This minute will remain draft until ratified by JCVI at its next meeting.

JOINT COMMITTEE ON VACCINATION AND IMMUNISATION

Minute of the meeting held on Wednesday 1 February 2012
10.30am – 4.00pm
Skipton House, 80 London Road
London, SE1 6NX

Members
Professor Andrew Hall (Chair)
Dr Syed Ahmed
Dr Peter Baxter
Professor Ray Borrow
Professor Jonathan Friedland
Dr Anthony Harnden
Professor Judy Breuer
Dr Jennifer Harries
Dr Gabrielle Laing
Mrs Pauline MacDonald
Mrs Anne McGowan
Dr Andrew Riordan
Professor Claire-Anne Siegrist

Devolved administrations
Dr Nicola Steedman (Scottish Government)
Dr Elizabeth Reaney (DHSSPSNI)
Mr David Vardy (Welsh Assembly Government)

Invited observers and presenters
Dr Mary Ramsay (HPA)
Dr Shamez Ladhani (HPA)
Dr Gayatri Amirthalingam (HPA)
Dr Katy Sinka (HPS)
Dr Richard Smithson (Public Health Agency, NI)
Lt Col Peter Hennessey (MoD)
Dr Linda Diggle (Jersey)
Dr Darina O'Flanagan (Eire)
Mr Conall Watson (HPA)

DH
Professor David Salisbury CB
Dr Dorian Kennedy
Dr Tom Barlow (minute)
Mr Andrew Earnshaw (minute)
Ms Joanne Yarwood
Mr David Hands
Dr David Ishola
Dr Peter Grove
Mr Guy Walker
Mr Robert Scott
Miss Laura Weatherill
Tim Baxter – for item 3
Sara Mason – for item 3

MHRA
Dr Phil Bryan
Dr Bridget King
Miss Catherine King

I. Welcome

1. The chair welcomed all to the meeting. Apologies had been received from Professor Matt Keeling. Dr Nicola Steedman was welcomed as the new representative from the Scottish Government.

2. The chair explained that interviews had taken place to fill the vacant post of lay member but it was not possible to announce the outcome. Interviews would be taking place for the vacant post of community paediatrician. No health economist had been interviewed and a further recruitment process will be needed. A number of members of JCVI completing terms of office in 2012 had been reappointed to serve further terms on the committee: Professors Ray Borrow and Claire-Anne Siegrist and Drs Jennifer Harries, Gabrielle Laing, Andrew Riordan, and Mrs Pauline MacDonald and Mrs Anne McGowan.

3. The committee was reminded that papers had been provided in confidence and that they should not be circulated nor the information they contain discussed outside of the meeting. Conflicts of interest forms had been circulated and all members were asked to complete them including nil returns to ensure records were up to date.

II. Minute of the previous meeting

4. The committee agreed that the minute of the meeting of 5 October 2011 was an accurate record.

III. Matters arising

5. The action points recorded in the minute of the 5 October 2011 meeting were reviewed. The chair noted that:
   - the committee had issued a statement on its position on the influenza vaccination programme in November 2011. Progress on gathering data to support further discussion of the possible expansion of the influenza vaccination programme was the subject of agenda item 6.
   - new text in the Green Book to acknowledge NICE guidance on febrile convulsions had been drafted and cleared with the editors
   - as requested by the committee, the Medicines and Healthcare products Regulatory Agency (MHRA) had begun to review any evidence for a hypothesis for an association between vaccination and development of allergies.
   - he had written to manufacturers of rotavirus vaccines in relation to the committee's rotavirus vaccination recommendation.
   - he had written to International Longevity Centre UK about the findings of JCVI's review of the cost effectiveness of routine influenza vaccination of those aged 50 to under 65 years.
   - The secretariat had yet to convene a meeting of the JCVI BCG sub-committee but proposes to do so during the Spring, resources allowing.

6. The chair explained that meetings of the JCVI pneumococcal and meningococcal sub-committees are being organised. The JCVI statement on meningococcal C vaccinations was published on the JCVI website in January 2012 following some minor modifications agreed by the sub-committee about the choice of vaccine for an adolescent booster – current evidence suggests that no one vaccine should be preferred.

7. The chair explained that the committee's letter to the Lancet in response to an editorial published in that journal which had misrepresented the committee's advice on universal hepatitis B vaccination had been accepted but it may be some time before it is published by the Lancet.

8. A press release[1] announcing the formation of a Childrens' and Young Peoples' Forum to inform the development of a Childrens' and Young Peoples' outcomes strategy was tabled. The committee agreed it would be important to engage with the Forum.
Action: secretariat to contact the Forum to ensure that JCVI's interest is known.

Discussion of the impact of changes in the health system on immunisation programmes

9. The committee had requested a discussion with officials involved in the development of Public Health England about the changes in the health and public health systems set out in the Health and Social Care Bill and how they would affect immunisation services.

10. The committee was informed about latest developments in relation to the creation, subject to the passage of the Bill, of Public Health England (PHE) and what the changes may mean for the national immunisation programme. Immunisation programmes would be commissioned by the NHS Commissioning Board to a specification developed by PHE that would be informed by advice from JCVI. Routine childhood vaccinations would continue to be commissioned via the GP contract but the Board would also need to consider vaccinations in other settings as appropriate. The Secretary of State would hold the Board to account for delivery. It was recognised that at a local level Clinical Commissioning Groups and local branches of the Commissioning Board would need a source of public health advice on immunisations and their implementation, similar to that provided currently by Consultants in Public Health and Immunisation Coordinators. The formation of local clinical advisory groups to fulfil this role in the future for immunisation and other areas such as screening is under consideration by a team led by Nick Hicks, a Director of Public Health (DPH). A working group chaired by John Newton, a Regional DPH, was responsible for looking at data requirements and delivery, including on immunisations, in the new public health system.

11. Members raised concerns about the period of transition from the current system to the new system and how this may affect the national immunisation programme. In addition, it was unclear who in the future would have responsibility for managing Child Health Information Systems (CHIS) and for the data submissions which allow assessment of immunisation coverage. It was also unclear how responsible populations would be defined; it would be important that both GP registered and unregistered populations (which may be more vulnerable) were covered. The future role of the DsPH and their ability to identify potential problems and influence rapidly the local provision of immunisation programmes to prevent problems arising was also unclear. Under proposed arrangements DsPH appear to lack robust levers to

[1] http://www.dh.gov.uk/health/2012/01/children-forum/

influence public health measures. Whilst DsPHs may advise the Commissioning Board, it was unclear if the Board would know when it needed advice. There may soon be a shortage of qualified DsPH. It was also unclear how schools-based programmes would be resourced and supported. In addition, given the complexity of the current immunisation and data collection systems, transition to the new system needs very careful management to ensure that problems do not arise and, if they do, that they can be identified and rectified rapidly.

12. Members also highlighted the need to ensure the continuing availability of the surveillance, clinical research and epidemiological and economic modelling currently provided by the HPA that the committee needs in order to provide advice.

13. The committee was informed that the commissioning of immunisation programmes and responsibility for CHIS would lie with the NHS Commissioning Board. This arrangement should support a consistent approach to their management and application. The Board would also be charged with ensuring the safe transition of immunisation services. Health and Wellbeing Boards which will include DsPH will provide advice and challenge on the local delivery of immunisation programmes. The Commissioning Board would be challenged on delivery of immunisation programmes by DH with advice from PHE. The Public Health Outcomes Framework Indicators include population vaccine coverage and so vaccine coverage at Local Authority level would be monitored nationally. DH agreed to provide a note for JCVI to address the issues raised.

14. The committee considered that it is vital that the success of the immunisation programme be maintained and protected. Following consideration of the note from DH, JCVI may wish to write to the CMO to highlight concerns about the potential risks of the changes to the health service. The committee asked that Nick Hicks and John Newton be invited to a future JCVI meeting to discuss the roles of DsPH, immunisation coordinators and data/evidence needs and delivery.
Action: DH to provide a note to address the questions raised by the committee. JCVI to consider the note and whether it wishes to write to CMO. Secretariat to invite Nick Hicks and John Newton to the next JCVI meeting.

IV. Report from the sub-committee on adolescent vaccinations

15. The sub-committee chair summarised the outcomes of the JCVI sub-committee on adolescent vaccinations meeting on the 27 January 2012. The sub-committee had discussed routine pertussis, mumps and meningococcal C vaccinations, targeted varicella vaccination, the current Td/IPV booster for adolescents and the implementation of vaccination programmes for adolescents. A formal report of the meeting is in preparation but in summary, the sub-committee considered that:
    - evidence did not support a third dose of MMR, however improvements in the implementation of checks of MMR vaccination status and offer of missed vaccinations would be important, particularly in light of the fall in MMR coverage during the last decade.

- more data are required to assess the effectiveness and cost effectiveness of pertussis and targeted varicella vaccinations. Research was underway in both areas that would allow future assessment.
- further discussion about the timing of an adolescent dose of meningococcal C vaccine would be needed – vaccination at age 15 years is likely to have a larger immediate impact to lower carriage than vaccination at an earlier age (e.g. 12 years). However vaccination at an earlier age may have a slower but more complete impact to lower carriage. It is not clear how urgently a change to the programme is needed. New carriage data may be available from vaccine manufacturers to inform advice.
- schools-based delivery of adolescent vaccinations is more effective on current evidence but GP practices could play an important role in mop up vaccinations or of vaccinations of harder to reach adolescent groups.
- There is no clear optimal age for Td/IPV vaccination on scientific grounds. It may be best given concurrently with meningococcal C booster vaccination on implementation grounds.
- Data recording and collection on adolescent vaccinations is poor and needs to improve to support adolescent vaccination programmes.
- Further discussions are required on the design and implementation of an adolescent vaccination programme and the input of Department of Education is needed. The sub-committee aims to meet again before the end of the calendar year.

16. The committee agreed that the impact on carriage of the age at which an adolescent booster dose of meningococcal C vaccine is given needed further consideration and should be informed by the new carriage data. The JCVI meningococcal sub-committee was asked to consider this issue at its next meeting.
Action: secretariat to request new carriage data from the vaccine manufacturers and the JCVI meningococcal sub-committee to consider the age at which an adolescent booster dose of meningococcal C vaccine should be given.

V. Rubella antenatal screening and immunisation

17. The chair explained that the National Screening Committee (NSC) had issued for consultation a review of rubella susceptibility screening policy that recommended: *"Policy makers should revisit i) the future of antenatal screening for rubella susceptibility and ii) primary prevention initiatives which might be directed towards population groups which continue to be at risk of rubella infection, including children, young adults and immigrants."* The NSC had written to JCVI with a summary of the consultation responses. NSC would welcome comments on the consultation from JCVI. The HPA had provided a response to the NSC, which had suggested possible modifications to the approach to reducing rubella susceptibility in the UK both in terms of rubella susceptibility testing and immunisation against rubella.

18. The committee considered the options presented in the HPA response:
(i) continuation of the screening programme with changes to the protocols so that women likely to be immune are less likely to be revaccinated either by altering the

accepted test threshold for rubella susceptibility or by not offering vaccination to women with a history of receiving two doses of rubella-containing vaccine.
(ii) replacement of rubella susceptibility screening with vaccination history screening with the offer of MMR vaccination to those with no history of rubella vaccinations or that are partially immunised.
(iii) selective testing of those with no history of rubella vaccinations or by birth cohort or country of origin.

19. The committee considered that the current approach, which is similar to option (i) and requires testing and follow up, is resource intensive and for many women may be unnecessary as they are immune. Implementation of option (i) may not appreciably resolve these issues and may also be challenging to implement. Option (iii) would be very challenging to implement and may be ineffective. Option (ii) was an appropriate and effective option and should replace the current system. This option would be the most straight forward to implement. As protection is established following one or two doses of rubella-containing vaccine, a recorded history of receiving two doses was sufficient to establish immunity. This would be the most effective strategy to ensure that those of child bearing age that had not already received two doses of MMR were fully immunised against measles, mumps and rubella before any subsequent pregnancies. This was especially important given the expected increase in susceptible women from birth cohorts affected by the drop in MMR coverage in the UK and also from unvaccinated women from other countries. Whilst there would be instances where fully immunised women receive further doses of vaccine because they have no record of rubella vaccinations, there are no safety issues with receiving more than two doses of MMR or rubella-containing vaccine.

20. The committee suggested that the new approach should be included in the service specification with the NHS Commissioning Board. It was noted that various guidance, including Infectious Disease in Pregnancy Screening Programme Standards (2010) had been issued indicating midwives should give MMR to women with no history of rubella vaccinations or that are underimmunised. If there was change in guidance it would be important that the change be reflected in all guidance that had been issued.

VI. Influenza update

21. The committee was updated about influenza activity during 2011/12 winter, the uptake of influenza vaccine in England and the findings of an unpublished study on factors influencing influenza vaccine uptake to inform new guidance.

22. The committee noted that the influenza activity during the 2011/12 winter had so far been very low. There had been little difference in the uptake of influenza vaccine by GP patients, although the number of vaccinations had increased significantly as the size of the population aged 65 years and older had increased in recent years. A substantial increase in uptake of influenza vaccine by frontline healthcare workers was noted and welcomed, although uptake was considered still too low.

23. The committee welcomed the unpublished study and noted that:
    - whilst the results were based on the responses of a relatively small number of GP practices and may be biased, the report would provide independent peer-reviewed evidence to support improved practice. An unpublished study conducted in Scotland had produced similar findings
    - practices that review and adjust their methods to identify eligible patients achieve higher uptake
    - there is considerable variability in methods used to call and recall patients for influenza vaccination and an improved standard method would be valuable
    - the current QoF indicator influences uptake of influenza vaccine and a general QoF indicator for all clinical risk groups and those aged 65 years and older may improve uptake significantly
    - administration of influenza vaccine by midwives is likely to increase uptake by pregnant women

24. The committee noted that influenza vaccine uptake in England for those in clinical risk groups aged under 65 years had remained much lower than for those aged 65 years and older. It was considered that communication with those in clinical risk groups aged under 65 years may be more challenging as many are no less healthy than the general population and therefore may not consider themselves at increased risk.

25. The committee noted that influenza vaccine uptake in Northern Ireland was similarly high in those in clinical risk groups aged under 65 years and those aged 65 years and older. The committee was informed that the health department in Northern Ireland provides financial support to GP practices for postal invitations to patients and to develop call-recall systems.

26. The committee was updated about progress on gathering the information requested to allow further consideration of possible extensions to the influenza vaccination programme. As the information is likely to be available by end March / early April 2012, the committee agreed to hold an ad hoc single issue meeting in April 2012 to consider the information. The committee noted that it would be important to consider the capacity to deliver and the opportunity costs of an extended programme. The committee noted information that had been provided by the manufacturer (AstraZeneca) of the live attenuated seasonal influenza vaccine (Fluenz®) and asked for more information on the safety of this vaccine in children with egg allergy.
    Action: secretariat to gather this information and convene a JCVI meeting in April 2012.

VII. Review of the influenza chapter of the Green Book

27. The committee reviewed data on the immune response and effectiveness of one compared with two doses of influenza vaccine in children. Data supporting the advice to administer two doses of influenza vaccine to children aged less than 13

years that had not previously received influenza vaccine was very limited. There are more and better data supporting an age threshold of below nine years (the threshold used in the United States). Further data may be available from the United States on the administration of one and two doses of the monovalent unadjuvanted influenza A 2009 H1N1v vaccine in children that could inform consideration of the threshold. The committee agreed, subject to review of these data, to revise its advice on the age threshold for two doses of influenza vaccine for children that have not previously received influenza vaccine to below nine years of age.
Action: committee to review the US data and provide advice on the age threshold by correspondence for incorporation into the influenza chapter of the Green Book.

28. The committee considered a draft influenza Green Book chapter in preparation for the 2012/13 influenza vaccination programme. The committee:
    - questioned the need for text in relation to the safety of thiomersal, since only trace levels were found in a small number of influenza vaccines and there are no safety concerns with its presence in vaccines. It was suggested that instead reference should be made to an explanation of the safety of thiomersal that would be included in the general safety section of the Green Book to answer questions that continue to arise.
    - suggested reference should be made to the findings of a recently published meta-analysis on influenza vaccine effectiveness[2].
    - advised no changes to the influenza clinical risk groups other than a rewording of the chronic neurological disease category: "*Stroke, transient ischaemic attack (TIA). Conditions in which respiratory function may be compromised <u>due to neurological disease</u> (e.g. polio syndrome sufferers).*" (additional text underlined).
    - noted that it remained difficult to be prescriptive about the level of immunosuppression from treatment that would indicate influenza vaccination as data are very limited. It was agreed that the current text that allowed clinical discretion remained appropriate.
    - noted that the attenuated and cold-adapted viruses in Fluenz® cannot replicate at body temperature and therefore, cannot cause clinical influenza. The committee considered that clinicians were likely to ask for further guidance than was provided in the Fluenz® Summary of Product Characteristics on the use of the vaccine in individuals that are immunosuppressed or with severe asthma. Members agreed to provide suggested text. Advice should also be included on administration of the vaccine in children with a heavily blocked nose. Clarification is also needed on whether a needle could be fitted inadvertently to the intra-nasal administration device.
    - the section on egg allergy should be revised, including to account of data on the use of Fluenz® in children with egg allergy.

29. A number of editorial amendments were proposed.

[2] Osterholm *et al.* (2011) Efficacy and effectiveness of influenza vaccines: a systematic review and meta-analysis. *Lancet Infectious Disease.* Published online 27 October 2011.

ACTION: Secretariat to revise influenza Green Book chapter as indicated, including further information about Fluenz®.

VIII. Review of the rabies chapter of the Green Book

30. The committee reviewed the chapter and was content with the revised text with some minor amendments.

IX. Review of the ordering, storage and disposal chapter of the Green Book

31. The committee reviewed and welcomed the chapter and was content with the revised text with some minor amendments.

X. Quality criteria for an immunisation programme

32. The Health Protection Agency provided for comment, a final draft version of a paper to describe the quality criteria for immunisation programmes. The paper had been developed in conjunction with an independent expert advisory group.

33. The committee suggested that it should be clear that the paper set out criteria for consideration when setting up and managing immunisation programmes. However, it was neither official guidance nor a care standard. The text around consent should clarify that there is a need, when written content is lacking, for documentation to record that a discussion with the patient took place and that the patient agreed to the vaccination. In addition, it would be helpful to state that vaccination records should be made available to other health professionals that need these data.

XI. Cytomegalovirus (CMV)

34. The chair explained that a letter had been received from a clinician asking for advice on CMV immunoglobulin prophylaxis against neonatal infection.

35. The committee concluded that, as there is only very limited evidence available from a single small clinical trial on the effectiveness and safety of a passive immunisation against CMV during pregnancy, no advice could be given on its use. The committee wished to review data from an ongoing second trial once completed.
ACTION: chair to respond to the clinician.

XII. Assessment of cost effectiveness

36. The committee was presented with an overview of the approach to assessing the cost effectiveness of vaccination programmes and the development of a new value-based pricing system. Handling uncertainty in cost effectiveness studies of vaccination programmes and how uncertainty affects interpretation of the results against cost effectiveness thresholds poses particular challenges. A small independent advisory group would be established to meet during the Spring to consider the issues and provide advice. The advice would be made available to JCVI at a future meeting to allow further consideration of cost effectiveness assessment of vaccination programmes.
Action: DH to convene expert group and provide advice to JCVI.

XIII. Recent epidemiology of pertussis

37. The committee was presented with an overview of the epidemiology of pertussis infection and disease in the UK and noted that disease due to pertussis in childhood is very effectively controlled by the routine vaccination programme. The incidence in adolescents and adults had increased in recent years, which was partially due to improved case ascertainment, and probably also waning of vaccine-induced and natural immunity. A higher positivity rate in samples tested in 2011 suggested a real increase in disease recently. The HPA plans to carry out research to improve estimates on the incidence and burden of disease amongst adolescents and adults and to understand better the source individuals for transmission. This work would inform the review of the vaccination programme as discussed by the JCVI sub-committee on adolescent vaccinations.

38. The committee was informed about evidence suggesting the involvement of nosocomial infections in recent pertusiss outbreaks. The committee agreed that HPA should review the evidence and options for pertussis vaccination of healthcare workers for consideration by JCVI at a future meeting.
Action: HPA to review evidence and options for pertussis vaccination of healthcare workers.

XIV. MMR and egg allergy advice

39. The committee noted that a recent update of the British Society for Allergy and Clinical Immunology (BASCI) guidelines on vaccination of those with allergies had removed an earlier recommendation for MMR vaccination of egg allergic individuals within a secondary care setting. A recent review of hospital referrals[3] showed no significant reactions to MMR vaccine when administered to egg allergic individuals.

40. The committee agreed that since there is no evidence of an increased risk of severe allergic reactions to MMR in egg allergic individuals, the Green Book should be revised to align with current BASCI guidelines on MMR vaccination of egg allergic individuals.

Action: secretariat to revise Green Book on MMR vaccination of egg allergic individuals

XV. Varicella vaccination and cystic fibrosis

41. The committee noted that the European Cystic Fibrosis Society Vaccination Group had recommended varicella vaccination for patients diagnosed with Cystic Fibrosis. It was noted that the Cystic Fibrosis Trust supported this recommendation and published guidance.

42. The committee considered that the evidence was too limited to support such a recommendation and concluded that varicella vaccination should be a matter of clinical judgement based on individual patient circumstances and history.

XVI. Coverage data

[3] Ainsworth E, Debenham P, Carrol ED, Riordan FA. (2010) Referrals for MMR immunisation in hospital. Arch Dis Child.;95(8):639–641.

43. Routine childhood vaccine coverage rates for the quarter April to June 2011 were summarised. The committee welcomed the continued high- and/or improved-coverage of the routine childhood vaccines in all UK countries.
England: http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/VaccineCoverageAndCOVER/
Scotland: http://www.isdscotlandarchive.scot.nhs.uk/isd/6083.html
Wales: http://www.wales.nhs.uk/sites3/page.cfm?orgid=457&pid=54144
Northern Ireland: http://www.publichealth.hscni.net/directorate-public-health/health-protection/vaccination-coverage

XVII. Horizon scanning

44. The committee noted that the 2012 horizon scan would be carried out in March and April and asked that it include a request for information on: CMV vaccination and passive immunisation and inactivated varicella zoster and herpes zoster vaccines

XVIII. Paper for information

45. A recently published paper by Field and Caplan, *Evidence-based decision making for vaccines: The need for an ethical foundation,* was provided for information.

XIX. Any other business

46. The committee noted that the continued lack of sufficient supply of herpes zoster vaccine prevented the introduction of the shingles vaccination programme that had been recommended by JCVI.

47. Dates set for future JCVI meetings: Wednesday 13 June 2012 and Wednesday 3 October 2012

The JCVI agenda and meeting papers are published on the meetings area of the JCVI website http://www.dh.gov.uk/ab/jcvi/index.htm

This minute will remain draft until ratified by JCVI at its next meeting.

Annex 1 - Declarations of interest

Agenda Item IV

The following members declared interests in companies that manufacture and supply mumps, varicella, meningococcal C or pertussis vaccines (GSK, Novartis, Pfizer, Sanofi-Pasteur MSD)

Member	Action	Interest
Ray Borrow	Non-personal, non-specific GSK, Sanofi-Pasteur MSD, Novartis and Pfizer	The member is able to participate in the discussion and to vote
Judith Breuer	Non-personal, non-specific and specific (varicella) Sanofi-Pasteur MSD	The member is able to participate in the discussion but not to vote (varicella)
Pauline MacDonald	Personal, non-specific GSK	The member is able to participate in the discussion but not to vote (all issues)
John Friedland	Non-personal, non-specific Pfizer	The member is able to participate in the discussion and to vote
Anne McGowan	Non-personal, non-specific GSK, Pfizer, and Sanofi-Pasteur MSD	The member is able to participate in the discussion and to vote
Andrew Riordan	Non-personal, non-specific GSK	The member is able to participate in the discussion and to vote

Agenda item V

The following members declared interests in companies that manufacture and supply rubella-containing vaccines (GSK, Sanofi-Pasteur MSD)

Member	Action	Interest
Ray Borrow	Non-personal, non-specific GSK, Sanofi-Pasteur MSD	The member is able to participate in the discussion and to vote
Judith Breuer	Non-personal, non-specific and Sanofi-Pasteur MSD	The member is able to participate in the discussion and vote
Pauline MacDonald	Personal, non-specific GSK	The member is able to participate in the discussion but not to vote (all issues)
Anne McGowan	Non-personal, non-specific GSK and Sanofi-Pasteur MSD	The member is able to participate in the discussion and to vote
Andrew Riordan	Non-personal, non-specific GSK	The member is able to participate in the discussion and to vote

Agenda item VI

The following members declared interests in companies that manufacture and supply influenza containing vaccines (Abbott, AstraZeneca, Baxter, Crucell, GSK, MASTA, Novartis, Pfizer, Sanofi-Pasteur MSD)

Member	Action	Interest
Ray Borrow	Non-personal, non-specific GSK, Sanofi-Pasteur MSD	The member is able to participate in the discussion and to vote
Judith Breuer	Non-personal, non-specific and Sanofi-Pasteur MSD	The member is able to participate in the discussion and vote
Pauline MacDonald	Personal, non-specific GSK	The member is able to participate in the discussion but not to vote (all issues)
Anne McGowan	Non-personal, non-specific GSK and Sanofi-Pasteur MSD	The member is able to participate in the discussion and to vote
Andrew Riordan	Non-personal, non-specific GSK	The member is able to participate in

		the discussion and to vote

Agenda item XIV

The following members declared interests in companies that manufacture and supply MMR vaccines (GSK, Sanofi-Pasteur MSD)

Member	Action	Interest
Ray Borrow	Non-personal, non-specific GSK, Sanofi-Pasteur MSD	The member is able to participate in the discussion and to vote
Judith Breuer	Non-personal, non-specific Sanofi-Pasteur MSD	The member is able to participate in the discussion and to vote
Pauline MacDonald	Personal, non-specific GSK	The member is able to participate in the discussion but not to vote
Anne McGowan	Non-personal, non-specific GSK and Sanofi-Pasteur MSD	The member is able to participate in the discussion and to vote
Andrew Riordan	Non-personal, non-specific GSK	The member is able to participate in the discussion and to vote

Agenda item XV

The following members declared interests in companies that manufacture and supply varicella vaccines (GSK, Sanofi-Pasteur MSD)

Member	Action	Interest
Ray Borrow	Non-personal, non-specific GSK, Sanofi-Pasteur MSD	The member is able to participate in the discussion and to vote
Judith Breuer	Non-personal, specific Sanofi-Pasteur MSD	The member is able to participate in the discussion but not to vote
Pauline MacDonald	Personal, non-specific GSK	The member is able to participate in the discussion but not to vote
Anne McGowan	Non-personal, non-specific GSK, and Sanofi-Pasteur MSD	The member is able to participate in the discussion and to vote
Andrew Riordan	Non-personal, non-specific GSK	The member is able to participate in the discussion and to vote

This minute will remain draft until ratified by JCVI at its next meeting.

Annex 2

Evidence considered by the committee.

Agenda item 2:
- Minute of JCVI meeting 5 October 2011

Agenda item 5:
- Cover Paper: Rubella susceptibility screening and immunisation
- Annex A - NSC consultation document
- Annex B HPA response to NSC consultation
- Letter from NSC on consultation responses

Agenda item 6:
- Cover Paper: update on influenza
- Annex A - study on factors that influence influenza vaccine uptake
- Annex B – JCVI position statement on influenza vaccination programme
- Annex C – AstraZeneca submissions
- HPA weekly influenza report

Agenda item 7:
- Cover paper: Influenza chapter of the Green Book
- Annex A - Influenza chapter of the Green Book
- Annex B – Fluenz® SPC
- Annex C - Published studies
    - Wright PF, Thompson J, Vaughn WK *et al.* (1977) Trials of influenza A/New Jersey/76 virus vaccine in normal children: an overview of age-related antigenicity and reactogenicity. *J Infect Dis* 136 Suppl S731-41. http://www.ncbi.nlm.nih.gov/sites/entrez/606798
    - Neuzil KM, Jackson LA, Nelson J *et al.* (2006) Immunogenicity and reactogenicity of 1 versus 2 doses of trivalent inactivated influenza vaccine in vaccine-naive 5-8-year-old children. *J Infect Dis* 194(8): 1032-9. http://www.ncbi.nlm.nih.gov/sites/entrez/16991077
    - Ritzwoller DP, Bridges CB, Shetterly S *et al.* (2005) Effectiveness of the 2003-2004 influenza vaccine among children 6 months to 8 years of age, with 1 vs 2 doses . *Pediatrics* 116(1): 153-9. http://www.ncbi.nlm.nih.gov/sites/entrez/15995046
    - La Montagne JR, Noble GR, Quinnan GV *et al.* (1983) Summary of clinical trials of inactivated influenza vaccine - 1978. *Rev Infect Dis* 5(4): 723-36. http://www.ncbi.nlm.nih.gov/sites/entrez/6353529
    - Rhorer J, Ambrose, CS, Dickinson, S *et al.* Efficacy of live attenuated influenza vaccine in children: A meta-analysis of nine randomized clinical trials. *Vaccine.* 27. 27: [7. 7] 1101-10, 1101-10. Epub 2008 Dec 16. 2009 Feb 11.

Agenda item 8:
- Cover Paper: Rabies chapter of the Green Book
- Annex A - Rabies chapter of the Green Book

Agenda item 9:

- Cover Paper: Ordering, storage and disposal of vaccines chapter of the Green Book
- Annex A: Ordering, storage and disposal of vaccines chapter of the Green Book

Agenda item 10:
- HPA paper: Quality criteria for an Effective Immunisation Programme

Agenda item 11:
- Cover Paper: Cytomegalovirus passive immunisation
- Annex A - Nigro et al. Passive immunization during pregnancy for congenital cytomegalovirus infection. N Engl J Med. 353: [13] 1350-62, 2005
- ANNEX B – Letter from Paul D. Griffiths MD, DSc, FRCPath. Professor of Virology

Agenda item 12:
- Presentation on cost effectiveness
- Kim JJ. (2011) The role of cost-effectiveness in U.S. vaccination policy. N Engl J Med. 10;365(19):1760-1
- Rawlins MD, Culyer AJ. (2004) National Institute for Clinical Excellence and its value judgments. BMJ. 329(7459):224-7.

Agenda item 13:
- Presentation on pertussis epidemiology

Agenda item 14:
- Cover Paper: MMR vaccine and egg allergy
- Ainsworth *et al*. (2010) Referrals for MMR immunisation in hospital. Arch Dis child.;95(8):639–641.
- Khakoo GA, Lack G. (2000) Recommendations for using MMR vaccine in children allergic to eggs. BMJ 320(7239):929-32.
- Extract from - Clark AT, Skypala I, Leech SC, et al (2010). British Society for Allergy and Clinical Immunology guidelines for the management of egg allergy. Clin Exp Allergy 40(8):1116-29.

Agenda item 15:
- Cover paper: Cystic fibrosis and varicella vaccination
- Malfroot *et al* (2005). Immunisation in the current management of cystic fibrosis patients. Journal of Cystic Fibrosis 4 77 – 87
- Extract from Cystic Fibrosis Today Summer 2009. Q&A on varicella vaccination.
- Ong *et al.* (1991) Varicella zoster infection in adults with cystic fibrosis, the role of acyclovir. Scand J Infect Dis 23: 283 285
- MacDonald *et al.* (1987) Varicella zoster infection in chidren with cystic fibrosis. The Pediatr Infect Dis J, 6: 414-416

Agenda item 16:
- UK COVER report June to September 2011
- England coverage, Q2 2011 (June to September 2011)
- Scotland coverage, Q2 2011 (June to September 2011)
- Wales coverage, Q2 2011 (June to September 2011)
- Northern Ireland coverage, Q2 2010-11 (June to September 2011).

This minute will remain draft until ratified by JCVI at its next meeting.

Agenda item 17:

- Cover paper: Horizon scan 2012

Agenda item 18:

- Field RI, Caplan AL.(2011). Evidence-based decision making for vaccines: The need for an ethical foundation. Vaccine. 2011 Dec 21