitis C.
- Coverage rates for measles, mumps and rubella (MMR) are still recovering from the falls seen in the early 2000s. 87 per cent of the children who reached their 5th birthday in the year ended 31 March 2012 had been immunised with the second dose against MMR.
- Uptake of 3 doses of Human Papilloma Virus (HPV) vaccine in 2010/11 school year 8 girls was 86 per cent, up from 82 per cent in the previous year;
- During autumn/winter 2011-12, 68 per cent of people aged 65 or over were immunised against influenza, up from 66 per cent in 2010-11; and 50 per cent of people aged under 65 in 'at risk' groups, up from 48 per cent in 2010-11.

¹ diphtheria, tetanus, polio, pertussis (whooping cough), haemophilus influenzae type b (Hib)

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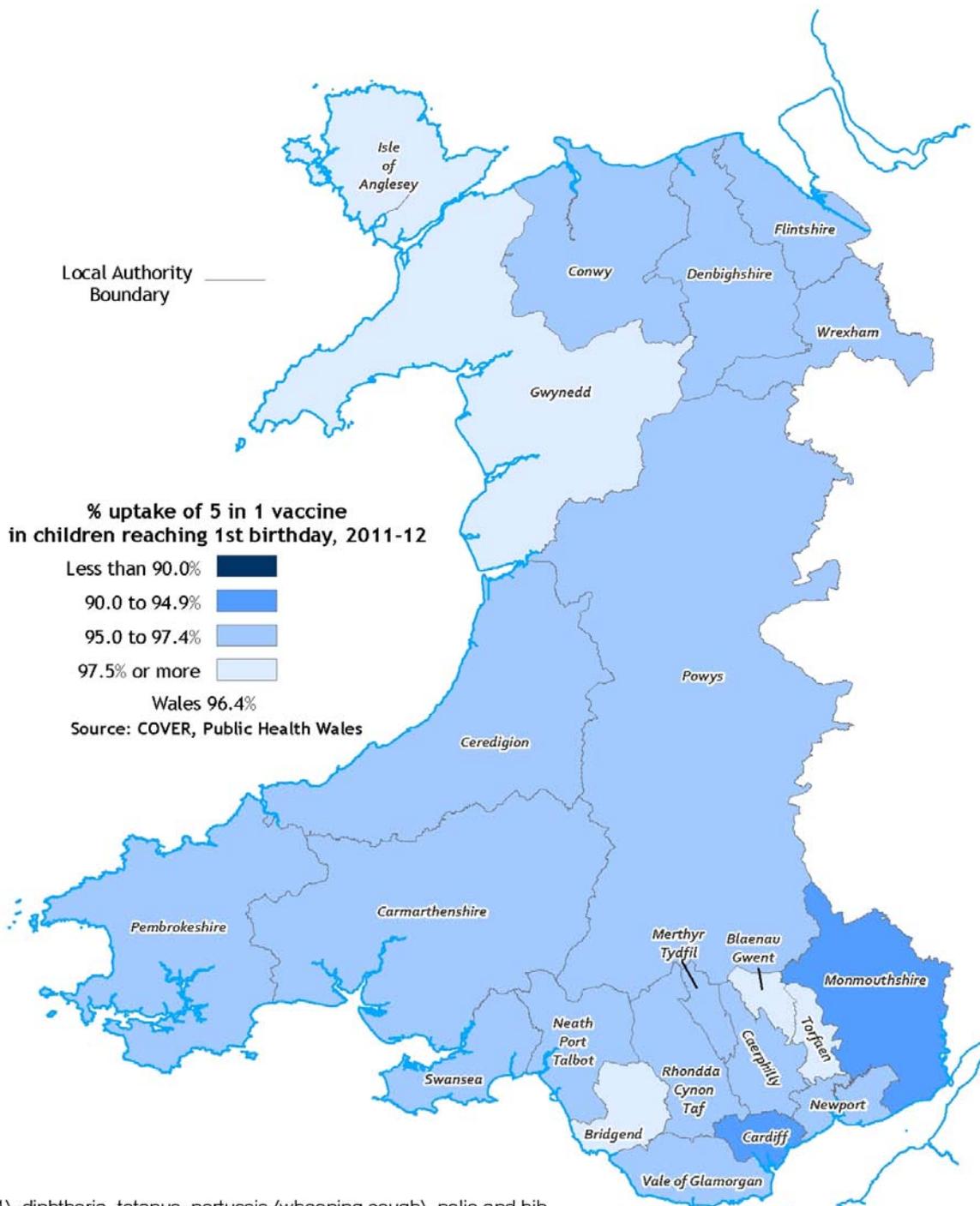
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All the base data for charts shown in this Release are available on 

Early childhood immunisation by age 1

- Immunisation coverage for all of the primary childhood immunisations, including meningitis C and pneumococcal conjugate vaccination (PCV), has exceeded the 95 per cent target in Wales, but as Map 1 shows there is variation across Wales, with North Wales and some South Wales valleys showing the highest rates.

Map 1: Percentage uptake of 5-in-1 vaccine in children reaching their first birthday, in 2011-12



(1) diphtheria, tetanus, pertussis (whooping cough), polio and hib. Pertussis uptake is used as a proxy

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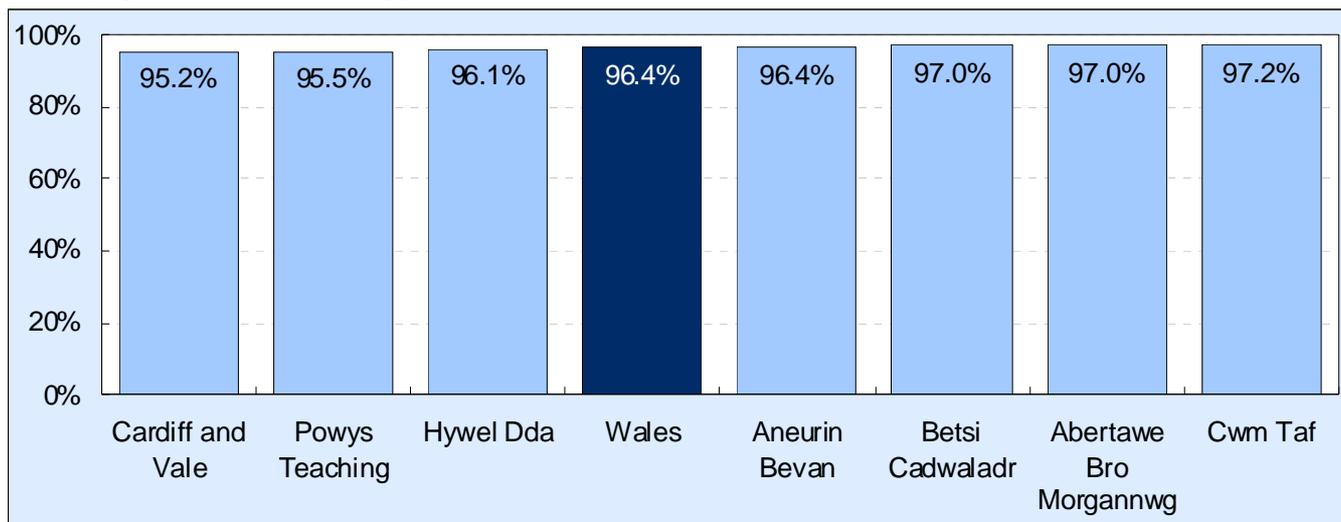
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Chart 1: Percentage of children immunised against diphtheria, tetanus, pertussis, polio, and Hib (5-in-1) by their first birthday, in 2011-12



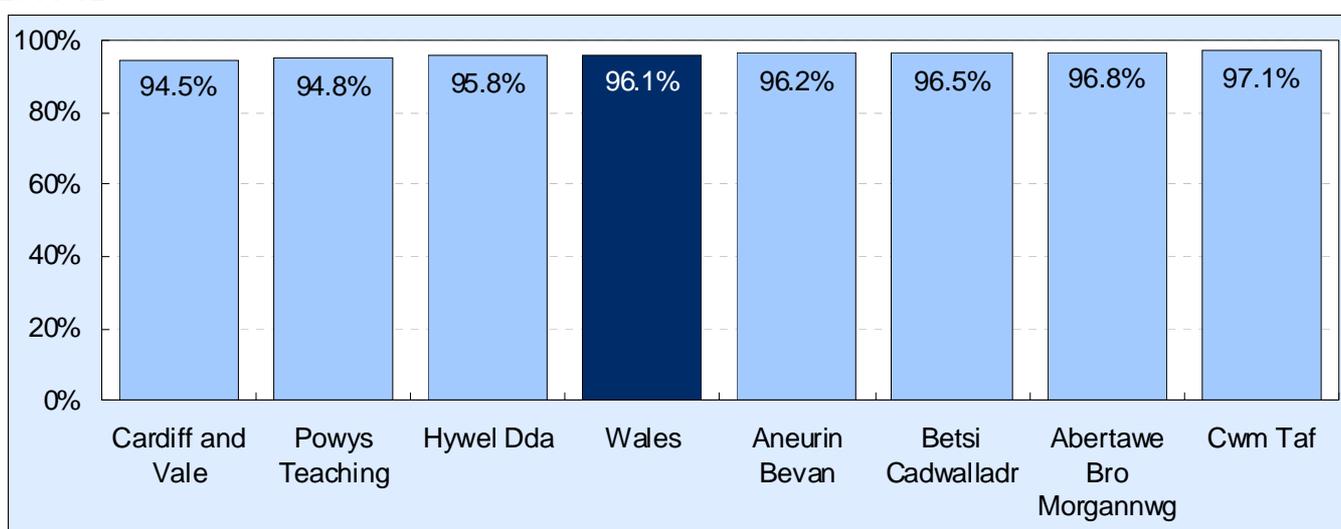
Source: [COVER, Public Health Wales](#)

Annual uptake of the complete three-dose course of the 5 in 1¹ vaccine (scheduled at 2, 3 and 4 months of age), in children reaching their first birthday was 96.4 per cent. All seven of the Local Health Boards achieved the 95 per cent target. Uptake ranged by LHB from 95.2 per cent in Cardiff and Vale University LHB to 97.2 per cent in Cwm Taf LHB, and by Local Authority Area from 94.8 per cent in Monmouthshire to 98.1 per cent in Anglesey. The 95% target was achieved in twenty of the twenty two Local Authority Areas.

¹diphtheria, tetanus, pertussis (whooping cough), polio and Hib. Pertussis uptake is used as a proxy

Further geographical detail of the coverage of the 5 in 1 vaccination across Wales is shown in Map 1. The highest rates were achieved in parts of North Wales and some of the Aneurin Bevan valleys with the lowest rates being seen in an area of south east Wales covering both rural and urban areas.

Chart 2: Percentage of children immunised against meningitis C (MenC) by their first birthday, in 2011-12

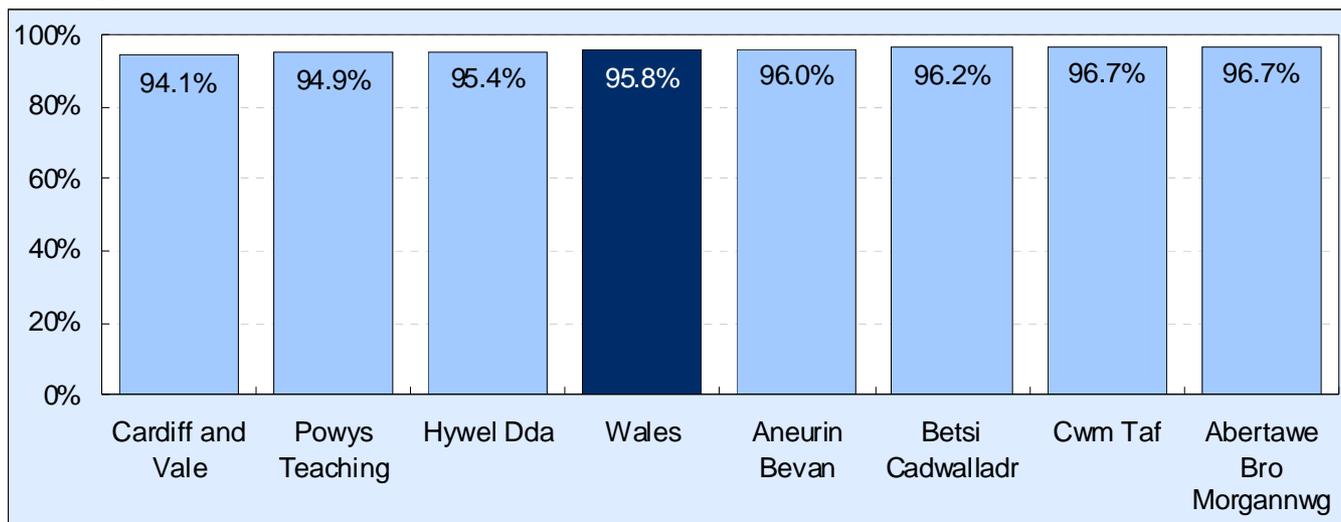


Source: [COVER, Public Health Wales](#)

Annual uptake of a completed course of MenC² vaccine in children reaching their first birthday during the year had increased since the previous year at 96.1 per cent. Uptake ranged by Local Health Board from 94.5 per cent in Cardiff and Vale University LHB to 97.1 per cent in Cwm Taf LHB, and by Local Authority Area from 94.2 per cent in Cardiff to 98.0 per cent in Anglesey.

²Men C vaccine protects against meningitis caused by meningococcus group C infection

Chart 3: Percentage of children immunised against pneumococcal infection (PCV) by their first birthday, in 2011-12



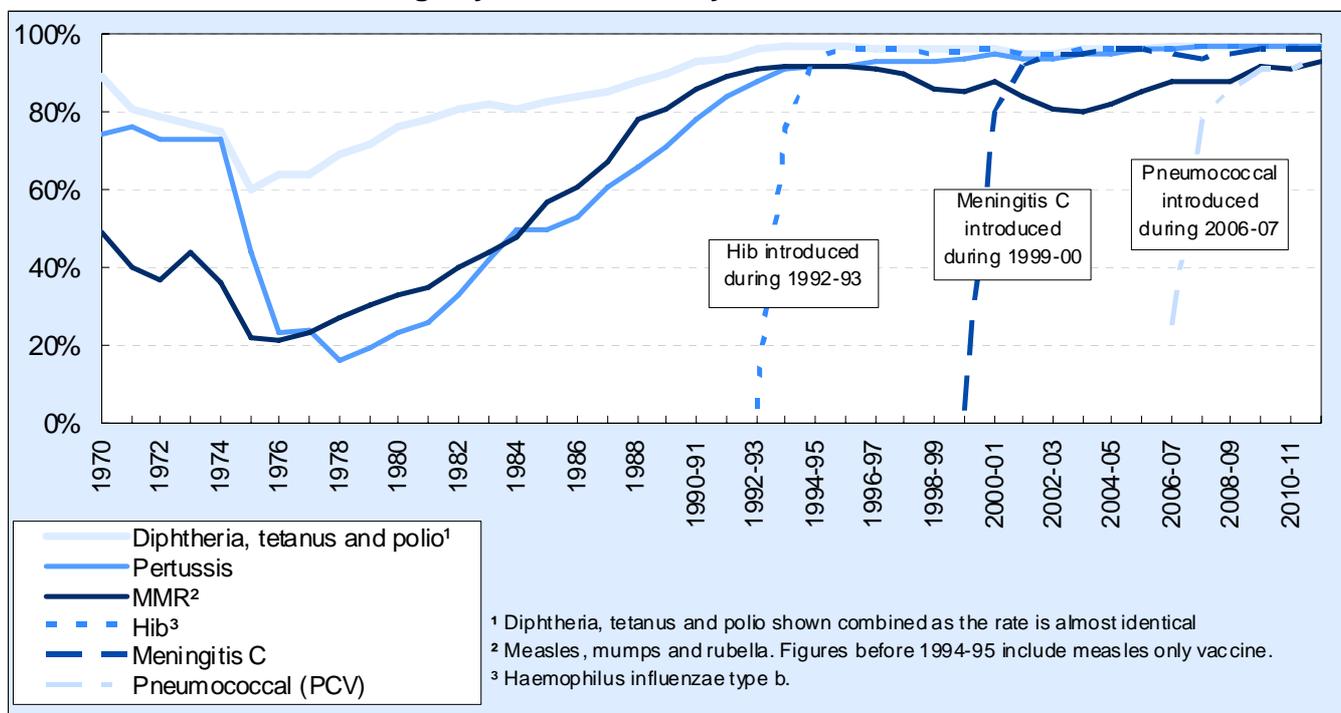
Source: [COVER, Public Health Wales](#)

Uptake of a complete two dose primary course of pneumococcal conjugate vaccination (PCV2) in children at one year of age was 95.8 per cent, ranging by Local Health Board from 94.1 per cent in Cardiff and Vale University LHB to 96.7 per cent in Abertawe Bro Morgannwg University LHB and by Local Authority Area from 93.6 per cent in Cardiff to 98.2 per cent in Blaenau Gwent.

Early childhood immunisation by age 2

Chart 4 shows an overview since 1970 of the coverage of current childhood immunisations by age 2.

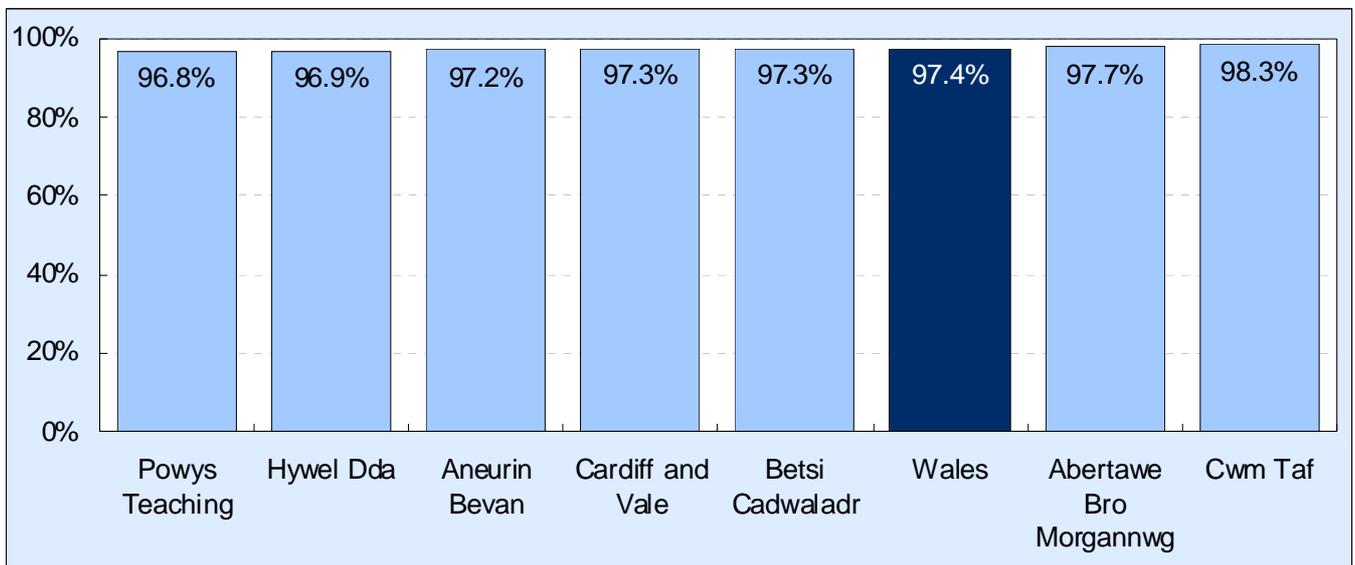
Chart 4: Immunisation coverage by second birthday, 1970 to 2011-12



Source: KC51/[COVER, Public Health Wales](#)

- Immunisation coverage for all of the primary childhood immunisations except MMR by age 2 is more than 95 per cent;
- Coverage rates for pertussis had, by the late 1990s, regained the ground lost in the mid 1970s due to adverse publicity about the safety of the vaccine, and had reached 97 per cent in children aged 2 years in 2011-12;
- The fall in MMR coverage during the early 2000s followed adverse publicity over the safety of the vaccine. Coverage of 1 dose in children aged 2 years rose steadily from the early 1980s to reach 92 per cent in the mid 1990s. It dropped to 80 per cent in 2003-04, but by 2011-12 had increased to 92.7 per cent;
- Following its introduction during 1992-93, coverage of the primary course against Hib (included in the '5-in-1' immunisation) in 2 year old children has now reached more than 97 per cent;
- Conjugate vaccine against meningitis C was introduced during 1999-2000, and has now reached a coverage rate of 96 per cent.

Chart 5: Percentage of children immunised against diphtheria, tetanus, pertussis, polio and Hib (5-in-1) by their second birthday, in 2011-12

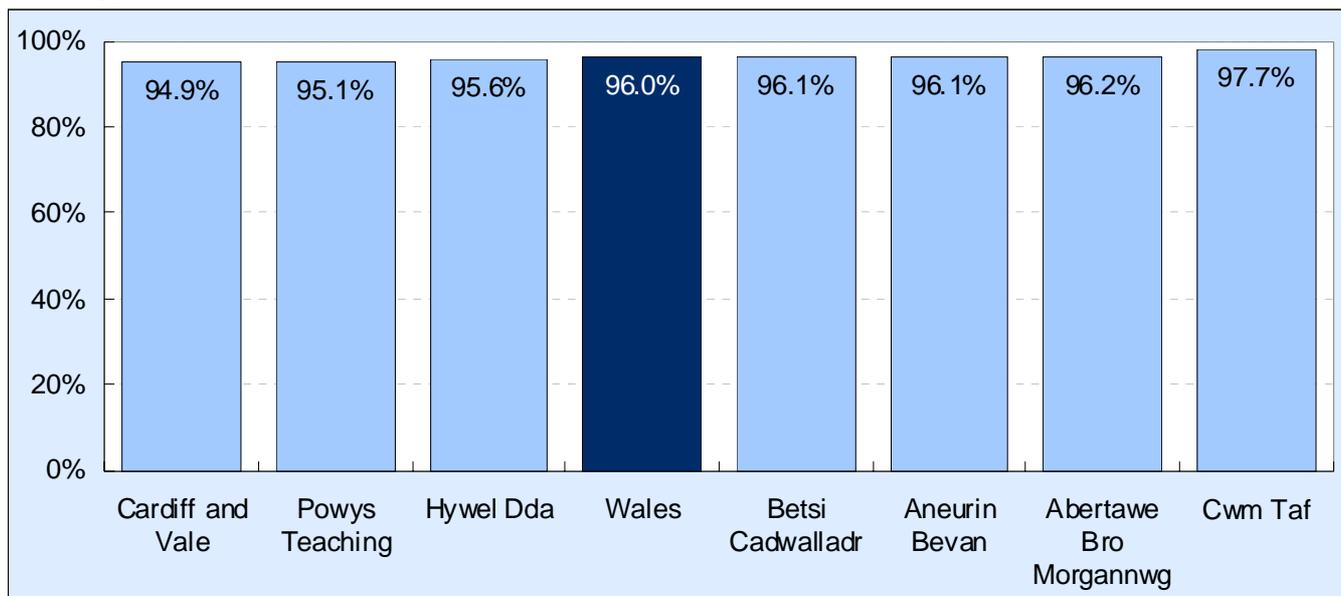


Source: [COVER, Public Health Wales](#)

Across Wales, coverage in children aged 2 years stands at 97.4 per cent for all diseases covered in the 5-in-1 vaccine¹, ranging by Local Health Board from 96.8 per cent in Powys Teaching LHB to 98.3 per cent in Cwm Taf LHB, and by Local Authority Area from 95.7 per cent in Newport to 98.6 per cent in Flintshire.

¹diphtheria, tetanus, pertussis (whooping cough), polio and Hib. Pertussis uptake is used as a proxy.

Chart 6: Percentage of children immunised against meningitis C (MenC)¹ by their second birthday, in 2011-12

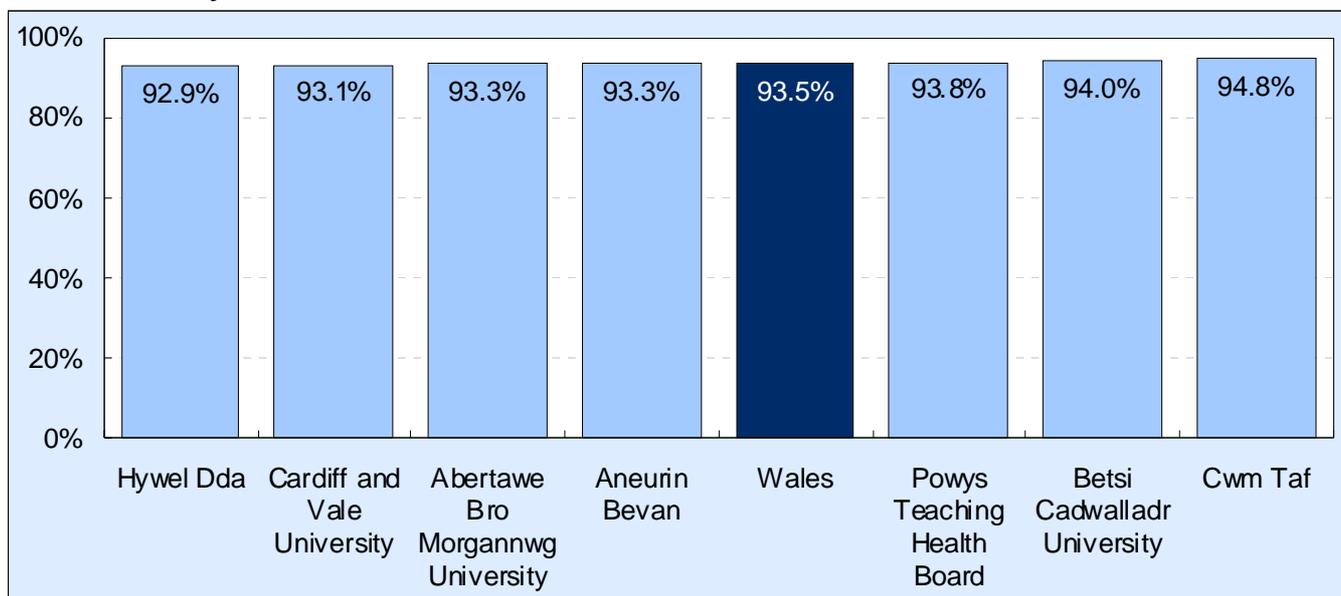


Source: [COVER, Public Health Wales](#)

Annual uptake of a completed primary two dose course of MenC¹ vaccine in children reaching their second birthday this year remained at 96.0 per cent. Uptake ranged by Local Health Board from 94.9 per cent in Cardiff and Vale University LHB to 97.7 per cent in Cwm Taf LHB, and by Local Authority Area from 93.7 per cent in Newport to 98.4 per cent in Merthyr Tydfil.

¹ Men C vaccine protects against meningitis caused by meningococcus group C infection

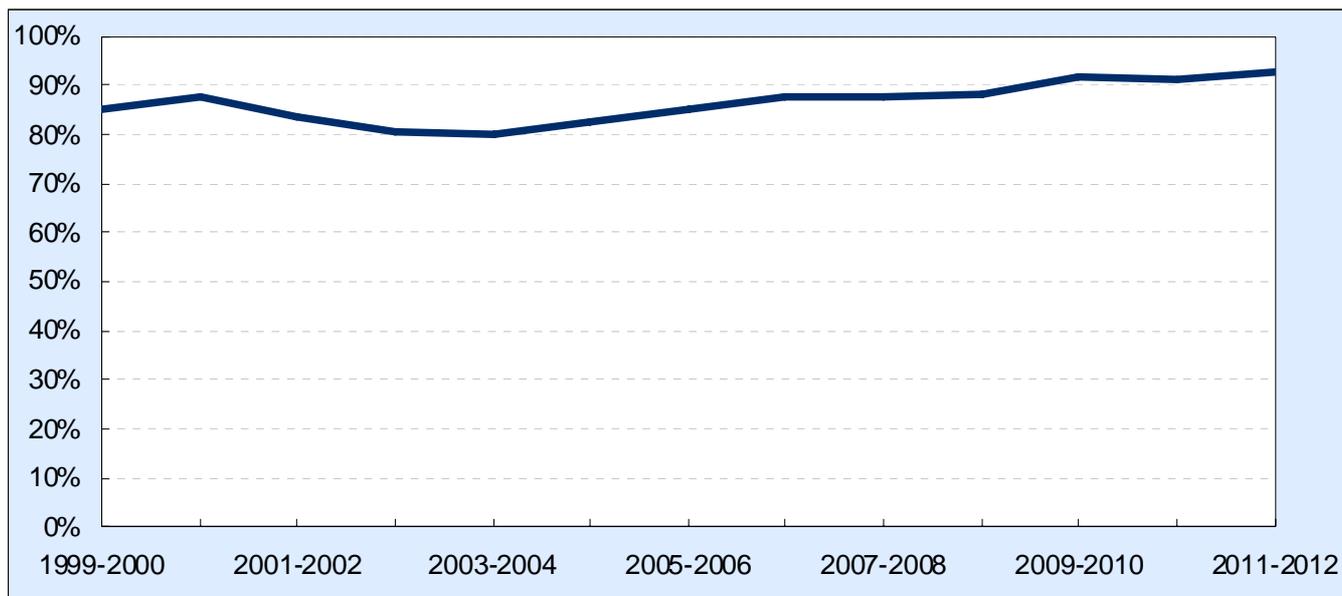
Chart 7: Percentage of children immunised against pneumococcal infection (PCV) by their second birthday, in 2011-12



Source: [COVER, Public Health Wales](#)

Uptake of the final pneumococcal conjugate vaccination (PCVf) in children at two years of age was 93.5 per cent, ranging by Local Health Board from 92.9 per cent in Hywel Dda LHB to 94.8 per cent in Cwm Taf LHB, and by Local Authority Area from 90.7 per cent in Pembrokeshire to 95.7 per cent in Flintshire.

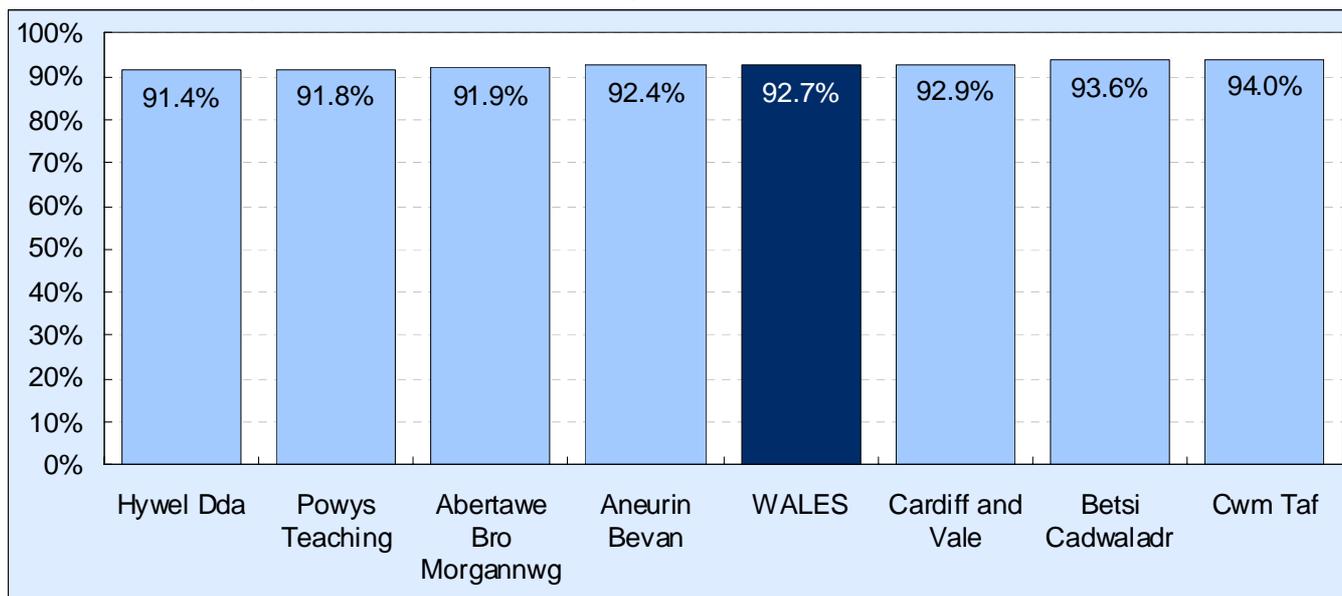
Chart 8: Percentage of children immunised against MMR by their second birthday, Wales, 1999-2000 onwards



Source: [COVER, Public Health Wales](#)

In 1999-2000, coverage in Wales was 85.3 per cent, but the figure dropped in 2003-04 to 80.1 per cent, the lowest rate since 1989-90. Increased uptake in the following six years pushed the Welsh average up to 92.0 per cent in 2009-10, but this fell slightly in 2010-11 and increased again in 2011-12 to 92.7 per cent.

Chart 9: Percentage of children immunised against MMR by their second birthday, in 2011-12

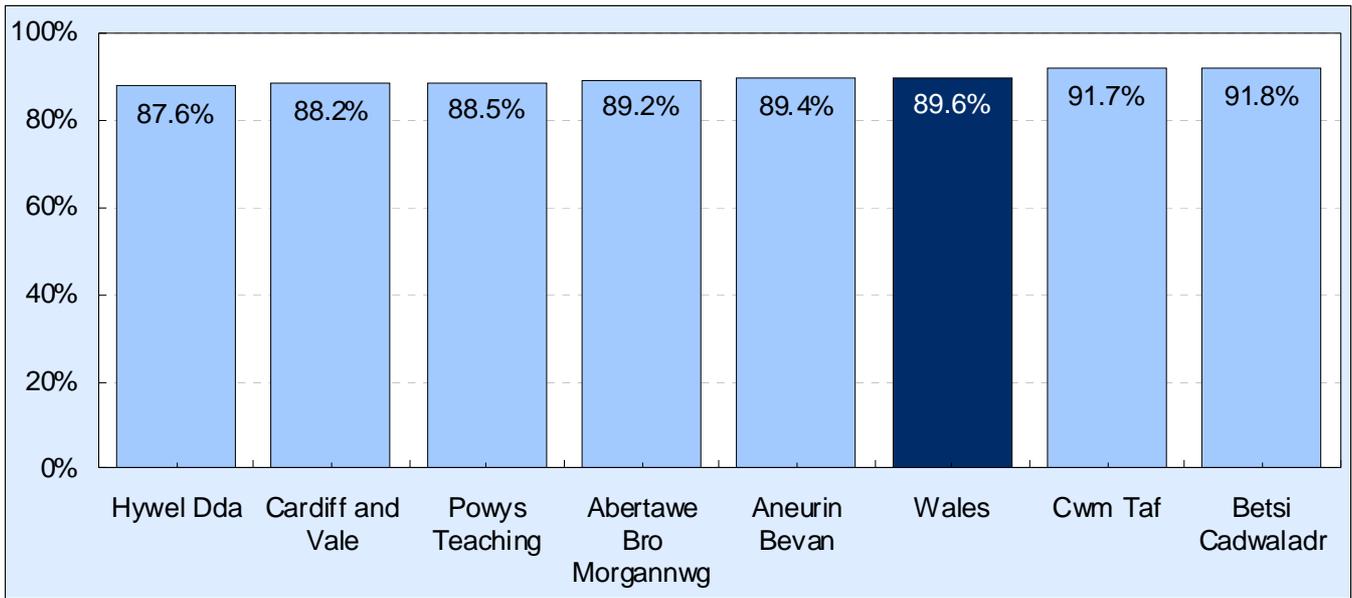


Source: [COVER, Public Health Wales](#)

Coverage of the first dose of MMR in 2 year olds during the year was 92.7 per cent across Wales, ranging by Local Health Board from 91.4 per cent in Hywel Dda LHB to 94.0 per cent in Cwm Taf LHB, and by Local Authority Area from 89.4 per cent in Pembrokeshire to 94.6 per cent in Flintshire and Vale of Glamorgan.

Pre-school boosters

Chart 10: Percentage of children receiving pre-school booster vaccine (4-in-1) by their fifth birthday, in 2011-12

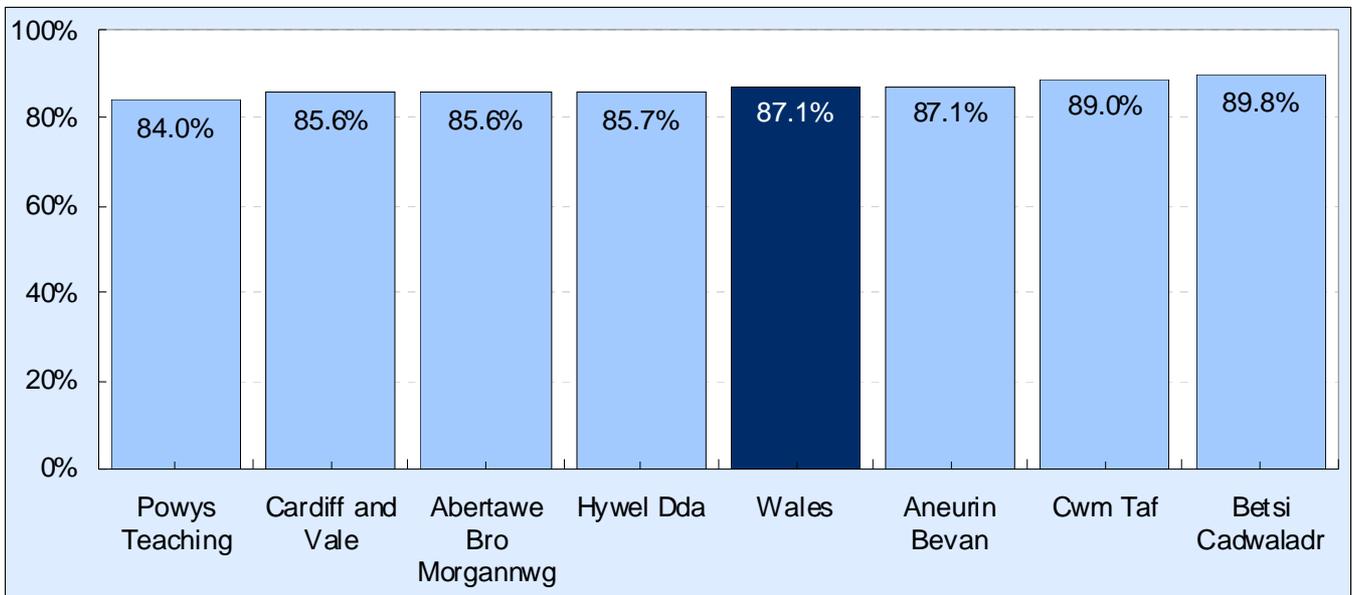


Source: [COVER, Public Health Wales](#)

Uptake of the 4 in 1¹ (DTaP/IPV) pre-school booster in children reaching their fifth birthday this year was 89.6 per cent, ranging by Local Health Board from 87.6 per cent in Hywel Dda LHB to 91.8 per cent in Betsi Cadwaladr University LHB, and by Local Authority Area from 85.8 per cent in Bridgend to 92.9 per cent in Flintshire.

¹ diphtheria, tetanus, pertussis and polio. Pertussis uptake is used as a proxy.

Chart 11: Percentage of children receiving a second dose of MMR by their fifth birthday, in 2011-12



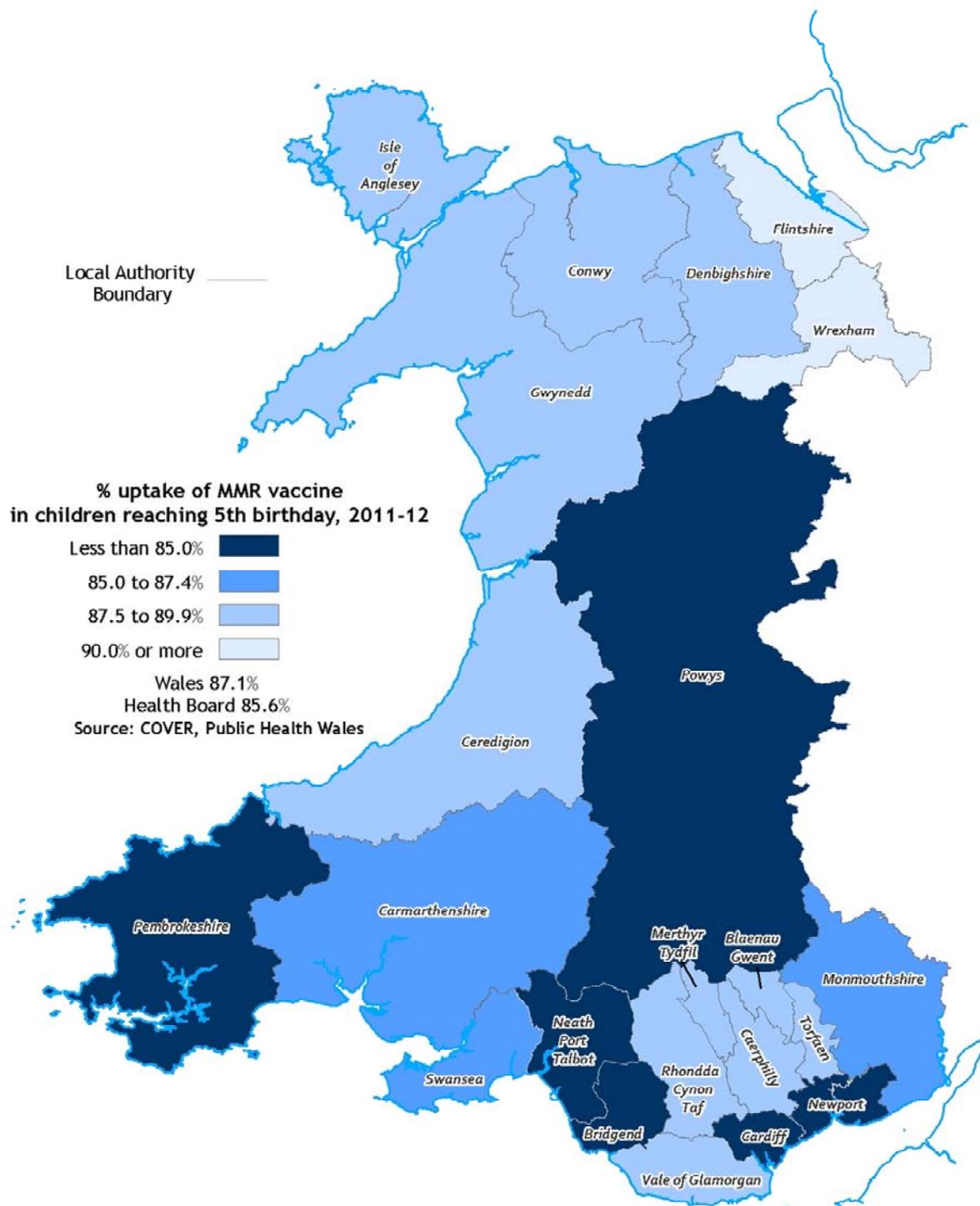
Source: [COVER, Public Health Wales](#)

Uptake of the second dose of MMR by five years of age ranged by Local Health Board from 84.0 per cent in Powys Teaching LHB to 89.8 per cent in Betsi Cadwaladr University LHB, and by Local Authority Area from 83.8 per cent in Bridgend and to 91.0 per cent in Flintshire and Wrexham.

No LHB achieved the 95 per cent target for this immunisation; however this is the highest ever annual uptake of the second dose of MMR at five years of age.

Further geographical detail of the coverage of the MMR booster across Wales is shown in Map 2. The geographical pattern of MMR coverage still reflects those areas where there was public concern about MMR in the early 2000s with South Wales areas having the lowest rates and North Wales and the valleys the highest.

Map 2: Percentage uptake of MMR vaccine in children reaching their fifth birthday, in 2011-12



(1) second dose MMR

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Cartographics, SPF&P

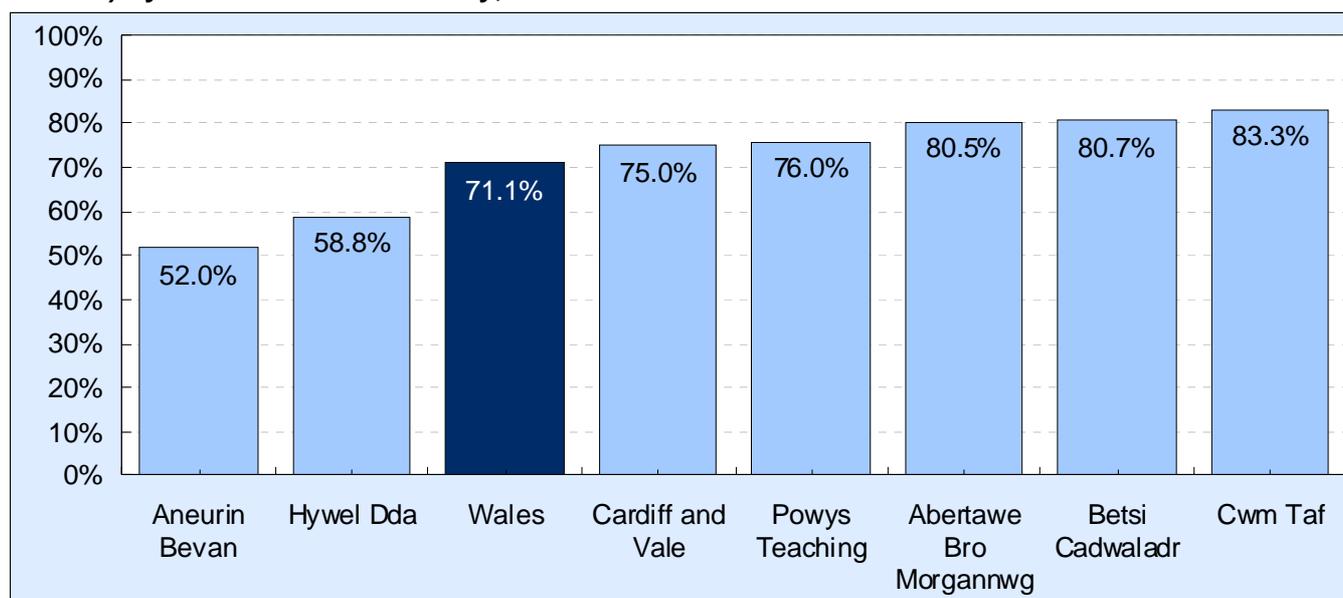
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Teenage boosters

Chart 12: Percentage of children immunised against diphtheria, tetanus & polio (3-in-1 teenage booster) by their sixteenth birthday, in 2011-12

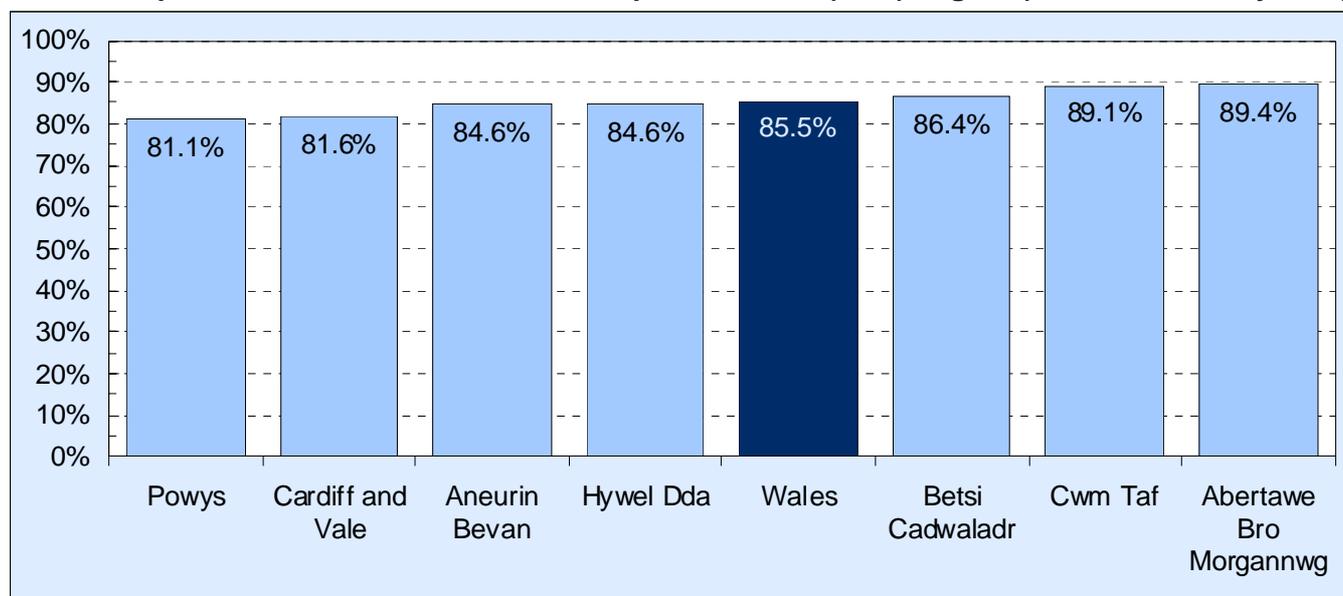


Source: [COVER, Public Health Wales](#)

National uptake of the 3-in-1¹ teenage booster in children reaching 16 years of age in the year ending 31st March 2012 was 71.1 per cent, ranging by Local Health Board from 52.0 per cent in Aneurin Bevan LHB to 83.3 per cent in Cwm Taf LHB, and by Local Authority Area from 26.7 per cent in Pembrokeshire to 85.2 per cent in Flintshire. The all-Wales coverage rate represents a rise of 10 percentage points since 2010-11, mostly due to improvements in Aneurin Bevan HB.

¹ diphtheria, tetanus and polio

Chart 13: Uptake of three doses of Human Papilloma Virus (HPV) in girls (2010/11, school year 8)



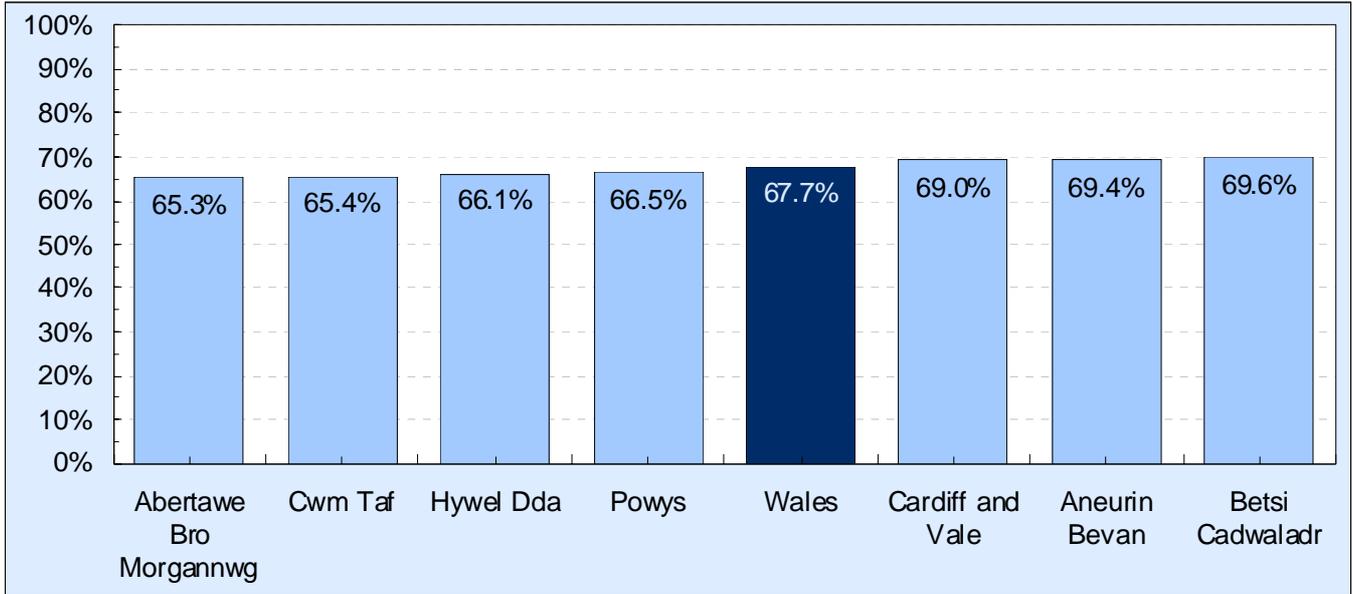
Source: [COVER, Public Health Wales](#)

National uptake of three doses of the Human Papilloma Virus (HPV) vaccine in girls in the 2010/11 school year 8 was 85.5 per cent, ranging from 81.1 per cent in Powys Teaching LHB to 89.4 per cent in Abertawe Bro Morgannwg University LHB.

HPV vaccination is routinely offered to girls during school year 8. Data is presented here for the 2010/11 year 8 cohort (who finished year 9 in August 2012). This is the most recent cohort of girls to have completed the three dose schedule for which data is available.

Influenza

Chart 14: Uptake of influenza immunisation in Wales¹, persons aged 65+



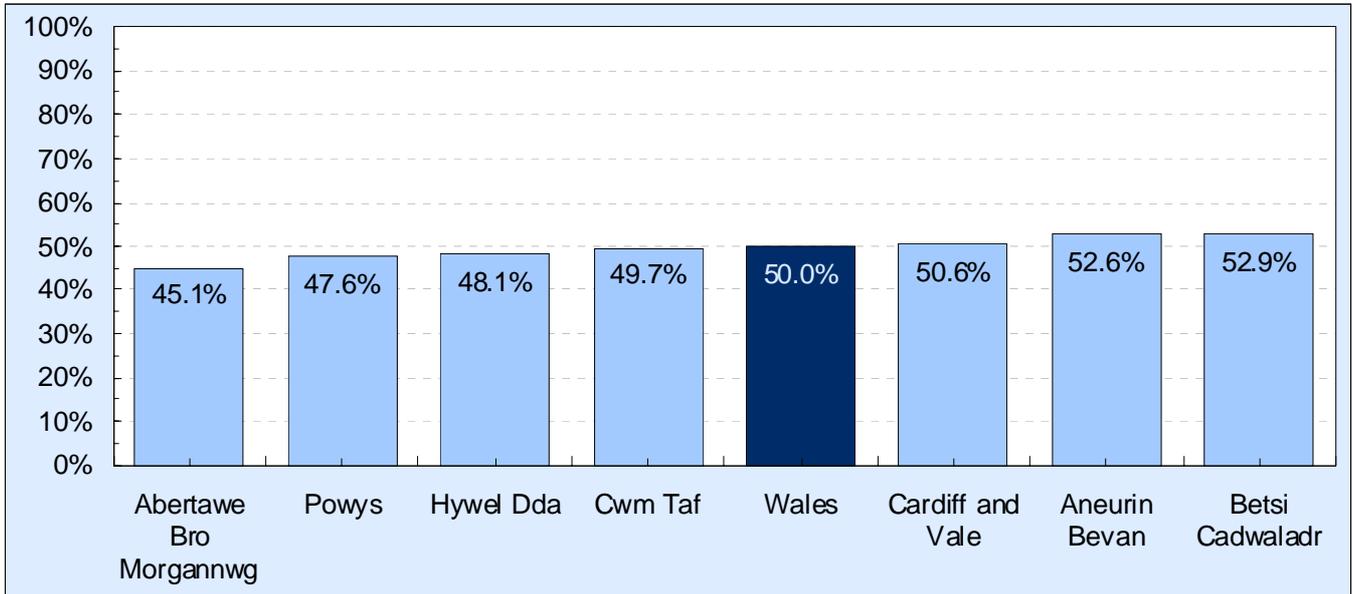
Source: [Public Health Wales Communicable Disease Surveillance Centre and VPDP \(Vaccine Preventable Disease Programme\)](#)

Data is aggregated from GP practice systems using Audit+

¹ Data is presented for all practices for which a return was received by 12 April 2012

During the Winter of 2011-12, 67.7 per cent of people in Wales aged 65 or over were immunised against flu, below the national uptake target of 75 per cent, but 2.0 percentage points up from 2010-11. No LHB met the 70 per cent target, but uptake in all of the LHBs exceeded 65 per cent.

Chart 15: Uptake of influenza immunisation in Wales¹, persons aged under 65 in 'at risk'² groups



Source: [Public Health Wales Communicable Disease Surveillance Centre and VPDP \(Vaccine Preventable Disease Programme\)](#)

Data is aggregated from GP practice systems using Audit+

¹ Data is presented for all practices for which a return was received by 12 April 2012

² 'At risk' groups include people living in long-term residential or nursing homes, people with a chronic heart or chest complaint, including asthma, chronic kidney or liver disease, diabetes, cerebrovascular disease (principally stroke and transient ischaemic attacks (TIAs)), multiple sclerosis and related conditions, a hereditary and degenerative disease of the central nervous system, lowered immunity due to disease or treatment such as steroid medication or cancer treatment, and those who are the main carer for an elderly or disabled person whose welfare may be at risk if the carer falls ill. The 'flu jab' was also offered to all pregnant women.

Uptake for those aged under 65 and in a high risk group rose from 48.5 per cent in 2010-11 to 50.0 per cent in 2011-12. Uptake rose in five of the seven LHBs, with only Abertawe Bro Morgannwg and Powys not showing an improvement.

Immunisation Courses

Immunisation for diphtheria, tetanus, pertussis, polio, Hib, Meningitis C and pneumococcal (PCV) are due at 2, 3 and 4 months, and most are in fact given by the first birthday; In 2011-12 less than 2 per cent of these vaccinations were given at older ages. Primaries will be given at older ages if a child has come into this country, or if there was a health issue previously or by parental choice.

Immunisation for MMR is given at about 13 months old. Note that there are still a number of teenagers receiving immunisation for MMR. In 2011-12 1 per cent of MMR vaccinations were given to children under 1 year, and 6 per cent to children aged 2 or over, the majority being between the ages of 2 and 3. This means there will still be a number of children starting nursery or school who are yet to receive their first course of immunisation for MMR.

Charts 16 and 17 show the percentage of immunisations given to children by actual age at which the immunisation was given.

Chart 16: Primary immunisation courses by age

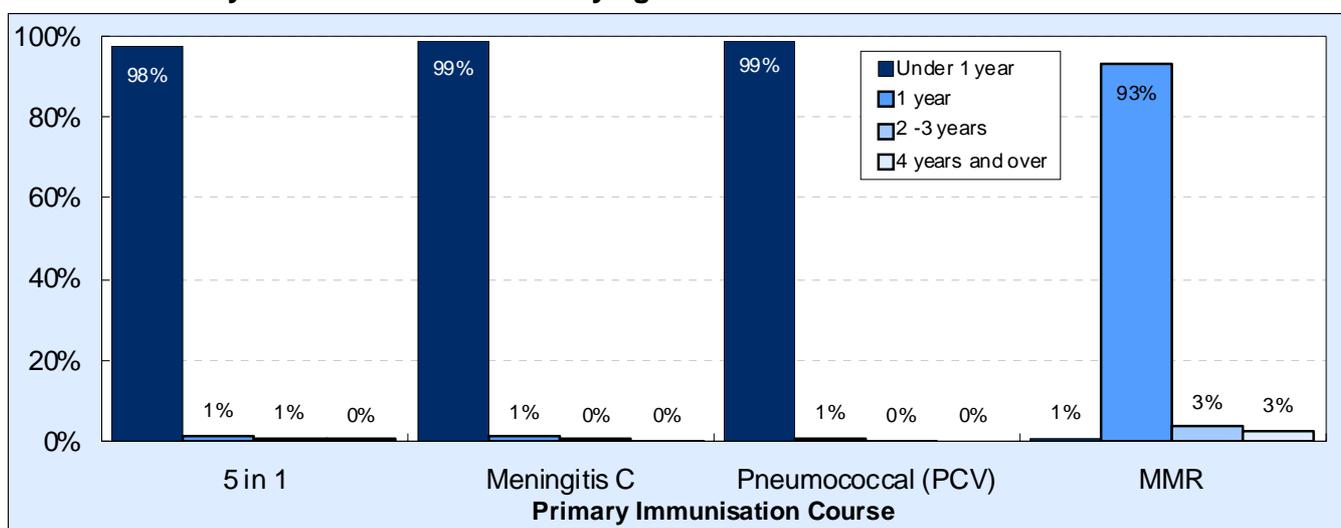
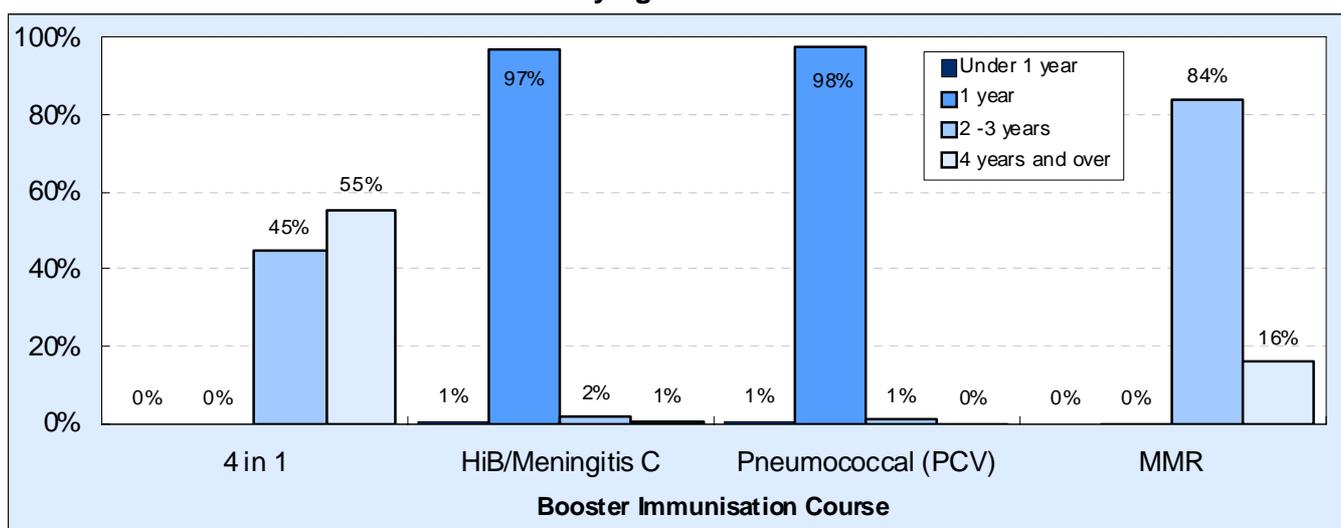


Chart 17: Booster immunisation courses by age



Further data on courses of immunisations given is available in associated StatsWales tables .

Key Quality information

Schedule of childhood immunisations

Age:	Diseases protected against:
Two months	Diphtheria, tetanus, pertussis (whooping cough), polio, <i>Haemophilus influenzae</i> type b (Hib) (5-in-1); and pneumococcal infection (PCV)
Three months	Diphtheria, tetanus, pertussis (whooping cough), polio, <i>Haemophilus influenzae</i> type b (Hib) (5-in-1); and meningitis C
Four months	Diphtheria, tetanus, pertussis (whooping cough), polio, <i>Haemophilus influenzae</i> type b (Hib) (5-in-1); pneumococcal infection (PCV) and meningitis C
Around 12-13 months	Haemophilus influenzae type b (Hib), meningitis C, Measles, mumps and rubella (MMR) and pneumococcal infection
Around 3 years and 4 months to 5 years	Diphtheria, tetanus, pertussis (whooping cough) and polio (4-in-1 pre-school booster); and measles, mumps and rubella (MMR)
Aged 12-13 years (girls only)	Human Papilloma Virus (HPV)
Around 13-18 years	Diphtheria, tetanus and polio (3-in-1 teenage booster)

A full report on childhood immunisation coverage is available for Wales on the [Public Health Wales](#) website.

Data sources:

Childhood immunisation coverage data: Charts 1-13 are from COVER (Coverage of Vaccination Evaluation Rapidly) data published by Public Health Wales. Until 2002-03, the data was derived from data submissions from NHS Trusts, including up to 1998-99 from the KC51 statistical return. From 2003-04 COVER data is derived directly from the National Community Child Health Database (NCCHD) and is allocated to Local Health Boards and health region on the basis of postcode of residence. Figures for Wales include children with unknown LHB of residence. Most childhood vaccinations are delivered in GP surgeries (by nurses, GPs and in some areas Health Visitors).

For further information on how COVER reports are produced, see Public Health Wales Health Protection Division website [here](#).

Flu coverage data: Data for Chart 14 and 15 are published annually by Public Health Wales and is derived from GP practice information systems (Audit+). The response rate in 2011-12 was 99% of GP practices across Wales, ranging from 97.8% (Aneurin Bevan LHB) to 100% (Cardiff & Vale University LHB, Cwm Taf LHB and Powys Teaching LHB). Most flu vaccinations are given in GP surgeries.

Notes:

Courses of immunisations: The data contained in the associated StatsWales tables is derived from the NCCHD and is counts of courses given to children and young people aged up to age 18 years.

Data on courses of immunisations given is available in associated StatsWales tables .

MMR: The StatsWales table includes for 2005-06 MMR catch-up immunisations. The MMR catch-up campaign was introduced in Wales on 17th October 2005 in order to respond to the increased transmission of mumps across the UK. MMR vaccine was offered to those in the 11-25 year old age groups by GP surgeries and also through university, college and school based sessions. The catch-up campaign was completed on 30th June 2006.

For further information visit the [Public Health Wales](#) website.

BCG: note that data for 2005-06 in the associated StatsWales table is affected by the cessation of the 10-14 year old BCG immunisation in July 2005. Following advice from the Joint Committee on Vaccination and Immunisation (JCVI) the current universal BCG vaccination programme delivered through schools

will be replaced with an improved programme of targeted vaccination for those individuals who are at greatest risk.

Health Maps Wales:

Health Maps Wales is an interactive tool that can be used to explore a variety of health indicators. The maps allow the user to explore data at their geographic area of choice (where available), to look at trends and to compare areas against a Wales comparison figure. Indicators are available at Middle Super Output Area (MSOA), Upper Super Output Area (USOA) and Unitary Authority (UA) level subject to rules of disclosure and small numbers. Uptake statistics for various immunisations to Welsh residents is available.

See [Health Maps Wales](#).

Data for other UK countries:

All UK countries provide the minimum data required to produce UK level stats on routine immunisations in one year olds, two year olds and five year olds, although data collection is carried out in different ways. Up to now, Wales is the only country reporting on uptake of the teenage booster and MMR coverage in older teens.

England data is available from the [NHS Information Centre](#) for health and social care website.

Data for Scotland and Northern Ireland are available at:

[Scottish data](#).

[Northern Ireland data](#).

Key immunisation statistics are compared for the four countries over time in the ONS publication [UK Health Statistics](#).

Uses and users:

What are the potential uses of these statistics?

The aim of these statistics is to provide a summary of immunisation trends over time and patterns across Wales. The main source of data for immunisation managers is likely to be the coverage reports published on the Public Health Wales website although the tables associated with the release provide more detail of the ages at which children are immunised. It is anticipated that this statistical release will be of more interest to a wider audience interested in an overview of the statistics. Key immunisation coverage statistics such as the coverage of specific immunisations such as MMR and flu are widely used by local and central policy developers.

Who are the key potential users of this data?

These statistics will be useful both within and outside the Welsh Government. Some of the key potential users are:

- Ministers and the Members Research Service in the National Assembly for Wales;
- Local Health Boards;
- Local Authorities;
- The Department for Health and Social Services in the Welsh Government;
- Other areas of the Welsh Government;
- National Health Service and Public Health Wales;
- Professional organisations;
- The research community;
- Students, academics and universities;
- Individual citizens and private companies.

Disclosure:

Data access, confidentiality and disclosure control:

These data are aggregated and therefore there is little risk of disclosing information about any individual but we would seek advice from Public Health Wales over any low cell counts. Our statistics take into account our disclosure control guidance and follow ONS confidentiality guidelines for Health statistics available from: [ONS best-practice guidelines](#)

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We welcome comments from users of our publications on content and presentation. If you have any comments or require further information, please contact:

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