Final Report

On

Immunization

AT

ANGUL, GAJAPATI & PURI

For

P&C DEPARTMENT, GOVT. OF ODISHA
ODISHA SECRETARIAT

by

NATIONAL PRODUCTIVITY COUNCIL
A/7, Surya Nagar, Bhubaneswar-751003
Evaluation of Immunization at Gumma, Chhendipada and Nimapara Block

Table of Contents

1.0 INTRODUCTION:........................................................................................................1
2.0 SCOPE OF THE STUDY:............................................................................................1
3.0 OBJECTIVE OF THE STUDY:..................................................................................2
4.0 OBSERVATIONS AND FINDINGS:............................................................................2
4.1 Immunization of the Children:................................................................................2
  4.1.1 Gumma Block:- .................................................................................................3
  4.1.2 Chhendipada Block:- .......................................................................................4
  4.1.3 Nimapara Block:- .............................................................................................4
4.2 Immunization of the Mothers:................................................................................6
  4.2.1 Gumma Block:- ................................................................................................7
  4.2.2 Chhendipada Block:- .......................................................................................7
  4.2.3 Nimapara Block:- .............................................................................................7
4.3 Immunization mapping:.........................................................................................10
  4.3.1 Roles of ANM/HW/AWW:................................................................................11
4.4 Infrastructural issues:..............................................................................................11
4.5 Monitoring and MIS:...............................................................................................12
5.0 BENEFICIARY RESPONSE ANALYSIS:- ..............................................................12
  5.1 Service realization:.................................................................................................12
  5.2 Literacy level:........................................................................................................14
  5.3 Awareness on Immunization schedule:.................................................................15
  5.4 Cost implication for Vaccination:...........................................................................16
6.0 SWOT:.....................................................................................................................17
7.0 RECOMMENDATIONS & POLICY OPTIONS:......................................................19
8.0 CONCLUSION:.......................................................................................................20
LIST OF FIGURES

Figure 1: Immunization Coverage in 3 blocks (in %) ................................................................. 6
Figure 2: % of child fully immunized in all 3 blocks................................................................. 6
Figure 3: Immunization of Mother TT1/TT2 at Nimapara, Chhendipada, Gumma .................. 9
Figure 4: Status of Immunization Session at Gumma, Chhendipada and Nimapara.................... 9
Figure 5: Immunization service realization status ................................................................. 12
Figure 6: Literacy level of Mothers ....................................................................................... 14
Figure 7: Awareness on Immunization schedule and timing .................................................... 15
Figure 8: Cost implication involved for Vaccination ............................................................... 16

LIST OF TABLES

Table 1: Immunization Programme for Mother and Child ....................................................... 3
Table 2: Immunization mapping of Mother & Child ................................................................ 10
1.0 INTRODUCTION:

Infectious diseases are major causes of morbidity and mortality among children. One of the most cost effective and easy methods for child survival is immunization. Childhood immunization is a proven strategy for prevention of many infectious diseases. Worldwide, about 2.5 million deaths of children who are under-5 years of age are averted annually by immunization against diphtheria, tetanus, pertussis, and measles. In India, vaccine preventable diseases (VPDs) are still responsible for over 0.5 million deaths annually. In May 1974, the World Health Organization (WHO) officially launched a global immunization programme known as Extended Programme of Immunization (EPI) to protect all children against six VPDs by 2000. The EPI was launched in India in January 1978 and subsequently in 1985 was renamed as Universal Immunization Programme (UIP). It covered nine VPDs, namely tuberculosis, diphtheria, whooping cough (pertusis), tetanus, polio, measles, mumps, rubella and hepatitis-B. Infectious diseases are major causes of morbidity and mortality among children. One of the most cost-effective interventions for improved child survival is immunization. Complete immunization coverage in urban areas of Odisha was 49% as compared to 84 and 73% in Tamil Nadu and Kerala, respectively.

2.0 SCOPE OF THE STUDY:

The scope of this study covers the factors responsible for immunization of children and mothers in Gumma block of Gajapati district, Chhendipada Block of Angul district and Nimapara Block of Puri district. The immunization of both children and mothers were assessed through interview about the nature and quality of immunization and also using the secondary data available in HMIS (Health Management Information System). ASHA, HW (Health worker) and AWW (Anganwadi Worker) are the main stakeholders who are responsible for carrying out the immunization of mother and children in their concerned area.
3.0 OBJECTIVE OF THE STUDY:

- To understand the present service delivery mechanism of the immunization programme and to identify the gaps (if any).
- Identify the key concerns of the beneficiary for improving the effectiveness and coverage of the programme.
- To propose policy measures/ Process improvements and/or initiatives by govt. for achievement of 100% immunization.
- Develop framework for improving the service delivery to the citizens.
- To identify the human resource/ infrastructural resource requirement (if any) for success of the immunization in the state.

4.0 OBSERVATIONS AND FINDINGS:

4.1 Immunization of the Children:

The immunization of children is considered complete (fully immunization), if the child receives vaccination against all the vaccination programme meant for Tuberculosis, 3 doses of DPT & Polio and one dose of Measles. Details of the immunization programme and schedule for the children are mentioned in Table1 of the Report.
Table 1: Immunization Programme for Mother and Child

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>When to give</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>TT-1</td>
<td>Early in pregnancy</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>TT-2</td>
<td>4 weeks after TT-1*</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>TT- Booster</td>
<td>If received ≥ 2 TT doses in a</td>
<td>0.5 ml</td>
</tr>
<tr>
<td></td>
<td>pregnancy within last 3 yrs*</td>
<td></td>
</tr>
<tr>
<td>BCG</td>
<td>At birth or as early as possible till one year of age</td>
<td>0.1 ml (0.05 ml till 1st year)</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>At birth or as early as possible within 24 hours</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>OPV-0</td>
<td>At birth or as early as possible within the first 15 days</td>
<td>2 drops</td>
</tr>
<tr>
<td>OPV 1,2 &amp; 3</td>
<td>At 6 weeks, 10 weeks &amp; 14 weeks</td>
<td>2 drops</td>
</tr>
<tr>
<td>DPT 1,2 &amp; 3</td>
<td>At 6 weeks 10 weeks &amp; 14 weeks</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>Hep B 1, 2 &amp; 3</td>
<td>At 6 weeks 10 weeks &amp; 14 weeks</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>Measles</td>
<td>9 completed months-12 months.</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>Vitamin-A (1st dose)</td>
<td>At 9 months with measles</td>
<td>1 ml (1 lakh IU)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>When to give</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPT booster</td>
<td>16-24 months</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>Measles 2nd dose</td>
<td>16-24 months</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>OPV Booster</td>
<td>16-24 months</td>
<td>2 drops</td>
</tr>
<tr>
<td>Japanese Encephalitis**</td>
<td>16-24 months</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>Vitamin-A*** (2nd to 9th dose)</td>
<td>16 months. Then, one dose every 6 months up to the age of 6 years</td>
<td>2ml (2 lakh IU)</td>
</tr>
<tr>
<td>DPT Booster</td>
<td>5-6 years</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>TT</td>
<td>10 years &amp; 16 years</td>
<td>0.5 ml</td>
</tr>
</tbody>
</table>

4.1.1 Gumma Block:-

- From the HMIS of Gumma CHC, it’s understood that only 70% of the children are fully immunized. *(Refer Figure 2)*
- Most of the members of the family works on daily wages including the female members so there is no one in the family to take the child to the immunization points for immunization.
- Gumma block do have more morbidity due to withholding vaccinations given by ANM; there were also many instances of non-immunization of children because of less mobility in some areas due to deep forest and inaccessibility.
- The non-awareness about the immunization schedule and illiteracy also being a reason amongst the tribal population for their non-participation and/or irregular involvement in the immunization programme.
Evaluation of Immunization at Gumma, Chhendipada and Nimapara Block

- Antigen-wise immunization coverage was highest for Measles (87%) and lowest for Hepatitis B2 (80%), which indicates high instances of late drop-out. The details of the immunization coverage (in %) is mentioned in Figure 1 of the Report.

4.1.2 Chhendipada Block:-

- Only 89% of the children are fully immunised under Chhendipada Block. *(Refer Figure 2)*
- Rest of the children remains non-immunised as per the database available with the ANMs and HWs. During the study, it’s understood that many of the non-immunised children prefer to go to the private clinics and hospitals for vaccinations as they are financially more capable and literate as compared to tribal dominated Gumma block. The record of the immunization made in the private clinics may not have updated with the Govt. record.
- Chhendipada block do have more morbidity due to withholding vaccinations given by ANM; there were also many instances of non-immunization of children because of less mobility in some areas due to deep forest/ in accessibility.
- The other reason also that there is conflict between residents under the displaced area of the coal block distribution and the Govt. of Odisha. These beneficiaries have voluntarily opting out of the Govt. scheme services/support provided at their areas.
- Antigen-wise immunization coverage was highest for DPT 2 (95%) and lowest for Hepatitis B2 (81%), which indicates high instances of late drop-out. The details of the immunization coverage (in %) is mentioned in Figure 1 of the Report.

4.1.3 Nimapara Block:-

- The study reveals that 92% of the children in Nimapara Block are fully immunised *(Refer Figure 2).*
• Other beneficiaries prefer to go the private hospitals and Clinic for vaccinations as the family members are aware about the schedule and are financially capable.

• In Nimapara Block immunization is systematically planned as per schedule, the information is again transferred to the beneficiaries at regular intervals.

• Antigen-wise immunization coverage was highest for OPV (99%) and lowest for Hepatitis B1 (89%), which indicates high instances of late drop-out. The details of the immunization coverage (in %) is mentioned in Figure 1 of the Report.
4.2 Immunization of the Mothers:

Maternal immunization protects both the mother and the fetus from the morbidity of certain infections. It can also provide the infant passive protection against infections acquired independently after birth.

Many of the times, the late detection of pregnancy also plays a vital role in the irregularity of the immunization of mothers.
4.2.1 Gumma Block:-

- Women are immunized during pregnancy when there is a high risk of exposure to an infection, the infection is hazardous to mother or foetus, and the immunizing agent is unlikely to cause harm.
- It was observed that the 92-93% women are covered with full immunization which is a great concern for health and wellness of the mothers.
- The failure in achieving 100% immunization is attributed to the late detection of pregnancy and also the daily wage workers in the family. Thus the family members consider as loss to their age for attending the immunization day and discourage the mother for attending the immunization.

4.2.2 Chhendipada Block:-

- It was observed that 98% of the pregnant women are fully immunized in Chhendipada block.
- It was understood that, many of the non-immunised pregnant women from the better socio-economic level, prefer to go to the private clinics and hospitals for immunization as they are aware about the immunization schedule and the immunization programme for required during pregnancy.
- The MIS of the immunization done at private clinics are not accounted fully in the MIS/ record maintained by the block/ district administration; thus there is gap in achievement of 100% immunization in the block.

4.2.3 Nimapara Block:-

- It was observed that 99% of the pregnant women go to the government institutions for vaccinations and the rest prefer to go to private nursing homes and clinics.
- The female literacy of Puri district is 77% (2011 census) and so the mothers of Puri district are more aware of the govt. scheme and initiatives as compared to the other 2 districts i.e. Angul and Gajapati.
Furthermore, the sample study at Nimapara also reveals that 87% of the respondent mothers are literate who are above 10th, thus they are aware of the significance of the immunization and its schedule.

In Villisasan, the old building is not in use and the new building is under construction since last 3 years.

Some of the interior GPs like Villisasan and Villigram which have no sub-centres for immunization, thus these GPs carry out the immunization activities by hiring private infrastructures.
Figure 3: Immunization of Mother TT1/TT2 at Nimapara, Chhendipada, Gumma

Immunization status of mother TT1/TT2

(Source: District Health Administration)

Figure 4: Status of Immunization Session at Gumma, Chhendipada and Nimapara

Immunization Session status at block

(Source: District Health Administration)
4.3 Immunization mapping:

Table 2: Immunization mapping of Mother & Child

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Activities</th>
<th>RESPONSIBLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Identification of beneficiary</td>
<td>ANM/HW/AWW</td>
</tr>
<tr>
<td>2</td>
<td>Preparation of the schedule</td>
<td>ANM/HW/AWW</td>
</tr>
<tr>
<td>3</td>
<td>Administer of dose</td>
<td>ANM/HW/AWW</td>
</tr>
</tbody>
</table>

Micro plan of Immunisation at Charichack
4.3.1 Roles of ANM/HW/AWW:

- Carryout immunization Programme as per immunization schedule.
- Educate people about the importance of immunization against various communicable diseases.
- Promote mothers and children to take part in the ICDS programme and rendering Primary Health Care and Immunization service to SCs under ICDS project.

4.4 Infrastructural issues:

- Gumma:
  Only 1 Sub centre out of 19 Sub Centres (SCs) do not have own building, else all other have govt. facilitated building. 10 building out of these 19 SCs needs to be repaired.

- Chhendipada:
  Only 8 Sub centre out of 25 sub centres do not have own building, else all other have govt. facilitated building. 11 out of the 25 SCs need to be repaired, which are in dilapidated state.
• **Nimapara:**
  
  Only 20 Sub centre out of 34 Sub Centres do not have own building, else all other have govt. facilitated building, and most of the govt. buildings are in dilapidated state need to be repaired.

4.5 **Monitoring and MIS:**

- The present MIS and monitoring mechanism does not account the immunization made at private clinics.
- The monitoring also is not systematic as there is no accountability fixed at the block level towards the achievement of the 100% immunization.

5.0 **BENEFICIARY RESPONSE ANALYSIS**:-

5.1 **Service realization:**

**Figure 5: Immunization service realization status**

<table>
<thead>
<tr>
<th></th>
<th>Availed regular immunization offered by HF &amp; WD?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gumma</td>
<td>65% YES 35% NO</td>
</tr>
<tr>
<td>Chendipada</td>
<td>79% YES 21% NO</td>
</tr>
<tr>
<td>Nimapara</td>
<td>81% YES 19% NO</td>
</tr>
</tbody>
</table>

(Source: FGD with the beneficiary)
65%, 79% and 81% of the beneficiaries have responded that they had availed regular immunization offered by HF & WD in Gumma, Chhendipada & Nimapara respectively.

Some of the respondents have opined that they are availing the immunization in private hospitals as they consider the private service providers are safe, hygienic and well behaved. They were also aware of the immunization programme offers by Govt. of Odisha.
5.2 Literacy level:

**Figure 6: Literacy level of Mothers**

(Source: FGD with the beneficiary)

- In Nimapara Block the literacy level amongst the respondent mothers is as such, which states 37% of the beneficiaries are graduate, 33% secondary, 17% are matriculate and rest are under matriculate. respectively which is contributing factor to 92% immunization in the block.
- In Chhendipada 53% and 5% of the mothers are matriculates and graduate respectively which could be a contributing factor for 89% immunization in the block.
- In Gumma Block 45% of the mothers are illiterate which could be one of the reasons of low immunization.
5.3 Awareness on Immunization schedule:

Figure 7: Awareness on Immunization schedule and timing

(Source: FGD with the beneficiary)

- In Gumma Block 31% of the beneficiaries are not aware about the immunization schedule and timings because their literacy level is low compared to other two blocks. So, campaigning and sensitization is almost essential for curb this problem.
- In Chhendipada and Nimapara block, 11% and 6% of the beneficiaries are not aware about the immunization schedule.
5.4 Cost implication for Vaccination:

Figure 8: Cost implication involved for Vaccination

(Source: FGD with the beneficiary)

- In Gumma Block most of the respondent mothers go to the govt. hospitals for immunization which could be a reason towards the response of 85% of the beneficiary mothers incurs cost less than Rs.1000.
- In Nimapara and Chhendipada Block, 67% and 45% of the beneficiaries incur less than Rs. 1000 towards the vaccination and rest incurs more
than Rs. 1000, as the beneficiary have other alternative of immunization done through private clinics where the expenditure is comparatively high as done in Govt. hospitals.

6.0 SWOT:

6.1 Strengths:

- Benefits of vaccination far outweigh the risks in mothers and children’s.
- This is linked to a network of local and state immunization programs, and also with other stakeholders (ICDS) that can support this plan.
- Parents today, overwhelmingly, want to vaccinate their children against disease.
- Social media and other promotional activities are done for dissemination of significance of immunization.
- One of this administration’s first priorities was childhood immunization.
- Vaccines are widely available and programs have reduced cost as a barrier to vaccination
- Persons with first-hand experience at ground level (AWW and HW) with these diseases are available to educate new generations of parents and providers who have no experience with these diseases.
6.2 Weaknesses:

- Risk communication messages regarding vaccine adverse reactions are difficult to develop.
- Poor communication and promotional activity by govt. resulting in less participation by the illiterate mass.
- Little perceived threat exists because of low disease incidence.
- Some claims against vaccine cannot be disproved.
- A comprehensive communication strategy will be costly.
- General mistrust of government, particularly among some population groups.
- Little current research exists regarding provider and parent attitudes about vaccine safety.
- Poor MIS and monitoring mechanism of Gov. resulting in the poor administration of vaccines by the stakeholders.
- Poor infrastructure and resources compels for service failure in many areas.

6.3 Opportunities:

- To develop media literacy among providers and parents on this health issue and others
- Develop a comprehensive, renewable system to communicate about health effects.
- Community-based and service provider partners are available that can be mobilized in this effort.
- Countering this movement can save children from disease and death who might otherwise go unvaccinated.

6.4 Threats:

- Vaccine safety could become a cornerstone for some anti-government activists, leaving behind the health debate for a debate on the intrusion of government in everyday life.
• Claims that lower vaccination rates will result in disease and death will not come true until some time passes.
• Absence of structured planning and financing for infrastructure maintenance and renewal and for human capacity development.
• Compel vaccine policy decision makers to address vaccine safety issues today that may affect policies for the future.

7.0 RECOMMENDATIONS & POLICY OPTIONS:
• Multi-Purpose Health Worker (MPHW) Male/ Female are the key and strongest link in the immunization system who operates at Sub-Centre (SC) Level. However, these sub-centres are operating in substandard and/or rented premises. The infrastructure at PHC should be strengthened to function as the immunization point. (REFER 4.4)
• There are very few IEC / social mobilization materials available at SC level. Proper Awareness should be created at village level. (REFER 5.3)
• A dedicated district level officer should be earmarked for immunization to coordinate activities. These activities will include coordination, implementation and monitoring and also ensure the coverage of 100% immunization at district and block levels. (REFER 4.5)
• Presently, there is limited accommodation facility available at Sub-Centre level, thus necessary quarter facility may be made for the workers to ensure their availability for timely service delivery. (REFER 4.4)
• Initiatives and measures may be taken for construction of appropriate infrastructure for sub centre and also provisions should be made for availability of for necessary equipment. The infrastructure in some sub-centre are in damaged condition, thus actions should be taken for repairing and maintenance of these buildings. (REFER 4.4)
• Every immunization site should have a display board showing session sites, times and immunization schedule and adequate quantity of immunization specific IEC (Information, Education and Communication) materials to be distributed in appropriate language.
Presently, there is no tracking of the immunization done at Private Clinic, and the same is not reflected in the MIS reported at the Govt. level. Thus necessary provision may be made for identification and tracking of immunization at any point other than govt. machinery. This would further strengthen the immunization coverage MIS for effective monitoring at necessary levels. (Refer 4.5)

- A District/State level grievance handling mechanism should be set up for addressing the grievances and harassment caused to mothers.

### 8.0 CONCLUSION:

- Frequent illnesses of the child, lack of information about the scheduled date of immunization, frequent displacement of the family and lack of knowledge regarding the benefits of immunization were cited as the main factors behind coverage of immunization services.
- Initiatives may be taken to reduce instances of early and late dropouts and, in turn, improve complete immunization. Community participation, inter co-ordination of departments and local supervision could help in addressing issues of drop-outs, supply logistics and community mobilization.
- Maternal immunization protects both the mother and foetus from the morbidity to certain infections. So, there is utmost need to achieve full maternal immunization.
- Emerging evidences indicate that immunization coverage has been steadily increasing but the average level remains far less than desired.
- Tribal regions do have more morbidity due to withholding to vaccinations by paramedics; there were also many instances of non-immunization of children because there was no one in the family to take the child to the health centre for vaccination.
- The traditional temporary migration of pregnant women for delivery, and the consequent non-availability of their records, results in missing out on
services at either of the residences. This highlights the need and importance of ensuring immunization for all vulnerable poor.

- Industrial and coastal region do have morbidity due to withholding of vaccination by paramedics, there also many instances of non immunisation in government institutions because they prefer private institutions for immunization as they are financially capable and aware about the immunization schedule and timing. In these cases, proper tracking and record updating may be made for preparation of the MIS.

- These findings could be helpful to the people in charge of immunization at local level.

- Anganwadi workers are responsible for identifying and tracking all eligible children for immunization along with the female health workers. Thus, proper co-ordination between the ICDS under the Department of Women and Child Development and NHM may be improved.