

## IRDI Public Health Policy Dialogue Series No. 2: Inclusion of Pneumococcal Conjugate Vaccine (PCV) into the National Immunisation Programme (NIP)

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The Institute for Research, Development, and Innovation (IRDI) of the International Medical University (IMU) had collaborated with the Malaysian Public Health Physicians Association (PPPKAM) to organise the second Public Health Policy Roundtable Discussion titled *Inclusion of Pneumococcal Conjugate Vaccine (PCV) in the National Immunisation Program (NIP): What's More and What's Next?* on 22<sup>nd</sup> November 2018 in IMU Bukit Jalil campus.

This dialogue was well-attended by representatives from the Malaysian Public Health Physicians Association (PPPKAM), Malaysian Association of Adolescent Health (MAAH), different divisions from the Ministry of Health Malaysia (MOH) including the Family Health Development Division and the Disease Control Division, Malaysian Paediatric Association (MPA), Institute for Medical Research (IMR), National Public Health Laboratory (MKAK), Institute for Health Systems Research (IHSR), Galen Centre for Health and Social Policy, University of Malaya (UM), University Putra Malaysia (UPM), International Medical University (IMU), public health physicians, and consultant paediatricians (Infectious Diseases).

The objectives of this public health policy dialogue were to review the evidence and best practices in PCV vaccination, deliberate on issues and processes of policy decision, implementation, monitoring and evaluation that need to be put in place, and provide

recommendations to relevant stakeholders on the way forward. It was a closed-door event and attendance was by invitation only.

Pneumococcal infection by *Streptococcus pneumoniae* (*S. pneumoniae*) is a significant health burden globally and a major cause of death among children younger than 5 years old<sup>1,2</sup> as well as the elderly and adults with pre-existing medical conditions<sup>3</sup>. As a result, the World Health Organization (WHO) has recommended PCV as a priority for inclusion into national childhood immunisation programmes, including in developing countries and priority among countries with high child mortality rates of >50/1000 live births<sup>4,5</sup>. Adoption of PCV immunisation as part of the NIP in many countries since 2000 has also shown a positive impact on the reduction of pneumococcal disease as well as on the pneumococcal carriage rate<sup>6,7</sup>.

In Malaysia, the under-5 mortality rate has been more or less stagnant for the last 3 decades at around 7.5 per 1,000 live births and a large majority of the causes relates to non-infectious causes. As one of the moves to curb non-communicable diseases (NCD) like pneumococcal infection, the Pakatan Harapan government has pledged to include PCV into the NIP as stated in the *Buku Harapan, Election Manifesto Promise 9: Improve Access to Quality of Health*<sup>8</sup>. The Pakatan Harapan government has decided to provide compulsory pneumococcal vaccination for all children under the age of 2 years as is the practice in many other countries<sup>9,7</sup>.

Besides that, it was also recognised that vaccinating children has also shown positive impact on adults. For instance, in the 8 states of the USA which started

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vaccinating their infants since 2000, among adults 50 years and above, there was 28% and 55% reduction in pneumococcal disease and conjugate vaccine serotypes respectively<sup>10</sup>.

Nevertheless, Malaysia has yet to adopt PCV immunization as part of the NIP, partly due to the fact that PCV immunisation is not cheap to implement and the under-5-year mortality rate of 7.5 per 1,000 live births in Malaysia is not considered high<sup>11</sup>. Also, being an upper middle-income country, Malaysia does not qualify for GAVI (Vaccine Alliance) support for implementation. The lack of data on pneumococcal disease in Malaysia, specifically the lack of ability to confirm the causative pneumococcal pathogen, has also been cited as the reason among others, for not including the pneumococcal vaccine in the NIP<sup>12</sup>.

In spite of all these challenges, WHO has maintained its recommendation even in the absence of data on pneumococcal disease burden or prevalence of pneumococcal serotypes. Furthermore, cost-effectiveness studies have also shown that the inclusion of PCV in NIP will be a cost-effective strategy in Malaysia as compared to no vaccination<sup>12</sup>.

The following recommendations had been made by this health policy dialogue for the consideration of the Ministry of Health, Ministry of Finance, Ministry of Women, Family and Community Development, Ministry of Education, and Ministry of Energy, Science, Technology, Innovation, Environment and Climate Change in Malaysia:

1. Review and have clearer target on efforts to reduce morbidity and mortality related to pneumonia instead of targeting on reducing the overall under-5 mortalities among children with this vaccination proposal. Pneumococcal vaccination is not expected to make any significant impact on the overall mortality rate of under-5 children;
2. Design, develop and implement a system of notification or registry of pneumococcal infections to better capture and record the cases of pneumococcal infection for the purpose of surveillance and impact measurement;
3. Consider implementing mass immunization at a pilot scale of the size of a reasonable state population in order to assess feasibility of including PCV into the NIP in relation to human resource, cold chain and logistic needs, surveillance system and impact measurement and address any other uncertainties in policy decision process;
4. Encourage and support pneumococcal surveillance and carriage studies, pneumococcal disease burden and other related socio-economic, clinical and epidemiological studies which could provide baseline information relevant for the implementation of the vaccination program;
5. In order to address the issue of the high price of pneumococcal vaccine, the government may want to consider collaborating with other ASEAN member states toward regional vaccine procurement approach. The Senior Officers Meeting for Health Development (SOMHD) and ASEAN Health Ministers Meeting (AHMM) platforms could be used for this purpose. This is in line with the ASEAN Social Cultural Blue Print Characteristic B: *Social Welfare and Protection*, Element B4: Access to healthcare and promotion of healthy lifestyles, Strategic Objective 22: *Ensure*

*access to adequate and affordable healthcare, medical services and medicine, and promote healthy lifestyles for the peoples of ASEAN and Action no. 21: Strengthen existing health networking in ASEAN Member States in order to push forward an active implementation on health services access and promotion of healthy lifestyles, as well as continually exchange of knowledge, technology and innovation for sustainable cooperation and development;*

6. Implement a structured and coordinated effort to improve and enhance pneumococcal diagnostic laboratory capacity which is critical not only for optimal patient care but also for surveillance, vaccination monitoring and impact assessment as well to support good quality research and development (R&D);
7. Under the 2019 budget for the medical and health protection scheme of the B40, it is recommended that the pneumococcal vaccination for children be considered as one of the benefits under this health protection plan;
8. The government to also consider incorporating vaccination for elderly in the NIP. Considering that pneumonia is a significant cause of morbidity and mortality among Haj pilgrims especially among elderly, government and Tabung Haji to consider pneumococcal vaccination as part of the health package required for potential pilgrims.
9. Awareness campaigns about pneumococcal infections should be regularly organised and enhanced amongst the community as well as healthcare professionals to increase pneumococcal vaccine uptakes.

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