

JOINT COMMITTEE ON VACCINATION AND IMMUNISATION

DRAFT MINUTES OF THE MEETING held on Tuesday 17 June 2008

136a-137a Skipton House, 80 London Road,
London, SE1 8UG

Members

Professor Andrew Hall (Chair)
Professor Paul Griffiths
Ms Anne McGowan
Professor Jonathan Friedland
Professor Simon Kroll
Dr Paul Jackson
Mrs Pauline MacDonald

Professor Brent Taylor
Professor Alan Emond
Dr Richard Roberts
Dr Syed Ahmed
Dr Ray Borrow
Mrs Vivienne Parry

Ex-Officio

Professor David Hill – NathNac
Dr Claire Cameron – HPS Scotland

Dr Stephen Inglis – NIBSC
Dr Paul Colville-Nash – MRC

Observers

Wg CDR Andy Green – MoD
Dr Darina O’Flanagan –Eire

Lt Cdr Vikki Cotton – MoD
Dr Linda Diggle – Jersey

Invited to attend

Professor Elizabeth Miller – HPA
Mrs Joanne White -HPA
Dr Ruby Siddiqui -HPA

Dr Mary Ramsay – HPA
Dr Gayatri Manikkavasagan –HPA

Welsh Assembly Government

Mr Neil Robins

Dr Sarah Hayes

Northern Ireland

Dr Lorraine Doherty

Department of Health

Professor David Salisbury (Medical Secretary)
Dr Dorian Kennedy (Admin Secretary)
Mr Daniel Eghan (minutes)
Mr Zoltan Bozoky
Ms Heather Lambert

Dr Karen Noakes
Dr Stephen Robinson
Mr Geoff Dent
Mrs Pamela Gardiner
Mrs Ann Freese

MHRA

Dr Philip Bryan

Dr Jane Woolley

1. ANNOUNCEMENTS AND WELCOME

The Chairman welcomed all those present to the meeting.

Dr Anthony Harnden, Dr Malcolm McWhirter (Scottish Executive) had sent their apologies.

Dr Paul Colville-Nash replaced Dr Desmond Walsh as the MRC observer for JCVI.

Members were reminded of the need to ensure their declarations of interest were up-to-date, and to declare their interests relevant to each agenda item.

The Chairman noted that this was the last meeting for Professor Simon Kroll, Professor Paul Griffith and Professor Brent Taylor. They were thanked for their valuable contribution to the work of JCVI.

2. MINUTES OF THE LAST MEETING HELD ON 13 FEBRUARY 2008

Members agreed that no changes needed to be made to the minutes.

The secretariat was asked to remove the draft status heading from the minutes as they were now final. This would be updated on the JCVI website.

3. MATTERS ARISING

3.1 *Palivizumab and Q fever update*

The Palivizumab work will need to be brought to a future JCVI meeting because further details are required.

The work on Q fever is also being taken forward. Professor Andrew Hall will be meeting with Professor Barry Marmion to prepare an item for a future JCVI meeting advising the Health and Safety Executive on exposed or potentially exposed workers.

The Committee noted the updates and agreed these items would come to a future JCVI meeting.

3.2 *Seasonal Influenza*

The members asked the secretariat what was being done to improve uptake in health care workers.

The DH secretariat explained that last week a national conference was held in London for influenza immunisation co-ordinators. Representatives from PCTs in England attended. Examples of good practice on increasing vaccination among healthcare workers were shared.

It was clear that this is an area that needs improvement. Improvement in this area is the prime responsibility of occupational health departments, at local level and DH Immunisation Branch is undertaking work in this area.

3.3 JCVI terms of reference

The Committee considered the need to clarify the JCVI terms of reference to refer to cost effectiveness. This was a significant part of the Committee's work in the assessment of proposals for new vaccination programmes.

It was noted that the Committee may need to strengthen its expertise in economic analysis, and in mathematical modelling in order to meet the growing need in this area. The Committee noted that it would be important to ensure that the modelling was robust to ensure that if challenges were made it could be justified.

The committee agreed that the terms of reference should be revised to include economic modelling. A draft revised terms of reference would be sent to members for final approval.

4. Rotavirus subgroup

The following member declared interests in Sanofi Pasteur, and in GSK.

| | |
|--------------------------|--|
| Professor Brent Taylor | non-personal non-specific, |
| Dr Ray Borrow | personal non-specific; non-personal non-specific |
| Dr Stephen Inglis | non-personal non-specific |
| Mrs Pauline MacDonald | personal non-specific; non-personal non-specific |
| Professor Paul Griffiths | personal non-specific; non-personal non-specific |
| Dr Claire Cameron | non-personal non-specific |

The rotavirus subgroup met on 17 March 2008 to examine the evidence on rotavirus vaccination. There were no plans to meet again as this work had been completed.

The following recommendation was provided to the committee.

1. that there is a considerable burden of disease due to rotavirus in the UK and that the bulk of this burden falls on families and to a lesser extent primary care;
2. that mortality is very rare and very difficult to estimate with any accuracy;
3. that there are no special high risk groups that it would be appropriate to target for selective vaccination;
4. that there are two rotavirus vaccines which are each highly effective in preventing severe disease but that the strength of evidence for protection against milder disease differs between them;
5. that the available evidence does not exclude an increased risk of intussusceptions (up to sixfold);
6. that economic analyses from a health care provider perspective indicate that universal vaccination exceeds the accepted threshold for implementation unless the vaccine price is less than half that currently proposed.

Although it was considered that this vaccine would reduce the incidence of diarrhoea in the population, it does not meet the current Government economic criteria for the introduction of a new vaccine. It probably would do so if the economic analysis were from a societal perspective. However the same economic criteria are used to make decisions across the health service. The committee asked that when Ministers were informed of this decision it was made clear that whilst vaccination did not currently pass government economic criteria it is likely that it would be of benefit to society as a whole if it were introduced.

The committee agreed that they would reconsider rotavirus vaccination if there were a change in the price of vaccines.

5. *Varicella/Herpes Zoster subgroup*

The following members declared interests in Sanofi Pasteur or GSK.

| | |
|--------------------------|---|
| Professor Simon Kroll | personal non-specific; non-personal non-specific |
| Professor Brent Taylor | non-personal non-specific |
| Dr Claire Cameron | non-personal non-specific |
| Dr Ray Borrow | personal non-specific; non-personal non-specific |
| Dr Stephen Inglis | non-personal non-specific |
| Mrs Pauline MacDonald | personal non-specific; non-personal non-specific |
| Professor Paul Griffiths | personal-specific; non-personal non-specific (left the room for this item due to the personal specific interest)) |

The Varicella/Herpes Zoster subgroup met on 28 April 2008 to discuss the benefits of introducing a varicella antenatal screening as an interim measure before any decision was made on a universal varicella vaccination programme.

Antenatal screening and vaccination of seronegative women post-natally has been found to be cost-saving in a published study. The subgroup considered that although such a recommendation would provide some clinical benefit for both pregnant women and their babies, the practicalities of making such a recommendation, such as the uncertainties over the serological tests currently used for screening, had not been taken into account. The subgroup was therefore, unable to provide advice to JCVI at this time. A paper would be prepared for the next subgroup meeting outlining the practical aspects of any antenatal screening advice that might be made at the same time as advice on a universal childhood vaccination programme.

The subgroup was also asked to provide advice in the following areas to inform the zoster and varicella economic models currently being developed by the Health Protection Agency:

- Burden of varicella in children under 18 months of age
- Burden of shingles in all ages
- The percentage of individuals that seroconvert without any symptoms
- Post Herpetic Neuralgia (PHN) – pain and cost of treatments

It was expected that at least one further meeting would be required to look at the revised economic models. When the economic models are completed, they will be sent out to peer review and the subgroup plan to bring their advice to the main Committee in 2009.

Final minutes of the subgroup meeting would be published once agreed by members.

6. Hepatitis B

The following member declared interests in Sanofi Pasteur or GSK.

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|-----------------------------|--|
| Dr Ray Borrow | personal non-specific; non-personal non-specific |
| Professor Brent Taylor | non-personal non-specific |
| Professor Dr Paul Griffiths | personal non-specific, non-personal non-specific |
| Mrs Pauline MacDonald | personal non-specific; non-personal non-specific |
| Dr Stephen Inglis | non-personal non-specific |
| Dr Ahmed Syed | non-personal non-specific |
| Dr Chris Verity | non-personal non-specific |
| Dr Claire Cameron | non-personal non-specific |
| Professor Simon Kroll | personal non-specific; non-personal non-specific |

This item was brought to the main Committee following advice from JCVI in October 2006 that a small group be convened to consider the options and practical issues involved in recommending a selective Hepatitis B immunisation programme using the same approach used in the Netherlands. In the Netherlands Hepatitis B vaccine is offered to all infants with one or more parents born in a high or intermediate endemicity country. A similar approach had recently been adopted in Sweden.

The HPA presented a paper that reviewed the current incidence of Hepatitis B in England and Wales. The prevalence of Hepatitis B infection is low in the general population but there are certain groups within the population who are at greater risk from infection. These risk factors include country of birth, ethnicity and adult risk factors such as intravenous drug use.

When a geographic selective immunisation programme, similar to that used for BCG is considered almost a quarter of the 152 PCTs in England are reported to have 20% or more of their antenatal population from a high or intermediate country and up to 15 PCTs have more than 40% of their antenatal population born in endemic countries. The antenatal population in these PCTs show a considerably higher cumulative incidence of chronic hepatitis B infection throughout life from early childhood and are more likely to benefit from a universal vaccination programme.

The Committee discussed how successful the antenatal screening programme for hepatitis B infection and subsequent vaccination of babies born to infected mothers had been. There was evidence from a local five year review of the programme that although 90% babies born to mothers who are hepatitis B positive received their birth vaccine dose in hospital, only 30-40% children complete a four-dose course.

National COVER data for Hepatitis B showed that 70% of these babies had received a three-dose course at 12 months of age although around 30 PCTs had not returned data.

The group noted that there was some uncertainty about the need to complete a four-dose course and that there was some evidence to suggest that two doses might produce adequate protection.

The Health Protection Agency presented a cost-effectiveness analysis of introducing hepatitis B vaccine as a routine infant, routine adolescent or as a selective infant immunisation programme. This analysis used a static Markov model, which included data from the recent (Tilson *et al.*, 2008) publication on the cost-effectiveness of introducing routine Hepatitis B immunisation in Ireland. It was noted that of the four published models reviewed as part of this analysis (including the model from Ireland and the US) all had failed to reflect the delay

between acquisition and carriage. In failing to reflect the delay the models overestimated the incidence of hepatocellular carcinoma caused by Hepatitis B below the age of 50 and underestimated the incidence over the age of 50. Therefore, none of the models fitted actual data on morbidity and mortality that were available from the US and from Taiwan. There was little data available on the progression rates of carriage to cirrhosis so the HPA carried out a fitting exercise to generate this parameter for their model.

The majority of morbidity from hepatitis B disease was in acute cases as opposed to chronic cases, although deaths were the result of chronic disease and occurred later in life. Males outnumbered females in both chronic and acute cases.

The Committee were asked whether they thought the assumptions made in the model were appropriate. They considered that they were but asked that this work be peer-reviewed, independently of any peer-review process that might take place prior to publication of this paper.

Representatives from Eire commented that the cost-effectiveness of the Hepatitis B immunisation programme in Ireland was marginal and was only cost-effective if given as a component of a combined vaccine.

The Committee would review this work again following peer-review. The minutes once agreed by the subgroup members would be posted on the DH JCVI website.

7. DTaP/ IPV/Hib vaccines-options

The following members declared interests in Sanofi Pasteur, GSK, Baxter, Novartis, or Merck.

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|---------------------------|--|
| Dr Syed Ahmed | non-personal non-specific, |
| Dr Ray Borrow | personal non-specific; non-personal non-specific |
| Dr Stephen Inglis | non-personal specific |
| Mrs Pauline MacDonald | non-personal non-specific |
| Mrs Anne McGowan | non-personal non specific |
| Professor David Goldblatt | non-personal non-specific |
| Professor Brent Taylor | non-personal non-specific |
| Professor Paul Griffiths | non-non-specific non-specific |
| Dr Claire Cameron | non-personal non-specific |
| Professor Simon Kroll | personal non-specific; non-personal non-specific |

A paper was presented by the HPA on the impact of the Hib-MenC routine booster and Hib catch-up programme. Ten years after the introduction of routine Hib immunisation in 1992, the UK experienced an increase in Hib cases due to the waning of immunity from the primary vaccination course. This waning was

masked by the use of a catch-up campaign at the start of the programme, which provided greater herd immunity than the primary vaccination course alone. A one-off Hib catch-up for all children under four years was introduced in 2003 and led to a dramatic fall in Hib cases in all age groups but did not return the overall level of disease to the levels seen following the initial introduction of the Hib immunisation programme. Following the addition of a routine Hib-MenC booster at 12 months in 2006, cases have continued to decline in older age groups suggesting that the control of Hib disease has again been re-established through herd immunity. It is too early to see an effect from the temporary addition of Hib to the pre-school booster in September 2007 for the small number of children who missed out on a Hib booster.

Given the recent paper on the loss of memory B cells following MenC vaccination, the Committee discussed whether this could also occur for the Hib vaccine. Although in a pre-vaccination era Hib disease in adults was rare, when Hib cases started to rise in children in 2002, Hib cases also increased in adults. The Committee asked to review the MenC data at their next meeting.

A paper was presented by the HPA on the options for using combination vaccines containing hepatitis B in the UK. Pediacel (that is not available combined with Hepatitis B vaccine) was recommended as the vaccine of choice for the UK immunisation programme on the basis that:

1. clinical trials in Sweden showed that acellular pertussis vaccines containing five pertussis components (such as Pediacel) was likely to be more effective at controlling pertussis transmission than three component pertussis containing vaccines (such as Infanrix/IPV/Hib).
2. there is a better Hib response with Pediacel than with the alternative combination vaccine Infanrix/IPV/Hib

The argument over the relative benefits of five pertussis component versus 3 pertussis component vaccines was recently explored in a publication by Poolman and Hallander, 2008. It is also suggested in this paper that the five- component pertussis vaccine may protect less well against pertussis caused by serotype 3 (the serotype that is currently predominant in the UK). The evidence for this is indirect and not supported by the surveillance data for the cohorts of children in England and Wales who have received Pediacel. The paper (Poolman *et al.*, 2007) also speculates that the higher amounts of PRN in Infanrix/IPV/Hib may offset any disadvantage from a lack of fimbrial antigens that are found in the five component pertussis vaccines.

The Committee was advised that a change to a three-component pertussis vaccine for primary immunisation was unlikely to have a discernable effect on pertussis epidemiology, particularly as 3-component vaccines are already given as a pre-school booster. Therefore, any additional benefit would only be in the first few years of life.

The differences in the Hib component of both vaccines was considered a more important factor as the temporary use of an Infanrix/Hib vaccine in the UK schedule resulted in at least 20% of infants failing to achieve putative protective levels, thereby contributing to the Hib resurgence of 1999/2000.

(Dagan *et al.*, 2008) suggests that the addition of IPV to the combined vaccine has an enhancing response on Hib but unpublished data suggests that this is not the case. The MHRA also looked at this argument and concluded that the addition of IPV was not a significant factor in the response to the Hib component. Neither did the concomitant use of MenC vaccine affect the immunogenicity of the Hib component. It cannot be assumed necessarily that an adequate Hib response would be achieved if infants received Infanrix/IPV/Hib/HepB instead of Pediaxel as part of the UK schedule.

Any decision to change the routine DTaP/IPV/Hib vaccine in the UK programme was therefore complex and needed to take into consideration a potential reduction in the response to the Hib component. Options could be to remove the Hib component from the combined vaccine and use Menitorix (Hib-MenC vaccine) for primary immunisation against Hib. Consideration also needed to be given to possible future changes to the pneumococcal conjugate vaccine and possible interactions between the tetanus and CRM conjugate in the vaccines. However it was noted that other DTaP/IPV/Hib combinations could be used if vaccine supply needed to be secured

The Committee agreed that any change to the DTaP/IPV/Hib vaccine needed to be considered in light of pneumococcal conjugate vaccines with higher valencies becoming available. The lifetime risks of any reduced effectiveness of the Hib component needed to be compared with the morbidity prevented by introducing Hep B vaccination to the routine schedule.

It was agreed that the Committee would reconsider this issue when new information became available.

8. HPV update

The following members declared interests in Sanofi Pasteur and GSK.

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|---------------------------|--|
| Dr Ray Borrow | personal non-specific; non-personal non-specific |
| Dr Stephen Inglis | non-personal non-specific |
| Mrs Pauline MacDonald | non-personal non-specific |
| Professor David Goldblatt | non-personal non-specific |
| Professor Brent Taylor | non-personal non-specific |
| Professor Paul Griffiths | personal non-specific; non-personal non-specific |
| Dr Claire Cameron | non-personal non-specific |

Professor Simon Kroll personal specific, non-personal non-specific (left the room for this item due to the personal specific interest)

The Committee was given a verbal report on the implementation of the national HPV immunisation programme. A CMO letter outlining the process had been issued on 2 May, with more detailed guidance contained in a letter from the Director of Immunisation. The following points were highlighted:

- The initial focus of the guidance is on the routine vaccination of girls aged 12-13. Further guidance will be issued about the two year catch-up exercise for older girls up to 18 years old. DH will also give advice regarding women aged 18 and over in due course.
- £8.9 million will be transferred to PCTs to support the implementation of the programme.
- A new chapter on HPV vaccine has been added to the Green Book.
- A comprehensive information pack has been produced for health professionals. In addition, an advertising campaign involving innovative use of new media will be launched in September. All communications material can be viewed on the HPV section of the immunisation web site (www.immunisation.nhs.uk/hpv).
- An announcement on the choice of vaccine to be used was imminent.

In discussion, the issue of consent was raised. There was concern about the possibility of passive refusals, where parents or carers did not complete and return the consent forms even though the child wished to be vaccinated. The committee was advised that there were established processes for chasing the return of consent forms. The Chair stated that implementation issues of this sort were a matter for the Department.

The committee discussed the importance of socio-economic status and inequalities in offering HPV vaccination. In particular, members expressed their concern that varying approaches in reimbursing HPV vaccination may create new inequalities.

In addition, a JCVI statement on the HPV vaccination programme will be circulated to members for agreement and this will be posted on the JCVI website.

9. Measles

HPA reported to the Committee on measles epidemiology. Numbers of measles cases continued to rise, particularly in London. This could be attributable to lower levels of MMR vaccination since 1998 when controversial claims were made about links to autism. In 2007 England and Wales experienced the highest annual total of confirmed measles cases since 1994.

On average over the last 6 years only 10% of notified measles cases were later confirmed by laboratory testing. One of the indications that measles cases are on the increase is when this proportion rises and in the last three quarters of 2007, around 20% of notified measles cases were confirmed.

Most of the increase in recent years has occurred in London and the South East. Many of the cases were linked to outbreaks among travellers and the orthodox Jewish community. In 2008, however, confirmed cases and some outbreaks have occurred outside these groups, in nurseries and school, for example. The epidemiology is consistent with the re-establishment of indigenous transmission and implies that numbers of cases are likely to increase.

The Department recognised that a response was required. GPs would be asked to identify unimmunised children and call in those children who needed one or two doses of MMR vaccine. Work was in hand to assess the logistics of such an exercise and it was intended to move as quickly as possible.

The Committee gave its support to a programme to increase MMR take up.

10. London Immunisation Conference

The committee were informed of a conference organised by the Department and the Regional Public Health Group of the London Strategic Health Authority which took place on 23 April. All 31 London PCTs were represented and about 130 staff attended.

It is well recognised that across the capital immunisation coverage is lower than the rest of the country and there is also significant variation between the 31 PCTs. The aim of the conference was to support PCTs in planning and delivering their immunisation activities in 2008/09, with a view to improving immunisation levels in the capital. A particular emphasis was on identifying common problems and sharing experience and best practice in how to deal with them.

It was concluded that immunisations are the highest priority deliverable and that more needs to be carried out in London to improve immunisations, including MMR.

11. Horizon Scanning- update on new vaccine developments

A summary paper highlighting new vaccine developments that were relevant to the UK immunisation programme was presented. The vaccines in development were Pneumococcal 10-valent and 13-valent, vaccine against *Clostridium Difficile*, Group B streptococcus, Tuberculosis, Cytomegalovirus, *Staphylococcus aureus*, Respiratory Syncytial Virus, Malaria and HIV.

The committee expressed its wish to see a review of new travel vaccines and new methods of vaccine delivery in the next horizon-scanning paper.

12. Coverage

12.1 & 12.2 Quarterly COVER report for England and UK

The Health Protection Agency (HPA) reported on vaccine coverage in England between October – December 2008.

Vaccine coverage in England at 12 and 24 months was similar to the previous quarter, with 90% of children receiving three doses of Diphtheria, Tetanus, Pertussis, inactivated polio and Hib combined vaccine (DTaP/IPV/Hib) by 12 months of age, and decrease of 0.9% to 84.3% of children receiving their first dose of Measles, Mumps and Rubella (MMR) vaccine by 24 months. London coverage decreased by 1.6% compared to the previous quarter to 71%.

Data on coverage of the Pneumococcal Conjugate Vaccine (PCV) was reported for the first time. The number of children receiving two doses of PCV vaccine by 12 months of age was 90%. This was similar to the uptake when MenC vaccine was first introduced. The Neonatal Hepatitis B coverage for England for 12 months was 70%.

Northern Ireland reported stable and mainly high vaccine uptake of DTaP/IPV/Hib at 12 months up to 96.5%. Scotland and Wales also reported high vaccine uptake rates at 12 and 24 months.

13. Vaccine associated suspected adverse reactions reported via the yellow card scheme during 2007

The Committee was given an update by the MHRA on UK suspected adverse reactions associated with routine vaccines from January to December 2008.

The yellow card data reports on suspected adverse reactions to MHRA/CHM but it does not mean all are caused by the vaccine.

On the routine childhood vaccines the overall reporting rates was very low. For Prevenar (pneumococcal conjugate vaccine), no significant new safety issues were identified during 2007.

Pediacel and Infanrix IVP Hib (DTaP/IPV/Hib): the total number of adverse reactions increased for 2007 compared to 2006 but the number of reports was lower than 2005. Overall, the types of serious reactions reported in 2007 were broadly similar to those reported in the previous year so therefore no significant new safety issues were identified during 2007.

MMR vaccine: overall reporting decreased. Convulsions not caused by the vaccine and no significant new safety issues were identified during 2007.
Meningitis C vaccine: the number of adverse reactions decreased from the previous year, no fatal reports were reported and no significant new safety issues were identified during 2007.

Revaxis (Dt/IPV): the total number of adverse reaction had slightly increased from 2007 compared to 2006. However the figures are still lower than 2005 and therefore there were no significant new safety issues identified during 2007.

Gardasil and Ceravix (Human Papilloma Virus): Low reporting as vaccine has not yet been introduced into the routine immunisation programme. Other than Guillain Barre Syndrome in the US, no significant new safety issues have been identified during 2007.

Influenza vaccine: The number of reports received over the last 3 years has remained relatively constant. No significant new safety issues have been identified during 2007.

The Committee noted the paper and that there were no adverse issues.

14. Articles for information

The following articles for information were bought to the Committee's attention.

- Revised JCVI Tetanus statement (JCVI, 2008)
- Immunoglobulins - HPA recommendation on the treatment and prophylaxis of tetanus (HPA, 2008)
- Introduction of Human Papillomavirus Vaccine into the National Immunisation Programme – letter from the Chief Medical Officer, the Chief Nursing Officer and the Chief Pharmaceutical Officer (Department of Health, 2008b)
- Introduction of human papilloavirus vaccine into the national immunisation programme: guidance on programme implementation (Department of Health, 2008c)

- The Influenza Immunisation Programme 2008/09 - letter from the Chief Medical Officer, the Chief Nursing Officer and the Chief Pharmaceutical Officer (Department of Health, 2008a)
- Report of the Director of Immunisation April 2008 (Department of Health, 2008d)
- European Immunisation week
- FOI (released requests)
- Perceptions of childhood immunization in a minority community: qualitative study (Henderson *et al.*, 2008)
- Uptake of first two doses of human papillomavirus vaccine by adolescent schoolgirls in Manchester: prospective cohort study (Brabin *et al.*, 2008)
- Development of internationally agreed abbreviations for prophylactic vaccines by the expert committee on biological standardization
- Vaccines and Autism Revisited – The Hannah Poling Case (Offit, 2008)
- Autism associated with the Mitochondrial DNA G8363A Transfer RNA^{Lys} Mutation (Graf *et al.*, 2000)
- Autistic disorder in 2 children with Mitochondrial disorders (Tsao *et al.*, 2007)
- Should autistic children be evaluated for Mitochondrial disorders? (Lerman-Sagie *et al.*, 2004)
- An investigation of mitochondrial haplogroups in autism (Brabin *et al.*, 2007)
- Development regression and Mitochondrial dysfunction in a child with autism (Poling *et al.*, 2006)
- Mitochondrial dysfunction in patients with hypotonia, epilepsy, autism, and developmental delay: HEADD Syndrome (Fillano *et al.*, 2002)
- Mitochondrial dysfunction in autism spectrum disorders: a population-based study (Oliveira *et al.*, 2005)
- Mitochondrial myopathies 1 (Schapira, 1989)
- Thimerosal exposure in infants and neurodevelopmental disorders: An assessment of computerized medical records in the Vaccine Safety Datalink. (Young *et al.*, 2008)

15. AOB

The committee discussed the potential implications of the Hannah Poling case on immunisation programmes in the UK. This case, which had received considerable publicity in the USA, was being used by some people to suggest a link between vaccination and the development of autism in children who have hereditary mitochondrial dysfunction.

JCVI, on the basis of the available information put to it about the Poling case, did not believe that such a link had been established, and considered it highly unlikely that vaccination was the cause of autism for a selective cohort of

children who had pre-existing hereditary conditions such as mitochondrial dysfunction when they were vaccinated. It was, however, concerned about the potential negative impact of unscientific media coverage of the case on the public's attitude to vaccination in the UK.

JCVI recommended that children with mitochondrial disorders should be vaccinated in the usual recommended way. There is no screening that can be done to identify mitochondrial disorders and UK data shows no impact of vaccination on children with mitochondrial disorders.

16. Dates of future meetings

Wednesday 15 October 2008 confirmed
Wednesday 18 February 2009 confirmed

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