

Inequalities in uptake of routine childhood immunisations in Wales 2017-18

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Purpose and Summary of Document:

This annual surveillance report summarises trends in socioeconomic inequalities and geographic variation in the uptake of routine childhood immunisations in Wales up to 2017-18.

Long-term trends in immunisation coverage, improving equality in uptake and reducing variation in coverage in Wales remain positive, although between 2013-14 and 2016-17 the proportion of children up to date by their fourth birthday decreased in all deprivation quintiles.

Between 2015-16 and 2017-18 socioeconomic inequalities and geographic variation in immunisation uptake decreased in four and five year olds but increased in one, two and 15 year olds.

Implementation of existing policies and guidance designed to improve follow-up of children who have missed scheduled immunisations would continue to reduce inequalities.

Appendix A contains additional charts and data tables for health boards, presenting annual uptake statistics by national quintile of socioeconomic deprivation.

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Key points

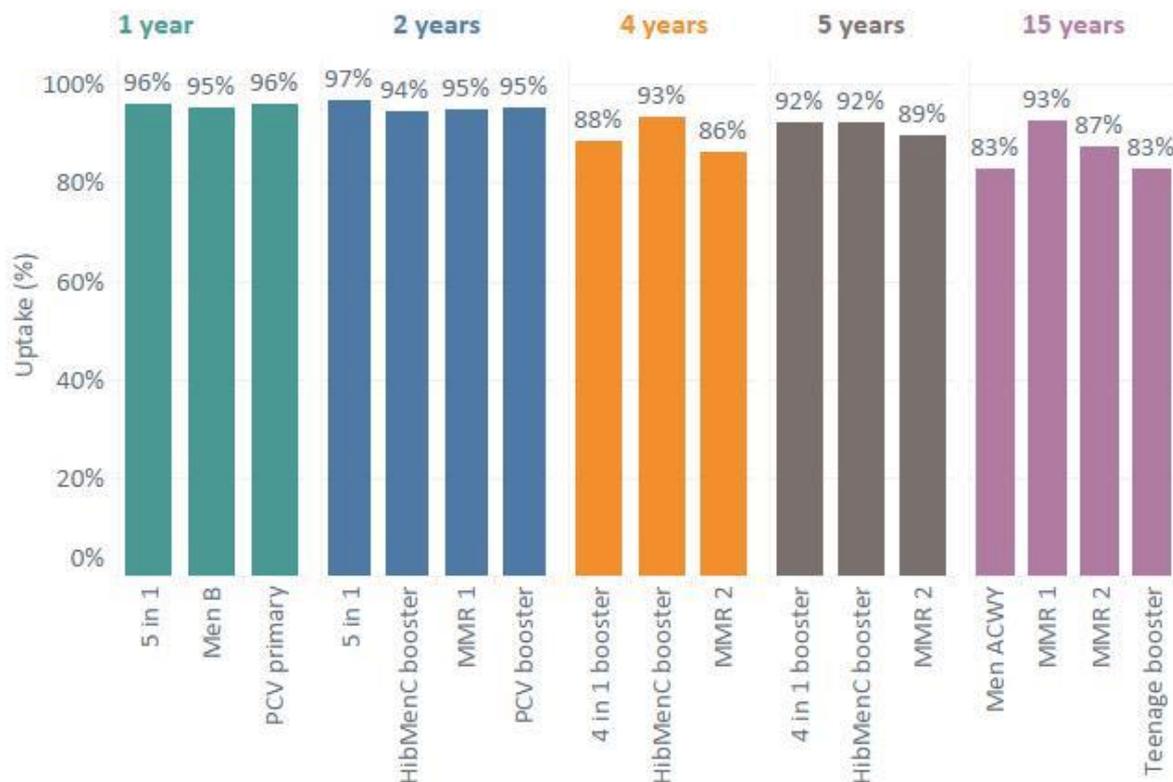
- Long-term trends in immunisation coverage, improving equality in uptake and reducing variation in coverage in Wales remain positive. However, compared to 2015-16 the picture is mixed.
- Socioeconomic inequalities and geographic variation in immunisation uptake remain smallest in one and two year olds and greater in older children and teenagers.
- Decreases in uptake and increases in the inequality gap seen in one year olds may be related to recent changes and expansion of the childhood vaccination schedule and may improve as programmes become more established.
- The declining trend in immunisations at four years of age seen since 2013 was stable in 2017-18; the inequality gap narrowed and geographic variation decreased compared to 2015-16.
- Compared to 2016-17, national uptake of routine immunisations has remained broadly stable and was:
 - 94.8% in one year olds (compared to 95.9% in 2016-17)
 - 92.9% in two year olds (compared to 93.4% in 2016-17)
 - 84.9% in four year olds (compared to 84.6% in 2016-17)
 - 87.6% in five year olds (compared to 88.3% in 2016-17)
 - 74.5% in 15 year olds (compared 76.5% in 2016-17)
- Compared to 2015-16 (most recently published data), the gap in uptake of routine immunisations in the most deprived and least deprived areas of Wales have:
 - **Increased** in one year olds from 1.4% to 2.7%
 - **Increased** in two year olds from 2.4% to 2.9%
 - **Decreased** in four year olds from 7.3% to 6.2%
 - **Decreased** in five year olds from 4.2% to 3.6%
 - **Increased** in 15 year olds from 5.7% to 6.7%
- Compared to 2015-16, health board variation in uptake of routine immunisations has:
 - **Remained stable** in one year olds at 4.0%
 - **Decreased** in two year olds from 5.4% to 4.4%
 - **Decreased** in four year olds from 9.5% to 7.2%
 - **Decreased** in five year olds from 6.3% to 5.9%
 - **Increased** in 15 year olds from 13.4% to 16.7%
- The data in this report suggest that routine catch-up activities play an important role in increasing uptake and reducing inequalities.
- Implementation of existing policies and guidance designed to improve follow-up of children who have missed scheduled immunisations would continue to reduce inequalities.

Background

National level coverage of immunisation in children in Wales is summarised in Figure 1. During 2017/18 uptake of all routine immunisations in one year old infants were 95% or above (apart from routine rotavirus immunisation, where there are strict upper age-limits for receiving the vaccine, which prevent catch-up if the course was started late). Uptakes of all routine immunisations in two year old children were also 95% or above, apart from the Hib/MenC booster immunisation which was just below 95%.

Uptake of immunisation generally declines with increasing scheduled immunisation age, and at a national level, none of the routine immunisations scheduled for children from their fourth year of life onward reach 95%. More detailed information on uptake of routine childhood immunisations is available from the 2017-18 Public Health Wales Annual COVER (Coverage Of Vaccination Evaluated Rapidly) report [1].

Figure 1. National coverage of vaccinations in children reaching their first, second, fourth, fifth and 15th birthdays during April 2017 to March 2018.



Although uptake of scheduled immunisations in the youngest children in Wales is high, there is variation in uptake at health board (HB) level, Local Authority area (LA) level and according to the level of socioeconomic deprivation of area of residence. Socioeconomic inequalities in uptake increase as the scheduled age of vaccination increases [2, 3].

A large number of factors are likely to affect uptake of immunisations. Previously published studies from other countries report that ethnic group and religious group, family mobility, family size, child age, socioeconomic status, geography and rurality, and service delivery method can all influence the likelihood



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2017/18

of children receiving routine immunisations. Inequalities due to method of service delivery have previously been reported in Wales [4].

The Public Health Wales COVER scheme has reported on the proportions of children who are up to date with immunisations by their fourth birthday in each quintile of deprivation since 2012-13. The percentage of children who are up to date with routine immunisations by four years of age is included as an indicator in the Public Health Outcomes Framework for Wales [5].

This report provides a high-level view of inequalities and variation in routine childhood immunisation uptake in Wales, with respect to socioeconomic deprivation, HB and LA of residence.

Methods

Source data for previously published annual COVER reports [6] were analysed. Public Health Wales Vaccine Preventable Disease Programme (VPDP) and Communicable Disease Surveillance Centre (CDSC) are responsible for the COVER reporting scheme in Wales. This is the standard measure of vaccination uptake and provides comparable data to other UK countries. The data on which these reports are based are sourced from HB child health office databases, via the National Community Child Health Database (NCCHD, managed by the NHS Wales Informatics Service).

Uptake of immunisations by key birthdays were calculated on the basis of LA and HB of residence at the time of issue of Annual COVER reports. The annual proportions (%) of children who were up to date with routine vaccinations in 2017-18 were calculated as defined below. Vaccinations introduced into the schedule during the last ten years were not included in calculations for annual periods prior to their introduction. Up to date measures do not include the rotavirus immunisation introduced in 2013 where there are strict upper age-limits for receiving the vaccine.

Vaccinations included in calculation

<i>Up to date by one year of age</i>	3 rd dose of 5 in 1 vaccination against diphtheria, tetanus, pertussis, polio and <i>Haemophilus influenzae</i> type B (DTaP/IPV/Hib), 2 nd dose of pneumococcal conjugate vaccine (PCV) and 2 nd dose of meningococcal type B (MenB) vaccine
<i>Up to date by two years of age</i>	3 rd dose of 5 in 1 vaccine, first dose of combined measles, mumps and rubella (MMR) vaccine, 3 rd dose of PCV, and Hib/MenC booster vaccine
<i>Up to date by four years of age</i>	4 in 1 booster vaccine against diphtheria, tetanus, pertussis and polio (DTaP/IPV), second dose of MMR vaccine, and Hib/MenC booster vaccine
<i>Up to date by five years of age</i>	4 in 1 booster vaccine against diphtheria, tetanus, pertussis and polio (DTaP/IPV), second dose of MMR vaccine, and Hib/MenC booster vaccine
<i>Up to date by 15 years of age</i>	3 in 1 booster vaccine against Diphtheria, tetanus and polio, second dose of MMR vaccine, and MenACWY vaccine

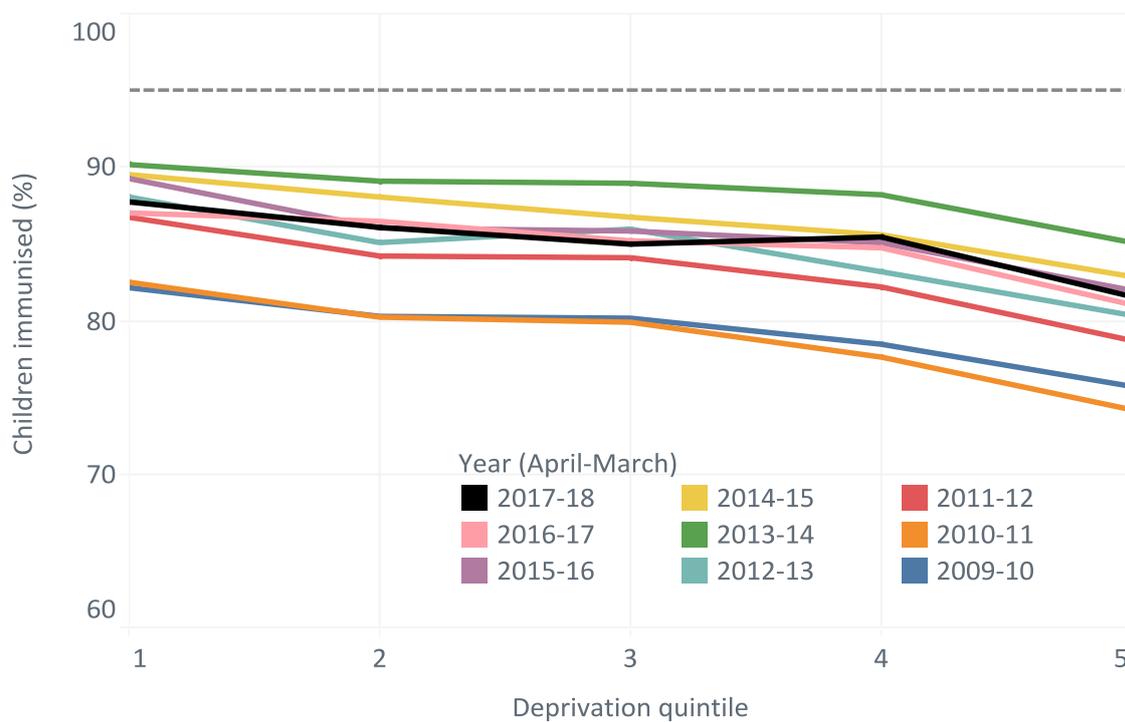
In order to calculate uptake by socioeconomic status, data were linked to the Welsh Index of Multiple Deprivation (WIMD) at Lower Super Output Area (LSOA) level. The WIMD provides a composite ranking deprivation for each LSOA in Wales, weighted across eight domains: income, employment, health, education, access to services, community safety, physical environment and housing. For this report, LSOAs were allocated into quintiles based on overall WIMD deprivation ranking, to provide an indication of the deprivation status of the LSOA in which each child lived. In this report, Quintile 1 refers to children who were living in the least deprived fifth of LSOAs in Wales and Quintile 5 refers to children who were living in the most deprived fifth of LSOAs in Wales.

All analyses of socioeconomic inequalities in this report use 2014 WIMD national quintiles of deprivation. Care should be taken when interpreting deprivation quintile level immunisation uptakes reported for each health board (Appendix A), as uptake calculations may be based on small numbers of children in some instances. Aggregated LA areas were used to provide historic data for current HB areas from 2008 to 2009 (prior to health board restructuring).

Inequalities in uptake according to socioeconomic status

Uptake of routine immunisations by the Public Health Outcomes Framework indicator age of four years increased across all quintiles of deprivation in Wales between 2009-10 and 2013-14 (Figure 2). However, between 2013-14 and 2016-17 the proportion of children up to date by their fourth birthday decreased in all deprivation quintiles. Overall uptake during 2017-18 remained stable compared to 2016-17, uptake in the least deprived quintile, and two most deprived quintiles increased and uptake in the next least deprived and middle quintiles decreased.

Figure 2. The percentage of children up to date with immunisations by four years of age, by quintile of deprivation of the area they are resident in, for April to March years 2009-10 to 2017-18.



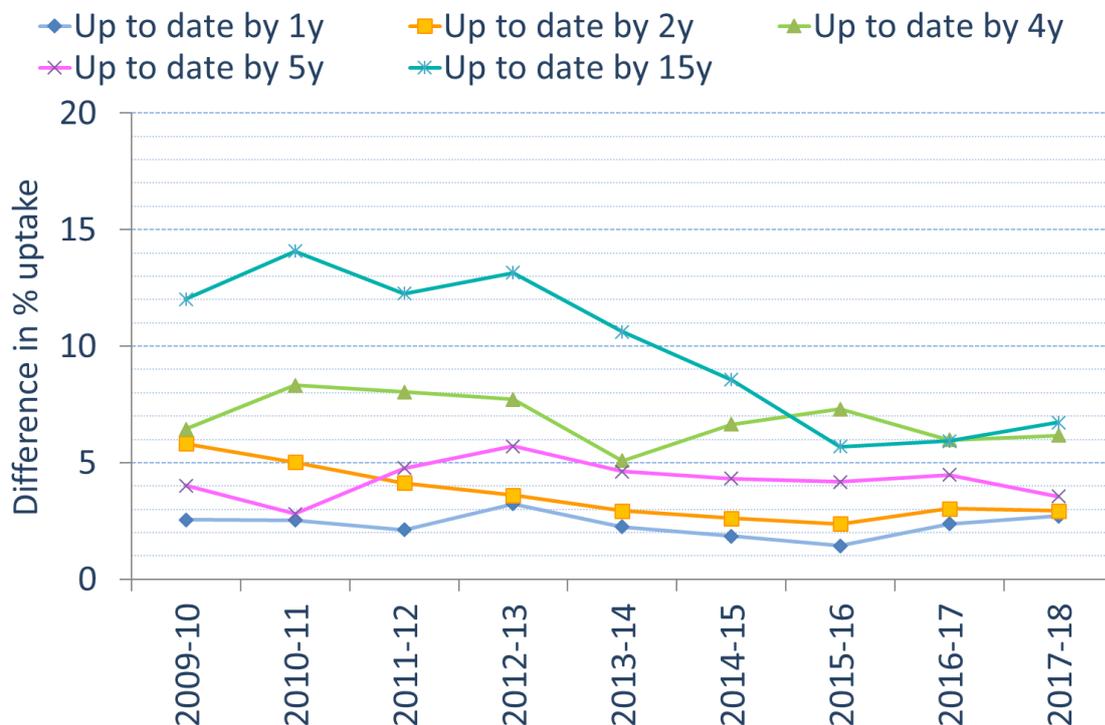
In 2017-18 there continued to be statistically significant differences between the most and least deprived areas of Wales in proportions of children who were up to date with routine immunisations by one, two, four, five and 15 years of age. Compared to the previous report, for 2015-16, the gap between quintiles has increased in one, two and 15 year olds but decreased in four and five year olds (Table 1) [2]. However, when comparing the gap in immunisation uptake in 2017-18 to 2009-10 it remains narrower for all ages apart from one year olds where it is comparable (Figure 3).

During 2017-18 the proportion of children who were up to date with immunisations remained highest in children who resided in the least deprived areas of Wales and lowest in children residing in the most deprived areas of Wales (Table 1).

Table 1. Percentage of children in Wales who had completed routine immunisations by key birthdays in 2015-16 compared to 2017-18; and the difference (inequality gap) in percentage of children who are up to date with routine immunisations (green indicates increased uptake and decreased inequality, red indicates decreased uptake and increased inequality).

Measure	National level uptake		Quintiles with highest and lowest uptakes				Difference in % uptake in highest and lowest uptake quintiles	
	2015-16	2017-18	2015-16		2017-18		2015-16	2017-18
			Highest uptake quintile	Lowest uptake quintile	Highest uptake quintile	Lowest uptake quintile		
Up to date by 1y	95.7	94.8	3	5	1	5	1.4	2.7
Up to date by 2y	93.6	92.9	1	5	1	5	2.4	2.9
Up to date by 4y	85.3	84.9	1	5	1	5	7.3	6.2
Up to date by 5y	88.9	87.6	1	5	1	5	4.2	3.6
Up to date by 15y	76.6	74.5	1	5	1	5	5.7	6.7

Figure 3. The difference (inequality gap) between quintiles of highest and lowest deprivation percentages of children up to date with immunisations by key birthdays.



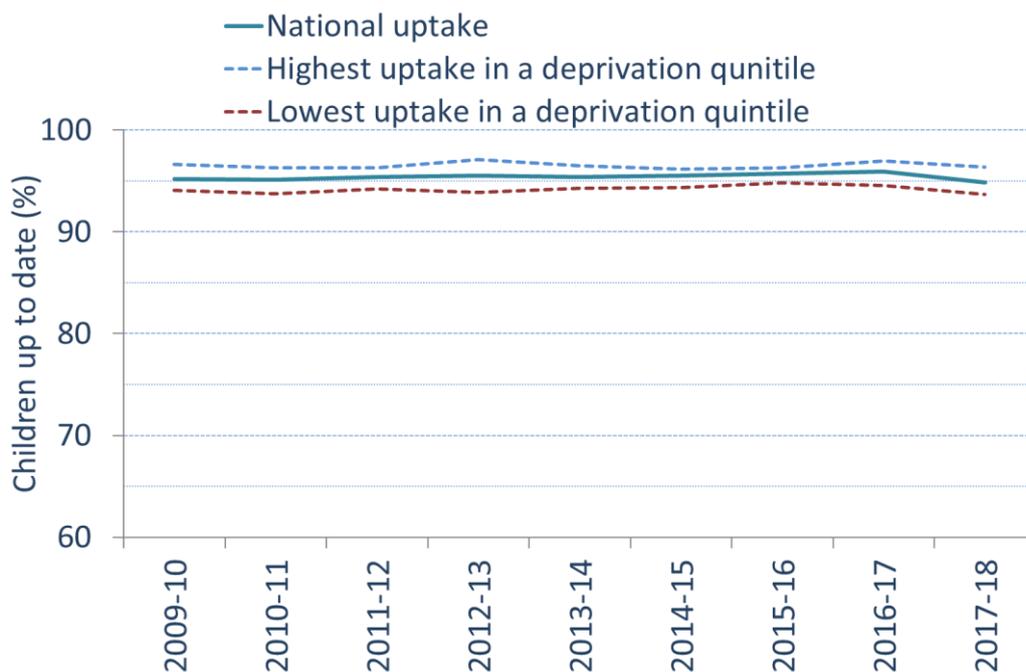
Socioeconomic inequalities at one year of age

The immunisation inequality gap in children in Wales who were up to date by one year of age, reduced by almost half between 2009-10 (2.6%) and 2015-16 (1.4%). However, the immunisation inequality gap has increased and in 2017-18 was 2.7%, similar to 2009-10. This may be an impact of the introduction of the relatively new MenB vaccine into this composite measure for 2017-18.

The proportion of children who had completed all routine immunisations by their first birthday continues to be lowest (93.7%), in children residing in areas in the most deprived quintile of Wales. The proportion of children up to date was above 95% in all other quintiles, with the exception of the middle quintile of deprivation where uptake decreased to 94.0% in 2017-18.

As with most previous years, areas in the least deprived quintile of Wales had the highest proportion (96.4%) of children who were up to date with immunisation by one year of age (Figure 4).

Figure 4. *Proportion of children reaching their first birthday during April to March years 2009-10 to 2017-18 who were up to date with routine immunisations (with highest and lowest uptake deprivation quintiles)*



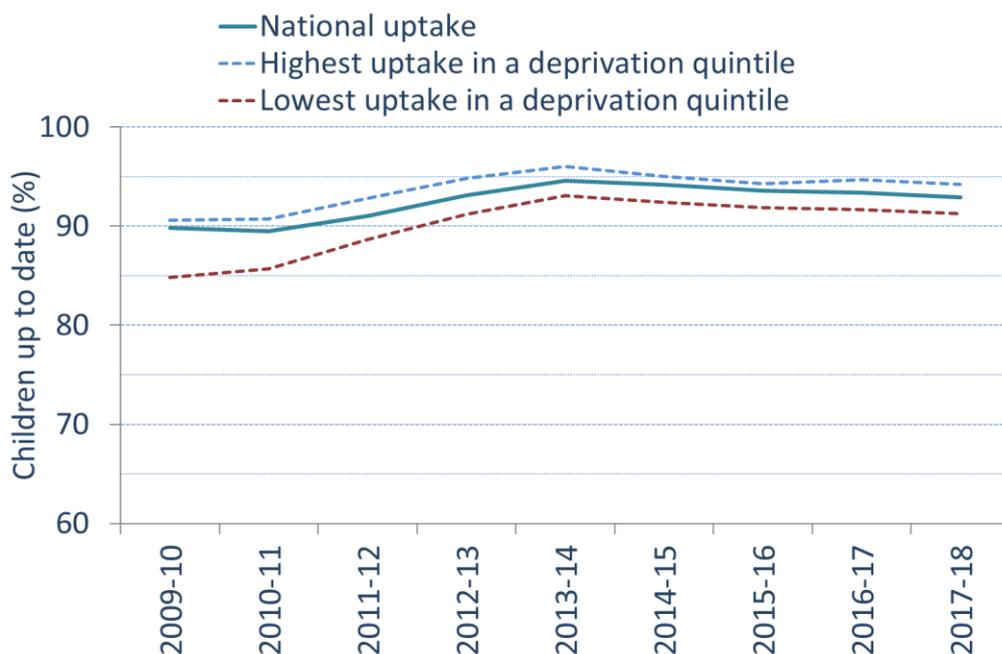
Socioeconomic inequalities at two years of age

The inequality gap in proportion of children in Wales who were up to date with routine immunisations by two years of age halved from 5.8% in 2009-10 to 2.9% in 2017-18 (Figure 6). Between 2015-16 and 2017-18, the gap has widened slightly (from 2.4% in 2015-16).

As with previous years, the proportion of children who had completed all routine immunisations by their second birthday was lowest (91.3%) in children residing in areas in the most deprived quintile.

During 2017-18 areas in the least deprived quintile of Wales had the highest proportion (94.2%) of children up to date with immunisations by two years of age, although uptake remained below 95% (Figure 5).

Figure 5. *Proportion of children reaching their second birthday during April to March years 2009-10 to 2017-18 who were up to date with routine immunisations (with highest and lowest uptake deprivation quintiles)*



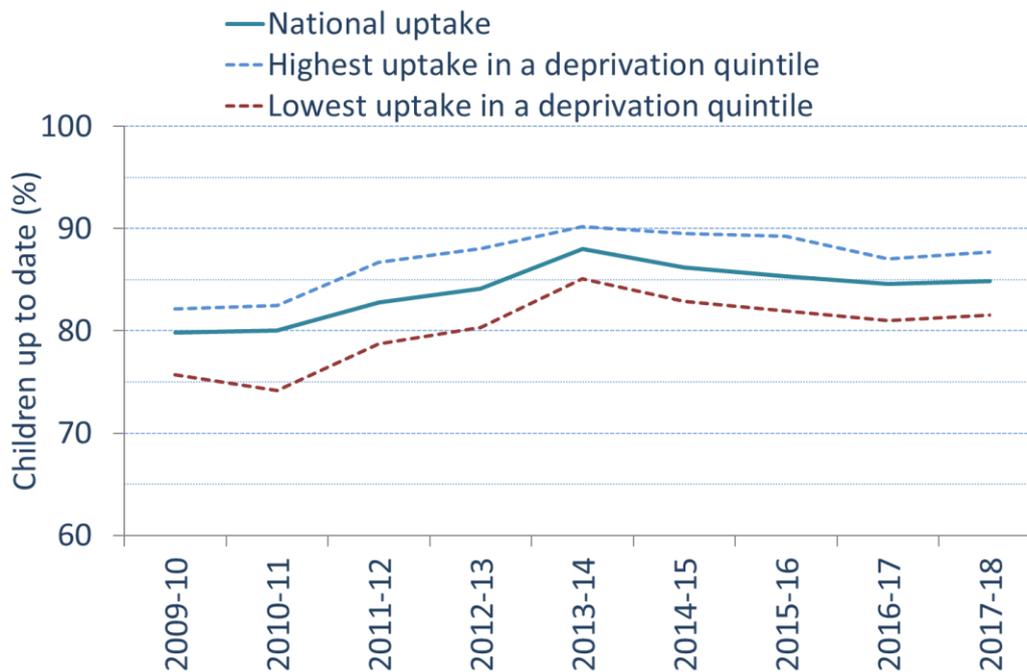
Socioeconomic inequalities at four years of age

The inequality gap in immunisation uptake by four years of age decreased in 2017-18 compared to 2015-16, from 7.3% to 6.2%. However, the gap in inequalities in this age group has fluctuated between a low of 5.1% (2013-14) and a high of 8.0% (2011-12) over the previous nine years (Figure 6).

As with previous years, the proportion of children who had completed all routine immunisations by their fourth birthday was lowest (81.6%) in children residing in area in the most deprived quintile of Wales and highest (87.7%) in children residing in areas in the least deprived quintile of Wales. There has been a decrease in national uptake of routine immunisations by four years of age since a peak in 2013-14. The decrease has been greater in those living in the least deprived quintile compared to the most deprived quintile, which has led to a reduction in the inequality gap.

Out of all of the immunisations that are included in this composite measure, uptake of the second MMR dose has usually been the lowest, however uptake of the 4 in 1 preschool booster immunisation has been at similar levels. Both of these immunisations are scheduled at around three years four months of age and allow for six to eight months of follow-up activity before the measurement point of a child's fourth birthday.

Figure 6. *Proportion of children reaching their fourth birthday during April to March years 2009-10 to 2017-18 who were up to date with routine immunisations (with highest and lowest uptake deprivation quintiles)*



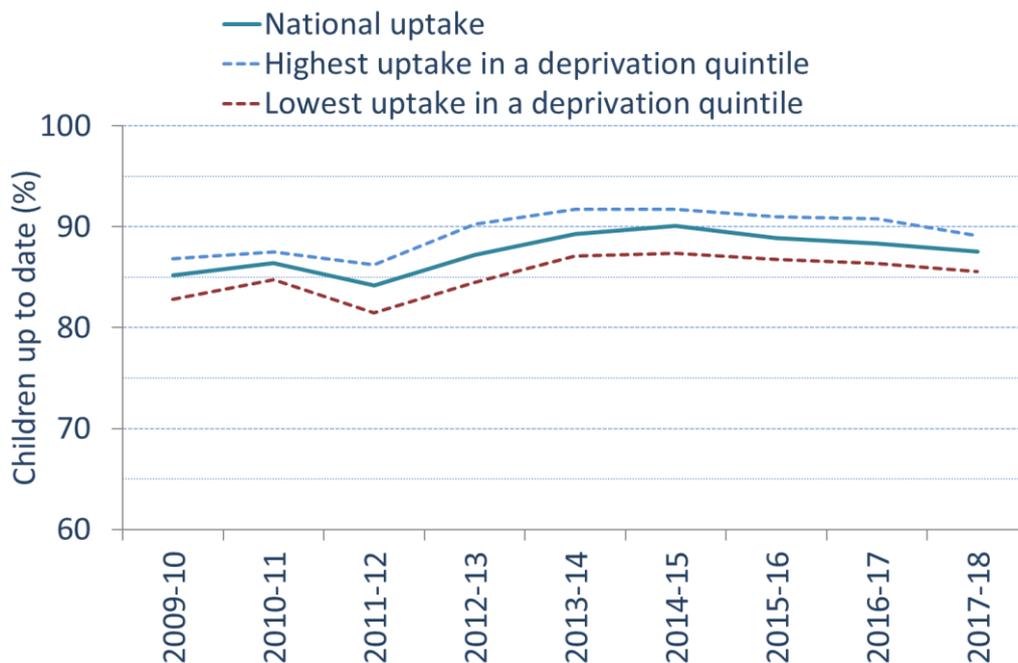
Socioeconomic inequalities at five years of age

The inequality gap in immunisation uptake by five years of age decreased in 2017-18 compared to 2015-16, from 4.2% to 3.6%. However, the gap in inequalities in this age group has fluctuated between a low of 2.8% (2010-11) and a high of 5.7% (2012-13) over the previous nine years (Figure 7).

As with previous years, the proportion of children who had completed all routine immunisations by their fifth birthday was lowest (85.6%) in children residing in areas in the most deprived quintile of Wales and highest (89.1%) in children residing in areas in the least deprived quintile of Wales. The proportion of children who are up to date was below 90% across all quintiles of deprivation.

The inequalities in immunisation coverage seen in children at five years are smaller than at four years of age, reflecting the longer period available for follow-up activities undertaken and catch-up opportunity between fourth and fifth birthdays. The percentage gap in uptake between those living in the most and least deprived quintiles decreased by 2.4 when comparing uptake of all routine immunisations in those reaching 5 years of age during 2017-18 to children reaching 4 years of age during 2016-17.

Figure 7. *Proportion of children reaching their fifth birthday during April to March years 2009-10 to 2017-18 who were up to date with routine immunisations (with highest and lowest uptake deprivation quintiles)*



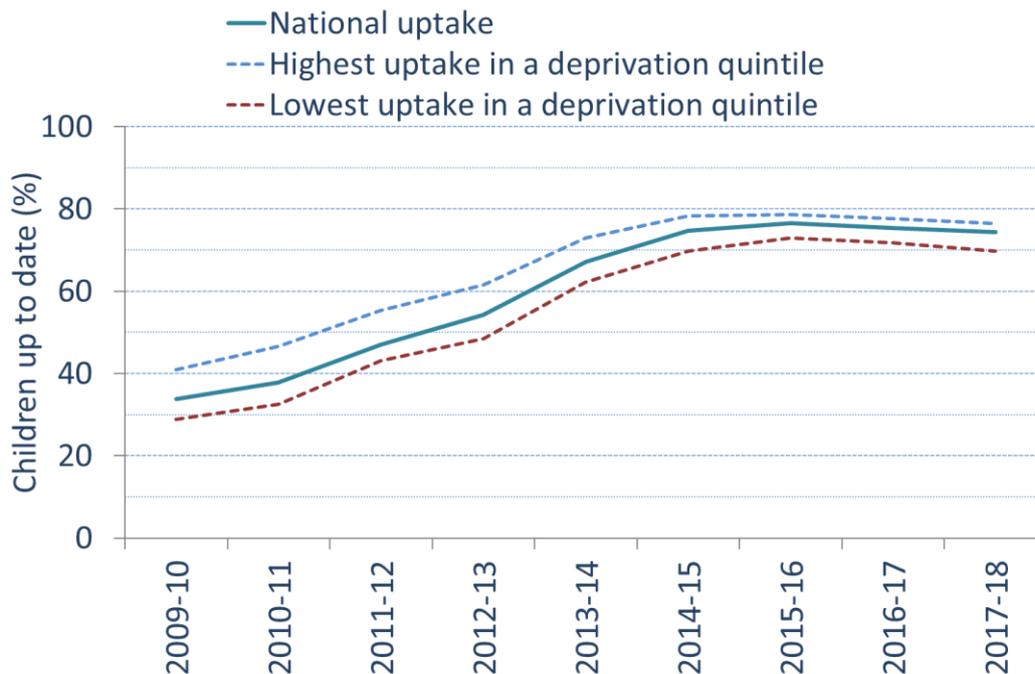
Socioeconomic inequalities at 15 years of age

Between 2009-10 and 2015-16, the inequality gap in immunisation uptake by 15 years of age more than halved from 12.0% to 5.7%. Since 2015-16, the inequality gap in uptake by 15 years of age has increased slightly, to 6.7% in 2017-18 (Figure 8).

As with the previous six years, the proportion of teenagers who had completed all routine immunisations by 15 years of age was lowest (69.8%) in children residing in areas in the most deprived quintile of Wales.

The proportion of children who were up to date with their immunisations by 15 years of age remained highest (76.5%) in children residing in areas in the least deprived quintile of Wales. The proportion of children who are up to date continues to be below 80% in all quintiles of deprivation.

Figure 8. *Proportion of children reaching their 15th birthday during April to March years 2009-10 to 2017-18 who were up to date with routine immunisations (with highest and lowest uptake deprivation quintiles)*



Variation in uptake at health board and local authority level

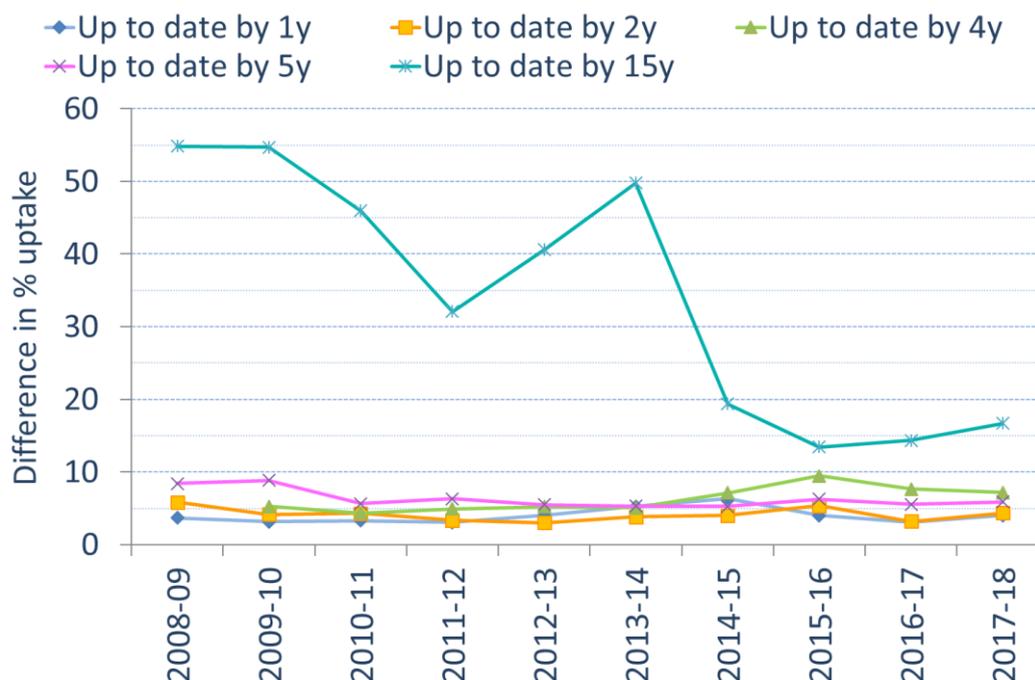
Compared to the previous report (2015-16) the gap between the highest uptake and lowest uptake HBs has remained stable in one year olds, decreased for two, four and five year olds, and increased in 15 year olds (Table 2). The largest variation continues to be in 15 year olds (16.7%) whilst the lowest level of variation is in one year olds (4.0%).

The gap between the highest uptake LAs and lowest uptake LAs has remained stable in one year olds, decreased in two year olds, and increased in four, five and 15 year olds (Table 2). The largest variation continues to be in 15 year olds (20.2%) whilst the lowest variation is in one year olds (5.0%).

Table 2. Percentage of children who had completed routine immunisations by key birthdays in 2015-16 compared to 2017-18; and the difference in percentage of children who are up to date at health board (HB) and local authority (LA) level (green indicates increased uptake and decreased variation, red indicates decreased uptake and increased variation).

Measure	National level uptake		Difference in % uptake in highest and lowest uptake HB		Difference in % uptake in highest and lowest uptake LA	
	2015-16	2017-18	2015-16	2017-18	2015-16	2017-18
Up to date by 1y	95.7	94.8	4.0	4.0	4.9	5.0
Up to date by 2y	93.6	92.9	5.4	4.4	6.6	5.3
Up to date by 4y	85.3	84.9	9.5	7.2	17.4	17.9
Up to date by 5y	88.9	87.6	6.3	5.9	10.0	10.7
Up to date by 15y	76.6	74.5	13.4	16.7	17.9	20.2

Figure 9. The difference in percentage of children up to date with immunisations by key birthdays between health boards where uptake is highest and uptake is lowest (data for 4y olds not available prior to 2009-10)



Health board and LA level variation at one year of age

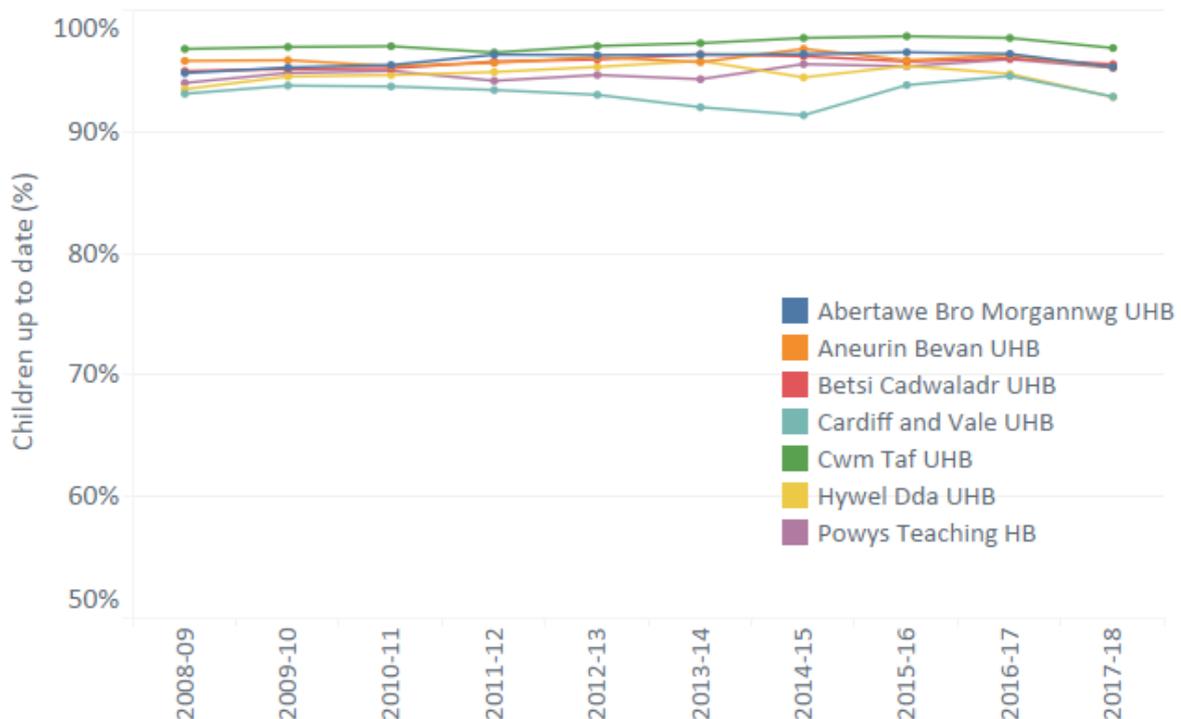
The variation in proportion of children who are up to date with all routine immunisations¹ by one year of age between the highest uptake HB and lowest uptake HB has remained stable in 2017-18 (4.0%) compared to 2015-16. Over the previous ten years, variation in uptake between HBs has ranged from 3.1% (2011-12 and 2016-17) to 6.4% (2014-15) (Figure 10).

The variation in proportion of children who are up to date with all routine immunisations by one year of age between the highest uptake LA and the lowest uptake LA has also remained stable in 2017-18 (5.0%) compared to 2015-16 (4.9%). Over the previous ten years, variation in uptake between LAs has ranged from 4.4% (2010-11 and 2016-17) to 7.5% (2014-15).

Nationally, the proportion of children who are up to date with all their routine immunisations by one year of age remained above 95% between 2009-10 and 2016-17, but was just below 95% in 2017-18. During 2017-18, the proportion of children who were up to date with routine immunisations by one year of age was 95% or higher in five HBs compared to six in 2015-16 (Figure 10).

Decreases in uptake seen in 2017-18 may be a reflection of the introduction of the relatively new MenB vaccine into this composite measure.

Figure 10. Proportion of children up to date with immunisations by one year of age, by health board, Wales; 2008-09 – 2017-18.



¹ Excluding rotavirus which has a strict upper age limit and less time for catch-up.

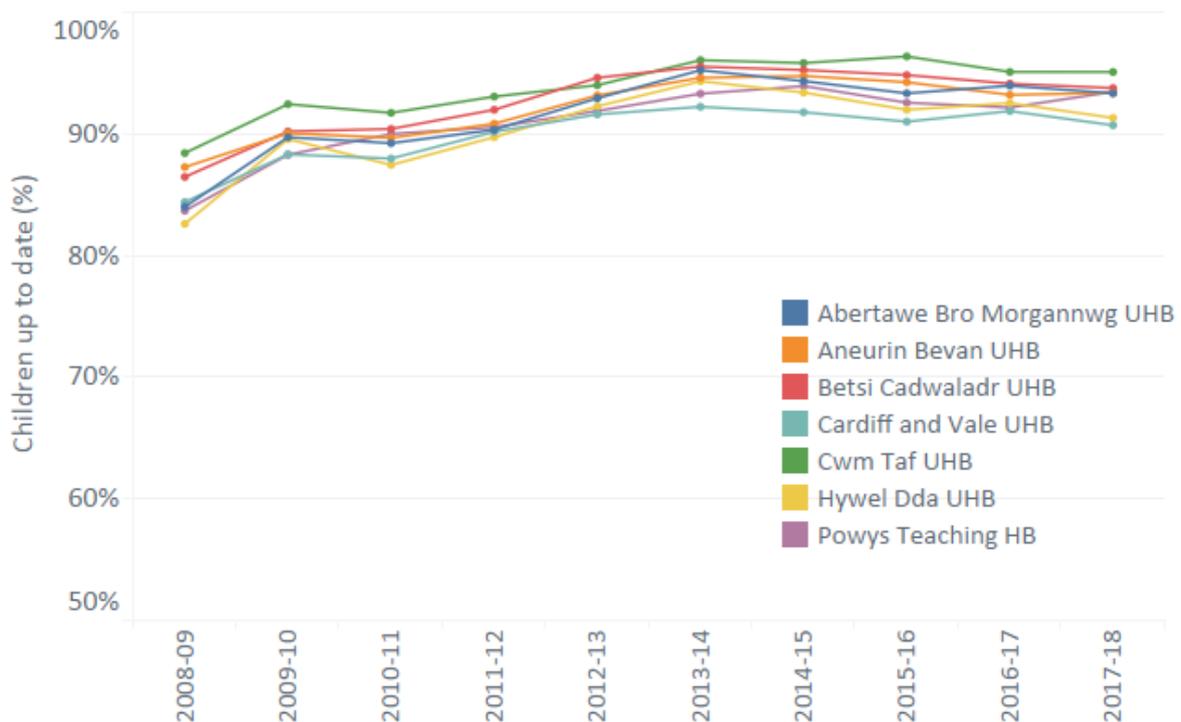
Health board level variation at two years of age

The variation in proportion of children who are up to date with all routine immunisations by two years of age between the highest uptake HB and lowest uptake HB decreased in 2017-18 (to 4.4%) compared to 2015-16 (5.4%). Over the previous ten years, variation in uptake between HBs has ranged from 3.0% (2012-13) to 5.8% (2008-09) (Figure 11).

The variation in proportion of children who are up to date with all routine immunisations by two years of age between the highest uptake LA and the lowest uptake LA also decreased in 2017-18 (to 5.3%) compared to 2015-16 (6.6%). Over the previous ten years, variation in uptake between LAs has halved, from 10.0% in 2008-09.

Nationally, the proportion of children who are up to date with all routine immunisations by two years of age increased from 85.5% in 2008-09 to 94.6% in 2013-14, before decreasing to 92.9% in 2017-18. This decline has been seen in the majority of HBs. During 2017-18, the proportion of children who were up to date with routine immunisations by two years of age was 95% or over in one HB area, the same as in 2015-16 (Figure 11).

Figure 11. Proportion of children up to date with immunisations by two years of age, by health board, Wales; 2008-09 – 2017-18.



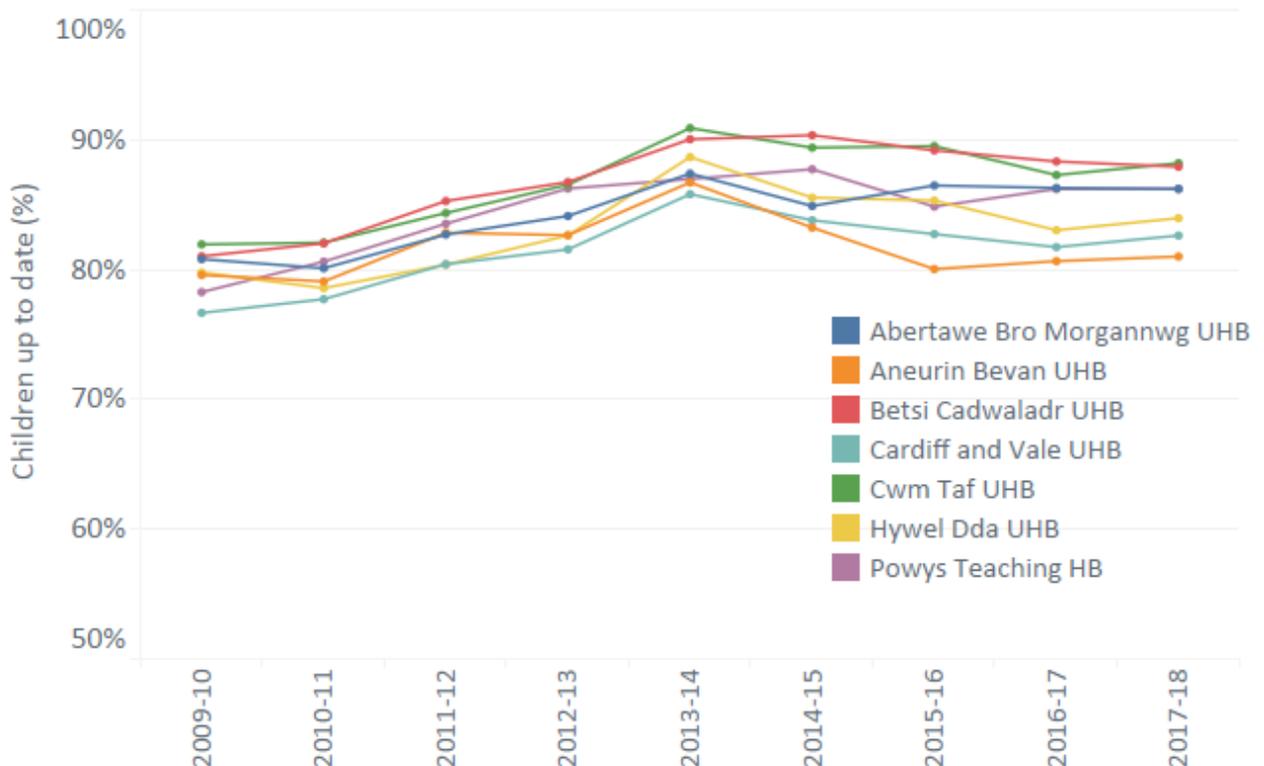
Health board level variation at four years of age

The variation in proportion of children who are up to date with all routine immunisations by four years of age between the highest uptake HB and lowest uptake HB decreased in 2017-18 (7.2%) compared to 2015-16 (9.5%). Over the previous nine years², variation in uptake between HBs has ranged from 4.4% (2010-11) to 9.5% (2015-16) (Figure 12).

The variation in proportion of children who are up to date with all routine immunisations by four years of age between the highest uptake LA and lowest uptake LA increased in 2017-18 (17.9%) compared to 2015-16 (17.4%). Over the previous nine years, variation in uptake between LAs has ranged from 8.2% (2012-13) to 17.9% (2017-18).

Nationally, the proportion of children who are up to date with all routine immunisations by four years of age increased from 79.8% in 2009-10 to 88.0% in 2013-14, before decreasing to 84.9% in 2017-18. Since 2013-14, levels of coverage have decreased at national level and in the HBs and LAs with highest and lowest levels of coverage. Decreases have been more pronounced in the areas with lowest coverage, resulting in a widening of the variation seen in HB and LA areas over this period.

Figure 12. Proportion of children up to date with immunisations by four years of age, by health board, Wales; 2009-10 – 2017-18.



² Data for four year olds unavailable for 2008-09.

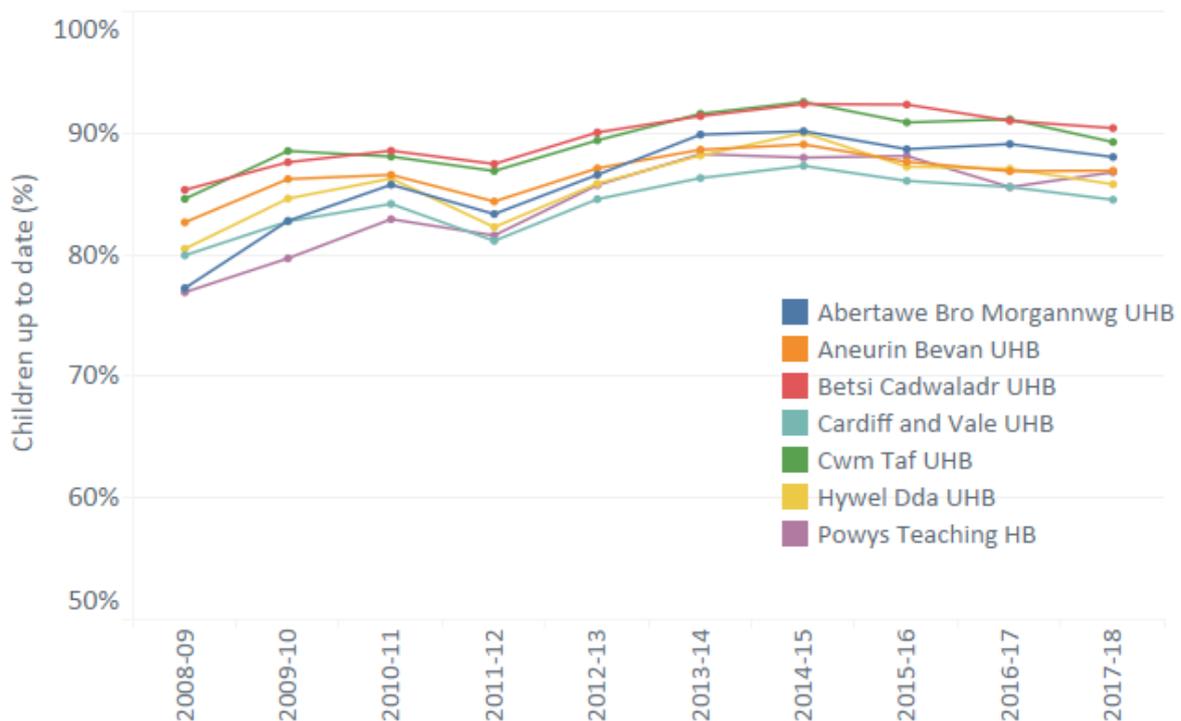
Health board level variation at five years of age

The variation in proportion of children who are up to date with all routine immunisations by five years of age between the highest uptake HB and lowest uptake HB has decreased in 2017-18 to 5.9%, compared to 6.3% in 2015-16. Over the previous ten years, variation in uptake between HBs has ranged from 5.3% (2013-14 and 2014-15) to 8.8% (2009-10) (Figure 13).

The variation in proportion of children who are up to date with all routine immunisations by five years of age between the highest uptake LA and lowest uptake LA increased in 2017-18 (10.7%) compared to 2015-16 (10.0%). Over the previous nine years, variation in uptake between LAs has ranged from 7.2% (2014-15) to 10.7% (2017-18).

Nationally, the proportion of children who are up to date with all routine immunisations by five years of age has increased from 81.5% in 2008-09 to 90.1% in 2014-15 before decreasing to 87.6% in 2017-18. The decrease seen since 2014-15 has been most pronounced in the lowest uptake areas, leading to widening of the variation seen.

Figure 13. Proportion of children up to date with immunisations by five years of age, by health board, Wales; 2008-09 – 2017-18.



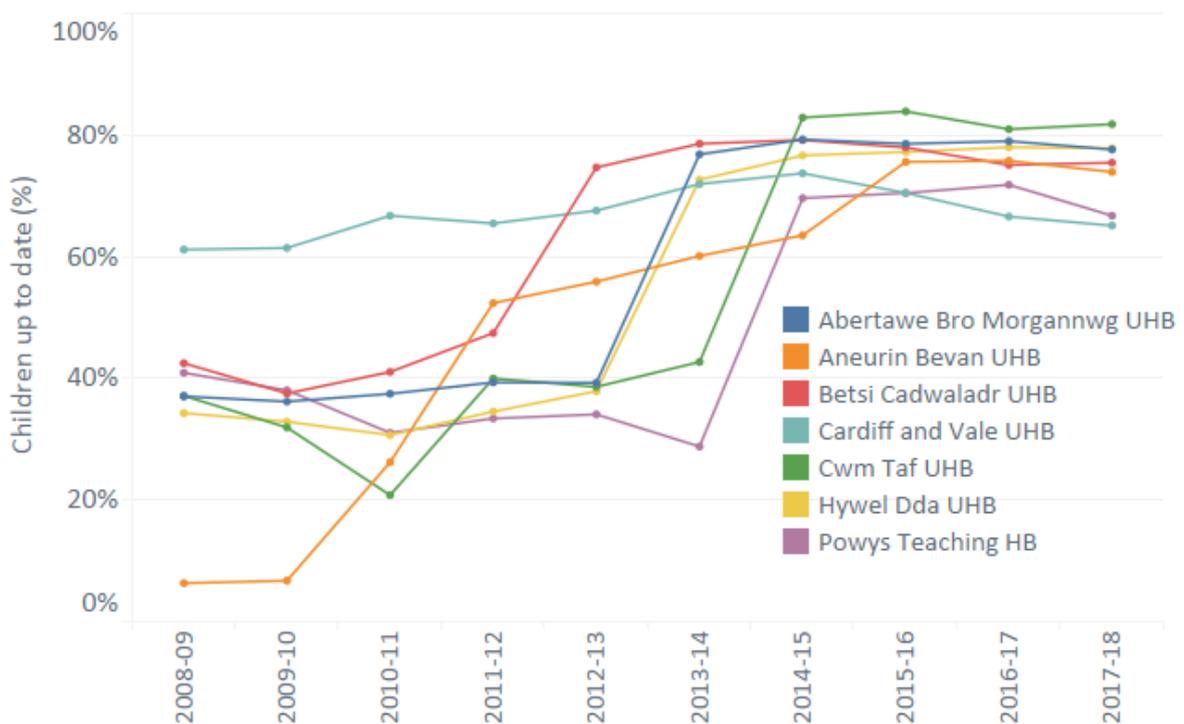
Health board level variation at fifteen years of age

The variation in proportion of children who are up to date with routine immunisations by 15 years of age between the HBs with the highest and lowest coverage increased in 2017-18 (16.7%) compared to 2015-16 (13.4%). Over the previous ten years, variation in uptake between HBs has ranged from 13.4% (2015-16) to 54.8% (2008-09) (Figure 14).

The variation in proportion of children who are up to date with all routine immunisations by 15 years of age between the highest uptake LA and lowest uptake LA increased in 2017-18 (20.2%) compared to 2015-16 (17.9%).

Nationally, the proportion of children who are up to date with all routine immunisations by 15 years of age has increased from 35.7% in 2008-09 to 76.6% in 2015-16 before decreasing to 74.5% in 2017-18. The decrease seen since 2015-16 has been more pronounced in the lowest uptake areas compared to the highest uptake areas, leading to a slight increase in the size of variation.

Figure 14. Proportion of children up to date with immunisations by 15 years of age, by health board, Wales; 2008-09 – 2017-18.



Discussion

Long-term trends in both improving uptake and in reducing inequalities in immunisation coverage in Wales remain positive although there has been widening of inequalities in some age groups since 2015-16. Socioeconomic inequalities in immunisation coverage in Wales continue to be smallest in the youngest children, with the gap widening as scheduled immunisation age increases.

There has been a slight increase in the socioeconomic inequalities in immunisation uptake in one year olds, although the variation between health board areas has remained stable. All infants turning one year of age during 2017-18 would have been eligible for the meningococcal vaccination that was introduced in July 2015 and this is the first time this immunisation has been included in the composite measure for this age group. Although acceptance of this new vaccine is high, uptake is slightly lower than the other vaccines used in this composite measure and is likely to increase as the programme becomes more established.

There has also been a slight increase in inequalities at two years of age, although variation seen between HBs has decreased.

The uptake of routine immunisations in four year olds remained stable in 2017-18, following a decline seen since 2013-14. It is too early to deduce whether the current period of stability reflects an end to the previous downward trend, however it is encouraging to see that inequalities and variation in uptake in this group have narrowed since 2015-16. The measurement age of four years allows limited time for catch-up of children who have missed immunisations normally scheduled at three years and four months of age. The reported percentage uptake for children at five years of age showed an improvement in 2017-18 compared to uptake reported when these children were four years of age in 2016-17, there has also been a narrowing of the inequalities gap. The improvement in uptake in the most deprived quintile (4.5%) was more than twice that of the least deprived quintile (2.1%) suggesting that, although timeliness and reduced capacity for catch-up may still be an issue, improvements are being made. Further investigations are needed to identify why uptake declined in children aged four and five years.

Uptake of all routine immunisations at four years of age is a key indicator for Public Health Outcomes Framework for Wales [5], the Healthy Child Wales Programme (HCWP) [7] and Flying Start programme [8]. Over 36,000 children in Wales received Flying Start services in 2017-18. Uptake in these areas, which are some of the most deprived in Wales, is routinely lower than other areas. There was no improvement in uptake between 2015-16 and 2017-18 in the proportion of children living in Flying Start areas who were fully immunised by their fourth birthday [9]. A recent survey showed that the complexity of social circumstances and frequently changing contact details are some of the greatest barriers to vaccination uptake in this group [10]. Recommendations from this report suggested offering families flexibility with appointment time

and date, alternative venue administration and checking contact details at every opportunity would help improve vaccination uptake in those living in more deprived areas of Wales.

Compared to 2015-16 inequalities have increased in 15 year olds but remain far lower than before the implementation of school-based immunisation in most areas. The teenage Td/IPV vaccine is now offered in School Year 9 in all HBs where previously it was delivered in School Year 10 in some areas. Areas that are not delivering the teenage Td/IPV and MenACWY vaccines in schools should continue to consider moving to this model of delivery. In the light of recent measles outbreaks involving secondary school aged children, monitoring variation in uptake in this group and continued offer of catch-up alongside other routine vaccinations also remain important in addressing inequalities in coverage.

There is continued need for improvement in the quality of data in the child health system. Development of electronic transfer of immunisation data between general practices and HB child health offices remains a priority in order to enable efficient follow-up of children who have missed immunisations. Establishing electronic links between local education authority databases and HB child health offices is also important in improving data quality.

The Public Health Wales VPDP provide a number of tools for locally monitoring uptake of childhood immunisations and variation in uptake at GP, GP cluster or small-area geography levels (see Appendix C). An annual report is also produced which includes a summary of inequalities in coverage of immunisations in four year olds.

Implementation of existing policy and guidance on immunisation status checking and targeted catch-up is key in addressing issues of decreased and inequitable uptake in children at four years of age and older. Pre-school follow-up is the responsibility of the health visiting services, this transfers to school nurses from four years of age. NICE guidance [11] is available on reducing differences in uptake in those aged younger than 19 years, including poorly reached population groups. Guidance on best practice for follow up of children who have not responded to initial and follow up invitations to attend general practice for immunisation at scheduled ages has been published by the VPDP [12, 13]. In addition the all Wales School Nursing Framework aims to ensure consistency in the provision of immunisation services for school age children [14].

Public Health Wales continues to work closely with HBs, and national service guidelines and standards have been developed in consultation with the child health, health visiting and school nursing services to help improve uptakes and reduce inequalities.

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Report prepared by Public Health Wales Vaccine Preventable Disease Programme and Communicable Disease Surveillance Centre.

Data for this report was provided by NHS Wales Informatics Service from the National Community Child Health Database (NCCHD). The data was sourced from Community Child Health databases maintained by local Child Health Office staff in Trusts throughout Wales based on regular returns from doctors and nurses who immunise or advise on immunisation. Uptake data presented throughout are for HB resident population, not for HB GP practice populations.

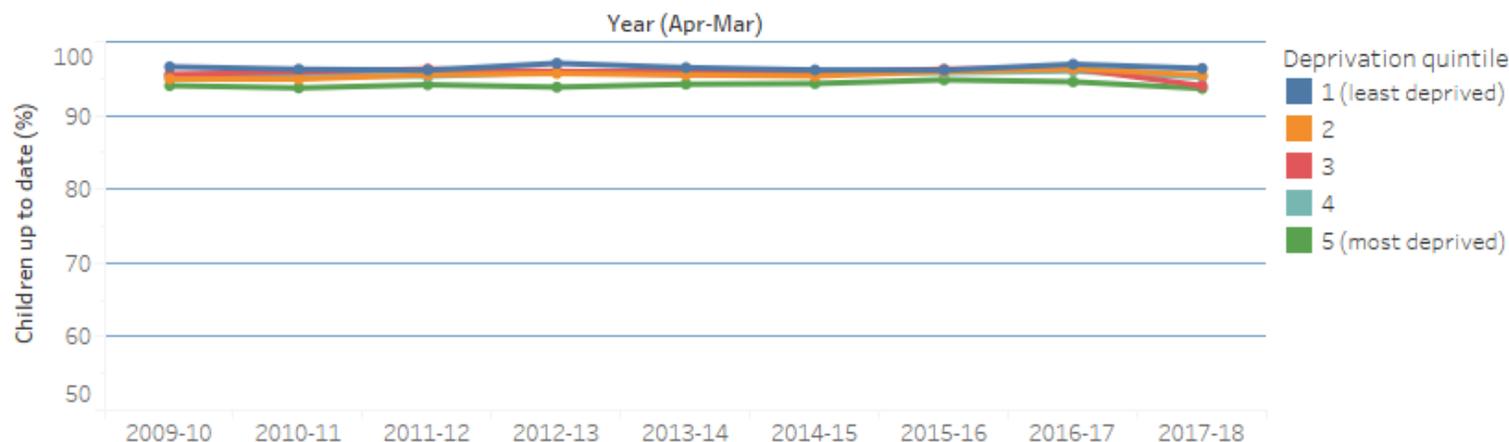
Suggested citation for this report: Public Health Wales Health Protection Division. Inequalities in uptake of routine childhood immunisations in Wales 2017-18, July 2018. Cardiff, Public Health Wales.

For further information on this report please contact: surveillance.requests@wales.nhs.uk



Appendix A – proportions of children up to date with immunisations at different ages in Wales and in each health board, by national quintiles of socioeconomic deprivation

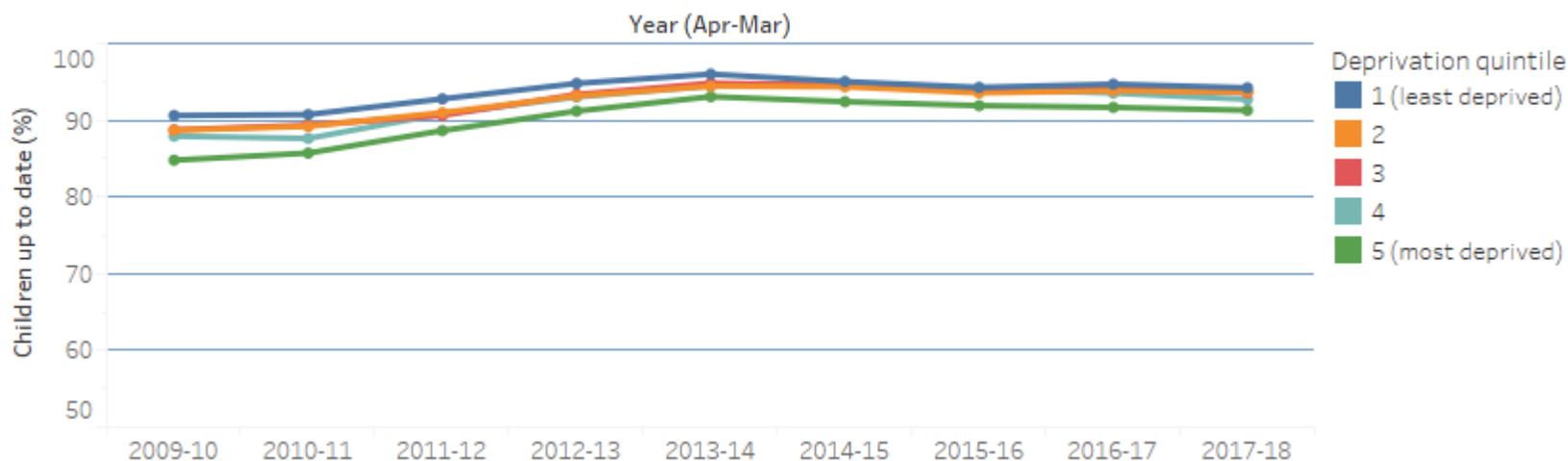
The proportion (%) of children up to date with routine immunisations by 1 years of age in Wales



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	5,470	5,662	96.6	5,660	5,960	95.0	6,374	6,668	95.6	7,161	7,513	95.3	8,399	8,930	94.1
2010-11	5,223	5,425	96.3	5,608	5,907	94.9	6,383	6,656	95.9	7,531	7,885	95.5	8,381	8,940	93.7
2011-12	5,203	5,411	96.2	5,742	6,012	95.5	6,537	6,788	96.3	7,386	7,747	95.3	8,788	9,331	94.2
2012-13	5,334	5,494	97.1	5,792	6,052	95.7	6,422	6,690	96.0	7,373	7,691	95.9	8,685	9,254	93.9
2013-14	5,096	5,281	96.5	5,707	5,976	95.5	6,565	6,841	96.0	7,199	7,534	95.6	8,361	8,871	94.3
2014-15	5,138	5,342	96.2	5,451	5,717	95.3	6,168	6,436	95.8	6,946	7,240	95.9	8,064	8,548	94.3
2015-16	4,982	5,181	96.2	5,489	5,720	96.0	6,417	6,665	96.3	6,784	7,080	95.8	7,962	8,395	94.8
2016-17	5,198	5,361	97.0	5,480	5,688	96.3	6,368	6,608	96.4	6,993	7,283	96.0	8,055	8,517	94.6
2017-18	5,092	5,283	96.4	5,518	5,779	95.5	6,120	6,508	94.0	6,658	6,994	95.2	7,707	8,228	93.7



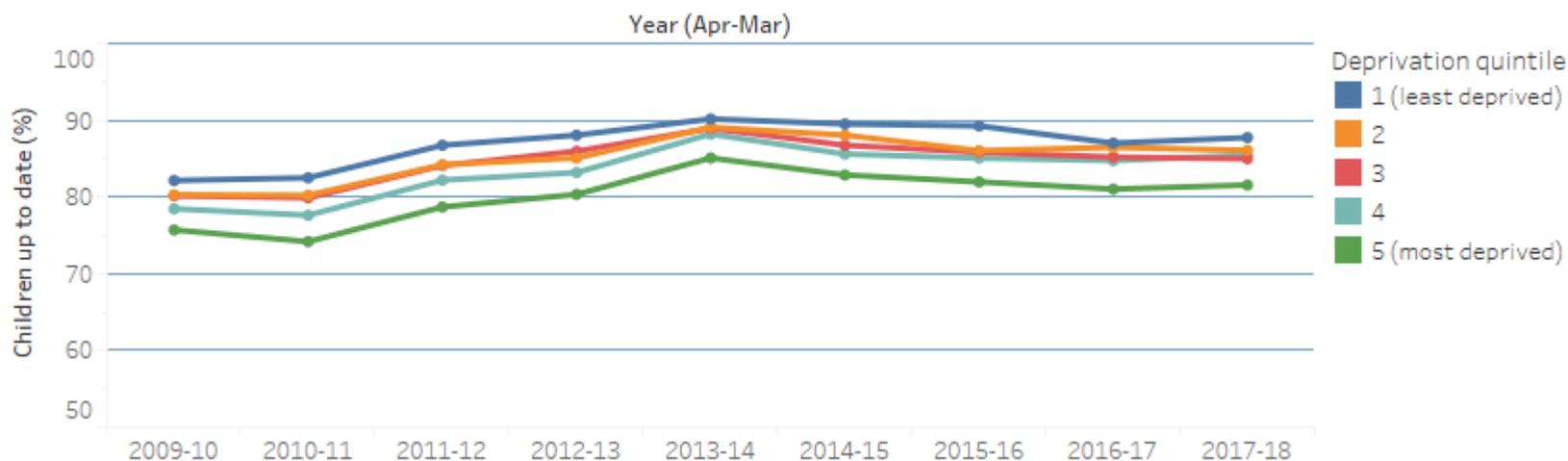
The proportion (%) of children up to date with routine immunisations by 2 years of age in Wales



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	5,250	5,794	90.6	5,359	6,042	88.7	5,845	6,587	88.7	6,417	7,299	87.9	7,515	8,863	84.8
2010-11	5,227	5,761	90.7	5,367	6,017	89.2	5,901	6,604	89.4	6,557	7,483	87.6	7,648	8,923	85.7
2011-12	5,174	5,577	92.8	5,427	5,965	91.0	6,002	6,623	90.6	7,129	7,849	90.8	7,874	8,883	88.6
2012-13	5,183	5,468	94.8	5,595	6,006	93.2	6,275	6,722	93.4	7,181	7,720	93.0	8,409	9,222	91.2
2013-14	5,424	5,650	96.0	5,720	6,057	94.4	6,362	6,710	94.8	7,185	7,606	94.5	8,587	9,227	93.1
2014-15	5,278	5,554	95.0	5,668	6,007	94.4	6,502	6,874	94.6	6,922	7,320	94.6	8,131	8,799	92.4
2015-16	5,167	5,481	94.3	5,400	5,772	93.6	6,078	6,471	93.9	6,808	7,236	94.1	7,846	8,538	91.9
2016-17	5,157	5,446	94.7	5,409	5,764	93.8	6,317	6,714	94.1	6,621	7,079	93.5	7,899	8,617	91.7
2017-18	5,311	5,637	94.2	5,416	5,780	93.7	6,216	6,642	93.6	6,804	7,339	92.7	7,867	8,618	91.3



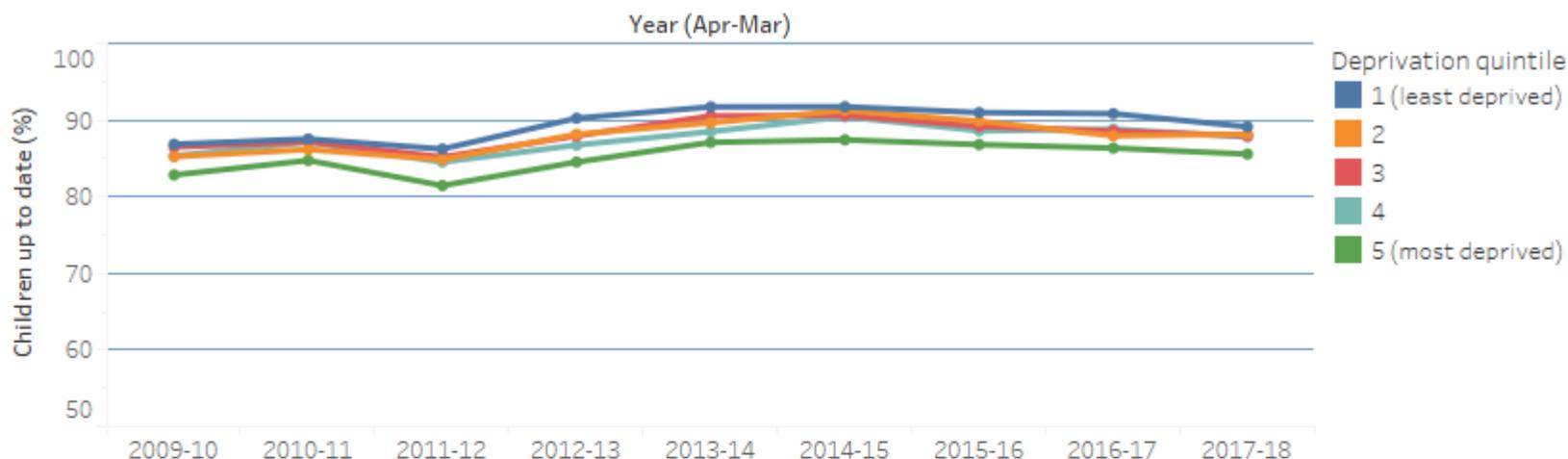
The proportion (%) of children up to date with routine immunisations by 4 years of age in Wales



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	4,842	5,895	82.1	4,592	5,721	80.3	5,091	6,352	80.1	5,290	6,743	78.5	6,040	7,979	75.7
2010-11	4,816	5,838	82.5	4,813	6,000	80.2	4,972	6,224	79.9	5,568	7,174	77.6	6,043	8,147	74.2
2011-12	5,274	6,081	86.7	5,153	6,120	84.2	5,539	6,587	84.1	5,910	7,191	82.2	6,831	8,681	78.7
2012-13	5,200	5,906	88.0	5,187	6,097	85.1	5,666	6,592	86.0	6,230	7,490	83.2	7,088	8,824	80.3
2013-14	5,323	5,904	90.2	5,359	6,016	89.1	5,895	6,628	88.9	6,804	7,715	88.2	7,467	8,777	85.1
2014-15	5,245	5,860	89.5	5,332	6,056	88.0	6,013	6,933	86.7	6,405	7,484	85.6	7,481	9,029	82.9
2015-16	5,430	6,084	89.3	5,262	6,117	86.0	5,887	6,859	85.8	6,244	7,341	85.1	7,404	9,034	82.0
2016-17	5,230	6,011	87.0	5,334	6,169	86.5	5,995	7,037	85.2	6,323	7,462	84.7	7,198	8,884	81.0
2017-18	5,211	5,940	87.7	5,071	5,892	86.1	5,706	6,715	85.0	6,218	7,278	85.4	7,113	8,722	81.6



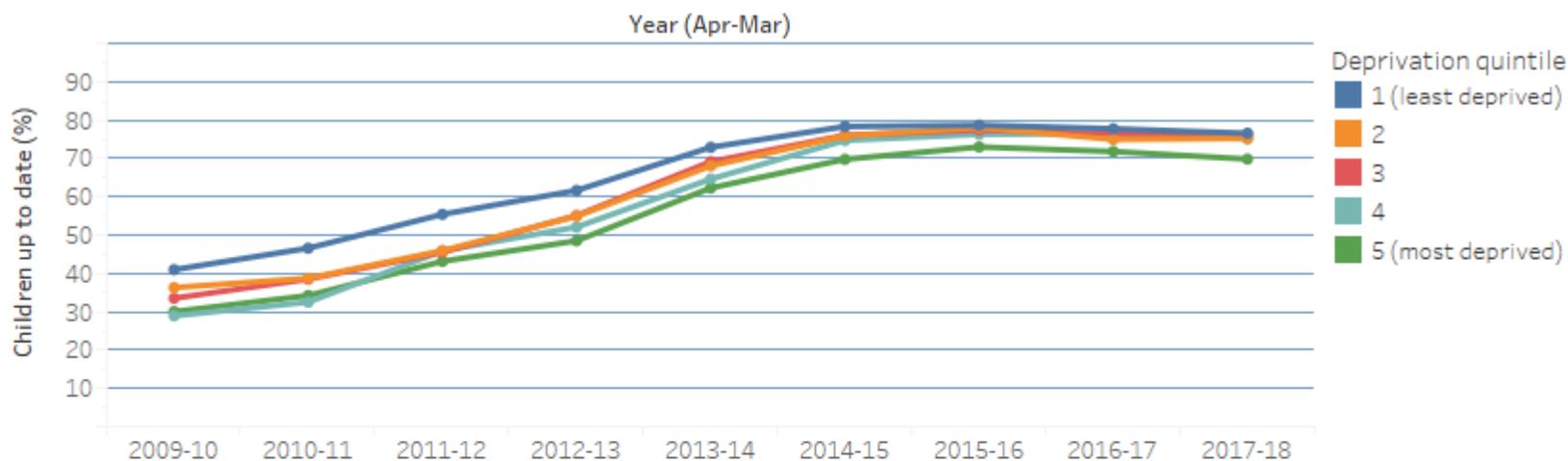
The proportion (%) of children up to date with routine immunisations by 5 years of age in Wales



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	5,122	5,898	86.8	4,827	5,664	85.2	5,295	6,123	86.5	5,817	6,818	85.3	6,561	7,921	82.8
2010-11	5,263	6,013	87.5	4,940	5,734	86.2	5,497	6,308	87.1	5,898	6,771	87.1	6,673	7,876	84.7
2011-12	5,103	5,919	86.2	5,161	6,083	84.8	5,285	6,205	85.2	6,042	7,150	84.5	6,620	8,128	81.4
2012-13	5,476	6,069	90.2	5,409	6,137	88.1	5,711	6,495	87.9	6,214	7,165	86.7	7,386	8,739	84.5
2013-14	5,508	6,006	91.7	5,461	6,092	89.6	5,978	6,603	90.5	6,557	7,410	88.5	7,698	8,840	87.1
2014-15	5,624	6,131	91.7	5,569	6,103	91.3	6,055	6,683	90.6	6,809	7,530	90.4	7,606	8,702	87.4
2015-16	5,420	5,958	91.0	5,439	6,054	89.8	6,131	6,875	89.2	6,682	7,543	88.6	7,833	9,025	86.8
2016-17	5,777	6,361	90.8	5,538	6,298	87.9	6,283	7,095	88.6	6,677	7,519	88.8	7,948	9,206	86.3
2017-18	5,476	6,145	89.1	5,539	6,284	88.1	6,251	7,107	88.0	6,581	7,496	87.8	7,627	8,915	85.6



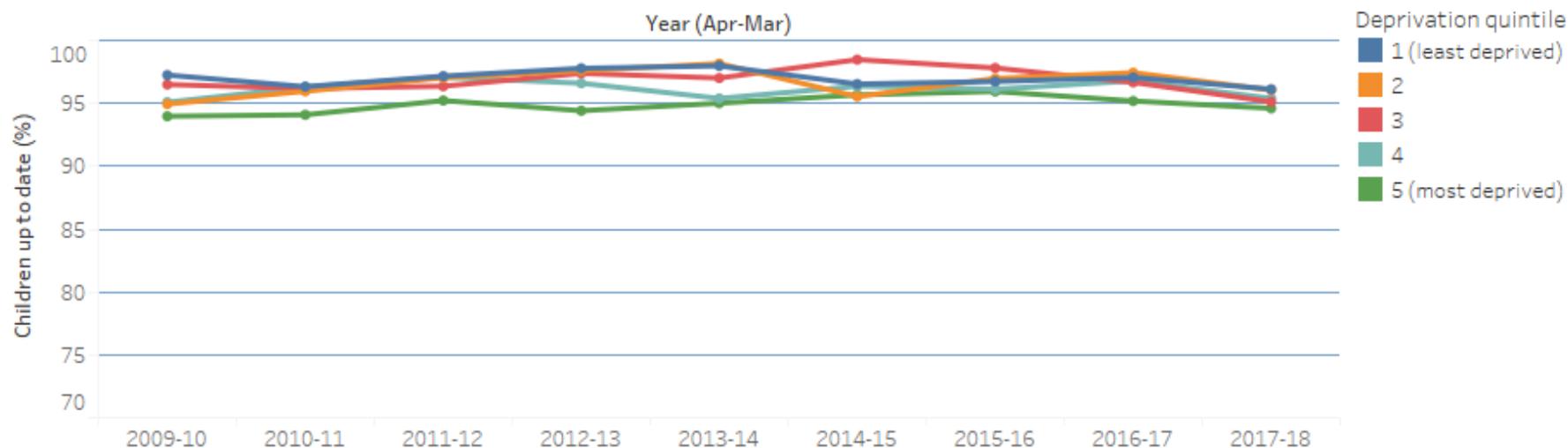
The proportion (%) of children up to date with routine immunisations by 15 years of age in Wales



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	2,842	6,939	41.0	2,467	6,798	36.3	2,375	7,089	33.5	2,122	7,332	28.9	2,372	7,902	30.0
2010-11	3,194	6,859	46.6	2,540	6,560	38.7	2,630	6,834	38.5	2,337	7,193	32.5	2,626	7,678	34.2
2011-12	3,807	6,873	55.4	3,097	6,745	45.9	3,106	6,824	45.5	3,360	7,327	45.9	3,429	7,951	43.1
2012-13	4,197	6,809	61.6	3,589	6,535	54.9	3,629	6,588	55.1	3,671	7,049	52.1	3,759	7,751	48.5
2013-14	4,756	6,525	72.9	4,311	6,336	68.0	4,648	6,722	69.1	4,419	6,841	64.6	4,688	7,528	62.3
2014-15	5,151	6,578	78.3	4,506	5,941	75.8	4,827	6,349	76.0	4,904	6,567	74.7	4,989	7,153	69.7
2015-16	5,091	6,472	78.7	4,629	5,931	78.0	4,756	6,143	77.4	4,864	6,377	76.3	5,206	7,135	73.0
2016-17	5,072	6,526	77.7	4,613	6,156	74.9	4,817	6,308	76.4	4,871	6,371	76.5	5,162	7,191	71.8
2017-18	4,965	6,487	76.5	4,423	5,881	75.2	4,857	6,364	76.3	4,967	6,614	75.1	5,055	7,241	69.8



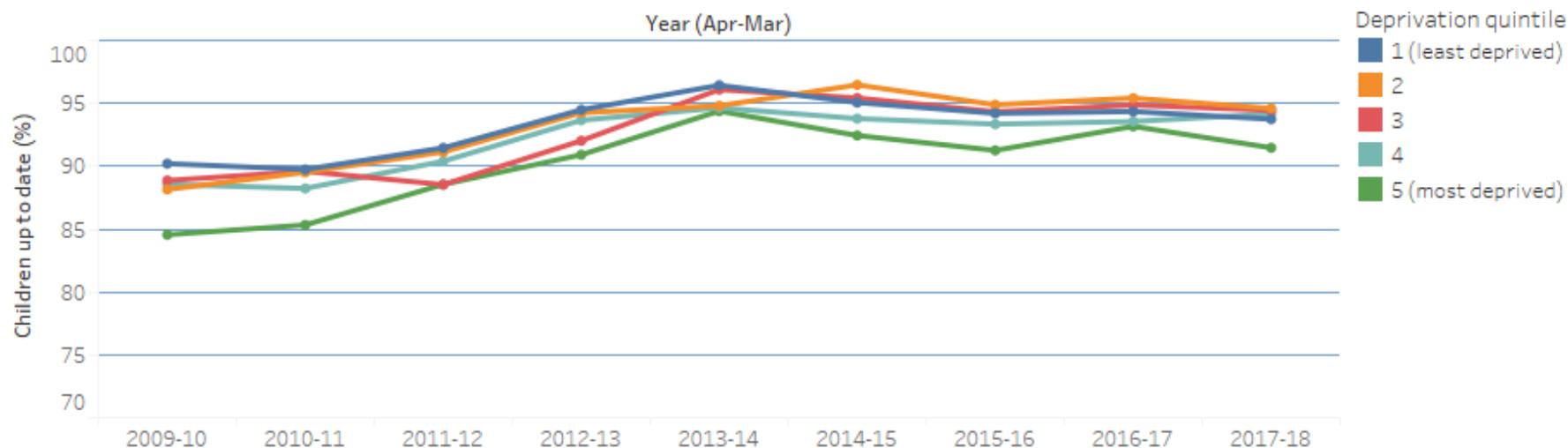
The Proportion (%) of children up to date with routine immunisations by 1 year of age in
Abertawe Bro Morgannwg UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	1,023	1,052	97.2	732	771	94.9	770	798	96.5	1,142	1,201	95.1	1,808	1,924	94.0
2010-11	995	1,033	96.3	711	741	96.0	754	784	96.2	1,246	1,294	96.3	1,861	1,978	94.1
2011-12	992	1,021	97.2	751	774	97.0	820	851	96.4	1,194	1,230	97.1	1,932	2,029	95.2
2012-13	971	993	97.8	771	790	97.6	855	878	97.4	1,248	1,292	96.6	1,925	2,039	94.4
2013-14	967	987	98.0	799	814	98.2	778	802	97.0	1,179	1,236	95.4	1,751	1,843	95.0
2014-15	1,002	1,038	96.5	578	605	95.5	838	851	98.5	1,216	1,262	96.4	1,657	1,732	95.7
2015-16	978	1,011	96.7	609	628	97.0	893	913	97.8	1,191	1,239	96.1	1,654	1,724	95.9
2016-17	1,023	1,054	97.1	645	662	97.4	869	899	96.7	1,230	1,271	96.8	1,660	1,744	95.2
2017-18	1,016	1,057	96.1	633	659	96.1	856	900	95.1	1,139	1,194	95.4	1,612	1,704	94.6



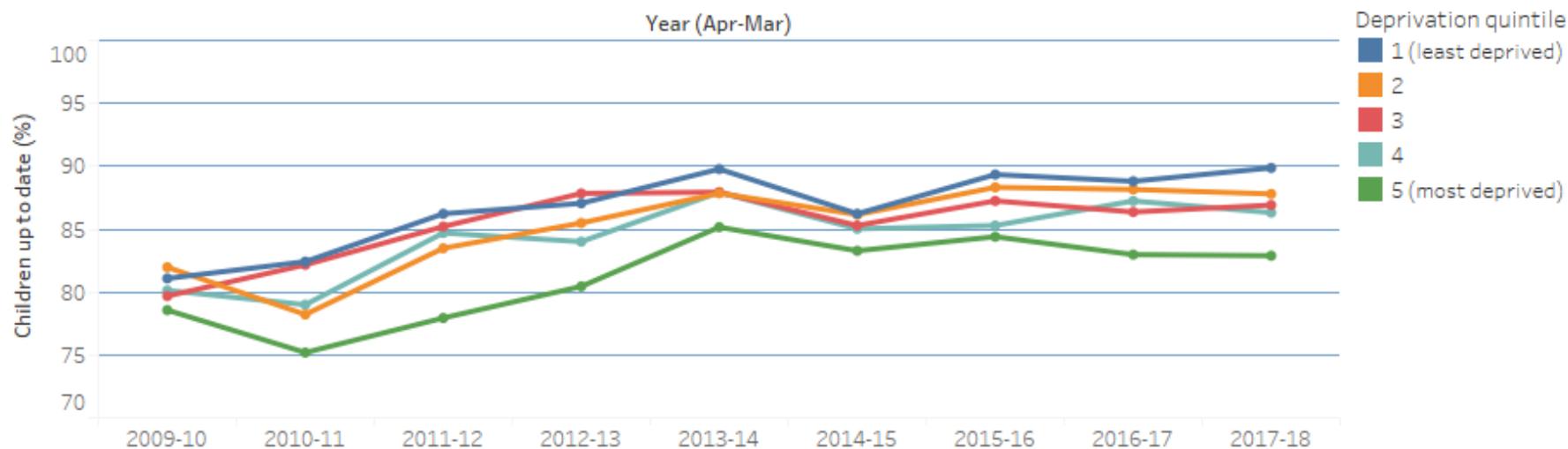
The Proportion (%) of children up to date with routine immunisations by 2 years of age in
Abertawe Bro Morgannwg UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	985	1,092	90.2	677	768	88.2	750	844	88.9	1,029	1,162	88.6	1,658	1,961	84.5
2010-11	936	1,043	89.7	708	791	89.5	706	788	89.6	1,042	1,181	88.2	1,628	1,908	85.3
2011-12	985	1,077	91.5	668	733	91.1	687	776	88.5	1,167	1,291	90.4	1,732	1,956	88.5
2012-13	994	1,052	94.5	721	765	94.2	773	840	92.0	1,151	1,229	93.7	1,830	2,013	90.9
2013-14	1,027	1,065	96.4	748	789	94.8	835	869	96.1	1,184	1,251	94.6	1,931	2,046	94.4
2014-15	1,020	1,073	95.1	682	707	96.5	855	896	95.4	1,222	1,303	93.8	1,577	1,706	92.4
2015-16	991	1,052	94.2	575	606	94.9	832	882	94.3	1,192	1,277	93.3	1,576	1,727	91.3
2016-17	1,018	1,079	94.3	603	632	95.4	850	896	94.9	1,161	1,241	93.6	1,663	1,785	93.2
2017-18	1,033	1,102	93.7	630	666	94.6	832	881	94.4	1,192	1,266	94.2	1,629	1,781	91.5



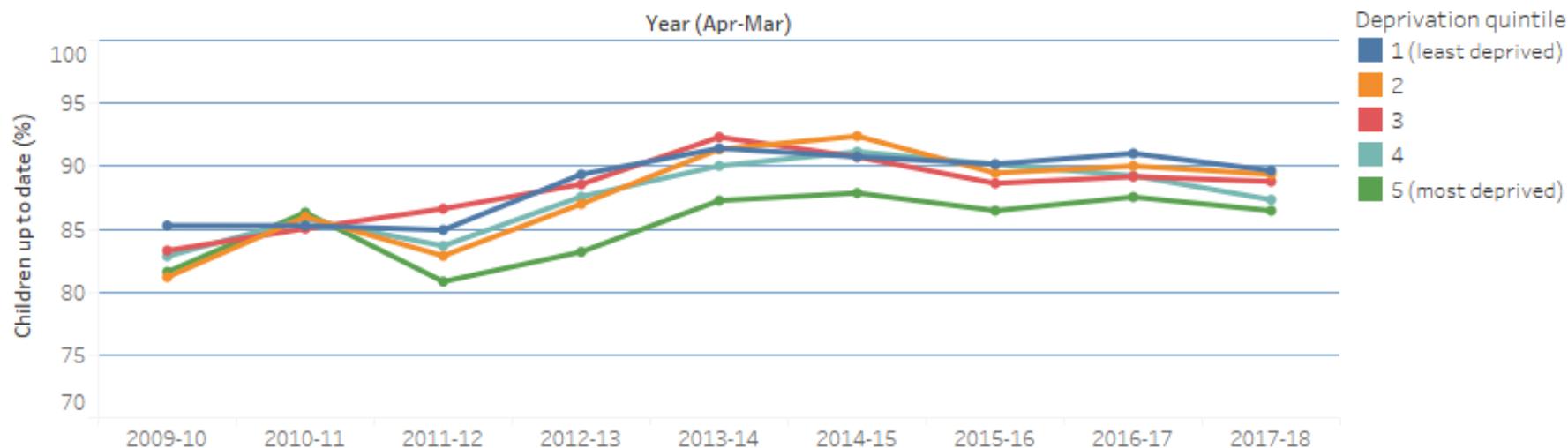
The Proportion (%) of children up to date with routine immunisations by 4 years of age in
Abertawe Bro Morgannwg UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	917	1,131	81.1	582	710	82.0	647	812	79.7	875	1,092	80.1	1,334	1,698	78.6
2010-11	942	1,143	82.4	578	739	78.2	631	768	82.2	940	1,190	79.0	1,303	1,733	75.2
2011-12	976	1,132	86.2	667	799	83.5	714	838	85.2	974	1,150	84.7	1,473	1,890	77.9
2012-13	948	1,089	87.1	701	820	85.5	679	773	87.8	982	1,169	84.0	1,514	1,882	80.4
2013-14	1,001	1,115	89.8	658	749	87.9	700	796	87.9	1,143	1,300	87.9	1,589	1,866	85.2
2014-15	1,001	1,161	86.2	591	686	86.2	852	999	85.3	1,073	1,262	85.0	1,519	1,824	83.3
2015-16	1,081	1,210	89.3	605	685	88.3	855	980	87.2	1,107	1,298	85.3	1,601	1,897	84.4
2016-17	1,039	1,170	88.8	640	726	88.2	785	909	86.4	1,169	1,340	87.2	1,423	1,715	83.0
2017-18	1,020	1,135	89.9	554	631	87.8	777	894	86.9	1,116	1,293	86.3	1,477	1,782	82.9



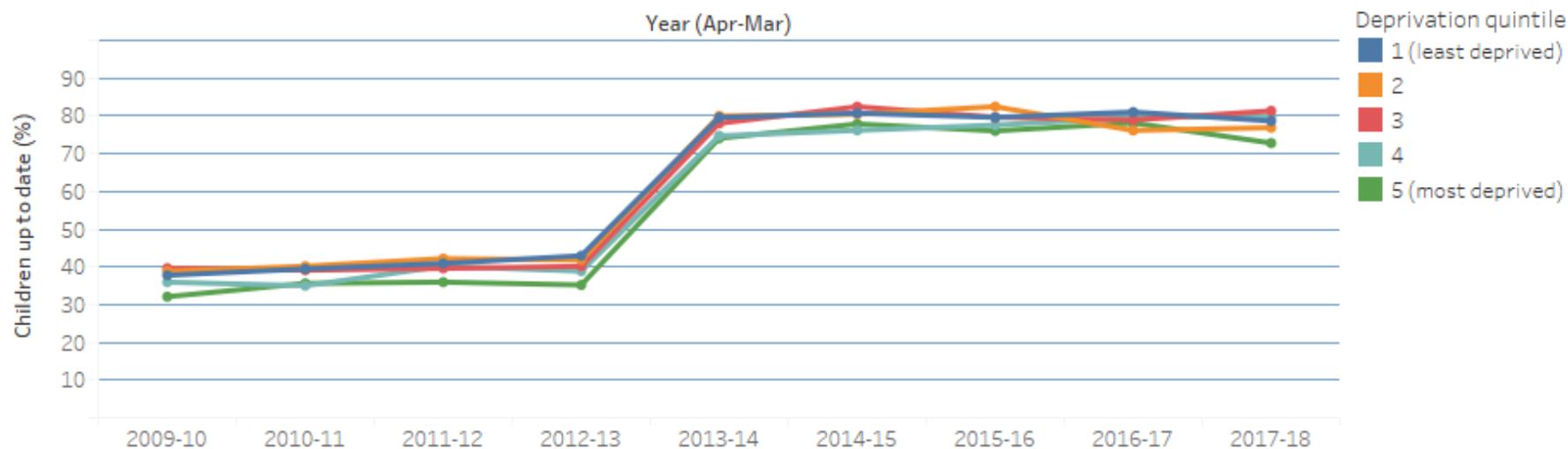
The Proportion (%) of children up to date with routine immunisations by 5 years of age in
Abertawe Bro Morgannwg UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	921	1,080	85.3	565	696	81.2	668	802	83.3	917	1,107	82.8	1,414	1,733	81.6
2010-11	978	1,147	85.3	631	734	86.0	693	815	85.0	950	1,107	85.8	1,438	1,666	86.3
2011-12	958	1,128	84.9	624	753	82.9	673	777	86.6	983	1,175	83.7	1,391	1,721	80.8
2012-13	1,023	1,145	89.3	682	784	87.0	743	839	88.6	1,022	1,167	87.6	1,573	1,891	83.2
2013-14	1,002	1,096	91.4	728	797	91.3	696	754	92.3	1,074	1,193	90.0	1,638	1,877	87.3
2014-15	1,099	1,211	90.8	607	657	92.4	803	885	90.7	1,205	1,322	91.1	1,549	1,763	87.9
2015-16	1,064	1,180	90.2	636	711	89.5	889	1,003	88.6	1,125	1,248	90.1	1,565	1,810	86.5
2016-17	1,154	1,268	91.0	649	721	90.0	905	1,015	89.2	1,186	1,329	89.2	1,708	1,951	87.5
2017-18	1,091	1,217	89.6	671	751	89.3	815	918	88.8	1,172	1,342	87.3	1,488	1,721	86.5



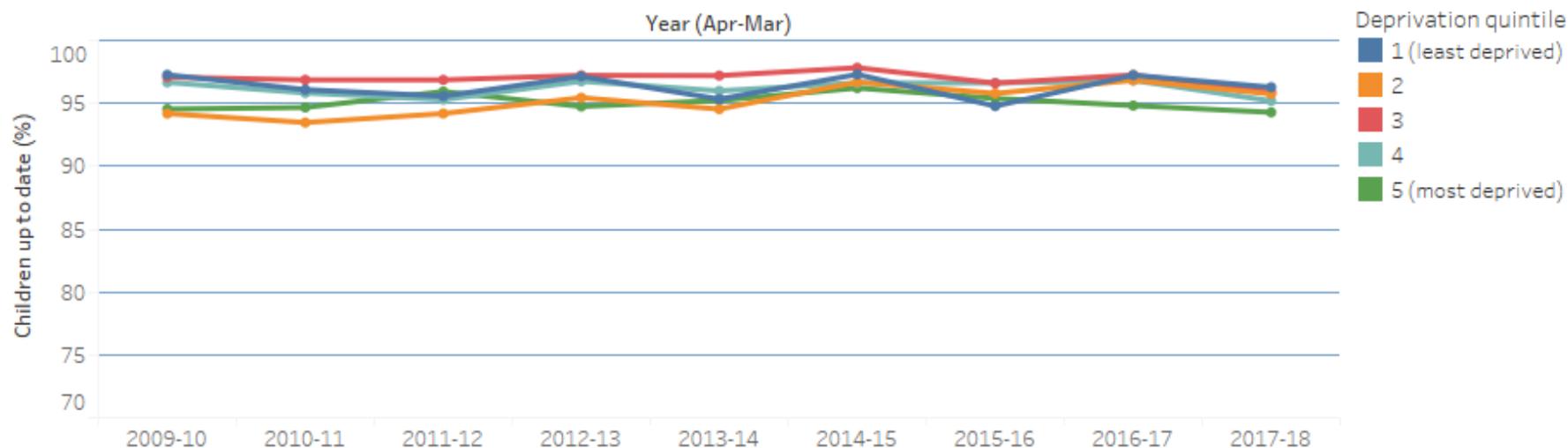
The Proportion (%) of children up to date with routine immunisations by 15 years of age in
Abertawe Bro Morgannwg UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	465	1,231	37.8	323	832	38.8	337	850	39.6	444	1,235	36.0	537	1,673	32.1
2010-11	477	1,209	39.5	321	799	40.2	343	877	39.1	419	1,197	35.0	612	1,718	35.6
2011-12	549	1,342	40.9	362	858	42.2	335	846	39.6	470	1,170	40.2	617	1,716	36.0
2012-13	532	1,239	42.9	356	851	41.8	346	862	40.1	455	1,171	38.9	597	1,696	35.2
2013-14	971	1,220	79.6	623	779	80.0	664	851	78.0	863	1,155	74.7	1,183	1,597	74.1
2014-15	1,079	1,337	80.7	519	645	80.5	728	883	82.4	847	1,112	76.2	1,161	1,491	77.9
2015-16	1,035	1,300	79.6	550	667	82.5	658	826	79.7	927	1,195	77.6	1,100	1,447	76.0
2016-17	1,063	1,312	81.0	536	704	76.1	704	892	78.9	904	1,136	79.6	1,169	1,496	78.1
2017-18	1,017	1,293	78.7	509	662	76.9	728	895	81.3	956	1,197	79.9	1,039	1,427	72.8



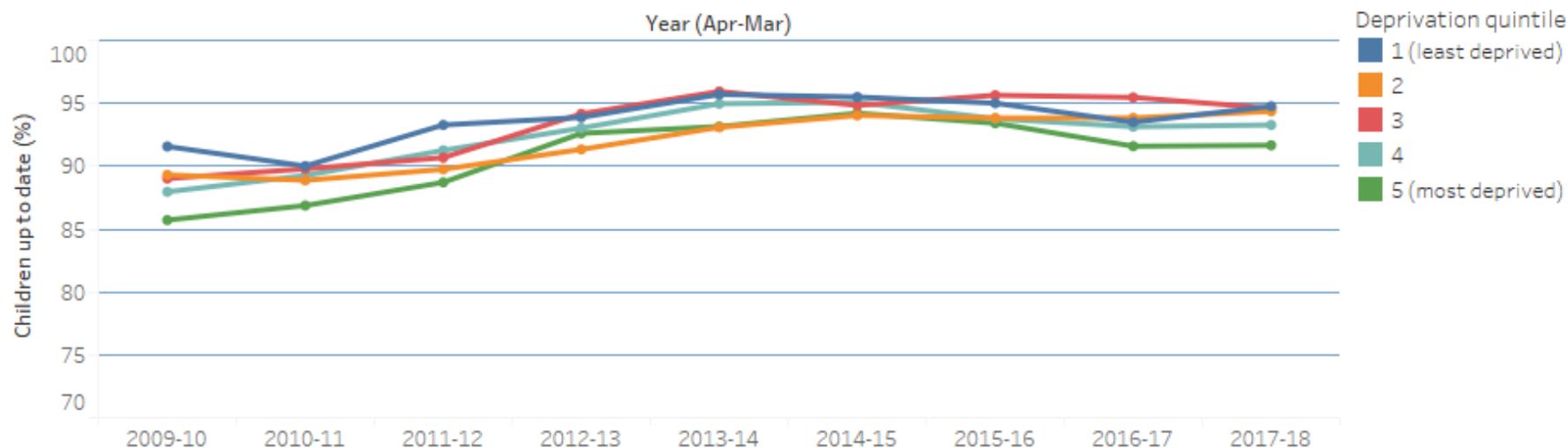
The Proportion (%) of children up to date with routine immunisations by 1 year of age in
Aneurin Bevan UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	960	987	97.3	858	911	94.2	1,162	1,197	97.1	1,738	1,798	96.7	1,836	1,942	94.5
2010-11	908	945	96.1	816	873	93.5	1,143	1,180	96.9	1,790	1,868	95.8	1,794	1,895	94.7
2011-12	906	948	95.6	810	860	94.2	1,203	1,242	96.9	1,719	1,804	95.3	1,935	2,017	95.9
2012-13	881	907	97.1	817	856	95.4	1,154	1,187	97.2	1,726	1,784	96.7	1,804	1,904	94.7
2013-14	837	878	95.3	814	861	94.5	1,250	1,286	97.2	1,699	1,770	96.0	1,834	1,926	95.2
2014-15	828	851	97.3	815	843	96.7	1,216	1,243	97.8	1,487	1,539	96.6	1,981	2,059	96.2
2015-16	853	900	94.8	773	807	95.8	1,223	1,266	96.6	1,456	1,507	96.6	1,904	1,996	95.4
2016-17	878	903	97.2	794	820	96.8	1,238	1,273	97.3	1,521	1,571	96.8	1,976	2,084	94.8
2017-18	879	913	96.3	832	869	95.7	1,216	1,268	95.9	1,425	1,497	95.2	1,847	1,959	94.3



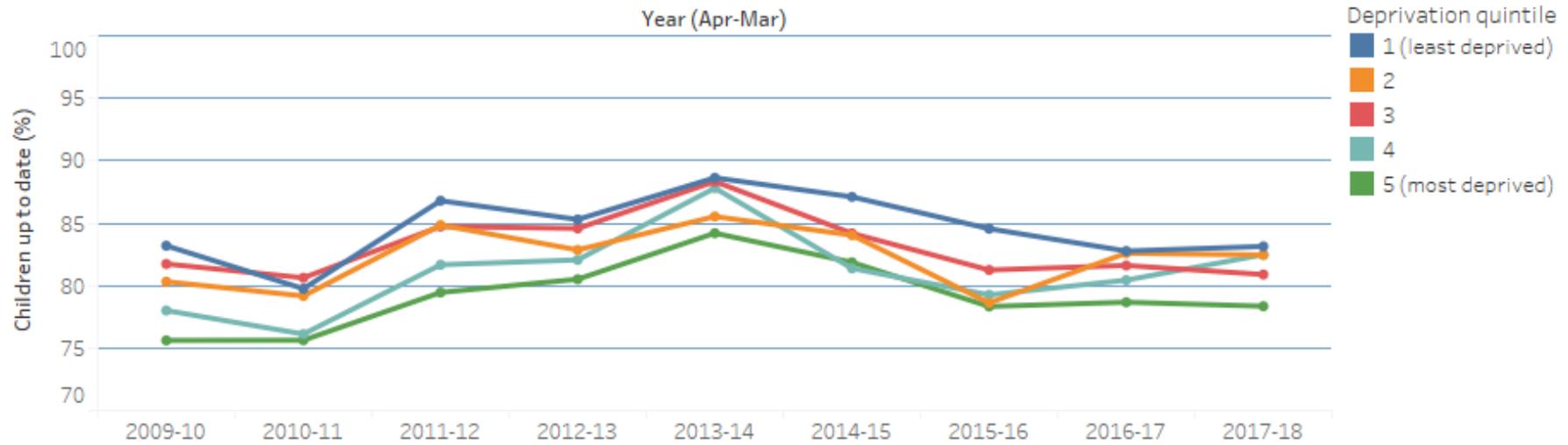
The Proportion (%) of children up to date with routine immunisations by 2 years of age in
Aneurin Bevan UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	945	1,032	91.6	760	851	89.3	997	1,120	89.0	1,491	1,695	88.0	1,632	1,904	85.7
2010-11	928	1,031	90.0	815	917	88.9	1,046	1,165	89.8	1,603	1,796	89.3	1,707	1,965	86.9
2011-12	888	952	93.3	788	878	89.7	1,080	1,191	90.7	1,702	1,865	91.3	1,674	1,887	88.7
2012-13	920	980	93.9	780	854	91.3	1,161	1,233	94.2	1,668	1,793	93.0	1,842	1,989	92.6
2013-14	892	932	95.7	822	883	93.1	1,134	1,182	95.9	1,679	1,768	95.0	1,768	1,898	93.2
2014-15	849	889	95.5	804	855	94.0	1,230	1,297	94.8	1,527	1,606	95.1	2,018	2,142	94.2
2015-16	857	902	95.0	821	875	93.8	1,207	1,262	95.6	1,461	1,558	93.8	1,916	2,051	93.4
2016-17	891	953	93.5	777	828	93.8	1,201	1,258	95.5	1,439	1,545	93.1	1,884	2,057	91.6
2017-18	905	955	94.8	787	834	94.4	1,228	1,298	94.6	1,471	1,577	93.3	1,957	2,135	91.7



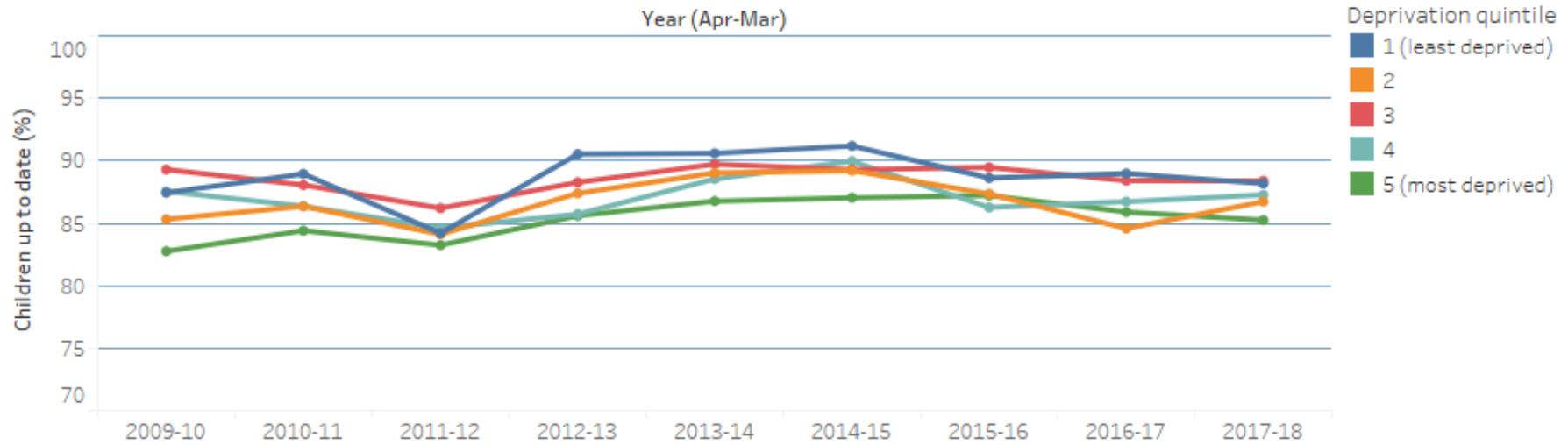
The Proportion (%) of children up to date with routine immunisations by 4 years of age in
Aneurin Bevan UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	891	1,071	83.2	665	828	80.3	971	1,188	81.7	1,199	1,537	78.0	1,355	1,792	75.6
2010-11	835	1,047	79.8	688	869	79.2	899	1,115	80.6	1,272	1,671	76.1	1,328	1,756	75.6
2011-12	966	1,113	86.8	739	871	84.8	949	1,120	84.7	1,372	1,680	81.7	1,481	1,864	79.5
2012-13	928	1,088	85.3	754	910	82.9	998	1,180	84.6	1,482	1,806	82.1	1,574	1,955	80.5
2013-14	928	1,047	88.6	792	926	85.5	1,045	1,183	88.3	1,613	1,837	87.8	1,572	1,867	84.2
2014-15	905	1,039	87.1	716	852	84.0	1,075	1,277	84.2	1,298	1,595	81.4	1,792	2,189	81.9
2015-16	854	1,010	84.6	706	898	78.6	1,001	1,232	81.3	1,242	1,567	79.3	1,623	2,072	78.3
2016-17	831	1,004	82.8	745	902	82.6	1,074	1,316	81.6	1,320	1,641	80.4	1,693	2,152	78.7
2017-18	853	1,026	83.1	747	906	82.5	1,054	1,303	80.9	1,294	1,569	82.5	1,672	2,134	78.4



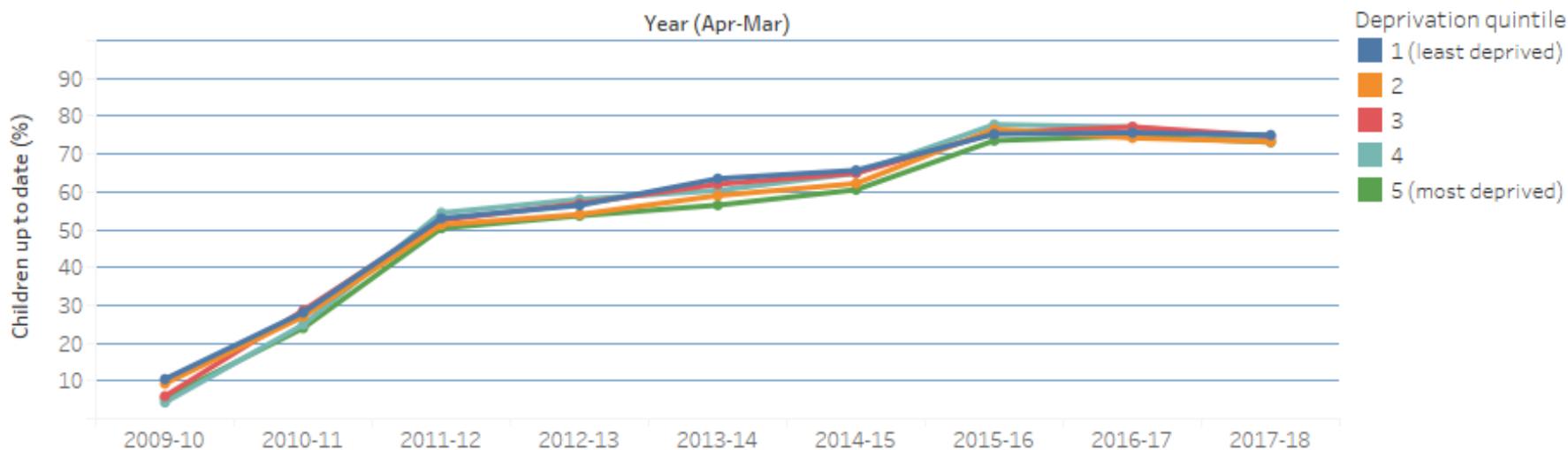
The Proportion (%) of children up to date with routine immunisations by 5 years of age in
Aneurin Bevan UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	960	1,098	87.4	726	851	85.3	959	1,074	89.3	1,469	1,678	87.5	1,454	1,757	82.8
2010-11	981	1,103	88.9	721	835	86.3	1,039	1,180	88.1	1,348	1,561	86.4	1,504	1,782	84.4
2011-12	900	1,069	84.2	746	887	84.1	974	1,130	86.2	1,424	1,683	84.6	1,460	1,754	83.2
2012-13	1,003	1,108	90.5	762	872	87.4	993	1,125	88.3	1,470	1,715	85.7	1,598	1,867	85.6
2013-14	1,011	1,116	90.6	819	920	89.0	1,082	1,206	89.7	1,575	1,779	88.5	1,723	1,986	86.8
2014-15	982	1,077	91.2	793	889	89.2	1,116	1,250	89.3	1,496	1,663	90.0	1,785	2,051	87.0
2015-16	965	1,089	88.6	752	861	87.3	1,146	1,281	89.5	1,393	1,615	86.3	1,924	2,206	87.2
2016-17	960	1,079	89.0	773	914	84.6	1,120	1,267	88.4	1,384	1,596	86.7	1,826	2,126	85.9
2017-18	924	1,048	88.2	816	941	86.7	1,179	1,334	88.4	1,439	1,649	87.3	1,871	2,195	85.2



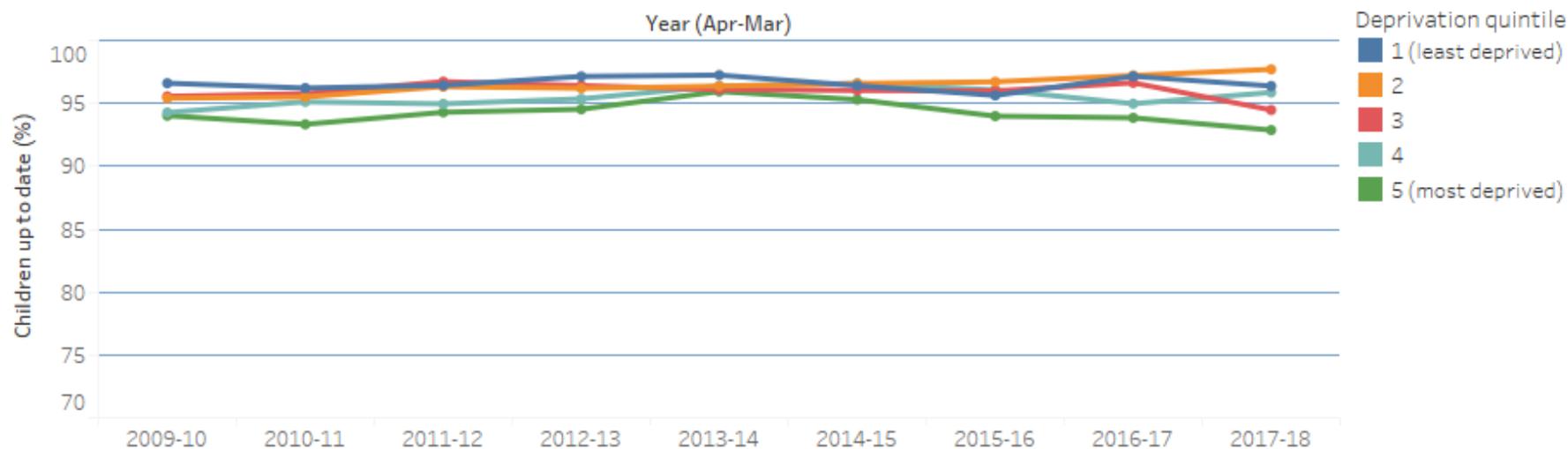
The Proportion (%) of children up to date with routine immunisations by 15 years of age in
Aneurin Bevan UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	143	1,364	10.5	96	1,035	9.3	82	1,373	6.0	78	1,809	4.3	100	1,829	5.5
2010-11	380	1,353	28.1	271	1,004	27.0	350	1,223	28.6	441	1,772	24.9	422	1,761	24.0
2011-12	761	1,436	53.0	519	1,012	51.3	709	1,351	52.5	974	1,789	54.4	932	1,851	50.4
2012-13	774	1,372	56.4	564	1,044	54.0	691	1,215	56.9	1,050	1,810	58.0	959	1,787	53.7
2013-14	845	1,331	63.5	567	961	59.0	807	1,301	62.0	990	1,640	60.4	982	1,739	56.5
2014-15	844	1,285	65.7	533	857	62.2	809	1,246	64.9	954	1,470	64.9	1,126	1,860	60.5
2015-16	941	1,250	75.3	702	917	76.6	858	1,135	75.6	1,120	1,440	77.8	1,309	1,780	73.5
2016-17	1,004	1,328	75.6	657	885	74.2	896	1,161	77.2	1,035	1,342	77.1	1,360	1,819	74.8
2017-18	958	1,277	75.0	643	878	73.2	925	1,238	74.7	1,081	1,466	73.7	1,335	1,826	73.1



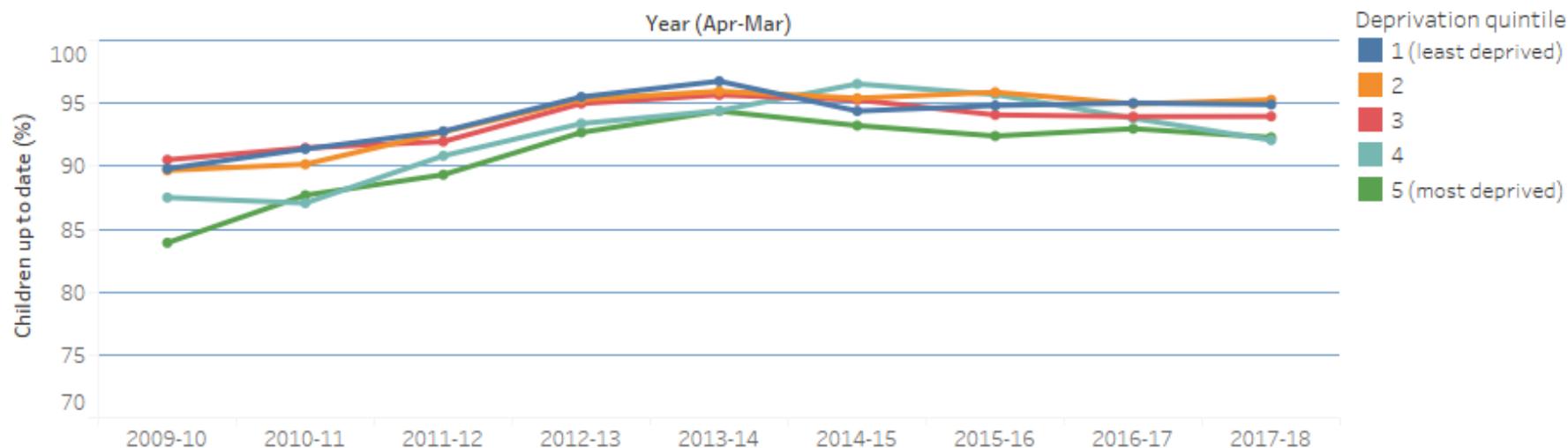
The Proportion (%) of children up to date with routine immunisations by 1 year of age in
Betsi Cadwaladr UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	1,136	1,176	96.6	1,662	1,742	95.4	1,720	1,800	95.6	1,448	1,536	94.3	1,226	1,304	94.0
2010-11	1,093	1,136	96.2	1,595	1,670	95.5	1,722	1,798	95.8	1,559	1,639	95.1	1,246	1,335	93.3
2011-12	1,160	1,203	96.4	1,651	1,714	96.3	1,712	1,770	96.7	1,488	1,567	95.0	1,288	1,366	94.3
2012-13	1,154	1,188	97.1	1,695	1,762	96.2	1,746	1,811	96.4	1,479	1,551	95.4	1,227	1,298	94.5
2013-14	1,128	1,160	97.2	1,642	1,704	96.4	1,751	1,822	96.1	1,465	1,520	96.4	1,299	1,354	95.9
2014-15	1,126	1,168	96.4	1,635	1,693	96.6	1,617	1,684	96.0	1,443	1,494	96.6	1,114	1,169	95.3
2015-16	1,094	1,144	95.6	1,587	1,641	96.7	1,626	1,694	96.0	1,369	1,425	96.1	1,125	1,197	94.0
2016-17	1,124	1,157	97.1	1,571	1,616	97.2	1,605	1,661	96.6	1,322	1,392	95.0	1,144	1,219	93.8
2017-18	1,064	1,104	96.4	1,658	1,697	97.7	1,555	1,646	94.5	1,298	1,354	95.9	1,108	1,193	92.9



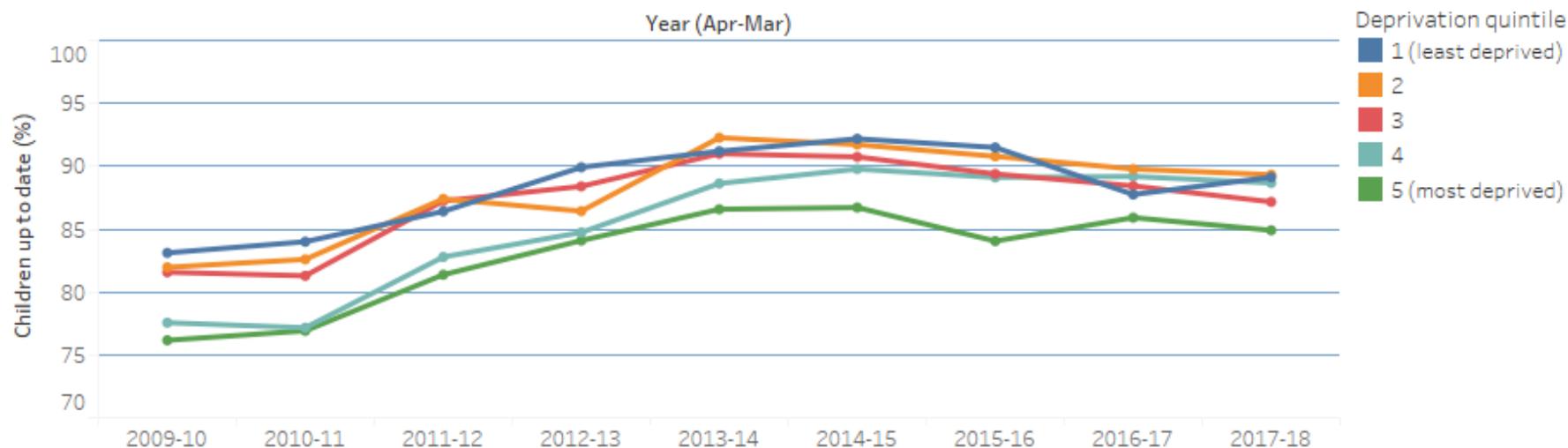
The Proportion (%) of children up to date with routine immunisations by 2 years of age in
Betsi Cadwaladr UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	1,171	1,304	89.8	1,562	1,742	89.7	1,602	1,770	90.5	1,289	1,473	87.5	1,074	1,280	83.9
2010-11	1,101	1,205	91.4	1,575	1,747	90.2	1,649	1,803	91.5	1,326	1,523	87.1	1,147	1,308	87.7
2011-12	1,091	1,176	92.8	1,566	1,689	92.7	1,635	1,778	92.0	1,475	1,624	90.8	1,204	1,348	89.3
2012-13	1,148	1,202	95.5	1,625	1,705	95.3	1,684	1,773	95.0	1,469	1,573	93.4	1,229	1,326	92.7
2013-14	1,193	1,233	96.8	1,685	1,756	96.0	1,766	1,846	95.7	1,420	1,504	94.4	1,242	1,316	94.4
2014-15	1,160	1,229	94.4	1,683	1,764	95.4	1,670	1,753	95.3	1,480	1,533	96.5	1,226	1,315	93.2
2015-16	1,117	1,178	94.8	1,628	1,698	95.9	1,589	1,689	94.1	1,424	1,488	95.7	1,094	1,184	92.4
2016-17	1,107	1,165	95.0	1,582	1,666	95.0	1,629	1,734	93.9	1,317	1,404	93.8	1,139	1,225	93.0
2017-18	1,135	1,196	94.9	1,574	1,652	95.3	1,587	1,689	94.0	1,301	1,413	92.1	1,125	1,219	92.3



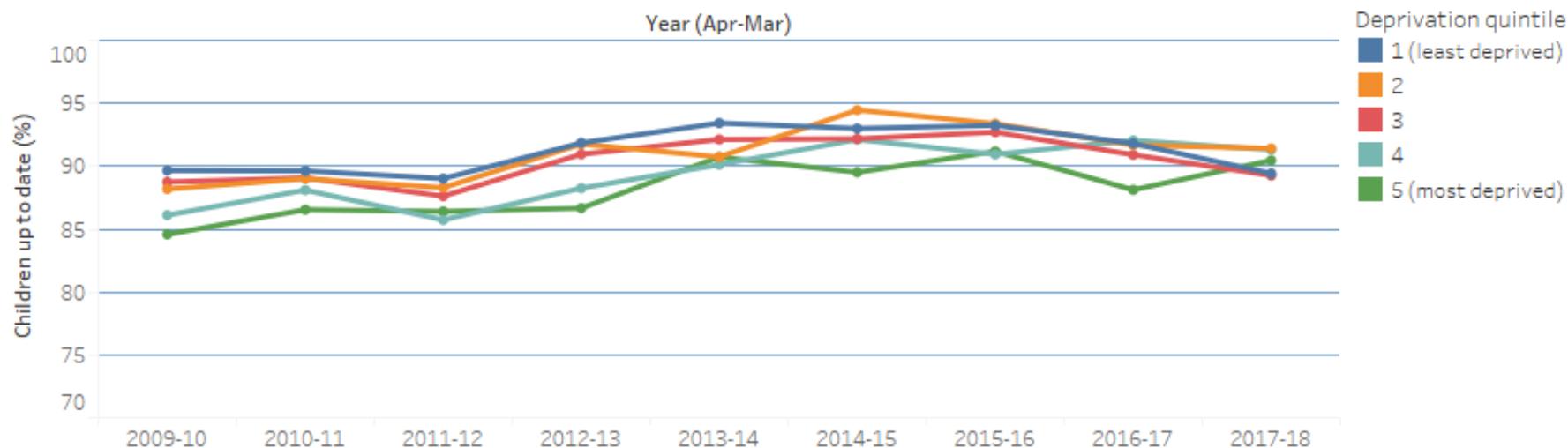
The Proportion (%) of children up to date with routine immunisations by 4 years of age in
Betsi Cadwaladr UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	1,038	1,249	83.1	1,363	1,663	82.0	1,345	1,649	81.6	1,116	1,439	77.6	904	1,187	76.2
2010-11	1,102	1,312	84.0	1,461	1,769	82.6	1,316	1,619	81.3	1,118	1,449	77.2	956	1,243	76.9
2011-12	1,144	1,324	86.4	1,540	1,762	87.4	1,524	1,747	87.2	1,221	1,475	82.8	1,035	1,272	81.4
2012-13	1,123	1,249	89.9	1,547	1,790	86.4	1,592	1,801	88.4	1,293	1,526	84.7	1,099	1,307	84.1
2013-14	1,149	1,260	91.2	1,562	1,693	92.3	1,606	1,765	91.0	1,387	1,565	88.6	1,180	1,363	86.6
2014-15	1,202	1,304	92.2	1,650	1,799	91.7	1,568	1,728	90.7	1,387	1,545	89.8	1,103	1,272	86.7
2015-16	1,204	1,316	91.5	1,704	1,877	90.8	1,633	1,827	89.4	1,309	1,469	89.1	1,027	1,222	84.0
2016-17	1,110	1,265	87.7	1,615	1,799	89.8	1,574	1,780	88.4	1,369	1,535	89.2	1,158	1,348	85.9
2017-18	1,114	1,250	89.1	1,556	1,742	89.3	1,487	1,706	87.2	1,275	1,438	88.7	1,046	1,232	84.9



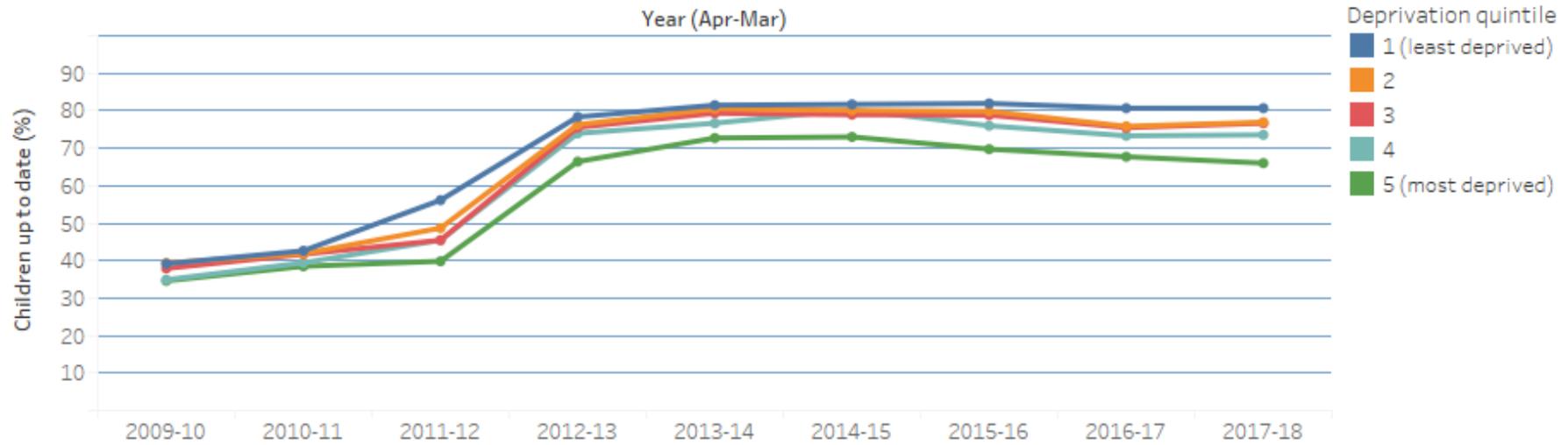
The Proportion (%) of children up to date with routine immunisations by 5 years of age in
Betsi Cadwaladr UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	1,204	1,343	89.7	1,485	1,684	88.2	1,435	1,617	88.7	1,134	1,317	86.1	1,009	1,193	84.6
2010-11	1,140	1,272	89.6	1,473	1,655	89.0	1,475	1,656	89.1	1,273	1,445	88.1	1,016	1,174	86.5
2011-12	1,191	1,338	89.0	1,583	1,793	88.3	1,408	1,607	87.6	1,243	1,450	85.7	1,061	1,228	86.4
2012-13	1,217	1,325	91.8	1,636	1,783	91.8	1,568	1,724	91.0	1,292	1,464	88.3	1,124	1,297	86.7
2013-14	1,194	1,278	93.4	1,646	1,814	90.7	1,696	1,841	92.1	1,359	1,508	90.1	1,164	1,283	90.7
2014-15	1,209	1,300	93.0	1,722	1,823	94.5	1,591	1,726	92.2	1,450	1,574	92.1	1,177	1,315	89.5
2015-16	1,242	1,332	93.2	1,692	1,812	93.4	1,575	1,699	92.7	1,406	1,546	90.9	1,189	1,304	91.2
2016-17	1,232	1,342	91.8	1,742	1,900	91.7	1,700	1,870	90.9	1,377	1,496	92.0	1,090	1,237	88.1
2017-18	1,133	1,267	89.4	1,682	1,840	91.4	1,612	1,806	89.3	1,407	1,541	91.3	1,224	1,353	90.5



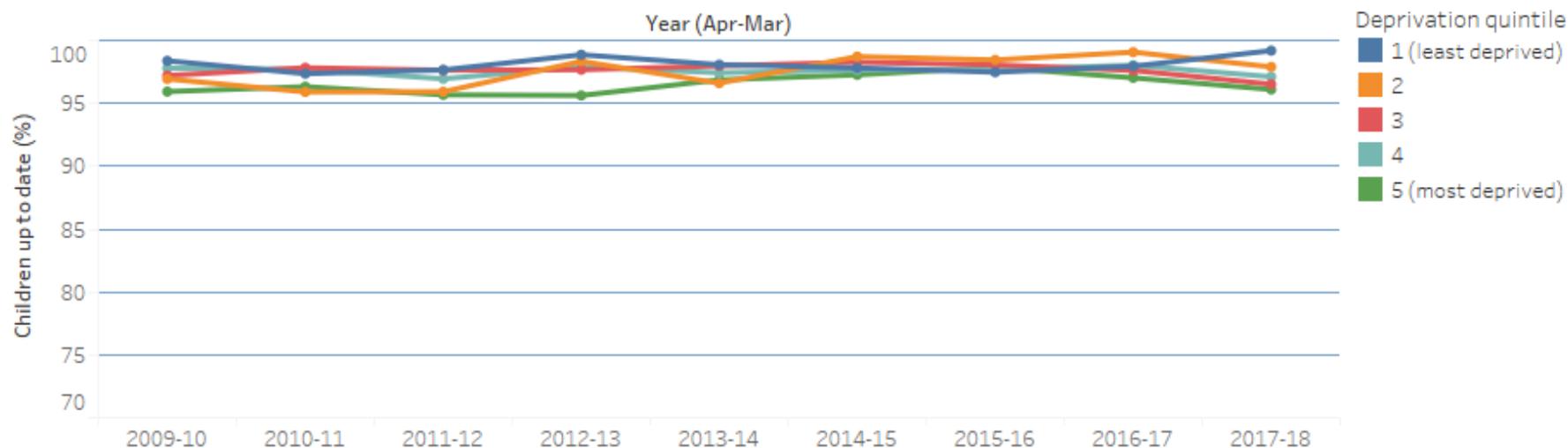
The Proportion (%) of children up to date with routine immunisations by 15 years of age in
Betsi Cadwaladr UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	624	1,593	39.2	736	1,871	39.3	714	1,883	37.9	500	1,432	34.9	383	1,107	34.6
2010-11	656	1,539	42.6	772	1,844	41.9	739	1,772	41.7	542	1,375	39.4	416	1,081	38.5
2011-12	823	1,466	56.1	944	1,939	48.7	798	1,756	45.4	659	1,450	45.4	462	1,160	39.8
2012-13	1,194	1,524	78.3	1,402	1,838	76.3	1,306	1,729	75.5	974	1,317	74.0	728	1,096	66.4
2013-14	1,232	1,512	81.5	1,450	1,801	80.5	1,386	1,747	79.3	1,032	1,346	76.7	829	1,140	72.7
2014-15	1,211	1,482	81.7	1,474	1,841	80.1	1,319	1,671	78.9	1,061	1,321	80.3	752	1,030	73.0
2015-16	1,257	1,534	81.9	1,460	1,829	79.8	1,269	1,610	78.8	946	1,245	76.0	717	1,028	69.7
2016-17	1,119	1,387	80.7	1,451	1,913	75.8	1,170	1,550	75.5	887	1,210	73.3	707	1,044	67.7
2017-18	1,102	1,366	80.7	1,321	1,717	76.9	1,215	1,585	76.7	921	1,252	73.6	649	983	66.0



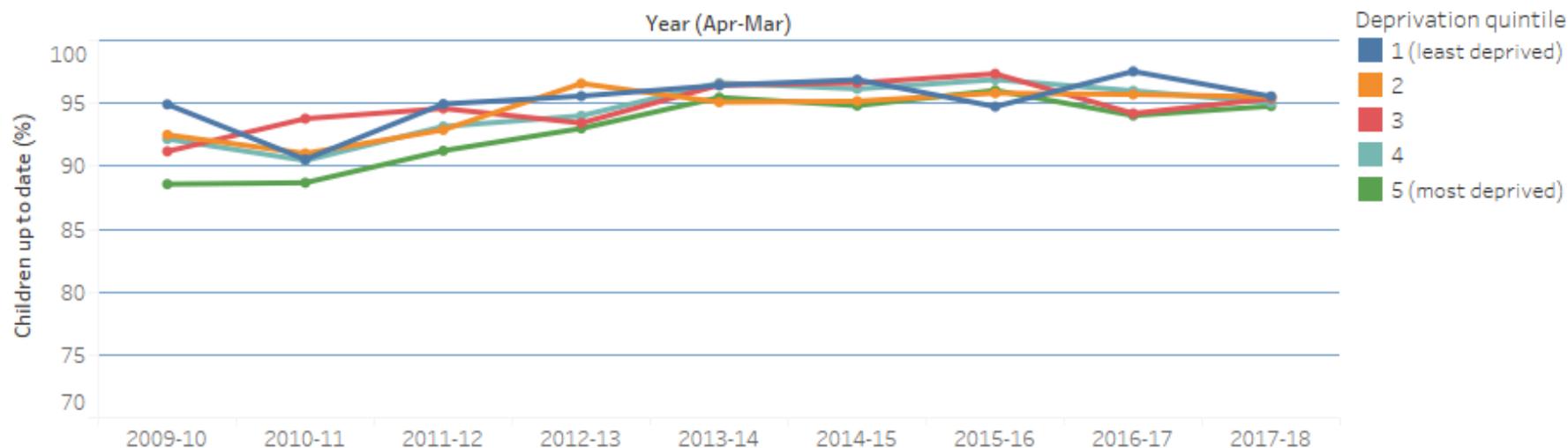
The Proportion (%) of children up to date with routine immunisations by 1 year of age in
Cwm Taf UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	364	370	98.4	253	261	96.9	592	609	97.2	932	953	97.8	1,320	1,376	95.9
2010-11	368	378	97.4	234	244	95.9	584	597	97.8	933	955	97.7	1,283	1,332	96.3
2011-12	333	341	97.7	282	294	95.9	537	550	97.6	920	949	96.9	1,393	1,456	95.7
2012-13	347	351	98.9	237	241	98.3	544	557	97.7	934	954	97.9	1,420	1,485	95.6
2013-14	305	311	98.1	284	294	96.6	581	593	98.0	870	893	97.4	1,326	1,369	96.9
2014-15	313	320	97.8	308	312	98.7	455	463	98.3	1,077	1,103	97.6	1,137	1,169	97.3
2015-16	270	277	97.5	318	323	98.5	505	515	98.1	1,103	1,129	97.7	1,096	1,120	97.9
2016-17	286	292	97.9	318	321	99.1	531	544	97.6	1,094	1,116	98.0	1,174	1,210	97.0
2017-18	244	246	99.2	279	285	97.9	499	517	96.5	1,109	1,142	97.1	1,108	1,153	96.1



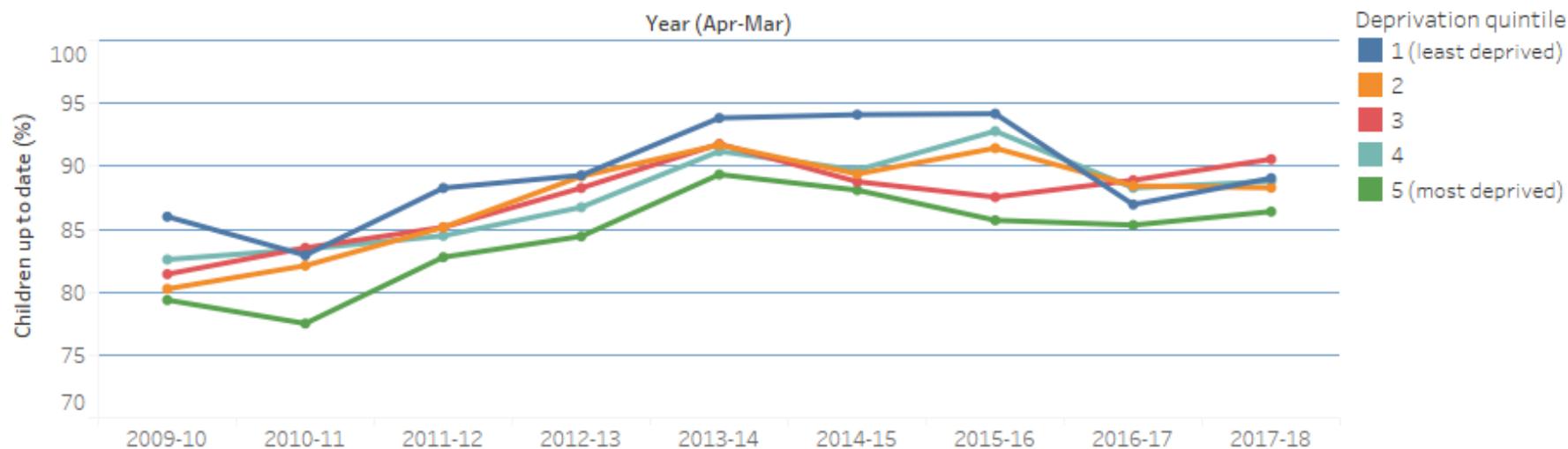
The Proportion (%) of children up to date with routine immunisations by 2 years of age in Cwm Taf UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	336	354	94.9	234	253	92.5	527	578	91.2	823	893	92.2	1,217	1,374	88.6
2010-11	335	370	90.5	233	256	91.0	573	611	93.8	862	953	90.5	1,199	1,352	88.7
2011-12	357	376	94.9	235	253	92.9	542	573	94.6	885	950	93.2	1,217	1,334	91.2
2012-13	324	339	95.6	282	292	96.6	512	548	93.4	894	951	94.0	1,342	1,443	93.0
2013-14	324	336	96.4	213	224	95.1	543	563	96.4	942	975	96.6	1,410	1,477	95.5
2014-15	310	320	96.9	335	352	95.2	514	532	96.6	1,023	1,064	96.1	1,116	1,177	94.8
2015-16	306	323	94.7	297	310	95.8	440	452	97.3	1,056	1,090	96.9	1,160	1,208	96.0
2016-17	277	284	97.5	312	326	95.7	519	551	94.2	1,078	1,123	96.0	1,118	1,189	94.0
2017-18	279	292	95.5	319	334	95.5	516	541	95.4	1,091	1,148	95.0	1,161	1,225	94.8



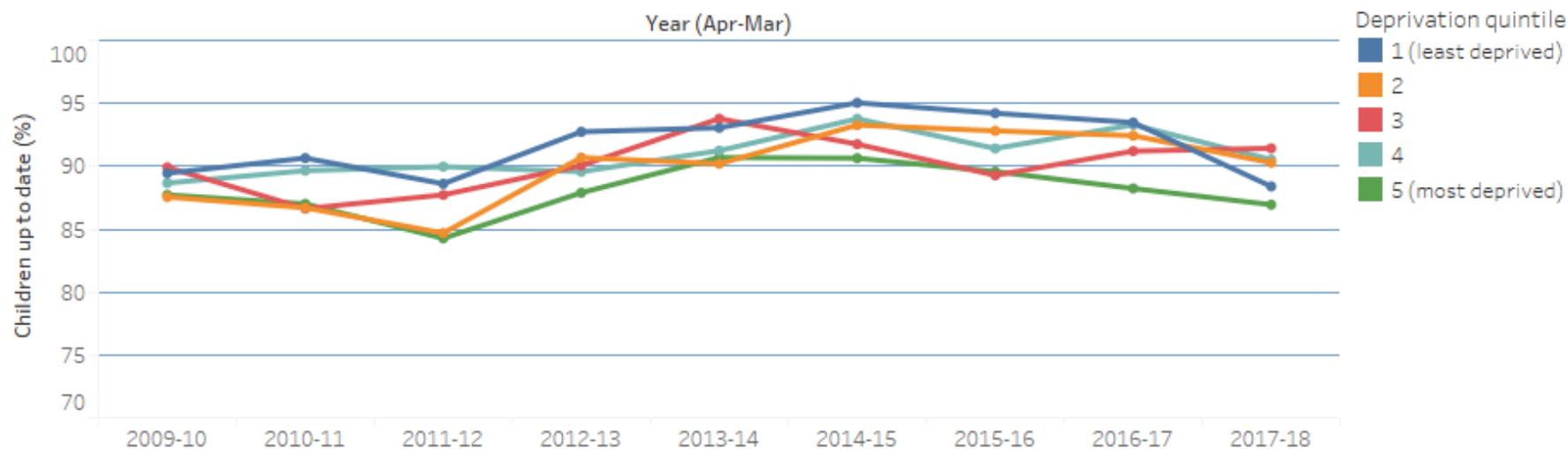
The Proportion (%) of children up to date with routine immunisations by 4 years of age in
Cwm Taf UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	356	414	86.0	191	238	80.3	447	549	81.4	697	844	82.6	996	1,255	79.4
2010-11	306	369	82.9	188	229	82.1	466	558	83.5	744	892	83.4	985	1,271	77.5
2011-12	316	358	88.3	212	249	85.1	493	579	85.1	745	882	84.5	1,124	1,358	82.8
2012-13	333	373	89.3	223	250	89.2	527	597	88.3	811	935	86.7	1,149	1,361	84.4
2013-14	350	373	93.8	221	241	91.7	524	571	91.8	859	942	91.2	1,182	1,323	89.3
2014-15	303	322	94.1	303	339	89.4	419	472	88.8	1,036	1,155	89.7	1,066	1,210	88.1
2015-16	291	309	94.2	267	292	91.4	443	506	87.5	1,081	1,165	92.8	1,085	1,266	85.7
2016-17	300	345	87.0	329	372	88.4	536	603	88.9	964	1,092	88.3	1,029	1,206	85.3
2017-18	301	338	89.1	294	333	88.3	470	519	90.6	990	1,115	88.8	1,054	1,220	86.4



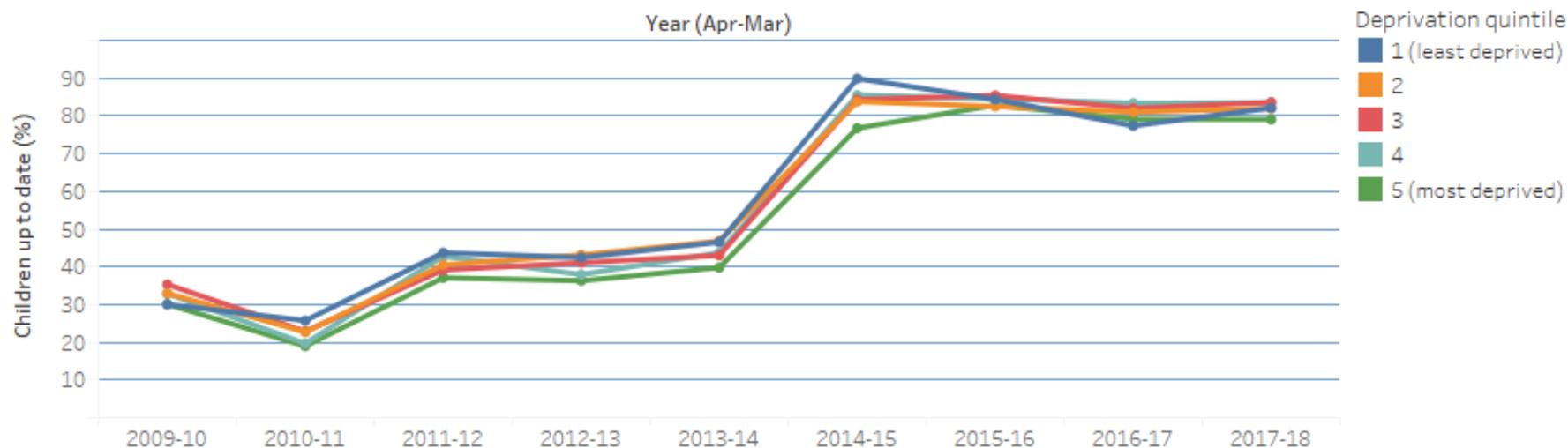
The Proportion (%) of children up to date with routine immunisations by 5 years of age in Cwm Taf UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	322	360	89.4	204	233	87.6	508	565	89.9	790	891	88.7	1,086	1,238	87.7
2010-11	378	417	90.6	202	233	86.7	473	546	86.6	762	850	89.6	1,078	1,239	87.0
2011-12	311	351	88.6	188	222	84.7	493	562	87.7	798	887	90.0	1,071	1,271	84.3
2012-13	332	358	92.7	224	247	90.7	507	563	90.1	781	872	89.6	1,198	1,363	87.9
2013-14	335	360	93.1	230	255	90.2	573	611	93.8	833	913	91.2	1,218	1,343	90.7
2014-15	345	363	95.0	291	312	93.3	445	485	91.8	1,084	1,156	93.8	1,007	1,111	90.6
2015-16	293	311	94.2	310	334	92.8	408	457	89.3	1,075	1,176	91.4	1,082	1,208	89.6
2016-17	315	337	93.5	293	317	92.4	508	557	91.2	1,112	1,192	93.3	1,162	1,317	88.2
2017-18	297	336	88.4	325	360	90.3	565	618	91.4	994	1,098	90.5	1,052	1,210	86.9



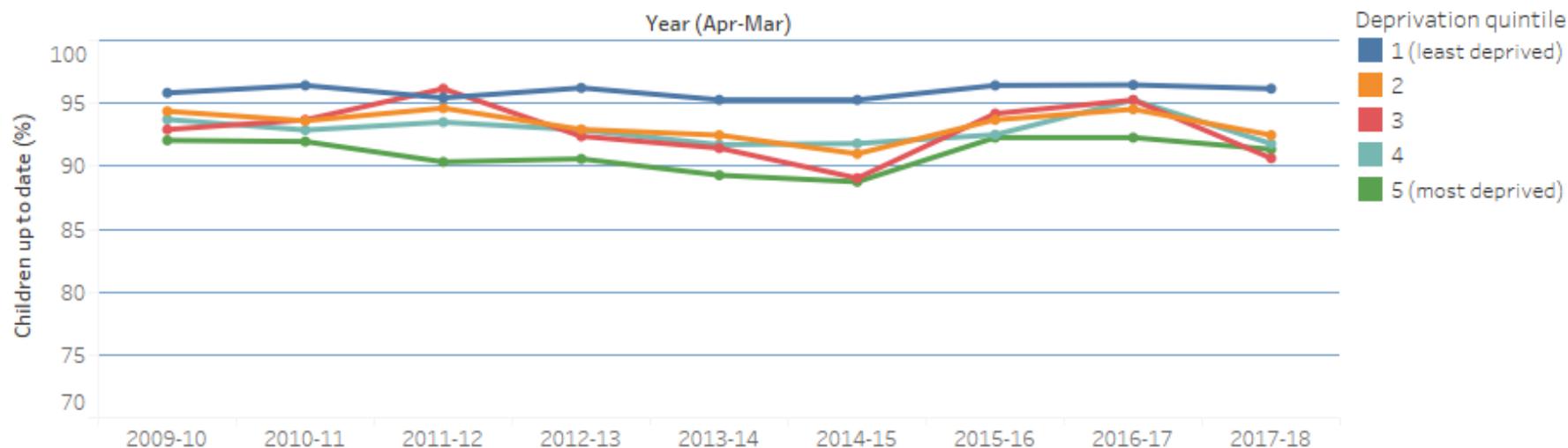
The Proportion (%) of children up to date with routine immunisations by 15 years of age in Cwm Taf UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	106	353	30.0	86	261	33.0	201	569	35.3	309	939	32.9	405	1,346	30.1
2010-11	88	342	25.7	62	273	22.7	126	551	22.9	192	976	19.7	233	1,229	19.0
2011-12	150	343	43.7	109	269	40.5	233	595	39.2	426	995	42.8	486	1,310	37.1
2012-13	132	311	42.4	107	248	43.1	228	555	41.1	352	928	37.9	480	1,322	36.3
2013-14	154	331	46.5	118	252	46.8	243	565	43.0	398	910	43.7	471	1,184	39.8
2014-15	275	306	89.9	253	302	83.8	398	472	84.3	936	1,095	85.5	746	972	76.7
2015-16	270	320	84.4	231	280	82.5	369	432	85.4	816	965	84.6	839	1,013	82.8
2016-17	263	340	77.4	243	300	81.0	401	489	82.0	887	1,064	83.4	791	1,000	79.1
2017-18	307	374	82.1	268	327	82.0	397	475	83.6	903	1,081	83.5	837	1,059	79.0



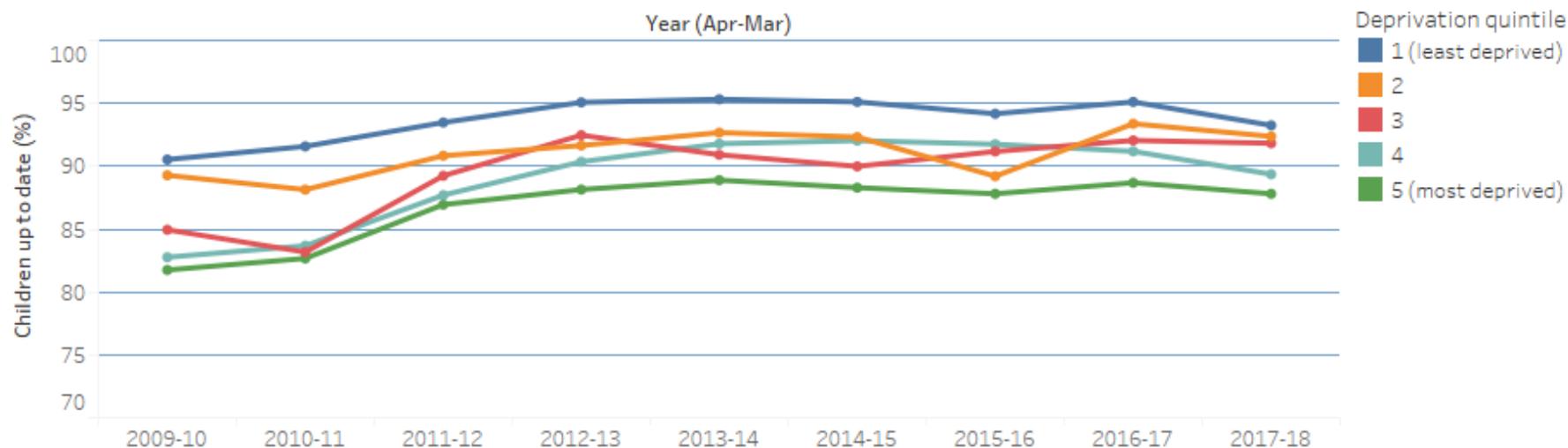
The Proportion (%) of children up to date with routine immunisations by 1 year of age in Cardiff and Vale UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	1,699	1,773	95.8	720	763	94.4	682	734	92.9	820	875	93.7	1,750	1,901	92.1
2010-11	1,562	1,620	96.4	747	798	93.6	697	744	93.7	899	968	92.9	1,773	1,928	92.0
2011-12	1,546	1,620	95.4	755	798	94.6	701	729	96.2	935	1,000	93.5	1,786	1,977	90.3
2012-13	1,682	1,748	96.2	788	848	92.9	630	682	92.4	900	969	92.9	1,808	1,996	90.6
2013-14	1,593	1,672	95.3	761	823	92.5	673	736	91.4	874	953	91.7	1,666	1,866	89.3
2014-15	1,552	1,629	95.3	757	832	91.0	569	639	89.0	784	854	91.8	1,697	1,912	88.8
2015-16	1,508	1,564	96.4	816	871	93.7	631	670	94.2	777	840	92.5	1,768	1,916	92.3
2016-17	1,581	1,639	96.5	760	804	94.5	603	633	95.3	865	908	95.3	1,684	1,825	92.3
2017-18	1,578	1,641	96.2	737	797	92.5	571	630	90.6	771	840	91.8	1,614	1,767	91.3



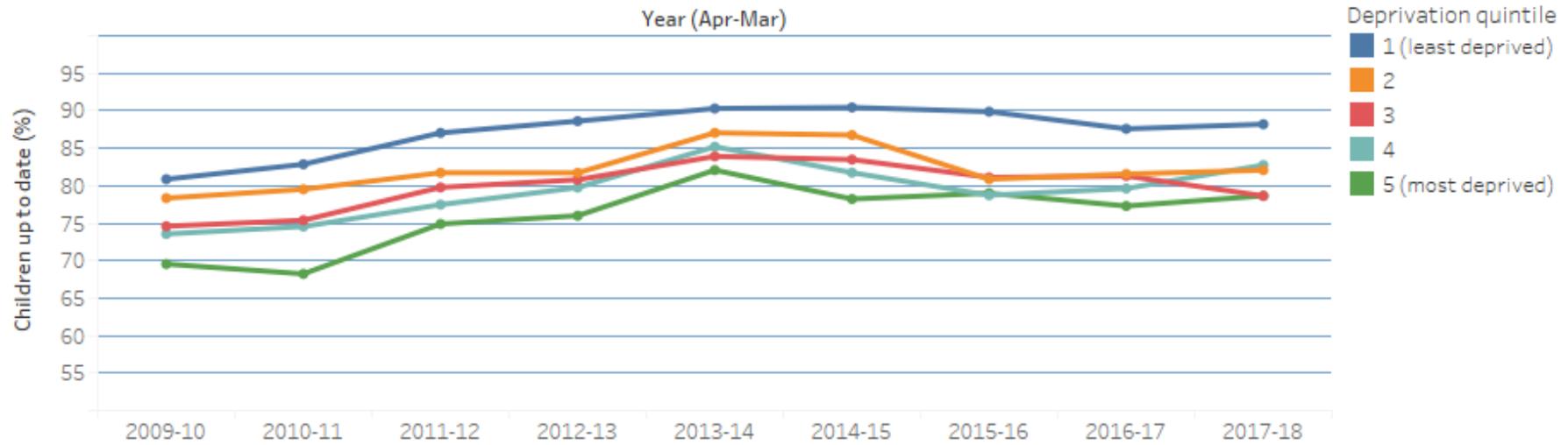
The Proportion (%) of children up to date with routine immunisations by 2 years of age in
Cardiff and Vale UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	1,520	1,679	90.5	716	802	89.3	598	704	84.9	744	899	82.8	1,527	1,868	81.7
2010-11	1,652	1,804	91.6	661	750	88.1	583	701	83.2	738	882	83.7	1,583	1,915	82.7
2011-12	1,561	1,670	93.5	733	807	90.8	630	706	89.2	834	951	87.7	1,658	1,907	86.9
2012-13	1,525	1,604	95.1	735	802	91.6	675	730	92.5	871	964	90.4	1,717	1,948	88.1
2013-14	1,690	1,773	95.3	771	832	92.7	620	682	90.9	860	937	91.8	1,776	1,998	88.9
2014-15	1,615	1,698	95.1	757	820	92.3	611	679	90.0	774	841	92.0	1,704	1,930	88.3
2015-16	1,583	1,681	94.2	702	787	89.2	568	623	91.2	789	860	91.7	1,635	1,862	87.8
2016-17	1,575	1,656	95.1	747	800	93.4	602	654	92.0	734	805	91.2	1,700	1,917	88.7
2017-18	1,629	1,747	93.2	714	773	92.4	584	636	91.8	789	883	89.4	1,584	1,804	87.8



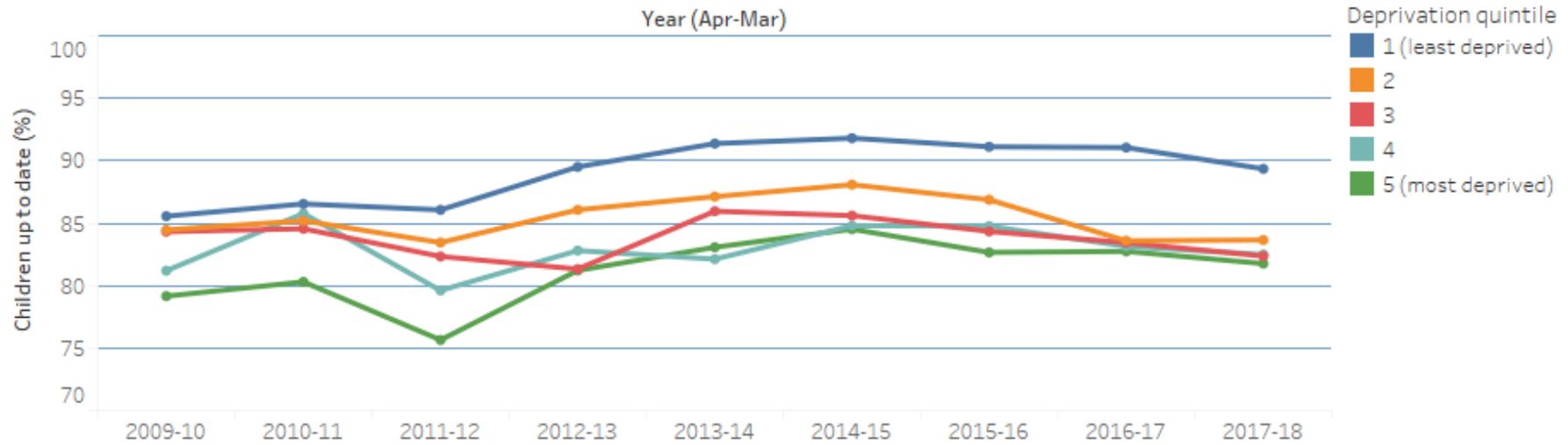
The Proportion (%) of children up to date with routine immunisations by 4 years of age in
Cardiff and Vale UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	1,386	1,714	80.9	528	674	78.3	455	610	74.6	562	764	73.6	1,135	1,632	69.5
2010-11	1,358	1,639	82.9	594	747	79.5	447	593	75.4	618	829	74.5	1,177	1,725	68.2
2011-12	1,579	1,814	87.0	617	755	81.7	552	692	79.8	667	861	77.5	1,360	1,816	74.9
2012-13	1,603	1,809	88.6	621	760	81.7	530	656	80.8	693	869	79.7	1,421	1,870	76.0
2013-14	1,601	1,773	90.3	679	780	87.1	584	696	83.9	783	919	85.2	1,557	1,897	82.1
2014-15	1,523	1,684	90.4	668	770	86.8	546	654	83.5	734	898	81.7	1,584	2,025	78.2
2015-16	1,687	1,877	89.9	617	763	80.9	502	619	81.1	655	832	78.7	1,613	2,042	79.0
2016-17	1,615	1,844	87.6	650	797	81.6	526	647	81.3	672	844	79.6	1,497	1,937	77.3
2017-18	1,607	1,822	88.2	618	753	82.1	497	632	78.6	710	858	82.8	1,455	1,850	78.6



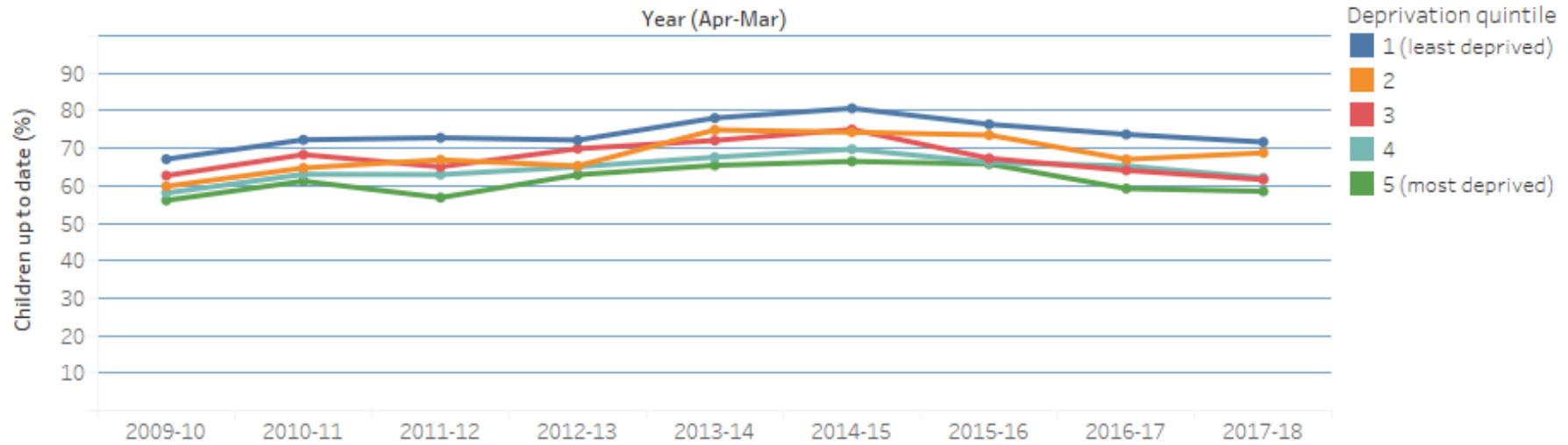
The Proportion (%) of children up to date with routine immunisations by 5 years of age in Cardiff and Vale UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	1,451	1,696	85.6	527	624	84.5	484	574	84.3	600	739	81.2	1,242	1,569	79.2
2010-11	1,511	1,746	86.5	558	655	85.2	509	602	84.6	657	766	85.8	1,292	1,609	80.3
2011-12	1,457	1,693	86.1	630	755	83.4	480	583	82.3	652	819	79.6	1,311	1,733	75.6
2012-13	1,603	1,791	89.5	667	775	86.1	553	680	81.3	703	849	82.8	1,500	1,847	81.2
2013-14	1,694	1,854	91.4	636	730	87.1	563	655	86.0	721	878	82.1	1,565	1,884	83.1
2014-15	1,658	1,806	91.8	702	797	88.1	547	639	85.6	725	855	84.8	1,671	1,977	84.5
2015-16	1,549	1,700	91.1	642	739	86.9	560	664	84.3	779	919	84.8	1,654	2,001	82.7
2016-17	1,781	1,956	91.1	652	780	83.6	534	640	83.4	710	854	83.1	1,697	2,051	82.7
2017-18	1,686	1,887	89.3	655	783	83.7	537	652	82.4	702	851	82.5	1,569	1,919	81.8



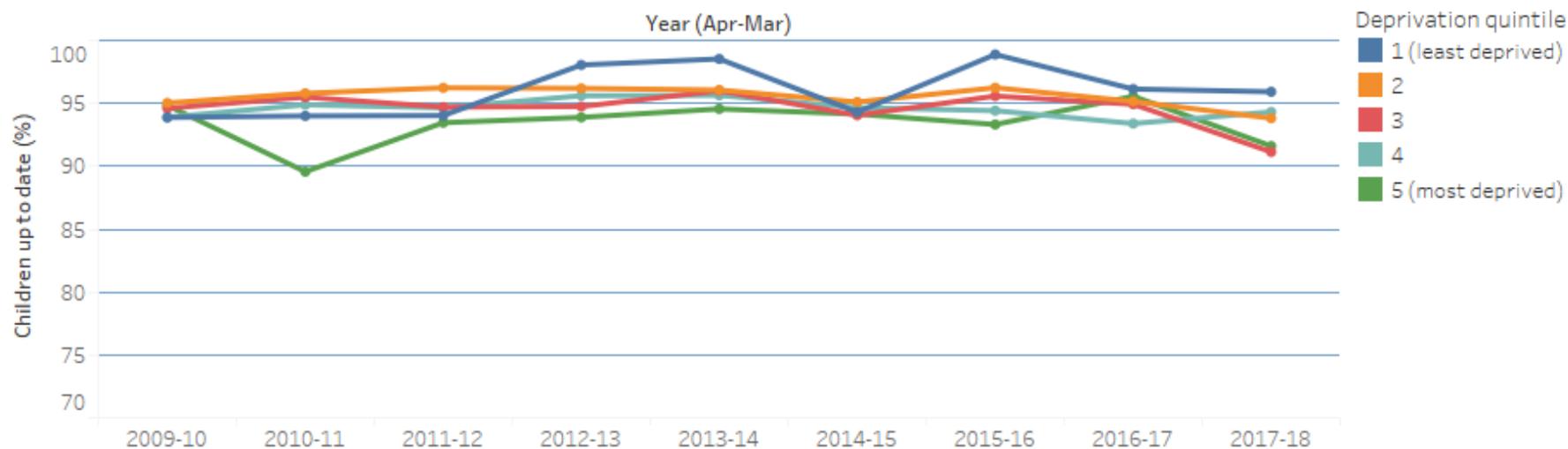
The Proportion (%) of children up to date with routine immunisations by 15 years of age in
Cardiff and Vale UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	1,369	2,041	67.1	484	809	59.8	393	627	62.7	458	789	58.0	868	1,548	56.1
2010-11	1,481	2,050	72.2	457	706	64.7	435	637	68.3	455	722	63.0	901	1,472	61.2
2011-12	1,388	1,907	72.8	467	698	66.9	385	592	65.0	469	745	63.0	838	1,475	56.8
2012-13	1,410	1,954	72.2	436	668	65.3	371	531	69.9	463	712	65.0	914	1,453	62.9
2013-14	1,369	1,754	78.1	474	633	74.9	418	580	72.1	480	710	67.6	959	1,466	65.4
2014-15	1,436	1,781	80.6	456	614	74.3	372	496	75.0	489	701	69.8	960	1,444	66.5
2015-16	1,299	1,701	76.4	430	585	73.5	358	532	67.3	478	722	66.2	980	1,490	65.8
2016-17	1,302	1,767	73.7	433	646	67.0	314	490	64.1	436	668	65.3	860	1,452	59.2
2017-18	1,281	1,788	71.6	405	589	68.8	289	469	61.6	423	681	62.1	895	1,530	58.5



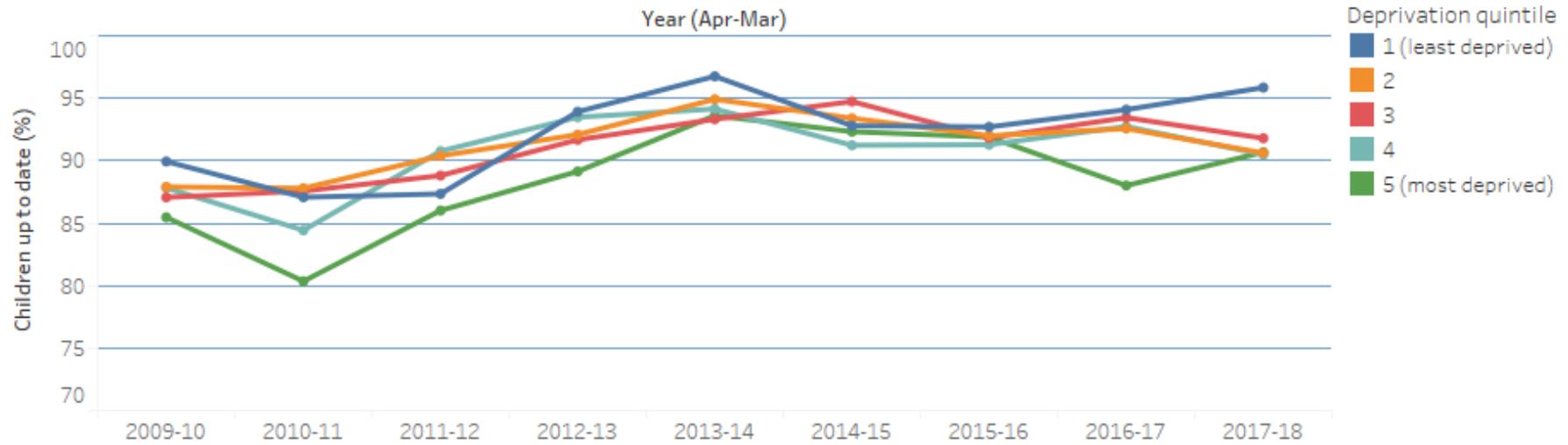
The Proportion (%) of children up to date with routine immunisations by 1 year of age in
Hywel Dda UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	138	147	93.9	899	946	95.0	1,210	1,279	94.6	846	901	93.9	441	465	94.8
2010-11	141	150	94.0	957	999	95.8	1,272	1,332	95.5	890	938	94.9	412	460	89.6
2011-12	126	134	94.0	996	1,035	96.2	1,305	1,378	94.7	918	970	94.6	443	474	93.5
2012-13	151	154	98.1	934	971	96.2	1,280	1,351	94.7	870	910	95.6	476	507	93.9
2013-14	134	136	98.5	877	913	96.1	1,298	1,352	96.0	877	917	95.6	469	496	94.6
2014-15	215	228	94.3	855	899	95.1	1,202	1,278	94.1	779	823	94.7	418	444	94.1
2015-16	177	179	98.9	921	957	96.2	1,253	1,311	95.6	761	806	94.4	363	389	93.3
2016-17	199	207	96.1	844	887	95.2	1,273	1,341	94.9	834	893	93.4	366	383	95.6
2017-18	188	196	95.9	880	938	93.8	1,162	1,275	91.1	780	827	94.3	371	405	91.6



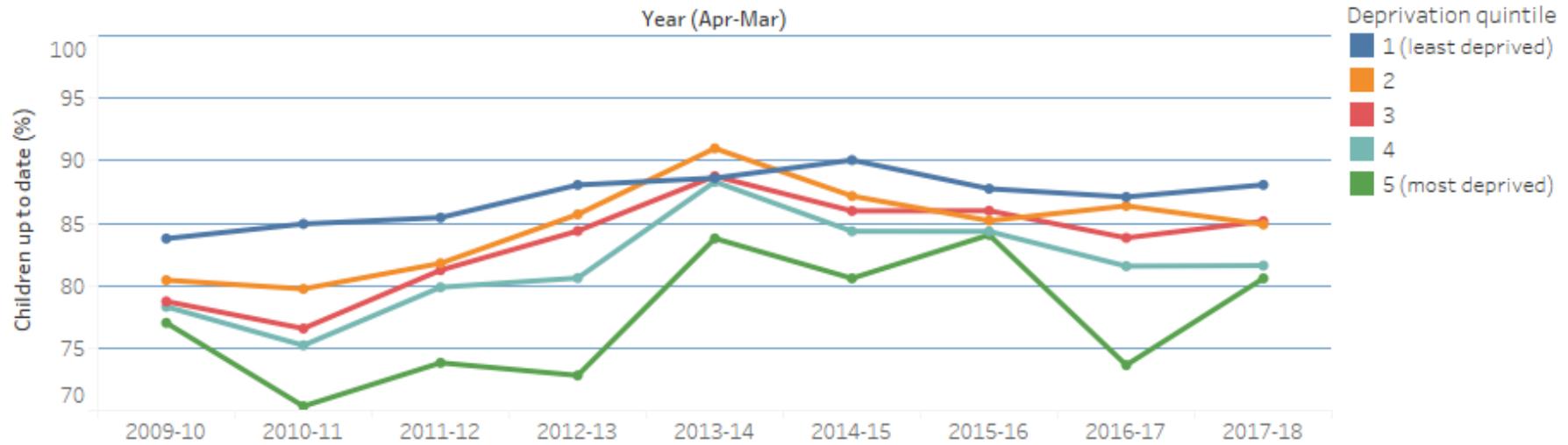
The Proportion (%) of children up to date with routine immunisations by 2 years of age in
Hywel Dda UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	143	159	89.9	923	1,050	87.9	1,151	1,322	87.1	815	928	87.8	394	461	85.5
2010-11	128	147	87.1	856	975	87.8	1,134	1,295	87.6	759	899	84.4	368	458	80.3
2011-12	138	158	87.3	912	1,009	90.4	1,214	1,367	88.8	855	942	90.8	375	436	86.0
2012-13	139	148	93.9	966	1,049	92.1	1,233	1,345	91.7	903	966	93.5	435	488	89.1
2013-14	149	154	96.8	934	984	94.9	1,257	1,347	93.3	868	922	94.1	439	469	93.6
2014-15	206	222	92.8	877	939	93.4	1,332	1,406	94.7	760	833	91.2	421	456	92.3
2015-16	216	233	92.7	862	937	92.0	1,181	1,286	91.8	733	803	91.3	408	444	91.9
2016-17	175	186	94.1	922	996	92.6	1,241	1,328	93.4	753	812	92.7	345	392	88.0
2017-18	208	217	95.9	850	938	90.6	1,231	1,341	91.8	828	915	90.5	360	397	90.7



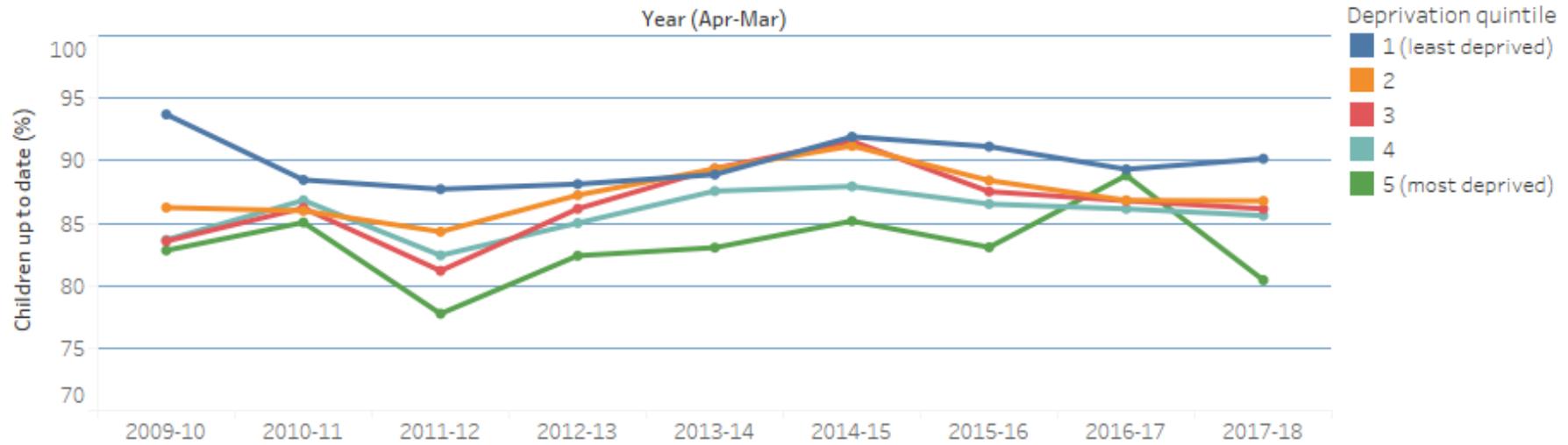
The Proportion (%) of children up to date with routine immunisations by 4 years of age in
Hywel Dda UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	129	154	83.8	810	1,007	80.4	1,033	1,312	78.7	657	839	78.3	305	396	77.0
2010-11	141	166	84.9	850	1,066	79.7	1,026	1,340	76.6	689	916	75.2	287	408	70.3
2011-12	135	158	85.4	889	1,087	81.8	1,104	1,359	81.2	730	914	79.9	344	466	73.8
2012-13	118	134	88.1	851	993	85.7	1,123	1,331	84.4	744	923	80.6	316	434	72.8
2013-14	140	158	88.6	939	1,032	91.0	1,216	1,370	88.8	816	924	88.3	377	450	83.8
2014-15	190	211	90.0	924	1,060	87.2	1,257	1,462	86.0	733	869	84.3	361	448	80.6
2015-16	215	245	87.8	869	1,020	85.2	1,185	1,378	86.0	727	862	84.3	385	458	84.1
2016-17	216	248	87.1	850	984	86.4	1,228	1,465	83.8	712	873	81.6	338	459	73.6
2017-18	214	243	88.1	798	940	84.9	1,159	1,361	85.2	692	848	81.6	361	448	80.6



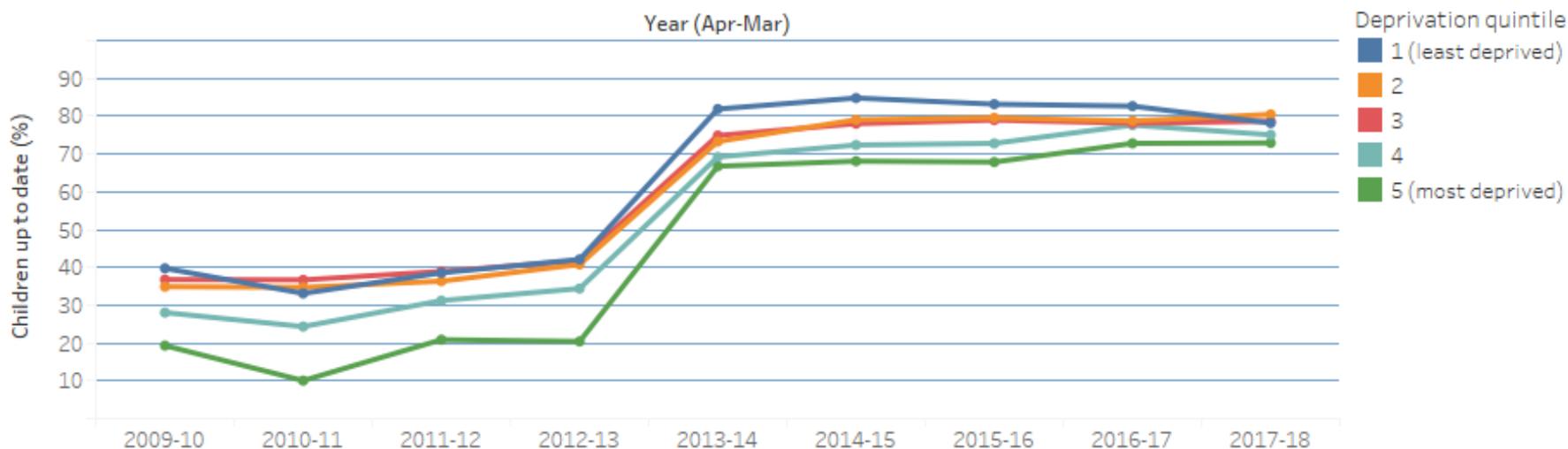
The Proportion (%) of children up to date with routine immunisations by 5 years of age in
Hywel Dda UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	134	143	93.7	834	967	86.2	1,042	1,247	83.6	722	863	83.7	347	419	82.8
2010-11	138	156	88.5	859	999	86.0	1,113	1,291	86.2	712	820	86.8	330	388	85.1
2011-12	150	171	87.7	903	1,071	84.3	1,070	1,318	81.2	750	910	82.4	318	409	77.8
2012-13	141	160	88.1	930	1,066	87.2	1,132	1,314	86.1	737	867	85.0	379	460	82.4
2013-14	120	135	88.9	889	995	89.3	1,144	1,280	89.4	768	877	87.6	377	454	83.0
2014-15	216	235	91.9	910	998	91.2	1,281	1,399	91.6	722	821	87.9	356	418	85.2
2015-16	185	203	91.1	916	1,036	88.4	1,263	1,443	87.5	758	876	86.5	363	437	83.1
2016-17	234	262	89.3	916	1,055	86.8	1,222	1,408	86.8	777	902	86.1	397	447	88.8
2017-18	229	254	90.2	860	991	86.8	1,268	1,472	86.1	755	882	85.6	366	455	80.4



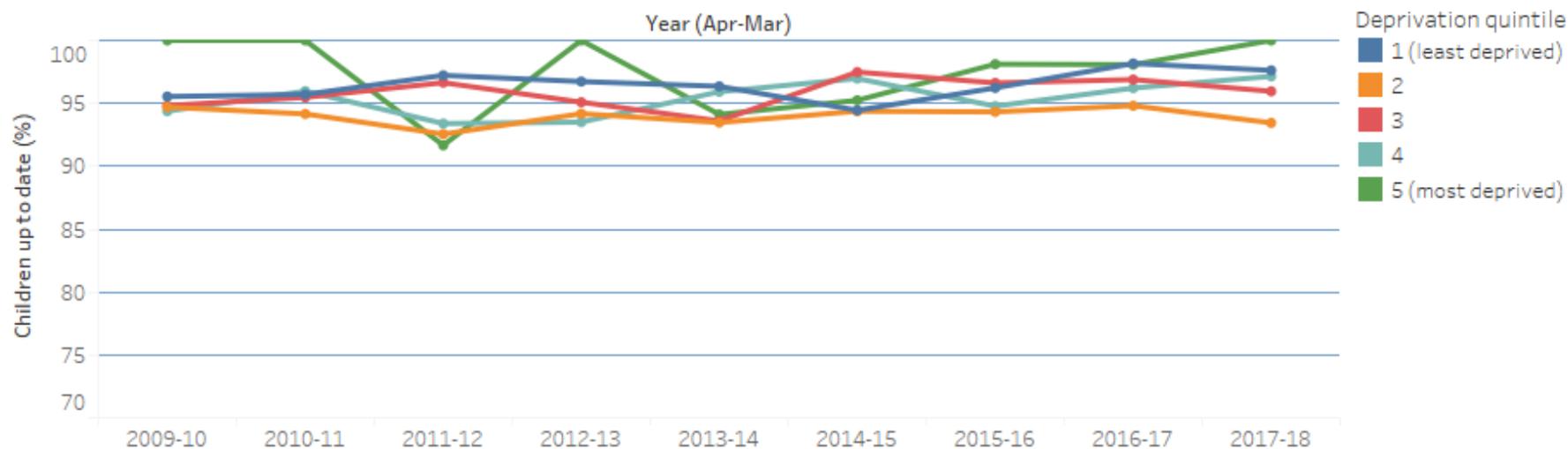
The Proportion (%) of children up to date with routine immunisations by 15 years of age in
Hywel Dda UHB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	64	161	39.8	421	1,206	34.9	557	1,514	36.8	255	909	28.1	74	383	19.3
2010-11	53	160	33.1	415	1,195	34.7	549	1,496	36.7	225	924	24.4	41	408	10.0
2011-12	59	153	38.6	437	1,202	36.4	553	1,421	38.9	296	948	31.2	90	431	20.9
2012-13	72	171	42.1	464	1,138	40.8	592	1,417	41.8	300	872	34.4	78	382	20.4
2013-14	113	138	81.9	870	1,187	73.3	1,061	1,417	74.9	589	851	69.2	259	388	66.8
2014-15	184	217	84.8	769	973	79.0	986	1,264	78.0	529	731	72.4	207	304	68.1
2015-16	168	202	83.2	806	1,013	79.6	1,013	1,283	79.0	479	658	72.8	209	308	67.9
2016-17	200	242	82.6	833	1,058	78.7	1,108	1,418	78.1	628	809	77.6	241	331	72.8
2017-18	197	252	78.2	840	1,044	80.5	1,080	1,373	78.7	599	798	75.1	264	362	72.9



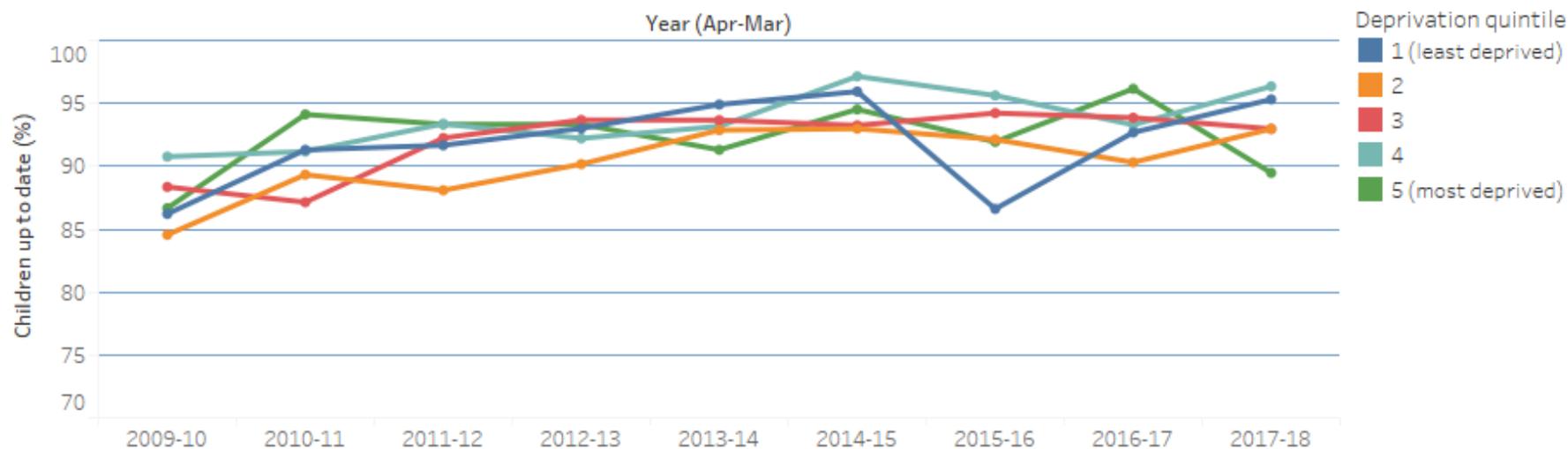
The Proportion (%) of children up to date with routine immunisations by 1 year of age in
Powys Teaching HB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	150	157	95.5	536	566	94.7	238	251	94.8	235	249	94.4	18	18	100.0
2010-11	156	163	95.7	548	582	94.2	211	221	95.5	214	223	96.0	12	12	100.0
2011-12	140	144	97.2	497	537	92.6	259	268	96.6	212	227	93.4	11	12	91.7
2012-13	148	153	96.7	550	584	94.2	213	224	95.1	216	231	93.5	25	25	100.0
2013-14	132	137	96.4	530	567	93.5	234	250	93.6	235	245	95.9	16	17	94.1
2014-15	102	108	94.4	503	533	94.4	271	278	97.5	160	165	97.0	60	63	95.2
2015-16	102	106	96.2	465	493	94.3	286	296	96.6	127	134	94.8	52	53	98.1
2016-17	107	109	98.2	548	578	94.8	249	257	96.9	127	132	96.2	51	52	98.1
2017-18	123	126	97.6	499	534	93.4	261	272	96.0	136	140	97.1	47	47	100.0



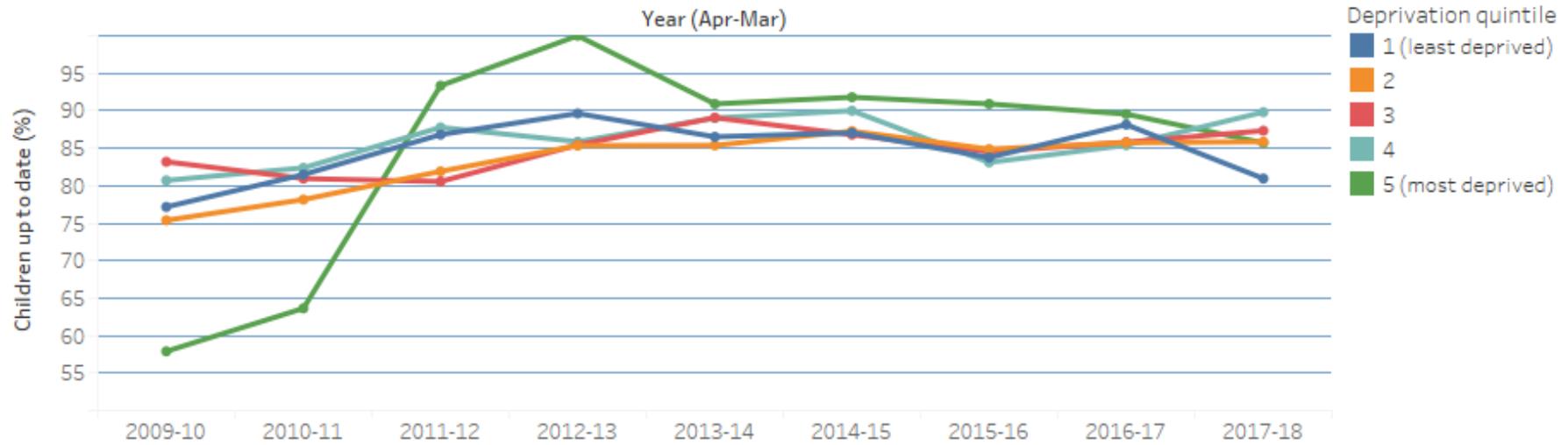
The Proportion (%) of children up to date with routine immunisations by 2 years of age in Powys Teaching HB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	150	174	86.2	487	576	84.5	220	249	88.4	226	249	90.8	13	15	86.7
2010-11	147	161	91.3	519	581	89.3	210	241	87.1	227	249	91.2	16	17	94.1
2011-12	154	168	91.7	525	596	88.1	214	232	92.2	211	226	93.4	14	15	93.3
2012-13	133	143	93.0	486	539	90.2	237	253	93.7	225	244	92.2	14	15	93.3
2013-14	149	157	94.9	547	589	92.9	207	221	93.7	232	249	93.2	21	23	91.3
2014-15	118	123	95.9	530	570	93.0	290	311	93.2	136	140	97.1	69	73	94.5
2015-16	97	112	86.6	515	559	92.1	261	277	94.2	153	160	95.6	57	62	91.9
2016-17	114	123	92.7	466	516	90.3	275	293	93.9	139	149	93.3	50	52	96.2
2017-18	122	128	95.3	542	583	93.0	238	256	93.0	132	137	96.4	51	57	89.5



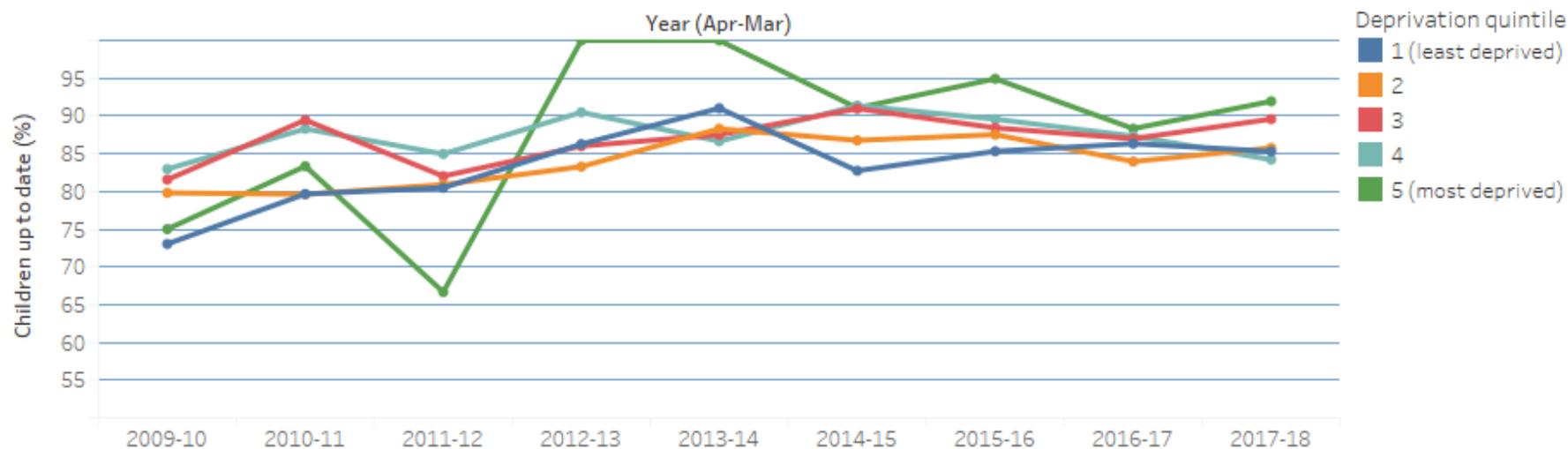
The Proportion (%) of children up to date with routine immunisations by 4 years of age in
Powys Teaching HB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	125	162	77.2	453	601	75.4	193	232	83.2	184	228	80.7	11	19	57.9
2010-11	132	162	81.5	454	581	78.1	187	231	81.0	187	227	82.4	7	11	63.6
2011-12	158	182	86.8	489	597	81.9	203	252	80.6	201	229	87.8	14	15	93.3
2012-13	147	164	89.6	490	574	85.4	217	254	85.4	225	262	85.9	15	15	100.0
2013-14	154	178	86.5	508	595	85.4	220	247	89.1	203	228	89.0	10	11	90.9
2014-15	121	139	87.1	480	550	87.3	296	341	86.8	144	160	90.0	56	61	91.8
2015-16	98	117	83.8	494	582	84.9	268	317	84.5	123	148	83.1	70	77	90.9
2016-17	119	135	88.1	505	589	85.7	272	317	85.8	117	137	85.4	60	67	89.6
2017-18	102	126	81.0	504	587	85.9	262	300	87.3	141	157	89.8	48	56	85.7



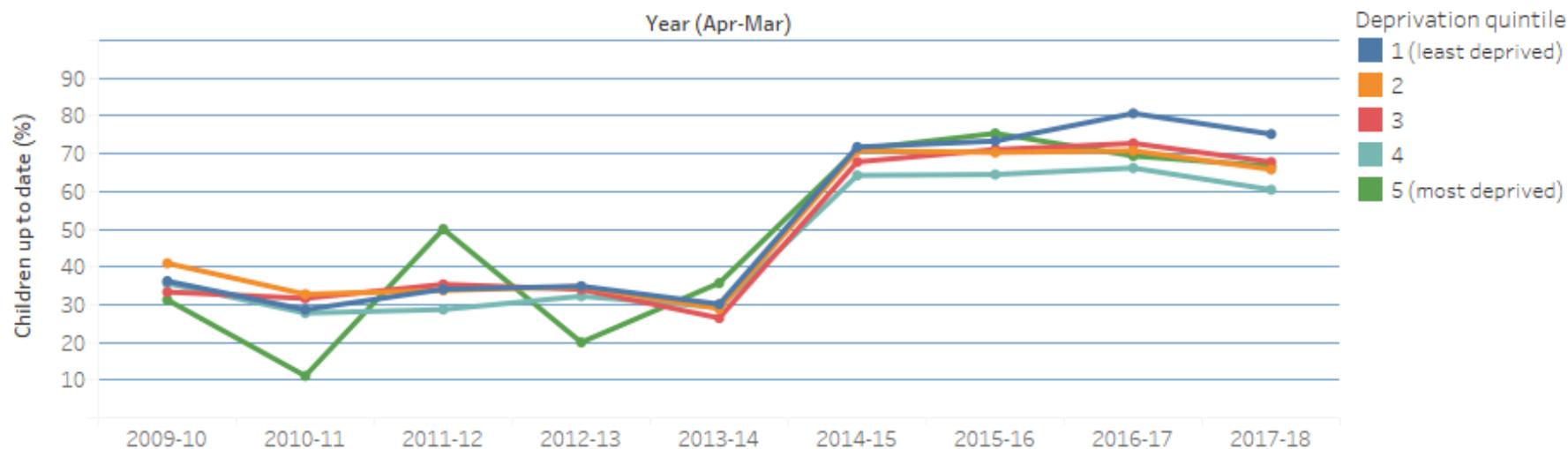
The Proportion (%) of children up to date with routine immunisations by 5 years of age in Powys Teaching HB



Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	130	178	73.0	486	609	79.8	199	244	81.6	185	223	83.0	9	12	75.0
2010-11	137	172	79.7	496	623	79.6	195	218	89.4	196	222	88.3	15	18	83.3
2011-12	136	169	80.5	487	602	80.9	187	228	82.0	192	226	85.0	8	12	66.7
2012-13	157	182	86.3	508	610	83.3	215	250	86.0	209	231	90.5	14	14	100.0
2013-14	152	167	91.0	513	581	88.3	224	256	87.5	227	262	86.6	13	13	100.0
2014-15	115	139	82.7	544	627	86.8	272	299	91.0	127	139	91.4	61	67	91.0
2015-16	122	143	85.3	491	561	87.5	290	328	88.4	146	163	89.6	56	59	94.9
2016-17	101	117	86.3	513	611	84.0	294	338	87.0	131	150	87.3	68	77	88.3
2017-18	116	136	85.3	530	618	85.8	275	307	89.6	112	133	84.2	57	62	91.9



The Proportion (%) of children up to date with routine immunisations by 15 years of age in Powys Teaching HB

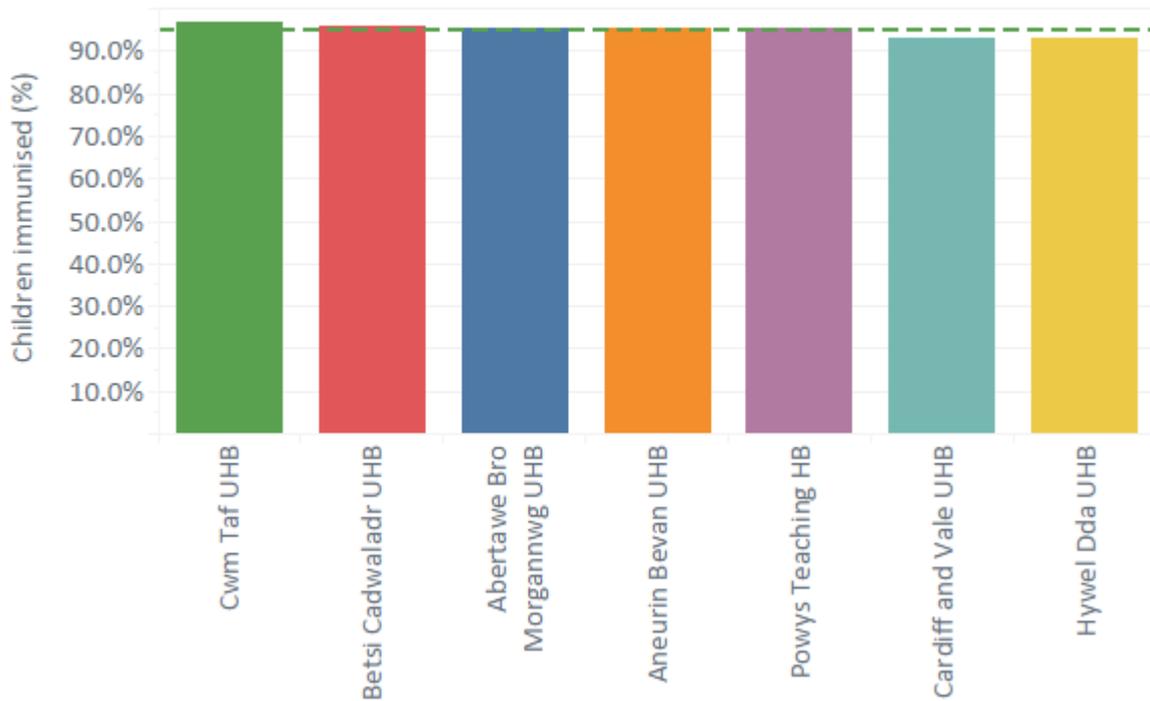


Year (Apr-Mar)	Deprivation quintile														
	1 (least deprived)			2			3			4			5 (most deprived)		
	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)	Imm'd (n)	Children (n)	Coverage (%)
2009-10	71	196	36.2	321	784	40.9	91	273	33.3	78	219	35.6	5	16	31.3
2010-11	59	206	28.6	242	739	32.7	88	278	31.7	63	227	27.8	1	9	11.1
2011-12	77	226	34.1	259	767	33.8	93	263	35.4	66	230	28.7	4	8	50.0
2012-13	83	238	34.9	260	748	34.8	95	279	34.1	77	239	32.2	3	15	20.0
2013-14	72	239	30.1	209	723	28.9	69	261	26.4	67	229	29.3	5	14	35.7
2014-15	122	170	71.8	502	709	70.8	215	317	67.8	88	137	64.2	37	52	71.2
2015-16	121	165	73.3	450	640	70.3	231	325	71.1	98	152	64.5	52	69	75.4
2016-17	121	150	80.7	460	650	70.8	224	308	72.7	94	142	66.2	34	49	69.4
2017-18	103	137	75.2	437	664	65.8	223	329	67.8	84	139	60.4	36	54	66.7

Appendix B – health board and LA level data 2017-18

Figure B1. Percentage of children who have completed routine immunisations by one year of age during 2017-18

Health Board level uptake (All routine) in children turning 1 year of age during 2017-18



LA level uptake (All routine) in children turning 1 year of age during 2017-18

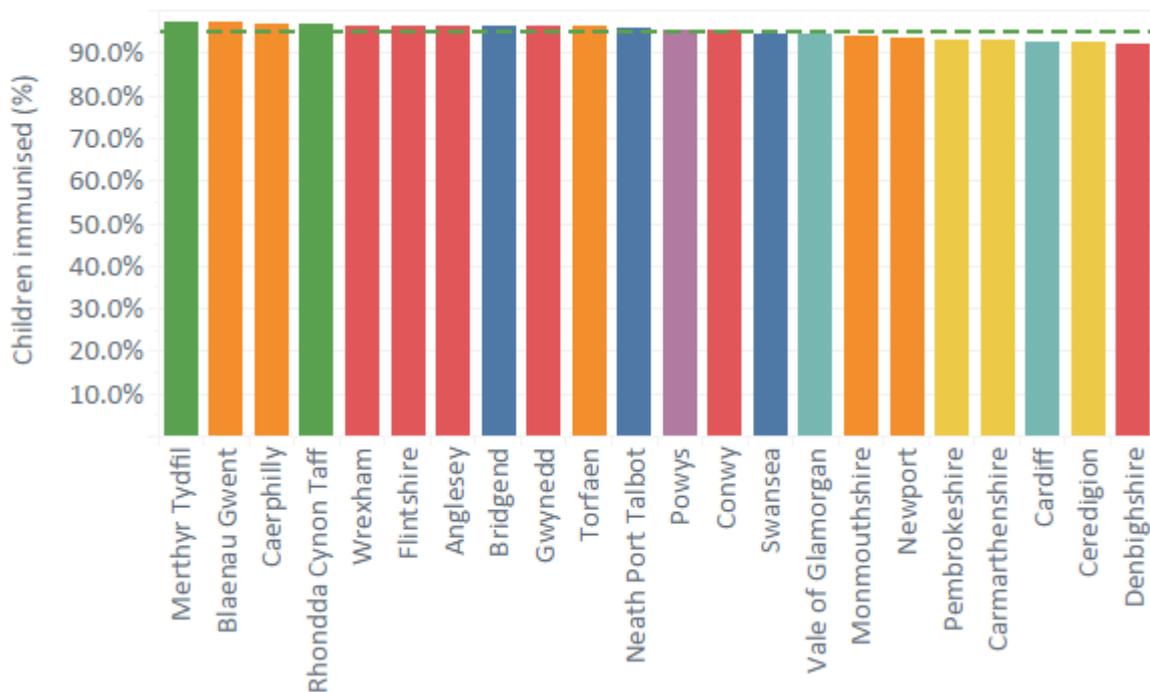
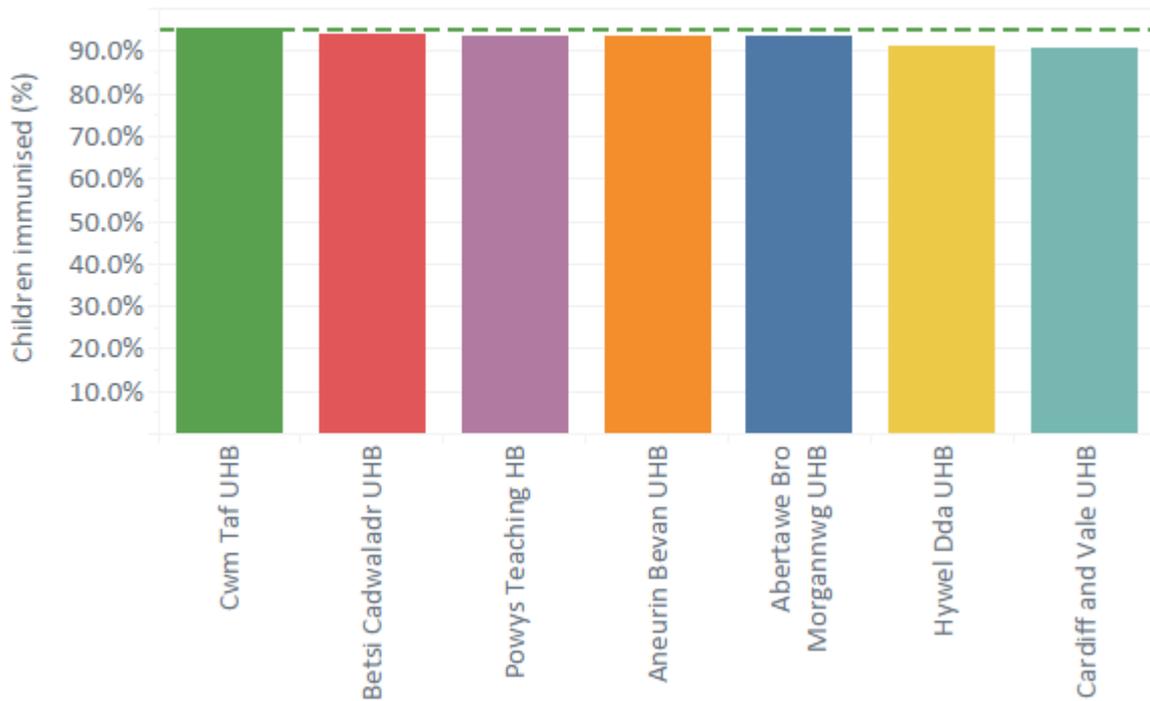


Figure B2. Percentage of children who have completed routine immunisations by two years of age during 2017-18

Health Board level uptake (All routine) in children turning 2 years of age during 2017-18



LA level uptake (All routine) in children turning 2 years of age during 2017-18

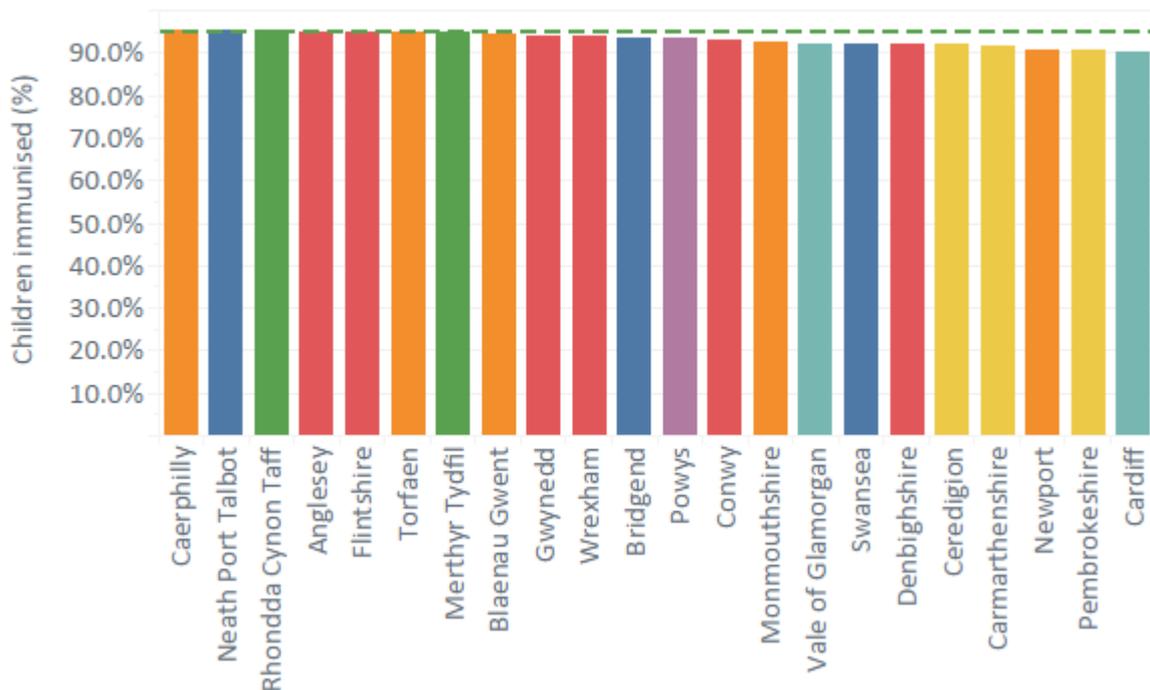
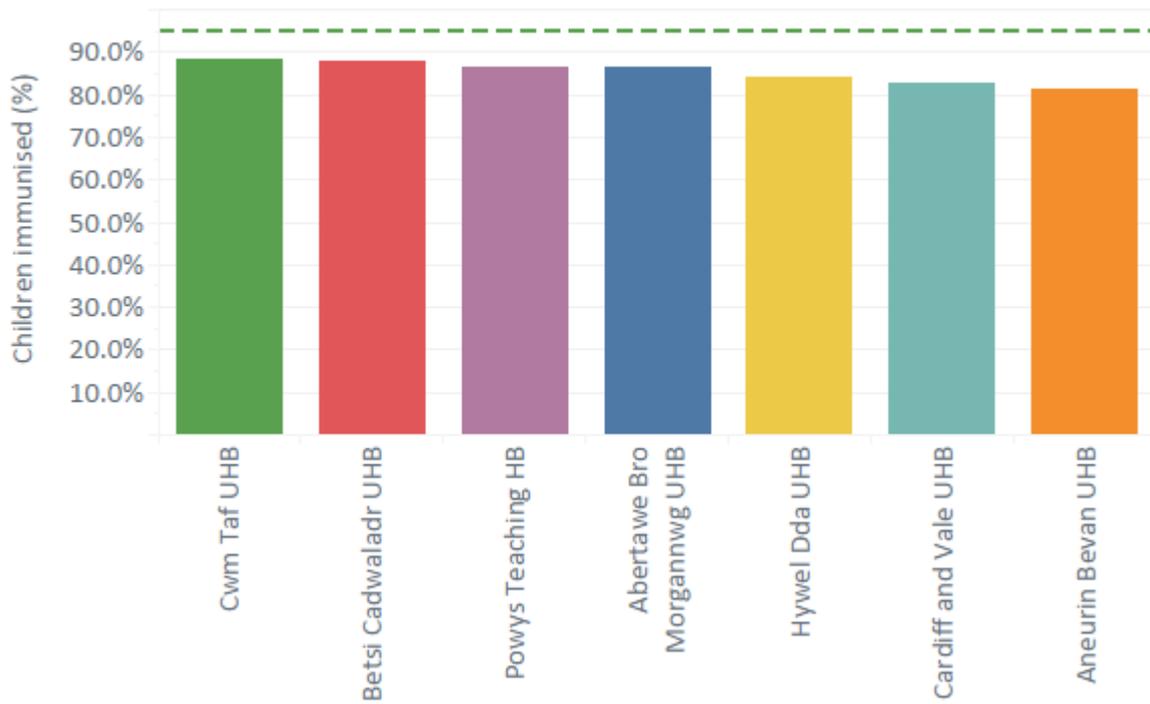


Figure B3. Percentage of children who have completed routine immunisations by four years of age during 2017-18

Health Board level uptake (All routine) in children turning 4 years of age during 2017-18



LA level uptake (All routine) in children turning 4 years of age during 2017-18

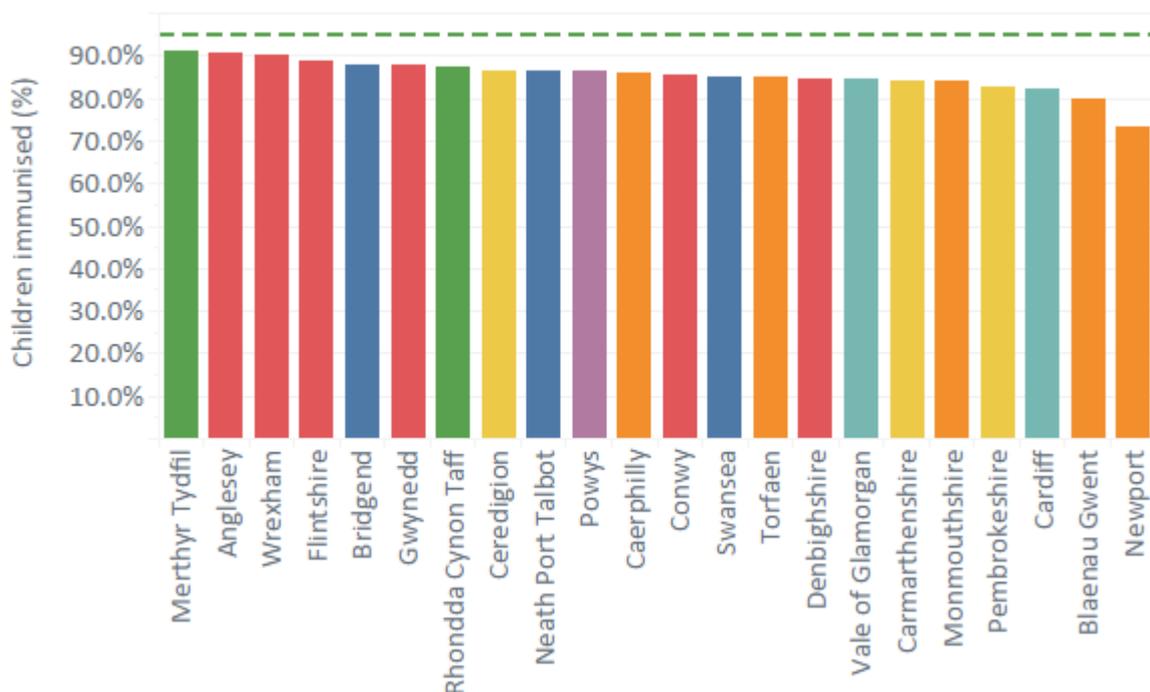
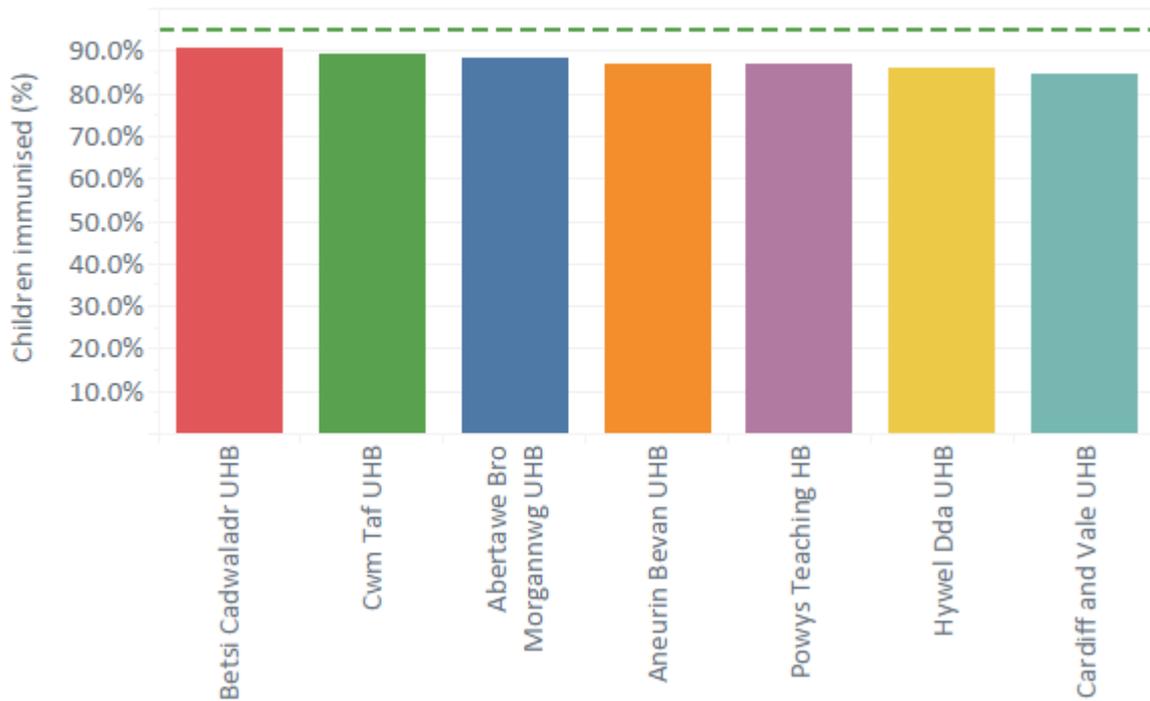


Figure B4. Percentage of children who have completed routine immunisations by five years of age during 2017-18

Health Board level uptake (All routine) in children turning 5 years of age during 2017-18



LA level uptake (All routine) in children turning 5 years of age during 2017-18

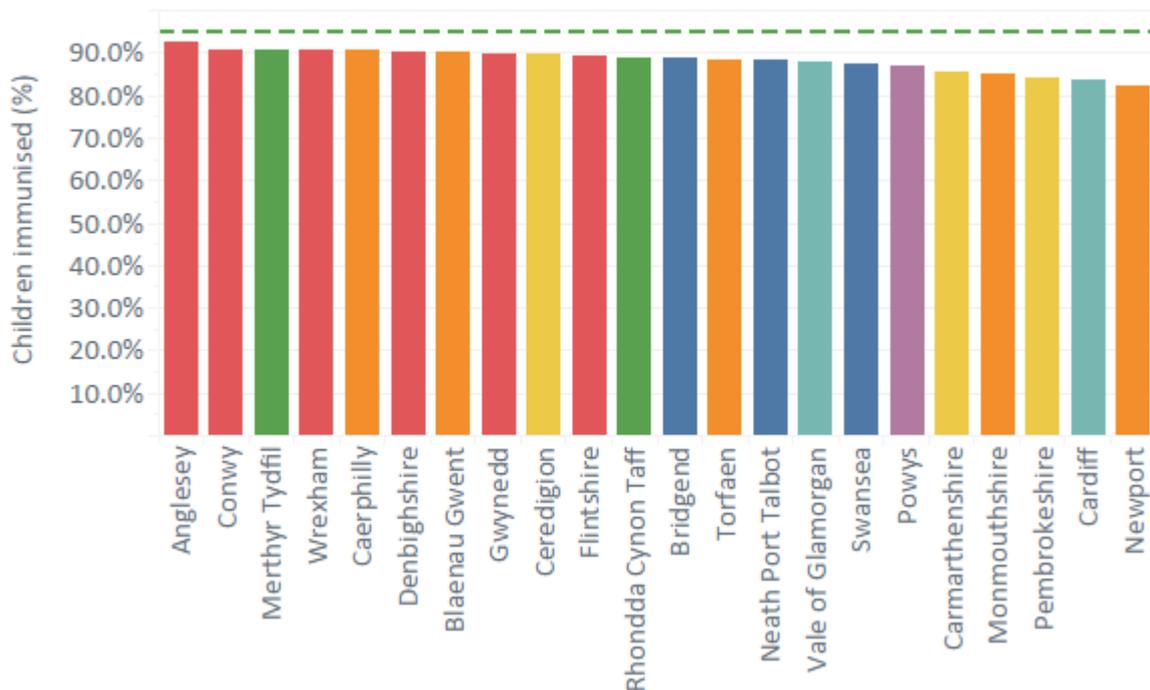
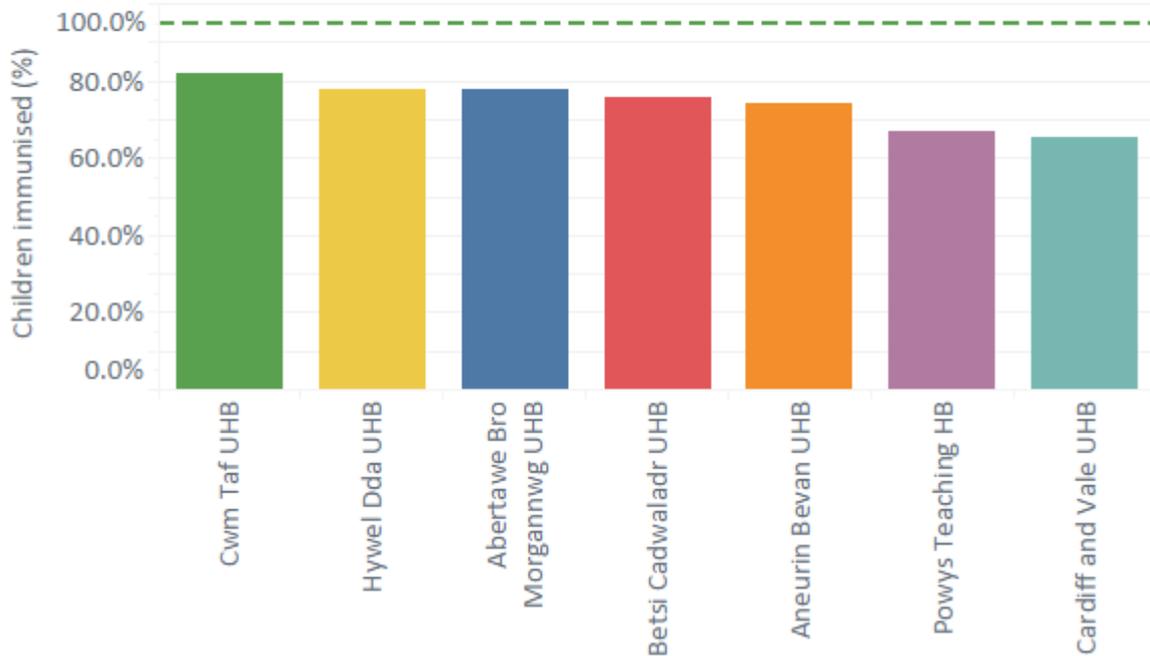


Figure B5. Percentage of children who have completed routine immunisations by 15 years of age during 2017-18

Health Board level uptake (All routine) in children turning 15 years of age during 2017-18



LA level uptake (All routine) in children turning 15 years of age during 2017-18



Appendix C – List of immunisation uptake resources produced by Public Health Wales VPDP and CDSC

- **Annual COVER reports** (including inequalities in immunisation coverage at four years of age): <http://nww.immunisation.wales.nhs.uk/annual-cover-reports>
- **Quarterly COVER reports**, including interactive tables, charts and maps at health board and local authority level: <http://nww.immunisation.wales.nhs.uk/quarterlycover>
- **GP and Cluster level COVER reports** for all health boards:
 - Abertawe Bro Morgannwg UHB: <http://nww.immunisation.wales.nhs.uk/abmu-gp-cluster-and-practice-level-data>
 - Aneurin Bevan UHB: <http://nww.immunisation.wales.nhs.uk/gp-cluster-and-practice-level-data-5>
 - Betsi Cadwaladr UHB: <http://nww.immunisation.wales.nhs.uk/gp-cluster-and-practice-level-data-7>
 - Cardiff and Vale UHB: <http://nww.immunisation.wales.nhs.uk/gp-cluster-and-practice-level-data-3>
 - Cwm Taf UHB: <http://nww.immunisation.wales.nhs.uk/gp-cluster-and-practice-level-data-9>
 - Hywel Dda UHB: <http://nww.immunisation.wales.nhs.uk/gp-cluster-and-practice-level-data-11>
 - Powys Teaching HB: <http://nww.immunisation.wales.nhs.uk/gp-cluster-and-practice-level-data-13>
- **Enhanced COVER reports**, including uptake figures for all ages between six month and four years (at three monthly intervals), for all health boards, at health board, LA and GP cluster level:
 - Abertawe Bro Morgannwg UHB: <http://nww.immunisation.wales.nhs.uk/abmu-hb-and-la-data>
 - Aneurin Bevan UHB: <http://nww.immunisation.wales.nhs.uk/hb-and-la-data-1>
 - Betsi Cadwaladr UHB: <http://nww.immunisation.wales.nhs.uk/hb-and-la-data-2>
 - Cardiff and Vale UHB: <http://nww.immunisation.wales.nhs.uk/hb-and-la-data>
 - Cwm Taf UHB: <http://nww.immunisation.wales.nhs.uk/hb-and-la-data-3>
 - Hywel Dda UHB: <http://nww.immunisation.wales.nhs.uk/hb-and-la-data-4>
 - Powys Teaching HB: <http://nww.immunisation.wales.nhs.uk/hb-and-la-data-5>
- **Maps showing geographical coverage of immunisations at middle super output area (MSOA) level** for each health board:
 - Abertawe Bro Morgannwg UHB: <http://nww.immunisation.wales.nhs.uk/abmu-msoa-maps>
 - Aneurin Bevan UHB: <http://nww.immunisation.wales.nhs.uk/ab-msoa-maps>
 - Betsi Cadwaladr UHB: <http://nww.immunisation.wales.nhs.uk/bc-msoa-maps>
 - Cardiff and Vale UHB: <http://nww.immunisation.wales.nhs.uk/cv-msoa-maps>
 - Cwm Taf UHB: <http://nww.immunisation.wales.nhs.uk/ct-msoa-maps>
 - Hywel Dda UHB: <http://nww.immunisation.wales.nhs.uk/hd-msoa-maps>



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- Powys Teaching HB: <http://nww.immunisation.wales.nhs.uk/powys-msoa-maps>
- Report timetable and background information about the COVER reporting scheme in Wales:
<http://nww.immunisation.wales.nhs.uk/what-is-cover--1>
- Annual MMR coverage in schools report, documenting current levels of MMR coverage in each school year group and progress made in catching-up through the school year:
<http://nww.immunisation.wales.nhs.uk/school-aged-mmr-coverage>