National Screening and immunisation

November 2013
Annual uptake of MMR at all-time high

The percentage of children immunised in 2012/13 against measles, mumps and rubella (MMR) by the age of two is the highest annual figure since the vaccine was first introduced in England in 1988, new figures show. The previous high of 91.8% has been exceeded, and now stands at 92.3% - a remarkable achievement by all concerned.

Amongst the other highlights in the report are increases in the uptake of several vaccinations to levels above the WHO recommended threshold of 95 per cent. These include primary:

- DTaP/IPV/Hib immunisation by age one (95.1 per cent)
- MenC immunisation by age two (95.1 per cent)
- Hib immunisation by age five (95.4 per cent)

Vaccine uptake in children

Vaccine uptake in children continues its upward trend throughout the UK.

UK vaccine coverage continues to improve and all childhood vaccines evaluated for children reaching 12 months, 24 months and five years of age in the quarter April to June 2013 increased marginally compared to levels reported in the previous quarter, with the exception of third dose DTaP/IPV/Hib coverage at 24 months and five years which remain the same.

Another positive story is that the number of confirmed cases of measles in England has fallen for the fourth successive month from over 300 in March to 21 in August.
But it’s not all good news. After reaching an uptake of pertussis vaccine of 60% in pregnant women in February this year, uptake had dropped back to 50% by June. This is of particular concern because the incidence of whooping cough in the general population shows no sign of abating.

**Influenza**

**Flu vaccination media campaign**

Public Health England (PHE) launched a national seasonal flu campaign on 11 October 2013 to encourage uptake of the flu vaccine amongst the most at-risk groups. The campaign is specifically aimed at adults (under 65) and parents of children (4-17) with long-term health conditions and pregnant women. We are also targeting parents of two- and three-year-olds encouraging them to get their children vaccinated with the new nasal spray vaccine. Media channels include radio, national press, magazines, online display and search accompanied by a PR push. In addition, we will be including messaging for adults with long-term health conditions on pharmacy bags in around 1500 pharmacies.

If you would like to order flu posters they can be viewed online [here](https://www.gov.uk/government/publications/influenza-the-green-book-chapter-19) and ordered at the

**Publications Orderline**

Green Book: the revised influenza chapter is now available online at

Public Health England

**PHE Bulletin** provides public health news and information to local authorities, public health professionals and anyone interested in the work of Public Health England.

Highlights of the latest issue include: Cold Weather Plan for England 2013, guidance on appointing directors of public health and PHE knowledge strategy for open review.

UK National Screening Committee: Screening Matters

Screening Matters is the bimonthly online newsletter of the UK National Screening Committee. It is aimed at everyone involved in screening - policy makers, commissioners, providers and those in quality assurance. It covers policy development and the NHS Screening Programmes in England.

**Issue 16, September - October 2013** includes the following:

Managing Incidents in the NHS Screening Programmes

The UK NSC's new interim guidance on [managing incidents in the national NHS screening programmes](http://immunisation.dh.gov.uk/category/updates/) (September 2013) is now available.

This guidance clarifies the roles and responsibilities for reporting, investigating and managing screening incidents in the context of the changes to commissioning and public health from April 2013.
NHS Newborn Blood Spot Screening Programme

Publication of revised Standards for Newborn Blood Spot Screening

The programme published its revised Standards for Newborn Blood Spot Screening on 23 August 2013. These revised standards replace standards 1–9 in Standards and Guidelines for Newborn Blood Spot Screening (August 2008) and unless stated have an implementation date of April 2014.

NHS Newborn and Infant Physical Examination (NIPE)

e-learning resource launch

On 25 November 2013, the NHS Newborn and Infant Physical Examination Programme (NIPE) launched an exciting new eLearning package.

Using film and animation to illustrate best practice, the module focuses on the screening elements of the examination - examination of the eyes, heart, hips and testes, in the context of the full examination. The resource is primarily aimed at doctors - GPs and their trainers, and junior hospital doctors and their trainers, and has been developed with their level of knowledge in mind.

New NIPE service specification for 2014-15

The new NHS Screening Programmes service specifications for 2014-15 have been published which includes the newborn and infant physical examination specification

Section 7a of the NHS Act 2006 sets out how NHS England is accountable for the delivery of certain public health services and gives details of arrangements for expert support from Public Health England. The service specifications set out details on each of the public health programmes for use by commissioners and service providers.
Immune response.

Adult immunisation in the UK: Improving access to vaccination for older people.

The ageing of society, resulting from longer life expectancies and lower rates of fertility will have huge implications for the way we organise our health and social care services.

Health interventions will need to increasingly be focussed on prevention. As part of a healthy ageing framework, vaccination has an instrumental role to play.

Vaccination has controlled 12 major diseases (at least in parts of the world). Other than clean water, it has arguably had the biggest impact on mortality reduction and population growth. A greater focus on the vaccination of older adults is particularly important due to immunosenescence, antimicrobial resistance and global migration.

Over recent years, death rates from infectious diseases have fallen globally, partly as a result of vaccination campaigns and partly due to initiatives which have reduced the spread of such diseases. But they are still a major cause of death in the very young and old. This report sets the scene for adult immunisation and makes detailed recommendations for, amongst others, Government, Public Health England, JCVI and individuals:

Review of the scientific literature on drivers and barriers of seasonal influenza vaccination coverage in the EU/EEA

Every winter, influenza epidemics cause significant morbidity and mortality throughout Europe. High-risk groups such as older people, individuals with chronic diseases, pregnant women and small children are most affected by these epidemics. Healthcare workers (HCW) are also at high risk of influenza transmission to and from patients. Seasonal vaccination against flu viruses reduces the burden of disease in these groups and has been widely available in most EU/EEA countries for several years. However, uptake of seasonal influenza vaccination for target groups in most of these countries still falls short of the 75% coverage target established by the European Council of Ministers in 2009. We conducted a systematic review to identify significant evidence on drivers of and barriers to seasonal influenza vaccination of relevance to the EU/EEA. We focused on the high-risk groups which have been identified by ECDC as those where high coverage of seasonal flu vaccination is important.


Adult vaccination: a key component of healthy ageing. Benefits of life-course immunisation in Europe

This report puts forward evidence that adult immunisation programmes, especially for those aged above 50, can bring significant health and socio-economic benefits. These include:

- Extending protection beyond the patient to the wider society through herd protection and protection of individuals who have not developed immunity (e.g. newborn infants).
- Contributing to the fight against antimicrobial resistance.
- For herpes zoster, seasonal influenza, IPD and pneumonia, studies were found for 13 EU Member States that show immunisation is likely to provide a cost-effective strategy for those aged 50 years or over.

Furthermore, a broader and more long-term view of vaccination shows its strongly beneficial economic consequences, for example, through its effects on growth, productivity and workforce participation, as well as on tax and pension systems.

Recent research

Should Europe have a universal hepatitis B vaccination programme?

WHO recommends that hepatitis B virus should be included in childhood vaccination programmes. Pierre Van Damme and colleagues argue that universal immunisation is essential to stop people becoming carriers but Tuija Leino and colleagues think that a targeted approach is a better use of resources in countries with low endemicity.

The Pertussis Paradox.

The introduction of a safer vaccine has inadvertently led to a frightening spike in the deadly disease commonly known as whooping cough.

Vaccination programme : Reducing rotavirus gastroenteritis in children.

Rotavirus is the leading cause of gastroenteritis in children living in the UK (Public Health England (PHE), 2013). On 1 July 2013, a live oral rotavirus vaccine, Rotarix (made by GlaxoSmithKline), was introduced into the national routine childhood immunization schedule for all children born on or after 1 May 2013. The programme is expected to reduce the incidence of rotavirus gastroenteritis in young children. This article provides a background to the introduction of the new vaccination programme, discussing the epidemiology and clinical features of rotavirus infection. As a major influence on vaccine uptake is the way in which health professionals communicate with parents and carers, this article highlights key vaccine and programme information for practitioners who promote and advise parents and carers about immunisations.

The introduction of a new preventive vaccine for shingles.

Simon Oakley and Adam Goodband look at the treatment and management of shingles and consider the efficacy of a preventive vaccine.
Recent research

The role of the BCG vaccine in preventing tuberculosis in the UK
Practice Nursing, Oct 2013, vol. 24, no. 10, p. 496-500, Crisp, Debbie

Debbie Crisp explains current guidelines for the Bacillus Calmette-Guérin (BCG) vaccination programme, and provides an overview of BCG aftercare.

How viruses attack : the story and history of influenza.
Practice Nurse, Sep 2013, vol. 43, no. 9, p. 44-49, (September 20, 2013) Bostock-Cox, Beverley

Advanced Practice module 13.09 The story and history of influenza. History demonstrates that influenza can cause devastating pandemics. Healthcare systems and healthcare professionals in the UK and around the world need to be prepared for the next pandemic, when (not if!) it arrives.

The immunisation of children and young people: An update
British Journal of School Nursing, Sep 2013, vol. 8, no. 7, p. 336., 1752-2803 (September 2013)

A Men C vaccine booster has recently been introduced into this year’s children and young people’s routine immunisation schedule. This article aims to provide an update on the immunisation schedule, planned changes and some of the vaccines that are currently being discussed for inclusion. [PUBLICATION] 7 references

Assisting healthcare professionals in understanding drivers and barriers to improving pre-school immunisation uptake
Community Practitioner, Sep 2013, vol. 86, no. 9, p. 28-31, Roland, Damian, Ellis, Catherine, Blair, Mitch E

Improving the uptake of immunisations in pre-school children is an ongoing public health policy strategy. Delineating the drivers and barriers affecting uptake may be helpful to health care professionals aiming to assess their own effectiveness or understand confounding factors when implementing improvement initiatives. Relevant literature was collated and placed into one of three over arching domains: 1. wider environment, 2. home environment, and 3. practice factors.
A range of sub-domains are presented in addition to metrics to enable their assessment. The list of domains will be helpful to health care professionals interested in developing quality improvement programmes to increase or assess pre-school immunisation uptake.

Boosting the flu vaccination uptake to meet this year’s tough targets.
Practice Nurse, Aug 2013, vol. 43, no. 8, p. 10-13, Greenfield, Jenny

With significant increases in the Department of Health’s targets for seasonal flu vaccination - especially in 'at risk' groups and pregnant women - practice nurses are going to need all the help they can get to maximise uptake: Jenny Greenfield offers a reminder of what is required, and some practical advice on how to go about it.

Influencing factors in MMR immunisation decision making

Immunisation decision making is not a straightforward process for parents. Many factors influence parental decision making on whether they immunise their child with the measles, mumps and rubella (MMR) vaccine. The feasibility study described in this article provides insight into influencing factors associated with decisions regarding the immunisation of children by parents. The study findings suggest that the practice nurse is a credible source of information for parents seeking informed decision making. At a time when the incidence of measles and mumps is rising in the UK, the provision of appropriate information by the practice nurse has the potential to increase uptake of the MMR vaccine.

Shingles part one: following the guidance for vaccination
Nursing & Residential Care, Aug 2013, vol. 15, no. 8, p. 538-542 Nazarko, Linda

The Government have introduced a routine vaccination for people aged between 70 and 79. In the first of this three-part series, Linda Nazarko highlights what the guidance entails and the benefits and risks of this for older people in care homes.
Strategies to control pertussis in infants
Archives of Disease in Childhood, Jul 2013, vol. 98, no. 7, p. 552-555 Amirthalingam, Gayatri

The UK is currently in the midst of a large outbreak of pertussis, with the highest morbidity and mortality occurring in young unimmunised infants. This review considers the potential strategies to optimise control of pertussis in infants, including vaccination of (1) adolescents, (2) close household contacts of newborn infants (cocooning), (3) newborn infants and (4) pregnant women. The paper discusses the evidence base for each of these strategies and considers the rationale for the recent introduction of a temporary vaccination programme for pregnant women in the UK in response to the ongoing outbreak.

Face to face interventions for informing or educating parents about early childhood vaccination.
Cochrane Database of Systematic Reviews, 2013, vol./is. 5 Kaufman J, Synnot A, Ryan R, Hill S, Horey D, Willis N, Lin V, Robinson P

BACKGROUND: Childhood vaccination (also described as immunisation) is an important and effective way to reduce childhood illness and death. However, there are many children who do not receive the recommended vaccines because their parents do not know why vaccination is important, do not understand how, where or when to get their children vaccinated, disagree with vaccination as a public health measure, or have concerns about vaccine safety. Face to face interventions to inform or educate parents about routine childhood vaccination may improve vaccination rates and parental knowledge or understanding of vaccination. Such interventions may describe or explain the practical and logistical factors associated with vaccination, and enable parents to understand the meaning and relevance of vaccination for their family or community.

OBJECTIVES: To assess the effects of face to face interventions for informing or educating parents about early childhood vaccination on immunisation uptake and parental knowledge

MAIN RESULTS: We included six RCTs and one cluster RCT involving a total of 2978 participants. Three studies were conducted in low- or middle-income countries and four were conducted in high-income countries. The cluster RCT did not contribute usable data to the review. The interventions comprised a mix of single-session and multi-session strategies. The quality of the evidence for each outcome was low to very low and the studies were at moderate risk of bias overall. All these trials compared face to face interventions directed to individual parents with
control. The three studies assessing the effect of a single-session intervention on immunisation status could not be pooled due to high heterogeneity. The overall result is uncertain because the individual study results ranged from no evidence of effect to a significant increase in immunisation. Two studies assessed the effect of a multi-session intervention on immunisation status. These studies were also not pooled due to heterogeneity and the result was very uncertain, ranging from a non-significant decrease in immunisation to no evidence of effect. The two studies assessing the effect of a face to face intervention on knowledge or understanding of vaccination were very uncertain and were not pooled as data from one study were skewed. However, neither study showed evidence of an effect on knowledge scores in the intervention group. Only one study measured the cost of a case management intervention. The estimated additional cost per fully immunised child for the intervention was approximately eight times higher than usual care. The review also considered the following secondary outcomes: intention to vaccinate child, parent experience of intervention, and adverse effects. No adverse effects related to the intervention were measured by any of the included studies, and there were no data on the other outcomes of interest.

AUTHORS’ CONCLUSIONS: The limited evidence available is low quality and suggests that face to face interventions to inform or educate parents about childhood vaccination have little to no impact on immunisation status, or knowledge or understanding of vaccination. There is insufficient evidence to comment on the cost of implementing the intervention, parent intention to vaccinate, parent experience of the intervention, or adverse effects. Given the apparently limited effect of such interventions, it may be feasible and appropriate to incorporate communication about vaccination into a healthcare encounter, rather than conduct it as a separate activity.

Title: Review: interventions to increase influenza vaccination among healthcare workers in hospitals. Influenza & Other Respiratory Viruses, July 2013, vol./is. 7/4(604-21) Hollmeyer H, Hayden F, Mounts A, Buchholz U

Abstract: Annual influenza vaccination rates among hospital healthcare workers (HCW) are almost universally low despite recommendations from WHO and public health authorities in many countries. To assist in the development of successful vaccination programmes, we reviewed studies where interventions aimed to increase the uptake of influenza vaccination among hospital HCW. We searched PUBMED from 1990 up to December 2011 for publications with
predetermined search strategies and of pre-defined criteria for inclusion or exclusion. We evaluated a large number of ‘intervention programmes’ each employing one or more ‘intervention components’ or strategies, such as easy access to vaccine or educational activities, with the goal to raise influenza vaccine uptake rates in hospital HCW during one influenza season. Included studies reported results of intervention programmes and compared the uptake with the season prior to the intervention (historical control) or to another intervention programme within the same season that started from the same set of baseline activities. Twenty-five studies performed in eight countries met our selection criteria and described 45 distinct intervention programmes. Most studies used their own facility as historical control and evaluated only one season. The following elements were used in intervention programmes that increased vaccine uptake: provision of free vaccine, easy access to the vaccine (e.g. through mobile carts or on-site vaccination), knowledge and behaviour modification through educational activities and/or reminders and/or incentives, management or organizational changes, such as the assignment of personnel dedicated to the intervention programme, long-term implementation of the strategy, requiring active declination and mandatory immunization policies. The number of these components applied appeared to be proportional to the increase in uptake. If influenza uptake in hospital HCW is to be increased on sustained basis, hospital managers need to be committed to conduct a well-designed long-term intervention programme that includes a variety of coordinated managerial and organizational elements.

Assisting healthcare professionals in understanding drivers and barriers to improving pre-school immunisation uptake.
Community Practitioner, September 2013, vol./is. 86/9(28-31), Roland D, Ellis C, Blair ME

Abstract: Improving the uptake of immunisations in preschool children is an ongoing public health policy strategy. Delineating the drivers and barriers affecting uptake may be helpful to health care professionals aiming to assess their own effectiveness or understand confounding factors when implementing improvement initiatives. Relevant literature was collated and placed into one of three over arching domains i) Wider environment ii) Home environment and iii) Practice Factors. A range of sub-domains are presented in addition to metrics to enable their assessment. The list of domains will be helpful to health care professionals interested in developing quality improvement programmes to increase or assess pre-school immunisation uptake.