ABSTRACTS

ISPOR 5TH ASIA-PACIFIC CONFERENCE RESEARCH ABSTRACTS

PODIUM SESSION I:
COST-EFFECTIVENESS STUDIES

CE1
THE COST-EFFECTIVENESS ANALYSIS OF 13-VALENT PNEUMOCOCCAL CONJUGATE VACCINE (PCV13) AND 23-VALENT PNEUMOCOCCAL POLYSACCHARIDE VACCINE (PPV23) IN TAIWAN

METHODS: An age-stratified (18-49, 50-64, 65-74, 75-84, 85-99) micro-simulation Markov model was developed and populated with local data inputs to simulate the potential public health and economic outcomes of PCV13 versus PPV23 against invasive pneumococcal diseases (meningitis and bacteremia) and all-cause pneumonia when used as routine vaccination of infants in Taiwan over a life-time horizon. Costs include direct medical cost such as hospitalization, medical outpatient visits, medications and indirect cost. Both epidemiological and cost data inputs were derived retrospectively from National Health Insurance Reimbursement Database and public sources where available. The study was performed from both payer and societal perspectives using 3% discount rate for both costs and life years. Sensitivity analyses were conducted to test the robustness of model outcomes. RESULTS: Model projected that PCV13 vaccination compared with PPV23 can prevent 96,459, 1,110,253 and 1,548,947 cases of meningitis, bacteremia, outpatients pneumonia, and inpatient pneumonia respectively while saving 167,065 deaths, equivalent to 201,166 life years. PCV13 vaccination is estimated to save an direct (indirect) cost of NTD113,925M (NTD37,820M) over 62 years. Given market price assumption of one dose of PCV13 and PPV23 (NTD3,000 vs. NTD7,000), PCV13 vaccination on adults is expected to lead to NTD57,334 (NTD36,476) per life year saved in 50-64 age group and is cost-saving for all elder age groups from both payer (societal) perspective compared to PPV23.

CONCLUSIONS: PCV13 adult vaccination in Taiwan was estimated to reduce the burden of pneumococcal diseases and expected to be cost-effective from both payer and societal perspectives.

CE2
COST-EFFECTIVENESS OF THE REAL-WORLD USE OF NUCLEIC ACID TEST SCREENING TO DONATED BLOOD FOR HEPATITIS B, HEPATITIS C, AND HUMAN IMMUNODEFICIENCY VIRUS: EXPERIENCE FROM TAIWAN, A COUNTRY WITH A HIGH PREVALENCE OF HEPATITIS B AND C INFECTIONS

OBJECTIVES: To examine the health and economic impact of PCV13 compared with PPV23 in Taiwan. METHODS: A 13-valent pneumococcal polysaccharide vaccine (PPV23) in the elderly aged above 65 in Taiwan. A 13-valent pneumococcal conjugate vaccine (PCV13) is developed for use in high-risk adults. OBJECTIVES: To examine the health and economic impact of PCV13 compared with PPV23 in Taiwan. METHODS: An age-stratified (18-49, 50-64, 65-74, 75-84, 85-99) micro-simulation Markov model was developed and populated with local data inputs to simulate the potential public health and economic outcomes of PCV13 versus PPV23 against invasive pneumococcal diseases (meningitis and bacteremia) and all-cause pneumonia when used as routine vaccination of infants in Taiwan over a life-time horizon. Costs include direct medical cost such as hospitalization, medical outpatient visits, medications and indirect cost. Both epidemiological and cost data inputs were derived retrospectively from National Health Insurance Reimbursement Database and public sources where available. The study was performed from both payer and societal perspectives using 3% discount rate for both costs and life years. Sensitivity analyses were conducted to test the robustness of model outcomes. RESULTS: Model projected that PCV13 vaccination compared with PPV23 can prevent 96,459, 1,110,253 and 1,548,947 cases of meningitis, bacteremia, outpatients pneumonia, and inpatient pneumonia respectively while saving 167,065 deaths, equivalent to 201,166 life years. PCV13 vaccination is estimated to save an direct (indirect) cost of NTD113,925M (NTD37,820M) over 62 years. Given market price assumption of one dose of PCV13 and PPV23 (NTD3,000 vs. NTD7,000), PCV13 vaccination on adults is expected to lead to NTD57,334 (NTD36,476) per life year saved in 50-64 age group and is cost-saving for all elder age groups from both payer (societal) perspective compared to PPV23. CONCLUSIONS: PCV13 adult vaccination in Taiwan was estimated to reduce the burden of pneumococcal diseases and expected to be cost-effective from both payer and societal perspectives.