

Health and Social Care Committee

Inquiry into the measles outbreak 2013 – Evidence from the Welsh Government

Purpose

This paper provides a report on the recent measles outbreak and the specific issues raised by the Committee:

- the factors that have led to the current measles outbreak;
- the actions taken by public health professionals, in partnership with other agencies, in response to the outbreak;
- the lessons that could be learned in order to prevent future outbreaks.

The Role of the Welsh Government

The Welsh Government is responsible for setting policy and strategic direction and this includes policy and strategy issues that arise during the course of or because of a public health outbreak. The extent of the Welsh Government's involvement will depend on the scale and nature of the outbreak.

During the recent measles outbreak, Welsh Government officials have worked proactively with Public Health Wales, the Outbreak Senior Response Team and Health Boards to:

- establish clear lines of communication to ensure the provision of regular and timely information and advice to Ministers and others (as appropriate);
- set up effective liaison and working relationships between all agencies involved;
- assess the effectiveness of the local or national response and consider the impact of the outbreak on national policy or strategy.

Background and factors that led to the current outbreak

Prior to the introduction of measles vaccination in 1968, annual notification of measles across the United Kingdom varied between 160,000 and 800,000 cases a year, with a peak every two years and

100 deaths from measles every single year. The introduction of the MMR vaccine in October 1988 revolutionised that position. In the 20 years between 1992 and 2012, there have been only two deaths from acute measles infection across the whole of the United Kingdom. As a consequence of the MMR vaccine by the mid 1990s the transmission of measles had been interrupted with very low levels of cases.

During the late 1990s and early 2000s, levels of MMR vaccination fell sharply. This followed articles published in 1997/98 by Andrew Wakefield and a few other researchers claiming a link between MMR and autism and bowel disease. These articles have subsequently been completely discredited but the media coverage which arose at that time led to public concern about the safety of the vaccine.

Consequently, uptake of the MMR vaccine reduced across the UK. In Wales, uptake fell from a quarterly peak of 94% in 1995 to 78% by 2003 in two year old children. In Swansea, the uptake rate in 2003 fell to 67.5%. Whilst this was clearly a national phenomenon, data shows that the decline in the Swansea and Neath Port Talbot areas occurred both earlier and was steeper than in the rest of Wales. It is likely this may have been due to a combination of local media campaigns such as the South Wales Evening Post's campaign "MMR Parent's Fight for Facts", together with comments from community leaders about the safety of MMR. Parental concern was raised in this area.

The only way to prevent outbreaks of measles is to ensure that at least 95% of the population has received two doses of MMR vaccine to achieve so called "herd immunity". Since the Wakefield scare, a series of actions and campaigns have been instigated by the Welsh Government and Public Health Wales to reverse the drop in MMR uptake. Key amongst these have been:

- In 2000, the "MMR Mythbuster" was published and distributed to all GP practices.
- In 2005, the Welsh Government issued a Welsh Health Circular requiring Health Boards to participate in a national catch up programme for 11–25 year olds. Over 60,800 children and

young people were vaccinated with one or more dose of MMR during the campaign.

- In 2008, an audit of implementation of the recommendations to improve MMR uptake was carried out by the National Public Health Service (NPHS). As a result, in 2009, the Welsh Government wrote to all health boards to encourage full compliance with the Welsh Health Circular (2005).
- In 2009, the Welsh Government required all health boards to appoint immunisation leads and full time immunisation co-ordinators.
- In 2010, the Wales Immunisation Group was established to advise on policy and implementation of vaccination programmes.
- In 2011, the Programme for Government included a commitment to eradicate the health problems caused by measles, mumps and rubella, to be measured by the uptake of MMR vaccine by age two years.

Since the low point in 2003, uptake of MMR at routine ages has seen a sustained, upward trend. At the start of the outbreak, uptake of the first dose of MMR at two years had reached 94% across Wales. Whilst many more infants were having the vaccine as part of the routine schedule, a large number of children who had missed out in the past remained susceptible to the disease.

The measles outbreak around Swansea started in November 2012. Between 9 and 16 November, three notifications of measles cases were received by Public Health Wales. By 27 November, transmission of the disease in schools was evident and clusters of cases were being reported in the Abertawe Bro Morgannwg University and Hywel Dda Health Board areas.

Response to the outbreak

The integrated public health system in Wales enabled a swift response to the outbreak to be achieved. A multiagency response was necessary to minimize the impact of the outbreak.

The initial response to the outbreak was dealt with by a local, multidisciplinary team comprising officers from Abertawe Bro Morgannwg University Health Board and Public Health Wales. The actions taken focused on raising awareness of circulation of the disease and encouraging MMR uptake. These actions included: targeted school vaccination sessions; letters to primary care; letters to all schools; tailored letters to parents of unvaccinated children in schools where measles had been reported and a press release.

By 7 February, a total of 168 notifications had been received. The decision was taken therefore to implement a nationally led response by establishing a Senior Response Team which met for the first time on 18 February. The SRT provided advice to health boards, including primary care, the education sector and Welsh Government on the actions needed to deal with the outbreak and to minimize opportunities for further cases of measles to arise across Wales.

The good working relationships established between Welsh Government officials, health professionals and the media during the outbreak enabled accurate, clear information to be provided to the public; thus raising awareness of the seriousness of measles and the importance of MMR vaccination. All concerned should be commended for their hard work and sustained efforts over recent months to combat the spread of the disease.

Actions

Since being made aware of the outbreak back in November 2012, the Welsh Government has been monitoring the progress of the outbreak through reporting lines established with Public Health Wales and the Senior Response Team. As the number of cases increased, daily reports were provided on the numbers of cases and the actions being taken. This enabled officials to ensure that all necessary and appropriate measures to reduce the impact of the outbreak were being taken. These actions were aimed at:

- ensuring as many children as possible between one and 18 years of age were up to date with their MMR vaccinations.

- enabling those children who had not received the MMR vaccine to be vaccinated, to protect themselves, family members and others in their community.
- proactively working with the media to raise public awareness of the importance of MMR vaccination and the actions that people could take to help others and themselves.
- engaging with health professionals – including GPs, midwives and health visitors to identify vulnerable individuals and facilitate vaccination.
- providing catch-up vaccination sessions at schools, GP surgeries and walk-in open access clinics in the outbreak area and across Wales.
- providing clear advice and information for the public including in minority languages.
- promoting the uptake of vaccination amongst healthcare staff.
- working with the prison service to facilitate vaccination sessions for prisoners.
- implementing changes to speed up laboratory testing and diagnosis.
- introducing enhanced surveillance to allow progress of the disease to be tracked and the response to our actions, especially vaccination rates, to be monitored.

On 17 April, the Chief Medical Officer announced plans to vaccinate all unprotected school aged children as part of a Wales-wide campaign, with the aim of completing the task as soon as possible and no later than 24 May 2013. This task was completed on time and over 12,000 vaccinations were delivered in schools.

Communication

The media response has been led by Public Health Wales but closely co-ordinated with Health Boards, local authorities and the Welsh Government. Over a 100 regular media interviews were given, bi-weekly press releases were issued and internet and social media sites were used for promotional messages. The positive relationship built up with the media greatly assisted with reaching the public's attention.

The Chief Medical Officer (CMO) gave a number of media interviews to raise awareness of the outbreak and the importance of MMR vaccination and to reiterate the actions that people can take to help themselves and others.

The CMO and the Permanent Secretary also wrote to their counterparts in other UK countries to inform them of actions being taken in Wales to prevent the spread of the disease.

I have endeavoured to keep Assembly Members and others fully informed:

15 March I responded in detail to a letter from the Children and Young People Committee which raised key points on the handling of the outbreak at that time.

26 March I wrote to Assembly Members, Members of Parliament, Council Leaders and Chairs of Health Boards in Wales to offer an update and to request their assistance as community leaders, in tackling the spread of the disease.

16 April/23 May I issued written statements giving the latest position and urging young people and parents of children who had not been fully vaccinated to contact health professionals.

11 June Plenary debate was held on the measles outbreak and new vaccination programmes.

Outcome

Notifications of measles cases reached a peak by 15 April when nearly 200 cases were received in a single week. By mid May, weekly reporting had fallen to a tenth of that figure. The graph at Appendix 1 shows the impact of the combined actions on the outbreak.

During the period 18 March to 23 June, 72,790 unscheduled MMR vaccinations were given in a range of settings. The majority, 45,080 were given in primary care through general practices; 12,427 were given through the schools programme and 5,639 were provided in open walk-in sessions. A breakdown by Health Board is provided at Appendix 2. In addition, over 1,600 prisoners and over 5,600 healthcare staff have received MMR vaccinations since March.

Public Health Wales has estimated that, in November 2012, there were 41,129 children in Wales from two to 18 years of age who had not received any MMR vaccination and a further 35,926 who had received one dose. The highest proportion of children likely to be at risk were considered to be in the 10 to 18 years age range where it was estimated 50,887 children and teenagers in Wales had not received a full two dose course of MMR.

The graph at Appendix 3 shows the effect of the MMR uptake campaign in reducing the number of unvaccinated children in Wales. The greatest impact was in the outbreak area where the response was most concentrated.

Modelling work undertaken by Public Health Wales through the University of Warwick, has provisionally suggested that, without a catch up immunisation campaign, the epidemic would have continued until late autumn of 2013, with the peak number of notifications around late June. The combined efforts have reduced the length of the outbreak, by an estimated 10 weeks and its severity by a factor of 20. With 88 hospitalisations as a result of the outbreak, it is easy to see what its impact might otherwise have been.

Lessons learned for future outbreaks

In line with the Outbreak Plan for Wales and national public health policy, a comprehensive report on the factors contributing to the outbreak and the actions taken by all parties in response will be compiled following the announcement that measles is no longer circulating within the community. Public Health Wales will lead on this and its purpose will be to identify gaps in the strategies and

systems employed during the outbreak and make recommendations for further improvements for future application. The Outbreak and Incident Sub-Group of the Health Protection Committee will review the recommendations and lessons learned. The Outbreak Plan for Wales will be reviewed and updated in light of the recommendations.

In the meantime, some useful findings have already emerged from work already undertaken. Telephone surveys have been carried out by Public Health Wales with parents of school children who were recorded as incomplete for MMR immunisation in some schools in Swansea and Monmouth. The surveys found that an extremely small proportion of these parents reported continuing safety concerns about the MMR vaccine as a reason for not consenting to immunisation. This suggests that for the vast majority of parents, the MMR vaccine is now considered safe and effective.

In addition, emerging data from the Swansea outbreak area shows that two doses of the MMR vaccination has been more than 99% effective in preventing infection, with fewer than 10 confirmed cases in people who have previously been vaccinated. The data also suggest that one dose of MMR vaccine has shown to protect against measles in more than 95% of cases vaccinated – higher than previous experience.

These findings are encouraging but it is important to guard against complacency. We have seen in recent weeks that there are still individuals and organisations prepared to promote the single measles vaccine. The Welsh Government does not support the use of unlicensed vaccines and we will continue to reinforce the message that the MMR vaccine is the only safe and effective option.

Conclusion

The measles outbreak has enabled the Welsh Government and health professionals to re-engage with the public, and parents in particular, about the importance of vaccination in preventing not just measles but other potentially serious diseases.

The latest quarterly COVER report from Public Health Wales has shown that the national average uptake of the first dose of MMR in two year olds has reached 95% for the first time ever and that this level is being achieved in a record number of Welsh local authorities. This is the result of a long term positive trend, a consequence of combined efforts over a number of years and boosted by the efforts of Health Boards, General Practices and Public Health Wales in recent weeks. Further efforts are needed to maintain this level and to improve the MMR uptake rate of two doses of MMR for children reaching 5 years and 16 years of age which are currently 90% and 82% respectively.

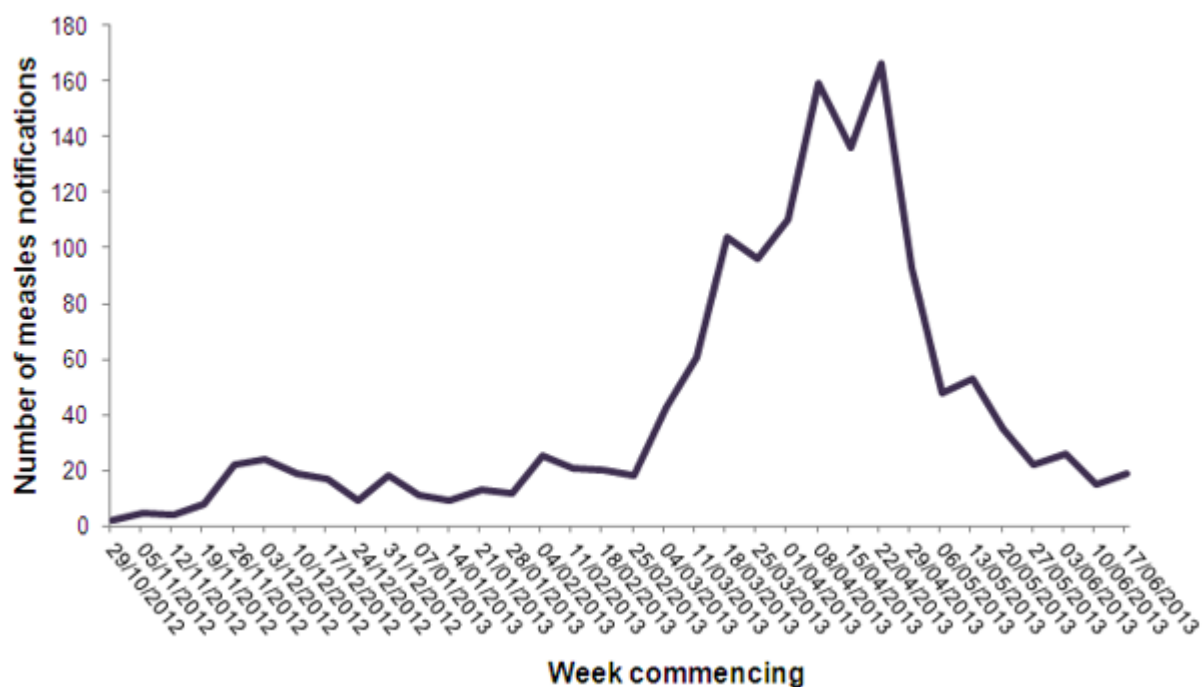
Officials and Public Health Wales will work with health boards to ensure that all available measures are in place to allow children who have missed vaccinations to catch up, including those in 'hard to reach' groups. This will be underpinned by the new NHS Delivery Framework which includes as a Tier 1 measure the need to ensure that 95% of children are fully immunised by the age of four years.

The response to the measles outbreak in Wales has prompted the three other UK countries to introduce catch up vaccination programmes for teenagers in their areas. As I have outlined above, the timely actions taken here have reduced the severity of the outbreak and shortened its duration.

It is clear that the response in Wales benefited from a national public health system capable of leading and co-ordinating an intense and effective effort involving primary care, local authorities and the voluntary sector. This enabled services to respond quickly and establish processes to deliver large numbers of vaccinations efficiently and effectively outside routine arrangements.

Notifications of measles in Wales by week

Chart of number of notifications from week commencing 29/10/2012 to week commencing 17/06/2013



* Data until end of week 25 2013 (17/06/13 – 23/06/13). Data for week 25 is provisional and may increase due to late notifications being received.

Source: CoSurv Notifications, Public Health Wales

Appendix 2

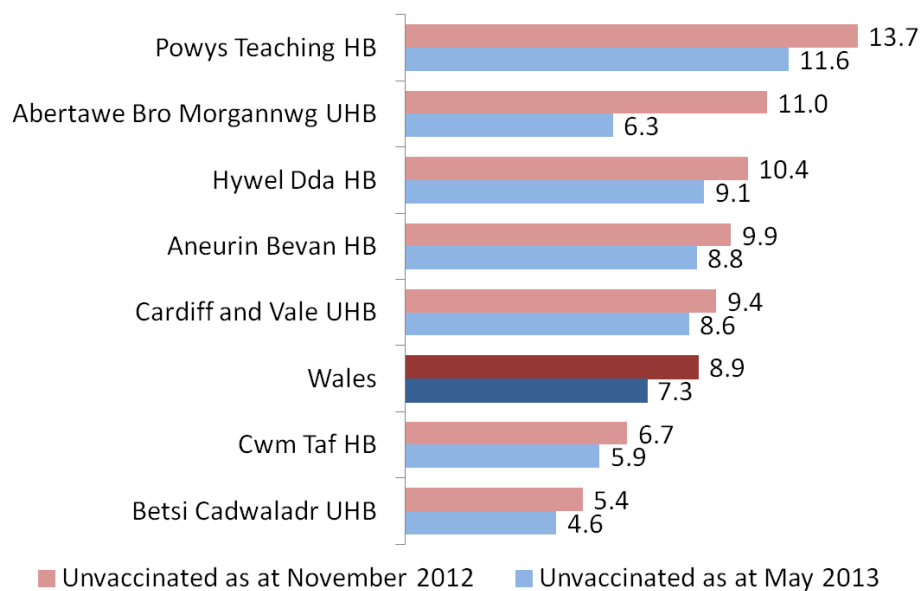
Cumulative number of MMR vaccines given at non-routine ages: 18/03/13 – 23/06/13

	GP*	Drop-in Clinics	School Sessions	Occupational Health	Total
Abertawe Bro Morgannwg UHB	16859	8764	1749	2600	29882
Aneurin Bevan HB	9233	2940	2094	472	14739
Betsi Cadwaladr UHB	3132	0	1344	548	5024
Cardiff and Vale UHB	4442	214	1283	1108	7047
Cwm Taf HB	3402	0	1640	466	5508
Hywel Dda HB	5527	570	1204	386	7687
Powys Teaching HB	2485	29	330	59	2903
Total Wales	45080	12427	9644	5639	72790

* Figures for latest week may increase as late data is submitted. Data submitted by approximately 90% of General Practices in Wales. Data collection began part-way through week commencing 11/03/2013.

Source: Public Health Wales – GP data from Audit+ DQS, Abertawe Bro Morgannwg University Health Board, Aneurin Bevan Health Board, Betsi Cadwaladr University Health Board, Cardiff and Vale University Health Board, Cwm Taf Health Board, Hywel Dda Health Board and Powys Teaching Health Board

The change in the proportion of 10 to 18 year olds in Health Board areas recorded as not having had any MMR doses between November 2012 and May 2013



Data source: NCCHD, February 2013 and May 2013 refreshes
Public Health Wales