



# Universal Immunization Programme Review

(25 August to 8 September 2004)

# ORISSA

**WRITTEN ON BEHALF OF AGENCIES TAKING PART IN THE UIP REVIEW:**

GOVERNMENT OF INDIA AND THE STATE GOVERNMENTS OF BIHAR, JHARKHAND, MADHYA PRADESH,  
ORISSA, RAJASTHAN AND UTTAR PRADESH.

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CARE  
CENTERS FOR DISEASE CONTROL (ATLANTA, USA)  
CHILDREN'S VACCINE PROGRAMME PROGRAMME FOR ALTERNATIVE TECHNOLOGIES IN HEALTH  
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# GLOSSARY & ACRONYMS

AD	Auto-Disabled syringe
AEFI	Adverse Events Following Immunization
ANM	Auxiliary Nurse Midwife: key health worker delivering UIP and other primary health care
AWW	care
AWC	Anganwadi worker
BDCS	Anganwadi centre
BCG	Border District Cluster Strategy
CDC	Bacille Calmette Guerin; vaccine against tuberculosis
CIP	Centers for Disease Control (Atlanta, USA)
CSSM	Coverage Improvement Plan
CVP PATH	Child Survival Safe Motherhood
DFID	Children's Vaccine Programme – Programme for Alternative Technologies in Health
DIO	UK Department for International Development
DPT	District Immunization Officer
DT	Diphtheria, Pertussis and Tetanus vaccine
EAG	Diphtheria & Tetanus vaccine
EPI	Empowered Action Group of States
EU	Expanded Programme on Immunization: WHO programme adopted by countries.
FI	European Union
Gol	Full immunization or fully immunized
IAP	Government of India
ICC	Indian Academy of Paediatrics
ICDS	Interagency Coordination Committee
IEC	Integrated Child Development Scheme
ILR	Information Education and Communication
IMA	Ice-lined refrigerator: used for storing vaccines.
IMR	Indian Medical Association
INCLIN	Infant Mortality Rate
IPC	Indian National Clinical Epidemiology network
ISP	Inter Personal Communication
LHV	Immunization Strengthening Project (World Bank Supported)
MMR	Lady Health Visitor
MNTE	Measles, mumps and rubella vaccine
MO	Maternal and Neonatal Tetanus Elimination
MYP	Medical Officer
NGO	Multi-year plan. The strategic plan for the UIP covering 2005 to 2010.
NIHFW	Non Governmental Organization
NNT	National Institute of Health and Family Welfare
NPSP	Neonatal Tetanus
NTAGI	National Polio Surveillance Project
OPV	National Technical Advisory Group on Immunization.
PHC	Oral Polio Vaccine
POL	Primary Health Centre
PPC	Petrol, Oil and Lubricants
PPI	Post Partum Centre
PRI	Pulse Polio Immunization
RCH	Panchayati Raj Institute
RED	Reproductive & Child Health
SC	Reach Every District strategy
SITF	Sub-centre (of the PHC)
TI	State Immunization Taskforce
UIP	Tetanus Toxoid vaccine
UHC	Universal Immunization Programme. The Indian National Immunization Programme
UNICEF	Urban Health Centre
USAID	

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# 1. SUMMARY

## 1.1 SUCCESSES

- Strong links between immunization system and ICDS AWW, and PRIs. Initiative has been taken by State Government for involvement of PRIs
- Most LHVs and ANM posts filled
- Fixed day, fixed site strategies are being implemented
- Annual action plans in place; coverage improvement plans in place (team approach, campaign, NGO & PRI support)
- Cold chain system established at most levels according to GoI standards
- AD syringe in use since 2001 in BDCS district

## 1.2 BARRIERS

- Micro-planning to reach remote areas on a routine basis is inadequate
- Vaccine delivery system is erratic, ad hoc due to insufficient mobility allowance and shortage of male health workers.
- Injection practices as well as waste disposal practices are often hazardous.
- Inadequate supportive supervisory visits
- Poor use of data for action; poor data feedback at all levels; criteria for calculating targets varies,

causing confusion in planning

- VPD surveillance is weak
- Lack of syringes
- Few IEC materials available <sup>1</sup>

## 1.3 CONCLUSIONS

- The number of infants fully immunized in the state appears to be decreasing from 1998 to 2002; the proportion of districts achieving over 80% DTP3 coverage has also decreased.
- Involvement of key government officials (e.g. Principal Secretary H/FW, District Collector) as well as collaboration between PRI and ICDS has contributed to recent successes in immunization in several districts of Orissa.
- Routine, regular access to remote areas appeared to be a problem in the districts visited. But relatively high and stable BCG coverage suggest that coverage can be increased by reducing dropout, as well as improving access.
- Vaccine and supplies logistics need improvement to ensure that inadequate supply of vaccine and/or injection does not interfere with service delivery.

<sup>1</sup> The State has reported that efforts are underway to distribute signboards.



## THE KEY RECOMMENDATIONS TO STRENGTHEN ROUTINE IMMUNIZATION

1. Appoint a dedicated State Immunization Officer (with no additional charges) to coordinate activities of a State Immunization Taskforce and district activities. [1]
2. Ensure adequate staff (fill all sanctioned ANM, LHV and male health worker posts) who are motivated (pay ANMs and contractual staff on time) with adequate working environment (build or rent subcentre buildings, or repair/maintain, as appropriate), and supplies (including for monitoring , such as registers, vaccine cards, monitoring and surveillance forms) and mobility allowances (review system).
3. Develop and implement a state immunization training plan. [2]
4. Develop a state injection safety policy (with special emphasis on bio-medical waste disposal), disseminate it widely, and monitor its implementation through state and district level injection safety committees.
5. Improve social mobilisation by developing adequate IEC

## NOTES:

- [1] Activities will include coordination of the implementation and accurate monitoring of coverage improvement plans at State, district and block levels that include:
- Identifying and reaching underserved populations
  - Prioritizing areas based on coverage and drop out rates
  - Using analyzed data for action at all levels
  - Developing and implementing a supportive style of supervision, with regular supervisory visits
  - Increased community involvement in session planning and use of ICDS, PRI and civil society to reduce drop out rates, increase demand, and help deliver other preventive health messages (such as breast feeding practices, diarrhoeal treatments etc.)
- [2] Training should include on-the-job training delivered through regular supervisory visits using a supportive style of supervision, supplemented by training during the regular meetings at state, district, and block level for the different staff. Training needs to include the following components:
- Interpersonal skills so that every immunization contact delivers four key messages to reduce drop out rates: i) importance of immunization, ii) normal effects post immunization, iii) timing and place of child's next immunization, iv) preventive behavioural health messages including breast feeding and nutrition
  - data recording and reporting practices and use for action
  - micro-planning to increase coverage rates and reduce drop outs
  - immunization safety aspects with special focus on injection technique and waste disposal
  - Cold chain maintenance and vaccine logistics, with specific reference to

## 2. BACKGROUND

Orissa is a medium-size state in the eastern part of India. Approximately 30% of the area is difficult to reach due to geographical barriers. Overall 22% of the population is tribal; 17% is member of a scheduled caste. Per capita income is Rs. 5648 per annum. There are 30 districts 314 blocks, 2 Municipal Corporations, 30 Municipalities and 68 NACs in Orissa; and 138 large and small towns.

### **DEMOGRAPHY (DATA FROM 2001 CENSUS)**

Total 2001 population was 36 804 660, making it the 11th most populous state in India. The population growth was 16% since the 1991 census; the 5th lowest growth rate of the 35 States and Union Territories.

Orissa population is 85% rural (72% for India). The overall gender imbalance is the 28th worst of the 35 States and Union Territories with 972 females for every 1000 males (933 per 1000 for India). Overall literacy rate is 63% (65% for India), with substantial female educational disadvantage as shown by a male to female literacy rate ratio of 1.5 (1.4 for India). Children aged under-five-years comprise 10% of the Orissa population (11% for India)

### **IMMUNIZATION**

The Universal Immunization Programme (UIP) is a national programme established in 1985, built upon the Expanded Programme on Immunization (EPI) started in 1978. The UIP is delivered as part of the Reproductive and Child

Health (RCH) programme. Private practitioners also deliver the UIP and offer additional vaccines.

The UIP had its last comprehensive review in 1989, with more recent but less comprehensive reviews undertaken in 1999. The 2004 UIP review was undertaken in six States. Orissa was selected because of its tribal populations and weak infrastructure.

### **STATE IMMUNIZATION PERFORMANCE**

There is political pressure for districts to report over 90% coverage, as this is one of the '20 points' for which each district is assessed. As a result reported coverage has become unreliable, especially in states with low coverage. For example, 2001/2 BCG coverage in Orissa was reported at 112% compared to evaluated coverage of 84%.

Coverage performance is thus assessed through surveys. UNICEF conducted national cluster surveys covering most or all states every year from 1999 to 2002, which included Orissa for each year except in 2002. Of the six states in the UIP review, Orissa had the best coverage for the three years 1999 to 2001.

The coverage surveys show relatively good access, but with increasing dropout leading to poor coverage in Orissa, with full immunization rate of 73%, 46%, and 53% for 1999, 2000, and 2001, respectively. Dropout is shown by the BGC to measles dropout rate of 10%, 29%, and 26%, for 1999, 2000, and 2001, respectively. Access is relatively good, as indicated by BCG

# 3. METHOD

The review provides qualitative and selective information on the immunization programme. It is not intended to be either quantitative or statistically representative. The aim was to identify strengths, weaknesses, and bottlenecks to develop practical strategies for improving routine immunization. The review is also to help prioritise implementation of the multi-year plan (MYP: the 2005-2010 strategic plan).

The state review was undertaken following a protocol and questionnaires developed by the national UIP review team. Annex 1 details the protocol. Keonjhar and Baragarh districts were each visited by one team, with the first team also visiting the State Headquarters. Annex 2 details the team members, their itinerary, and the main persons met.

Specific functions, such as delivery to the block of vaccine and icepacks from the district and early morning collection of vaccine by ANMs were also observed. The interviews were typically conducted with one member leading the discussion and the second member recording information and observations. To elicit common information from ANMs, a focus group discussion was held.

Some of the key observations made by the teams are detailed in Annex 3. These observations, the completed questionnaires, and discussions between team members generation of up to three each of successes, barriers,

conclusions, and recommendations for:

- Strengthening routine immunization at every level (section 4)
- Eight technical areas of protocol, to aid prioritisation for the MYP (section 5)

Further discussion led the team to agree on up to five key recommendations to strengthen routine immunization (presented in the summary); and the priority actions for the MYP (section 5).

# 4. STRENGTHENING ROUTINE IMMUNIZATION

The state review team identified up to three key successes, barriers, conclusions and recommendations for strengthening routine immunization at each level. Annex 3 includes these in more detail as well as some additional observations and recommendations.

	SUCCESSSES	BARRIERS	CONCLUSIONS	RECOMMENDATIONS
STATE	<ul style="list-style-type: none"> <li>State immunization taskforce recently formed meeting quarterly.</li> <li>State level annual action plan but doesn't reach underserved</li> </ul>	<ul style="list-style-type: none"> <li>No senior staff member solely for immunization.</li> <li>Weak coordination between training institute-family welfare; private-public sectors and in urban areas.</li> </ul>	<ul style="list-style-type: none"> <li>Strong commitment to improve coverage.</li> <li>Comprehensive coverage data, but inaccurate and not used for planning or monitoring.</li> <li>Inadequate coverage improvement plan.</li> </ul>	<ul style="list-style-type: none"> <li>Develop, implement, and monitor state CIP [1].</li> <li>Dedicated state immunization officer to: coordinate taskforce activities, with focus on CIP development and monitoring.</li> </ul>
DISTRICT	<ul style="list-style-type: none"> <li>Infrastructure and plan in place.</li> <li>Special immunization camps in one district.</li> <li>PRI and ICDS actively supportive of immunization activities.</li> </ul>	<ul style="list-style-type: none"> <li>Vaccine stock outs; delivery strained by vacant staff positions.</li> <li>Almost no social mobilisation or IEC materials.</li> <li>Low quality data and poor planning.</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring data not used; denominators unclear.</li> <li>Action plan repeats last year's activities and does not address coverage improvement for the coming year.</li> </ul>	<ul style="list-style-type: none"> <li>DIO to develop, implement, and monitor district CIP [1].</li> <li>Constitute a district immunization core group, incl. ICDS, PRI and NGOs, to coordinate and support CIP.</li> <li>Train district level staff on priority areas [2].</li> </ul>
URBAN	<ul style="list-style-type: none"> <li>Urban centres fully staffed, with outreach and strong community links in some areas.</li> <li>Cold chain adequate and in place</li> <li>Private sector contributing and starting additional UIP initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>Inaccurate denominator; lack of standard forms (to report and to track).</li> <li>Mobile population makes tracking harder.</li> <li>Chaotic sessions in unhygienic environments and no IEC materials.</li> <li>Hazardous injection safety practices</li> </ul>	<ul style="list-style-type: none"> <li>No efforts to reach underserved.</li> <li>Weak monitoring; data not used for planning.</li> <li>Potential for greater private sector and NGO involvement.</li> </ul>	<ul style="list-style-type: none"> <li>Develop CIP [1] appropriate for mobile populations &amp; slums.</li> <li>Train UHC &amp; private staff on priority areas [3].</li> <li>Provide UHCs &amp; private sector with registers and reporting forms and IEC materials [4].</li> </ul>
PHC	<ul style="list-style-type: none"> <li>Cold chain and logistics adequate : no stock outs despite stock outs at district level</li> <li>AWW, PRI chairman and NGO role in social mobilisation.</li> </ul>	<ul style="list-style-type: none"> <li>Poor work setting [5].</li> <li>Numerator and denominator inaccuracies for coverage data; incomplete microplans.</li> <li>PHC is weakest link for UIP; with little MO involvement.</li> </ul>	<ul style="list-style-type: none"> <li>Poor social mobilisation; practically no IEC materials; no posting of session times.</li> <li>Weak supervision aggravating poor reporting, compiling, and use of immunization data.</li> </ul>	<ul style="list-style-type: none"> <li>Develop and implement CIPs [1] for block to support it.</li> <li>Develop alternative system to deliver vaccine to PHCs and ANMs.</li> <li>Review mobility allowance for supervisory POL.</li> </ul>
SC	<ul style="list-style-type: none"> <li>Team approach for hard to reach areas .</li> <li>Coordinate with AWW, ICDS, MSS, and PRI.</li> <li>Most planned sessions held.</li> </ul>	<ul style="list-style-type: none"> <li>Poor work setting [5]; minimal training; onerous reporting requirements</li> </ul>	<ul style="list-style-type: none"> <li>ANMs have poor work conditions&amp; support.</li> <li>Resources wasted to record</li> </ul>	<ul style="list-style-type: none"> <li>State review and improve work conditions (incl. reporting) for ANM.</li> <li>Train AWWs &amp; ANMs [3].</li> <li>Provide every immunization site with</li> </ul>

## Notes:

- [1] Coverage improvement plan (CIP) to describe activities needed, building to any existing plans, to reach every child. CIP is ongoing process that includes: (a) identifying underserved populations; (b) prioritizing areas based on coverage and drop-out rates; (c) using analyzed data for action at all levels; (d) increased frequency and quality of supervision with supportive style of supervision; (e) increased community involvement in session planning and use of ICDS, PRI and civil society to reduce drop out rates and increase demand; (f) integration of immunization with other health interventions (such as education on breast feeding practices etc, nutritional supplementation, deworming, bed nets)
- [2] Priority training topics at district and state level include learning: additional skills for developing, implementing and monitoring the CIP building on micro planning skills and

- using data for programme management; supportive style of supervision to provide on-the-job training and monitoring; and safe injection practices (with emphasis on waste disposal)
- [3] Priority training topics at service delivery level include learning: use of data for planning, use of patient contacts as opportunities to promote immunization and for other key giving preventive health messages; and immunization safety, with a focus on injection technique and waste disposal.
  - [4] IEC materials need to be developed that use appropriate messages and methods for promoting participation in programme. All immunization sites should have a signboard showing immunization site, timing and immunization schedule, as well as appropriate promotional material for routine immunization.
  - [5] Working conditions are poor causing poor morale. Problems include level of salary and delayed salary payments; no feedback on performance or reports; inadequate mobility

# 5. PRIORITY AREAS FOR IMPLEMENTATION OF THE MULTI YEAR PLAN

The state review team identified up to three key successes, barriers, conclusions and recommendations on eight technical areas, detailed below. From these (and the complete set of observations and recommendations, detailed in Annex 3), the national team identified priority actions from a subset of the recommendations. With many potential priorities, the final list was limited to feasible actions most likely to have an impact in relation to the overall goal protecting children from disease.

Each priority action was linked, if possible, to one of the 20 objective in the MYP. The objectives are numbered and given a short title here, with the full description and associated goal in Annex 5. Implementing the priority action for that objective provides a focus for implementing the MYP.

PRIORITY ACTIONS	MYP OBJECTIVE
1. Provide support to help each district, block, PHC, and SC develop coverage improvement plan (CIP)	1.1: regular sessions
2. Develop and provide simple tools and job-aids to register and track each child, and to monitor progress, and to validate coverage	6.3: Coverage monitoring
3. Develop and implement state immunization safety and waste disposal policy	1.5: safe injection
4. Improve vaccine stock management using guidelines to specify standard processes for ordering and maintaining stock levels	1.4: logistics
5. Develop state social mobilisation plan to engage community	

In the table below describing the eight technical areas, the abbreviation used is in square brackets:

Service delivery & injection safety [DEL]; Surveillance & monitoring [S&M]; Vaccine distribution & logistics [LOG]; Programme management [MGT]; Cold chain management [CC]; Human resources [HR]; Training [TRN]; IEC and social

	SUCCESSSES	BARRIERS	CONCLUSIONS	RECOMMENDATIONS
DEL	<ul style="list-style-type: none"> <li>Use team/camp approach for hard to reach.</li> <li>AD syringes used in BDCS since 2001; all staff received injection safety training in 2003.</li> <li>Adequate injection technique.</li> </ul>	<ul style="list-style-type: none"> <li>Hazardous waste disposal: lack clear state policy/guidelines.</li> <li>SCs in poor state of repair; if any building .</li> <li>Not following immunization schedule.</li> </ul>	<ul style="list-style-type: none"> <li>Waste disposal potentially harming workers and communities, especially in urban.</li> <li>Supervision mobility allowance needs review.</li> <li>Inadequate supervision with minimal on the job training.</li> </ul>	<ul style="list-style-type: none"> <li>Develop state immunization safety and waste disposal policy; form state and district committees to implement policy.</li> <li>Improve process for developing and reviewing microplans; include special camps for hard-to-reach.</li> <li>Develop supervisory practices to provide on-the-job training, supplemented by UIP field guide for ANM on service delivery, incl. injection safety.</li> </ul>
S&M	<ul style="list-style-type: none"> <li>Timeliness and completeness of reporting system; regular meetings.</li> <li>Some SC records well maintained.</li> <li>Good card retention by parents, if cards available.</li> </ul>	<ul style="list-style-type: none"> <li>Data only compiled and analysis is weak/non-existent; data not used; common reporting errors.</li> <li>ANMs maintain many registers but not used; few imm. Registers.</li> <li>Imm. card counterfoils not consistently used; no system to track dropouts.</li> </ul>	<ul style="list-style-type: none"> <li>VPD surveillance is weak.</li> <li>Coverage reporting is good, but requires excessive ANM time and data not used.</li> <li>Unclear guidance on denominator estimations contribute to confusion and poor planning.</li> </ul>	<ul style="list-style-type: none"> <li>ANM reporting needs review to reduce burden; all data should be analysed and used by each level.</li> <li>Provide simple tools and training to follow-up dropouts; estimate denominator; and analyse data.</li> <li>Correct and reprint ICDS immunization registers where BCG has three columns</li> </ul>
LOG	<ul style="list-style-type: none"> <li>Stock record keeping is maintained at all levels.</li> <li>ANMs are concerned with vaccine wastage.</li> <li>Good supply system to PHCs</li> </ul>	<ul style="list-style-type: none"> <li>Vaccine stock outs; inadequate DTP in 2004.</li> <li>Inadequate syringes and needles. No diluent syringes supplied or used .</li> <li>Where AD syringe used, no BCG AD.</li> </ul>	<ul style="list-style-type: none"> <li>Poor vaccine stock management.</li> <li>Vaccine wastage concerns (especially BCG) causing missed opportunities; but wastage not monitored.</li> </ul>	<ul style="list-style-type: none"> <li>Improve vaccine stock management, with guidelines on buffer stocks and ordering.</li> <li>Provide BCG syringes for all sites.</li> <li>Ensure vaccines are transported in plastic bags to keep dry for label.</li> </ul>
MGT	<ul style="list-style-type: none"> <li>Strong support from District Collector and other important government administrators.</li> <li>Planned session schedules.</li> <li>SDMO, ADMO, MO are doing medical supervisory visits</li> </ul>	<ul style="list-style-type: none"> <li>Irregular supervisory visits to immunisation sessions.</li> <li>Target setting is not taking into account CNA results.</li> <li>ANMs unsure of targets.</li> </ul>		<ul style="list-style-type: none"> <li>Provide support for LHVs and other sector supervisors to conduct supervisory visits to immunization sessions .</li> </ul>
CC	<ul style="list-style-type: none"> <li>State level cold chain well managed.</li> </ul>	<ul style="list-style-type: none"> <li>Poor awareness of freeze risk.</li> <li>Back up power systems.</li> <li>Some PHCs not monitoring temps.</li> </ul>	<ul style="list-style-type: none"> <li>Cold chain is in relatively good shape.</li> </ul>	<ul style="list-style-type: none"> <li>Standardize target setting.</li> <li>Communicate targets to sub-centre level.</li> <li>Use baskets for storing vaccines to prevent freezing; train on freeze risk.</li> <li>Develop appropriate back-up power, including support for generator/voltage stabilizer.</li> <li>Increase number of vaccine storage points.</li> </ul>
HR	<ul style="list-style-type: none"> <li>Temperature monitoring common.</li> <li>Available equipment is in good condition; good power supply.</li> <li>Highly competent LHVs.</li> </ul>	<ul style="list-style-type: none"> <li>No Human Resource development plan.</li> <li>Many vacant positions</li> </ul>	<ul style="list-style-type: none"> <li>Staff have low morale from lack of pay and no feedback or recognition for good work.</li> </ul>	<ul style="list-style-type: none"> <li>Create Human Resource development plan; fill vacant posts; recruit local women for ANM training.</li> </ul>

	SUCCESSSES	BARRIERS	CONCLUSIONS	RECOMMENDATIONS
TRN	<ul style="list-style-type: none"> <li>▪ Involvement of MPHWS (males) in assisting with immunization activities.</li> <li>▪ All health workers attended RCH training in 2002.</li> <li>▪ LHV provides on the job training.</li> <li>▪ Immunization messages transmitted during sectoral meetings.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Salaries not paid on time; staff not paid for several months</li> <li>▪ Training materials out of date; no training since 2002 and a request for yearly updates.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Knowledge and skills deficient for cold chain, injection safety, microplans, supervision.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pay salaries on time.</li> <li>▪ Motivate health workers by recognising achievements.</li> <li>▪ Develop and implement state immunization training plan [1], with refresher training every two years.</li> </ul>
IEC	<ul style="list-style-type: none"> <li>▪ AWW and ICDS provide house to house mobilization and for</li> </ul>	<ul style="list-style-type: none"> <li>▪ Limited IEC materials used, except for PPI.</li> <li>▪ No specific leaflets / posters available for routine</li> </ul>		<ul style="list-style-type: none"> <li>▪ Provide ANM operational guidelines</li> <li>▪ Provide signboards and other IEC at sub-centre level.</li> </ul>

**Notes:**

[1] Priority training needs are:

- Interpersonal communication skills;
- Data recording and reporting practices and use for action;
- Micro-planning to increase coverage rates;
- Immunization safety aspects with special focus on syringe and needles disposal;
- Conducting supervisory visits

# ANNEX 1 : METHOD USED FOR THE UIP REVIEW OF SIX STATES

The national UIP review team developed the methodology, and recruited 56 national and international experts (in a range of areas) to participate in the review in 13 teams reviewing six states (two in each State and three in UP). The 56 experts represented the GOI (4); CARE (6); CVP PATH (2); DFID (1); USAID (3); EU (1); CDC (2); UNICEF (13); WHO (13); STATES / ACADEMICS (10); and SHRISTI (1).

Questionnaire modules for each level (including for urban and rural health facilities and for private physicians) provided a framework to elicit information and guide observations in a standardised way. The national team developed and pre-tested questionnaires to cover eight technical areas relevant to the multi-year plan.

The teams' primary information source was through observation and questioning (as per the questionnaires). Immunization sessions were observed including at outreach sessions, wherever possible. However, the opportunity to observe sessions was limited, so most observations were based on records and the overall situation of each facility, and from discussions with the health workers. Observations included review of immunization records and reports, vaccine stocks and storage, injection supplies and disposal. Records were used to provide additional insights and validate information given to the teams, and to cross check data (eg, coverage and vaccine utilisation data).

In addition, where possible, teams sought information from the community (mothers) and local representatives (e.g. Gram Panchayats) to understand their perception of the immunization services and their perceived needs

Each team was designed to include four (and in some cases five) individuals with a range of knowledge and skills to provide a

comprehensive review of immunization in each district, and at the state level for one of the teams. Within each district, the team split into two to assess two blocks per district. The national team pre-selected the two districts to be reviewed in each State (three for UP): one with high coverage and one with low coverage (from those districts included in the 2002-3 coverage survey data).

Each team randomly selected two blocks to review. The selection was not from all the blocks, but from four blocks pre-selected by the national team. (However, Jaisalmer district only has three blocks). After reviewing the block Primary Health Centre (PHC), one randomly selected PHC in that block, and two subcentres (SCs) of the PHC were to be reviewed by each half of the team.

Each team had a briefing and debriefing at State and District levels, as well as giving feedback to all sites visited. The two (three for UP) teams consolidated their findings in their feedback to the state at the end of the visit. All teams shared their findings in Delhi to come to a consensus on the key recommendations for national level.

# ANNEX 2 : TEAM MEMBERS, ITINERARY, AND PERSONS MET

## TEAM MEMBERS

### TEAM ' 8'

1. Dr. Biswal (GoI)
2. Dr. Craig Burgess (WHO)
3. Dr. Subroto Mukherjee (CARE)
4. Dr. Godbole (UNICEF)

### ITINERARY:

- August 28<sup>th</sup> : Flight to Bubeneshwar and meeting with State team  
August 29<sup>th</sup> : Travel to Kheonjhar District and summarizing State results  
August 30<sup>th</sup> : District review in Kheonjhar, urban health clinic and private practitioner  
August 31<sup>st</sup>: Telkoi CHC (Telkoi block), Sirigura PHC (Telkoi block) and Sainpur CHC (Ghasipura block) visited
- September 1<sup>st</sup>: Mandapur subcentre (Bato PHC), Bato PHC (Ghasipura block) visited  
September 2<sup>nd</sup>: Atta cubcentre (Bato PHC), Zarbida subcentre (Sirigura PHC)  
September 3<sup>rd</sup>: Debriefing with District team and drive back to Bubeneshwar  
September 4<sup>th</sup>: Bubeneshwar Capital Hospital Post Partum Centre, State cold chain store, sunflower private nursing home and one slum visit  
September 5<sup>th</sup>: Bubeneshwar summarizing findings with team 9  
September 6<sup>th</sup>: State debriefing in Bubeneshwar and flight back to Delhi

### PLACES VISITED:

#### BUBENESHWAR:

state cold chain store, capital hospital post partum centre, sunflower private nursing home, 1 slum

#### KEONJHAR DISTRICT:

Telkoi block: Telkoi chc; Sirigida phc; Zarbida sub centre;

### PEOPLE MET

<b>STATE HQ</b> State Secretary of Health and Family Welfare State Director of Family Welfare State Joint Director Health Services (RH) State Deputy Director Health Services (RH) State Deputy Director Demography State Assistant Director Demography and Statistics State Cold Chain Officer WHO NPSP Regional Coordinator WHO NPSP Sub Regional Coordinator WHO NPSP SMO	Mr. R.N. Senapati Dr. B.K. Das Dr. Gita Rani Mohanty Dr. Chowdray Mr. R.K. Mishra Mr. S. Das Mr. Suresh Jena Dr. K. C. Singhal Dr. S. T. Ghandi Dr. A. K. Roy

<p>UNICEF</p> <p><b>DISTRICT HQ</b></p> <p>District Immunization Officer</p> <p>Addl. Chief District Medical Officer</p> <p>Addl. Chief District Medical Officer</p> <p>District Deputy Mass Education Information officer</p> <p>District Statistical Investigator</p> <p>District Statistical Assistant</p> <p>District Senior Clerk</p> <p>District Refrigerator Mechanics</p> <p>CARE district political liaison officer</p> <p>LHV</p> <p>LHV</p> <p>Medical Officer I/C, PPC</p> <p><b>BLOCK CHC</b></p> <p>Ghasipura block medical officer in charge</p> <p>Sub Divisional Medical Officer, Anandpur</p> <p>Ghasipura Block Extension Educator</p> <p>Lady Health Visitor</p> <p>Telkoi block Medical Officer in charge</p> <p>Telkoi block extension educator</p> <p><b>PHC</b></p> <p>Srigida PHC medical officer in charge</p> <p>Srigida PHC Pharmacist</p> <p>Srigida Chairman of PS</p> <p>Bato PHC medical officer</p> <p>Bato PHC Pharmacist</p> <p>Bato PHC ANM</p> <p>Bato PHC ward attendant</p> <p>Bato PHC male health worker</p>	<p>Dr. B. D. Muduli</p> <p>Dr. Chandrabhanu Sethi</p> <p>Dr. Baisahakh</p> <p>Mrs. Kuntala Sahu</p> <p>Mr. Arjun Charan Behra</p> <p>Mr. Nursingh Narayan Nanda</p> <p>Mr. Shyam Sunder Sahu</p> <p>Mr. Dilip Kumar Das</p> <p>Mr. Pati</p> <p>Smt. Sahnti Lata</p> <p>Smti. Sabita Kar</p> <p>Dr. Jaganath Patra</p> <p>Dr. P. K. Sahoo</p> <p>Dr. G. S. Sarangi</p> <p>Mr. Gobardhan Jena</p> <p>Ms. Kamini Pradhan</p> <p>Dr. Trinath Pal</p> <p>Mr. A. Mishra</p> <p>Dr. Sanjeev Kumar Tinya</p> <p>Mr. Prabhatkumar Malik</p> <p>Mr. Tirthavasi Nayak</p> <p>Dr. Manmohan Bishoi</p> <p>Mr. Subtrichi Sethi</p> <p>Ms. Sumit Sonia Sethi</p> <p>Mr. Rohinton Das</p> <p>Mr. Surendra Sethi</p>
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**GHASIPURA BLOCK:**

Sainpur chc; Bato phc; Atta Sub centre; Mandapur Sub centre

**TEAM '9'**

1. Dr. Paul Prabhakar Francis (WHO)
2. James Patterson (UNICEF)
3. Dr. Kumar Madhu Sudan (CARE)
4. Dr. Shannon Stokley (CDC)

**BARAGARH DISTRICT**

August 28th : Travel to Bargarh district and meet with District Health Officials

August 29th : Visit to Private Medical Facility / Mission Hospital

August 30th : Block/UHC visits to Padampur, Jamala, Barpali UCH

August 31st: PHC Visits to Dava, Jhanbangh, Bhatli, Kamgaon

September 1st: S/C visits to Bhadarपुरi, Udepali,

September 2nd: S/C visits to Belaspur, Bhadhigaon

September 3rd: Feedback to District Collector, District Officials, MOs in Bargarh

September 4th: Visit to Regional vaccine store

## PEOPLE MET

### DISTRICT LEVEL

District Collector,  
Bargarh District, CDMO,  
Bargarh District, ADMO (PH) i/c ADMO(FW),  
Bargarh District, DPO,  
Bargarh DH/PPC, OG Specialist,  
Bargarh DH, Paed Specialist,  
Bargarh DH, OG Specialist,  
Bargarh District, Statistical Assistant,  
Bargarh District, LHV,  
Bargarh District, MEIO,

### BLOCK / PHC LEVEL

Padampur SDH, SDMO,  
Padampur SDH, Paediatrician,  
Padampur SDH/PPC , Obstetrician I/C PPC,  
Jamla Block PHC, MO ,  
Dava Block PHC, MO,  
Barpali UHC, MO,  
Barpali UHC, MO,  
Bhatli PHC, MO,  
Jharband PHC, MO,  
Kamgaon Add'l PHC, MO,  
Jamala Block PHC, LHV,  
Kamgaon Add'l PHC, LHV,  
Udaipalli, PHC New  
Bhatli Block PHC, LHV,  
Bhatli Block PHC, ANM,  
Padampur PPC, ANM,  
Dava Block PHC, ANM,  
Jamala Block PHC, ANM,  
Jharbandh PHC, ANM,  
Dava Block PHC, MPHS (M),  
Jhanbangh PHC, MPH(M),  
Dava Block PHC, MPH(M),  
Jhanbangh PHC, Pharmacist,  
Jamla Block PHC, Vital Statistics Clerk,

### FIELD

Belaspur S/C, ANM,  
Bhatli PHC, ANM,  
Bhadarpuri S/C, ANM,  
Bhadarpuri S/C, MPH(M),  
Bhadhigaon S/C , MPH(M),  
Belaspur, AWW,  
Nagarangapur, AWW,  
Bhadhigaon, AWW,

Mr W Yadev  
Dr (Mrs) Induprava Das  
Dr Ravindra Narayan Samanta  
Mrs Matilda Dungdung  
Dr Prana Ranjandash  
Dr Madhu Sudan Dash  
Dr Narayan Thanapati  
Mr MS Mahanta  
Mrs Sanjupta Das  
Mr Chandra Panda

Dr MC Panda  
Dr Chadamani  
Dr S.C Panda  
Dr AK Das  
Dr Bhubaneswar Bagh  
Dr Mohamand  
Dr Achut Pradan  
Dr Panda  
Dr PK Biswal  
Dr NK Niak  
Mrs Amarmaipurti  
Mrs Nirupumara Beura  
Dr Arti Pradhan  
Mrs Puspar Rani Rai  
Mrs Chandakali Gourd  
Mrs Pushpa Vaikar  
Mrs Pankajin  
Mrs Surya Deep  
Mrs K Kar  
Mr PK Padhkar  
Mr AK Das  
Mr Goyadai  
Mr SC Sahu  
Mr P Naik

Mrs Ashwanti Bhera  
Mrs Punamasi Nanda  
Mrs Saraswat Patra  
Mr Pradbad Thatoi  
Mr Saldan Mishra  
Mrs J Pradhan  
Mrs Pushpa  
Mrs Amruti Mahapatra

# ANNEX 3: SELECTED OBSERVATIONS AND RECOMMENDATIONS

## 1. OBSERVATIONS BY LEVEL

### 1. STATE LEVEL

#### 1.1 SUCCESSES

- A State level immunization taskforce has recently been formed (Health, ICDS, WHO, UNICEF and other stakeholders) and will be meeting quarterly
- State level annual action plan is in place

#### 1.2 BARRIERS

- Action plan does not include a specific state coverage improvement plan that targets, underserved populations (hilly tribal areas and urban settings)
- No senior State staff member earmarked solely for immunization
- State training institute and director of family welfare coordination needs to be strengthened
- Private public partnership uncoordinated
- Low emphasis and poor coordination of urban coverage (15-17% of population)
- Low involvement of medical colleges (most have their own catchment areas)

#### 1.3 CONCLUSIONS

- Central level commitment to improving coverage is strong
- Availability of immunization data is good, but accuracy is problematic
- The State level coverage improvement plan is incomplete.

#### 1.4 RECOMMENDATIONS

- State officer to be earmarked solely for immunization to coordinate activities of State immunization taskforce
- The State immunization focal point should coordinate the drafting, implementing and accurate monitoring of a State coverage improvement plan that includes
  - Identifying underserved populations
  - Prioritizing areas based on coverage and drop-out rates
    - Using analyzed data for action at all levels
    - Increased frequency and quality of supportive supervision
    - Increased community involvement in session planning and use of ICDS, PRI and civil society to reduce drop out rates and increase demand. These can also help deliver other preventive health messages (such as education of next sessions, breast feeding practices, diarrhoeal treatments etc.)

### 2. DISTRICT LEVEL

#### 2.1 SUCCESSES

- DIO (DIO/acting) is present, with supportive staff
- Routine immunization action plan exists; including special immunization camps in one district
- PRI and ICDS actively supportive of immunization activities

#### 2.2 BARRIERS

- Action plan does not highlight coverage improvement plan or hard to reach. The action plan is purely a reflection of last year's performance extrapolated
- Little private sector involvement with

#### 2.3 CONCLUSIONS

- Surveillance and monitoring data is not used and denominators unclear
- There is no district coverage improvement plan

#### 2.4 RECOMMENDATIONS

- The DIO should coordinate the drafting, implementing and accurate monitoring of a district coverage improvement plan with the

immunization

- DTP/BCG vaccine supply is fragile in 2004. Despite requests, state and regional stores were not been able to deliver requested amounts, causing disruptions to supply especially of DTP this year. Although there have been no measles stock-outs, supplies have decreased and buffer stocks used up this year at district level.
- Apart from polio activities, there are no specific routine immunization social mobilization and IEC activities except boards at the district immunization site and a wall painting (which do not have the booster doses included)
- High male health workers vacancies means that vaccine delivery system is strained, limited alternatives for supporting vaccine delivery do not exist outside of personal contributions from the ANM herself.

key components:

- Identifying underserved populations
- Prioritizing areas based on coverage and drop out rates
- Using analyzed data for action at all levels
- Increased frequency and quality of supportive Supervision
- Increased community involvement in session planning and use of ICDS, PRI and civil society in demand generation and delivery of other preventive health messages (such as education of next sessions, breast feeding practices, diarrhoeal treatments etc.)
- Constitute a district level immunization taskforce whose objective is to guide the implementation of the district coverage improvement plan, which meets monthly with BMOs and includes representatives of

Low quality immunization data leads to lack of accurate data for decision making

### 3. BLOCK PHC/CHC LEVEL

- ICDS, PRI and NGOs
- Provide refresher training to all immunization staff at district level on:

- Using data for action and planning
- Micro planning practices
- Safe injection practices (with emphasis on Disposal of sharps)

#### 3.1 SUCCESSES

- Strong cold chain and vaccine supply logistics leading to few stock outs (despite problems with vaccine logistics at district level).
- Micro planning processes used for polio are recognized as important
- Hard to reach areas and areas affected by seasonal variations are targeted with team approach / campaigns or camps which can also deliver other health packages
- AWW and ICDS involved with house to house mobilization for immunization (including SC to block)

#### 3.2 BARRIERS

- Many Family Welfare staff receive their salaries only intermittently (many have received no payment in February and have not been paid for 3 months) leading to decreased motivation
- Supervisory visits are infrequent due to inadequate resources for mobility

#### 3.3 CONCLUSIONS

- Low numbers of male health workers create problems for vaccine logistics
- Supervisory visits are weak due to inadequate compensation for mobility payment
- There is low priority on use of immunization data at block level or emphasis on accuracy (main emphasis is on timeliness and completeness).
- Very few standard IEC / social mobilization materials or messages are available

#### 3.4 RECOMMENDATIONS

- Block MO should coordinate the drafting, implementing and accurately monitoring of a block level coverage improvement plan with the key components:
  - identifying underserved populations
  - Prioritizing areas based on coverage and

allowance (diesel and maintenance costs may be 3 times the funds received)

- Little feedback on staff performance from district leads to decreased motivation
- Unclear and confused source of denominators for calculating targets and weak surveillance networks all lead to confusion in coverage planning effectively.
- Although some micro plans are in place with map, these are not detailed

drop out rates

- Using analyzed data for action at all levels increased frequency and quality of supportive supervision
- increased community involvement in session planning and use of ICDS, PRI and civil society in demand generation and delivery of other preventive health messages (such as education of next sessions, breast feeding practices, diarrhoeal treatments etc.)
- Constitute a block level immunization taskforce whose objective is to guide the implementation of the block level coverage improvement plan, which meets monthly with PHC MOs and includes representatives

## 4. PHC LEVEL

### 4.1 SUCCESSES

- Strong role and positive interaction played by ICDS (AWW), chairman of PS and NGO for demand creation (motivation and informing beneficiaries of sessions)
- Weekly sector and monthly immunization meetings help strengthen the coordination of activities in hard to reach areas (with camp approaches)
- Vaccine supply logistics to and from the PHC is strong where male health workers are in place alternative strategies are considered

### 4.2 BARRIERS

- Little MO involvement
- PHC is currently the weakest link in the immunization system
- Key immunization data is often unavailable or incomplete at PHC level (demography,

estimates of litres of diesel used or km travelled per year

- In the absence of male health workers, identify and recruit staff who can take vaccines from ILRs (CHC or PHC) to SC (or immunization sites) at cost of 20-80 rupees per session, based on comments from the field.
- Ensure adequate stocks of immunization specific social mobilization and IEC materials are available in every block that can be adapted accordingly.

### 4.3 CONCLUSIONS

- Coverage improvement plans are not in place
- No IEC materials available and no sign demonstrating session times
- Immunization data is not being compiled, analyzed or used for planning or monitoring at PHC level
- Supportive supervisory visits rarely include outreach sessions

### 4.4 RECOMMENDATIONS

- Every PHC MO should coordinate the drafting, implementing and accurate monitoring of a PHC level coverage improvement plan with the key

reported coverage, vaccine inventory and vaccine wastage). Data from SCs is not compiled at PHC, leading to confusion over targets and poor planning

- Action plans do not necessarily lead to coverage improvement and often ANM action plans have not been scrutinized / validated by the MO
- Frequency of supportive supervisory visits from PHC is low and quality is poor, often due to inadequate mobility support

components:

- Identifying underserved population
- Prioritizing areas based on coverage and drop out rates
- Analyse data for action
- Increased frequency and quality of supportive supervision
- Increased community involvement in session planning and use of ICDS, PRI and civil society in demand generation and delivery of other preventive health messages (such as education of next sessions, breast feeding practices, diarrhoeal treatments etc.)

## 5.SUBCENTRE/OUTREACH LEVEL

### 5.1 SUCCESSES

- Close coordination and links with AWW, ICDS, MSS, DDC and PRI for routine immunization services as well as schools for sites and booster doses.
- AWW also providing and monitoring other services.
- ANMs present & living in SC, able to explain map of area, weekly activities, difficult to reach areas and camp strategies.
- Strong, efficient vaccine and vaccine supply logistics and availability for most sessions, despite having to sometimes pay out of pocket for extra support to transport from PHC.
- Few resistant populations

### 5.2 BARRIERS

- Half the sub-centres have no building at all and those that need to be rented received inadequate compensation to cover the rent; the remaining are in a poor state of

improvement plan, which meets monthly with ANMs and AWWs and includes representatives of ICDS, PRI and NGOs

- Every PHC should have an adequate stock of immunization specific IEC materials and should have a sign board demonstrating times, sites and schedules
- Immunization data from SCs and the PHC should be compiled and appropriately analyzed at the PHC and sent on to the CHC.
- Review PHC level mobility allowance for supervisory POL - based on annual estimates of litres of diesel used or km traveled per year
- The PHC must support alternative vaccine delivery mechanisms from PHC to SC levels.

### 5.1 CONCLUSIONS

- ANMs are the key and strongest link in the immunization system. However their pay is erratic, they often stay in sub standard or rented premises and their pay scales are often not linked with updated rates.
- Much needless effort and time is being spent on recording and reporting inaccurate data which is not looked at or analyzed for use at SC or PHC levels
- There is a good ratio of sessions held /

## 6. PRIVATE PRACTITIONERS

repair

- Confusion over denominators / targets often leads to no target being recorded at all and many forms do not have an annual target recorded
- ANM salaries are erratic, not been paid for three months leading to low motivation
- There is very little on the job training and no feedback on the huge amount of data the ANM has to collect (often 2 hours per day)
- No IEC materials are available or signboard advertising sites, sessions or schedules at any PHC or SC. However, most populations were aware of session times.
- Large drop outs due to missed opportunities to educate and no system for systematic tracing of defaulters

### 6.1 SUCCESSES

- Private sector is starting immunization initiatives
- Private sector contacts have been identified to provide immunization
- Private staff want more immunization training
- Private practitioners may be able to provide greater choice of vaccines
- Growth monitoring accompanying

immunization sessions

## 7. URBAN HEALTH CENTRES

### 6.2 BARRIERS

- No Government guidelines or policies available for private sector
- Private sector may only give birth doses and TT vaccination to pregnant women then refers to Government sector, as not much profit in primary schedule provision.
- Private sector cold chain weak. Witnessed use of a household fridge without temperature monitoring and many DTP vaccines frozen
- Weaker logistics due to erratic needs and bulk deliveries
- Private sector has no records of immunization coverage reported to Govt sector
- Little involvement of medical associations such as IMA and IAP.

sessions

planned

- There are few immunization specific IEC Materials available at SC level

### 5.2 RECOMMENDATIONS

- ANMs salaries, SC building conditions urgently require review by State
- State level needs to review the workload of ANMs on unnecessary and duplicative data management and registers required by other health sectors
- AWW and ANMs need trained in using patient contacts as opportunities to reduce missed opportunities, drop out rates and provide key preventive health messages (eg. breast feeding, supplementary nutrition diarrhoeal prevention and treatment)
- Every immunization site should have adequate quantities of immunization specific IEC materials

and signboard showing immunization site, timing and immunization schedule

- Sufficient syringes should be available for every immunization session

### 6.3 CONCLUSIONS

- Private sector is keen for further involvement and training in immunization sector
- Weak supervision and monitoring in private sector
- Private sector needs State regulation and guidance regarding safe immunization practices, vaccine quality assurance, monitoring and supervisory practices

### 6.4 RECOMMENDATIONS

- All private immunization sites should have a designated staff member that has been adequately trained in an accredited State institute (this training should include cold chain handling, immunization safety,

## **7.1 SUCCESSES**

- Urban centres are aware of underserved populations
- Outreach sessions from urban centres conducted by Balwari and LHVs in some areas
- Fixed day, fixed site strategy with active plans and strong links with AWWs and women's groups in urban pockets
- Cold chain storage and maintenance is strong with no breaks in chain
- Fully staffed

vaccine quality assurance and monitoring and supervisory practices)

- State should include IMA / IAP members for the training of private immunization providers and co-opted as part of the training institutes
- State should ensure adequate monitoring and surveillance materials and forms for all private immunization providers
- All private immunization providers should provide accurate immunization data and feedback to Government institutions

## 2. OBSERVATIONS AND RECOMMENDATIONS BY TECHNICAL AREA

### SERVICE DELIVERY & INJECTION SAFETY

- Community acceptance of the urban centres

#### 7.2 BARRIERS

- Urban population head count often differs from census data, leading to mixed denominator estimation. Head count data used in slum areas, but otherwise the denominator seems to be fixed at 50,000.
- Tracking dropouts and giving preventive health messages (such when next session is, breastfeeding and treatment of diarrhoea) are problematic for mobile populations and these messages are not being given.
- Little active involvement by MO weakens overall coordination and management, leading to chaotic sessions, in unhygienic environments
- No immunization specific IEC materials available for any sessions
- Few official forms or registers are available, necessitating loose forms and pieces of paper making data and planning even more chaotic
- Little immunization training has been provided for urban staff
- Hard to reach areas and areas affected by seasonal variations are targeted with team approach / campaigns or camps which can also deliver other health packages
- Strong role and positive interaction played by ICDS (AWW), chairman of PS and NGO for motivation and informing beneficiaries
- AD syringes have been used in border cluster district areas since 2001 & all staff received injection safety training for all staff in 2003)
- Immunization providers show adequate injection technique
- No State injection safety policy or guidelines in place, leading to extremely hazardous syringe, needles and waste disposal practices at all levels. Many used needles and syringes litter the grounds of immunization sites, despite

designated sharps pits, burning areas. The use of needles cutters and AD syringe introduction in some places has decreased the infection risk to patients, but increased the risk to health staff. E.g. Used syringes are collected in a box and bulk cutting of needles is done by an untrained, unprotected person.

- Sub-centres are in a poor state of repair (if building exists at all)
- Vaccines are not delivered according official immunization schedule; in one case measles was administered at 4 months of age.

#### CONCLUSIONS

- Used syringe, needles and waste disposal is extremely hazardous, especially in urban settings
- Mobility allowance for supervision practices requires review
- Feedback and active supportive supervision with on the job training practices extremely weak
- Service delivery & injection safety

#### RECOMMENDATIONS

- An immunization safety and waste disposal policy is urgently required to be drafted and implemented; a state and district waste disposal committee should urgently be constituted to implement the policy (including training initiatives)
- District and block level mobility allowance for supervisory POL should be reviewed by State and based on annual estimates of litres of diesel used or km travelled
  - All micro-plans need to be

## SURVEILLANCE AND MONITORING

reviewed by the PHC MO for completeness of coverage and routinely monitored for implementation.

- Special camps should be scheduled based on specific criteria (criteria currently used: hard to reach areas, low coverage areas, neglected areas)
  - Create alternate system for vaccine delivery to immunization session sites; for example use ICDS/Block PHC vehicles, hire local worker to collect vaccines, etc
  - Provide mobility support to ANMs so that they can reach all their villages
  - Immunization and practice guidelines (field guide) should be given to all ANM's
  - Supervisory practices need to be highlighted in refresher training
  - Facilitate and regulate private physicians involvement in delivery of routine immunizations (directive should be given by State Government)
    - Provide cold chain training
    - Reporting of doses administered
    - VPD reporting
  - Timeliness and completeness of reporting system
  - Some sub-centres records well maintained
  - Vaccination card retention by patients strong (where cards are available).
  - Weekly/monthly sectoral meetings
  - PHC level compiles data, but analysis is weak/non-existent. Little use of data for action or planning immunization activities. Data is often recorded without analysis and sent up the chain with no feedback
- ANMs have to keep up too many registers and are of no direct use to her without any feedback or understanding of data use. Maternal and child registers do not match reported figures of children vaccinated
  - Non-availability of certain forms required for recording and reporting. Few official immunization registers were seen, sometimes forms 6,7 or 8 were of short supply and monitoring charts were not seen anywhere. In one district, ANMs were instructed not to use form 6.
  - VPD surveillance is poor and non/under-reporting is common.
  - Immunization card counterfoils are not being used consistently and there is no system of tracing defaulters to decrease drop out rates
  - District estimations for infants, under fives and pregnant women are based on census data and annualized growth rate. At the sub-centre level, the denominator is based on annual head count performed by ANMs and block specific birth rates from the previous year. This leads to confusion of the denominator and planning annual targets.
  - Some AWW immunization registers incorrectly have three columns for BCG I, II, and booster dosage. These columns were filled in some cases.
  - Measles coverage is used to estimate full immunization coverage.
  - The private sector is using non standardized vaccination card with an incorrect schedule mentioned which leads to confusion

## CONCLUSIONS

## VACCINE PROCUREMENT AND DISTRIBUTION

- VPD surveillance is weak
- ANMs are spending a large amount of their time recording and reporting duplicative data
- There is no priority on use of data for action at any level
- Unclear guidance on denominator estimations contribute to confusion and poor planning
- Erratic availability of monitoring forms and immunization registers

### RECOMMENDATIONS

- Immunization data pertaining to a level and all levels below in the system should be available for analysis and use at that level
- The amount and need for data recorded by ANMs requires urgent review; simplify reporting system to only 1-2 main forms
- Defaulter tracing should be conducted using a standard format (i.e. tickler box, counterfiles, etc)
- Refresher training is required for all immunization providers on denominator estimation and how to effectively use immunization data for planning and monitoring
- Adequate monitoring forms and immunization registers should be available.
- AWW and ANM refresher training requires focus on surveillance mechanism and under reporting of cases.
- Correct and reprint ICDS immunization registers where BCG has three columns.
- Stock record keeping is maintained at all levels
- ANMs are concerned with vaccine

wastage

- Storage and movement of vaccines from district to PHC level strong

## PROGRAMME MANAGEMENT

- Too much emphasis placed on vaccine wastage (especially BCG) causing missed opportunities and delay of vaccination
- Session indenting is non-standard; stock outs at district were observed, due to lack of monitoring and oversight at State level.
- DTP vaccine supply is fragile in 2004. Despite requests, State and regional stores were not been able to deliver requested amounts, causing disruptions to supply especially of DTP this year.
- Vaccine wastage not monitored
- Inadequate supply of syringes and needles. Where AD syringe in use since 2001, there is no AD syringe for BCGs
- Plastic bags not used for holding

## COLD CHAIN MANAGEMENT

sometimes leads to confusion.

- No diluent syringes supplied or used
- At times, not all antigens are being offered at routine sessions that occur closely after a special campaign.

### RECOMMENDATIONS

- BCG syringes should be made available in all immunization sites
- Vaccines need to be transported in plastic bags to keep dry and ensure labels stay
- Create standardized format for indenting at all levels
- Utilize smaller dose vials to reduce missed opportunities and wastage
- Implement guidelines for maintenance of buffer stocks

- Strong support from District Collector and other important government administrators
- Preparation of immunization session schedules
- SDMO, ADMO, MO are doing medical supervisory visits
- Irregular supervisory visits to immunisation sessions
- Target setting is not taking into account CNA results; ANMs unsure of targets

### RECOMMENDATIONS

- Provide support for LHVs and other sector supervisors to conduct supervisory visits to immunization sessions
- Standardize target setting
- Communicate targets to sub-centre level
- State level cold chain equipment and system functions well and is well maintained. First in, first out strategy.

### HUMAN RESOURCES

- register
- Temperature monitoring is done at lower levels
- Available equipment is in good condition
- Electricity supply is good
- Cold chain maintained during transport to and from CHC
- Poor awareness of risk of freezing TT/DTP vaccines; vaccines improperly stored in ILRs and are kept on ice-packs during immunisation sessions.

- Delivery of session vaccines in a carrier the night before session
- Automatic switch over generator system is not working because control panels, mechanic unaware of how to report technical difficulties. Generators not available at PHC's
- State Cold chain store also contains insulin and anti snake venom, though no additional items were observed at other levels of the cold chain
- Cold chain is weakest at PHC temperature monitoring chart (last entry Aug 2002)
- Baskets for storing vaccines in ILR/DF are not being used
- Voltage is unstable, often dropping to 90V

### RECOMMENDATIONS

### TRAINING

- Training on risk of vaccine freezing is needed at regional level and below.
- Use baskets for storing vaccines to prevent freezing
- Replacement of mobile cold chain repairing van and automatic switch-over control panels; all cold chain facilities should have an alternate power supply including support for generator/voltage stabilizer
- Extend number of vaccine storage points when power supply is established (explore use of gas refrigerators for areas with inadequate electricity)
- Highly competent LHVs
- Involvement of MPHWS (males) in assisting with immunization activities
- Vacancies of key positions (ANM, MPHWS, LHV, MO, ADMO)
- Salaries not being paid on time; salary payment particularly delayed

for contract employees; Telkoi Family Welfare staff have not received salaries for 3 months; contract staff have not been paid for up to 9 months

- Poor feedback on staff performance from district leads to decreased motivation; little recognition of good work
- Lack of Human Resource development plan

### RECOMMENDATIONS

- Fill vacant posts, specifically male health workers, ANMs and LHVs

### IEC AND SOCIAL MOBILIZATION

- Pay salaries on time
- To motivate health workers, provide recognition of achievements. For example, certificates for Highest Coverage, Lowest Drop-out rate, Accurate Reporting, etc.
- District should be involved with recruitment of local women for ANM training
- Officer in charge should be empowered to disburse funds

- All health workers attended RCH training in 2002
- LHV on the job training
- Immunization messages transmitted during sectoral meetings
- Training materials out of date
- There has been no training since 2002 and a request for yearly updates
- Weak knowledge of proper cold chain maintenance

- No injection safety and vaccine delivery training has been conducted
- No training for development of micro-plans and conducting supervisory visits have been conducted

### RECOMMENDATIONS

- A State immunization training plan should be implemented as soon as possible. All immunization providers should receive refresher training every two years. These should be held at State level for DIOs and district / block levels for all other staff delivering immunization. The training components should emphasize:
  - Interpersonal communication skills
  - Data recording and reporting practices and use for action
  - Micro-planning to increase coverage rates
  - Immunization safety aspects with special focus on syringe and needles disposal
  - Conducting supervisory visits
- The planned national level ANM operational guideline should be translated and disseminated to reinforce the key training topics
- AWW and ICDS involved with house to house mobilization for immunization (including SC to block); AWW are strong force in mobilizing community
- Traditional birth attendants / 'drum beaters' help with mobilization in areas where AWW is not posted
- In some areas, SHG, MMS, and Village Health Guide involved in

# ANNEX 4: STATE PRESENTATION

The team presented comments and recommendations to the state at the end of the review. This presentation is highlighted below.

## ORISSA STATE IMMUNIZATION REVIEW

Presentation by immunization review Team, 6th September 2004

## REVIEW TEAM MEMBERS

### Kheonjhar District

P.Biswal - Gol, New Delhi  
 Craig Burgess - WHO, New Delhi  
 V.T. Godbole - UNICEF, Gujarat  
 Subroto Mukherjee - CARE, New Delhi

### Baragarh District

Paul Francis - WHO, New Delhi  
 James Patterson - UNICEF, New

## WHERE?

- State level facilities
- 2 Districts (Kheonjhar & Bargarh)
- 4 Block PHCs / CHCs
- 4 PHCs
- 8 Sub centres (with outreach)
- 4 urban post partum centres
- Slum areas
- Private practitioner facilities

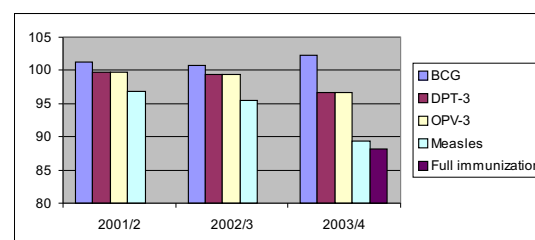
## STRENGTHS

- Most of the LHVs and ANM posts filled
- Fixed day, fixed site strategies are being implemented
- Annual action plans are in place
- Strong links between immunization system and ICDS AWW, MSS and PRIs. Initiative has been taken by State Govt for involvement of PRIs
- Strong cold chain system established at all levels
- Vaccine storage and distribution logistics below district level
- AD syringe in use since 2001 for BDCS
- Coverage improvement plans in place (team)

## GENERAL ISSUES

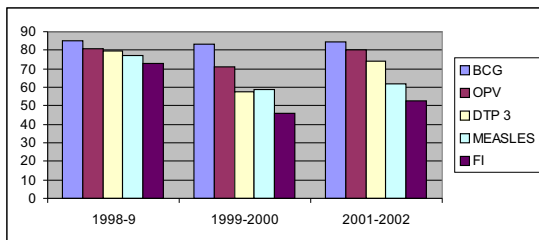
- Criteria for calculating population targets varies from level to level, causing confusion in planning
- Waste disposal is currently hazardous
- VPD surveillance is weak
- There is very little use of data for action, feedback on data at any level
- Inadequate supportive supervisory visits
- Lack of BCG syringes
- Very few IEC materials available
- Many male health worker posts are vacant

## REPORTED COVERAGE



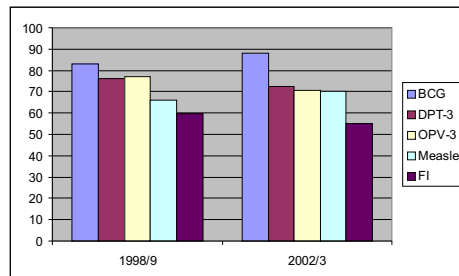
2001 – 2004 REPORTED COVERAGE BY ANTIGEN, ORISSA STATE – shows BCG coverage (access) increasing but all other antigens coverage decreased. No FI data available 2001-

## STATE EVALUATED COVERAGE



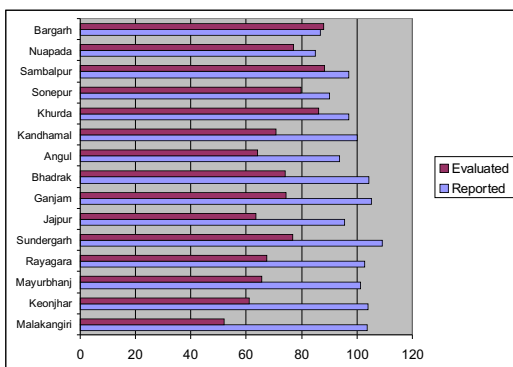
UNICEF STATE CES – (NO DATA AVAILABLE 2002 – 2004)

## EVALUATED COVERAGE – DISTRICT AVERAGE COVERAGE BY ANTIGEN



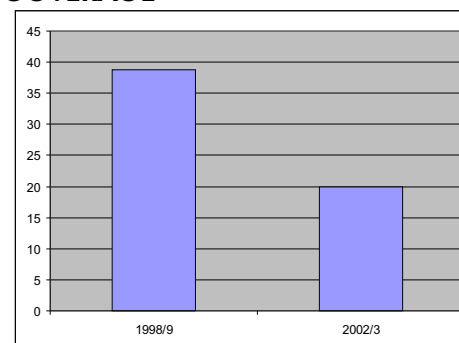
DISTRICT AVERAGE COVERAGE BY ANTIGEN 1998 /9 & 2002 /3  
RAPID HOUSEHOLD SURVEYS 1998-9 (n= 30) AND 2002-3 (n=15). District average BCG coverage increased but DTP3 and FI rates fallen

## IS REPORTED DOCUMENT ACCURATE?



2002 – 2003 Reported DTP3 coverage versus evaluated

## % DISTRICTS ACHIEVING >80% DTP 3 COVERAGE



SOURCE: RAPID HOUSEHOLD SURVEYS 1998-9 (n= 30) AND 2002-3 (n=15). Perhaps increasing inequities between districts?

## COVERAGE CONCLUSIONS

% infants fully immunized in the State appears to be **decreasing since 1998-99**  
% BCG coverage in the State is increasing – access to services is NOT the major problem  
Drop out rates are increasing – perhaps acceptability/service quality is the major problem

% districts achieving > 80% DTP3 coverage has **decreased** – perhaps suggests greater intra-state inequities?

## DISTRICT ISSUES

1. Vaccine stock outs for DPT/BCG observed at district level
2. Use of surveillance and monitoring data for planning and feedback to lower levels needs improved
3. Waste disposal is hazardous
4. Weak supervision



### **BLOCK-PHC/CHC ISSUES**

1. Large number of vacant posts, particularly male health workers
2. Supervisory visits are weak due to lack of mobility support
3. Little emphasis on accuracy, analysis or use of immunization data; only timeliness and completeness
4. Very few IEC / social mobilization

### **PHC ISSUES**

1. Lack of IEC materials and no signboard
2. Immunization data is not being compiled, analyzed or used for planning or monitoring at PHC level. Some shortages of forms and immunization registers.
3. Supportive supervisory visits need to include outreach sessions
4. Waste disposal is currently hazardous
5. No PHC coverage improvement plan in

### **SCs / OUTREACH ISSUES**

1. ANMs are the key and strongest link in the immunization system. However their pay is erratic, they often stay in sub standard or rented premises.
2. ANM is unaware of use of data she is reporting.
3. Waste disposal is hazardous, no proper knowledge
4. BCG syringes are not available
5. There are very few IEC / social mobilization materials available at SC level and no signboard
6. Little information for mothers on preventive

### **URBAN HEALTH CENTRE ISSUES**

1. Urban health center not using the Bio-medical waste disposal facilities
2. Little supervision by Medical Officer
3. No social mobilization or IEC materials available for routine immunization

### **PRIVATE PRACTITIONER ISSUES**

- Little immunization training for private sector
- Poor vaccine storage and some vaccine freezing
- Non standardized forms / guidelines
- Reporting or accountability to Govt sector is weak

## **10 RECOMMENDATIONS**

**1. A State officer should be earmarked solely for immunization (with no additional charges) to coordinate activities. These activities will include coordination, implementation and monitoring of coverage improvement plans at State, district and block levels that include:**

- Identifying underserved populations
- Prioritizing areas based on coverage and drop out rates
- Using analyzed data for action at all levels
- Increased frequency and quality of supportive supervision
- Increased community involvement in session planning and use of ICDS, PRI and civil society to reduce drop out rates and increase demand. These can also help deliver other preventive health messages (such as education of next sessions, breast feeding practices, diarrhoeal treatments etc.)
- The State immunization taskforce should

**2. All sanctioned ANM, LHV and male health worker posts should be filled as soon as possible and salaries of ANMs in particular should be paid on time (with special focus on contractual staff).**

**3. Where a sub centre building does not exist, actions should be taken for construction of an appropriate sub centre or adequate funds made available for appropriate renting. Where a sub centre building does exist, actions should be taken for repairing and maintenance of these buildings.**

**4. A State immunization training plan should be developed and implemented as soon as possible. All immunization providers should receive refresher training every two - three years. These should be held at State level for DIOs and district / block levels for all other staff delivering immunization. The training components should emphasize:**

**5. A State injection safety policy (with special emphasis on bio-medical waste disposal) should be urgently disseminated all levels and its implementation monitored by a constituted State and district level injection safety committees**

- a) Interpersonal skills so that every immunization contact delivers four key messages to reduce drop out rates: i) importance of immunization, ii) normal effects post immunization, iii) timing and place of child's next immunization, iv) preventive behavioural health messages including breast feeding and nutrition
- b) data recording and reporting practices and use for action
- c) micro-planning to increase coverage rates and reduce drop outs
- d) immunization safety aspects – with special focus on syringe and needle disposal

**6. Every immunization site should have sign board showing session sites, times and immunization schedule and adequate quantity of immunization specific IEC materials in appropriate language**

**7. Private practitioners should be encouraged to deliver routine immunization services, with State / district support to ensure training of the designated staff in an accredited Govt. institute (also including cold chain handling, immunization safety, vaccine quality assurance and monitoring and supervisory**

**8. State level immunization taskforce should meet every quarter and district level immunization committees should meet every month. This committee should have representation from ICDS, education dept, PRI . The groups should analyze and review performance and suggest**

**9. Strengthen supportive supervisory and feedback processes at all levels. Provision for mobility support of supervisory staff should be made. provide adequate training for supportive supervision practices.**

**10. Adequate quantities of immunization registers, vaccine cards, monitoring and surveillance forms must be available at all immunization sites, using a standardized indenting procedure**

## **FOLLOW UP RECOMMENDATIONS**

### **KEY TO SUCCESS:**

- Regular routine immunization meetings at all levels with action points reviewed
- Feedback & supportive

# ANNEX 5: GOALS AND OBJECTIVES OF THE 2005-2010 MULTI-YEAR PLAN FOR THE UIP

## GOAL 1 - DISTRICTS WILL PROVIDE EFFICIENT AND SAFE IMMUNIZATION SERVICE TO ALL INFANTS AND PREGNANT WOMEN

Objective 1.1: [regular sessions]	To ensure regular quality immunization sessions are planned and held.
Objective 1.2: [adequate staffing]	To ensure adequate trained staff are empowered to provide essential quality immunization services.
Objective 1.3: [cold chain]	To keep an annually upgraded inventory of cold chain according to the levels of the network, allowing for new equipment, substitution, replacement, spare parts, fuel and others in order to maintain a functional status of 90%.
Objective 1.4: [logistics]	To ensure an efficient vaccine and injection equipment management and logistics system to forecast and deliver adequate supplies of vaccines in a timely manner.
	To ensure the implementation of safe injection practices and

## GOAL 2 - CONTRIBUTE TO GLOBAL POLIO ERADICATION, MEASLES MORTALITY REDUCTION AND NEONATAL TETANUS ELIMINATION

Objective 2.1: [polio eradication]	To achieve polio eradication certification by 2007
	To eliminate neonatal tetanus (NNT) by 2009
Objective 2.2: [MNTE]	
Objective 2.3: [measles]	To reduce measles mortality by two-thirds by 2010, compared to 2000 estimates.
Objective 2.4: [Vitamin A]	To achieve and maintain a level of 70% coverage with two doses of vitamin a supplementation to children under three.

## GOAL 3 - THE UIP WILL HAVE SUFFICIENT AND SUSTAINABLE FUNDING WITH ESTABLISHED ADEQUATE, ACCOUNTABLE AND EFFICIENT FUND

Objective 3.1: [adequate finance]	To ensure adequate and reliable financial resources at national, state and local levels for the UIP to achieve goals and objectives.
Objective 3.2: [political]	To ensure political commitment for adequate annual funding

## **GOAL 4 - THERE IS SUSTAINED DEMAND AND REDUCED SOCIAL BARRIERS TO ACCESS IMMUNIZATION SERVICES**

Objective 4.1: [social mobilisation ]	To ensure widespread support by all families and communities and to ensure that all eligible children and pregnant women are immunized.
Objective 4.2: [advocacy]	To ensure high level political and administrative support for immunization as the key public good.

## **GOAL 5 - ACCELERATED INTRODUCTION OF LICENSED NEW AND UNDER UTILIZED VACCINES AGAINST DISEASES WITH SIGNIFICANT MORTALITY AND MORBIDITY IN INDIA**

Objective 5.1: [new vaccine]	To ensure institutional mechanisms are in place to adequately obtain, review and utilize information for deciding on introduction of new and under utilized vaccines.
Objective 5.2: [consider MMR]	To review need for MMR or MR vaccine in India's immunization programme.
Objective 5.3: [consider JE]	To review need for introduction of Japanese encephalitis (JE) vaccine in selected states.
Objective 5.4: [implement]	To implement a phased introduction of Hepatitis B vaccine.

## **GOAL 6 - TO MONITOR AND USE ACCURATE, COMPLETE AND TIMELY DATA ON VACCINE PREVENTABLE DISEASES, AEFIS AND ANTIGEN COVERAGE AND DROP OUT RATES BY DISTRICT**

Objective 6.1: [disease surveillance]	To institutionalize surveillance for vaccine-preventable diseases and early detection of any outbreaks.
Objective 6.2: [AEFI surveillance]	To strengthen vaccine quality and injection safety by developing a monitoring system for reporting and responding to adverse events following immunization (AEFI) by 2009.
Objective 6.3: [coverage monitoring]	To establish an effective, efficient, complete and timely immunization recording and local area monitoring system by 2009.





