GIG CYMRU NHS WALES

Bwrdd Iechyd Prifysgol
Betsi Cadwaladr
University Health Board

Betsi Cadwaladr University Health Board

Strategic Immunisation Plan 2019 -22

Contents

1 Executive summary

Vaccination preventable diseases remain a significant risk to morbidity and mortality in north Wales. Protecting the health of the population through provision of vaccination programmes to eligible groups across the life course represents the most cost-effective public health intervention, second only to providing clean drinking water. All vaccines are safe and effective for the groups to which they are offered.

There are a growing number of vaccination programmes and this plan provides an overview of all which the Health Board and its partners have a responsibility to provide for people living in North Wales. It highlights how we are doing against targets and provides a clear vision of how we will improve the uptake of key vaccinations from 2019-2022, in particular those for Measles, Mumps and Rubella (MMR) and Influenza (Flu).

Whilst we are doing relatively well in North Wales in comparison to the rest of Wales, we need to continue to work together as a whole system, including the NHS, Local Authorities, third and independent sector providers, to improve vaccination uptake and reduce variation where it exists. Inequities in immunisation uptake within population groups and across geographies are a real risk to the health and wellbeing of the whole population, and we must remain committed and focused in tackling them together.

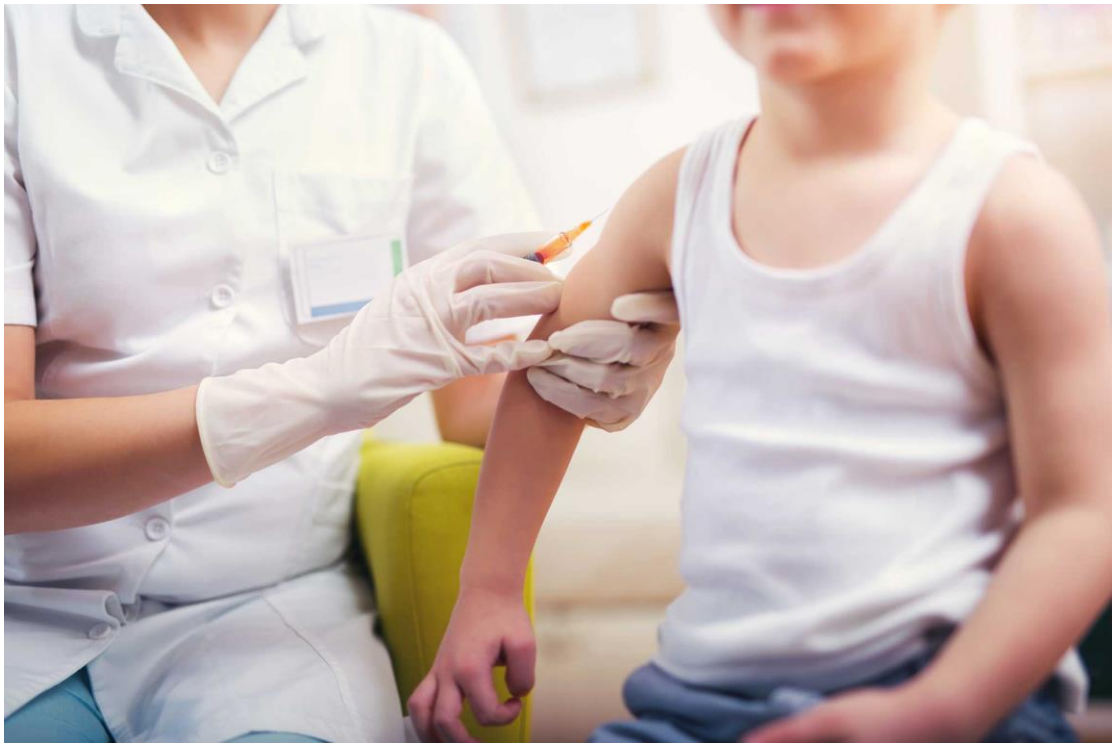
2 Introduction

The aim of this Strategic Plan is to outline how the Health Board and primary care providers will protect and improve the health of the population through maximising uptake of vaccines for eligible groups across the life course. This will be achieved by focussing on reducing variation in uptake, sharing learning and further embedding a culture of quality improvement, strengthening governance arrangements, improving how we communicate and engage with key stakeholders, and taking every opportunity to immunise our public, patients, and staff.

BCUHB has a workforce of around 16,500 staff who, alongside an extensive network of primary care contractors, provide healthcare services to a population of around 676,000 people. A broad range of different groups in the population are eligible to be vaccinated against vaccine preventable diseases; these groups are outlined in the Plan.

This document has considered existing BCUHB operational plans as part of its development, and provides the strategic direction for their ongoing review over the next three years. They include:

- Measles, Mumps and Rubella (MMR) Operational Plan
- Human Papilloma Virus (HPV) Vaccination Action Plan
- Childhood Immunisation Action Plan
- Immunisation Training Plan
- Annual BCUHB Influenza (Flu) Plan, and the Pandemic Influenza Vaccination Plan (both aligned with the pan-BCUHB Winter planning processes).



3 Strategic and Policy Context

The UK Immunisation Policy is informed by policies that are developed through the World Health Organisation (WHO) for the European region[1]. These include the coverage levels to be attained e.g. 95% uptake required for herd immunity against many childhood vaccine preventable diseases, and outcomes such as elimination of target diseases e.g. polio, measles, diphtheria.

Decisions on the most appropriate use of vaccines are made on advice from the UK Joint Committee on Vaccination and Immunisation (JCVI). The JCVI is an independent Departmental Expert Committee and a statutory body, and is constituted for advising the secretary of state in England and Welsh Ministers in Wales on *"The provision of vaccination and immunisation services, being facilities for the prevention of illness"*[2].

Following consideration of JCVI advice by the Welsh Government's Chief Medical Officer, the relevant actions regarding the implementation of vaccination programmes in Wales are communicated to Health Boards through the circulation of Welsh Health Circulars (WHC) and Chief Medical Officer Letters. Typically, funding is made available to Health Boards in order to facilitate the full delivery of each WHC.

Within BCUHB, the immunisation agenda sits under the Improving Health and Tackling Inequalities priority outlined in the current Three Year Plan (2018/19-2020/21)[3]. Section 11 of this Plan provides further details of the governance structure for vaccination and immunisation within the Health Board.

This Strategic Immunisation Plan is informed by NICE guidelines relating to maximising uptake of childhood and flu vaccinations[4,5,6]. Although no additional funding is made available in Wales to support full delivery of NICE guideline recommendations, development of the detailed action plans that will sit alongside this Strategic Plan take them into consideration. Another important national policy driver includes the Wellbeing of Future Generations (Wales) Act 2015, in particular the ways of working it advocates. In seeking to improve the uptake of vaccinations amongst eligible groups, the Act encourages us to:

- think long term in our planning and aspirations, to prevent the spread of vaccine preventable disease wherever possible,
- take a whole system approach to vaccination by integrating planning and the delivery of services,

[1] Immunisation against infectious disease: The Green Book
[2] Joint Committee on Vaccination and immunisation: code of practice, June 2013
[3] BCUHB (2018). 3 Year Plan (2018-2021)
[4] NICE (2009). Immunisations: reducing difference in uptake in under 19s [PH21]
[5] NICE (2018). Flu Vaccination: increasing uptake [NG103]
[6] NICE (2017). Vaccine Uptake in under 19s: Quality Standards [QS145]

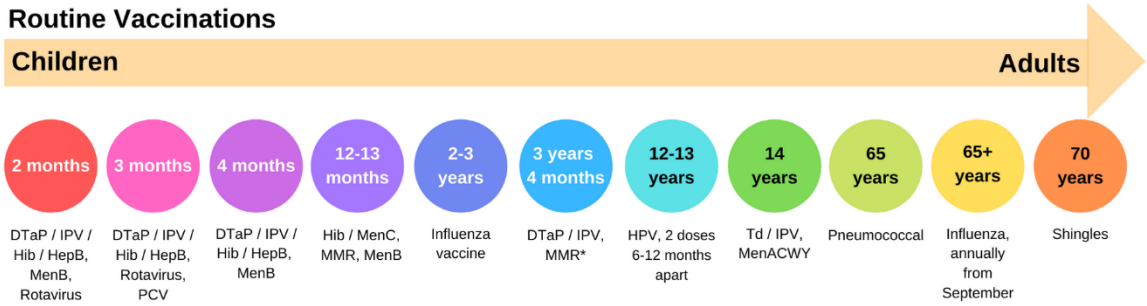
- encourage further collaboration with and involvement of key stakeholders to secure improvement.

Low immunisation uptake increases the risk of an outbreak. Maintaining high levels of uptake is the responsibility of BCUHB. The response to an outbreak is the shared responsibility of a multi-agency Outbreak Control Team as defined in the 'Communicable Disease Outbreak Plan for Wales'. BCUHB staff involved in immunisation may be required to assist in delivering outbreak response activities. Adequate staffing levels are therefore necessary to continue routine activities while also contributing to responding to outbreaks.

4 Immunisation Programme Schedule

Figure 1 presents a summary of the vaccination programmes that are being delivered by the Health Board and primary care contractors for the population of North Wales[7]. It is based on the detailed vaccination checklists outlined in Public Health Wales' Vaccine and Preventable Disease Programme webpages[8], including routine, selective, travel and occupation vaccines across the life course. Note that guidance relating to the frequent checking of MMR status at key milestones following the scheduled second dose at 3 years and 4 months is reflective of current good practice across BCUHB. This is not highlighted in national guidance.

Figure 1: Summary Schedule of Routine, Selective, Medical and Occupational & Traveller Vaccinations



Occupational & Traveller Vaccinations

Who: Staff involved with direct patient care
What: Tuberculosis, Hepatitis B, Varicella and Influenza (during flu season). Non-clinical staff in healthcare settings should also have these vaccinations, except for Influenza.

Who: Travel vaccines are tailored to individuals following a risk assessment of the areas and duration of their visit. Certain vaccines are provided free on the NHS if thought to pose a threat if brought into the UK. Patients are advised to discuss their travel circumstances with their GP.

Selective Vaccination

Who: Pregnant women
What & When: Influenza during flu season, at any stage of pregnancy. Pertussis from 16 weeks of pregnancy.

Who: Infants in areas of the country with Tuberculosis incidence >=40/100,000 and/or infants with a parent or grandparent born in a high TB incidence country.
What & When: Tuberculosis, at birth. Children also screened for vaccination eligibility at school entry.

Who: Babies born to Hepatitis B infected mothers
What & When: Hepatitis B at birth and 1 month old. Booster required at 12-13 months.

Who: Men who have sex with men
What & When: HPV, up to and including 45 years.

Medical conditions

Who: People with diabetes, chronic respiratory, heart, neurological conditions or those with immunosupression due to disease or treatment.
What: Pneumococcal and Influenza.

Who: People who have asplenia, splenic dysfunction or complement disorders.
What: MenABCWY, Pneumococcal, Hib, Influenza.

Who: People who have cochlear implants, CSF leaks.
What: Pneumococcal.

Who: Chronic kidney disease (CKD).
What: Pneumococcal and Hepatitis B for stages 4 & 5, Influenza for stage 3, 4 & 5.

Who: Chronic liver conditions.
What: Pneumococcal, Influenza, Hepatitis A and Hepatitis B.

Who: Haemophilia.
What: Hepatitis A and Hepatitis B.

**MMR status should be checked at several key milestones following this stage, including the handover from the Health Visitor to the School Nurse, at school entry, and during the provision of all other routine childhood vaccinations.*

[7] Please note that this schedule is not exhaustive and is subject to changes in line with Welsh Government vaccination directives

[8] http://www.wales.nhs.uk/sitesplus/888/page/43510

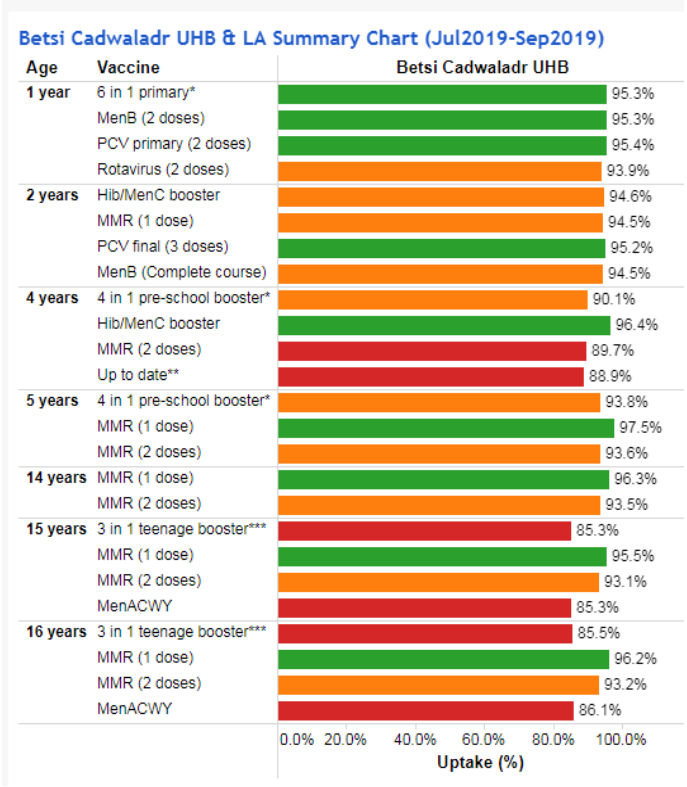
5 Benchmarking

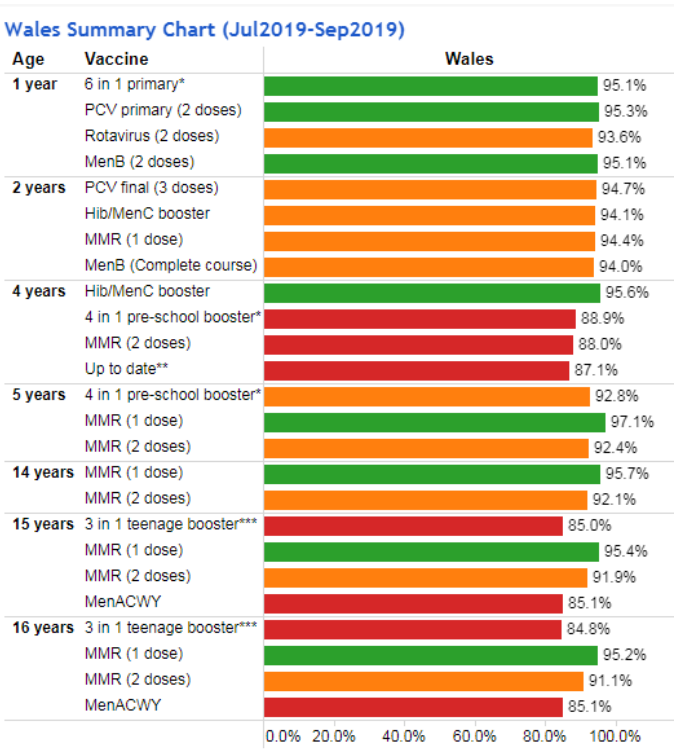
This benchmarking chapter provides a narrative summary of the uptake of routine and selective vaccinations, specifically for children, adults and flu (across the life-course). Further detail can be found via the links to the data sources referenced as footnotes, and in Appendix 1 which includes an overview of child, adult and travel & workplace vaccines.

5.1 Childhood Immunisations

BCUHB has historically performed better than the national average for uptake of most childhood immunisations. The most recent data[9] shows vaccine uptake in young infants remaining high and stable. However, as outlined in Figures 2a & 2b, uptake rates[10] generally reduce from infancy through to later childhood, and there is variation based on geographical area (see section 5.1.2 for MMR variation by Cluster).

Figures 2a & 2b: BCUHB & Wales Childhood Vaccination Uptake (July-Sept 2019)

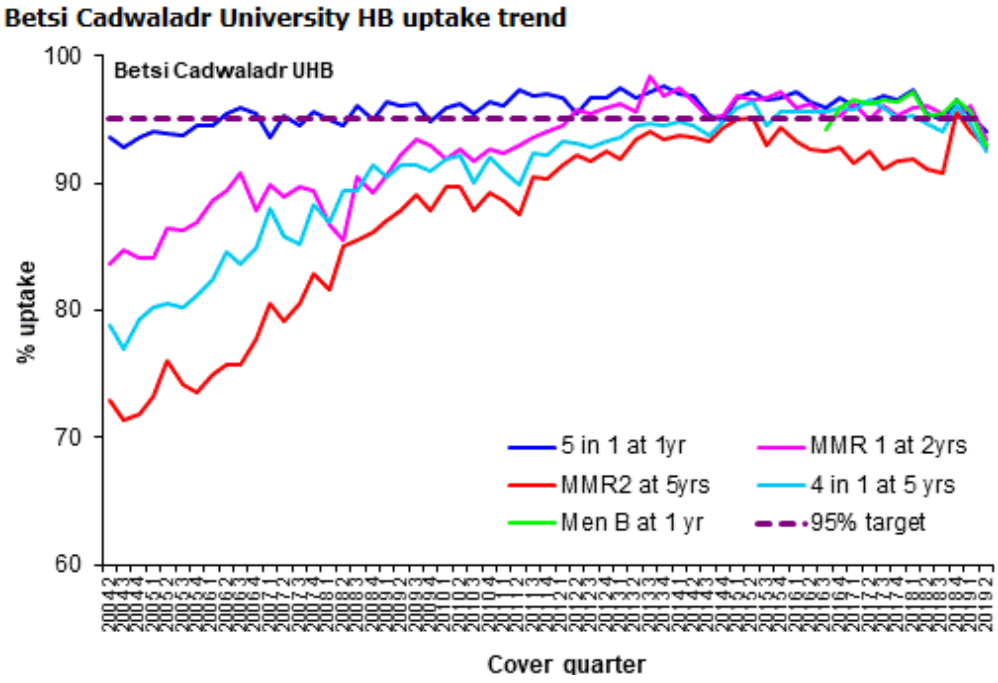




[9] Childhood immunisation uptake data (called COVER data) is provided by the Public Health Wales Vaccine Preventable Disease Programme (VPDP): http://nww.immunisation.wales.nhs.uk/cover (data access may be limited to non-NHS computers)

[10] Key: Green = uptake meets or exceeds 95% target; Yellow = uptake between 90%-94.9%; Red = uptake below 90%

Figure 3: BCUHB Uptake Trend of Key Childhood Vaccinations, 2004-2019



Uptake of the second dose of MMR at age 5 shows a decline from 2014/15 until mid-2018/19, which was a cause for concern.

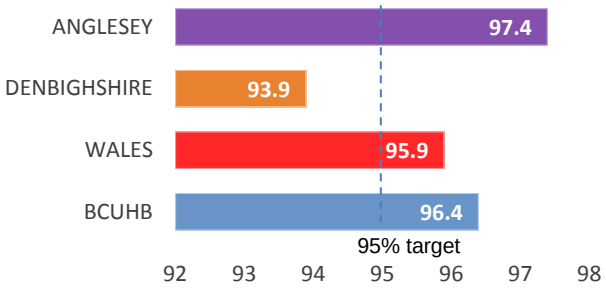
However, recent COVER trend data (Figure 3) illustrates a sharp increase in uptake during Oct-Dec 2018. This was due to a review and rectification of data as part of a national quality assurance project; historical data will not be adjusted for this correction.

Whilst this latest data rightly recognises the positive impact of the collective system efforts in supporting a high uptake of MMR uptake, there remains geographical variation at Area, Local Authority, Primary Care Cluster and GP Practice levels (see Section 5.1.2 below for further details). There is also a general decline in the selected routine childhood immunisations over the most recent 2-3 quarters (Figure 3). This illustrates the need to continue to prioritise optimal uptake of routine childhood vaccinations in order to maintain the high immunisation levels required in order to protect child health and wellbeing in north Wales.

5.1.1 6 in 1 Vaccine

In 2017/18 all Local Authority areas exceeded the 95% target for the 6 in 1 vaccination before 1st birthday, except Denbighshire at 93.9%.

Figure 4: 6 in 1 by 1st birthday 2017/18



5.1.2 Measles, Mumps and Rubella (MMR)

12-13 months

Hib / MenC, PCV, MMR, MenB booster

3 years 4 months

DTaP / IPV, MMR*

BCUHB uptake of the first dose MMR vaccine in two-year-old children was above the 95% target (95.5%) and also above the national average (94.5%) during the most recent full year that data is available (2018-2019). At Local Authority level, Wrexham, Flintshire, Anglesey and Gwynedd remained above the target (Anglesey equal highest in Wales at 97%). However, Conwy and Denbighshire were below at 94.1% and 93.7%, respectively. Overall, BCUHB has constantly remained above the target since 2014.

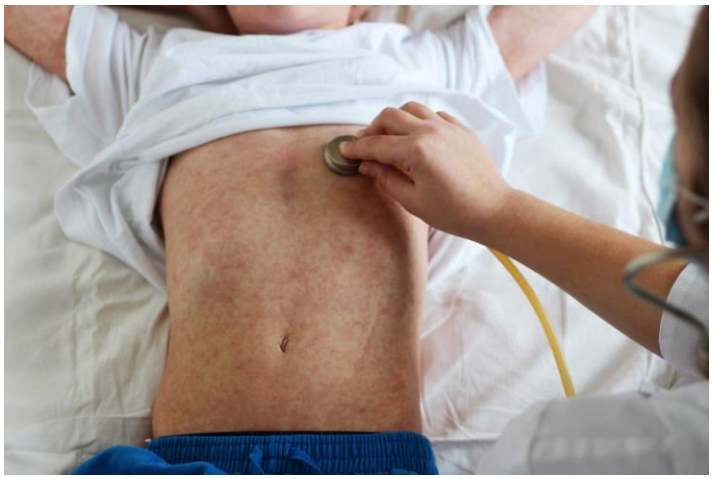


Figure 5: Uptake of two doses of MMR at age 5 years by BCUHB Primary Care Cluster

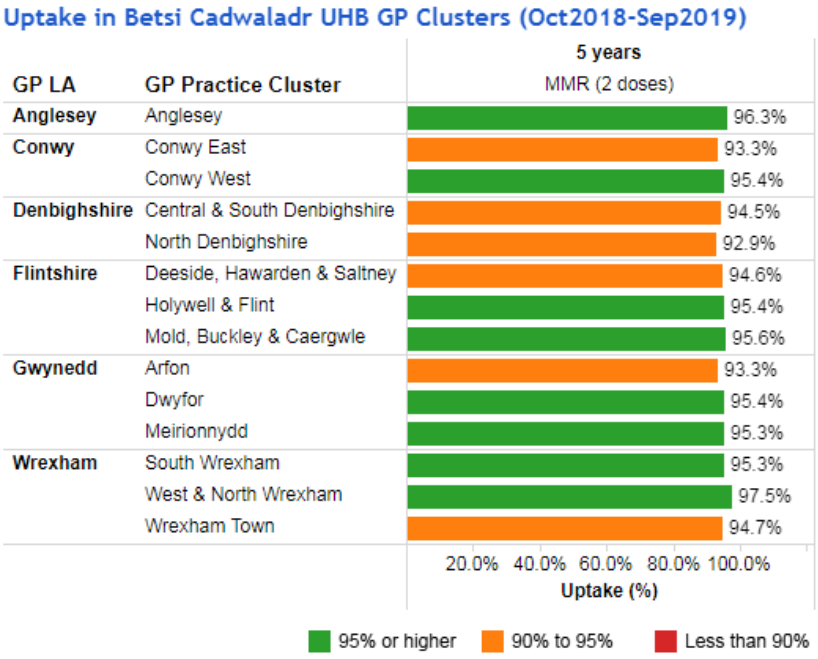
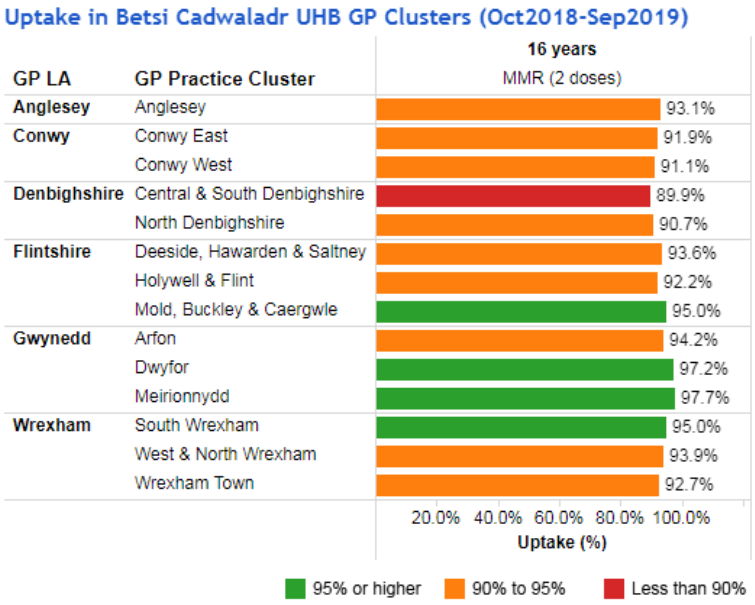


Figure 5 illustrates the most recent uptake data of two doses of MMR by age 5 in Primary Care Clusters (October 2018-September 2019). It is worth noting that:

- 8 out of the 14 Clusters achieved the 95% uptake target
- At least one Cluster in each Local Authority area achieved the 95% target except for Denbighshire
- Highest uptake was in West & North Wrexham (97.5%) and Anglesey (96.3%)
- Lowest uptake was in North Denbighshire (92.9%)

Figure 6: Uptake of two doses of MMR at age 16 years by BCUHB Primary Care Cluster



The proportion of children achieving an uptake of two doses of MMR at age 16 is notably lower than at age 5, which represents an increased risk of potential measles outbreaks in this current cohort older children. The lower uptake is likely due to number of factors, including historical parental attitudes to vaccination and the effectiveness of the system in identifying and following up children who missed a vaccination. Again there is notable variation across the Primary Care Clusters:

- Four Clusters achieved the 95% uptake target with Dwyfor and Meirionnydd achieving particularly high uptake (97.2% and 97.7% respectively)
- Lowest uptake in Denbighshire, with Central and South Denbighshire achieving just under 90%

A three year Measles and Rubella Elimination Action Plan was published by Public Health Wales in 2019[11]. It makes recommendations for system-wide interventions at national and Health Board levels to support achieving high uptake of the MMR vaccination, including establishing catch up programmes in schools and general practice for young people 16-24 years of age. The Health Board is establishing an action group to ensure that the relevant recommendations are taken forward locally, along with supporting a number of other measures to secure continual improvement in MMR uptake.

5.1.3 Up to date by 4th birthday

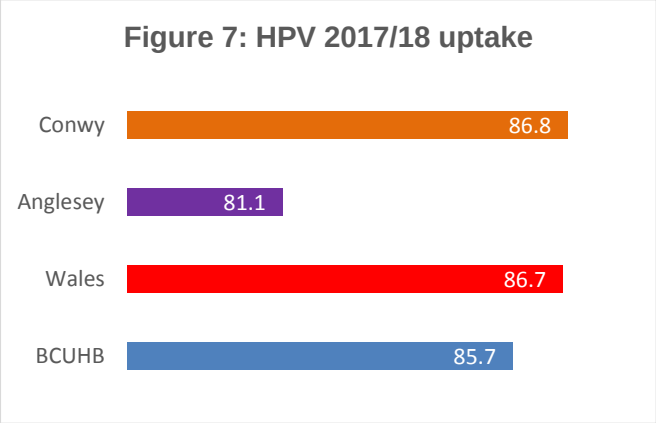
Local Authorities are measured by the proportion of resident children that are 'up to date' with their immunisations by their 4th birthday. This indicator is a composite measure of completion of the '4 in 1' preschool booster, the Hib/MenC booster and second MMR dose and, as such, there is no uptake target. The uptake for BCUHB has been higher than the Wales average since 2014. At Local Authority level, Anglesey and Flintshire are generally highest with Denbighshire and Conwy having consistently lower uptake.

[11] Wales Measles and Rubella Elimination Task Group Action Plan 2019-2021. Available from: http://nww.immunisation.wales.nhs.uk/opendoc/500141

5.1.4 Human Papilloma Virus (HPV)

12-13 years

HPV, 2 doses 6-12 months apart**

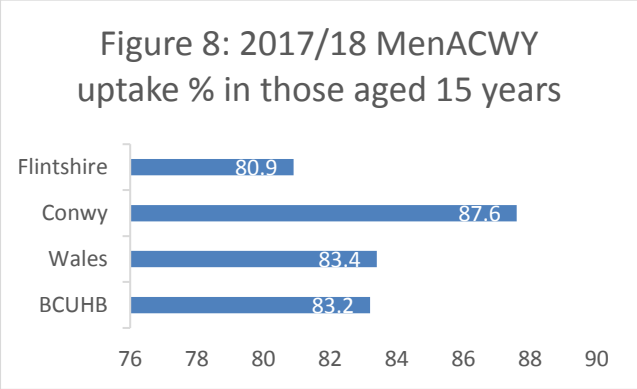


A summary of uptake of a complete course of HPV vaccine (two doses for girls reaching their 16th birthday) in 2017-2018 can be seen in figure 7. The trend has been a decline of 1.6 percentage points over the previous two years in BCUHB (87.3% in 2016/17 vs 85.7% in 2017/18).

5.1.5 Meningococcal ACWY (MenACWY)

14 years

Td / IPV, MenACWY



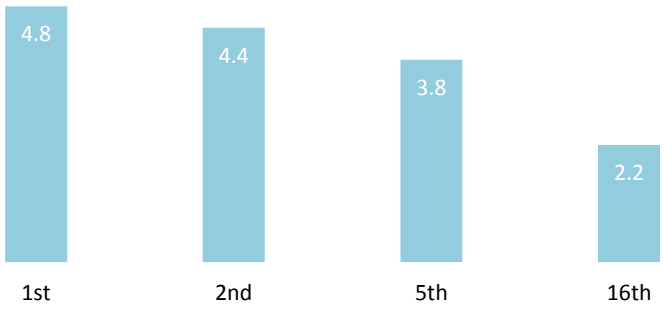
Since 2015, young people aged 13/14 years and new university students have been offered the MenACWY vaccine. This is in response to a rise in cases of meningitis and septicaemia caused by meningococcal W. Uptake in 15 years olds is measured. Rates are variable as can be seen by figure 8, with BCUHB levels similar to all Wales uptake since 2016.

5.1.6 Hepatitis B

An all-Wales database to support the appropriate monitoring and follow up of vaccination of babies born to mothers with hepatitis B infection has been developed by Public Health Wales. In BCUHB, uptake of three doses in children by their first birthday who were at risk of perinatal infection was 100% in 2017/18. Uptake of four doses in children who were at risk of perinatal infection by their 2nd and 5th birthdays was also both 100% in 2017/18.

5.1.7 Bacillus Calmette-Guérin (BCG)

Figure 9: Percentage of children at respective birthday's immunised with BCG in BCUHB Q3 2018.



The uptake data in figure 9 is based on BCG immunisations recorded in the National Community Child Health Database. The proportion of children in each age group being vaccinated for BCG is increasing from early age, although the causes of this are unclear. Only children who are eligible due to risk factors are immunised with BCG. At Local Authority level, Wrexham had the highest proportion of children given BCG, specifically 8% and 6.1% of children reaching their first and 2nd birthday, respectively. More information on geographical variation by age, and eligibility for BCG, can be found in Appendix 1.

5.2 Adult vaccinations

5.2.1 Human Papilloma Virus (HPV)

The HPV vaccination programme for men who have sex with men (MSM) has been offered since April 2017. In Wales, Health Boards offer sexual health services through integrated sexual health clinics. The vast majority of MSM who are in regular contact with sexual health clinics are seen at consultant led (level 3) sexual health clinics.

Public Health Wales provide quarterly reports on uptake to service providers and to Welsh Government.

5.2.2 Pneumococcal

65 years

Pneumococcal

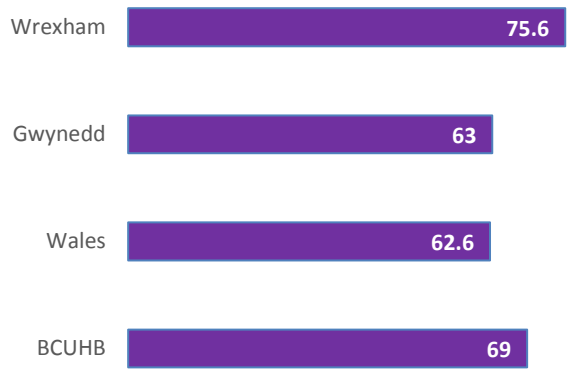
People are eligible for pneumococcal vaccination if 65 years and over, or aged 6 months to 64 years with 'at risk' conditions. People usually receive just one dose for life unless they have chronic kidney disease, no spleen or splenic dysfunction which requires vaccination every five years. Vaccination uptake data has only been produced on an ad hoc basis since the programme commenced; the most recent data is for 2006, and the scheme has been hampered by national vaccine supply issues for several years. There is no specific target for this vaccination programme.

5.2.3 Shingles

70 years

Shingles

Figure 10: Percentage uptake of Shingles in eligible individuals aged 73 years on 1st Sept 2018



Individuals are eligible for shingles vaccination from age 70-80 years. GP practices are required to provide data to Public Health Wales (PHW) sufficient to carry out surveillance and monitoring of the shingles vaccination programme. There is no specific uptake target and it is important to note that there will be a significant proportion of the eligible population that are contraindicated due to disease or treatment. The uptake for those aged 73 years from the 1st September 2018 for BCUHB, is in the graph, particular variation can be seen between Wrexham and Gwynedd. More information on the shingles programme in BCUHB can be found in Appendix 1.

5.3 Seasonal Flu Vaccination Programme

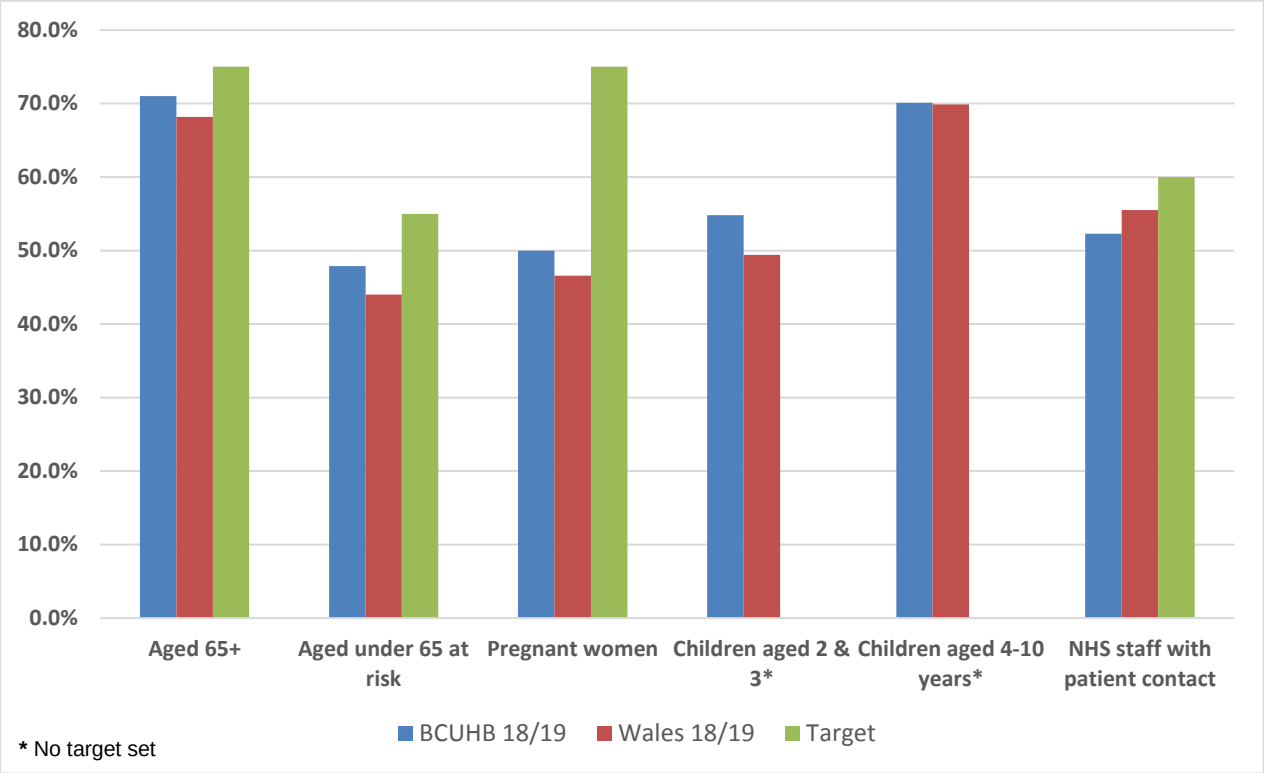
Flu vaccination is available every year on the NHS to help protect adults and children at risk of flu and its complications. The Flu vaccine uptake targets for 2018/19 were:

- 75% uptake for those aged 65 years and older and pregnant women
- 55% uptake for those aged six months to 64 years in clinical risk groups
- 60% uptake for health care workers providing direct patient care.

The long-term aim for all eligible adults is that a minimum 75% uptake rate is achieved, as recommended by the World Health Organisation. Specific targets for the children's programme have not been set. The expectation is that uptake across the children's programme will improve on the previous season.

Figure 11 summarises the uptake of the 2018/19 flu vaccination amongst eligible groups (including the targets) for BCUHB and Wales.

Figure 11: 2018/19 Flu Vaccine uptake by Eligible Group: BCUHB, Wales and Target



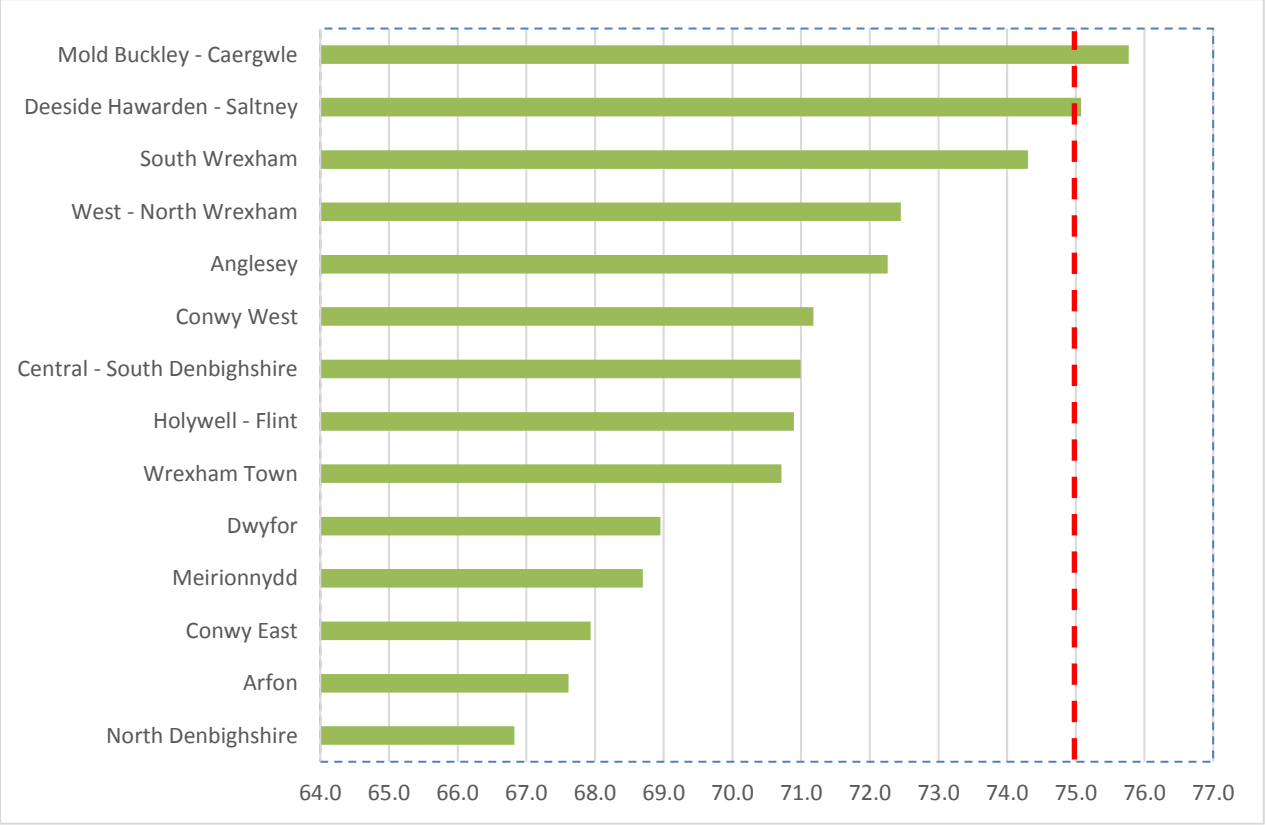
Although the uptake targets were not met for 2018/19, BCUHB has consistently been performing well compared to other Health Boards in Wales. However, as with Childhood Immunisations, there remains considerable variation in flu vaccine uptake for all eligible groups across geographical areas in north Wales. Figures 12, 13 and 14 highlight the 2018/19 flu vaccine uptake at Primary Care Cluster level for people aged 65+ years, clinical risk patients aged 6 months–64 years, and children aged 2&3 years, respectively[12].

The uptake target for people aged 65+ was met by two Clusters (Mold, Buckley & Caergwrle, and Deeside, Hawarden and Saltney); the target for at risk groups aged 6 month – 64 years was not met by any Clusters. In terms of the magnitude of variation between the Clusters with the highest and lowest uptake, there was an 8.9% point difference in uptake for people aged 65+, 12.4% point difference in uptake for people with an at risk condition, and a notably large 26.6% point difference in uptake for children aged 2 & 3 years.

[12] Vaccine Preventable Disease Programme, Public Health Wales (data by request)

Public Health Wales provides weekly flu vaccine uptake reports during the flu season via the Influenza Vaccine Online Reporting (IVOR) platform. These are accessible to NHS staff via the Vaccine Preventable Disease Programme (VPDP[13]) webpages. Data is available at Health Board, Cluster, and individual GP Practice levels. It was not appropriate to include the most up to date uptake data for the 2019/20 flu season at the time of writing this plan (end of January 2020).

Figure 12: 2018/19 season flu immunisation % uptake in patients aged 65+ in BCUHB Primary Care Clusters (red line denotes the 75% uptake target)



[13] http://nww.immunisation.wales.nhs.uk/ivor

Figure 13: 2018/19 season flu immunisation % uptake in clinical risk patients aged 6 months–64 years in BCUHB Primary Care Clusters (red line represents 55% uptake target)

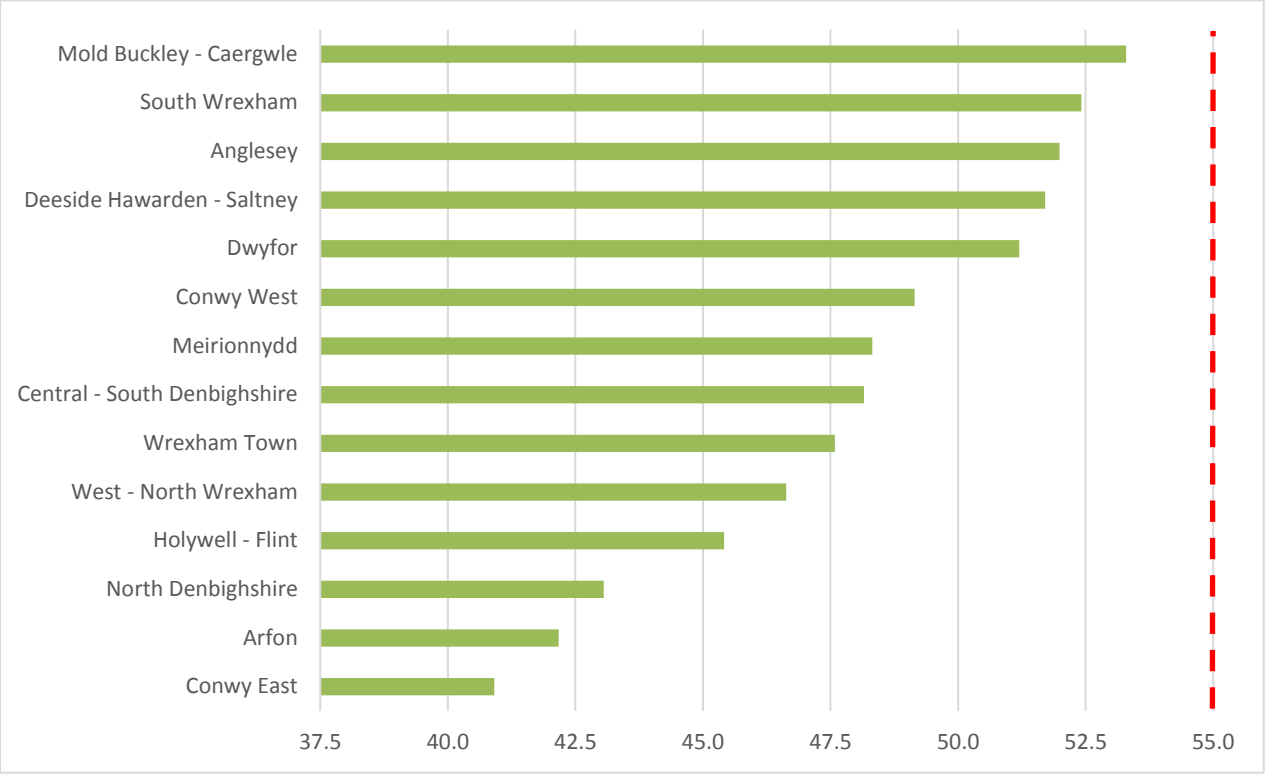
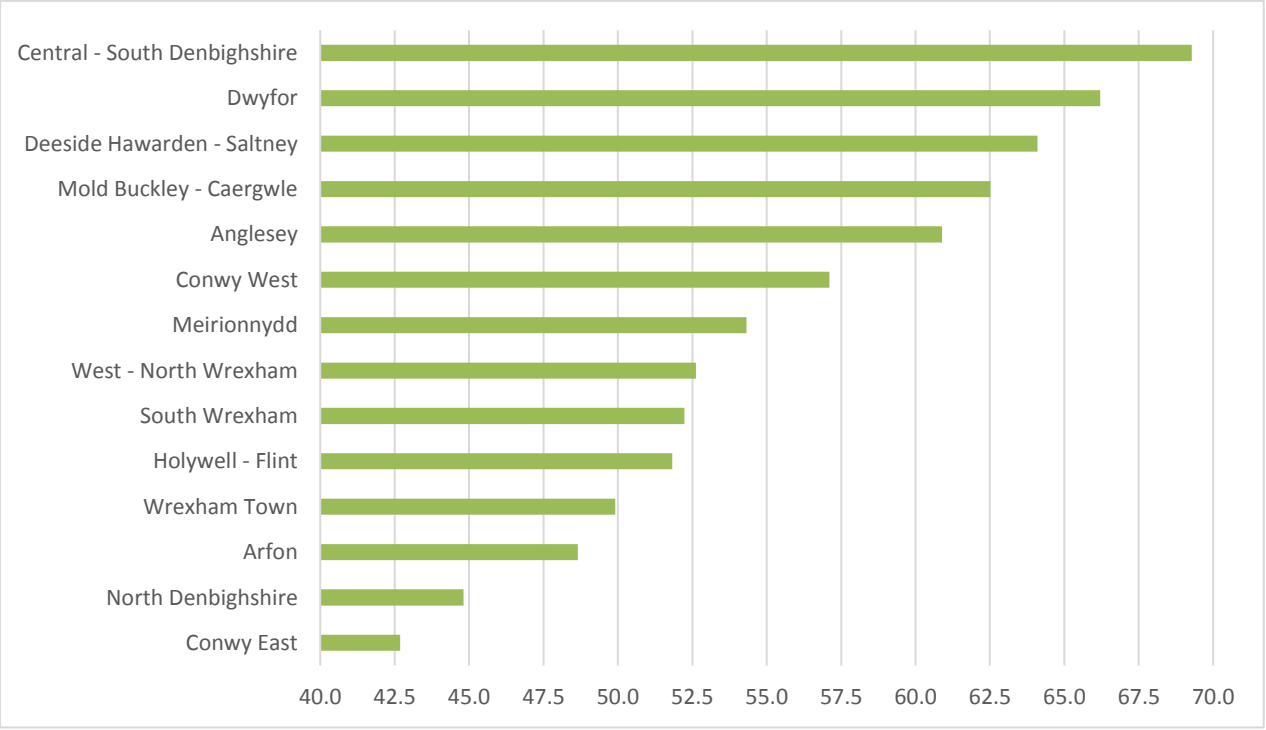


Figure 14: 2018/19 season flu immunisation % uptake in children aged 2 & 3 years in BCUHB Primary Care Clusters (no uptake target set for this group)



5.4 Selective Vaccines

5.4.1 Travel Vaccines

Travel vaccinations are required to protect health when travelling abroad[14]. The NHS must provide certain travel vaccinations, others are available via private services. For more details see Appendix 1.

5.4.2 Workplace Vaccines

Employers need to have an effective immunisation programme in place to protect their employees from some infectious diseases such a Hepatitis B, measles, or influenza. The employer has an obligation to arrange and pay for this service. No data is collected on the uptake of vaccines apart from influenza in the NHS.

5.4.3 Medical Conditions

A range of medical conditions require extra protection through vaccination, see routine immunisation schedule diagram in Section 4.

Primary care keep records of who is eligible and are responsible for inviting patients and administering vaccinations to those with qualifying medical conditions. BCUHB only collects data on influenza vaccination uptake for those with medical conditions.

6 Equality

As defined in the Public Sector Equality Duty (2011), BCUHB is required to demonstrate how it has paid due regard to the potential impact of this Strategic Immunisations Plan on groups sharing the protected characteristics[15]. An integrated Equality and Health Impact Assessment screening exercise was undertaken by a task and finish group on a draft version of this Plan[16]. No significant negative impacts were identified, although the assessment highlighted a number of opportunities to improve how vaccination programmes are delivered and promoted in order to improve access and uptake amongst priority eligible groups. A summary of these improvements is provided below, which will be addressed as part of the detailed action plans to take forward the Improvement Priorities (Section 7).

[14] NHS Travel Vaccines: https://www.nhsdirect.wales.nhs.uk/travelhealth/TravelVaccines/

[15] Age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation. Impact on the Welsh Language is also considered.

[16] A detailed report on the Health and Equality Impact Assessment is available on request.

- Need identified to develop a comprehensive engagement and communication plan for key groups to improve awareness and uptake of immunisations. This work to include close collaboration with representatives from children and young people (and their parents & guardian), those with transport, language or communication difficulties, and those with physical or learning disabilities. Ensuring provision of up-to-date information in a variety of formats on the benefits of immunisation against vaccine-preventable infections tailored for different communities and groups, according to local needs.

- Strengthen our existing collaborative working arrangements with both NHS service providers and external agencies. Working collaboratively, in particular with, third sector and local authority social care and education services, to inform strategic approaches to promoting and facilitating access to vaccinations for priority eligible groups. This to include maximising existing assets that are already effectively engaging with identified groups.

- Improve the quality of GP Practice coding relating to health and disease status, in order to facilitate more accurate vaccination uptake data (e.g. pregnancy and chronic conditions)

- Targeting geographical areas with known lower vaccination uptake rates, not all of which are associated with socio-economic deprivation

7 Priorities for Improvement

As outlined in Section 2 (Introduction), the aim of this Strategic Plan is to protect and improve the health of the population through maximising uptake of vaccines for eligible groups across the life course. In order to achieve this aim, a number of vaccination improvement priorities have been identified due to their:

a) Risk to health i.e. what would be the risk to the health of those eligible for the vaccination if vaccine uptake was sub-optimal
b) Scale of impact i.e. the proportion of the population that would be negatively impacted due to sub-optimal vaccine uptake
c) Welsh Government vaccine uptake targets, which have been identified in relation to both a) and b) above, and against which BCUHB performance is measured
d) Potential impact to public services, in particular health and social care, due to sub-optimal vaccine uptake and subsequent increased risk of vaccine preventable disease outbreaks

The priority vaccines have been grouped into three themes (Figure 15), alongside a rationale for their inclusion. They have been described as the **'What'**. The lower section of Figure 15 describes the **'How'**, which is represented by six improvement areas that are informed by the Public Health Wales Quality and Impact Framework[17].

Tables 1-6 provide further detail on each of the six improvement areas. The Strategic Immunisation Group will lead the development of detailed action plans to take forward each of these for 2019/20-2021/22.

Year 1: Apr 2019-Mar 2020

Year 2: Apr 2020-Mar 2021

Year 3: Apr 2021-Mar 2022

[17] Public Health Wales Quality and Impact Framework: http://www.wales.nhs.uk/sitesplus/documents/888/FINAL%20PHW%20Quality%20and%20Impact%20Framework%20E%284%29.pdf

Figure 15: Improvement Priorities: What we are going to achieve, and how will it be done (defined under six improvement areas)

Tables 1-6: How the Strategic Plan will lead the work across the six improvement areas

1. Transforming Culture		
What will we do?	**How will we deliver this?**	**Who is responsible and by when?**
Strengthen the governance and accountability structures for vaccinations and immunisations in the Health Board.	Review and agree the governance structure for vaccinations and immunisations within BCUHB to ensure accountability and effective reporting & escalation mechanisms, clarity of roles and responsibilities, consistency of approaches, and improved communication between groups.	SIG (Year 1)
	Refine the terms of reference for the Strategic Immunisation Group (SIG), Area Operational Immunisations Groups and other immunisation groups within the Health Board. This work to also consider opportunities for strengthening the link with Primary Care Clusters in relation to their role in promoting and delivering vaccination programmes across the life course.	SIG (Year 1)
	Clarify the financial arrangements for Area Teams, and regularly review these budgets, in order to facilitate the ongoing implementation of all vaccination and immunisations programmes. Maintain close collaboration with finance teams to ensure effective financial planning for new vaccination programmes, in line with expected corresponding Welsh Health Circulars.	BCUHB Area Finance Leads (Year 1)
	Undertake an annual review of all BCUHB Immunisation Plans (and associated documents) that are currently in place, and ensure that the development of any new plans are informed by and fit with this Strategic Immunisation Plan.	SIG (Year 1, 2, 3)

	Develop a formal system of reporting BCUHB activities related to immunisation. Agree activities to be monitored by immunisation managers, Area Operational Immunisations Groups and SIG to ensure expected programmes and ad-hoc activities are being delivered.	SIG (Year 1)
Consolidate and strengthen Senior Leadership in the Health Board in order to drive improvements against the Plan's Outcomes.	Maximise the role of Board members in advocating for and securing improvements for key vaccination programmes, in support of the Director of Public Health as the Executive lead. Identify and increase the visibility of Clinical Leaders in both Primary and Secondary Care in relation to vaccinations, and agree the most effective way of seeking their ongoing engagement in informing the planning and monitoring of vaccination uptake for both staff and the public.	SIG (Year 1, 2, 3) SIG (Year 1, 2, 3)

2. Strengthening the Workforce		
What will we do?	**How will we deliver this?**	**Who is responsible and by when?**
Ensure that the workforce has the right knowledge, skills and capacity to effectively deliver vaccination programmes. Encourage BCUHB staff to be vaccinated (particularly flu) in order to protect themselves and their patients, families and communities.	Undertake an annual immunisation workforce review of BCUHB staff, ensuring staffing capacity and competencies are appropriate and implementing any necessary changes. Develop an immunisation training plan to address any training needs identified in the above review and to also include non-BCUHB immunisation colleagues. Include promotion of the FluOne training module in included in the training. Implement plans to build awareness of immunisation into the BCUHB induction process for both clinical and non-clinical staff.	Immunisations Coordinator (Year 1, 2, 3) Immunisation Coordinator (Year 1) Immunisation Coordinator (Year 1, 2)

Maximise the role of Primary Care services in delivering vaccination programmes across the life course.	Review of Service Level Agreements (SLAs) with GP Practices in the East Area for the delivery of childhood immunisations in order to increase capacity of GP Practice staff to deliver vaccinations. In line with Improvement Area 1, scope opportunities for maximising the role of Primary Care Clusters in supporting improvement in vaccine uptake.	East Area Health Visitor Management AOIGs

3. Monitoring Impact		
What will we do?	**How will we deliver this?**	**Who is responsible and by when?**
Establish robust monitoring and scrutiny arrangements within the immunisation governance framework, in order to maximise vaccination uptake and reduce inequities in uptake.	In line with Improvement Area 1, develop mechanisms within AOIGs and the SIG for regular monitoring of vaccination uptake and variation. Develop effective mechanisms for updating key stakeholders on progress, including frontline BCUHB teams.	SIG (Year 1) BCUHB Communications Team (Year 1, 2, 3)
Recognise risks of outbreaks and potential health harms from low uptake, and target activities to reduce the risks.	Maintain high levels of data accuracy in relation to immunisation uptake and monitoring of circulating vaccine preventable disease. Ensure clear risk management and escalation systems in place.	Immunisations Coordinator, AOIGs, BCUHB Infection Prevention and Control Team (Year 1, 2, 3)
Monitor the processes and systems of immunisation programmes without routinely collected uptake data, in order to ensure a high quality and equitable service across the Health Board.	Work in partnership with those delivering programmes for non-routine immunisations / programmes with variable demand, in order to develop a detailed understanding of processes and provision across the Health Board.	Immunisations Coordinator (Year 1, 2)

4. Raising Standards, Achieving Impact and Outcomes		
What will we do?	**How will we deliver this?**	**Who is responsible and by when?**
Maximise uptake of key vaccinations, in particular childhood immunisations and flu, and reduce variation across BCUHB geographies and within specific groups known to have lower uptake.	Review data accuracy through audit and review of immunisation recording processes. Make recommendations if necessary for improvements. Regularly scrutinise uptake data, including information on inequalities, in order to inform action on addressing low levels. Develop robust systems to enable the deployment of resources to respond to identified need. Strengthen plans and policies for targeting areas or groups of low uptake, agreeing for each immunisation, at what uptake level they are to be implemented. Respond to the findings of the Equality Impact Assessment and develop an ongoing plan of engagement with priority groups in the population to improve access to and uptake of vaccinations. Strengthen consistency in high outcomes across BCUHB, whilst supporting a flexible approach to meeting local needs.	Immunisation Coordinator (Year 1, 2, 3) SIG & AOIGs (Year 1, 2, 3) AOIGs (Year 1, 2, 3) SIG & BCUHB Communications Team (Year 1, 2, 3) SIG & AOIGs (Year 1, 2, 3)
Ensure the work of BCUHB is informed by evidence based guidelines.	Regular review of NICE guidance and Welsh Health Circulars / CMO Letters against BCUHB activity, and implementing changes where necessary.	Immunisations Coordinator & BCUHB Public Health Team (Year 1, 2, 3)

5. Measuring Improvement and the Quality of our work		
What will we do?	**How will we deliver this?**	**Who is responsible and by when?**
Utilise quality improvement (QI) methodology where appropriate to enable the effective planning, delivery, and evaluation of tests of change.	Identify opportunities e.g. specific improvement projects, to use QI methodology. Ensure robust evaluation considered as a core part of planning test of change, and facilitate the sharing of learning in the system.	AOIGs, Immunisations Coordinator, BCUHB Public Health Team (Year 1, 2, 3)
Strengthen Child Health Systems to continue delivering accurate and timely surveillance information for children's immunisations.	Undertake quality assurance activity around data in the BCUHB Child Health System, in partnership with Child Health System colleagues.	Immunisations Coordinator & Child Health Team (Year 1, 2, 3)
Ensure the continued safe and prudent delivery of vaccine programmes.	Develop more robust methods for scrutinising data in relation to medication errors. Ensure relevant learning included and shared in clinical training.	SIG SIG

6. Working Collaboratively		
What will we do?	**How will we deliver this?**	**Who is responsible and by when?**
Secure meaningful engagement with and insight from key external stakeholders around vaccination uptake, including groups in the population.	Undertake an external stakeholder analysis in relation to priority vaccination programmes. Work collaboratively to develop an insight based communications plan to address areas or groups with low uptake and reduce variation. This work to also identify stakeholders who can influence attitudes and cultures around immunisations in order to positively affect immunisation uptake.	BCUHB Communications Team, Immunisations Coordinator, BCUHB Public Health Team (Year 1, 2, 3)

	Identify opportunities to secure ongoing engagement with key settings and management groups in external agencies, including the offer of joint training e.g. Early Years settings, Social Care Services, Third Sector Services. In line with reviewing the governance arrangements (see Improvement Area 1), identify methods for effective collaboration with Primary Care Clusters to develop approaches to sharing learning and reducing local variation in uptake across all vaccination programmes.	BCUHB Communications Team, Immunisations Coordinator, BCUHB Public Health Team (Year 1, 2, 3) AOIGs
Secure improved engagement and communication with NHS service providers across Primary and Secondary Care to inform robust immunisation planning and monitoring activity.	In collaboration with colleagues in Primary and Secondary Care services, develop an internal communications plan that raises the profile of immunisations across the life course, outlines roles and expectations of staff at all levels, and identifies opportunities for improvement. Identify more effective and sustainable ways of securing input from colleagues in Primary and Secondary Care in informing the planning, monitoring and evaluation of immunisation programmes.	BCUHB Communications Team (Year 1, 2, 3) SIG, AOIGs, BCUHB Communications Team (Year 1, 2, 3)

8 Funding the Plan

All vaccination programmes are funded through Welsh Government allocations. These are updated through the publication of Welsh Health Circulars for new vaccination initiatives, guidelines, or changes to eligible groups, and are reviewed annually.

As part of developing this Plan, a comprehensive piece of work is being undertaken to review existing allocations and expenditure for all vaccination programmes in order to consolidate to an overall current baseline. This will then form the basis for delivering the plan over the next three years, including ensuring equitable allocation of both staff and vaccination resources across the Health Board to support the delivery of identified priorities.

The work will include reviewing the financial governance controls that are in place at Area level, and establishing regular monitoring and reporting of expenditure to the Strategic Immunisations Group. In addition, evidence will be collated as to the benefits realised in terms of expenditure against vaccination uptake performance, in order to inform future planning and improvement.

9 Risks

There is a risk that:	Controls in place:
The health and wellbeing of the population could be adversely affected by vaccine preventable diseases. This may be caused by sub-optimal uptake of vaccinations amongst eligible groups across the life-course, which could present as variation at a geographical level or between specific groups in the population. This could lead to increasing the risk of avoidable illness, disability and preventable excess deaths. It could also lead to increased avoidable demand on health care and other public services.	**Strategic Controls for all Immunisation Programmes** 1. Strategic Immunisation Plan and monitoring in place. 2. Responsibility for operational delivery confirmed under lead of Area Director (West), with Area Operational Immunisation Groups (AOIGs) in place in each Area. 3. Key BCUHB Immunisation roles identified, namely Immunisation Co-ordinator Senior Nurse for Immunisation.
	Childhood Immunisation Specific Controls: 1. "COVER" reports circulated to AOIGs. Immunisation regularly reported as item on the Clinical Advisory Group (that reports to the BCUHB Children's Transformation Group). 2. Regular auditing of compliance with the MMR Welsh Health Circular. 3. Raising awareness of the uptake of two doses of MMR on an individual school basis with Heads of Education services. 4. Regular checking and recording of Immunisation status on Child Health System for Looked After children. 5. Identifying children not in mainstream education/privately educated or educated in England to establish immunisation status 6. Detailed epidemiological report developed and disseminated on variation in uptake of key childhood immunisations, in order to support more targeted improvement action. 7. School nurses routinely ensuring MMR is offered with Teenage booster or other school years e.g. HPV Year 8. 8. Ongoing data cleansing in relation to pupils entering secondary schools.
	Influenza Specific Controls: 1. Flu Planning Group established with membership from across the Health Board. Group meets frequently from April to the commencement of delivery in October. Planning has been informed by the

	Flu Debrief to capture learning from the 2018/19 season and outline how priority areas will be improved. 2. Specific uptake improvement activities identified for priority eligible groups for 2019/20, including staff flu vaccine uptake 3. Flu Monitoring Group established meeting frequently from October to March to monitor uptake during the flu season. 4. Weekly WHO report received via Public Health Wales and distributed during the season, along with weekly coverage data for Wales to inform local actions. 5. Consolidating the work from 2018/19 for the provision of flu vaccine to pregnant women attending Antenatal Day Units 6. Resources identified to support delivery of comprehensive Internal and External Flu Communications Plans 7. Bespoke Flu planning sessions offered to Primary Care Clusters to support local improvements and reduce variation in uptake.

10 Governance, Monitoring and Evaluation

This section summarises the governance structure for delivering the Strategic Immunisations Plan, including monitoring and evaluation arrangements.

- The Health Board lead for immunisations will be the Executive Director of Public Health.
- Overall co-ordination and monitoring of the Strategic Immunisations Plan lies with the Strategic Immunisation Group (SIG), who will oversee the development, implementation, and monitoring of detailed operational actions plans to implement the Plan over 2019-2022. The SIG will also monitor and scrutinise vaccination uptake data in line with Welsh Government Targets, and seek to provide assurance to the Health Board on progress, risks and mitigating actions.
- Oversight of the operational delivery of all routine and selective vaccination programmes at an Area level will be provided by the Area Operational Immunisation Groups (AOIGs), which report directly to the SIG. The role of the BCUHB Immunisations Sub-group, which currently provides clinical input into immunisation policy development, will be reviewed in line with the strengthened function of the AOIGs.
- The SIG reports to the Quality and Safety Group, which reports to Quality, Safety and Experience Committee. This arrangement is illustrated in Figure 16.
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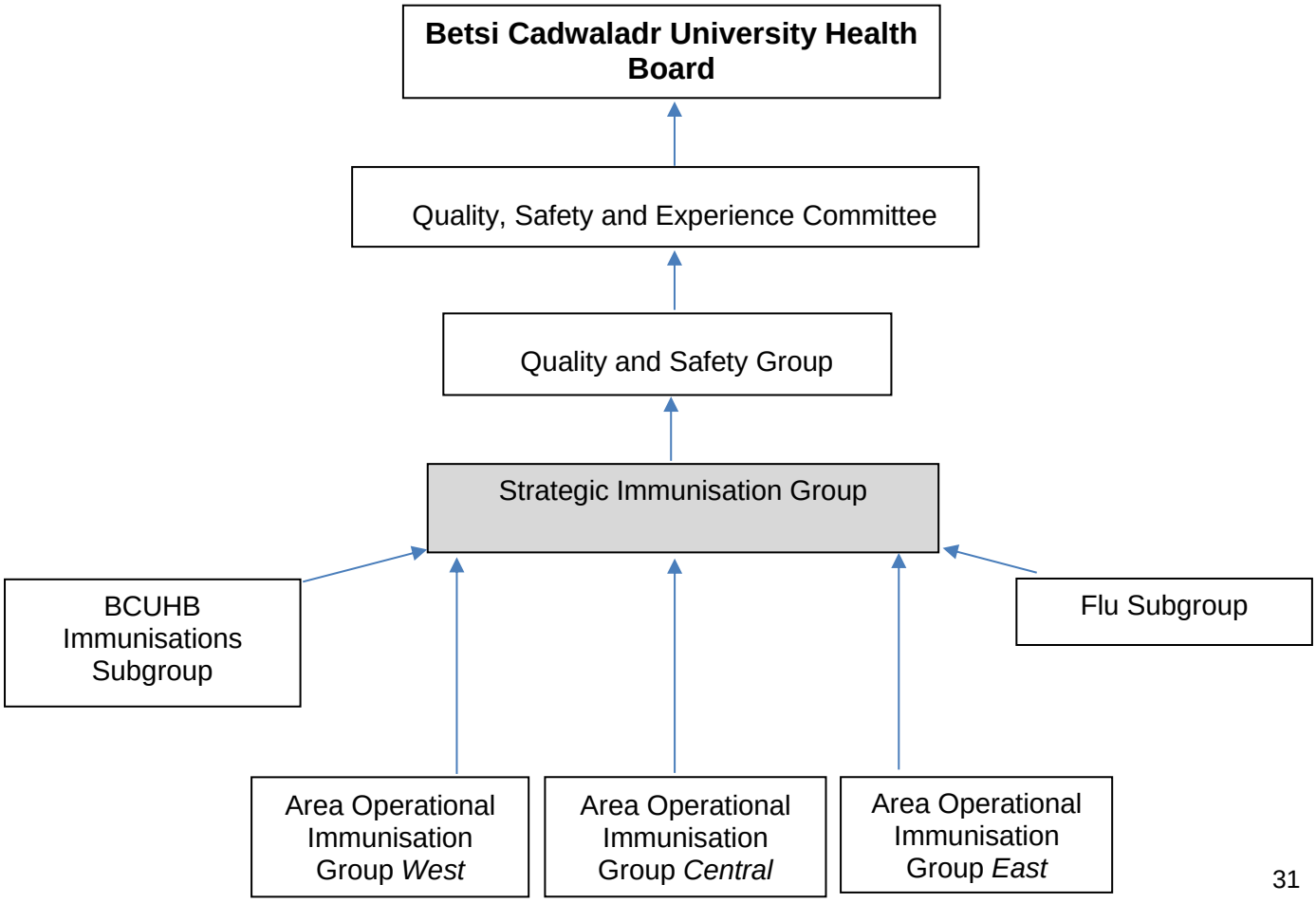
Figure 16: BCUHB Immunisation Governance Structure



Appendix 1: Additional details on BCUHB immunisation programmes

1 Childhood Immunisations

1.1 Human Papilloma Virus (HPV)

BCUHB uptake of a complete course of HPV vaccine (two doses for girls reaching their 16th birthday) in 2017-2018 was 85.7%, which is slightly lower than the Welsh average at 86.7%. At Local Authority level, Conwy had the highest uptake (86.8%), closely followed by Gwynedd (86.7%), Denbighshire (86.4%), and Flintshire (86.2%). Wrexham and Anglesey had the lowest uptake at 85.3 % and 81.1% respectively. Overall, there was a 1.6% decline over the previous two years in BCUHB (87.3% in 2016/17 vs 85.7% in 2017/18). It is expected that a HPV vaccination programme for boys will be launched in Wales during 2019/20.

1.2 Bacullus Calmette-Guerin (BCG)

In Wales, as in the rest of the UK, BCG is offered to babies and children under 16 years of age who are more likely than the general population to come into contact with someone with Tuberculosis (TB). This could be due to them having lived in a country with high rates of TB, or that their parents or grandparents came from a country with high rates of TB and are at potentially increased risk of exposure to contracting the disease.

The uptake data is based on BCG immunisations recorded in the National Community Child Health Database. Within BCUHB, BCG has been received by 4.8%, 4.4%, 3.8%, and 2.2% of children reaching their first, second, fifth and 16th birthdays (respectively) during quarter three of 2018. At Local Authority level, Wrexham had the highest proportion of children given BCG, specifically 8% and 6.1% of children reaching their first and 2nd birthday, respectively. Conwy had the highest proportion of children given BCG by 5 years of age (5.7%), and Denbighshire had the highest proportion of children given BCG by 16 years of age (2.7%). Child and adult BCG vaccinations are coordinated and led by different staff in the three areas. Three specialist respiratory nurses, one for each area lead clinics for high risk adults. Clinics are necessary for BCG to avoid wastage, as the vaccine only comes in a ten dose vial. There is no individual with responsibility for BCG vaccination in BCUHB, and no data is collected by the health board on the uptake rate for adult vaccination.

2 Adult Vaccinations

2.1 Human Papilloma Virus (HPV)

The HPV vaccination programme for men who have sex with men (MSM) has been offered since April 2017. In Wales, Health Boards offer sexual health services through integrated sexual health clinics. The vast majority of MSM who are in regular contact with sexual health clinics are seen at consultant led (level 3) sexual health clinics.

These clinics offer a full course of HPV vaccination to the following eligible groups when they are accessing services for sexual health care: all MSM up to and including those 45 years of age; transgender men and women, HIV positive men who are not MSM, HIV positive women, and sex workers. It is not intended that vaccination should be offered to all attendees in these groups but to those who may individually benefit. Clinics are not required to arrange separate HPV vaccination sessions or to proactively identify and contact eligible clients who have previously attended the services. The programme is not offered via Primary Care services.

2.2 Shingles

The shingles vaccination programme for people aged 70-79 years was introduced in Wales in September 2013. The introduction was phased with those aged 70 and 79 years eligible in the first year. Eligibility was defined by an individual's age on 1st September of each year, and they may receive the vaccine from the 1st April that year. Now all those aged between 70 and 80 years are eligible. Those who have received shingles privately are not recorded on the national statistics. There is no robust call and reminder system in place for shingles vaccination in Wales.

2.3 Pneumococcal

The pneumococcal vaccination programme was introduced in Wales in 1992 for adults deemed to be at risk of developing complications or severe disease. The programme has had several changes since then so that now adults aged 65 years and over are eligible and also people aged 6 months to 64 years with at risk conditions such as asplenia or if they have a cochlear implant.

3 Selective Vaccines

3.1 Travel Vaccines

Travel vaccinations are required to protect health when travelling abroad[18]. A risk assessment is conducted by a practice nurse in a General Practice following a request by the patient. This risk assessment will determine, if any vaccines are required for travel abroad. There are three categories of travel immunisations:

1. Those that must always be given as part of NHS provision including Hepatitis A (first and second /booster dose (6-12 months after the first dose); combined hepatitis A and B; Typhoid (first and any booster doses); combined hepatitis A; typhoid and Tetanus, diphtheria and polio (as given in the combined Td/IPV vaccine), and Cholera.
2. Those that cannot be given as an NHS service including Yellow Fever, Japanese B encephalitis; Tick borne encephalitis and Rabies.
3. Those that can be given as either NHS or as a private service including hepatitis B (single agent) any dose and Meningitis ACWY (quadrivalent meningococcal meningitis vaccine; A, C, Y and W135).

3.2 Workplace Vaccines

Employers need to have an effective immunisation programme in place to protect their employees from some infectious diseases such a Hepatitis B or influenza. The employer has an obligation to arrange and pay for this service. No data is collected on the uptake of vaccines apart from influenza in the NHS.

3.3 Medical Conditions

A range of medical conditions require extra protection through vaccination. Conditions such as diabetes, chronic liver disease and those on some cancer treatments are included (see routine immunisation schedule diagram in Section 4). Some vaccinations are needed more often than others, for example Hepatitis B is only needed once in a lifetime, whereas the flu vaccine is an annual immunisation.

Primary care keep records of who is eligible and are responsible for inviting patients and administering vaccinations to those with qualifying medical conditions. As conditions such as asthma and pregnancy change over time, if records are not updated regularly, GP lists may not be completely accurate. Measures are not recorded centrally by BCUHB or Wales of who is being invited or vaccinated in these medical groups, other than for flu. To find further details on the vaccination status of those with medical conditions the records of each GP surgery would need to be analysed.

[18] NHS Travel Vaccines: https://www.nhsdirect.wales.nhs.uk/travelhealth/TravelVaccines/