What is the best PCV schedule for LMIC? Results from trials in Asian countries: Nepal experience

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Nepal: PCV Introduction and schedule

- Nepal introduced PCV 10 in 2015
- The first GAVI country to introduce 2+1 schedule

- In 2010/2011 a non inferiority trial conducted to evaluate 3+0 vs 2+1 Schedule in Nepali children

- The 2+1 schedule was equally immunogenic to the 3+0 schedule in the early infancy with comparatively better antibody response in the later infancy and early childhood
Study evaluating Nepal schedule (2015-2016)

A slightly different schedule from the standard WHO schedule was used: 6 weeks, 10 weeks and 9 month
PCV Impact assessment

Impact on IPD cases (IBD surveillance)

Cases of invasive pneumococcal disease by year and age group
Impact on Pneumonia

• Proportion of pneumonia cases with end-point consolidation (EPC) on chest radiographs declined from 40% in the pre-vaccine period to 25% by 2018, but rose again in 2019 to 36%.
• The increase in 2019 was most pronounced in children >5 years of age

Impact on NP carriage in children with clinical pneumonia

• In children < 2 years with clinical pneumonia PCV10 VT carriage declined significantly (declined 72% by 2019). No decrease in in older children
Impact on NP carriage among healthy children

Urban cohort
Children 6 to 59 months

Rural cohort
Children 6 to 23 months

- Short term impact of PCV 10 introduction using the 2+1 schedule has been observed
- Continued surveillance is needed for the long term vaccine impact assessment