Malaria Vaccine Implementation Program, Kenya

Dr. Collins Tabu
27th April 2018
Mombasa, Kenya
Presentation Outline

- Background
- Malaria Burden in Kenya
- Malaria Vaccine Implementation Program
- Approach to vaccine introduction
- MVIP in the context of other preventive efforts
Considerations for public Interventions

- Magnitude of public health problem conclusively determined
- Risk groups clearly identified
- Ensured **Sustainable** availability of an effective vaccine
- Ability of vaccination services to cover > 80% of at-risk-population in order to break transmission
- Political Goodwill
- Cost effectiveness
- International Trends, Quality approval and Monitoring
Malaria Burden in Kenya
Progress has been made, but parasite prevalence remains high (27% in lake endemic region)

Estimated 3.5 million malaria cases and >10,000 deaths in 2016¹

Major cause of hospital attendance, contributing to an estimated 30% of admissions in lake region

Sources: 1. World Malaria Report 2017
Malaria Burden In 3 Pilot Countries, Estimated Malaria Cases, 2016

Source: World Malaria Report 2017

- Ghana: 8,060,000
- Kenya: 3,520,000
- Malawi: 4,510,000
Malaria Burden In 3 Pilot Countries, Estimated Malaria Deaths, 2016

- Ghana: 12,880 deaths
- Kenya: 10,780 deaths
- Malawi: 7,000 deaths

Source: World Malaria Report 2017
Malaria Vaccine Implementation Programme (MVIP)

Key Considerations:

- Vaccine to be evaluated and authorized for use by national regulatory authorities
- Introduced and delivered by the national immunization programme using existing mechanisms
- In close collaboration with the national malaria control programme, ensuring continued use of other malaria prevention and treatment measures
Malaria Vaccine Implementation Programme (MVIP)

- Rigorous evaluation of:
  - Operational feasibility of providing RTS,S at the recommended four-dose schedule when implemented through the routine EPI;
  - Impact of the vaccine on all cause child mortality (overall and by gender), malaria-specific mortality and severe malaria;
  - Frequency of adverse events following immunisation (AEFI), with an emphasis on meningitis and cerebral malaria;
  - A highly critical issue is the extent to which the protection demonstrated in children in the Phase 3 trial can be replicated in the context of routine health systems
Recommendations on Schedule

- In the pilot implementation schedules, the malaria vaccine to be given as a 4-dose schedule
  - Beginning as close as possible to 5 months of age
  - Minimal interval of 4 weeks between doses 1, 2, 3
  - The 4th dose should follow 15-18 months after the 3rd dose

- The use of the RTS,S vaccine is not recommended for use in the younger (6–12 weeks) age category, as the vaccine efficacy was found to be low in this age category
# Proposed Immunization Schedule

<table>
<thead>
<tr>
<th>Age</th>
<th>6months</th>
<th>7months</th>
<th>9months</th>
<th>24months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed schedule</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Other interventions</td>
<td>Vit A</td>
<td>MR1st Dose</td>
<td>Vit A, De-worming</td>
<td></td>
</tr>
</tbody>
</table>
Malaria Vaccine Implementation Programme (MVIP)

- RTS,S MVIP Sub-National Vaccine Introduction:
  - Enables some areas to introduce RTS,S at the beginning of the programme, while other areas act as a comparison
    - Allocation of areas to implementation or comparison will be randomized
    - Areas to be randomized defined based on country context and evaluation requirements (eg. sub counties in Kenya)
    - Approximately 120,000 children per year in each country will have the opportunity to receive RTS,S with vaccination continuing for at least 30 months
Selection of pilot implementation areas based on criteria such as malaria parasite prevalence
1. Identification of pilot area and units for randomized introduction

2. Set up of standardized monitoring systems in all areas to monitor safety and survival

3. Randomization of areas
   - Implement RTS,S
   - Comparison areas
RTSS Introduction Plan- Communication a High Priority

- Information on vaccine benefits and risks to parents
- Explanation of the vaccine’s partial protection
  - A child who receives the vaccine may still get malaria
  - Need to continue to use other malaria control measures and seek health care promptly in case of fever
- Importance of child receiving all 4 doses for optimal benefit
- Pilot implementation—vaccine only available in a sub-set of high burden areas until more information is available
- Communication plans, engagement strategies and IEC materials finalized
Vaccination Strategy

- The MVIP will be fully integrated in the routine vaccination program
- Main strategy is will be use of fixed posts- All current vaccinating health facilities
- Outreaches or mobile vaccinations will be carried out where necessary in areas that access and utilization is a challenge
- Existing malaria control strategies are integrated with vaccination delivery.
Other Programmatic considerations

- Immunization Service delivery
  - New immunization visits
  - Co-administration with other vaccines - Site, Characteristics
  - Introduction of new vaccines in future
  - Vaccine safety monitoring

- Vaccine management
  - Cold storage capacity
RTS,S in the context of other malaria prevention tools

- Existing malaria control measures have played an essential role in significantly reducing the burden of disease in recent years.
- Vaccine does not replace these existing malaria interventions, but a new complementary tool;
  - Prompt malaria diagnosis and effective treatment
    - Test, treat and track (3T) policy
  - Insecticide Treated Nets (ITS)
  - Indoor Residual Spraying (IRS)
- Need for effective communication at all levels to ensure malaria prevention and control is accelerated even with deployment of the vaccine.
Thank You!