

**Australian Technical Advisory Group on Immunisation (ATAGI)
59th meeting
18 and 19 February 2016**

ATAGI Bulletin

The Australian Technical Advisory Group on Immunisation (ATAGI) 59th face-to-face meeting was held on 18 and 19 February 2016 in Canberra.

Pneumococcal disease

- ATAGI reviewed an updated evidence summary from the Pneumococcal Working Party regarding invasive pneumococcal disease (IPD) in Aboriginal and Torres Strait Islander people. Notification rates of IPD were more than 10 times higher in Aboriginal and Torres Strait Islander people than in non-Indigenous Australians for most adult age groups. Approximately 30% of IPD in Aboriginal and Torres Strait Islander people aged 15 years or over was caused by pneumococcal serotypes that are included in the 13-valent pneumococcal conjugate vaccine (13vPCV). An additional 40% of IPD was caused by serotypes that are included in the 23-valent pneumococcal polysaccharide vaccine (23vPPV), but not in 13vPCV.
- ATAGI noted that the IPD notification rates among Aboriginal and Torres Strait Islander people aged 15–24 years were similar to those in non-Indigenous adults aged 65 or over (for whom 23vPPV is free under the National Immunisation Program [NIP]), and that IPD incidence continues to increase from about 25–29 years of age. However, for Aboriginal and Torres Strait Islander people less than 50 years of age, 23vPPV is provided under the NIP only for those with risk factors.
- ATAGI noted that evidence from other programs suggested that pneumococcal vaccination coverage in Aboriginal and Torres Strait Islander adults less than 50 years old could be optimised by adopting an age-based rather than a risk factor–based approach. Further work by the Pneumococcal Working Party will include consideration of recent epidemiology, vaccination coverage, waning immunity following immunisation and feasibility of program implementation.
- The Pneumococcal Working Party will seek representatives from the National Aboriginal Community Controlled Health Organisation (NACCHO) and/or the Australian Indigenous Doctors' Association (AIDA) to progress this work.

Influenza

- ATAGI discussed a data summary on influenza burden from the Influenza Working Party. From the available data on hospitalisations coded as influenza, the highest burden was in children aged less than 6 months, ranging from around 150 hospitalisations per 100 000 population in years of low influenza activity to almost 400 hospitalisations per 100 000 population in years of high activity. Other age groups with higher incidence of hospitalisation were children aged 6–23 months, children aged 2–4 years, and adults aged over 65 years.
- Members noted the limitations of routine data available for comprehensive measurement of the burden of influenza in Australia. Mathematical modelling of disease burden, which could take into account the patterns of all hospitalisations with codes associated with respiratory infection (relative to the timing of peak influenza activity in each year) and assess the

potential impact of relevant immunisation strategies, would be valuable to inform optimal use of vaccines to reduce the burden of influenza.

- ATAGI endorsed the 2016 ATAGI statements on influenza vaccines for immunisation providers and consumers to be published on the Immunise Australia website.
- ATAGI endorsed the updated 4.7 Influenza chapter of the Australian Immunisation Handbook (the Handbook) to be submitted to the National Health and Medical Research Council for approval.

Pertussis

- ATAGI discussed data on the national burden of severe pertussis in infants in the first few months of life, which is the primary reason for the recommendation of pertussis immunisation during the third trimester of pregnancy. ATAGI noted that, during epidemic years, there have been approximately 500 hospitalisations and 2 deaths per year among infants aged less than 4 months. In a non-epidemic year, there are typically around 100 hospitalisations and no deaths.
- Members discussed a recent study that found higher pertussis antibody titres in the cord blood of infants born to mothers who were immunised before 32 weeks of pregnancy,¹ similar to a previous smaller study. Members agreed that these data did not provide sufficient evidence to warrant any change to the current recommendation for pertussis-containing vaccine in the third trimester of pregnancy, but did lend support to vaccine administration earlier in the third trimester. ATAGI agreed that the most robust data were from a UK study of pertussis vaccine effectiveness in preventing severe infant disease—this study found equivalent outcomes if the vaccine was given at least 2 weeks before birth (up to 38 weeks gestation), indicating there is still value in giving vaccine later in pregnancy, ideally between 28 and 32 weeks gestation.
- ATAGI endorsed draft updates to the 4.12 Pertussis chapter of the Handbook to be published in the 2016 annual update, including:
 - clarification that ATAGI continues to recommend that adult household contacts and carers of infants under 6 months of age do not require a booster unless 10 years have elapsed since a previous dose. This is because, based on current evidence, maternal vaccination provides a much greater level of protection to the infant than is afforded by vaccination of other adult contacts, and, in immunised adults, higher levels of antibody persist for up to 10 years
 - clarification that ATAGI recommends that, if a dose of pertussis-containing vaccine is given during pregnancy, but prior to the third trimester, the dose does not need to be repeated in the third trimester of that pregnancy. This is supported by recent studies of earlier vaccination in pregnancy (see above)
 - clarification that, if a previous dose of pertussis-containing vaccine was administered after delivery (known as cocooning) rather than during the third trimester, the woman should receive the recommended dose in the third trimester of future pregnancies, even if the pregnancies are closely spaced (e.g. less than 2 years apart). This is because it is uncertain whether antibody levels in women who were vaccinated postpartum will be sufficient to protect the newborn in a subsequent pregnancy, and because repeated pertussis-containing vaccine doses have a good safety record. Similarly, any pertussis-containing vaccine administered before pregnancy should be repeated during pregnancy.

Human papillomavirus (HPV)

- Members were informed that, at its November 2015 meeting, the Pharmaceutical Benefits Advisory Committee (PBAC) had recommended that a 2-dose schedule for Cervarix® (2-valent HPV vaccine) for vaccination of 12–13-year-old females be listed as a Designated Vaccine under the NIP.
- ATAGI endorsed the draft update to the 4.6 HPV chapter of the Handbook to be published in 2016, in response to updates to the Product Information for Cervarix® to include an alternative 2-dose schedule in adolescent girls 10 to 14 years of age. However, at this stage, ATAGI continues to endorse providing routine protection of adolescent boys and girls against HPV types 16 and 18 and recommend a 3-dose schedule for HPV vaccine. ATAGI will continue to review the evidence for a 2-dose HPV immunisation schedule in the Australian context for each of the registered HPV vaccines to inform any potential changes to recommendations in future updates of the Handbook.

Mumps

- Members discussed the ongoing outbreak of mumps in fully vaccinated Aboriginal adolescents and young adults in Western Australia. Members noted that the mumps outbreak remains largely confined to Aboriginal adolescents, but has continued despite a public health response, with the potential to involve adjacent jurisdictions. ATAGI agreed to offer strategic advice and support to the Western Australian Department of Health regarding consideration of further measures to control the outbreak.

Special Risk Groups Working Party

- ATAGI endorsed membership of a working party on immunisation recommendations for population groups with special risks for vaccine-preventable diseases. This working party will consider approaches to immunisation in special risk groups at a whole-of-population level, as opposed to by individual disease or by vaccine.
- Priorities for the working party include vaccine recommendations for Aboriginal and Torres Strait Islander people, and also for those with underlying medical conditions due to disease or treatment.

Australian Immunisation Handbook

- ATAGI endorsed membership and terms of reference for a working group to progress issues related to future editions of the Handbook. The working group will also consider the scope for publishing other ATAGI communications as part of a broader communication strategy.
- Members discussed the comments received from public consultation on updates to the clinical recommendations in the 4.23 Yellow fever chapter of the Handbook, and endorsed the proposed changes to the chapter in response to these comments. The updated chapter will be published in the 2016 update of the Handbook. The public consultation comments and ATAGI's responses will be published on the Department of Health website when the chapter is finalised. Comments from public consultation that were not specific to the Handbook will also be passed to the Communicable Diseases Network Australia for potential actions relating to operational issues raised on the accreditation of yellow fever vaccine providers and clinics.

- ATAGI endorsed updates to the following Handbook chapters, which do not include changes to clinical recommendations, to be published in the 2016 annual update of the Handbook: 2.1 Pre-vaccination, 2.2 Administration of vaccines, 2.3 Post-vaccination, 3.2 Vaccination for international travel, 3.3 Groups with special vaccination requirements, 4.2 Diphtheria, 4.6 Human papillomavirus, 4.12 Pertussis, 4.13 Pneumococcal disease, 4.19 Tetanus, 4.20 Tuberculosis and 4.24 Zoster (herpes zoster).
- ATAGI identified and discussed Handbook chapters that may require updates to ATAGI recommendations in the 2017 Handbook annual update, and therefore may require public consultation. These include pneumococcal disease, rabies and other lyssaviruses, HPV, influenza and special risk groups.

Immunisation coverage data

- The recent publication of *Healthy communities: immunisation rates for children in 2014–15* by the National Health Performance Authority emphasises the aspirational target of 95% immunisation coverage. Members agreed that setting this aspirational target is a positive step towards improving immunisation coverage. ATAGI reiterated the evidence informing the 95% threshold, which is that the level of immunisation coverage required to achieve herd immunity against measles (the most highly infectious agent for which there is a vaccine under the NIP) is estimated to be 94%. The aspirational target of 95% supports Australia's contribution to achieving measles elimination in the Western Pacific Region. It will also ensure sufficient herd protection against other vaccine-preventable diseases for which vaccines are funded on the NIP because the level of population vaccine uptake to achieve herd immunity against these diseases is likely to be lower than for measles.
- Members noted the importance of ensuring that data in the Australian Childhood Immunisation Register (ACIR) is high quality, and that lessons learned regarding data quality should inform the development of the whole-of-life Australian Immunisation Register (AIR) proposed for establishment in November 2016.

Strategic vision for ATAGI

- Members discussed a range of topics to inform a strategic vision for ATAGI. Key areas for consideration included immunisation recommendations for Aboriginal and Torres Strait Islander people; immunisation of adults; a communication strategy for ATAGI; immunisation registers and data quality; sharing information with other national immunisation technical advisory groups (NITAGs); implementation and evaluation of immunisation programs; research priorities; and collaboration with other groups in the area of immunisation.
- ATAGI endorsed membership of a small working group to progress these issues. An update from this group will be provided at the next ATAGI meeting.

Horizon scanning

- Members noted the report from the National Centre for Immunisation Research and Surveillance (NCIRS) on recent deliberations and recommendations from the Strategic Advisory Group of Experts on Immunization of the World Health Organization, and NITAGs of the USA, UK, Canada and New Zealand.

PBAC guidelines review

- ATAGI was advised that the draft revised guidelines for preparing a submission to the PBAC, including the section on vaccine product types, are open for public consultation until 5 April 2016. ATAGI nominated a small group of ATAGI members to review the guidelines and provide comments to the PBAC out of session.

ATAGI's role in regional and international collaboration between NITAGs

- ATAGI welcomed visitors from the Strengthening Independent Immunization and Vaccine Advisory Committees (SIVAC) Initiative, Dr Alex Adjagba and Ms Laura Davison. Ms Davison presented a summary of SIVAC's work in supporting NITAGs in the Western Pacific Region.
- ATAGI endorsed participation in the SIVAC evaluation process for NITAGs. Members also noted other potential mechanisms by which ATAGI could collaborate and share information with other NITAGs, including providing information and expertise, participating in capacity-building workshops, and engaging in regional and international networks.
- Members strongly supported ATAGI's participation in the region, and also noted that this type of engagement is part of the National Immunisation Strategy, Strategic Priority 8.

ATAGI membership and other business

- ATAGI welcomed new members Professor Allen Cheng, Associate Professor Michelle Giles and Dr Nicholas Silberstein.

Notes and resources

- ATAGI's membership, terms of reference and conflict of interest information are available on the Immunise Australia website at www.immunise.health.gov.au (see 'Immunisation Advisory Bodies').
- The *Australian Immunisation Handbook* is available on the Immunise Australia website at www.immunise.health.gov.au.
- The horizon scanning report will be available on the NCIRS website at www.ncirs.edu.au.
- Information on NITAGs worldwide is available on the NITAG Resource Centre website at www.nitag-resource.org.
- Next ATAGI meeting: Thursday 16 June to Friday 17 June 2016. The meeting agenda will be published on the Immunise Australia website shortly before the meeting.

¹ Eberhardt C, et al. Maternal immunization earlier in pregnancy maximizes antibody transfer and expected infant seropositivity against pertussis. *Clinical Infectious Diseases* (2016), doi: 10.1093/cid/ciw027.