

TRAINING STRATEGY - INTEGRATED DISEASE SURVEILLANCE PROGRAMME (IDSP)

INDIA

Government of India

WHO

TRAINING STRATEGY FOR IDSP

INTRODUCTION

For surveillance to be successful, effective training of all categories of staff is vital. The Training strategy would aim at strengthening the capacities of medical and paramedical staff of both the Government and private sector. The emphasis of the training will therefore be on development of skills and capacities i.e. field based epidemiology (rather than information based or theoretical training) so that each category of staff is able to effectively perform their

task in the IDSP. Keeping in mind the huge requirements in training, it is clear that the Government of India would need to partner with various institutions and agencies to achieve the goal of training all the concerned staff in IDSP. Some of the possible partners who can assist the Government are Medical colleges, Private training institutions, NGOs and individuals with experience in training and / or in surveillance.

The training strategy will address the following:

- Training needs
- Whom to train?
- Who will train?
- The Training Methods
- Where the training will be held – the training centres
- The duration of Training and the Training schedule
- The Training Curricula
- Monitoring, Quality assurance and Evaluation
- Integrating the courses that already exist.
- Training costs

TRAINING NEEDS

Training need assessment was carried out in Tamilnadu, Andrapradesh, Karnataka, Maharashtra, Madhyapradesh and Mizoram. Key issues that emerged out of this are:

1. Training and sensitization workshops for IDSP activities is essential for the successful implementation of the program.
2. There is a wide variation in the training needs and available infrastructure between different states. While some of the states have established training centres and good medical colleges, the training infrastructure (including human resources) in other states leaves much to be desired.
3. The male health workers are not being re-employed in most states and only 30-50% of available posts are occupied. Over the next few years more vacancies are likely to be present in this category.
4. Qualified microbiologists even at diploma level are not present in the public health system in most states for working in the district public health laboratories envisaged in the program.
5. Staff trained in Public Health are very few, especially at the District level and above. This means that the training in surveillance needs to be imparted to all the relevant personnel, including the district and state level officers.
6. Duration of training for IDSP should be short and it is not possible to spare health workers and doctors for more than 2-3 days at a time. However, it must be recognised that this will have an effect on the quality of the training.

7. The district surveillance officer who has a crucial role to play in the program will need to have at control over his time allocated for purpose of pursuing IDSP activities.
8. Consultant service at State level would be required at least for the first 2 years to effectively implement the IDSP activities in addition to training of personnel.

The Training workshops:

The training workshops can be classified as

1. Induction Training to start the Program.
2. Continued training subsequently which would include, on-the-job training including supervision, retraining to correct the deficiencies that are observed, regular refresher training to maintain the skill level and fresh training on an annual basis to cover those who have not been trained so far due to various reasons (e.g. new inductions, those who missed the first round)

The Sensitization Workshops:

Short half a day to 1 day sensitization workshops will be conducted as part of IEC activities to make stake holders aware of the IDSP and ensure their participation in the program at different levels. These workshops are seen differently than training and is dealt with in the IEC section. The groups which needs sensitization are mentioned below:

1. State Level – Policy makers and administrators at state, district including Health secretaries, secretaries of related sectors. Heads of departments of medical education and health services. Medical college principals, District collectors,
2. District Level - NGOs doing and interested in disease surveillance. Representatives of Indian Medical Association (IMA) and Indian Association Paediatrics (IAP).
3. Block Level - Panchayat leaders, School teachers, Anganwadi workers, Sentinel private practitioners and Medical practitioners of alternate systems of medicine alike aurveda, unani, homeopathy and un registered practitioners in the locality.

Induction training

Essential Induction Training is necessary to start the Program. It is provided so that all key stake holders are fully conversant with the activities of the IDSP and able to perform all the activities specified under IDSP.

Induction Training on surveillance for the health staff will be targeted for the following broad categories of staff.

1. Training of the State and District surveillance teams
2. Training of the Medical officers (PHC / CHC / Urban Health services / Medical colleges)
3. Training of the Medical officers (clinical staff of Hospitals, Medical colleges, Private practitioners)

4. Training of the Peripheral workers (MPWs, ANMs, Health supervisors, NGO field workers etc)
5. Training of Microbiologists and Lab technicians (State and District level)
6. Training of Lab technicians (Sub District level)
7. Training of Data entry operators (State, District and Sub District level)
8. Training of Data Managers (District and State level).

A large number of staff will require short term sensitization training of 1 to 2 days. The Medical officers at the PHC/CHC will require a longer duration training – of at least 3 days. The Nodal officers at the district and the State will require longer duration training, at least 6 days. Most of this training would be in epidemiology and surveillance. On the other hand, separate training programmes would have to be organised for the Laboratory technicians and the Data Entry Operators.

This essential training is necessary to ensure that all the concerned staff are at the same level and fully conversant with the activities of the IDSP; especially those that relate to their level.

Continued training

Supervision and retraining will help to maintain the skill levels. Supportive supervision should be regular and streamlined so that each level is supervised regularly. Supervisory checklists need to be made so that all aspects of the surveillance system is looked into. Other tools like observation methodologies, record review etc are also important and should be used. Supervision should be a tool to train on the job and motivate the staff to perform better. It is a well known fact that with time, both knowledge and skills reduce sharply. To maintain the learning curve, regular (annual) contact sessions and refresher training programmes and CMEs should be conducted. IDSP monthly bulletin could be used partly for this in addition to feed back. However, this does not need to be as detailed as the essential training. It would be more focussed on the experiences of the participants and the problems faced by them in implementing the IDSP.

In any training programme of this magnitude there would be staff who would get left out in the first round. Also as the IDSP is a continuous activity, there is bound to be new entrants into the programme who would need training. So it is advisable for the State governments to plan for a round of fresh training once a year to mop up the above participants and give them the detailed training that is necessary. This requires that the District and State would have to keep a record of the training status of its staff

WHO TO TRAIN? – THE TRAINEES

The trainees for the induction training are given below:

Table 1: THE TRAINEES¹

Category	Level	Trainees	Numbers
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¹ **Nodal Officers:** It is clarified that nodal officer/District Surveillance Officer at district level does not automatically imply the DHFWO but should be the officer who is actually involved with the programme and would usually be a Dy DHO/ Dy CMO/ Programme officer dealing with surveillance. S/He should preferably be a specialist in public health

I	State and District level Surveillance Teams	State Surveillance Officer (SSO), State Programme managers, State Microbiologists / Lab technicians and State level Data Managers	10 per state
		District Surveillance officer, 2 District programme Managers, District Microbiologist / LT and District Data Managers	10 per district
II	Medical Officers	Medical Officers of the PHCs, CHCs and Urban Health sector. MOs of the SPM departments of local Medical colleges. MOs of NGOs / Mission Hospitals	70 per district
III	Clinical Medical officers	Medical Officers of the Hospitals, Subdistrict Hospitals, Medical College Hospitals, SPPs,	30 per district
IV	Sub Block staff	MPWs (Male / Female), Health Supervisors, NGO volunteers, unregistered Medical practitioners	350 district
V	State and District Level Laboratory training	State and District level microbiologists / LT. Also of the urban health sector. Also Microbiologists from local Medical Colleges	5 per district
VI	Sub District Level Laboratory training	PHC / CHC / Urban dispensary LTs	5 per district
VII	Data entry operators	DEOs at CHC, District and state level	15 per district
VIII	Data managers	Statisticians at District and State level	2 per district

WHO WILL TRAIN? – THE TRAINERS.

Any training programme is as good as the trainers. They form the key to any training programme. For the IDSP, there are various levels of trainers as there are different levels of trainees. Some suggestions for the trainers are given below

National Network of training Institutions – Level 1:

The responsibility of training in the program will be with a network of national institutions selected on the basis of definite criteria. These institutions will take the responsibility for training state and district surveillance teams coordinated by the central surveillance unit functioning under the ministry of health and family welfare. These will be the Level-1 Trainers.

A total of 30 institutions will be chosen which would focus on training in surveillance activities, and specific laboratory training. Institutions specialised in epidemiology and surveillance activities may be chosen, even if they do not have training facilities in laboratory. In such cases the State would have to choose a separate institution for training in laboratory activities.

The Central Surveillance Cell would short list the 30 institutions based on certain criteria. The State Surveillance Unit would be free to choose the appropriate ones for their state.

Some of the criteria proposed for choosing a Training Institution are as follows:

Criteria: Epidemiology Training center

1. Recognized training institutions with experience in post graduate teaching in the field of community medicine/ Public health, and microbiology
2. Adequate training infrastructure and equipments, ,
3. Key resource person in the area of epidemiology, microbiology, medicine and paediatrics who are willing to be resource person for training if selected
4. Preferably, experience in health surveillance activities

Criteria for Laboratory Training:

1. Training institutions with experience in the field of microbiology
2. Adequate training infrastructure and equipments, ,
3. Key resource person with expertise in the field of microbiology who are willing to be resource person for training if selected
4. Preferably, experience in health surveillance activities

Criteria for Institutions for training in data management:

1. Institutions with prior experience in training in data management
2. Adequate training infrastructure and equipments, ,
3. Key resource person with expertise in the field of statistics and data management who are willing to be resource person for training if selected
4. Preferably, experience in health surveillance activities

Once selected, these trainers would be responsible for training the Category I trainees in the concerned state. The selected national training institutes will be provided information on IDSP, Training strategy and operations manuals so that they can develop their strategy in consultation with national and state surveillance unit.

Level -2 Trainers:

The level 2 trainers would be members of the district and state surveillance team who have been trained by the Level 1 Trainers. They would take the primary responsibility of training the district and sub-district personnel (Category II, III and V trainees). Level 1 Trainers would support as well as ensure the quality of the training.

The Microbiology departments of the State laboratories and the Medical colleges would be enrolled into the State teams to provide the laboratory perspective. They would also provide training to the Sub Block LTs (Category VI).

Level 3 Trainers:

These would be the Block Medical officers who would in turn train the Sub Block staff (Category IV trainees). One faculty from the district / state (Level 2 Trainer) would be involved in each of these training sessions.

Specialized training:

1. Data entry operators will be provided specialized training based on the IDSP soft ware package that will be developed for the program. The package training will be provided by the software agency as part of their contractual obligation.
2. Date managers would need to have specialised statistical training so that they are able to access the data from the computers and make independent analysis for the district, state and central level surveillance officers.
3. The Laboratory Training for the microbiologists and Laboratory Technician is a separate hands on training and would be organised by the Microbiologists at the National and State level.

The Training plan

	TRAINEES	TRAINERS	Site	Duration
I	District and State Surveillance team	Level 1 – Selected National Level Training Institutions	Regional / State	6 days
II	Medical Officers of the PHCs, CHCs and Urban Health sector. MOs of the SPM departments of local Medical colleges. MOs of NGOs / Mission Hospitals	Level 2 – State and District Surveillance Team Support from Level 1 Trainers	District HQ	3 days
III.	Medical Officers of the Hospitals, Subdistrict Hospitals, Medical College Hospitals, SPPs,	Level 2 – State and District Surveillance Team Support from Level 1 Trainers	District HQ	1 day
IV	MPWs (Male / Female), Health Supervisors, NGO volunteers, unregistered Medical practitioners	CHC Team with selected MO PHCs. Support from Level 2 Trainers.	CHC	2 days
V	State and District level microbiologists / LT. Also of the urban health sector. Also Microbiologists from local Medical Colleges	Level 1 trainers - Identified training institutions	Regional / State	6 days
VI	Training for lab assistants at CHC / PHC	District Public Health laboratory staff Representatives from Level-1 institutions	District HQ	3 days
VII	Data entry operators	Soft ware agency	District HQ	2 days
VIII	Data Managers district	Identified training institutions	Regional/ state	3 days

THE TRAINING CURRICULA

The training curricula for the IDSP would be focussed mainly on surveillance activities. While all the staff would get an overview about IDSP, the stress would be on the practical aspects of the programme that apply to their level, rather than esoteric epidemiology principles. The basis for the IDSP curricula would be the Operational manual.

	Trainees	Content of Training
I	Training of district and state Surveillance teams	<ul style="list-style-type: none"> • Overview and introduction to surveillance with special reference to IDSP. • Basic epidemiology pertaining to surveillance including definitions like rates, ratios, IR, PR, CFR, spot maps, graphs etc. • Details of case detection, including case definitions, reporting units and filling up forms, compilation and transmission of data • Collection and transmission of laboratory specimens and bio-safety issues • Details of analysis and Interpretation of data • Details on Response to outbreaks • Supervision Monitoring and Evaluation . • Feed back • Training methodology • Inter-sectoral coordination
II	Medical Officers of the PHCs, CHCs and Urban Health sector. MOs of the SPM departments of local Medical colleges. MOs of NGOs / Mission Hospitals	<ul style="list-style-type: none"> • Overview and introduction to surveillance with special reference to IDSP. • Details of case detection, including case definitions, reporting units and filling up forms, compilation and transmission of data • Collection and transmission of laboratory specimens and bio-safety issues • Basics of analysis and Interpretation of data • Details on Response to outbreaks • Supervision Monitoring and Evaluation.
III	Medical Officers of the Hospitals, Subdistrict Hospitals, Medical College Hospitals, SPPs,	<ul style="list-style-type: none"> • Overview and introduction to surveillance with special reference to IDSP. • Details of case detection, including case definitions, reporting units and filling up forms, compilation and transmission of data • Basics of lab confirmation – what specimens to be sent to which lab, and in what manner for confirmation

	Trainees	Content of Training
IV	MPWs (Male / Female), Health Supervisors, NGO volunteers, unregistered Medical practitioners	<ul style="list-style-type: none"> • Overview and introduction to surveillance • Syndrome description • Filling up of forms • Transmission of data • Collection of specimens • Biosafety issues • Basic response to outbreaks
V	State and District level microbiologists / LT. Also of the urban health sector. Also Microbiologists from local Medical Colleges	<ul style="list-style-type: none"> • Overview and introduction to surveillance with special reference to IDSP • Hands on training on diagnosis of specific diseases. Especially Culture and sensitivity of stool and blood, Serology etc. • Quality assurance mechanisms • Biosafety issues
VI	Training for lab assistants at CHC / PHC	<ul style="list-style-type: none"> • Introduction to IDSP • Testing for sputum AFB, Malarial smear, Typhi Dot test • Collection, storage and transportation of specimen • Biosafety issues
VI II	Training for data management at district and state level	<ul style="list-style-type: none"> • Introduction to IDSP • Extracting of data from the computers • Analysis of data

A summary of the topics that need to be incorporated in the curricula for each category of trainee is given below.

	Overview	Case detection	Analysis	Lab confirmation	Response	Feedback	Supervision and Monitoring	Data entry	Research	Training
State and District Surveillance Team	++	++	++	++	++	++	++	-	++	++
MO of PHC / CHC etc	++	++	+	+	++	-	++	-	-	+
Clinical MOs	+	++	-	+	-	-	-	-	-	-
MPWs etc	+	++	-	-	+	-	-	-	-	-
State and District Lab personnel	+	+	++	+++	+	+	+	-	+	++
District Lab technicians	+	+	-	++	-	-	-	-	-	-
Data entry operators	+	-	-	-	-	-	-	++	-	-
Data managers	+	-	++	-	-	-	-	-	-	-

Duration of Training

The training for IDSP requires multiple courses of different duration. While ideally one would have preferred to have a detailed training programme, ground realities require that the training duration is maintained at an optimal level. Based on this, 3 broad categories of training have been fixed:

- A one week training programme for the State and District trainers as well as the State and District Surveillance teams
- A three day training programme for the Medical officers of the PHC / CHC / Medical colleges / Urban health services, the Rapid Response Teams and for the laboratory and DEO teams.
- A 1 to 2 day training programmes for the MPWs, the clinicians, the Private sector and the decision makers.

TRAINING SCHEDULE

It is important that the training follows a specific schedule. This would of course depend on the training strategy that the States adopt. E.g. it is important that the Government sector is trained and operational before the Private sector is trained. Else the Private sector would get disillusioned and would undermine the efforts to co-opt the private sector into the surveillance activities. Similarly, without training of the senior staff, there is no point in training the lower level staff. And ideally the forms, the computer systems and laboratory systems should be in place before starting the surveillance training, so that there is minimum loss of knowledge due to attrition. A suggested training schedule is given in the Table below: This is just an approximate presentation and does not reflect in any way the actual amount of time required, which will take into account other logistic issues.

Trainers	Trainees	W1	W2	W3	W4	W4	W5	W6	W7	W8	W9	W10
Level 1 (30 institutions)	State and District Trainers				<i>Totally 2100 trainees in 7 states. 30 Training institutions An average of 70 trainees per training institution 3 batches per training institution – 20 trainees per batch One week training per batch</i>							
Level 2 (200 districts)	MOs of PHCs / CHC etc	<i>Totally 60 – 70 trainees per district One training team per district 3 batches of 3 days each An average of 2 weeks</i>										
	MOs of Hospitals	<i>Totally 30 trainees per district One training team 2 batches of 1 day each.</i>										
Level 3 (200 districts)	MPWs etc	<i>20 – 30 trainees per block One training team per block 1 batch of 2 days each</i>										
Level 1 (30 institutions)	State / District Trainers					<i>400 trainees 20 training institutions – an average of 20 participants per institution 1 batch per institution – of 1 week</i>						
Level 2 (200 districts)	LT of PHC / CHC	<i>10 LTs per district One training team One batch per district of 3 days</i>										
Level 1	Data Management	<i>400 trainees 20 training institutions – an average of 20 participants per institution 1 batch per institution – of 3 days</i>										

MONITORING & EVALUATION

Quality control of training is an essential component of training strategy. Internal and independent external evaluation will be part of the IDSP training programme. Each level of training would be evaluated, to assess the contents, the process and the effectiveness of the training. Feed back and corrective measures will be initiated to improve the training based on evaluation reports. If the training is consistently poor quality and not achieving the objectives then the training would have to be repeated to cover the gaps. If selected training institutes do not perform and provide high quality training then alternate institutions will be identified. While external evaluation would be a done at specific intervals for the training programme, the Surveillance cell in the district and the state would be regularly monitoring the progress of training to ensure that the staff have been covered by the training programme adequately. Untrained staff would be identified in a regular manner so that they can be provided with appropriate training

Integrating Existing public health training programs in the country into the IDSP

While the IDSP is a new programme, training in surveillance is not new. There are many existing training programmes and training material that could be used by the States to minimize duplication and conserve scarce resources

Currently there are a number of training programs in public health organized by different organizations in the country. These are

Course	Duration	Institution
MD in PSM	3 years	Various Medical colleges in the country
MAE (Masters in Applied Epidemiology)	2 years	National Institute of Epidemiology (ICMR)
MPH (Masters in Public Health)	18 months	Achutha Menon Centre for Health Science Studies – Trivandrum
MPH	2 years	Tata Institute of Social Sciences - Mumbai
MSc (Epidemiology)	2 years	Community Health Dept. CMC – Vellore
DPH (Diploma in Public Health)	2 years	AIIPH&H, Kolkatta. Some medical colleges
FETP (Field Epidemiology Training Programme)	3 month	NICD – Delhi
EPR (Epidemic Preparedness and Response)	10 days	NICD - Delhi NIE – Chennai
Training of RRT	10 days	NICD – Delhi Government of Maharashtra
MD (microbiology)	3 years	Various medical colleges
MSc (Microbiology)	2 years	Various colleges
Short course in Microbiology	3 months	CMCH Vellore
Computer applications	10 days	NICD – Delhi Government of TN Government of Maharashtra Various private IT companies

The IDSP can use some of them to train their staff as well as utilize the training materials already available.

For undertaking these courses, detailed training manuals need to be developed. The Government of India would be developing generic modules for each of the level – which may then be modified, translated and used by the individual States.

TRAINING COSTS.

To be filled by Dr Bachani

CONCLUSIONS

This training strategy is an effort to be comprehensive and look into all the possible aspects. Efforts have been made to encourage public private partnership so that the great load can be distributed among all the important stakeholders.

However, it is a draft and needs to be finalised by the States. It is they who will be able to give the actual numbers and costs involved, as well as the training strategy to be adopted.

Similarly the training manuals need to be developed. This needs to keep into account the various issues regarding adult learning, problem based teaching and interactive styles.

It is hoped that this strategy has covered the important issues.