

Overview of measles



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Introduction

This essay aims to critically analyse how the chosen topic, measles, a highly infectious virus, has been dealt with by a number of specific groups, these being PublicHealthEngland (PHE), Health Promotion, the Government, and the general public, between 2007 – 2013. Evidence and the literature will be reviewed in order to determine what changes and improvements, if any, to public health with regards to measles, have been made, as a direct result of activities carried out by the groups mentioned, in addition to analysing whether lessons have been learned along the way.

The Agents

The groups included in this critique with varying levels of responsibility for public health are:

Public Health England (PHE)

Health Promotion

The Government

The general public

Public Health England (PHE) has a mission to protect and improve the nation's health and to address inequalities. It aims to make the public healthier by encouraging dialogue, and advising the Government, the NHS and other relevant groups including the public, with a responsibility to research and analyse data to improve our understanding of health (Department of Health, 2012). The World Health Organisation (WHO) has a focus on health promotion in relation to education, community development, policy, legislation and regulation, to control and prevent disease (World

Health Organisation, 2009). The Department of Health is a ministerial department led by a Government minister, the Secretary of State for Health. It is responsible for government policy on health and social care matters in England, and it oversees the English NHS, aiming to improve the quality of care and meet patient expectations. The Department often links some of its work with arms-length bodies including PHE (Department of Health, 2014). Increasing patient and public involvement is at the heart of many medical research and health organisations, to ensure that issues relevant to patients, service users, carers and the public, reflect their views, and meet their health and social care needs.

The chosen topic: Measles

Measles is one of the most contagious viral diseases and can sometimes result in serious complications. The disease spreads easily via droplets resulting from cold symptoms. Following an incubation period of 1-2 weeks, symptoms of measles include a fever, cold symptoms such as a cough and sore throat with swollen lymph nodes, conjunctivitis, a sensitivity to light, and greyish spots around the mouth and teeth known as Koplik's spots which appear before the red rash appears. These symptoms and the rash remain for a few days before disappearing, and full health is often achieved. However complications can occur, especially in children or vulnerable patients, including febrile convulsions, pneumonia, inflammation of the middle ear, and inflammation of the nervous system (de Swart RL, 2008). Anyone can get measles if they have not been vaccinated or have not had it previously, although it is most common in children aged 1-4 years. Once a person has had measles, it is extremely rare to develop the infection again

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as the disease gives lifelong immunity. It is labelled as a notifiable disease in the UK, which means that by law, all cases of the disease must be reported to a health officer or local government authority. However it is now uncommon in the UK because of the effectiveness of a vaccine, to be discussed (Health Protection Agency, 2010).

Management and Prevention

Measles is easily prevented by vaccination in childhood. The measles, mumps and rubella (MMR) vaccine is part of the routine childhood vaccination programme. One dose is given to a child at 12-13 months old, with a second dose given between 3-5 yrs old. Other groups (e. g. adults, babies under 6 months) may be considered for the vaccine if there is a need for protection.

History

Evidence of cases of measles in England and Wales began in 1940 with hundreds of thousands of cases reported and approximately 100 deaths annually. Following the introduction of a measles vaccination in 1968, cases remained high due to the vaccine not reaching sufficient numbers to make a difference. The MMR vaccine, introduced in 1988, and of equal importance, coverage levels exceeding 90%, reported cases fell significantly (Public Health England, 2013). However, those children not immunised remained susceptible at an older age, and indeed, small outbreaks occurred in England and Wales in 1993 predominantly affecting secondary school children. A measles epidemic also occurred in Scotland in 1993-94, with 138 teenagers admitted to a single hospital (Ramsey et al., 1994). As a result of these outbreaks, and in order to prevent further epidemics, a UK vaccination campaign was implemented towards the end of 1994, with millions of

children vaccinated (Vyse et al., 2002). To maintain this control, following the campaign, the two-dose MMR schedule mentioned was introduced in 1996, resulting in a significantly reduced incidence of measles.

Adverse reactions / Other Conditions

A number of adverse reactions following the MMR vaccine are known, most commonly fever and a rash. More serious, rarer reactions include febrile seizures and arthritis (Miller et al., 1989). Systems are in place to deal with all suspected adverse reactions, involving the Commission on Human Medicines. A number of conditions have been linked to the vaccine, including Guillain-Barre syndrome, gait disturbance and bowel disease, although research suggests no evidence to link the vaccine to these conditions (Patja et al., 2001; Miller et al., 1995; Seagroatt, 2005). The most well-known condition that received huge news coverage in recent years is autism, where it was claimed there was a direct link between MMR and this condition. However this was widely disputed, and there is now overwhelming evidence to conclude that MMR does not cause autism (Farrington et al., 2001).

Current Information

Outbreaks of measles in England have been increasing in the last two years with a total of 1, 920 confirmed cases in 2012, the highest annual figure since 1994. In early 2013, 587 cases were already confirmed in England, and although these were spread across the country, higher numbers were seen in the North West and North East. Those most affected have been teenagers, a pattern of incidence not seen in previous years. Secondary schools provide an opportunity for rapid spread of infection, and this was observed in

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Swansea, where Public Health Wales received 1, 202 notifications of measles, with 88 hospital admissions and one death (Public Health Wales, 2013). The increase of measles during 2012 and 2013 mainly in teenagers (and young adults) has been linked to a decrease in the uptake of the MMR vaccine in the late 1990s, when extensive and adverse media coverage reported claims of links between the vaccine, autism and bowel cancer (as previously mentioned). Indeed such was the extent of the media ‘scare’, not only did it cause large rises in the number of measles cases in the UK, but the seriously flawed and eventually discredited research brought the medical profession into disrepute.

MMR Action Plan

Although work was undertaken immediately by health services to restore confidence in the MMR vaccine, following the formal withdrawal of the research papers, significant numbers of children remained unvaccinated, with no protection against measles (and mumps and rubella). This demonstrated that reduced uptake of the vaccine, whatever the reasons, immediately impact negatively on the health of the public, which in turn has a knock-on effect on health services in general. For this reason, an MMR Action Plan (also referred to as a national catch-up campaign) was implemented, with an overall aim to ‘urgently get the right people vaccinated in the right place by the right providers’ (Public Health England, 2013). Key elements of the plan included:

Raising awareness of the dangers of not being vaccinated, aiming to increase those unvaccinated or under-vaccinated (not receiving both doses) via their GP.

GP practices proactively identifying those at risk who require the vaccine, and making it available to them.

Support and intervention where required by Screening and Immunisation Leads (SILS) to track GP Practices and ensure action is occurring.

Additional plans in place to target particularly vulnerable or low coverage groups, with methods in place to encourage good uptake of the vaccine.

Ongoing tracking and reporting to monitor the success of the plan, in addition to ongoing communications and campaigning to highlight the necessity of the plan.

The overall target was that at least 95% of young people aged 10 – 16 years would have received at least one dose of MMR by the end of September 2013, with the knowledge that if this was achieved, this would be enough to provide significant immunity in the population, thereby reducing transmission and spread of measles. Bodies including Public Health England, the Department of Health, and the NHS all took organisational responsibility, with support from Directors of Public Health in local government.

Communication was key, ensuring appropriate campaigning designed to engage with stakeholders including patients and the public, and Local Authorities. Posters and flyers entitled ‘ Measles: Don’t let your child catch it’ were disseminated across the country, targeting schools, head teachers, school governors, school nurses, health visitors, GPs, and paediatricians, to name a few.

The Outcome

An evaluation of the MMR Action Plan/Catch-up Campaign in England was published in February this year (Public Health England, 2014), reporting on results obtained at the midway point. Taking limitations into account, including inaccurate GP records, the report estimates that approximately 95% of those children targeted received at least one dose of the MMR vaccine. However evidence of variation in vaccine coverage across local areas was identified, with London having an estimated coverage of 88%. This significantly lower percentage is believed to be an underestimate due to less accurate GP records and a higher mobility in the London population making it more challenging to track people. It was recognised further studies would be required to assess areas such as London. However, overall, the campaign appeared to be successful at the midway point, and where lower coverage was reported, this enabled identification of a need to ensure further work to increase coverage in such areas, and to reach specific groups.

Conclusion

Only 8 confirmed cases of measles were reported in England in November and December 2013, a very significant decline in cases since a peak number was reported in April 2013 of nearly 300 cases (Health Protection Report, 2013). Therefore based on the most recent data and published reports, these findings provide evidence of a successful campaign led by Public Health England, with a focus on working with other health bodies, to both promote a campaign and implement its messages swiftly and practically. Coverage of the vaccine following the campaign was higher than before the catch-up plan was launched, and the 95% coverage target was achieved overall in England. Given the aim of the campaign, targeting children and young people and

their parents and guardians with transparent and accessible information was key to ensuring an effective partnership. In addition, the sensitivities linked to the choice not to be vaccinated in the majority of cases (as a result of media coverage) meant it was essential that a balance was achieved to positively influence people that the MMR vaccine is necessary without causing further fear or uncertainty. The partnership demonstrated between Public Health England, Local Authorities, NHS England and GPs appears to have had a hugely beneficial impact on the success of this campaign. In addition GPs have not only accurately and proactively identified those patients requiring the vaccine, but messages reached those targeted too, with parents and young people encouraged to contact their GP even if not contacted. Further work is required to update evidence on the campaign's effectiveness, identify factors associated with those that chose to accept the vaccine, understand better the barriers to vaccination for those that chose to decline, and to ensure the highest coverage of the vaccine is maintained to ensure prevention of further outbreaks of measles.

Word Count: 1995

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