THE ROYAL SOCIETY

The Academy of Medical Sciences

Summary of oral evidence: Dr David Salisbury

27 April 2006

Dr David Salisbury is Director of Immunisation at the Department of Health. Dr Salisbury is a member of the Department of Health's Pandemic Influenza Scientific Advisory Group and chairs the sub-group on surveillance. The views expressed were the personal views of Dr Salisbury.

Members of the working group present were: Sir John Skehel, Professor Glynis Breakwell, Professor Neil Ferguson, Dr John McCauley, Professor Andrew McMichael, Professor Karl Nicholson and Dr Geoffrey Schild.

Key points

Vaccine research and development

Dr Salisbury explained that the UK/European Union and United States models for vaccines research are very different. In Europe, a great deal of influenza vaccine research is undertaken by the vaccines industry compared with the United States where much research is undertaken by the National Institute of Health. Where there are gaps in research, the UK Government tries to fills these gaps by commissioning its own research. Biomedical research is the responsibility of the MRC whilst the Department of Health concentrates its resources on 'near-term' studies, especially those will be influential in policy development. The Concordat arrangement between the MRC and DH allows the two organisations to identify priorities and re-direct work.

Dr Salisbury outlined the roles of different parts of Government in the research, development and evaluation of vaccines. The Medical Research Council are involved in commissioning more basic research and early clinical work; the Department of Health funds projects that are more near-term with the Health Protection Agency particularly involved in the evaluation of new and existing vaccines.

The UK National Vaccine Evaluation Consortium, funded by the Department of Health, also carries out underpinning work for the UK vaccination programme. Its work is focussed in the following areas: pre-clinical and clinical evaluation of new vaccines and immunisation schedules; vaccine safety research; and modelling and economic evaluation of new immunisation programmes.

Pandemic influenza vaccines

Worldwide production of influenza vaccines is currently around 350 million doses which are taken up producing seasonal influenza vaccines. The strategy of European Union is to switch the production of the seasonal influenza vaccine to pandemic influenza at the earliest opportunity once the strain of the pandemic has been identified.

Dr Salisbury reported the purchase by the UK Government of 3.5 million does of second generation vaccines against the H5N1 strain of avian influenza to be used for the vaccination of healthcare workers in the event of a pandemic. The two contracts for the supply were awarded to Chiron Corporation and Baxter Healthcare Corporation. The two products were purchased on the basis that one is egg-grown and adjuvanted with a new adjuvanting agent and the second is cell-grown and uses alum as the adjuvant. The companies were providing supporting data on the immune responses of their low-dose vaccines and the cross-protection effects of their adjuvants.

Some preliminary immunogenicity data is available but no challenge or human clinical data with their H5N1 vaccines are available yet. He explained that should an influenza pandemic in humans occur the vaccine would serve as a useful first line of defence until a vaccine against the exact strain circulating in humans could be produced. Some of the H5N1 vaccine would also be available to researchers.

The role of adjuvants for dose-sparing was highlighted as an area of continued interest to the Department of Health. The Department is in discussion with a number of companies about the results of trials of new adjuvants and different influenza antigens. The results of these trials give the Department the opportunity to look across the board at the best options for the UK.

A recent meeting was held between the National Institute of Biological Standards and Control (NIBSC), the Department of Health, representatives from the scientific community and industry which provided an insight into timeline issues for production of vaccines. Last year, it took 84 days between the identification of an influenza virus and transporting it to the vaccine manufacturing industry for the industry to start production processes. NIBSC was leading on this highly important work to reduce this time to around 24 days. The best estimate of how much time it will take between the identification of a new virus strain to the starting of production of a vaccine is four months. The first vaccine delivery would be made after four months with completion of orders in up to one year. This means that it will be very difficult to vaccinate before the first wave of a pandemic, and possibly even the second wave. The Department of Health has invited manufacturers to tender for sleeping contracts for post-pandemic vaccines. They are also in discussions with manufacturers to find a way of increasing vaccine production capacity.

Dr Salisbury said that the Department of Health regularly meets vaccine manufacturers to align priorities and to receive updates on various research programmes, including those involving H5 strains. Dr Salisbury also said that he is a member of the Department of Health's Pandemic Influenza Science Advisory Group which, along with a number of experts, feeds into the UK National Influenza Pandemic Committee UK which in turn advises the Health Departments of the United Kingdom on the health response during an influenza pandemic.

Risk Communication

Dr Salisbury said that the United Kingdom has worked extensively on the communication of risks involved in vaccination over a number of years. This work involves commissioning twice yearly market research of 1000 mothers with children about their views of immunisations which now has twelve years of data. In addition, specific focus group work has been undertaken. Both the market research and focus groups now include questions related to pandemic influenza. The Department of Health's communication strategy for a potential pandemic is publicly available. The strategy is linked to the World Health Organisations stages of a pandemic with different material prepared for each phase. Material currently available is linked to the current phase three status.