EVALUATION OF IMMUNIZATION TRAINING OF MEDICAL OFFICERS, COLD CHAIN HANDLERS AND TECHNICIANS

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Objectives

General Objective

To study the processes and factors affecting the progress, performance and quality of immunization training of medical officers, cold chain handlers and technicians.

Specific Objectives

- To identify factors affecting differential progress between states in RI training of MOs and cold chain handlers. (phase 1)
- To identify factors affecting the quality of training. (phase 1)
To assess the knowledge, skills and practice of medical officers, cold chain handlers and technicians related to UIP. (phase 2)

To make recommendations for improving future training of medical officers, cold chain handlers and technicians. (phase 2)

Study Design (in brief):

First two objectives were studied in first phase between February and March 2012 and the second and third objectives formed part of phase-2 study conducted in April and May, 2012. For the first phase, 12 states were selected for desk review and field visits on the basis of MO-training progress. All states were categorized into groups with less than 40%, 40-70% and more than 70% MOs trained. From each of these groups, 4 states were selected randomly. For the second phase, 6 out of the original 12 states were selected (2 from each category) mainly by excluding those states where training of medical officers was conducted recently for Measles catch-up campaigns. Then 12 districts, 2 from each of the 6 states, with moderate training coverage (one near and one away from state headquarter) were selected.

<table>
<thead>
<tr>
<th>Selection of states</th>
<th>MO-Training &lt; 40%</th>
<th>MO-Training 40-70%</th>
<th>MO-Training &gt;70%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase-1 study</td>
<td>UP, MP, WB, Gujarat</td>
<td>Odisha, Manipur, Maharashtra, Delhi</td>
<td>AP, Assam, Haryana, Karnataka</td>
</tr>
<tr>
<td>Phase-2 study</td>
<td>UP and WB</td>
<td>MP and Odisha</td>
<td>AP and Maharashtra</td>
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</table>

Study tools were developed for in-depth interviews, observations and records reviews during both phases of the study. 24 study teams were identified amongst officers from NIHFW, WHO, UNICEF, MCHIP, NIPI and state officials. During first phase, field visits were made to each of the 12 states for 2-3 days by a 2 member team to conduct in-depth interview of SEPIO, SCCO, Director-SIHFW, Director-FW, MD-NRHM / other state level officials and trainers of the state/regional training centers. During second phase, field visits were conducted to each of the 12 districts for 3-4 days by a 2 member team to conduct in-depth interview of DIO, DPM, Cold chain technician, Medical officers, Cold chain handlers, HWs and Trainers of the MO and CCH.

The sample size was 400 (100 during first and 300 during second phase of the study). The sample included both trained and untrained medical officers, cold chain handlers and cold chain technicians. After data validation, state wise data was compiled and analyzed based on each objective of the study.
Summary of Results (including duration of data collection):

12 study teams were identified amongst officers from NIHFW and Partners. Field visits were conducted to each of the 12 districts for 3-4 days by a 2 member team to conduct in-depth interview of DIO, DPM, Cold chain technician, Medical officers, Cold chain handlers, HWs and Trainees of the MO and CCH during 23rd April to 25th May, 2012.

Factors affecting progress in immunization training of medical officers in the states

The enabling factors in four states (AP, Assam, Karnataka and Haryana) with good progress in training (more than 70% trained) of medical officers were

Priority to training through regular review by MD-NRHM / Director (FW) (in AP and Haryana) and proactive involvement of Director FW, MD-NRHM, and SEPIO in Karnataka and Assam to facilitate the progress of training. Monitoring quality of training was done by state and district officials e.g. use of 'SKYPE' for online monitoring of training in Karnataka and monitoring of training in districts by SIHFW in AP. Trainings were decentralized to district levels to expedite the progress of training in AP, Assam, Karnataka and Haryana (WB is exception). Large pool of trainers helped to improve the training progress.

Barriers and Issues in the progress of training were poor planning and coordination of Trainings. Poor attendance of MOs due to lack of follow up of nominations which was due to lack of coordination between SIHFW and state/district offices and no accountability for not attending the training were factors in poor progress of trainings. Data-base of trained personnel was not maintained at district and state levels. Poor training infrastructure & facilities in terms of less number of training centres and lack of training infrastructure specifically non availability of hostels, shortage of trainers with vacancies at SIHFW and non availability of trainers posted in NRHM for actual trainings. Poor implementation and monitoring of training due to shortage of doctors and inability to relieve MOs for 3 days due to other priorities as outbreaks, floods, school health programme, etc. and also because service delivery in PHC suffers. No system of regular reporting and no mechanism for regular monitoring of training were in place. Delay in release of funds and non conformity to financial norms were also cited as reasons of slow progress. RCH training norms were not followed and participants were not given TA/DA and trainers honorarium as per RCH norms. No trainings were conducted in April to June because funds were released from GOI in June. In-house trainers were not given honorarium leading to reluctance to train.
**Factors affecting the Quality of Medical officers training**

Overall quality of training was found to be good as gathered from the trainers and the trainees. The enabling factors were the **good choice of trainers** (faculty of training centres; medical colleges; SEPIO / Programme Officers; CMO / DIO / DTO; Pediatrician; senior medical officers; Divisional coordinators; NPSP SMOs; Retired senior health officer etc.). The medical officers who were involved in immunization program were trained as MO (PHC/CHC); Contractual doctors; AYUSH Doctors and MOs of hospitals. Adequate **numbers of trainers were involved** on all 3 days during last 3 batches in all states except Maharashtra where only one trainer was involved. Proper following of **Training methodology** through use of interactive training methods as per facilitators guide and use of training kits in all states. Transport was provided for the field visits to practice supervision. Immunization Handbook and Handouts were given as a part of training. Training kit and CD with films was used. Pre and post test was done and feedback received from the trainees. Certificate was given to each participant. Action was taken on **feedback of trainees** in the form of improvement in quality of trainings (making more participatory, change of venue leading to reduced noise due to traffic, etc.). **Involvement of SIHFW** in taking lead of coordination of trainings was observed in AP, Assam, Delhi and Gujarat.

**Barriers and Issues in the quality of training**

**Training facilities**-Lack of training, hostel and mess facilities observed in the states of Delhi, Manipur and Gujarat was a barrier. There was **lack of involvement of SIHFWs** in UP, WB, Haryana, Karnataka and Manipur in coordinating and monitoring immunization training. There was shortage of trainers in Delhi, Gujarat, West Bengal, Odisha, UP and AP. Trainers were not present in full strength in MP and Maharashtra due to transfer of trained trainers to other positions.

**Factors affecting progress in Cold chain handlers training**

The progress of training was **good** in all states except UP and Karnataka. Major reasons for good progress were:

- Regular reviews by CFW and SEPIO and intensive monitoring by dedicated person at state level.
- Trained trainers in adequate numbers were available in all the states visited.
- Training was decentralized to district level.
- Development Partners mainly UNICEF supported TOTs for CCH training in 7 states.

**Reasons for slow progress** were cited as delay in translation and printing of Handbooks; HR Shortage and SCCO on leave.
Factors affecting the quality of cold chain handlers training

Quality of training was found to be good as gathered from the trainers and the trainees.
- Duration of training was 2 days in 9 states and 1 day in Delhi, Manipur and UP.
- No. of CCH trained per cold chain point were 2 or more in 8 states.
- Handbook was translated and printed/available in local language in all states except in AP and Manipur where the participants were comfortable in English.
- Training was residential in all states except Gujarat.
- 3 or more trainers were involved per batch for both days in all states.

Knowledge and practices of cold chain handlers after training
- The trained cold chain handler had better knowledge and skills in all areas (storage of vaccines and diluents, maintenance of equipments, recording of temperatures and stock registers, etc.) as compared to untrained handlers.
- Knowledge and skill levels remained poor for both trained and untrained handlers in recording of diluents details in stock register and contingency actions, conditioning of ice packs and freezing of ice packs in Deep Freezers.

Cold Chain Technicians training
Positive observations about Cold chain technicians training
- All cold chain technicians had minimum required qualifications and were in-charge of only one district.
- All had received trainings for repair and maintenance of ILRs/DFs.
- Maharashtra technicians were also repairing and maintaining hospital equipments.
- A few of the cold chain technicians were also involved in vaccine management duties.
- The technician with a WIC under his charge had received trainings for repair and maintenance of WIC/WIF and also for the Servo stabilizers (for use with WIC/WIF).
- All technicians except one had tool kits.
- All were satisfied with the quality of trainings received at SHTO, Pune.
Areas of concern regarding Cold chain technicians training

- One technician was not trained to repair 1 KVa voltage stabilisers used with ILRs / DFs.
- Three cold chain technicians trained for WIC/WIF were currently posted in districts without WIC/WIF. They were also not trained in repair and maintenance of Servo stabilisers.
- Training has not been provided for all the different types and brands of voltage stabilizers available in the field.
- A technician each gave incorrect answers to two questions directly related to his job responsibilities. This indicates non-application in actual work of knowledge gained during training or the requirement of short refresher trainings to update knowledge after every few years.
- TA/DA receipt / reimbursement issues have been reported by two of the eight technicians.
- Most of the technicians did not have dedicated rooms to be used as workshops/offices. They also did not have easy access to transportation for travelling to repair broken down machines/ compressors and other spare parts.
- High breakdown instances / rates for Haier equipments and Chintz stabilizers reported by at least two of the eight cold chain technicians.
- Many spare parts used commonly for minor repairs were neither available with technicians nor at state level.

Policy Implications: Key Recommendations for improving trainings

Medical Officers

- Establish state/district training cell with one officer designated as Training coordinator to coordinate for all programs; improve coordination among SIHFW, NRHM and Directorate and ensure that overlapping with other trainings is avoided.
- Review the progress of training as part of regular program reviews at state and district level. Devise mechanisms to ensure adequacy of batch size and mandatory attendance of nominated participants.
- Strengthen and involve SIHFWs to coordinate and monitor the immunization training. Integrate immunization training in the induction training program for medical officers.
- Training data-base should be maintained by the state and district training centres. Regular reporting of training should be ensured through HMIS.
• Develop training infrastructure in all districts. Provide hostel and transport facilities in Delhi, Gujarat and Manipur. Districts with trained MOs, good training and residential facilities should be made training centres for MO training e.g. Hoshangabad in MP.

• Address shortage of faculty and staff at the training centres by hiring on contract basis under NRHM. Training cadre/faculty should be full time, regular and if required, transfer to other training centres only.

• Conduct state TOT to increase the pool of trainers at the state and in all regional training centres. Provide regular refresher training to master trainers/ faculty members of SIHFW. Involve medical college faculty in all training courses on immunization.

• Training monitoring should be institutionalized. Use of technology e.g. SKYPE should be encouraged. Involve the state trainers to monitor trainings at regional and district level. District trainers should follow-up the trainees on the job.

• Revise financial guidelines for immunization trainings in line with RCH training norms. The budget of MOs training to be included in the state PIP of 2013-14 so that all Medical officers are trained by end 2013.

• Train the untrained MOs including AYUSH MOs and organize refresher course at the district level. Encourage all medical officers in addition to the MO-I/Cs to be actively involved in micro-planning, monitoring and supervision activities.

• **Address non-training factors** affecting the immunization services as release of funds, supply of logistics and conduct of supervision at all levels to enable the medical officers to translate the training into good practices.

**Cold chain handlers**

• A one-day refresher course may be recommended for cold chain handlers trained for two days provided proper data base of trained cold chain handlers is available.

• The cold chain handlers training should be followed by intensive supportive supervision and on job training to ensure that knowledge and skills acquired are used in the actual settings

**Cold chain technicians**

• For optimum utilization of resources, states may post technicians trained in repair and maintenance of WICs/WIFs to districts with WIC/WIF. They should receive training on Servo stabilizers before or immediately after getting posted to these districts.
- Trainings on different types/brands of 1kVA voltage stabilizers need to be organized for technicians who have not received the training.
- Training to be urgently organized for repair and maintenance of Haier equipments and Chintz stabilizers.
- Refresher trainings need to be organized for technicians regularly as per training needs assessment.
- Supply of spare parts for minor repairs should be made regular.
- TA/DA reimbursement issues of cold chain technicians should be taken up by states and districts regularly. States and districts should ensure dedicated room as workshop for the technician along with priority allocation of four wheeler vehicle for transportation of ILRs/DFs and heavy spare parts.

Remarks
- The document is under print