NOT FOR PUBLICATION

JOINT COMMITTEE ON VACCINATION AND IMMUNISATION

MINUTES OF THE MEETING HELD ON FRIDAY 25 APRIL 1986

Present:

Sir John Badenoch - Chairman
Professor J E Banatvala
Dr M F H Bush
Dr K M Citron
Professor J G Collee
Professor R W Gilliatt
Professor D Hull
Professor J Knowelden
Professor H P Lambert
Professor June K Lloyd
Dr D Reid
Dr J B Selkon
Dr G C Schild
Dr J W G Smith
Professor R W Smithells

Professor J M S Dixon)
Professor J A Dudgeon)
Dr W O Williams) by invitation
Professor A J Zuckerman)

Dr J Barnes)
Dr J R H Berrie) secretaries
Mr L T Wilson)

Dr A Fenton Lewis)
Dr R G Penn)
Mr R L Cunningham) DHSS
Mr C Kenny)
Mrs F Leenders)

Brigadier N W J England - MOD
Dr R G Covell - SHHD
Dr S N Donaldson - DHSS, NI

1. Apologies for absence and announcements

The Chairman welcomed Professor Dixon from Canada, Dr Williams who was presenting a paper on whooping cough and Professor Zuckerman who had kindly agreed to speak on vaccination against hepatitis. He also welcomed Professor Dudgeon who, although retired from the Committee, had returned to speak on rubella. The Chairman announced that Professor Geddes, Professor Campbell and Professor Banatvala had been appointed as new members of the Committee. Dr Berrie was attending in place of Dr Zutshi who was away ill and Mr Cunningham had replaced Mr Murray. Apologies for absence were received from Professor Campbell, Professor Geddes, Professor Glynn, Professor Grob, Dr Grundy, Professor Miller, Dr Noble and Dr Small; and from Dr Galbraith (CDSC) and Dr Jenkins (DHSS).

2. Minutes of the meeting held on 25 October 1985

The following amendments were made:

Item 5 - Risk of cross infection through the use of the Dermojet

Second paragraph, line 8 - It was suggested that "an embarrassment" be replaced by "very unfortunate".

Item 8.2 - Minutes of the meeting of ARVI held on 7 June 1985

Line 5 - Replace "analysis" by "long-term follow-up".

Item 8.9 - Suspected adverse reactions associated with DPT vaccine, Trivax and Trivax AD

Third paragraph, line 4 - Delete "Emery/".

Line 5 - Insert "Emery and" before "Knowelden" and change "study" to "studies".

Line 7 - Delete "except as would be" and substitute the words "above that".

Apart from these and other minor amendments, the minutes were agreed and signed.

3. Matters arising

Item 6 - AIDS and jet injectors - oral report

Dr Barnes reported that a circular had been prepared which stated the advice of the Joint Committee in this matter and it was hoped to issue this circular in the near future.

Item 10 - Temperature of refrigerators and the storage of vaccines in clinics and health centres - oral report

Dr Barnes reported that a recent survey of wastage of vaccines had taken this matter into account. This survey will be published shortly by Supply Division.

4. Whooping Cough

4.1 Present position - a paper by the Department JCVI(86)1

Dr Barnes said that the attack rate for children under the age of 10 during the second half of 1985 was higher than the equivalent rates for the previous two epidemics. However, the number of cases notified during the first quarter of 1986 had been lower than the equivalent period for 1982 and 1978. The attack rate for children aged five to nine years during the second half of 1985 was double that for the equivalent period in 1977. So far, five deaths had been reported; three of these children were not vaccinated against whooping cough and the remaining two infants were too young to have received whooping cough vaccination.

4.2 Upper age limit for vaccination against whooping cough

Dr Barnes reminded members that the current upper age limit for vaccination against whooping cough was the sixth birthday. There was evidence of whooping cough increasing amongst older children and there had been requests from doctors for the age limit for vaccination to be increased. In the ensuing discussion, it was pointed out that there was little or no knowledge concerning the risk of vaccination in older individuals. The age of six years was similar to school entry and would be a useful time to check on vaccination. It was also considered that the main reason for offering vaccination to older children was to prevent them from taking the illness back home and infecting younger children. It was agreed to amend the recommendation so that it stated "pertussis vaccination is recommended for children up to the sixth birthday, but vaccination of older children may be considered, eg to protect infants. There is no need to give reinforcing doses after the basic course of three injections".

Professor Hull said that plain DPT vaccine was more reactive than the adsorbed vaccine. The Chairman said that it should be reiterated to the manufacturers that monovalent pertussis vaccine should be supplied in the adsorbed form.

4.3 Progress of the current vaccination campaign - Report from the Department JCVI(86)2

Dr Barnes reported that the campaign was launched in September 1985 following the publication of the circular in the previous month. It included television and newspaper advertisements, posters and a leaflet for parents. This campaign had generated generally favourable publicity in the media. There was evidence, from increased sales of monovalent pertussis vaccine, that the first stage of the campaign had achieved some success.

4.4 Long term respiratory sequelae of whooping cough in a nationally representative sample - Paper by Britten N and Wadsworth J - BMJ 1986, vol 292; page 441 JCVI(86)3

Dr Barnes, introducing this paper, said that it was complementary to a study carried out by Professor Lambert and his colleagues, and also to those by Dr Williams. This study was carried out among subjects in the National Survey of Health and Development who were 36 years old. As in the studies carried out by Lambert et al and Dr Williams no significant respiratory sequelae were demonstrated in this sample. Professor Lambert observed that none of these studies could exclude pre-existing susceptibility to chest illness before the age of two years. Also none of these studies could exclude the existence of a rare respiratory complication caused by whooping cough. It was observed that measurement of peak expiratory flow rate was a somewhat crude measure of respiratory function. The Chairman pointed out the remarkable fall in fatality from whooping cough quoted in this paper.

4.5 Recognising whooping cough, leader in the BMJ 1986, Vol 292; page 360 (for information) JCVI(86)4

4.6 Paper by the Swansea Research Unit of the RCGP JCVI(86)4a

Dr Williams speaking to this paper, said that there was an amendment to the second paragraph on page 2. The third and fourth sentences starting on page 4 should read - "Of the 32 children, 27 had suffered apnoea, four convulsions and one encephalitis. One of the apnoea cases and the child with encephalitis also had convulsions, so altogether six children had convulsions".

He said that on the advice of the JCVI he had not taken a large sample for his study, which he had confined to children under the age of five years who had serious complications which might lead to cerebal damage; these comprised apnoea, convulsions (non-febrile) and encephalitis. It was intended to match each of these cases with controls matched by age, social class and sex; in the event it was impossible to match five of the cases; this number comprised three mentally retarded children and two children from small schools from which no controls could be found. Of 32 children identified as having whooping cough with complications, 27 children were matched with controls. All children were subject to a battery of psycho-educational tests. Results included assessment of age, sex, social and household class. Age at the time of onset of whooping cough was on average 17 months for the index cases compared with three years and three months for control. With regard to the position in the family, more index children had older siblings compared with the respective controls. Concerning intellectual level, 50 per cent of the index cases were already receiving remedial teaching and these children performed worst on reading, comprehension and the Vernon spelling test.

Three of the index case children were mentally handicapped, two having a neurological deficit before their attack of whooping cough. Two of these children were no worse after the attack of whooping cough but one child's condition was considerably worsened.

Professor Gilliatt observed that the index cases were selected in that children with convulsions were included.

5. Rubella

5.1 Unconfirmed minutes of the meeting held on 9 October 1985

Professor Dudgeon speaking to these minutes said that the meeting had noted a slow increase in the uptake of rubella vaccine amongst schoolgirls. They had now also discussed the persistence of antibody after vaccination with rubella vaccine. The National Congenital Rubella Surveillance Programme indicated a decreasing trend in the incidence of the congenital rubella syndrome. Unfortunately, there were three or four cases of CRS in mothers who had definitely been vaccinated against rubella. Non-response to the vaccination was estimated to be five per cent but this could be reduced if the vaccination was carefully undertaken.

Professor Dudgeon considered that it should shortly be possible to say more positively that the risk of vaccination given inadvertently in early pregnancy or not long before conception was now thought to be a very slight risk indeed.

Professor Dudgeon reported that a change in rubella vaccination policy had been mooted but it was considered that there was insufficient documented evidence to justify a change. A meeting was planned for 12 June 1986, to discuss this matter, and that meeting would report to the Joint Committee.

5.2 Proposed meeting in June 1986 on scientific strategy for rubella vaccination - oral report

This item was discussed under the unconfirmed minutes of the meeting of 9 October 1985 above.

5.3 Rubella campaign - report from the Department

JCVI(86)5

Mr Wilson reported that during 1985 the National Rubella Council had produced a video film aimed at schoolgirls and was available for hire or sale to youth organisations. In 1986 it was hoped to launch a complementary video film for adult women.

5.4 Rubella vaccination and pregnancy - preliminary report of a national survey BMJ 1986, vol 292; page 727

JCVI(86)6

Professor Smithells suggested that it could be advised that rubella vaccination in these circumstances should not be regarded as an automatic reason for termination of pregnancy. However, it was necessary to define a shorter period around conception than could be concentrated on in these studies. In discussion, it was noted that it was necessary to define the criteria for teratogenicity and to take account of the different types of vaccine. It was agreed that before new advice was finalised, the Rubella Sub-Committee should look at all parameters.

The Chairman recorded the Joint Committee's gratitude to Professor Dudgeon for his valuable contribution during his years of membership.

6. Measles

6.1 Report of the meeting of the Measles Sub-Committee held on 6 December 1985

Dr Smith reported that in England the acceptance rate for measles vaccination had risen slowly to reach a level of 63 per cent in 1984, compared with 71 per cent in Scotland. It was noted that in Northern Ireland the uptake of measles vaccine had increased from 16 per cent in 1983 to 25 per cent in 1984. Dr Donaldson said that he would be writing to all health professionals on this matter.

The Chairman suggested a follow-up of districts in England who had a low uptake of measles vaccine. Dr Smith indicated that the Sub-Committee had suggested that a Working Party be set up to examine ways to improve the uptake of vaccination. This was agreed.

There was an increase in the proportion of cases in older children but no actual increase in the number of cases. It was noted that measles may produce premature delivery amongst mothers.

With regard to deaths from measles, Dr C Miller had found that the actual numbers of deaths were declining but the comparative mortality ratio had not decreased. Most deaths occurred in children old enough to have been vaccinated and were therefore preventable. A substantial proportion of deaths occurred in children with leukaemia. The Chairman suggested that a general statement be made to the public concerning the need to immunise normal children against measles in order to protect children who could not be vaccinated. Professor Banatvala enquired about giving measles vaccine to children with leukaemia and was told that the Joint BPA/JCVI Working Group were considering this point.

The observation that measles antibody was lower in children born to mothers protected against measles by vaccination compared with natural disease, indicated the need that eventually it might be necessary to lower the age of measles vaccination.

The Sub-Committee had noted that the interpretation of contra-indications to measles vaccination among the health professions was variable and that in computerised schemes measles vaccination might not be offered if the basic course of three doses of triple vaccine was not complete.

A paper by Dr Christine Miller and her colleagues had demonstrated that specially dilute immunoglobulin did not interfere with the development of immunity from measles vaccine. However the question was raised as to whether the administration of such immunoglobulin was necessary in children who had a personal or family history of convulsions. The Joint BPA/JCVI Working Group would consider this.

The Sub-Committee had noted the paper on early onset of anaphylactoid reactions to measles vaccine and Professor Campbell's suggestion that instead of specific mention of anaphylaxis to eggs, a general statement should be made on sensitivity with regard to measles vaccine.

6.2 Upper age limit for measles vaccination - paper by the Department JCVI(86)7

Dr Barnes said that recent experience in the USA had highlighted the severity of measles in adults and of the possible dangers to the new-born child; therefore with a successful vaccination programme it might be necessary to offer measles vaccination to adults. The Committee agreed that it was safe to administer measles vaccine to adults and that, as uptake of vaccine increased, adult vaccination became more important. It was recommended that this matter should be referred to the licensing body for its views and then considered again by the Committee. The intention would be to make measles vaccination of adults permissive and offer it initially to University students and other groups of young adults.

7. Recent developments in immunisation in North America

Professor Dixon described the chief subjects discussed at the two most recent meetings of (a) Canadian National Advisory Committee on Immunisation, and (b) US Immunisation Practices Advisory Committee.

Haemophilus influenzae type b vaccine was now recommended for all children aged two years; children aged 3-5 years at special risk could also be considered for vaccination. In the USA where younger children may also be offered the vaccine, a second dose is recommended at the age of 24 months, provided at least two months have elapsed. Dr Smith mentioned that Professor Moxon was hoping to study H. influenzae b vaccines in Oxford; he would also be chairing an MRC Sub-Committee on polysaccharide vaccines. Dr Selkon pointed out that his laboratory in Oxford was the relevant reference laboratory and received representatives strains from all over the country. Professor Hull wondered how often death or permanent CNS damage occurred as a result of H influenzae meningitis. Delay in recognition and appropriate treatment must be largely responsible. Professor Lloyd suggested that a prospective study would be of value. Professor Hull mentioned that the current neonatal meningitis study did not cover infections due to this organism although if the age range were extended it would.

Professor Dixon's next topic was the question of whether live vaccines could be used in children born to mothers infected with HTLV III/LAV or in persons with known infection but no symptoms. Such vaccination might well be contra-indicated. The Chairman pointed out that this topic was also raised in a letter from the Welsh Office and in a note from the Department (paper 13). It was agreed that the use of such vaccines as BCG, measles and oral polio vaccines in such infants might be unwise, and that a further report should be considered at the next meeting of the Committee.

Professor Dixon mentioned that the varicella-zoster vaccine trials which are under way in the US with Canadian participation were giving promising results; members observed that there was so far insufficient evidence to warrant licensing of this vaccine in the UK. He then moved on to the question of improved inactivated polio vaccines, which had caused much discussion in the USA. Dr Schild commented that the safety aspects were not fully cleared up.

Professor Dixon concluded by noting the US recommendation on influenza vaccination that annual programmes in nursing homes should not be begun before November, since it was thought that in elderly persons immunity was only satisfactory for two to three months. Dr Schild considered that it would normally last longer than that. The Canadian Advisory Committee were also planning for the eventuality of a pandemic of influenza.

8. BCG

Dr Citron stated that his letter in the British Medical Journal (15 February 1986) was intended to summarise the present position on BCG vaccination policy. The BCG Vaccination Sub-Committee now considered that a final decision to change to a more selective scheme should not be made until a further survey about 1988. This would entail further funding of the MRC unit. The Committee agreed, and considered that it would be helpful to have the results of such a study before recommending any change.

Dr Fenton Lewis reported on the analysis of the 1984 BCG vaccination data from District Health Authorities. Dr Bush commented that both East and West Suffolk had now reintroduced pre-BCG skin testing after ten years without it. Dr Citron said it would be useful to find out if any outbreaks had occurred in the few districts that had given up routine vaccination of school children.

Professor Collee stated that in Scotland, which was probably some ten years behind England in tuberculosis eradication, another ten years of the present scheme would certainly be needed. Professor Gilliatt called attention to the MRC survey's finding that in this country osteomyelitis was not apparently related to BCG, but ARVI had no data on young babies given BCG. There was a problem with late reactions eg ulceration and keloid and these needed surveillance. Dr Citron said that the BCG Sub-Committee felt it important to know of all really bad late reactions and plastic surgeons were being approached to get indications of the incidence of these.

Professor Gilliatt said that the surveillance of BCG should continue and should be applied to neonates if the school programme was stopped.

9. Influenza

Dr Smith reported on the recent meeting of the Advisory Group on the Antigenic Composition of Influenza Vaccines. Slight drifting in A (H_3N_2) and B strains led WHO to recommend changes in the respective components of the vaccine and the Advisory Group had concurred in these. Dr Smith also drew attention to the Group's suggestion that in this year's CMO letter on influenza vaccination the use of jet injectors for the purpose should be deprecated.

The Committee agreed that it would be of value if the Advisory Group could discuss at its next meeting the question of contingency planning for a future influenza pandemic.

10. Hepatitis B

Professor Zuckerman reviewed the paragraphs in the unconfirmed minutes of the Advisory Group on Hepatitis which considered the groups thought to be at special risk. He felt that it would be cost-effective to screen homosexuals before offering vaccine. Dentists were certainly at risk especially in hospital work, but it would be preferable to broaden the coverage to include all dental and medical students. Although certain groups of nurses were at particular risk, Professor Collee felt that nursing students should all be offered vaccination and Professor Zuckerman agreed. Sections of the police force were clearly at special risk and they should definitely be included. Professor Banatvala pointed out that even policemen on ordinary duties often get involved in incidents with a hepatitis B risk. It was agreed that any scheme should be run centrally; prison officers also needed protection.

Professor Zuckerman felt that 'persons who frequently change sexual partners' was an accurate definition of an important at risk group, although homosexuals within that definition were at particular risk, as were prostitutes. Children whose mothers were HBsAg positive should be vaccinated, as should ambulance

and rescue services. Intravenous drug abusers constitute reservoirs in large urban centres and would have to be considered. Travellers to highly endemic areas should not normally require vaccination unless they are going to be involved in health care in the area - or sexual promiscuity. Dr Smith mentioned mortuary attendants, morticians and embalmers as another at-risk group.

There was some discussion on which members of the police force need vaccination; the consensus was that all those on active duty do. Dr Selkon suggested that intradermal administration would be much cheaper but Professor Zuckerman mentioned the need for careful technique and that aluminium hydroxide adjuvant contra-indicates this route. Dr Bush pointed out the need to stress the importance of good technique in dentistry, for instance, even though protection against hepatitis B had been provided.

In considering the WHO paper (Annex D), Professor Zuckerman pointed out that boosting might prove necessary in high-risk personnel, but further work was needed. He felt that the paper by Adler et al (Annex B) was very sound as well as provocative and that there would be a need to give Ministers not only the cost of death from hepatitis B but also the considerable cost of treatment. The pool of infection in homosexuals was still sufficiently small to make vaccination worthwhile.

There was some discussion on financial implications. Professor Zuckerman considered that pre-screening was not needed except in homosexuals, especially the older ones. Professor Collee mentioned laboratory workers and Dr Covell social workers.

The Chairman asked the Committee to state who should be included in the expanded recommendations. It was agreed that inter alia health care students, morticians, social workers in drug addiction, laboratory workers, at-risk infants, and certain travellers should be included. Professor Banatvala raised the question of persons on renal dialysis going abroad. Professor Zuckerman said vaccination was best done before dialysis started. Dr Covell warned against vague expressions; advice should be definite. Professor Hull stressed the need for a suitable order for the recommended groups.

The Chairman said that proposed revisions of the present recommendations would be circulated to the Committee before being promulgated.

11. ARVI

11.1 Minutes of the meeting held on 4 October 1985

Professor Gilliatt said that an account of this meeting had been given verbally at the last meeting of the JCVI.

11.2 Report of the meeting held on 7 February 1986

Professor Gilliatt reported that this meeting had considered the letter from Mrs Fox. There had been further discussion on infant deaths and triple vaccine. Dr Fine had produced calculations which suggested that the estimate of deaths occurring within 24 hours of vaccination of four to six deaths per year, was of the correct order

of magnitude. ARVI had also received a report on the Hoffman paper concerning infant deaths; ARVI hoped to return to this topic when the Hoffman study is completed. (Dr Elizabeth Taylor had also reported on the immunisation history of 63 babies who died unexpectedly in Sheffield over the period 1979 to 1985.) The Sub-Committee had also received a further report from the NCES on adsorbed and plain DPT which showed that there was no significant difference in the incidence of serious reactions in the two types of vaccine. The report also indicated that screaming was not an indication of serious neurological injury. Professor Knowelden said that there was a difference in age distribution between SIDS and children vaccinated; the majority of cases of SIDS occurred in children too young to be vaccinated. Also in most cases of SIDS it was now becoming apparent that there was a clear clinical story of some subsidiary infection. Professor Gilliatt concluded his account of the February meeting of ARVI by saying that Dr Noah had spoken to his paper on the surveillance of adverse reactions to acellular whooping cough vaccine.

11.3 Response to Mrs Fox's letter - for information JCVI(86)11

Mr Wilson said that the reply to Mrs Fox's letter had been non-committal. Mrs Fox was to be sent a copy of Professor Miller's paper when this is available.

11.4 Report on suspected adverse reactions for the period 19 September 1985 to 15 January 1986 - paper by the Department JCVI(86)12

Dr Barnes said that there were 90 reports of adverse reactions to triple vaccine with or without oral poliovaccine during the period; these included two cot deaths and six reports of convulsions. There had been one report of possible meningism to oral poliovaccine. Most of the 26 reports to diphtheria and tetanus vaccine were injection site disorders; two reports of convulsions were also recorded. Adverse reactions to measles vaccine included one early onset reaction and one case of anaphylaxis which was alleged to have been caused by egg allergy. The circumstances of the latter case were to be confirmed. There were 14 suspected adverse reactions to influenza vaccine. These occurred mainly in patients who were already ill.

The Committee agreed to a suggestion from the Chairman that in future it would accept reports on adverse reactions as "for information" only.

12. BPA/JCVI Working Group

Unconfirmed note of the meeting held on 30 January 1986

The Chairman reported that the question of immunisation of premature infants had to be discussed by the BPA Immunisation Committee.

Professor Campbell had agreed to draw up a list of local and general reactions to pertussis vaccine which might be considered a contra-indication to a further dose of that vaccine. It was hoped to issue a statement on contra-indications to whooping cough vaccine shortly. This would include a list of conditions which were not contra-indications.

The advice on the site of injection was discussed by the Joint Committee and it was advised that the Working Group's recommendations be cleared with the General Medical Service Committee of the BMA.

The Chairman reported that training of under-graduates and doctors in immunisation was to be further considered by the Working Party in the light of enquiries being made.

In the matter of alleged egg allergy and measles vaccine, it was noted that although it was possible to amend the advice contained in the Memorandum 'Immunisation against Infectious Disease', it was also desirable to encourage manufacturers to change the advice in their data sheets.

The next meeting of the Group is to be held in June.

13. AIDS and Immunisation

13.1 Correspondence from Welsh Office and Note by the Department JCVI(86)13

With regard to the use of live vaccines in individuals who have asymptomatic HTLV III/LAV infection the Committee decided, after discussion, that there was no evidence so far which would cause them to recommend that live vaccines should not be used in such individuals. The Chairman said that this question would be reviewed at the next meeting.

14. Treatment of Tetanus - letter from Glasgow and West of Scotland BTS JCVI(86)14

The Committee agreed that immunoglobulin suitable for intravenous treatment of tetanus should be freely available. Dr Barnes agreed to make enquiries with Supply Division.

15. Any other business

There was none.

16. Date of next meeting

The next meeting is to be held on 7 November 1986.