The 23rd National Immunization Conference for Health Care Workers was held on December 7th, 2012 at the Manchester Conference Centre. There were over 220 delegates for this event sponsored by educational grants from Crucell, Glaxo Smith Kline, Pfizer Vaccines and Sanofi Pasteur. A number of speakers took the opportunity kindly afforded by Human Vaccines and Immunotherapeutics to write up their conference presentation as a paper for this special supplement.

Dr Peter Arwright, Consultant Paediatric Immunologist at the Manchester Children’s Hospital presented the “Meet the Expert” breakfast session and looked at vaccine protective efficacy including immunological correlates of protection, with particular reference to the glycoconjugate vaccines. Professor Miller (Health Protection Agency) reviewed “Current Hot Topics in Immunization,” presenting a comprehensive commentary on prenatal immunization (pertussis and influenza), possible changes to the national schedule involving Meningococcal C conjugate vaccine and varicella vaccine.

The next two presentations focused on pertussis. Dr Gayatri Amirthalingam (Health Protection Agency) looked at the changing epidemiology of pertussis in the UK and its implications for the national infant, child and adolescent vaccination program. Dr Stephen Hughes, Consultant Paediatric Immunologist at the Manchester Children’s Hospital, further developed this by considering pertussis vaccination in infants and young children and compared whole cell pertussis vaccine with the five valent acellular vaccine. Dr Mich Lajeunesse explored egg allergy and vaccination of children. He reported on research looking at anaphylaxis occurrence following vaccination in egg hypersensitive children. He then discussed guidelines for immunizing children with egg hypersensitivity. Professor Janet Lord reported on her work around the effect of aging on the immune system. This considered fundamental immunological responses in adults and the changes observed with aging. She also discussed variation in antibody response by time of day of vaccine administration. Professor Perrie’s Research Unit presented a comprehensive review on the adaptive immune response to different vaccine delivery systems and the advantages and disadvantages of each. Professor Nick Phin (Health Protection Agency) addressed the issue of influenza with particular reference to the limitations of the current subunit vaccine, and the rationale for, and the proposed piloting of the quadrivalent live attenuated influenza vaccine in 2013/14. Mr Julian Sheather (British Medical Association) explored “Refusal of parents to vaccinate: Dereliction of duty or Legitimate Personal Choice.” He argued that while parents had the final responsibility for decision making about their child’s health, such action should not increase the child’s risk of an adverse disease outcome. Claire Wong reviewed hot issues around travel immunization and focused particularly on yellow fever and typhoid vaccines, and the common issues that practitioners experience when using these vaccines.

A key theme running through the conference involved improving access to vaccine services. Ms Joanne Yarwood addressed prenatal immunization and

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early experiences with pertussis and influenza. The topic of widening access was the subject of an afternoon workshop and had presentations by Michelle Falconer, (St Helens and Knowsley PCT), Fiona Print (Health Protection Agency) and Dr David Baxter (Stockport PCT).

One of the other three afternoon workshops looked at Meningococcal vaccines with particular reference to the recently licensed Men B vaccine. Presentations by Dr Jamie Findlow (Health Protection Agency), Dr Mary Ramsay (Health Protection Agency), and Professor Robert Read (University of Sheffield) looked at the “Current Status of Meningococcal B vaccines, Meningococcal Epidemiology and Outbreak Management, Lessons for Meningococcal Carriage from Experimental Human Challenge with Neisseria Lactamica, and the Cost Effectiveness of Meningococcal B vaccines.”

The final workshop brought together Professors Ray Borrow and David Fedson who looked at “Evidence for the use of Pneumococcal Conjugate over Polysaccharide in children” and “Pneumococcal Vaccination of Older Adults: Conjugate or Polysaccharide.”

This Special Focus features several articles and short reviews based on presentations made at the 23rd National Immunization Conference. David Baxter describes the practical experience gained from running a prenatal vaccination program in Stockport (UK). Janet Lord’s presentation (discussed above) led to a short review on the effect of aging of the immune system on vaccination responses. Age-related decline in immunity results not only in increased susceptibility to infection but also reduces the prophylactic efficacy of vaccinations. It is therefore important to consider how we can best improve vaccination responses, and strategies discussed include boosting, time of day of vaccine administration, mitigating the effects of stress, the use of improved adjuvants and the role of exercise. Michelle Falconer reports on findings of a project to improve vaccine uptake. In this study, a task group was set up to improve service quality to ensure that all children waiting for an appointment for vaccination are offered one at the earliest opportunity. It is reported that new ways of delivering immunization sessions can be successfully implemented in order to enhance access through the use of alternative venues that can subsequently lead to increased vaccine uptake. Fiona Print reviews the importance of accessing hard to reach groups, travelers and looked after children, and the various strategies and initiatives to do so. Yvonne Perrie and colleagues provide a systematic review of the correlation between the induction of immune responses and the ability of the liposomal formulation to promote depot formation. They confirm that the physicochemical characteristics of particulate-based adjuvants play a key role in the modulation of immune responses. David Fedson discusses strategies for optimal protection from invasive pneumococcal disease and pneumococcal pneumonia. This follows the introduction of PCV13 vaccination of children and the changing cost-effectiveness of PPV23 in older adults. On a similar theme, Ray Borrow considers evidence for the use of pneumococcal conjugate over polysaccharide in children. Given the theoretical risk of memory B-cell depletion following vaccination with PPV23, it is not clear how best to maintain protection in those children at increased risk of pneumococcal infection. However, it is clear that the potential advantages of PPV23 vaccination outweigh any potential concerns. Jamie Findlow reviews the current status of meningococcal group B vaccines and looks to the future with development techniques including reverse vaccinology. Notably, 4CMenB may soon be available to prevent disease caused by the last of five major pathogenic meningococcal groups to further reduce the burden of meningococcal disease. Finally, Julian Sheather asks whether childhood MMR vaccination should be compulsory. This article considers the rights, duties, public interest and consequences of such an approach.

The 24th National Immunisation Conference for Health Care Workers will be held on Friday December 6th, 2013 at the Manchester Conference Centre.

Disclosure of Potential Conflicts of Interest

No potential conflicts of interest were disclosed.