Lessons Learned from Vaccine Introduction Experiences

Opportunities for Inactivated Poliovirus Vaccine (IPV)

Many publications and studies have documented lessons learned from adding new vaccines to routine childhood immunization programmes. These efforts have identified lessons and principles that countries can consider for the introduction of inactivated polio vaccine (IPV).

Six important areas for successful introduction of a routine childhood vaccine

Countries’ experiences suggest there are at least six main areas that help ensure the success of adding a vaccine to a national routine childhood immunization programme:

- Effective leadership and advocacy for the new vaccine
- Sufficient vaccines available across the system
- Adequate cold chain capacity at all levels and all sites
- Health workers fully trained on the new vaccine
- Social mobilization to publicize the vaccine and educate communities, parents and caregivers
- Ongoing monitoring for early identification of and quick, effective response to challenges

The introduction of a vaccine can help strengthen routine immunization programmes

Many activities that are carried out to prepare for, implement, and monitor the addition of a new vaccine, like IPV, offer opportunities to make improvements in routine immunization programmes. Countries have found that new vaccines tend to perform only as well as the underlying programme, so efforts to leverage the introduction to reinforce targeted areas should not be neglected.

General examples of how to strengthen routine programmes include:

- Using the interest generated by a new vaccine to promote the value of routine immunization
- Understanding reasons for limited coverage, and strengthening efforts to reach children in need
- Integrating other services with immunization, especially for people with limited access to care
- Using trainings and new materials to reinforce the capacity and strengthen the interpersonal communication skills of health workers to provide recommended vaccines and other interventions
- Improving and expanding cold chain capacity
- Strengthening disease surveillance and AEFI monitoring and reporting systems
- Undertaking communication and education activities that help health workers and parents/caregivers understand the benefits of immunization, which can help boost overall interest and demand for immunization services
Leadership and Advocacy

Strong leadership and early, effective planning are very important for a new vaccine introduction.

- Government decision-makers need a strong scientific and public health rationale to support adding the new vaccine and clear information to help them understand why adding the vaccine. In this case, IPV is an important priority for the health of the country and for global polio eradication.
- Strong leadership in support of vaccines and immunization is critical at national, regional, and district levels to ensure allocation of sufficient resources.
- Global level partnerships and coordination mechanisms have proven essential to effective planning, and sharing of knowledge, experiences and best practices.

Tips for routine immunization strengthening

- A pre-introduction assessment of the national immunization programme can identify weak areas to be improved prior to or in parallel with IPV introduction.
- Financial and technical support from partners can be leveraged to fill these gaps and benefit the immunization programme as a whole.
- IPV introduction offers an opportunity to stress the importance of and increase visibility for the benefit of all vaccines in high level forums such as country oversight boards and the public.

Vaccine Planning and Supply

Introducing a new vaccine is a multifaceted process which requires detailed planning and coordination. It can help to identify all the major activities that need to happen prior to introduction and develop timelines working backwards from the planned date of introduction.

- Planning should factor in sufficient time for technical and regulatory approvals, if any.
- IPV may need to be phased-in to facilitate an effective introduction.
- Vaccine forecasting should be done early, and orders for vaccine placed well in advance (3 to 9 months).
- Efforts should be made to avoid stock-outs: Health care workers should adhere to the policy on eligible target cohorts. Parents and caregivers expect vaccine to be available, and stock-outs or shortages of new vaccines can reduce public confidence in the health delivery system and can lead to negative news media stories.

Tips for routine immunization strengthening

- Forecasting for IPV requirements presents an opportunity to examine needs forecasting for other routine vaccines and make adjustments in areas where there may have been shortages or wastage in the past.
- Routine monitoring and reporting, as well as assessing the causes of vaccine wastage in different settings, are helpful strategies for reducing vaccine wastage.
- Reviewing vaccine supply systems for IPV introduction can stimulate an overhaul of the entire supply chain.
Logistics and Cold Chain

Introduction of a new vaccine may create additional requirements for cold chain and vaccine management systems. A cold chain capacity assessment will identify areas that can benefit from expansion, and provides an opportunity to establish a national cold chain inventory.

- Vaccine stocks should be checked – or at least spot checked – ahead of the launch date to ensure adequate supplies are in place.
- Contingency plans should be in place in case anticipated IPV vaccine supplies or presentations do not arrive in the desired quantities.

**Tips for routine immunization strengthening**

- Where funding allows, old or substandard cold chain equipment should be replaced or upgraded.
- IPV introduction presents an opportunity to retrain all staff members who handle or administer vaccines in proper vaccine storage and handling policies and procedures at their facility.

Service Delivery

Introduction of a new vaccine is most efficient when it uses existing delivery structures. In order to minimize confusion and inconvenience for health workers and caregivers, efforts should be made to integrate new vaccines into existing schedules and avoid creating additional vaccination visits that are not absolutely necessary.

- Health workers are central to successful immunization programmes. Positive attitudes and good interpersonal communication skills of frontline health workers are crucial for parent and caregiver acceptance of new vaccines.
- Training on IPV vaccination and administration should be conducted 2-3 weeks before launch so the information remains “fresh.”
- It can be helpful to provide frontline health workers with well-designed, easy-to-use tools to assist them in talking with parents and caregivers about IPV.

**Tips for routine immunization strengthening**

- Health worker training for IPV introduction provides an opportunity to provide broader immunization refresher training on immunization best practices, including safe injection techniques, vaccine safety and waste disposal, and management and reporting of possible adverse events following immunization (AEFIs).
- Supervisory visits should provide feedback on both the new vaccine (IPV) and all aspects of the vaccination programme.
Communication and Social Mobilization

Effective communication and social mobilization efforts require proper funding, should begin early and should continue through the launch and roll out of the new vaccine.

- Consider establishing a committee to plan and implement communication and social mobilization efforts.
- Communications plans should be prepared far in advance of IPV introduction.
- Engaging local opinion leaders and experts is helpful for tailoring communication to specific audiences.
- Funding should be earmarked to support clear and meaningful messaging materials for both health workers and parents/caregivers regarding the safety, effectiveness and purpose/value of the vaccine.
- Messages should include information on the safety and value of multiple vaccine injections given at the same visit, as well as an explanation of why both OPV and IPV vaccinations are needed. Effective communications and health worker training can help to alleviate concerns of this nature.

Tips for routine immunization strengthening

- An assessment of knowledge, attitudes and practices (KAP), as well as root causes of immunization service under-use will help inform the communications strategy.
- IPV introduction provides an opportunity to communicate with parents/caregivers about the need for vaccination, the time and place for vaccination, and the safety and benefits of vaccination, in general.
- Promotion of all routine childhood vaccines should be integrated into messaging and materials on IPV.
- High demand for a new vaccine – spurred by effective communication and social mobilization activities – may increase contact with the health system and present opportunities to ensure children are up-to-date on all other vaccinations.

Monitoring and Evaluation

- Data collection tools and home-based records should be updated to include the IPV and be at facilities ahead of the launch.
- Analysis of IPV vaccine coverage data can identify how many children have been vaccinated and what portion of children being missed by vaccination efforts.
- A monitoring and reporting system for investigating and responding to possible adverse events following immunization (AEFI) should be in place before launch.

Tips for routine immunization strengthening

- Updating information systems, forms and tools presents an opportunity to review and improve how data is collected and used for the national immunization programme.
- Data quality assessments can identify areas for improvement in order to build capacity on gathering and analysis of data for action.
- A Post-Introduction Evaluation is an opportunity to monitor all aspects of the national immunization programme.
**A Summary Checklist of Key Activities and Timelines**

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<th>Time Frame</th>
<th>Key Activities and Actions</th>
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| **Decision-making Process** | - Develop and provide a strong public health and scientific rationale for adding IPV to routine immunization schedule  
- Obtain necessary recommendation from technical advisory groups and experts  
- Obtain necessary government approvals |
| **Early Planning** | |
| **9-12 months** before the planned IPV launch | - Identify month or date for IPV launch and rollout; plan backwards from the planned launch date  
- Identify any required technical and regulatory approvals for IPV, and begin process for getting those approvals  
- Conduct a pre-introduction assessment of the national immunization programme to identify weak areas to be improved prior to or in parallel with IPV introduction  
- Conduct a KAP assessment to inform communications planning  
- Establish the necessary groups/committees to plan and implement activities such as communications and social mobilization, cold chain and logistics, health worker training, monitoring and evaluation, etc. |
| **6-9 months** before the planned IPV launch | - Place orders for IPV and related supplies  
- Ensure all vaccine sites will have sufficient cold chain capacity for IPV. As possible, repair or replace old or substandard cold chain equipment  
- Update data collection tools (including those related to vaccine use, coverage and safety monitoring) and vaccination cards to include IPV  
  - Review all data collection tools and practices for routine immunization services and make improvements as needed  
- Develop health worker training materials on IPV introduction  
  - Include refreshers on all aspects of immunization best practices, including vaccine storage and handling, safe injection techniques, waste disposal, management and reporting of possible adverse events following immunization (AEFIs), and routine data recording tools and reporting procedures  
- Based on the KAP, develop a communications plan, and begin drafting communication materials and strategizing social mobilization efforts  
- If planning a high profile launch event, consider lead times and protocols required for securing any high profile attendees |
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<td><strong>1-3 months before the planned IPV launch</strong></td>
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| • Test and finalize materials and resources for health workers, caregivers and other key audiences, including journalists  
  ○ Use this opportunity for promotion of all childhood vaccines  
• Print and disseminate sufficient quantities of updated data tools  
• Conduct health worker trainings on IPV, including the specific attributes and national schedule for IPV, as well as other all refresher topics  
• Ensure emergency management protocol is updated and ready in the case of any event that may require a response  
• Identify and train spokespeople and conduct media briefing on IPV and the value of immunization |

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| • Verify that immunization sites have the required IPV vaccine and IPV vaccination supplies, including updated data collection tools  
• Mark the introduction with an appropriate launch event. Deliver key messages to stakeholders, journalists, and community regarding the need and reasons for adding IPV to routine immunization programme.  
• Begin administering IPV vaccine to children, together with OPV  
• Monitor data collection and recording practices (patient register, vaccination cards, monitoring charts, and home-based records)  
• Provide supportive supervision for overall performance of the immunization programme and practices |

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<th>After rollout of IPV</th>
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| • Monitor immunization coverage, drop-out rates, vaccine supply and vaccine wastage to measure progress and make necessary improvements  
  ○ Frequent assessments of the rollout in the early weeks and months is essential in order to catch and address any issues as they arise, and to avert missed opportunities  
  ○ Include indicators for all routine immunization vaccines  
• Monitor vaccine safety and reporting of AEFIs to identify and address any concerns as early as possible  
• Monitor public response in order to discover and respond to any rumours or misperceptions as soon as possible (e.g. monitor social media and/or obtain feedback from health workers). A mechanism to respond to public queries (e.g. a hotline or dedicated email address) can also be established. |
References and Resources

Principles and Considerations for Adding a New Vaccine to a National Immunization Programme: From decision making to implementation and monitoring. World Health Organization 2014.


“Meeting the need for advocacy, social mobilisation and communication in the introduction of three new vaccines in South Africa – Successes and Challenges,” Adele F. Baleta, Johann van den Heever and Rosemary J. Burnett. Vaccine 2005; 30S: C66-C71.
