UNIT-9

Communication for behaviour change

Learning objectives

- *Recognize the importance of integrating social and behaviour change communication (BCC) in immunization services to reduce vaccine hesitancy*
- *Identify the reasons for children missing vaccinations (dropouts or left outs) and possible interventions*
- *Learn about different communication tools, channels and opportunities to reduce vaccine hesitancy.*
- *Learn to develop a simple communication plan for the PHC/CHC using communication planning tools*

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9 Communication for reducing vaccine hesitancy and increasing demand for immunization

Role of MOs in reducing vaccine hesitancy

MOs at the block and PHCs have a critical role to play in ensuring that all children in the population under their PHCs are fully vaccinated. MOs are already working very hard to ensure that the quality of health services for mothers and children in their PHCs and SCs and are well recognized by the communities living in their areas. This also means that their first responsibility will be to ensure that RI services are not only available but that these services are also of the best quality.

Vaccine hesitancy is the behaviour of parents, caregivers, or the community in hesitating to get their children vaccinated in spite of immunization services being available and accessible to them. Inadequate immunization services due to non-availability of vaccines, absenteeism of vaccinators and long distances to vaccination centres contribute to this hesitancy. Hesitation also comes from a number of other reasons (let's call them barriers), such as low perception of the benefits of vaccines, loss of wages, social beliefs, fear of AEFIs, demotivation owing to inadequate IPC skills of HW, to sometimes geographical barriers such as inaccessible terrain.

This section looks at **low immunization coverage from the behavioural perspective,** i.e. the reasons behind vaccine hesitancy and the interventions that can be initiated by MOs to achieve the communication objectives of increasing demand for vaccination services.

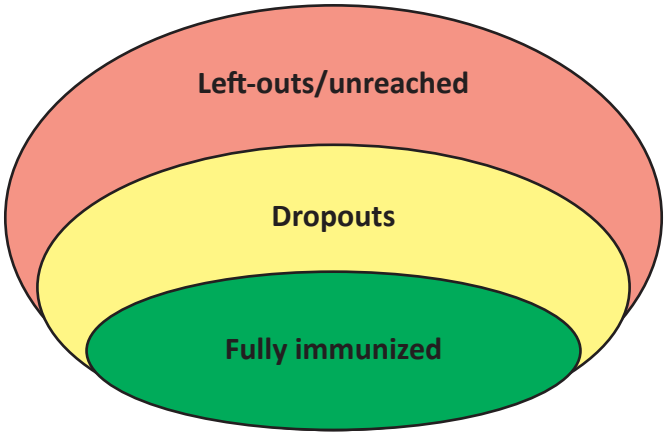
On the other hand, **vaccine confidence** is when parents, caregivers or the community understand the value of vaccination and voluntarily demand vaccination services as a right, whether these vaccinations are part of the RI schedule for their children or part of adult vaccinations such as TT for pregnant women. Vaccine confidence comes from adequate awareness about the benefits of vaccines, both to the individual and the community, and the trust in the immunization service delivery system to be able to provide quality vaccination.

Left-outs and dropouts

From a service delivery perspective:

- ***left-outs*** are those children who have never been vaccinated or reached (thus remaining unimmunized);
- ***dropouts*** are those children who started vaccination but did not complete the schedule (thus remaining partially immunized).

Fig. 9.1. Three types of behaviour groups

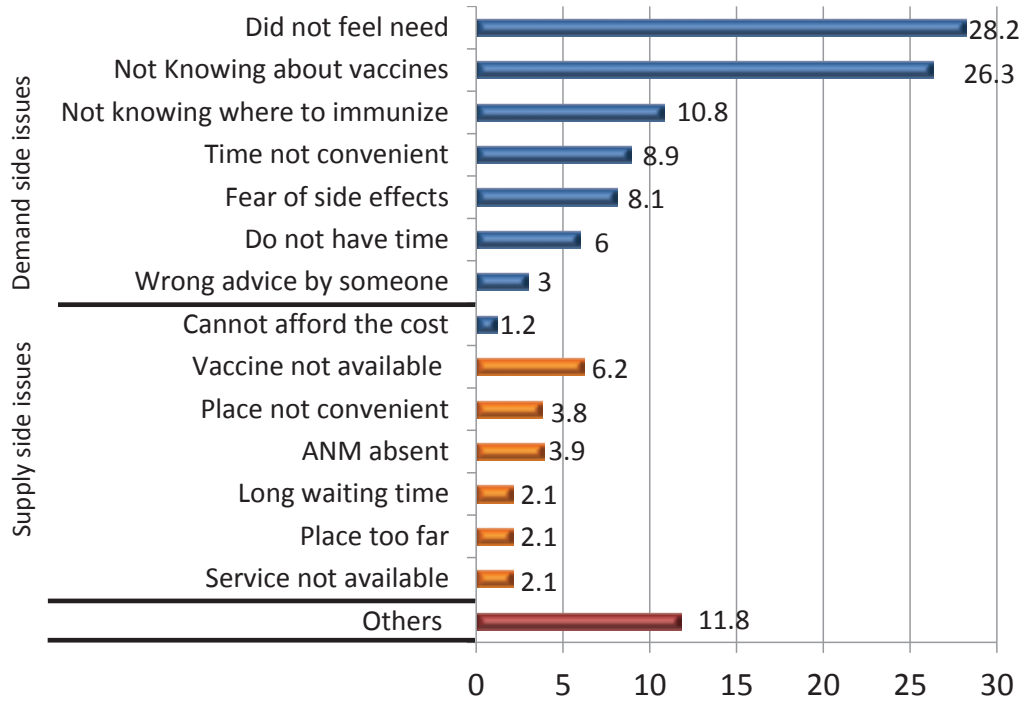


The immunization-targeted community can be divided into three groups as shown in Fig. 9.1. The aim of the health system (including MOs, HWs and mobilizers) should be to expand the inner circle to cover the entire universe of eligible children in its catchment area.

From a behavioural perspective, a large percentage of dropouts is a serious problem because it reflects the poor perception of parents/caregivers' about the benefits of vaccination or of the immunization service delivery system, or both, combined with other barriers that forces them to place immunization on a low priority.

People who "drop out" of the immunization system are the easiest to reach and be convinced to return for full immunization.

Fig. 9.2. Reasons for partial or no immunization (multiple responses) (n=10 542)

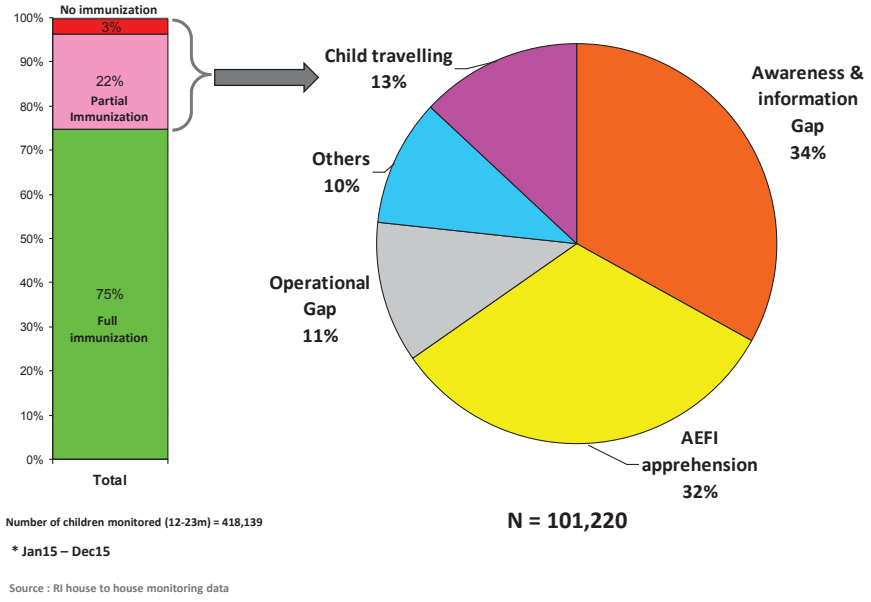


Why children do not get vaccinated: behavioural barriers

The Coverage Evaluation Survey (2009) identified the reasons for not accessing immunization services as cited by the community. A majority had demand-side issues, e.g. did not feel the need for vaccination; did not know about vaccines or where to go for vaccination; time not convenient; fear of side-effects; or did not have time.

Recent data from house-to-house RI monitoring in UP also highlighted lack of awareness and fear of AEFIs as major reasons for missed children as shown in Fig.9.3.

Fig.9.3. Reasons for missed children



The table below enlists reasons and possible interventions for tackling vaccine hesitancy. Medical officers are encouraged to review/discuss this table with staff during meetings.

Table 9.1: Reasons for missed children and possible interventions

Possible reasons	Possible interventions
Demand-side issues	
Parents not motivated to immunize children because of their poor understanding of its purpose and importance	• Engage with community leaders, school teachers, faith/religious leaders, youth networks, women's self-help groups (SHGs) and encourage them to talk to parents about the benefits of immunization. • Build capacities of HWs to counsel and effectively communicate with parents and the community on the importance of immunization. • Disseminate information on the benefits of immunization at health fairs and other events and make people aware of immunization services. • Use other communication channels such as local cable television, wall paintings and posters, mosque and temple announcements, traditional and folk media.
Cultural or religious reasons for refusal of vaccination (myths, rumours and misconceptions)	• Find out the reasons for reluctance by talking directly to communities/leaders. Try to address their misconceptions, doubts and fears by listening to them and offering support. • Involve community leaders (particularly the ones favourable to immunization) and other staff working within that particular community in order to encourage their fellow members to have their children immunized. • Arrange for an interaction between resistant groups and satisfied beneficiaries in the area to promote immunization.

Fear of side-effects or AEFI in the community discourages parents to immunize their children	• Involve religious leaders, village elders, school teachers and panchayati raj institution (PRI) members to accompany the field level workers (FLWs) during their house-to-house mobilization visits, organize folk shows to educate parents and communities on the importance of RI for children and dispel myths and misconceptions. • Remind HWs to always tell parents/caregivers about common side-effects that may occur and what to do should they occur. • Investigate any AEFI and apprise the community of the details of the case, possible causes and actions taken.
Financial or gender barriers to immunization, e.g. husbands disallowing wives to attend sessions because of time/lost labour, expense and/or fear of side-effects	• Counsel opinion leaders and influential persons about the dangers of VPDs and the benefits of immunization. • Encourage peer counselling by fathers of children who accept immunization. • Publicize that immunization services are entirely free.
Refugees/families that fear contact with government, e.g. those who lack documents/ scheduled castes or tribes/ nomadic groups/homeless families/urban slums/street children	• Determine where these populations reside. • Visit the communities and work with local mobilizers/educators/community groups/leaders to discuss reasons why they are not accessing immunization services. • Provide information on the importance of vaccination and date, time and place of the next nearest session. • Develop a list of children who have never accessed immunization services in the area and share it with HWs of the area for immunization and ensure follow-up.

Supply-side issues	
All newborns and infants not identified and listed	• Involve AWWs/ASHAs to identify and share lists of newborns and children with the HWs.
Sessions too infrequent or timings and days not convenient/not understood	• Plan sessions after consulting the community, e.g. early in the morning/late evening.
Session site too far away, e.g. border populations	• Include all the areas in the microplan. • Reorganize the catchment area so that remote sites are visited at least once every 2 or 3 months (plan at least 4 immunization sessions a year). • Work with neighbouring health facilities to coordinate services for border areas. • Improve outreach to communities through appropriate transport, additional staff and publicize outreach services.
Parents do not return because sessions are not held as planned or vaccines are unavailable	• In case of HW being on leave, deploy alternate vaccinators. • Ensure alternate delivery of vaccines to session sites. • Encourage community groups to report problems regarding HWs' attendance on session days to the PHC. • Conduct session monitoring and make real improvements; then publicize the improvements to communities. • Ensure adequate supplies of vaccines and logistics.
HWs do not clearly explain to parents what vaccines are due, when they are due and why they are needed	• Remind HWs/AWWs/ASHAs to always convey the 4 key messages to parents in a simple and understandable language. • Train HWs to provide filled-in MCP cards to all beneficiaries and to write the next due date on the card. • Ask caregivers to repeat the information given to them in order to increase the chances that they will remember when to return. Praise correct answers. • Thank the parents for bringing the child. • Publicize the immunization schedule.

HWs do not show respect towards parents or interest in the child's health, e.g. long waits, HWs shouting at mothers for forgetting the card or bringing the baby in late	• Sensitize and train HWs, ASHAs and AWWs to communicate with and treat parents with respect, warmth, friendliness and should empathize with the parents' situation. Encourage and praise the parents for bringing their children for immunization. Encourage parents to ask questions. • Guide HWs to visit dropouts before the next session to find out the reasons why they missed the session.
HWs do not know which children are due and what vaccines are due	• Organize tracking of children using RI Cards, immunization registers, counterfoils and tracking bags. • HWs can involve community teams (NGOs, community based organizations (CBOs), youth clubs, school teachers, volunteers, etc.) to identify children who are left-outs and dropouts • remind parents about the importance of full immunization; inform them about the date and time of the next session and mobilize parents for immunization sessions.
HWs do not understand/ explain to caregivers that immunization may be given to mildly ill children (false contraindication)	• Orient HWs that immunization can be safely provided to mildly ill children and that they should convince parents about this fact.
Children and mothers are not immunized when coming to the HWs for curative care (missed opportunities)	• When providing other services, always keep an eye on eligible children visiting the session with a parent or sibling. Enquire about their immunization status or refer to the list of due beneficiaries and provide services, as appropriate. • Put a reminder about immunization in the facility's waiting area.

MO as facilitator and enabler: 10 key roles

All medical officers must take a few simple steps for improving vaccine demand. The primary role of MO is to act as a facilitator and enabler for demand generation activities in order to be effective within their respective PHCs. Given below are some of the initiatives MOs must take:

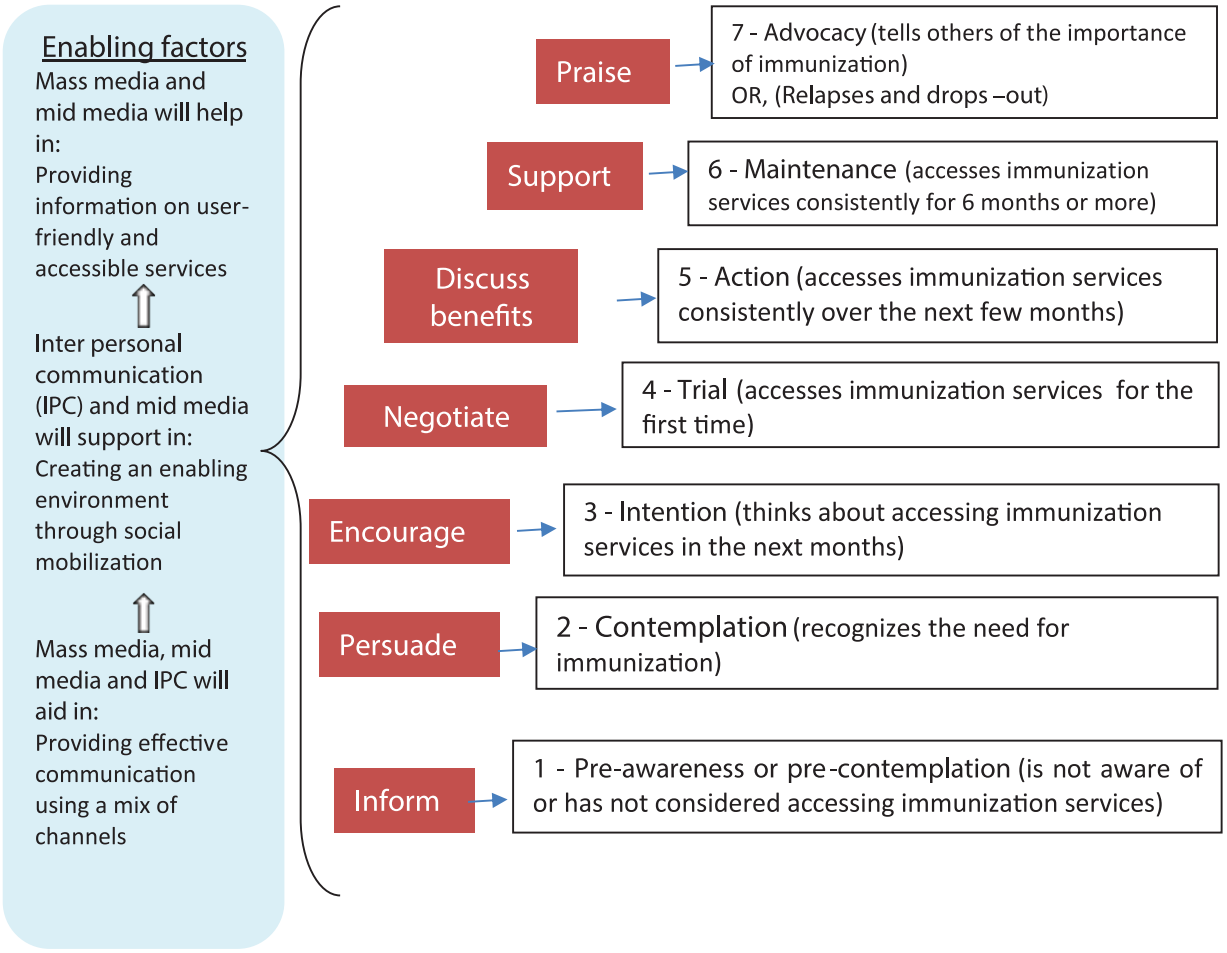
1. **Collect evidence for vaccine hesitancy/refusal**
2. **Undergo professionally-organized orientation in social and behavioural change communication (SBCC)**
3. **Ensure front-line workers and community mobilizers are well-trained in interpersonal communication skills**
4. **Strengthen or innovate supportive supervision for communication**
5. **Target populations through communication microplanning**
6. **Develop a communication plan using mapping and communication tools**
7. **Develop partnerships at local level**
8. **Generate resources for communication activities**
9. **Ensure the right communication tools (IEC) are available and used**
10. **Monitor communications interventions.**

Changing behaviour

Behaviour change is not a one-time effort but a continuous, well-planned endeavour. To mobilize parents and communities for immunization, we need to ensure that the community understands our message, taking care to keep our message simple and straight forward, avoiding too much information too fast. It is equally important that as health-care providers, we have complete information on the issue and take time to understand the community's perspective, establish and maintain credibility and also clarify misconceptions.

One of the most popular theories of behaviour change communication is called the "Stages of Change," proposed by F. Prochaska. It states that individuals are at various stages in the behaviour change cycle. Knowing at what stage of change an individual is – or a group of individuals are – will help create the appropriate change intervention (Fig. 9.4).

Fig. 9.4. Behaviour change cycle



For the RI programme to create an impact, behaviour change has to happen both at the parents/caregivers as well as service providers level. Behaviour change cannot be achieved in isolation; it is important to engage with key stakeholders in the community. This will help to create an enabling environment and motivate people to immunize their children.

For example, a mother who is aware of immunization but does not get her children routinely vaccinated could be in Step 4 of the stages of behaviour change (Trial). She might be aware of the benefits of immunization and also have accessed services, but needs to be encouraged further to continue getting her children vaccinated. The HW needs to discuss the benefits of immunization with the mother to motivate her further. Community networks and peer support groups can help in stimulating community dialogue to adopt immunization, thus helping the mother sustain this positive behaviour.

Involving the community to support immunization

Sharing responsibilities for increasing demand

Community participation is the key to increasing demand for services. An informed community has confidence in the immunization programme, ensures that provision of immunization services is tailored to the community's context (time, place and convenience) and therefore supports and demands immunization services.

You may not have much time to directly interact with the various community groups and leaders. However, encourage and support HWs and supervisors in establishing strong links with the community.

The community should be involved in the immunization programme from the planning phase.

Planning

HWs should:

- consult communities about service locations and timings to ensure a convenient service, e.g. shifting vaccination hours from mornings to afternoons in areas where mothers are busy in the fields in the morning;
- involve village elders, religious leaders and village youth to motivate the community to access the immunization sessions, dispel myths and misconceptions.

Implementation

Communities can assist with:

- arranging a clean outreach site such as a school, club, panchayat bhawan, community meeting room;
- informing families initially of scheduled outreach, and again when the HW has actually arrived;
- educating the community regarding free availability of these services;
- registering patients, controlling crowds, and making waiting areas more comfortable (by providing shade and organizing space and seating);
- disseminating appropriate messages and answering questions (health education);
- identifying and referring newborns and/or infants who have recently arrived in the community and sharing the list with the HW to include in the immunization register;

- facilitate transporting vaccines and HWs in some hard to reach areas ;
- motivating fellow community members to use immunization services and helping bridge cultural or educational gaps between HWs and caregivers;
- identifying dropouts and left-outs. Making home visits when children are behind schedule to explain the importance of adherence to the immunization schedule and to motivate caregivers;
- communicating with local people and informing HWs about suspected VPDs

Evaluation

Community leaders can contribute by responding to questions about the quality of services, including counselling provided by front-line workers.

Steps for involving the community

Step 1: Identify key stakeholders in the PHC area/community and also ways to engage with them

These could be:

- governmental departments and staff (Health, ICDS, Education, District/Block Administration, PRI);
- NGOs, local organizations and youth bodies such as Nehru Yuva Kendra, National Social Service (NSS), National Cadet Corps (NCC);
- professional associations (Indian Medical Association, Indian Association of Paediatrics);
- community (parents, village health and sanitation committee(VHSC), faith-based organizations, SHGs);
- private and traditional health practitioners.

Meet the key stakeholders on a regular basis, establish a rapport with them and seek their support for the immunization programme. Encourage them to talk to parents/caregivers about the benefits of immunization; give them some IEC material such as posters and handouts with messages on immunization which can be displayed at their offices/premises or during their meetings and also be disseminated in the community. Motivate religious leaders, particularly the ones favourable to immunization, to endorse and encourage their fellow members to have their children immunized; get temple/mosque/religious places announcements made giving out details about the next immunization session and calling on parents to get their children vaccinated.

Step 2: Conduct a situation analysis

- Hold community meetings, small group discussions or discussions with opinion leaders to assess the current extent of the community's involvement with immunization services, by finding out:
  - what the community already knows about VPDs and immunization;
  - community awareness and perceptions about immunization services;
  - perceived barriers to immunization (related to quality of immunization services and the community's knowledge, attitudes and practices);
  - issues affecting physical access to services (location, frequency, schedule);
  - issues on access to services by special groups (minorities, migrants etc.);
- Identify problems and reasons for left-outs and dropouts. Jointly seek possible solutions;
- Provide information, using basic language and non-scientific terminology, on the importance of immunization, and where and when services are available. Dispel misinformation and doubts that sometimes surround immunization;
- Encourage questions so that everyone can be better informed;
- Use stories, short plays, songs and visual aids to hold the group's attention and make meetings interesting;
- Discuss possible community support.

If required, re-align Health and ICDS sector boundaries for joint planning, implementation and monitoring of immunization activities.

Step 3: Establish mechanisms for coordination

Establish a consultative mechanism at the block/PHC level, or use existing forums such as the Rogi Kalyan Samitis to ensure regular coordination between departments and to enlist community support for immunization services.

- Establish alliances with programmes such as ICDS and organizations such as NGOs with community reach;
- Involve representatives of the key stakeholder groups listed in Step 1;

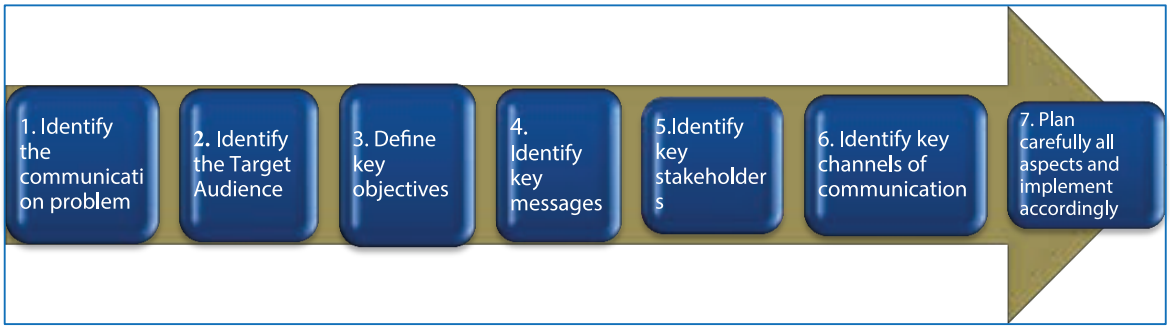
- Inform the members well in advance and prepare a clear agenda for the meeting including:
  - o state and district immunization goals
  - o current status of immunization in the district and block
  - o key challenges and areas requiring support, with suggestions on possible interventions
  - o possible roles of stakeholders
  - o preparing and implementing a communication plan.

Step 4: Develop a comprehensive communication plan for community mobilization

A communication plan helps to organize actions to target our communication accurately, leading to the fulfilment of a goal. It gives a structure to determine whom we need to reach, and how. It can be longterm as well as short term, making our communication efforts more efficient, effective and lasting. This saves a great deal of time, as we know exactly what we should be doing at any point in the process. (See also Unit 3 - Forms 11 and 18)

The steps given in Fig 9.5 will help you and your team members to prepare a comprehensive communication plan for your area.

Fig. 9.5.Communication plan development



To develop a plan for communication, you need to consider some basic questions:

- Why do you want to communicate with the community? **(What is your purpose?)**
- Who do you want to communicate it to? **(Who is your target audience?)**
- What do you want to communicate? **(What is your message?)**
- How do you want to communicate it? **(What communication channels will you use?)**
- Whom should you contact and what should you do in order to use these channels? **(How are you going to disseminate your message?)**

Sample communication action plan

A sample communication action plan is outlined in Table 9.2.

Table 9.2. Developing a communication action plan

Communication objective: By…….(month and date), parents and caregivers of children under 2 years of age in village……., to be aware of the benefits of immunization and agree to get their children immunized as per schedule

Behaviour analysis	Primary target group (Individual/household level)	Secondary target group (community/service provider level)
Who is the target group?	Mothers/caregivers of children	HWs, community members
What is the current behaviour?	Parents not motivated to immunize children	ANMs may write the next due date in the immunization card, but few give mothers the four key messages or any other information, or invite questions
What is the recommended key behaviour?	Mothers/caregivers to access immunization services and get their children fully immunized	ANMs give mothers/caregivers four key messages, including when and where to go for next vaccination, what side-effects can occur and how to deal with them
What are the key barriers to the recommended behaviour?	▪ Lack of information on immunization ▪ Poor understanding of its purpose and importance ▪ Fear of AEFIs ▪ Cultural and religious reasons (myths and misconceptions) ▪ Long waiting time; days and time not convenient ▪ Time/lost labour, expense and/or fear of side-effects ▪ Lack of money	▪ ANM/AWW lack skills or focus on importance of communicating with mothers ▪ There are real or perceived social, economic, class and possibly ethnic differences between ANM/AWW and caregivers/community ▪ ANMs/AWWs lack time to give good counselling (because so many people are waiting for care)

Communication strategy	Primary target group	Secondary target group
Which barriers can be addressed through communication?	Demand side issues can be addressed through communication **(refer Table 9.1** on possible reasons for left-outs and dropouts)	
What is the key message for each target group?	Immunization is important and beneficial for your child. Get your child fully immunized	Communicate four key messages to mothers/caregivers
What are the suggested communication activities?	▪ Use posters, community meetings,radio, TV (where appropriate), and other channels to create awareness on the importance of immunization and inform parents/caregivers about the next immunization session. ▪ Orient community volunteers and school children on immunization and encourage them to discuss the benefits of immunization with parents/caregivers.	▪ Plan sessions after consulting the community (e.g. early in the morning/late evening) ▪ Visit the communities and work with local mobilizers/educators and community groups/leaders to discuss reasons for not accessing immunization services ▪ Provide information on the importance of vaccination and the date, time and place of the nearest session. ▪ Improve talks and counselling by reminding HW/AWW/ASHA to always communicate thefour key messages to the caregivers ▪ Train/orient HWs to provide filled-in immunization cards to all beneficiaries and to write the next due date on the card. Ask caregivers to repeat the information given to them in order to increase the chances of their remembering when to return ▪ Encourage ANMs/HWs to do more one-on-one counsellings.

Monitoring	Primary target group	Secondary target group
What are the monitoring indicators?	▪ Number of mothers caregivers who can tell the vaccine schedule ▪ Number of mothers who can recall the four key messages ▪ Number of ASHAs/AWWs/HWs with updated duelist	
How will you measure these?	RI monitoring data; rapid surveys; in-depth interviews Monthly HMIS reports	
Who will collect information/ data?	HWs and supervisors	

Communicating messages

The Immunization Programme uses different communication methods to reach parents and other target audiences with messages on RI such as radio, television, folk media, community meetings and interpersonal communication during sessions.

It is important to identify which communication methods or channels are the most appropriate for our target audiences, liked and used by them and can most effectively reach them with immunization messages. For example, while using mass media, it is important to know which radio stations and TV programmes are popular with the target population.

A mix of different communication channels is usually employed to reach different target groups, as each channel serves a specific purpose as outlined in **Table 9.3.**

Table 9.3: Benefits of communication channels

Mass media (radio, TV, etc.)	Mid media (reminder media)	Interpersonal Communication (IPC)
▪ Triggers thought and acts as a "hook" ▪ Reaches many people very quickly and repeatedly ▪ Reinforces messages delivered through other channels	▪ Reinforces and expands upon mass media messages ▪ Builds on messages delivered through IPC and serves as "reminders" or "message takeaways"	▪ Involves direct interaction with the audience ▪ Allows discussion and dispels myths and misconceptions ▪ Encourages, motivates and reinforces action

Thus, no single channel is the "best channel". Multiple, mutually reinforcing channels/ messages integrating all these channels together has a greater impact in stimulating behaviour change.

At the PHC level, you can effectively use the channels and tools for involving and informing the community about immunization services (Table 9.4).

Table 9.4. Channels and tools for communicating information on immunization

Communication channel or tool	Settings	Activities
Discussions between HWs and small groups of parents	Immunization sessions	Inform parents (using storyboards or flip charts) about importance of immunization, the immunization schedule and clarify individual concerns
Community mobilizers (ASHAs and AWWs)	Immunization sessions, home visits	Identify target beneficiaries and share lists with HWs. Make home visits to mobilize beneficiaries, inform about session dates and times and follow up dropouts
Local leaders such as PRI members, political/religious leaders, teachers, private medical practitioners	Work places or community events	Advocate for increasing immunization coverage and seek their support in mobilizing the community
Community groups, NGOs, CBOs, SHGs	Work places or community events	Advocate for increasing immunization coverage and seek their support in mobilizing the community
Public/street announcements	Town criers, community events	Provide basic information in support of immunization and publicize date and time of session
Drama and songs	As a precursor to discussion in community meetings	Counter rumours, misconceptions and other barriers to understanding. Provide basic information, e.g. on RI schedule
Poster, banner, tinplate and wall writing	Well-frequented places such as AWC, markets, bus stops, ration shops, schools, panchayat bhawan	Display information related to the session site, date and immunization schedule
AWW home visits with shared session due list	AWC, panchayat bhawan, school	Motivate and remind families to get their children immunized

RI form 11 for a SC communication plan is given at the end of this unit.

Increasing visibility and awareness of immunization services

Increasing the visibility and awareness of immunization and outreach health services to the general public, and particularly to beneficiaries, is the initial and perhaps the easiest step of communication. The designs for posters and hoardings on RI have been developed at the national level and the states/districts may use the prototypes to customize it according to their local needs. For example, banners and posters should preferably be in the local language. You should read the content and see the pictures of the material available to you before arranging for their placements. Make sure that what is written or shown is consistent with the guidelines of the programme. As programme managers, you will have to plan when and how to use these communication materials.

Fig. 9.6. Posters and banners used in RI

JeSaid are wellrecognized by the communities living in their areas. This also means that their first responsibility will be to ensure that RI services are not only available but that these services are also of the best quality.

Vaccine hesitancy is the behaviour of parents, caregivers, or the community in hesitating to get their children vaccinated or immunized in spite of immunization services being available and accessible to them. Inadequate immunization services such as non-availability of vaccines, absence of vaccinators and long distances between vaccination centre and home contribute to this hesitancy. Hesitation also comes from a number of other reasons (let's call them barriers), such as low perception of the benefits of vaccines, its affordability, social beliefs, fear of AEFIs, demotivation owing to HW

For example, if a poster stresses on birth dose vaccination following institutional deliveries, it should ideally be put up at institutional delivery points. If another poster encourages beneficiaries to ensure that their child completes the vaccine doses as per the immunization schedule, it could be put up at outreach sites as well as delivery points.

Strengthening interpersonal communication skills of front-line workers

ANMs/ASHAs/AWWs are a critical interpersonal link between health providers and community members. They carry out door-to-door visits and are actively involved with the community.For them to be able to effectively communicate with parents/ caregivers and mobilize them to get their children vaccinated, it is important that their interpersonal communication skills be strengthened. They also need to be equipped with appropriate knowledge about vaccines and their benefits, and how to counter prevailing myths and misconceptions on immunization with facts. Details on training of front-line workers are given in Unit 11 on training.

How and when to communicate key messages? Messages need to be appropriately timed: neither too early, lest they be forgotten nor too late for the behaviour to be practiced

Tips for effective IPC skills for communicating with caregivers

Speak clearly

- Use encouraging/helpful non-verbal communication.
- Posture – keep your head level.
- Spend enough time; do not be in a hurry.
- Use responses and gestures to show interest.
- Listen carefully and repeat what the mother says.

Greet

- Smile.Speak in a pleasant voice and tone.
- Maintain eye contact.
- Introduce yourself and your organization.

Ask

- Ask open-ended questions—What? When? Where? Why? How? Who?
    - How many children do you have?
    - Why did you not vaccinate your child?
    - How did you know about the immunization session?

Tell

- What diseases are prevented by vaccination.
- Where and when will the session be held.
- What minor side-effects can occur after vaccination and how these can be managed.

Help: Encourage the parents to come for vaccination by telling them about how to manage AEFIs.

Explain: Use **info-kits** to explain the importance of immunization and the immunization schedule.

Repeat: Use your visit to find out reasons for left-outs and dropouts.

Four key messages to be given to caregivers

- What vaccine was given and what disease it prevents
- What minor adverse events could occur and how to deal with them
- When and where to come for the next visit
- To keep the immunization card safe and to bring it along for the next visit

Holding an effective community meeting

- Identify local community representatives who would participate in the meeting;
- Hold the meeting at a convenient time and place, e.g. on market days, close to places of worship;
- Be prepared with data on the coverage and dropout rates and a map of the health areas with low coverage;
- Provide a comfortable and welcoming environment for the discussion;
- Listen to the community; find out what the community already knows about VPDs and immunization;
- Provide information, using basic language and non-scientific terminology, on the importance of immunization, the status of the immunization programme and where and when services are available. Dispel misinformation and doubts that sometimes surround immunization;
- Encourage the participants to ask questions so that everyone can be better informed;
- Use stories, short plays, songs and visual aids to hold the group's attention and make meetings interesting;
- Involve as many group members as possible in the discussion and ask them to suggest solutions to problems;
- Help mobilize resources for immunization.

Exploring new media and digital communication

The reach of digital media is expanding exponentially and you should exploit every potential communication media. The digital media, either mobile or internet-based, is inexpensive and requires minimal effort. During planning for communication, whether it is for strengthening routine RI programmes or for campaigns, remember to identify media behaviour of the population in your block/under your PHC. As MOs, you have the potential and opportunity to be innovative. There are a number of ways to achieve impactful communication using new digital technologies, as follows:

1. Social media such as Facebook, Twitter, and YouTube are becoming highly popular as preferred modes of communication among the new millennia (young, educated generation).

2. Mobile phones have not only reached every village but also almost every villager, including into women's hands. The potential of reaching the targeted stakeholders is thus enormous. SMS messaging, voiceover messages using celebrities and reminder calls are some simple, direct and affordable ways of reaching the stakeholders with messages.

3. iPads and Notebooks: Digital tools such as iPads or digital Notebooks have now become very powerful tools for IPC sessions to be conducted by front-line workers with the communities. RI counselling using multimedia formats during household visits can be made not only educative but also entertaining.
4. Digitized PHCs: Visitors to PHCs, whether they are patients or their families, can be effectively counselled and exposed to key messages on RI using these digital tools innovatively. A MO who is innovative can make their PHC a model on the use of new media and digital technologies.
5. Data collection and analysis: These digital tools can also be used for purposes of data collection and monitoring and evaluation of different communication interventions for instant results.
6. Training before using: Innovative require capacity building of health service providers to enable effective use.

Appendix: RI form 11: Communication plan for a SC (See Unit 3 for details)

Sub centre communication plan for RI Quarter- 1 / 2 / 3 / 4 **RI Form 11**

Name of Block:_____ Name of ANM:_____ Name of Subcentre:_____

Name of Village						
Nane of Session site	1-	2-	3-	4-	5-	6-
Activities						
Miking / drum beating- Name and contact number						
Mosque announcement - Contact person and number - announcement time						
Meetings (Mothers meeting,AWW meeting,etc -Contact person and number - Monthly / weekly)						
VHSC meeting - contact person and number - location - attended by ANM Monthly / weekly - enter date						
School Rallies - school name and contact person with number (once a month in villages on rotation)						
Celebrations / Special Days (eg Mothers day, health day etc) - contact person and number						
Wall paintings - locations						
Banners - identify 4 key locations - Ensure display at least one day before RI day						
Painting competition / Exihibition - (once a quarter -school name and contact person with number						
Posters - identify 5 key locations (other than Panchayat ghar, Ration store, AWWcentre, Sub centre, Bus stand) - ensure display at least 2 days before RI day						
Pamphlets / Leaflets - available with - contact person name and number - distribute before RI session day						
Counselling aids / job aids (flip books etc.,) - available with - contact person name and number						
Other						
Manpower involvement - with contact number						
Name of ASHA						
Name of AWW						
Name of Mobilizer / CMC						
Name of community influencer						
Name of PRI member						

Date:_____ Sign of ANM:_____ Sign of MO:_____

Notes:

UNIT-10

Vaccine Preventable Diseases and VPD surveillance

Learning objectives

- *Define surveillance and list its uses*
- *Describe standard case definitions of various vaccine preventable diseases*
- *Explain steps in conducting surveillance and outbreak response.*

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Types of surveillance systems functioning in India 224

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Surveillance for vaccine preventable diseases

10

Surveillance is data collection for action. It is defined as the ongoing systematic collection, analysis, interpretation and dissemination of data about cases of a disease and factors influencing disease behaviour, which is used as a basis for planning, implementing and evaluating disease prevention and control activities, including immunization. Surveillance is the basic tool for understanding the epidemiology of a disease. Its key objectives are to trigger public health control measures, identify outbreaks and assess the effectiveness of prevention programmes.

Key elements of an effective surveillance system

These are:

- detection and notification of disease conditions
- investigation and confirmation (epidemiological, clinical and lab) of VPD cases
- collection, analysis and interpretation of data
- feedback and dissemination of results
- prevention and control responses.

Surveillance data on VPDs can monitor the impact of vaccination on disease incidence, identify HRAs and identify outbreaks.

Uses of VPD surveillance

Disease surveillance enables the following:

- predicting or detecting disease outbreaks for containment (**what** disease is occurring)
- identifying high-risk populations (**who** gets the disease)
- identification of HRAs requiring special attention, and where system performance is poor (**where** the disease is occurring)

- determining the frequency of occurrence of a disease in the community and magnitude of the problem (**when** the disease is occurring and **how many** get the disease)
- identifying underlying causes (or risk factors) of the disease (**why** the disease is occurring)
- guiding response activities, including immunization (**how** the disease can be prevented, controlled or eliminated).

Prerequisites for effective surveillance

- Standard case definitions (to ensure uniformity in reporting)
- Recording and reporting system (to ensure regularity in reporting)
- List of all the reporting units (to ensure completeness in reporting)

The quality of surveillance data depends upon correct diagnostic criteria, timeliness and completeness of reports.

Case definitions of VPDs

The case definitions of VPDs are as follows:

- ***Polio:*** Acute flaccid paralysis (AFP) is defined as sudden onset of weakness and floppiness in any part of the body in a child < 15 years of age, or paralysis in a person of any age in whom polio is suspected. **(WHO)**
- ***Measles:*** Any person in whom a clinician suspects measles infection,

  or

  Any person with fever **and** maculopapular rash, i.e. non-vesicular

  and

  cough, coryza (runny nose), or conjunctivitis (red eyes). **(WHO)**
- ***Diphtheria:*** A suspected case of diphtheria is defined as an illness of the upper respiratory tract characterized by the following:
  - laryngitis or pharyngitis or tonsillitis,

    and

  - adherent membranes of tonsils, pharynx and/or nose. **(WHO)**
- ***Pertussis:*** A suspected case of pertussis is defined as a person with a cough lasting for at least 2 weeks, with at least one of the following:
  - paroxysms (fits of coughing)
  - inspiratory whooping
  - post-tussive vomiting (vomiting immediately after coughing)
  - without other apparent causes. **(WHO)**

- ***Neonatal tetanus:*** Any neonate with a normal ability to suck and cry during the first 2 days of life, and who thereafter cannot suck normally between 3 and 28 days of age and becomes stiff or has convulsions/spasms (jerking of the muscles), or both. **(WHO)**
- ***Tuberculosis:*** A child with fever and/or cough for more than 2 weeks, with loss of weight/no weight gain and history of contact with a suspected or diagnosed case of active TB disease within the last 2 years. **(WHO)**
- ***Bacterial meningitis:*** Any person with sudden onset of fever (> 38.5 °C rectal or 38.0 °C axillary)

  and

  one of the following signs: neck stiffness, altered consciousness or other meningeal sign **(IDSP).**
- ***Hepatitis B:*** An acute illness typically including acute jaundice, dark urine, anorexia, malaise, extreme fatigue and right upper quadrant tenderness.
  - Biological signs include increased urine urobilinogen and >2.5 times the upper limit of serum alanine aminotransferase.

  Note: Most infections occur during early childhood. A variable proportion of adult infections are asymptomatic. **(IDSP)**
- ***Japanese Encephalitis:*** A person of any age, at any time of the year with acute onset of fever and change in mental status (including symptoms such as confusion, disorientation, coma or inability to talk)

  and/or

  new onset of seizures (excluding simple febrile seizures).

  Other early clinical findings may include an increase in irritability, somnolence or abnormal behaviour greater than that seen with usual febrile illness. **(IDSP)**

Reporting network: the backbone of a surveillance system

Efficient and reliable reporting network and notification systems are vital for any disease surveillance. In many developing countries, the number of cases that are reported into the system is an underestimation of the actual disease burden, for the following main reasons:

- ***Community level:*** Not all cases seek healthcare at the designated reporting sites (this is called under ascertainment).
- ***Health facility level:*** Failure of the reporting site to adequately report suspected cases that have sought medical advice (under-reporting). The common reasons for under-reporting include lack of knowledge of case definitions , lack of appreciation of the importance of reporting , lack of motivation, competing priorities and complexity of the reporting procedure.

- All ***health-care delivery sectors not included in the reporting network*** (e.g. private sector not involved, ISM practitioners not involved, etc.)

It is difficult to address under-ascertainment. However, under-reporting can be addressed by diligently selecting the reporting sites, creating awareness of the importance of case reporting and regular monitoring to verify the quality and completeness of reporting. The health facility selected for VPD surveillance should:

- be adequately motivated to participate in the surveillance with the understanding of its importance
- serve the population of interest
- have medical staff sufficiently specialised to diagnose, treat and report cases of the diseases under surveillance.

Various types of surveillance systems functioning in India

Surveillance system for polio and other VPDs

The country has established an efficient surveillance system for polio with technical, operational and monitoring support from WHO-NPSP. This support for countrywide AFP surveillance is made through its strong field presence and a well-distributed network of reporting sites.

The reporting network for AFP involves both public and private sector health facilities and has established mechanisms for case investigation, reporting and data management. AFP surveillance has proved to be one of the best surveillance systems globally and functions beyond the globally accepted quality standards. Details of operational protocols are available in the AFP surveillance field guide, also popularly known as Red Book.

Utilizing the AFP surveillance system for surveillance of other VPDs

To capitalize on the existing infrastructure and investments already made in the Polio Eradication Initiative, the platform of the AFP surveillance system is being modified to generate valuable epidemiological information for other VPDs. A laboratory-supported surveillance system for VPDs has been designed to capture epidemiological data on measles, rubella, diphtheria, pertussis and neonatal tetanus.

A measles-rubella surveillance system has been established across the country with 14 laboratories in the network. National Institute of Virology, Pune and King Institute of Preventive Medicine (KIPM), Chennai are designated as reference laboratories. The operational protocols for measles-rubella surveillance are available in the “Measles Surveillance and Outbreak Investigation– Field Guide”.

A laboratory network for surveillance of other VPDs is being established. The Christian Medical College at Vellore has been designated to serve as the reference laboratory for the VPD surveillance laboratory network and state-specific laboratories functioning under the supervision of the reference laboratory are expected to test the samples collected from suspect cases. Technical and operational details of the laboratory-supported case-based VPD surveillance system are available in "Surveillance for Vaccine Preventable Diseases – Field Guide" developed by WHO in coordination with the GoI.

Integrated Disease Surveillance Project

IDSP is a surveillance system wherein data generation, compilation, analysis and feedback to actions take place at district level and flow upwards to the state surveillance unit (SSU) and central surveillance unit (CSU). IDSP has an administrative mechanism in the form of surveillance committees and surveillance units at district and state levels headed by a surveillance officer and supported by an epidemiologist, microbiologist, data entry operator and data managers. Implementation is intended to uncover the burden of infectious diseases and detect early warning signals for outbreaks based on syndromic reporting right from the population level. Gaps exist in capturing of data from the private sector.

Laboratory confirmation of cases and outbreaks is another important component of IDSP that feeds into Form L at the district level. In addition, a reference laboratory network has been established in nine states by utilizing the existing functional laboratories in the medical colleges and other facilities which provide diagnostic services.

Central Bureau of Health Intelligence (CBHI)

CBHI, under the Directorate General of Health Services (DGHS), is an agency involved in collection, compilation, analysis and dissemination of information on a broad range of indicators related to health status and health services in the country. It is the national nodal institution for health intelligence. CBHI has a web-based data entry portal for collation of data at the national level. It regularly brings outs an annual publication in the form of National Health Profile based on the health data collected from all health directorates of states and union territories.

A sensitive and reliable VPD surveillance system can become an important tool for generating valuable epidemiological data which provides guidance to national policy-makers to identify specific national challenges and formulate evidence-based recommendations on immunization.

Awareness and skills of health staff are major factors for high sensitivity and quality of a surveillance system. All these systems are dependent on the district and sub-district level health staff. The states have to ensure capacity building of the health-care providers/ surveillance staff, monitoring and evaluation of the key components of surveillance, data analysis and providing feedback.

Outbreak investigation, response and control

An **outbreak** is defined as the occurrence of an illness in a community, clearly in excess of the expected numbers. Usually, an outbreak is limited to a small focal area. When an outbreak covers a larger geographic area and has more than one focal point, it is termed as an epidemic.

Outbreaks are defined differently for different VPDs. For diphtheria, polio, neonatal tetanus or JE, even a single case is defined as an outbreak, whereas for measles and pertussis, a sudden increase in the number of cases is considered to be an outbreak.

Steps in outbreak investigation

Prompt and timely action during an outbreak is critical for minimizing the damage and maintaining public trust in health and immunization services. The emphasis should be on saving lives. Do not wait for confirmation of a suspected outbreak, immediately provide logistic support to the field teams. Once the cause of the outbreak is confirmed, do not further waste laboratory support for diagnosing every case, since standard case management for epidemiologically-linked cases does not require laboratory confirmation.

Step 1: Confirm the outbreak

Confirmation of an outbreak is done through two related steps. Firstly, you have to visit the area concerned and confirm the diagnosis of as many reported cases as possible. Next, you should ascertain its geographical spread through a preliminary search.

- **Confirm the diagnosis** by:
  - ***Clinical criteria:*** According to the standard case definition using information obtained by history and examination.

- ***Epidemiological association:*** If an outbreak has been confirmed, and similar cases in the same area in the same period of time are reported by HWs but not investigated individually, they may be confirmed by epidemiologically-linked association with confirmed cases.
- ***Laboratory tests:*** For VPDs subject to eradication or elimination, collect laboratory specimens from every suspect case (e.g. stool sample from each AFP case). For VPDs subject to control, collect specimens from a sufficient number of cases (e.g. five blood samples in case of a measles outbreak) to confirm the outbreak. However, no laboratory specimens are required for neonatal tetanus.

- **Ascertain the geographical extent** of the outbreak to the surrounding villages/ blocks. The search for additional cases must include visits to:

  Health facilities: Talk to the doctors and nurses to see if they are seeing suspected cases of the VPD. Visit hospital wards and outpatient departments and search all patient registers for cases that fit the standard case definition.

  The community: Visit the area from where cases have been identified. Talk to volunteers and other influential persons in the community. If feasible, organize a rapid house-to-house search of the affected area(s) to search for similar cases. Identify key informants in each village/ward for prompt information about any cases.

Step 2: Conduct house-to-house searches to find additional cases and provide case management

Train and assign HWs to conduct house-to-house searches to find the cases in the designated area. Ensure all are aware of the case definitions and ensure monitoring of this activity.

Step 3: Line list and notify the cases

Enlisting all cases is important as it collates all relevant information.

Step 4: Describe the outbreak

Describe the outbreak in terms of time, place and person.

Step 5: Analyze the data to:

- Confirm the outbreak:
  - Are the number of cases reported greater than the number expected for this period (e.g. threshold)?
  - What proportion of cases fulfill the case definition?

- Define the extent of the outbreak (time, place and person).
- Measure the severity of the outbreak (what proportion of confirmed cases were hospitalized, suffered complications or died).

Step 6: Use the data for action

Use data on the various components of the immunization system such as coverage, status of the cold chain, training and availability of personnel to determine the probable causes of the outbreak.

Step 7: Write the report

After conducting the outbreak investigation, prepare a short comprehensive report.

Step 8: Give feedback

Provide feedback to all levels (community/SC/PHC/CHC/district) on the outcomes of the VPD outbreak investigation, in order to ensure that all stake holders are aware of the reasons for the outbreak, the actions initiated and the plan to prevent future outbreaks.

Step 9: Initiate action

In all VPD outbreaks, effective case management and followup of cases is a priority. Thereafter, conduct activities for strengthening and raising awareness of RI.

For further details refer to operational manuals / guidelines of VPD surveillance, measles and AFP.

UNIT-11

Capacity building of health functionaries in immunization

Learning objectives

- *Describe the importance of capacity building of health functionaries and the target groups*
- *Enlist different mechanisms for conducting immunization training*
- *Describe the guidelines, curricula and steps for conducting intensified immunization training of frontline workers.*

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Capacity building of health functionaries in immunization

11

Regular capacity building of health functionaries at the village and SC level is essential to ensure sustained utilization of quality immunization services by the community. As an MO, it is your duty to ensure that all the health functionaries in your PHC have adequate knowledge and skills to provide quality immunization services, including social mobilization functions.

The following health functionaries need to be regularly trained in immunization at the block/PHC level:

- HWs or vaccinators
- HSs
- Social mobilizers such as ASHAs and AWWs
- Vaccine and Cold-chain handlers
- Data handlers.

Training mechanisms

Different mechanisms which can be used to train the health functionaries are as follows:

- Half day training of front-line workers at PHC/block level once every 6 months
- Review meeting at the block/PHC held every fortnight/month/quarter
- Supervisory visits to the health centres, session sites and the community.

These are in addition to the regular training courses imparted by the district or state. Overview of the regular training courses available under the immunization programme is given in Table 11.1.

Table 11.1.Overview of regular training courses available under the immunization programme

Category	Duration	Venue	Training materials
MOs – Immunization	3 days	District/regional/state training centre	Immunization Handbook for MOs, Facilitators' Guide and Training kit
MOs –RI microplanning	2 days	State level TOT followed by cascaded training at district and sub-district level	Material shared during state-level workshops
HWs	2 days	District training centre/ ANMTC	Immunization Handbook for HWs and Facilitators' Guide
Frontline Workers – Immunization	Half day	Block/PHC level	Info-kits for HWs and ASHAs/ AWWs,Facilitators Guide for Intensified Immunization Training of Frontline Workers
Cold-chain handlers	2 days	District training centre/ ANM Training Centre	Handbook for Vaccine and Cold-chain Handlers

Intensified immunization training of frontline workers: an overview

This training course was provided by GoI with WHO-India (NPSP) support to the frontline workers in nine priority states during 2013. It is recommended that MOs of all blocks/ PHCs should use these guidelines, curricula and methodologies to regularly train frontline workers, i.e. ANMs, LHVs, HSs, ASHAs, AWWs,HWs (male), urban HWs, link persons, etc. An overview of the training is at Table 11.2.

Table 11.2 .Overview of immunization training for ANMs and LHVs

Participants	Block level facilitators (MO/BMC)	ANMs, LHVs, health supervisors	ASHAs, AWWs and others*
Venue of training	District level	Block level	Block level
Duration	One day TOT	4 hours	3 hours
Batch size	20–25	25–30	30–40 (ASHAs and AWWs under the same SC area should be called together along with the concerned ANM)
Facilitators	DIO, SMO (WHO), other partners, RRT members	Block level MO (2 per batch)	Block level (2 per batch) MO/LHV/ BMC
Contents of training	Role of facilitator and types of training, immunization schedule and FAQs, social mobilization and IPC, planning and managing immunization sessions, injection safety, AEFIs, records and reports	Immunization schedule and FAQs, social mobilization and IPC, planning and managing immunization session, injection safety, AEFIs, records and reports	Immunization schedule and FAQs, role and responsibilities, improving reach of immunization services and IPC skills required
Training material	Facilitators' guide	Info-kit for HWs	Info-kit for ASHAs, AWWs
Training methods	Discussions, roleplays, group exercises, films on immunization and IPC		

**** Others include HW (male), urban HW, link person, etc.***

TOT – training of trainers; RRT – rapid response team; FAQ – frequently asked questions

Roles and responsibilities of MOIC block/PHC as immunization manager

- Assess training load and prepare a training calendar for the year, marking the dates of the meetings and other opportunities that can be used for training.
- Select topics from the training material which are relevant for the health functionaries based on assessments through data analysis of routine reports and RI monitoring/ supervision.
- Prepare an agenda and allocate sessions to the facilitators at PHC/block level.
- Inform the participants in advance so that they can come prepared with their questions.
- Arrange for all equipment and supplies required during the training.
- Organize the venue and logistics.
- Conduct training as per the calendar.
- Submit a report of the training conducted with muster roll to DIO.
- Plan and conduct catch-up training for absentees.
- Continue to provide follow-up and on the job training to front-line workers during supervisory visits and review meetings.

Role and responsibilities of MO as the facilitator

- Positive attitude is required at all times to effectively carry out your roles.
- Encourage participants to ask questions and make comments.
- Use examples from your own experience and ask participants for examples from their experience.
- Model good communication skills, speak clearly and vary the pitch and speed of your voice.
- Use interactive training methods for training such as demonstration and hands-on practice, brainstorming, group discussions, role plays, films on immunization and IPC, question and answer technique, posters and presentations and flip charts or black/ white board.
- Praise/compliment each participant for comments, participation and contributions.
- Always summarize, or ask a participant to summarize what was discussed in the session.
- Keep the group on track.
- Encourage participants to explore how the skills they are learning can help them to improve immunization coverage.

Note: Various planning (annxure 1) and reporting formats (annxure 2) used for this training are annexed in this unit.

Training programme for immunization training of ANMs and LHVs

Learning objectives

At the end of the training, the participants should be able to:

- explain National Immunization Schedule and the frequently asked questions (FAQs);
- list the reasons and solutions for left-outs and dropouts, and key IPC messages;
- plan and conduct immunization sessions using injection safety measures;
- use recording and reporting forms correctly.

The agenda for this training is given in Table 11.3.

Table 11.3. Agenda for immunization training of HWs (ANMs and LHVs)

Session No.	Time	Session
1.	10:00–10:15	• Welcome, introduction of participants and pre-test • Sharing of RI issues from the RI monitoring reports
2.	10:15–10:45	• National Immunization schedule • Frequently asked questions
3.	10:45–11:30	Social mobilization and IPC: • Tracking left-outs and dropouts with emphasis on HRAs • Key IPC messages
4.	11:30–12:30	Planning and managing immunization sessions: • Planning and preparing for immunization session • Arranging immunization session • Conducting immunization session • Injection safety • AEFIs - including the use of Adrenaline in AEFI
5.	12:30 -13:20	Records and reports (10 minutes each): • MCP card,counterfoils and tracking bag • MCH/Immunization/MCTS register • Name-based list of due beneficiaries and Tally Sheet • Monthly Progress Report (HMIS report)
6.	13:20–13:40	Film on RI
7.	13:40–14:00	Open discussion, post-test, feedback and wrap-up

List of items required for the training

- Info-kit for HWs and stationary for all participants
- White board with marker pens/flip charts with tripod stand
- TV, DVD player/LCD projector and screen
- Vaccine carrier with 4 conditioned ice packs and vaccine vials in the zipper polythene pack
- AD disposable syringes – 0.1 ml and 0.5 ml
- Functional hub cutters – 4
- Waste baskets with Red Plastic Bag – at least 1
- Waste basket with Black Plastic Bag- at least 1
- MCP/RI cards – filled
- Tracking bag
- RCH/Immunization/MCTS registers –filled
- Due list cum tally sheets –filled
- HMIS reporting format for SC–filled.
- Use of adrenaline in AEFI

Detailed guidelines for conducting HW training

Session 1: Welcome, introduction and sharing of key RI issues

Time: 10:00–10:15	**Registration:** • Register all participants by asking them to sign in Muster roll (Annex2). • Give info-kit and other stationary to each participant. • Make a note of the number of expected participants who did not attend. • Plan to train them during catch-up sessions. **Introduction and pre-test:** • Ask each participant to introduce herself/himself briefly by giving her/his name, place of work and years of experience. Also, one personal detail such as a hobby or interest they have outside of work. • Ask pre-test questions. **Sharing of RI issues from monitoring reports:** • Share key RI issues identified during monitoring visits. Ensure that these issues are addressed during the training.
Method: Interaction and discussion	

Session 2: National Immunization Schedule and frequently asked questions

Time: 10:15–10:45	**Steps:**
Method: Discussion	• Discuss the National Immunization Schedule by asking participants and later ask them to check from info-kit. • Discuss FAQs by asking each participant to read one question and answer by taking turns. • Explain to clarify their doubts.

Session 3: Social mobilization and interpersonal communication

Time: 10:45 – 11:30	**Steps:**
Method: Group discussion and role plays	• Discuss definition of dropouts and left-outs (5 mins). • Ask participants about the common reasons and solutions for dropouts and left-outs based on their experience. List them on the flip chart (15 mins). • Divide the participants into two groups to discuss the following (20 mins): ▪ Ask Group 1 to move to the far corner of the room to represent that they are living in a remote hamlet without any SC in their village. Outreach sessions are rarely held in their village. Explain that their children are one type of "left-outs", i.e. they are hard to reach geographically and have difficult access to services. Ask them to discuss the reasons why their children do not get vaccinated and also suggest some possible solutions. ▪ Now turn to Group 2 and explain that their children started the vaccination schedule but have not completed it and no longer go to the session. Explain that their children are "dropouts." Ask them to discuss the reasons why their children dropped out and to also suggest some possible solutions. • Ask each group to present/role play in the plenary (15 mins). • Summarize the session by reminding participants of the 4 key IPC messages (5 mins).

Session 4: Planning and managing an immunization session

Time: 11:30–12:30	**Steps:** • Discuss components of the Microplan by asking participants (5 mins). • Discuss what all preparations are required before an immunization session (5 mins). • Ask for volunteers to play the role of ANM and caregiver with beneficiary. • Ask them to present a roleplay on conducting an immunization session (by using the session site equipment and logistics) (10 mins). • Ask all participants to observe the role play and check from the info-kit whether all steps are being followed. Make a note of missed steps to be discussed after the roleplay (15 mins). • Demonstrate the use of AD syringe, hubcutter and waste disposal guidelines (10 mins). • Discuss definition of AEFIs and their types; common programme errors and how to prevent them; how to manage and report AEFIs (15 mins) and ensure entry in the block AEFI register.
Method: Discussion, role plays, demonstration of injection safety equipment	

Session 5: Records and reports

Time: 12:30–13:20	**Steps:** • Ask participants what are the various records and reports related to the immunization programme (5 mins). • To each group of 4–5 participants, distribute filled in: o MCP card o RCH/Immunization/MCTS register o Due list and Tally sheet o Monthly Progress Report (HMIS report). • Ask them to identify the gaps and discuss any issues faced. • Demonstrate use of tracking bag for keeping counterfoils.
Method: Brain storming, group work, discussion, demonstration	

Session 6: Film on Routine Immunization

Time: 13:20–13:40	**Steps:** • Ask participants to note key messages from the film for improving quality of immunization services. • Show the film.
Method: Film	

Session 7: Open discussion, post-test, feedback and wrap-up

Time: 13:40–14:00	**Steps:** • Ask post-test (same as pre-test) and feedback questions from the participants. • Ask participants to enumerate key actions they would take to improve coverage and quality of services after training. • Clarify any doubts of the participants and close the session.
Method: DIscussion	

Training programme for immunization training of ASHAs and AWWs

Learning objectives:

At the end of the training, the participants should be able to:

- Describe the importance of immunization and the role of ASHA and AWW in the immunization programme
- List the vaccines available under National Immunization Schedule
- List the reasons for left-outs and dropouts and how to deal with them
- Keyinterpersonal messages and skills to communicate with the caregivers.

Agenda for this training is given in Table 11.4.

Table 11.4. Agenda for immunization training for ASHAs and AWWs

S No	Time	Session
1.	10:00–10:15	Welcome,introduction of participants and pre-test
2.	10:15–10:30	Importance of immunization and National Immunization Schedule
3.	10:30–10:45	Role of ASHA/AWW in immunization programme
4.	10:45–12:00	**Social mobilization and IPC:** • What and why are dropouts and left-outs? How to reach them? • IPC skills required • Preparing/updating due lists • Tracking left-outs and 0dropouts • Key IPC messages during o house-to-house visits o immunization sessions
5.	12:00 –12:20	Film on IPC in RI
6.	12:20–12:40	FAQs regarding immunization
7.	12:40–13:00	Open discussion, post-test, feedback and wrap-up

List of items required for the training

- Info-kit for ASHA/AWW and stationary for all participants
- White board with marker pens/flip charts with tripod stand
- TV, DVD player/LCD projector and screen
- Due-list cum tally sheet – filled.

Detailed guidelines for conducting ASHAs and AWWs training

Session 1: Welcome and introduction of participants

Time: 10:00–10:15	**Registration:** • Register all participants by asking them to sign in Muster roll (Annex2). • Give info-kit and other stationary to each participant. • Make a note of the number of expected participants who did not attend • Plan to train them during catch-up sessions.
Method: Interaction and discussion.	**Introduction and pre-test:** • Welcome and ask each participant to introduce herself briefly by giving her name, place of work and years of experience. Ask pre-test questions.

Session 2: Importance of immunization and National Immunization Schedule

Time: 10:15–10:30	**Steps:**
Method: Discussion	• Explain the importance of immunization and the VPDs prevented. • Discuss the National Immunization Schedule by asking participants and later ask them to check from info-kit.

Session 3: Role of ASHAs/AWWs in the immunization programme

Time: 10:30–10:45	**Steps:**
Method: Brainstorming	• Ask each participant to tell one responsibility of an ASHA/AWW in immunization and write their responses on a flip chart. • Group them into groups for enumerating their responsibilities before, during and after immunization session and check from info-kit for any missed points.

Session 4: Social mobilization and interpersonal communication

Time: 10:45–12:00	**Steps:**
Method: Brainstorming, discussion, roleplays, exercises	• Discuss the definition of dropouts and left-outs (5 mins). • Ask participants about the common reasons for dropouts and left-outs based on their experience. **List them on the flip chart** (15 mins). • Check from info-kit to see if any reason is missed. • For each reason, ask and discuss the solutions and cross check from info-kit (15 mins). • Discuss IPC skills required for the social mobilizers by referring to the info-kit (5 mins). • For roleplays, ask for 8–10 volunteers, 4–5 to act as caregivers and other 4–5 to act as ASHAs/AWWs. • Ask other participants to observe the IPC skills used during roleplays and comment on the same after the role plays. • Call a pair of one caregiver and one ASHA/AWW to the front. Ask them to enact the IPC related to RI issue/s (dropouts and left-outs) during house-to-house visits and at session sites. • Then ask other pairs to come one by one and discuss different issues not covered by earlier groups (25 mins). • Summarize the session by revising the key IPC messages. • Discuss tools for tracking left-outs and dropouts. • Give an exercise on filling due lists and Tally sheet (10 mins).

Session 5: Film on interpersonal communication in routine immunization

Time: 12:00–12:20	**Steps:** • Ask participants to note key messages from the film for improving coverage. • Show the film.
Method: Film	

Session 6: Frequently asked questions on immunization

Time: 12:20–12:40	**Steps:** • Ask participants to read the FAQs and answers one by one. • Explain and clarify their doubts.
Method: Discussion	

Session 7: Open discussion, post-test, feedback and wrap-up

Time: 12:40–13:00	**Steps:** • Ask post-test (same as pre-test) and feedback questions from the participants. • Ask participants to enumerate key actions they would take to improve coverage and quality of services after training. • Clarify any doubts of the participants and close the session.
Method: Discussion	

Pre and Post test questions

For HWs:

1. Name the VPDs under the UIP.
2. What all vaccines should be given to a child for full immunization by 1 year of age and by 2 years of age?
3. What tools are available for tracking dropouts and left-outs?
4. What are the four key IPC messages that should be given to the caregivers?
5. What are minor AEFIs and how to manage them?

For ASHAs and AWWs:

1. Name the VPDs under the UIP.
2. What all vaccines should be given to a child for full immunization by 1 year of age and by 2 years of age?
3. What tools are available for tracking dropouts and left-outs?
4. What are the four key IPC messages that should be given to the caregivers?

Role of ASHA, AWW and social mobilizers in the immunization programme

Planning for immunization

- Enumerate all the pregnant women and children and their immunization status.
- Help the ANM to identify hard to reach areas and underserved populations.
- Help in planning the site, day and time of the session in the village.
- Share the list of newborns in the area with the ANM every month.
- Help in preparing the due list of beneficiaries for your area/village.
- Visit households to inform the due beneficiaries of the vaccination date, time and site.

During the immunization session

- Ensure that all due beneficiaries are brought to the session site for immunization.
- Assist the ANM in conducting the immunization session(control the crowd, assist in recording, etc.).
- Deliver the four key messages about immunization to the caregivers.
- Ask the beneficiaries to wait for 30 minutes at the session site after immunization.
- Prepare the due list for the next session.

After the immunization session

- Report any case of high fever, any allergic reaction or convulsions after immunization to the ANM and ensure the treatment.
- Visit the houses of dropouts and left-outs to counsel the mothers to immunize their children.

"How to conduct a roleplay" with a sample illustration

- Select a group of six volunteers and take them out of the hall.
- Share with them the story plot given below.
- Instruct them to prepare a roleplay based on the situation.
- Give them 10 minutes to present the roleplay.
- Before the roleplay begins, ensure the following:
    - o Participants are seated and attentive;
    - o Ask everyone to observe the roleplay closely so that it could be discussed later;
    - o Take note of the HW's role.
- Ask them to enact out the roleplay.

A sample role play is given below (please note that in the case study below, the example of a female child has been deliberately given to reinforce the point that a female chid is equally important and needs equal care as a male child).

Rani is a HW. She goes to Phalguni's house. She wants to remind the family about the immunization session the next day and the visit of the ANM. Also, she has to explain the importance of vaccinating a child and the benefits of immunization. Phalguni's 5-month-old daughter is suffering from diarrhoea and fever. The entire family is under great stress. Rani is trying to draw their attention. She fails and the discussion could not start.

Rani: (Knock knock – she is knocking at the door of Phalguni's house). Phalguni's sister Phoolwati opens the door.

Rani: (Comes in through the door.) "Phoolwati, listen, the ANM behenji is coming to the village tomorrow and she will give vaccines to the children. I want to talk to you all about this".

Phoolwati: "Dekho Rani, we all are very tense and busy now".

There is loud crying from inside. Phalguni is crying. The others in the house are trying to pacify her. Rekha, her sister-in-law, is running around to get a clean cloth to wipe the baby. Someone else is running to fetch a wiping mop.

Rani: "Listen, I have come to tell you something very important. The ANM will vaccinate children of the village tomorrow. You have so many little children in the house. You all must definitely come."

Nobody is listening to Rani. She is looking around at all of them.

Rekha: "Bhabhi, don't cry. Munni will be alright. Bhaiyya,why don't you run and get the nurse behenji".

Rani: "Phoolwati, if you don't want to listen it is really your headache. How does it matter to me? I will tell the Pradhanji, and I have to visit other houses too. Had you taken the advice of nurse behenji seriously your child would not have been so sick in the first place."

The father of the child is running out and Rani leaves.

Some questions after the role play:

- What did you see?
- What mistakes did Rani make?
- What should she have done?

Discuss and brief the HWs on the various attributes and skills a communicator should possess and use when dealing with families and the community at large. Now ask them to enact the same role play (with a changed scenario).

Rani: (Knock knock – she is knocking at the door of Phalguni's house). Phalguni's sister Phoolwati opens the door.

Rani: (Comes in through the door.) "Phoolwati, listen, the ANM behenji is coming to the village tomorrow and she will give vaccines to the children. I want to talk to you all about this".

Phoolwati: "Dekho Rani, we all are very tense and busy now".

There is loud crying from inside. Phalguni is crying. The others in the house are trying to pacify her. Rekha, her sister-in-law, is running around to get a clean cloth to wipe the baby. Someone else is running for fetching a wiping mop.

Rani: "Oh! What happened? Why is the baby crying? Is everything all right?"

Phoolwati: "Rani, Phalguni's baby is very sick. She has been having watery stools for the last 3 days and also has fever. We all are very worried for her".

Rani: "Don't worry, she will be fine. May I have a look at her?"

Phoolwati: "Surely.She is in the room. Phalguni has been crying, we have tried everything….don't know what to do. Come in".

Rani: (Goes into the room, and consoles and comforts Phalguni) "Don't worry, she will be fine. Have you given her ORS?"

Phalguni: "No Rani, she has become so weak. She is not even taking my milk".

Rani: "ORS is very safe. Please give it to her. It will help her recover fast". (Rani takes out an ORS sachet from her bag and gives it to Phalguni. She tells her how to prepare the ORS solution and how to feed the baby). "Also continue to breastfeed the baby, there is no substitute for mother's milk. But you should get her vaccinated tomorrow. The fever is mild and vaccination will not harm her; rather, it will protect her from life-threatening diseases. Bhaiyya, please come along with me. We need to call in the doctor immediately".

Both of them leave to call the doctor.

Some questions after the role play:

- What did you see?
- What did Rani do differently this time?
- What do we learn from this?

Annexures –Planning and reporting formats

Annexure 1

Format for planning and scheduling the immunization training of front-line health workers

State: ____________________________ **District:** ________________________ **Block / Urban Planning Unit:** ____________________________

Sr. No.	Category of training* (Encircle)	Date of training session	Venue of training	Time of training session	Number of participants expected to attend						Name of trainer	Designation and contact details of trainer
					LHV / HS	ANM	ASHA	AWW	Others#	Total		
	1 / 2											
	1 / 2											
	1 / 2											
	1 / 2											
	1 / 2											
	1 / 2											
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	1 / 2											
	1 / 2											
	1 / 2											
Total												

* 1=LHV/ HS/ ANM; 2=ASHA/ AWW/ Others#

\# Others includes HW(Male), Urban health worker, Link person etc.

Submitted by: ______________________________(signature with seal)

Name: ____

Designation: ______________________________________

Annexure 2

Muster roll for the intensified immunization training of front-line health workers

State: ____________________ **District:** ________________________

Block / Urban Planning Unit: ____

Sr. No.	Name of participant	Designation # (Encircle)	Contact number	Signature
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
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		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
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		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		
		LHV / HS / ANM / ASHA / AWW / Others		

Others includes HW(Male), Urban health worker, Link person etc.

Submitted by: ____________________________**(signature with seal)**

Name: ______________________________________

Designation: __________________________________

Annexure 3

Block reporting format for immunization training of front-line health workers

(To be submitted weekly by the BMO to the DIO)

Reporting Week: From: ______________ To: ______________

State: ______________ **District:** ______________ **Block/ Urban Planning Unit:** ______________

Sr. No.	Category of Training* (Encircle)	Date of training session	Number of participants										Name of facilitator	Facilitator trained in TOT (Encircle)	Info-kits distributed (Encircle)
			LHV/ HS		ANM		ASHA		AWW		Others#				
			Expected	Attended	Expected	Attended	Expected	Attended	Expected	Attended	Expected	Attended			
	1 / 2													Yes / No	Yes / No
	1 / 2													Yes / No	Yes / No
	1 / 2													Yes / No	Yes / No
	1 / 2													Yes / No	Yes / No
	1 / 2													Yes / No	Yes / No
	1 / 2													Yes / No	Yes / No
	1 / 2													Yes / No	Yes / No
	1 / 2													Yes / No	Yes / No
	1 / 2													Yes / No	Yes / No
	1 / 2													Yes / No	Yes / No
	1 / 2													Yes / No	Yes / No
	1 / 2													Yes / No	Yes / No
Total															

* 1=LHV/HS/ ANM; 2=ASHA/ AWW/ Others

Others includes HW(Male), Urban health worker, Link person etc.

Attach copies of Muster Roll (List of participants with designation, place of work, contact numbers and signatures)

Submitted by: ______________________**(signature with seal)**

Name: ______________________

Designation: ______________________

UNIT-12

High risk populations and Urban areas

Learning objectives

- *List steps to include high risk areas and populations in the RI microplans*
- *Explain the challenges and steps to provide RI services in urban areas*

Key Contents

High risk areas/populations	247
Provision of services	248
Steps to be followed by block/urban area MOs and DIOs	249
Urban services	250
Challenges to providing immunization in urban areas	251

High-risk areas and urban services

12

High risk areas/populations

HRAs are special sites/areas which may be one or more of the following types of areas:

- Hard-to-reach areas
- Unserved or underserved areas or areas with shortage of health workers
- Urban areas, especially slums
- Migratory populations including temporary harvesters, brick kiln workers and construction labourers in large construction sites
- Security compromised areas.

The polio programme has identified population groups/areas that often miss routine and supplementary immunization and pose a risk for polio and other VPDs. HRAs are categorized as migratory and non-migratory (settled). (Other high risk populations could include those living in prisons, brothels and redlight areas)

Migratory HRAs

Migratory HRAs have been characterized as follows:

- ***Slums with migration:*** These are settlements in urban/periurban areas, or slums situated close to industrial areas including mining/stone-crushing sites or agricultural fields. These slums are typically found listed as such with urban development or district authorities. These areas are densely populated with substandard housing, which may be pucca or kaccha (jhuggies) and invariably have poor sanitation. Some of these areas are unauthorized and/or are not recognized by urban development authorities. The socioeconomic status of the residents in these areas is low.
- ***Nomads:*** Populations such as Mangteys, Kanjars, Fakirs, Natts, Banjaras, Shahs, Shahbalis, Albis, GadhiaLuhars, Ghumantus, etc. often move from place to place for livelihood, usually setting up “dera” wherever they stop. They are normally found in between or at the end of big colonies, railway stations, along the rail tracks, open fields, market places and in urban/periurban slums.

- ***Brick kilns:*** Migrant labour camping in brick kilns and the "pather" fields where raw bricks are prepared.
- ***Construction sites:*** Migrant families live in jhuggies or brick sheds in and around the under-construction buildings. The number of families and children present in these sites varies according to the size of the construction site.
- ***Others:*** These are fishermen villages, riverine areas with shifting populations, etc.

Non-migratory HRAs

These are areas with settled population with no migration and poor immunization coverage. These include hard-to-reach areas and misinformed communities that refuse vaccination due to misplaced beliefs.

Hard to reach areas

Accessibility compromised areas i.e. due to geographical / topographical reasons and in areas where security is a concern poses a different challenge to delivering RI or any other services.

Provision of services

Despite these challenges frontline workers and health staff are committed to providing services even in such areas. Therefore it is important for RI microplanning to be flexible and respond specifically to local situations and needs.

As MO you can review situations and in consultation with the district be innovative to overcome some of these obstacles.

For areas with multiple pockets of nomads or construction sites:

- Ensure identification of each area or pocket
- Identify a key person in each
- Explore use of mobile session for such areas

For hilly regions:

- Due to the vertical spread and terrain microplanning including maps should be made to reflect the ground realities
- Mobilization of beneficiaries will benefit from innovation. E.g. using available telecommunication /sending messages through school children returning home or through other agencies
- The use of alternate vaccine delivery options which may include pack animals or other modes of transport

- ANMs / health workers may have to stay overnight is some areas this will require extra vaccine carriers with extra ice packs to ensure maintenance of cold chain
- Immunization waste management – all waste will have to return to the centre for further management.

Steps to be followed by block/urban area MOs

1. Update the available list of all HRAs in the block/urban area every 3 months.
2. HRAs that are not included in the microplan should be immediately added, with appropriate revisions.
3. Review monitoring and coverage reports to identify issues in provision of immunization services with special emphasis on HRAs to include:
   a. Planned sessions not held
   b. Areas with low coverage
   c. Sessions with poor mobilization
   d. Status of due-list updating, especially for migrants and newborns
4. Revise session sites and timings, wherever required, in consultation with the ANM, ASHA, LW,AWW and community members.
5. Followup the progress regularly.

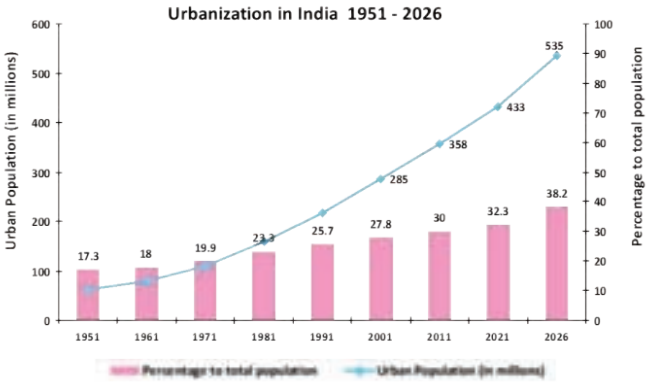
Steps to be followed by DIO

1. Review the maps and microplans from each block to check that all the HRAs are included in the ANM work-plan;
2. Review monitoring reports to identify issues;
3. Prioritize block/s with large number of HRAs;
4. Facilitate block level review and revision in priority blocks.

Any area with a risk for disease transmission or outbreak can be included as an HRA by MO.

Urban services

Virtually all population growth over the next 30 years will be in urban areas. By 2030, six out of every 10 people will be city dwellers, rising to seven out of 10 people by 2050. The trend for the past 50 years is for cities to grow horizontally in the form of urban sprawls, whether as suburbs or as peri-urban expansion.



India has been urbanizing rapidly in recent decades. It is estimated that the urban population will nearly double to reach 534 million by 2026.

Urbanization and its health impacts are not just an issue for with over 10 million residents. In fact, much of the urban population growth will occur in small and mid-sized cities. While large cities of developing countries will account for 20% of the increase in the world's population between 2000 and 2015, small and mid-size cities (less than 5 million) will account for 45% of this increase.

India is on the brink of an urban revolution with nearly 30% (about 300 million people) of the total population living in towns and cities. As per the United Nations projections, if urbanization continues at the present rate, 46% (about 500 million people) of the total population will be concentrated in urban regions of India by 2030. Migration is a major driving force for this rise in urban population. This exponential growth in urban population is leading to many problems such as increasing slums, decrease in standard of living in urban areas and contributes to environmental damage.

The definition of urban area as per the 2011 Census is as follows:

(a) All statutory places with a municipality, corporation, cantonment board or notified town area committee, etc.

(b) A place satisfying the following three criteria simultaneously:

i) a minimum population of 5000;

ii) at least 75% of the male working population engaged in non-agricultural pursuits;

iii) a density of population of at least 400 per sq km (1000 per sq mile).

An urban agglomeration is a continuous urban spread constituting of a town and its adjoining urban outgrowths, or two or more physically contiguous towns together and any adjoining urban outgrowths of such towns.

Characteristics of urban areas

- Ever expanding borders and peri-urban areas
- HRAs - higher number of construction and nomadic sites
- Manpower shortages.
- Large volume of transit / migrant population
- Unrecognized slums

Challenges to providing immunization in urban areas

Providing immunization services in urban areas have the following challenges:

1. Area demarcation
2. Accessibility
3. Inadequate infrastructure to support RI sessions
4. Multiple agencies / bodies for coordination

1. Area demarcation

Most of the urban areas in cities and towns are defined clearly with local urban bodies and infrastructure. However, the demarcation of areas among health workers is a challenge due to either overlapping administrative areas or expanding areas.

Area demarcation in urban areas is an investment that will be beneficial to all and is worth the effort. Except for the periphery or peri-urban parts, for the rest of the area it will be a onetime activity to develop maps and demarcate areas.

Source of maps in urban areas:

- Local urban bodies such as municipality / corporation / Dept. of urban development (see Unit 3, Fig 3.7)
- Simple hand drawn maps made by health workers (see Unit 3 Fig 3.8)
- Using google maps (Fig 12.3 and 12.4)
- Upgrading existing maps to clearly demarcate (Fig 12.2)

To clear up issues of area demarcation:

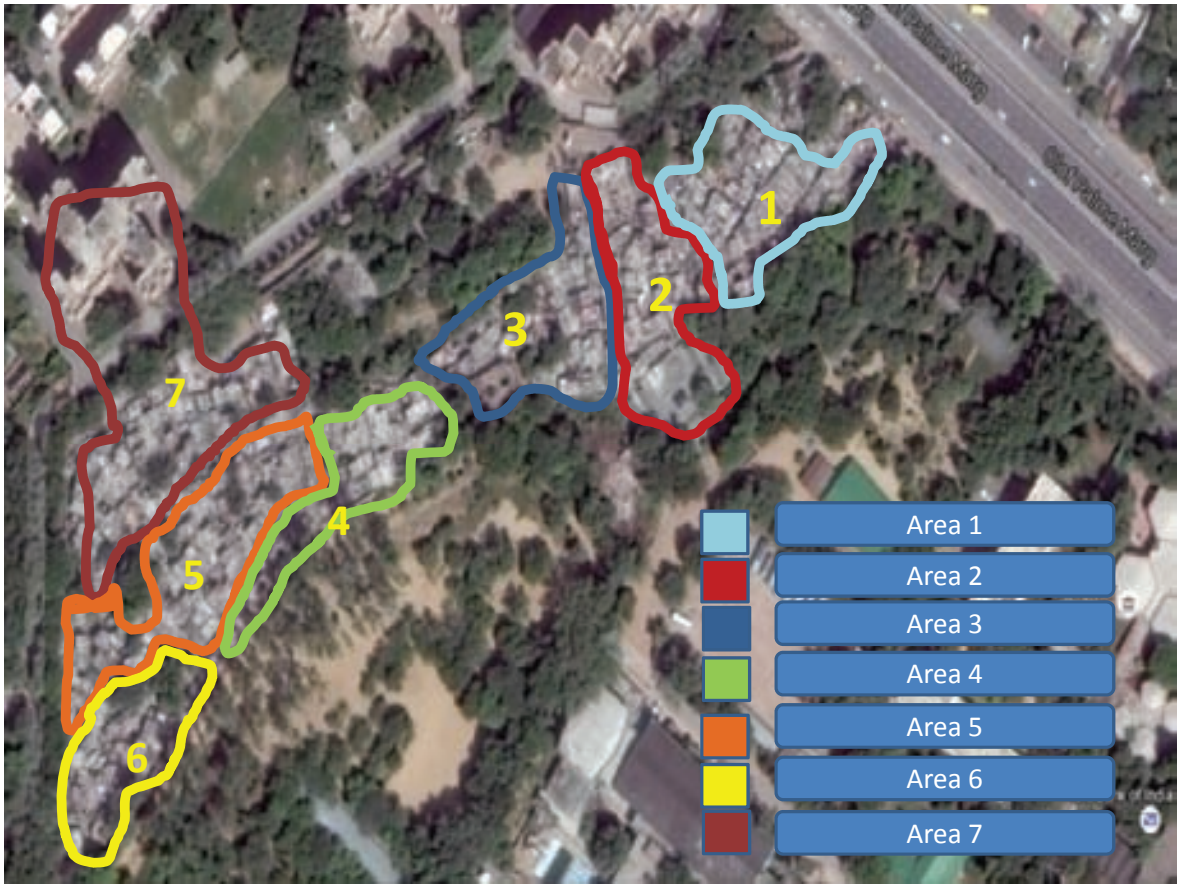
- Have copies of maps of each urban SC area prepared / copies made if already available
- Call for an ANM meeting and/or coordinated meeting with ICDS (if available)
- Bring out discussion on areas of confusion
- Clarify and if needed take decisions based on ease of access / rationality and finalize
- Plan for field verifications where boundaries are not well defined.

If there is an existing AWW/ASHA/link worker network, areas can be demarcated on the same lines. This makes it simpler to identify areas. Once this is done, ANM areas can be superimposed on the maps.

Fig 12.2 Urban PHC area polio map showing landmarks and upgraded to include migrant population mapping

Fig 12.3 Urban PHC area map – screen grab from google maps

Fig 12.4 Urban SC area map – screen grab from google maps – with areas demarcated for ASHA/LW



Steps to use google maps

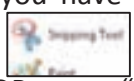
Using google maps may seem to be very complicated but for the purpose of getting a birds eye view of your area it is as simple as viewing a photograph on your computer.

Step 1 – go to www.googlemaps.com (generally the map identifies your IP address and shows the area you are located automatically)

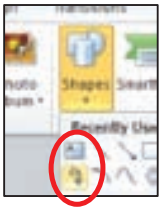
Step 2 – at the bottom left of the screen click on the "earth"  square so this will show you a satellite image rather than line map.

Step 3 –at the top left of the screen in the "search google maps"enter the name of your area. 

Step 4 – using the scroll button  on the mouse or the + and – icons  on the map zoom into any area on the map.

Step 5 – once you have identified the area you wish to use as a map, either use the "snipping tool"  from "ACCESSORIES folder" from Windows Menu to cut out the area you need OR press "PrtScn"  to get an screen image of the map. (For Mac computers use Command-control-shift-3)

Step 6 – paste the image on a PowerPoint slide or in a word document.



Step 7 – using the "insert shapes" option you can draw around an area using the "scribble" option (see Fig 12.4) OR take a print out and draw directly on the print out to demarcate areas.

Step 8 – save the file with area name and take a print out of the final map.

2. Accessibility

One of the challenges facing urban HWs is the large number of high-rise buildings, industrial areas and apartment complexes. Other challenges include narrow lanes, distance from local public transportation, high density and also access to flats and families living in them. The local solutions to providing services include:

- Using three or two wheelers to access narrow lanes;
- Involvement of industries – individually or through their organizations;
- Involvement of the apartment associations in planning and support to the HWs during visits;
- Involvement of local municipalities or corporations to issue instructions to all apartments or other associations in an area;
- Seeking support from local key influencers and community leaders;
- Support from local civil service organizations – Rotary, Lions, professional bodies, etc.

The MO with support from the local workers can discuss and develop locally specific solutions in such areas.

3. Infrastructure for providing RI services

Urban immunization services to be operationalized in the following way:

1. **"Same day, Same site, Same time" provision of services:** This should include:
    - All sites including Anganwadi centres, dispensaries, clinics and maternity homes in the public sector;
    - All NGOs engaged in providing health care in urban areas;
    - Any private institution /practitioner willing to support RI services.

2. **Urban outreach:** Expand the network of urban service provision points from the health facility:
    - Estimate size of population and frequency of sessions (same as with rural areas);
    - Set up a site in every urban slum, with one or two trained vaccinators, to provide immunization services on a regular (weekly or monthly) basis;
    - Use the same principles for creating a session plan and work plan (described in Unit 3) for the expanded network of urban outreach;
    - Plan location of sites, frequency and timing of service to suit the local population;
    - Establish contact with the local leader and obtain support;
    - Communicate time and dates of sessions to the community (using existing channels in the community like loudspeakers, religious or mothers' groups, etc.);
    - Ensure a regular uninterrupted service to gain the trust and cooperation of the community
3. **Communication:** Communication through ICDS workers, LWs,HWs, NGOs active in the area, print media, television and radio about the following:
    - The timing of local immunization services;
    - Local service delivery points;
    - The vaccines and schedule of immunization;
    - The benefits of immunization.

4. Multiple agencies / bodies for coordination

In addition to the Municipalities and Corporations there are many other departments that can be approached for support. E.g. Department of Telecommunications can be approached for help to send SMSs through government mobile network or from private sector under Corporate Social Responsibility / local FM radio stations to be involved or conduct special programs for immunization or Department of Transport can be approached to display banners or posters on government vehicles or to facilitate support from private transport companies.

Urban areas have the advantage of many non-governmental organisations working in the peripheries or in slums. These organizations can be approached for support or for active involvement in some areas where they have a strong presence.

Educational institutions can be approached directly or through the Department of Education for support. Nursing colleges can be approached for support during campaigns or in areas where there are vacancies in the urban health infrastructure. Involving multiple organisations requires careful planning and inter-sectoral coordination, consult with CMO/ DHO and DIO for guidance and support.

Refer to frame work for implementation of National Urban Health Mission for urban specific guidelines.

Notes:

UNIT-13

Financial planning in Immunization

Learning objectives

- *Understanding the process flow in Programme Implementation Plan (PIP) preparation under National Health Mission*
- *Overview of the Financial Management Report (FMR) codes and budget utility in immunization*

Key Contents

Sources of funding	257
Process of PIP	258
Details of PIP Norms	261

Financial planning in immunization

13

Financial management is an essential part of organizational management and comprises of more than just keeping accounting records. Financial management involves planning, organizing, controlling and monitoring financial resources in order to achieve organizational objectives.This unit will give you an overview of sources of funding and focuses on the detials of the program implementation plan and its norms.

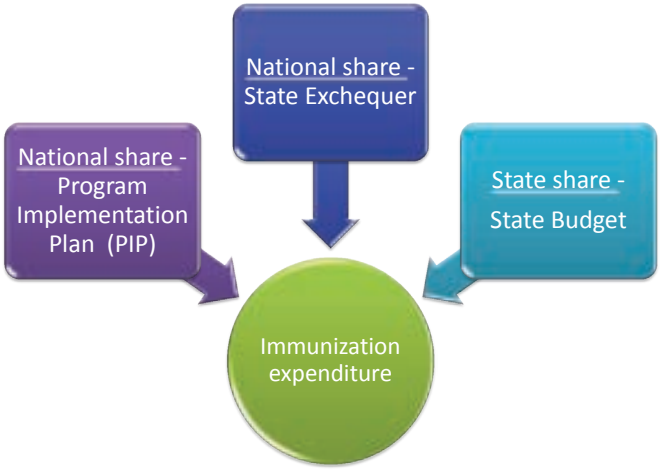
Sources of funding:

The state financial resource for health is made up from three sources:

- State Budget
- State Exchequer
- Program Implementation Plan (PIP)

The state budget is the finances allocated by the state in its annual budget and reflects the state's contribution. The state exchequer source refers to funds received by the state from the centre through the Ministry of Finance. These are amounts disbursed for regular activities and represent the centres contribution. The PIP source refers to the flexible funds proposed by the states as per the states PIP reflecting the states proposed needs for funds from the centre in addition to those committed. These funds are committed to the state by the centre through the Recording of Proceedings (ROP).

Fig. 13.1. Source of funds



State Programme Implementation Plans (PIPs) are a proposal of the overall annual activities and budgetary requirements based on which the state health system will function (Including immunization expenditure).

PIPs are made up of five parts, namely: PART I: NRHM plus RMNCH+A (including immunization), PART II: NUHM; PART III: Disease Control Programmes; PART IV: Non-communicable diseases including injury and trauma; and PART V: Infrastructure Maintenance. The MoHFW supports the states immunization programme through the National Health Mission under Part I as mentioned above.

Process of PIP:

The purpose of the PIPs is to make budgetary proposals for both regular as well as need based activities.

The block medical officer with support from the Block Program Management Unit provides inputs for the DHAP in consultation with the District Program Management Unit and district health officials. The DHAPs are a complete action plan which includes budgeting of all health programs including immunization. The DPMU will review the district action plan before submitting it to the District Health Society which under the chairmanship of the District Magistrate will review and finalize it for submission to the state.

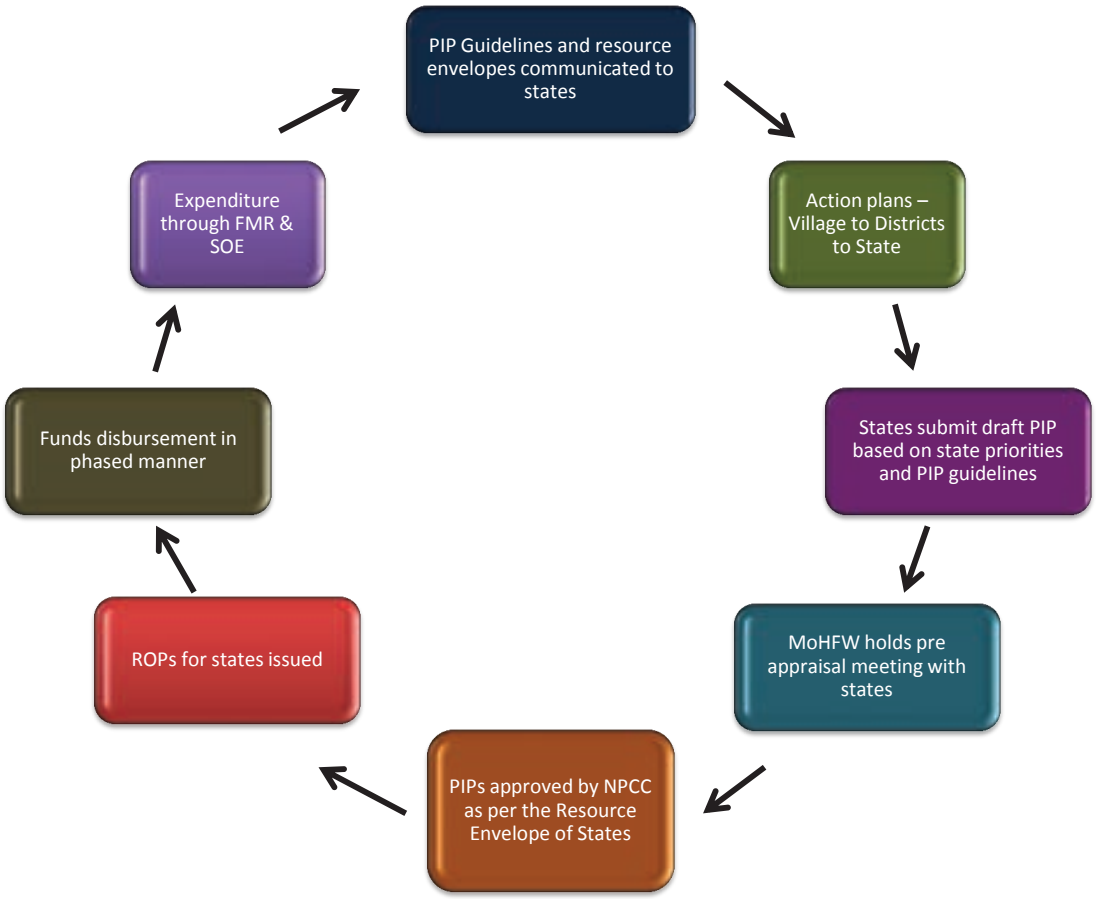
The State Program Management Unit (SPMU) with officials from the Directorate and Mission Director review the action plans which are then sent to the State Health Society where, under the chairmanship of the Principal Secretary they are finalized. The Executive Committee (EC) of the State Health Society can examine this plan and make appropriate modifications based on the states priorities and resource envelope. The State's PIP is consolidated from DHAPs.

The states submit their draft PIPs to the centre where the MoHFW conducts pre-appraisal meetings with the states. The PIP is then appraised by the National Programme Coordination Committee (NPCC), chaired by the Mission Director with officials from various program divisions in MOHFW and with state participation.

Once approved the states are issued with a Record of Proceedings (ROP). Funds from the centre are disdursed to the states in a phased manner.

The State Health Society implements the approved plan, with governance and oversight exercised by the Governing Board and the State Health Mission, in association with District Health Society (DHS). All expenditures should be made using FMR codes and followed by issuance of SOE. See fig. 13.2 for proccess flow of PIP.

Fig. 13.2. Process flow of PIP



The role of the Medical Officer is crucial for the preparation of village & block health action plans, which form the basis for making DHAPs which are finally merged into the state PIPs.

Programme Implementation Plan - Immunization

(Part C, Financial Management Report (FMR) C.1 to C.6)

Under the National Health Mission (NHM), financial support for various components of immunization is given to all states at all levels to strengthen the Immunization Programme under part C. These are further budgeted under FMR C.1 to C.6 of the PIP.

C.1 Routine Immunization strengthening project (Review meetings, mobility support, printing, outreach services, innovations, etc.)

C.2 Salary of contractual staff

C.3 Training under Immunization

C.4 Cold chain maintenance

C.5 ASHA incentive for full immunization

C.6 Pulse polio operational cost

Most of the activities are covered under C.1 component, which is further sub classified into FMR c.1.a to c.1.v.

There are certain activities which may not fit into part C like additional human resources or budget for IEC/ BCC etc. These can be budgeted under part A/ part B of PIP.

Others (Part A and B) – support for HR and IEC/BCC:

- For other HR related to immunization (technical staff), e.g. refrigerator mechanics
- For IEC/BCC activities related to immunization.

New Activity

The State should provide a brief description, rationale, data/ background information required to appraise the proposal and budget break-up for each new activity

Innovation

Up to a maximum of 10 % of the health systems strengthening budget (Mission Flexi pool and NUHM) may be proposed for innovations which is a part of the overall budget envelope.

Budget Envelope:

As per 2016-17 guidelines, the NHM funding between the Centre and States would be in the ratio of 60:40 (for all states except NE and 3 Himalayan States), 60 from Central government and 40 from State.

States are requested to estimate the resource envelope accordingly. However, FMG communicates the resource envelope separately.

Note:

Budgetary : this refers to norms to be used as guidance for preparing PIP.

Expenditure : this refers to norms to be used while spending as per GoI norms.

Details of PIP Norms

FMR Code	Activities	Purpose	Norms *	Level
C.1				
c.1.a	Mobility Support for supervision for district level officers.	**Budgetary:** Mobility budget for the entire year is provided to the districts for undertaking monitoring and supervision of Routine immunization programme in the district. The mobility support is provided only for the district level officers.	Rs.2,50,000/ Year / district level officers.	District
c.1.b	Mobility support for supervision at state level	**Budgetary:** Mobility budget for the entire year is provided for undertaking monitoring and supervision of Routine immunization programme in State Level.	Rs. 1, 50,000 per year.	State
c.1.c	Printing and dissemination of Immunization cards, tally sheets, monitoring forms etc.	**Budgetary:** The funds allocated under this head are for printing and dissemination of Immunization cards, etc.	Rs. 10 / beneficiary	State/ district
c.1.d	Support for Quarterly State level review meetings of district officer	**Budgetary:** Funds allocated for conducting quarterly State level review meetings of district officer for maximum of 3 persons per meeting	Rs. 1250/ per participant/day for 3 persons (CMO/ DIO/Dist. Cold Chain Officer)	District

FMR Code	Activities	Purpose	Norms *	Level
c.1.e	Quarterly review meetings exclusive for RI at district level with one Block MOs, CDPO, and other stake holders	**Budgetary:** Funds allocated for conducting quarterly review meetings at district level for maximum of 5 persons per meeting	Rs. 100/per participant for meeting expenses for 5 persons (lunch, Organization expenses)	Block
c.1.f	Quarterly review meetings exclusive for RI at block level	**Budgetary:** Funds allocated for conducting quarterly review meetings at block level wherein honorarium is paid to ASHA	Rs. 50/ per person as honorarium for ASHA (Travel) and Rs. 25/person at the disposal of MO-IC for meeting expenses (refreshment, stationary and misc. expenses)	Block
c.1.g	Focus on slum & underserved areas in urban areas/alternative vaccinator for slums	**Expenditure:** In case the ANM is not available or appointed, an alternate vaccinator can be hired for these session sites.	Hiring of ANM@ Rs 450/session for four session/month/ slum of 10000 population and Rs. 300/- per month as contingency per slum i.e. Rs. 2100/- per month per slum of 10000 population	District/ Block
c.1.h	Mobilization of children through ASHA or other mobilizers	**Expenditure:** Funds @ 150/- per session for mobilization of Pregnant Women and targeted children for immunization as per the micro-plan are to be paid preferably to ASHA.	Rs. 150 per session	District/ Block

c.1.i	Alternative vaccine delivery in hard to reach areas	**Expenditure:** Rs. 150 per session for Hilly terrains and geographically hard to reach areas	Rs. 150 per session	District/ Block
c.1.j	Alternative Vaccine Delivery in other areas	**Budgetary:** Rs. 75 per session for RI session in other areas	Rs. 75 per session	District/ Block
c.1.k	To develop micro plan at sub-centre level	**Budgetary:** Rs. 100/- paid per subcentre to familiarize the health managers with the steps in developing a comprehensive and equitable micro plan	@ Rs 100/- per subcentre	Block
c.1.l	For consolidation of micro plans at block level	**Budgetary:** Rs.2000/- for each district and Rs.1000/- for each block or PHC for the purpose of consolidation of micro plans	Rs. 1000 per block/ PHC and Rs. 2000 per district	District/ Block
c.1.m	POL for vaccine delivery from State to district and from district to PHC/CHCs	**Budgetary:** The POL is provided for transport and distribution of vaccine from State to district and then from district to PHC/CHCs	Rs1,50,000/ district/ year	State/ District
c.1.n	Consumables for computer including provision for internet access for RIMs	**Budgetary:** The funds is earmarked for petty consumable items for each district	@ 400/ - month/ district	District

FMR Code	Activities	Purpose	Norms *	Level
c.1.o	Red/Black plastic bags etc.	**Budgetary:** Fund allocated for procurement of red and black plastic bags for containment of medical waste after post RI immunization session	Rs. 3/bags/session	District/ Block
c.1.p	Hub Cutter/ Bleach/Hypochlorite solution/ Twin bucket	**Budgetary:** For cutting the AD syringe at the hub immediately after administering the injection at the session site. Similarly other items are required for disinfecting medical/bio waste	Rs. 1200 per PHC/ CHC per year	District/ Block
c.1.q	Safety Pits	**Budgetary:** Funds allocated for the disposal of used needles and syringes that are loose	Rs. 5250/pit	District/ Block
c.1.r	State specific requirement	**Expenditure:** This head is for any innovation under Immunization. Normally it should not exceed 10% of the total resource envelope under Part C.		At all levels
c.1.s	Teeka Express Operational Cost	**Expenditure:** Funds allocated for providing operational cost for Teeka Express.		State (as a pilot in only 5 states)
c.1.t	Measles SIA operational Cost	**Expenditure:** Funds allocated for providing operational cost for Measles SIA		Allocat-ed by GOI

c.1.u	JE Campaign Operational Cost	**Expenditure:** Funds allocated for providing operational cost for JE SIA		Allocated by GOI
c.1.v	Others	**Expenditure:** This head is basically for any other Immunization activity which could not be covered under any other head. Alternatively, this head can also be used for innovation in the field of Immunization		At all levels
C.1-Sub Total				
C.2		**Expenditure:**		
C.2.1	Computer Assistants support for State level	Funds allocated for payment of salary to Computer Assistant at State level		State
C.2.2	Computer Assistants support for District level	Funds allocated for payment of salaries to Computer Assistants at District level		District
C.2.3	Others(service delivery staff)	Funds allocated for payment of salaries to service delivery staff , if any		At any level
C.2-Sub Total				

FMR Code	Activities	Purpose	Norms *	Level
C.3				
C.3.1	District level Orientation training including Hep B, Measles & JE(wherever required) for 2 days ANM, Multi-Purpose Health Worker (Male), LHV, Health Assistant (Male/Female), Nurse Midwives, BEEs & other staff	**Expenditure:** Fund allocated for conducting 2 days training for ANM, Multi-Purpose Health Worker (Male), LHV, Health Assistant (Male/ Female), Nurse Midwives, BEEs & other staff	As per revised norms for trainings under RCH** (See page 286)	
C.3.2	Three day training including Hep B, Measles & JE(wherever required) of Medical Officers of RI using revised MO training module)	**Expenditure:** Fund allocated for conducting 3 days training for Medical Officers of RI		
C.3.3	One day refresher training of district Computer assistants on HIMS and immunization formats	**Expenditure:** Fund allocated for conducting 1 day refresher training of Computer assistants on RIMS/HIMS and immunization formats		
C.3.4	Two days cold chain handlers training for block level cold chain handlers by State and district cold chain officers	**Expenditure:** Fund allocated for conducting 2 days training of cold chain handlers at block level and district level		

C.3.5	One day training of block level data handlers by DIOs and District cold chain officer	**Expenditure:** Fund allocated for conducting 1 day training of block level data handlers by DIOs and District cold chain officer		
C.3.6	Others	**Expenditure:** Head reserved for any other training to be conducted under Immunization which could not be covered under the above mentioned training heads		At all levels
C.3-Sub Total				

C.4				
C.4	Cold chain maintenance	**Budgetary:** Funds are allocated for cold chain maintenance at District Level, PHC and CHC	Rs.750/PHC/CHCs per year District Rs.15000/year	State/ district
C.5				
C.5	ASHA incentive for full Immunization	**Expenditure:** The ASHAs will receive performance-based incentives for full Immunization of Rs.150/- which is paid in two years.	Rs 100 per child for full immunization in first year	District/ block
			Rs 50 per child for ensuring complete immunization up to 2nd year of age	
Total ROUTINE IMMUNIZATION				

FMR Code	Activities	Purpose	Norms *	Level
C.6	Pulse Polio Operational Cost (Tentative)	**Expenditure:** Funds allocated for providing operational cost for Pulse Polio Immunization Programme	Allocated by GOI	National level
Total				
A.8	Human Resources	**Expenditure:** Funds allocated for payment of salary to technical staff e.g. refrigerator mechanics	Any new or ongoing positions	State/ district
A.10	Program Management	**Expenditure:** Funds allocated for payment of salary to other staff related to Immunization	Any new or ongoing positions	State/ district
B.10	IEC-BCC NHM	**Expenditure:** Funds allocated for IEC / BCC activities related to Immunization		State / district

Other incentives for ASHAs under NHM

c.1.r/ c.1.v	ASHA incentive for due list preparation	**Expenditure:** For monthly updating of due list of beneficiaries under immunization	Rs 100/month	District
	ASHA incentive for house to house survey	**Expenditure:** For conducting house to house survey bi-annually	Rs 100 twice in a year	District

Please note that under Immunization most of the activities are normatic, and is to be budgeted as the multiplication factor of the mentioned norm. However, there is flexibility provided to the state under innovations head (c.1.r & c.1.v). States should also refer to the conditionality mentioned in the ROP. These conditionalities are provided for C.4 under cold chain maintenance funds, wherein the state may propose for re-appropriation of funds within part C from MoHFW, in case the funds are exhausted as per the actual expenditure. Also, the norms for alternate vaccine delivery are for budgetary purpose only and need based support should be provided for vaccine delivery as per local situation.

** Revised training norms under RCH (as per GOI letter D.O.No. A-11033/101/07- Trg, dated 28th Jan, 2015)

S No.	Budget Head	Final Proposed Norms
1.	DA to Group A equivalent Participants	Rs 700/- per day
2.	DA to Group B, C & D or equivalent participants	Rs 400/- per day
3.	Honorarium/ per diem to Group A & B equivalent participants	Rs 500/-
4.	Honorarium/ per diem to Group C & D or equivalent participants	Rs 300/-
5.	TA to Group A,B,C & D or equivalent participants	TA rules of Central/ State Govt. (whichever applicable)
6.	Hiring of Vehicle by Trainer	State norms of hiring of vehicle will apply
7.	Honorarium to Guest faculty at District and sub-district, State/Regional/National level (Experts/Specialists of area, faculty of medical college, centre of excellence, program officer dealing with program)	Rs 600 (district) Rs 1000 (State) & 1500 (National Level) per day^
8.	Honorarium to professional/ Faculty/ Trainers from Medical Colleges^^^ for monitoring of trainings in field as Observer • Checklist • Handholding the training • Action taken decision	District to Block- Rs 500/-, State to District/Block 1000/- and National to State/ District/ Block level – 1500/- (one training in a day with complete observer report) Report to be copied to respective concern division, State headquarters/ SIHFW and in Ministry (MOHFW)
9.	Food to participants (breakfast, working tea & lunch & Dinner for residential trainings)	Rs 250/- participants/day at district level and 350 at State and 400 at National level (subject to actual)
10.	Accommodation for Trainers where residential facility is not available	Up to Rs 3000 (district level) Rs 4000 (at state level), & 5000 (National Level) per day (subject to actual). Above are the maximum limits and subject to receipt.

11.	Accommodation for participants where hostel facility is not available	Up to Rs 1000 (district level) Rs 2000 (at state level), & 3500 (National Level) per day (subject to actual). Above are the maximum limits and subject to receipt.
12.	Incidental expenses (Photocopy, job aids, flip charts etc)	Rs 300/- participants/day (subject to actual)^^
13.	Venue hiring (in absence of training institute)	Rs 5000/- per day at district/block level per day Rs 10,000 per day at State level per day and Rs 20,000 per day at National level per day^^
14.	Institutional overhead for the use of institutional facilities	15% of total training expense

^ Subject to two lectures/Guest faculty/per day

^^Subject to keeping it minimum

^^^In principle, honorarium to impart training/taking sessions is not to be paid to any type of in-house faculty from NIHFW/SIHFW/ DTC/ HFWTC/ ANMTC/ DTT/ HTT or similar institute of training since training is their defined job.

The Medical Officer may refer to the link http://nhm.gov.in/nrhm-in-state/state-program-implementation-plans-pips.html, for updated guidelines and ROPs of all states/ UTs at MoHFW National Health Mission website.

Medical Officer's role	Activity	How
Providing inputs during preparation of the block & district health action plans.	1. Ensuring all activities related to routine immunization are included in BHAP (Block Health Action Plans) of PIPs. 2. MOIC can share his ideas with the District Immunization Officer (DIO) during preparation of District Health Action Plans for adding any need based innovation.	During preparation of BHAP for PIPs, interact with BPMs (Block Programme Manager), NHM & DPMs (District Programme Manager)
Utilization of Budget provided to the state as per ROP	1. A Medical officer can view activities under state ROP which has been approved for his state in a particular financial year and accordingly incur expenditure on various activities. 2. The utilization is to be shared with the district regularly.	ROP can be viewed at NHM website of GOI or can be taken from SPMU/ DPMU.
Any additional requirement can be projected in the Supplementary PIP.	Are all activities covered under ROP? If not, you may propose a new activity within your budget envelope, explaining in a short write-up, why you need this and may propose under supplementary PIP.	Any time after the issue of final ROP.

Notes:

Further reading and links

This unit contains a list of links to some of the information that supports this module. Some of the links provided are technical information which may not have been mentioned in this manual but will be useful if you wish to read further on some topics or if you need a broader perspective. Happy reading!!

Unit 1 – Introduction

- Comprehensive Multiyear Plan 2013–2017

  https://www.itsu.org.in/Comprehensive-Multi-year-Plan

- Understanding global evolution of EPI

  http://www.who.int/immunization/programmes_systems/en/

- Information on global immunization policies and strategies

  http://www.who.int/immunization/programmes_systems/policies_strategies/en/

- Global Vaccine Action Plan

  http://www.who.int/immunization/global_vaccine_action_plan/GVAP_foreword.pdf?ua=1

- Sampling methods in estimating immunization coverage
  - o http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index1.html
  - o http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index2.html

Unit 2 – National Immunization Schedule

- How vaccines are introduced in India – National Vaccine Policy

  http://mohfw.nic.in/showfile.php?lid=900

- Detailed technical information on vaccines – WHO: Vaccine Position Papers

  http://www.who.int/immunization/documents/positionpapers/en/

- For National Technical Advisory Group on immunization recommendations

  visit www.mohfw.nic.in. Use search function on webpage; key in NTAGI. Meeting minutes and recommendations are available.

Unit 4 – Cold chain and logistics management

- National effective vaccine management assessment 2013

  http://unicef.in/Uploads/Publications/Resources/pub_doc86.pdf

- Article on best practices in intradermal, subcutaneous and intramuscular

  injections –http://www.who.int/bulletin/volumes/81/7/Hutin0703.pdf?ua=1

- Validation of the shake test for detecting freeze damage to adsorbed vaccines

  http://www.who.int/bulletin/volumes/88/8/08-056879/en/

Unit 5 – Safe injections and waste disposal

- Central Pollution Control Board for details on BMW rules

  http://www.cpcb.nic.in/Bio_medical.php

- Biomedical Waste Management and Handling Draft Rules 2015 amendments

  http://www.moef.nic.in/sites/default/files/Final_vetted_BMW%20Rules%202015.pdf

- Injection safety information

  http://www.who.int/injection_safety/en/

Unit 6 – Adverse events following immunization

- Information sheets on reaction rates of selected vaccines

  www.who.int/vaccine_safety/initiative/tools/vaccinfosheets/en/

Unit 7 – Sources and use of data

- Immunization coverage estimation

  http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/

- Using data to improve immunization – global learning

  http://www.who.int/management/UsingDataToImproveServiceDeliveryImmunization.pdf

Unit 8 – Supervision and monitoring

- NIHFW module on supervision and monitoring

  http://www.nihfw.org/pdf/nchrc-publications/module%20-%204.pdf

Unit 9 – Communication for behaviour change

- Information on vaccine hesitancy

  http://www.who.int/mediacentre/news/releases/2015/vaccine-hesitancy/en/

Unit 10 – Vaccine Preventable Diseases and VPD surveillance

- Epidemiology and Prevention of Vaccine-Preventable Diseases; The Pink Book: Course Textbook– 13th Edition (2015) available at:

  http://www.cdc.gov/vaccines/pubs/pinkbook/index.html

- WHO – recommended standards for surveillance of selected vaccine-preventable diseases available at:

  http://apps.who.int/iris/bitstream/10665/68334/1/WHO_V-B_03.01_eng.pdf?ua=1

- Field guide for AFP surveillance

  http://www.searo.who.int/entity/india/topics/poliomyelitis/Field_guide_for_Surveillance_of_Acute_Flaccid_Paralysis_3rd_edition.pdf

- Measles outbreak investigation field guide

  http://www.searo.who.int/india/topics/measles/Measles_surveillance_and_outbreak_investigation_field_guide_2005.pdf

Unit 11 – Capacity building of health functionaries in immunization

- Module on ASHA guidelines including roles and responsibilities

  http://nrhm.gov.in/images/pdf/communitisation/asha/Orders-Guidelines/Guidelines_for_Community_Processes_2014_English.pdf

Unit 12

- National Framework for NUHM implementation

  http://www.nrhm.gov.in/images/pdf/NUHM/Implementation_Framework_NUHM.pdf

- PIP guidelines for NUHM

  http://www.nrhm.gov.in/images/pdf/NUHM/NUHM_PIP_Guidelines_2013-14.pdf

Unit 13– Budgeting and finance

- E-Training Module on “PIP/Budget preparation”

  http://mohfw.nic.in/WriteReadData/l892s/8514370340PIP-%20Budget%20%20Module.pdf

Notes:

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Notes:

Frequently asked questions

General queries on immunization

What is immunization?

Immunization is the process of administering vaccines for the development of the body's protective response.

How do vaccines work?

Vaccines contain either weakened or killed versions of viruses or bacteria. These are also called "antigens". Once introduced, they stimulate the immune system in the body to produce "antibodies" against the disease causing organisms. Each vaccine provides immunity against a particular disease; therefore, a number of vaccines are administered to children and women to protect them from many vaccine-preventable diseases.

Vaccines also vary in **efficacy,** according to the age at which the vaccine is administered and the number of doses given. Presence of maternal antibodies in early infancy interferes with the antibody production. For example, measles vaccine is 85% effective at the age of 9 months and 95% at 1 year.

What are the different types of vaccines?

There are four main types of vaccines:

Live attenuated vaccines (LAV), inactivated or killedvaccines, Subunit or Recombinant and Toxoid (Inactivated toxins).

Live attenuated vaccines are derived from disease-causing viruses or bacteria that have been weakened under laboratory conditions. They replicate in a vaccinated individual, but because they are weak, they cause either no disease or only a mild form of the disease. Examples of live vaccines are BCG, measles, Rotavirus, JE and oral polio vaccine.

Inactivated or killed vaccines are produced by viruses or bacteria which are inactivated with heat or chemicals. They cannot grow in a vaccinated individual and so cannot cause the disease. They may not always induce an immune response, requiring multiple doses for full protection as well as booster doses to maintain immunity. Use of adjuvants enhances response to non-live vaccines. Examples are whole-cell (pertussis), fractional polysaccharide-based conjugate (Haemophilusinfluenzae type b or Hib) and IPV.

Subunit or Recombinant vaccines are produced by inserting genetic material from a disease-causing organism into a harmless cell, which replicates the proteins of the disease-causing organism. The proteins are then purified and used as vaccine. Example is hepatitis B vaccine.

Toxoid vaccines are made from a toxin that has been made harmless but which elicits an immune response against the toxin. Toxoid vaccines are safe because they cannot cause the disease they prevent and there is no possibility of reversion to virulence. The vaccine antigens are not actively multiplying and do not spread to unimmunized individuals. Examples are Tetanus toxoid and diphtheria toxoid.

What is Herd immunity or population immunity?

A population with a high number of members with immunity to a particular disease or pathogen may give protection from that infection to the small number of its non-immune members. This is as a result of there being too few susceptible persons in the "herd" for the infection to circulate. This is known as "herd immunity or population immunity."

Immunization of children can go well beyond saving individual lives. It can also help in preventing large-scale outbreaks of diseases as well as keeping a disease under control (or sometimes even eliminated or eradicated e.g. polio) in the area. You should always strive to achieve the highest percentage of coveragepossible for all doses of the vaccines for disease control to be effective.

How are vaccines introduced in UIP and how are immunization schedules decided?

The decision on inclusion of vaccines and the schedules is taken by the National Technical Advisory Group on Immunization (NTAGI). It is based on recommendations of the Strategic Advisory Group of Experts (SAGE)as well as WHO-recommended schedules and vaccine position papers.

Why are vaccines administered at specific sites?

Vaccines are administered at specific sites to maintain uniformity and for helping surveyors in verifying the receipt of the vaccine. e.g BCG on left upper arm.

Why should there be a minimum gap of 4 weeks between two doses of a vaccine?

There should be a minimum of 4 weeks gap between two doses because decreasing the interval between doses may not achieve optimal antibody production required for protection.

How long can a bottle of Vitamin A be used, once opened?

A Vitamin A bottle, once opened, should be used within 8 weeks. Write the date of opening on the bottle. It must be kept away from direct sunlight.

What is the dose of Zinc to be used along with ORS in the treatment of diarrhea?

The dose of zinc for infants aged 2–6 months is 10 mg of dispersible tablet in expressed breast milk for 14 days. For children 6 months to 5 years of age, it is 20 mg of dispersible tablet for 14 days.

Queries on immunization schedule

If a child is brought late for a subsequent dose, should one re-start with the first dose of a vaccine?

No, do not restart the schedule again; pick up where the schedule was left off. For example, If a child who has received BCG, penta1 and OPV1 at 5 months of age returns at 11 months of age, then vaccinate the child with penta2, OPV2 , measles, Rotavirus vaccine (where applicable) and JE (where applicable).

If a child who has never been vaccinated is brought in at 9 completed months but before 12 completed months of age, then, can all the due vaccines be given to a child on the same day?

Yes, all the due vaccines can be given during the same session but at recommended injection sites, using separate AD syringes. It is safe and effective to give BCG, penta, OPV,IPV, measles ,RVV (where applicable), JE (where applicable) vaccines and Vitamin A at the same time to a 9-month-old child who has never been vaccinated.

If more than one injection has to be given in one limb then ensure that the distance between the two injection sites is at least 1 inch apart.

If a child who has never been vaccinated is brought in immediately after completing 12 months of age, (beyond one year) what vaccines would you give?

As per the national immunization schedule this child need not be given – BCG, Hepatitis B, Rotavirus, Penta and IPV.

This child should be administered DPT 1, OPV 1, Measles 1, JE 1(if applicable) and also Vitamin A solution.

The subsequent doses of DPT and OPV should be given at an interval of 4 weeks. Administer Measles 2, JE 2 (If applicable), Vitamin A and a booster dose of DPT at recommended age as per national immunization schedule.

Which vaccines can be given to a child between 1 and 5 years of age who has never been vaccinated?

Such a child will not receive BCG, Hepatitis B, Rotavirus, Penta and IPV.

Give DPT1, OPV1, measles 1, JE 1 (where applicable) and 2ml of Vitamin A solution.

Then follow with the second and third doses of DPT and OPV at 1 month intervals. Give measles 2 as per the schedule/1 month later*. Give booster dose of OPV/DPT at a minimum of 6 months after administering OPV 3/DPT 3. Also give Vit A at 6 months interval till 5 years of age.

***Note:** In an unvaccinated child more than **16 months** of age remember the interval between Measles 1 and Measles 2 is 4 weeks and for JE 1 and JE 2 (where applicable) the interval is **3 months.**

Which vaccines can be given to a child between 5 and 7 years of age who has never been vaccinated?

Give of DPT 1, 2 and 3 at 1 month intervals. Give booster dose of DPT at a minimum of 6 months after administering DPT 3 up to the age of 7 years.

Why are the DPT, HepB (birth dose), IPV and pentavalent vaccines given in the anterolateral mid-thigh and not the gluteal region (buttocks)?

This is done to prevent damage to the sciatic nerve. Moreover, vaccine deposited in the fat of the gluteal region does not invoke the appropriate immune response.

Vaccine-specific FAQs

BCG

Why is BCG given only up to 1 year of age?

Most children acquire natural clinical/sub-clinical tuberculosis infection by the age of 1 year. This protects against severe forms of childhood tuberculosis, e.g. TB meningitis and miliary disease.

If no scar appears after administering BCG, should one re-vaccinate the child?

There is no need to re-vaccinate the child even if there is no scar.

Why do we give 0.05 ml dose of BCG to new borns (below 1 month of age)?

This is because the skin of newborns is thin and an intra-dermal injection of 0.1 ml may break the skin or penetrate into the deeper tissue and cause local abscess and enlarged axillary lymph nodes. Dose of 0.05 ml is sufficient to elicit adequate protection.

Hepatitis B

What is hepatitis?

Hepatitis is an inflammation of the liver, most commonly caused by a viral infection. There are five main hepatitis viruses, referred to as types A, B, C, D and E. These five types are of the greatest concern because of the burden of illness and death they cause and the potential for spread of outbreaks and epidemics. In particular, types B and C lead to chronic disease in hundreds of millions of people and, together, are the most common cause of liver cirrhosis and liver cancer.

Hepatitis A and E are typically caused by ingestion of contaminated food or water. Hepatitis B, C and D usually occur as a result of parenteral contact with infected body fluids. Common modes of transmission for these viruses include receipt of contaminated blood or blood products and using contaminated equipment in invasive medical procedures. For hepatitis B, the causes are transmission from mother to baby at birth, from family member to child and also by sexual contact.

Acute infection may occur with limited or no symptoms, or may include symptoms such as jaundice (yellowing of the skin and eyes), dark urine, extreme fatigue, nausea, vomiting and abdominal pain.

What is the "birth dose" of hepatitis B?

This refers to the dose given within 24 hours of birth. A child vaccinated with Hep B after more than 24 hours of birth is not considered to have received the birth dose.

Why is the birth dose of hepatitis B vaccine given only within 24 hours of birth?

The birth dose of hepatitis B vaccine is effective in preventing peri-natal transmission of hepatitis B only if given within the first 24 hours.

Why is hepatitis B vaccine given only till 1 year of age?

Hepatitis B vaccine is given till 1 year of age because infections during first year of age have a 90% chance of becoming chronic as compared to 30% during 1–5 years and 6% after 5 years. Persons with chronic infection have 15–25% risk of dying prematurely due to HBV-related liver cirrhosis and cancer.

Pentavalent Vaccine

What is pentavalent vaccine?

Pentavalent vaccine is a vaccine that contains five antigens (diphtheria + pertussis + tetanus+ hepatitis B + Haemophilusinfluenzae type b).

How is pentavalent vaccine more advantageous?

- The addition of Hib vaccine provides protection against Haemophilus Influenzae Type b related diseases (bacterial meningitis, pneumonia and others)
- The number of injections administered under UIP during the first year of life reduces from ten to seven (not including IPV).
- It does not require reconstitution.

What is the schedule for pentavalent vaccine?

As per the National Immunization Schedule, three doses of pentavalent vaccine are to be administered. The first dose is given only after a child is 6 weeks old. The second and third doses are given at 10 and 14 weeks of age, respectively. There is no booster dose recommended under UIP

Note: Pentavalent vaccine should be started for any child aged more than 6 weeks and can be started upto 1 year of age.

For what reasons should a child not be given pentavalent vaccine?

- Age – a child below 6 weeks of age should not be given pentavalent vaccine.
- Vaccination history – a child whose vaccination schedule has been initiated with DPT/hepatitis B vaccine will continue to receive subsequent doses of DPT/hepatitis B and not pentavalent vaccine.
- Severe allergic reactions – although serious side effects have not been reported, a child who has had a severe reaction to pentavalent vaccine earlier should not be given another dose.
- Children with moderate or severe acute illness should not be administered pentavalent vaccine until their condition improves. Minor illnesses, however, such as upper respiratory infections (URI) are not a contraindication to vaccination.

What vaccine will be given to a child who has received at least one dose of pentavalent vaccine before his/her first birthday?

If a child has received at least one dose of pentavalent vaccine before his/her first birthday, the child should be administered the due pentavalent doses at a minimum interval of 4 weeks, at the earliest available opportunity.

What are the common side-effects of pentavalent vaccine?

Pentavalent vaccine has not been associated with any serious side-effects. However, redness, swelling and pain may occur at the site where the injection was given. These symptoms may appear the day after the injection is given and last from 1 to 3 days. Less commonly, children may develop fever for a short time after immunization.

After introduction of pentavalent vaccine, will DPT and Hep B be required?

Yes, Hep B birth dose (within 24 hours) for institutional deliveries and DPT boosters at 16–24 months and 5–7 years will continue as before.– Introduced

Rotavirus vaccine – Introduced in Feb 2016 - in phases

What is Rotavirus?

Rotavirus is a highly contagious virus. It is the most common organism that causes diarrhea among children which may lead to hospitalization and death.

What are the clinical features of Rotavirus diarrhea?

Rotavirus diarrhea has an incubation period 1-3 days. It presents usually with sudden onset of watery stools, often accompanied by fever and vomiting. Sometimes accompanied with abdominal pain. The diarrhea and associated symptoms may last for 3-7 days.

How effective is the Rotavirus vaccine?

The available Rotavirus Vaccines are observed to be effective in preventing severe rotavirus diarrhea by 54-60%. The protective effect of Rotavirus vaccine lasts through 2nd year of life.

Is Rotavirus vaccine being used in any other country in the world?

Rotavirus vaccine is being used in national immunization program more than 80 countries. Rotavirus vaccine has also been in use by private practitioners in India for several years.

Will vaccination with Rotavirus vaccine prevent all diarrheas?

No it does not prevent all diarrheas. Diarrhea is caused by many organismsof which Rotavirus is one of the leading causes for diarrheain children. Rotavirus vaccine is effective in preventing diarrhea due to Rotavirus only. So the child may still get diarrhea due to other germs and causes even after receiving Rotavirus vaccine.

How and when is the Rotavirus vaccine given?

Rotavirus vaccine is an oral vaccine. The dose of Rotavirus vaccine varies from manufacturer to manufacturer.

The dose and route for Rotavirus vaccine currently being supplied under UIP is 5 drops to be administered to all infants at 6, 10 and 14 weeks along with other vaccines in routine immunization .

What is the maximum age limit for giving the first dose of Rotavirus vaccine?

The upper age limit for the first dose of Rotavirus vaccine is one year of age. If a child has received only the first dose of Rotavirus vaccine by 12 months of age, two more doses of the vaccine should be given at an interval of 4 weeks between the two doses to complete the course.

Is a booster dose required for Rotavirus vaccine?

No booster dose of Rotavirus vaccine is recommended. Only three doses at 6, 10 and 14 weeks are required to complete the schedule of vaccination for a child.

Should Rotavirus vaccine be given to children who have already received first dose of OPV and Pentavalent vaccine?

No, during the initial period of Rotavirus vaccine introduction, only the infants coming for the first dose of OPV and pentavalent vaccine will be administered Rotavirus vaccine. These children will be given 2nd and 3rd doses in subsequent visits as per the schedule.

Infants who are coming for their second or third dose of OPV and pentavalent vaccine, will complete the schedule with OPV and pentavalent vaccine only. Rotavirus vaccine is not to be started with second or third dose of OPV and Pentavalent vaccine.

What should be done if a child has received one or two doses of Rotavirus vaccine in a private facility?

If the parents want to vaccinate their child from the public sector after receiving one or two doses of Rotavirus vaccine in a private facility, a new course of Rotavirus vaccine must be started with all three doses at one month intervals provided the child is less than one year old.

Inactivated Poliovirus Vaccine

What is IPV?

IPV refers to Inactivated Poliovirus Vaccine administered by injection. Evidence suggests that this vaccine, when used along with OPV, increases the protection to the individual as well as the community. IPV together with OPV prevents re-emergence and reinfection of wild poliovirus (WPV).

Will IPV (injection) replace OPV (drops)?

No, IPV (injection) will not replace OPV (polio drops), since IPV is recommended to be administered in addition to OPV.

Is IPV a new vaccine?

No, IPV is not a new vaccine. It is being used in many countries. IPV was licensed in 1955 for use in United States, Canada, and Western Europe.

IPV was licensed for use in India in 2006. Based on recommendations of the Indian Academy of Paediatrics (IAP), IPV is being used in the private sector in addition to OPV schedules since 2007.

What is the benefit of IPV?

IPV provides much needed additional protection against polio and protects a child as well as other children in our community. Evidence shows that when IPV is used along with OPV, it builds better mucosal (intestinal) immunity than when OPV is used alone; it thereby increases both the protection to the individual and the community. To maximize childhood immunity and move towards global polio eradication, it is recommended that both vaccines be used together.

Is IPV safe?

Yes, IPV is considered very safe, whether given alone or in combination with other vaccines.

Are there any contraindications for use of IPV?

IPV should not be administered to children with a documented or known allergy to streptomycin, neomycin or polymyxin B, or with a history of a previous allergic reaction after IPV injection.

Is it safe to give IPV and OPV together?

Yes, it is absolutely safe to give IPV and OPV together. It is also important – and best – for a child to receive both IPV and OPV. Together, these two vaccines provide safe and strong protection against polio. If a child only receives one of the vaccines they will not be as well protected as the child that has received both the vaccines. Primary doses of OPV (OPV1, OPV2 and OPV 3) should be completed as per schedule.

How and when is IPV to be administered?

IPV is to be given as a fractional dose (0.1 ml) intradermally in the Right arm of the child.

Fractional IPV is given in two doses at 6 and 14 weeks along with OPV 1 and OPV 3

Measles / Rubella

What are Measles / Rubella diseases?

Measles is a highly infectious disease causing illness and death due to complications in the form of diarrhea, pneumonia or brain infection mostly among the children less than five years of age. Rubella is a mild disease but when infection occurs in early pregnancy, it has the potential to cause spontaneous abortions, fetal deaths, still births and serious congenital defects in the child causing lifelong disabilities.

What is CRS?

CRS, (Congenital Rubella syndrome) is a set of serious congenital defects a child may be born with when a pregnant women gets Rubella infection in early pregnancy , causing blindness, deafness, heart defects, mental retardation, liver disorders and other hematological disorder, incompatible with normal living.

Why is Measles-Rubella vaccine given?

This Measles –Rubella vaccine is given for preventing both measles and rubella disease in the child, as these diseases can be only prevented by vaccination.

What is the efficacy of Measles-Rubella vaccine?

The efficacy of measles component in the vaccine is 85% when given below 12 months of age in a child and >95% efficacy when given above 12 months of age. While the efficacy of the Rubella component in the vaccine is more than 95% below 12 months and > 99% if given above 12 months of age.

Does a child need to be vaccinated if she or he has history of any fever-rash illness including measles or rubella disease?

Yes, every child must be vaccinated with two doses, as per the national immunization schedule with MR vaccine at the recommended ages, irrespective of any past fever-rash illness or measles/rubella disease.

If a child has received the Measles Rubella vaccine before 9 months of age, is it necessary to repeat the vaccine later?

Yes, the Measles Rubella vaccine needs to be administered, according to the National Immunization Schedule, after the completion of 9 months until 12 months of age as 1st dose and at 16-24 months as 2nd dose in RI.

If a child comes after 2 years for the first dose, then can he/she get the second dose?

All efforts should be made to immunize all children at the right age i.e. first dose at completed 9 months to 12 months and second dose at 16-24 months. However if a child comes late (beyond 2 years),then two doses of the vaccine can be given at one month interval until 5 years of age under UIP.

If a child has received all vaccines as per the national immunization schedule, dose she or he need to be vaccinated during supplementary MR campaigns?

Yes, in addition to the recommended national immunization schedule the child (if eligible as per age group targeted) must be vaccinated with supplementary MR vaccines during campaigns.

As measles and JE vaccine doses are recommended for the same age group, can they be given together?

Yes, two live injectable vaccines can be administered simultaneously at different sites, otherwise at a minimum interval of 28 days.

Japanese Encephalitis

What is Japanese encephalitis and what is acute encephalitis syndrome (AES)?

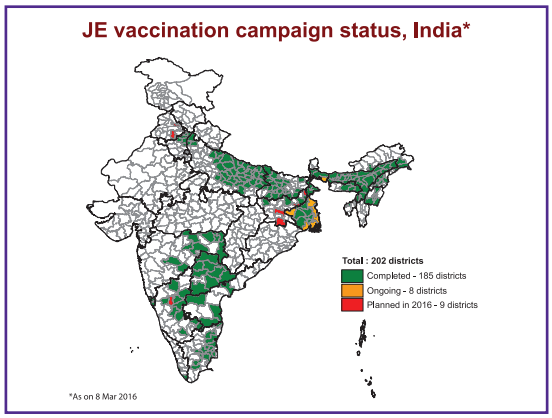
Japanese encephalitis (JE) is a severe, disabling viral disease spread by infected mosquitoes, primarily in the agricultural regions of Asia. The disease affects the central nervous system and can cause severe complications, seizures, and even death.

Clinically, a case of acute encephalitis syndrome (AES) is defined as a person of any age, at any time of the year with acute onset of fever and a change in mental status (including symptoms such as confusion, disorientation, coma, or inability to talk) and/or new onset of seizures (excluding simple febrile seizures). Other early clinical findings may include an increase in irritability, somnolence or abnormal behaviour greater than that seen with usual febrile illness (WHO).

AES including JE is a group of clinically similar neurological manifestations caused by several different viruses, bacteria, fungus, parasites, spirochetes, chemical/toxins, etc. Some other causes of AES could be tuberculosis, meningitis, viral encephalitis, cerebral malaria, etc.

How common is JE?

JE is the leading cause of viral encephalitis in Asia. Though 30,000 to 50,000 cases and 15,000 deaths are reported each year, a lack of diagnostic capability and reliable data suggest that the actual number of cases is much higher.



Where is JE endemic in India?

JE is endemic in 202 districts in 12 states across the country. JE vaccination campaigns have been completed in 193 districts and with the remaining nine scheduled to be completed in 2016.

Who is at risk for JE?

People living in rural rice-growing and pig-farming regions face increased risk. Cases are also found in the peri-urban parts of cities. In areas where JE has been present for many years, the disease is most frequently seen in children between the ages of 1 and 15 years; however, it can affect adults also.

Which vaccine is used in JE?

Live attenuated SA-14-14-2 JE vaccine manufactured by Chengdu Institute of Biological Products, China is used by the GoI.

What is the schedule of JE vaccine in the UIP?

Two doses of JE vaccine are administered in UIP in all JE endemic districts of the country. The first dose of JE vaccine is given to infants aged 9–12months along with the first dose of measles vaccine and the second dose is given along with DPT booster dose and measles vaccine second dose.

What is the side-effect of SA 14-14-2 JE vaccine?

JE vaccine is as safe as any other immunization vaccines given in India. Rare serious adverse events may be reported, such as transient fever amongst 5–10% vaccine recipients and local reactions such as injection site tenderness, rash or irritability in 1–3% of cases.

What if someone misses receiving JE vaccine during catch-up campaigns?

Those children aged 1–15 years who have missed receiving JE vaccine during the catch-up campaigns can receive it at the nearest PHC/CHC or district hospital.

If a child more than 9 months but less than 24 months who has never received any JE vaccine comes for immunization, how should JE vaccine be administered?

The first dose should be given at first contact and the second dose should be given with an interval of 3 months following the first dose.

Pneumococcal

What is pneumococcal disease?

- Pneumococcal disease is a group of diseases caused by a bacterium Streptococcus pneumoniae (also known as pneumococcus).
- The most serious of these diseases are pneumonia, meningitis, and blood stream infections.
- Streptococcus pneumoniae is the leading cause of bacterial pneumonia in children under 5 years of age.

How common is pneumococcal disease?

- Pneumococcal disease constitutes a major public health problem.
- In India, pneumococcal pneumonia was estimated to have caused 105,000 deaths in 2010.
- Beyond the pneumonia cases there are other serious pneumococcal cases and deaths from blood stream infections (sepsis) and meningitis.

How is pneumococcal disease spread?

- Pneumococcus spreads from person to person (coughing, sneezing or close contact). Many people have pneumococcus in their nasopharynx for days or weeks at a time. In most cases the pneumococcus disappears from the nasopharynx without causing any symptoms, but sometimes disease develops.

What diseases does pneumococcus cause?

Diseases that are often caused by pneumococci include:

- Pneumonia,
- Bacteraemia, sepsis: bloodstream infection,
- Bacterial meningitis: infection of the membranes and fluid that covers and protects the spinal cord and brain
- Middle ear infection (otitis media)
- Sinusitis, Bronchitis

Who is at increased risk of pneumococcal disease?

- Young children and elderly individuals are most at risk.
- The children most at risk of pneumococcal disease are:
  - Children under 5 years of age, especially those under 2 years of age
  - Immunocompromised children
  - Those with influenza or other respiratory virus infections can get a second infection with pneumococcus.
  - Malnutrition, lack of breastfeeding, exposure to indoor smoke and crowded living conditions.
  - Poor and marginalized populations with poor access to health care.

What is the vaccination schedule for PCV?

PCV is to be administered in three doses (2 primary doses and 1 booster) at 6 weeks, 14 weeks and 9 months of age.

Age	PCV schedule	Other scheduled vaccines to be given along with PCV
6 weeks	**PCV-1***	**OPV-1, Pentavalent-1, Rota-1*, fIPV-1**
14 weeks	**PCV-2***	**OPV-3, Pentavalent-3, Rota-3*, fIPV-2**
9 months	**PCV booster dose***	**Measles-1/MR-1, JE-1***

* Where applicable

Microplanning

RI microplans already exist in my PHC/UHC. Do I need to review them?

Yes, RI microplans require to be reviewed every quarter. This ensures that all areas and all beneficiaries are included in the RI session due lists.

Why should we do the house-to-house survey?

The house-to-house survey is the most important activity in RI microplanning. It gives the exact count of pregnant women and eligible children, and is the basis for calculation of injection loads. This injection load estimation determines the number of sessions to be conducted in an area.

Why is head counting important for microplanning?

- Head counting identifies all beneficiaries (children and pregnant women) for immunization;
- When done correctly, it makes sure that no beneficiary is missed;
- It provides an opportunity to build community confidence in the programme;
- Due list preparation is based on head count;
- The head count is important for estimation of injection loads ,vaccines and logistics.

What should an ANM do if there is no ASHA in her area?

- After discussing with the sector MO or MOIC, she should plan for an ASHA from nearby to cover this area.
- With support from the ICDS supervisor, an AWW can also be deputed to help with the head counting.

OR

- After discussion with the MOIC, a local person who is involved with the polio programme, or who supports mobilization, can be called in to conduct the head counting after receiving training from the MO.

Is there any incentive for ASHAs under NHM for conducting house to house survey?

Yes, an ASHA is to receive Rs 100 twice in a year for conducting the house-to-house survey. (refer Unit 12)

Who is expected to conduct immunization at vacant sub-centres?

Any ANMof the adjoining area / SC with more than one ANM/ who has no planned sessions on the day should be delegated to conduct RI sessions in vacant sub-centres. In some cases, ANMs from other blocks can be deployed by block/district officials to conduct sessions for such vacant areas.

First line Management of Anaphylaxis in Field Settings

SOP for administration of one dose of Intra-muscular Adrenaline by ANM

Q 1. What is Anaphylaxis? How does it manifest?

Anaphylaxis is an extreme and severe allergic reaction, that is potentially life threatening. The whole body is affected, often within minutes of exposure to the allergen (substance causing the allergic reaction), but sometimes after hours. It occurs because the immune system overreacts to an allergen, and causes secretion of chemical substances that cause swelling of blood vessels. Common allergens include foods such as peanuts, dairy products, eggs etc. and non-foods such as wasp or bee sting, medications, vaccines, latex etc. The symptoms of an anaphylactic reaction include generalized flushing of the skin, nettle rash (hives) anywhere on the body, swelling of throat and mouth, difficulty in swallowing or speaking, alterations in heart rate, severe asthma, abdominal pain, nausea and vomiting, sudden feeling of weakness (drop in blood pressure), collapse and unconsciousness.

Q2. How will you suspect a case of anaphylaxis?

In anaphylaxis, there is sudden onset of symptoms which rapidly worsens. Individual may complain of difficulty in breathing and/or giddiness/loss of consciousness, hypotension, skin changes such as generalized rashes, swelling of the lips and tongue (angioedema), hives (urticaria) and flushing.The person may have had a severe allergic reaction or anaphylaxis in the past. However, this may be the first time. Sudden onset and rapid progression of ≥ 1 signs and symptoms of any of the two systems (respiratory, cardiovascular and dermatological/ mucosal) should be suspected as a case of anaphylaxis.

Recognition of anaphylaxis case in field setting

Usually respiratory, dermatological and cardiovascular systems are involved in anaphylaxis. In most cases of anaphylaxis, skin and mucous membrane are affected. The case of anaphylaxis is suspected if the following criteria are met:

Rapid onset and progression of ≥ 1 signs and symptoms of any of the two systems (respiratory, cardiovascular and dermatological/mucosal) as illustrated in Figure 3 (clinical features).

In addition to the signs and symptoms given in Table 1, following features could also be observed: anxiety, diarrhea, abdominal cramps, nausea, vomiting and sneezing or rhinorrhea.

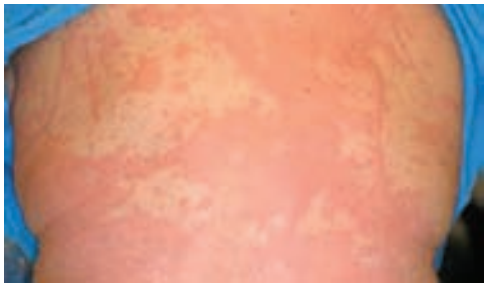
Table 1: Signs and symptoms of Anaphylaxis

System	Sign and Symptom
Respiratory	• Swelling in tongue, lip, throat, uvula or larynx • Difficulty in breathing • Stridor (Harsh vibrating sounds during breathing) • Wheezing (breath with whistling or rattling sound in the chest) • Cyanosis (bluish discoloration of arms and legs, tongue, ears, lips etc.) • Grunting (noisy breathing)
Cardiovascular	• Decreased level /loss of consciousness (fainting, dizziness) • Low blood pressure (measured hypotension) • Tachycardia (increased heart rate, palpitation)
Dermatological or mucosal	• Generalized urticaria (raised red skin lesion, rash with itching) • Generalized erythema (redness of skin) • Local or generalized Angioedema- itchy/ painful swelling of subcutaneous tissues such as upper eyelids, lips, tongue, face etc. • Generalized pruritus (itching) with skin rash

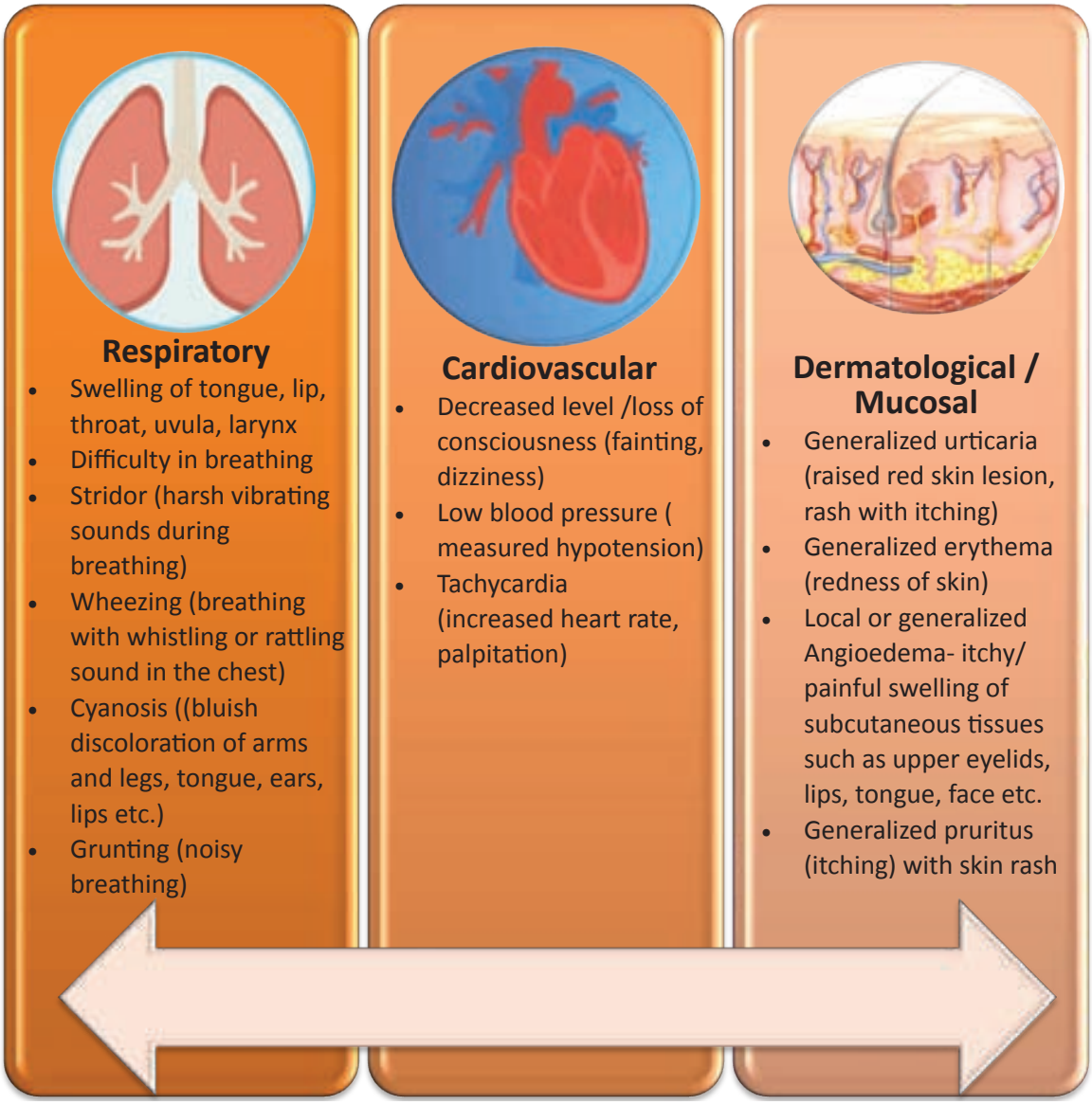
Figure 3: Clinical features

Picture 1: Angioedema

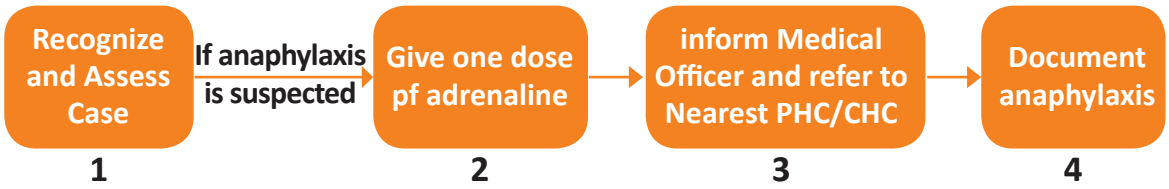
Picture 2: Cyanosis



Picture 3: Urticaria



The ANM should follow four steps for initial management of anaphylaxis cases.



Suspect Anaphylaxis in a case with following symptoms and signs

Assess Case

Rapid onset & progression of >= 1 signs & symptoms of any of the two systems (Respiratory, cardiovascular and dermatological / mucosal)

Respiratory:

- Swelling of tongue, lip, throat, uvula, larynx
- Difficulty in breathing
- Stridor (harsh vibrating sounds during breathing)
- Wheezing (breathing with whistling or rattling sound in the chest)
- Cyanosis ((bluish discoloration of arms and legs, tongue, ears, lips etc.)
- Grunting (noisy breathing)

Cardiovascular:

- Decreased level /loss of consciousness (fainting, dizziness)
- Low blood pressure (measured hypotension)
- Tachycardia (increased heart rate, palpitation)

Dermatological or mucosal:

- Generalized urticaria (raised red skin lesion, rash with itching)
- Generalized erythema (redness of skin)
- Local or generalized Angioedema- itchy/ painful swelling of subcutaneous tissues such as upper eyelids, lips, tongue, face etc.
- Generalized pruritus (itching) with skin rash

Manage anaphylaxis

Give one dose of adrenaline deep IM

- **Reassure** patient, parents/ relatives
- **Immediately administer** one dose of injection Adrenaline by deep IM route
- **Seek help to immediately arrange for ambulance** to transport the patient to the nearest health facility (PHC/CHC/District Hospital/Civil Hospital)
- **Do not leave patient alone**
- If patient is **conscious,** he/she should be kept in **supine position with lower limbs raised** higher than head
- If patient is **unconscious,** he/she should be kept in **left lateral position**

Referrals

Refer to higher center

- **Call for ambulance**
- **Inform MO** about the case for timely management

Document suspected anaphylaxis

Document suspected anaphylaxis on immunization card in block letters against vaccines administered

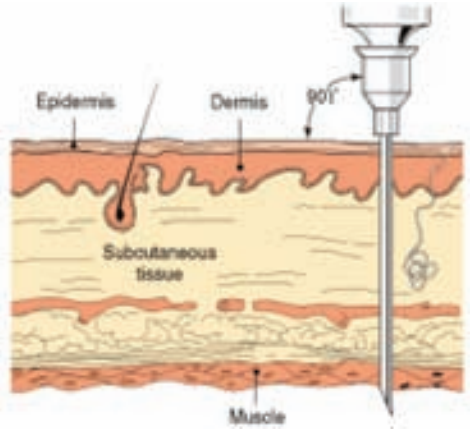
Steps for administration of injection Adrenaline by ANM

- Take one ampoule of adrenaline (1:1000) solution from the **Anaphylaxis Kit** and check name, dilution and expiry date on **label of vial** (not from kit label).
- Take a 1 ml syringe and 24/25 G needle of length 1 inch and load the required dose of adrenaline as per the age of the patient. [Table 2]
- Adrenaline ampoules are also labelled as Epinephrine. Epinephrine is another name for adrenaline.

Table 2: Age specific dosing chart of adrenaline (1:1000) for management of anaphylaxis

Age group (in years)	One inch needle gauge	Dosage (in mL) using 1 mL tuberculin syringe	Dosage (in units) using 40 units insulin syringe
0-1	24G/ 25G	0.05	2
1-6		0.1	4
6-12		0.2	8
12-18		0.3	12
Adults		0.5	20

- Use alcohol swab to clean the middle 1/3rd of anterolateral aspect of the thigh of the opposite limb to that in which vaccine is given.
- Hold the muscle mass on the anterolateral aspect of thigh with hands, stretch the skin (do not bunch) with fingers.
- Give deep intramuscular injection at 90 degree angle to skin in middle 1/3rd of anterolateral aspect of thigh.

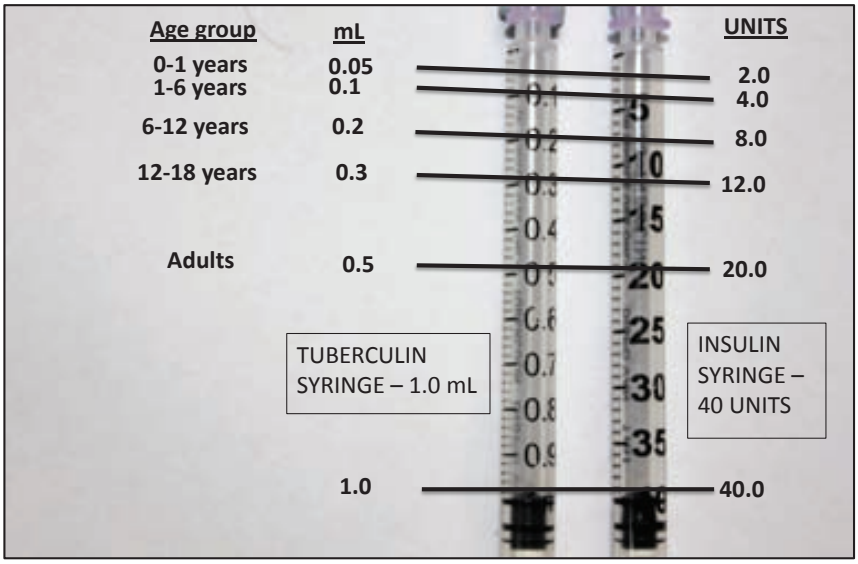


Source: Smith et al., 2000, p. 394

Ensure appropriate syringes and Needle availability at sub centre

- States/districts should procure and supply anaphylaxis kits with the following syringes and needles:
  Tuberculin syringe (1 ml) OR
  Insulin syringe (40 units) (without attached needle) – 3 nos./ANM

* 1ml tuberculin syringe comes with a detachable 0.5 inch needle. Procure 1 inch 24/25G needles separately and supply in anaphylaxis kit.



Anaphylaxis kit for ANM

Anaphylaxis Kit – Each kit should contain the following items:

- Annexure 2 of these guidelines to be taped to the inside of the box lid – 1 no.
- 1 mL ampoule of adrenaline (1:1000 aqueous solution) – 3 nos.
- 1 mL syringes – 3 nos.
- 24/25 G needles of 1 inch length – 3 nos.
- Alcohol swabs – 3 nos.
- Up to date contact information for the DIO and Medical Officer(s) of PHC/CHC and local ambulance services.

The kits can be stored in an air tight container. Ensure the drugs are not exposed to light which can cause deterioration. Ensure the contents of Anaphylaxis kits are verified in advance of every session so as to replace drugs before the expiry date.

Adrenaline Administration record

Name of Patient: _____ Age: _____

Date:_____

Adrenaline (1:1000 dilution) dose administered:

dose Amount: _____ mL

(if given)Time:_____ Site:_____

Anaphylaxis Kit

ANM should administer only one dose of adrenaline and refer the patient to referral center. Record of the administration of Adrenaline should be entered in the card above, which must be provided with the patient when he/she referred to medical officer. These details must also be recorded in immunization session summary and available with the ANM after transferring the patient.

About Adrenaline Injection

Adrenaline ampoules should not be exposed to temperature above 25 degree Celsius.

Key features of adrenaline are as follows:

- Description of drug: Adrenaline is a naturally occurring catecholamine.
- Dosage: 0.01ml/Kg body weight
- Route of administration: Intramuscular
- Site of injection: middle 1/3rd of anterolateral aspect of thigh in children and deltoid region of arm in case of adults.
- Preparation: injection adrenaline is available in 1 mg/ml preparation.
- Storage: Store in airtight containers, protected from light.
- Shelf life: 1 year

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