Urban Immunization

A tool kit for those planning to address inequitable immunization coverage in the urban context

September 2018

About the Urban Immunization Working Group
In January 2017, UNICEF and Gavi alongside WHO, CDC, BMGF, JSI, IFRC, Save the Children, London School of Hygiene and Tropical Medicine constituted a Working Group to create awareness about inequities in urban areas and support development of strategies aimed at improving immunization outcomes in urban areas, addressing specific needs of underserved urban communities. The Group meets in-person bi-annually and remotely quarterly.

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Introduction

Why a tool kit for urban immunization?

There is no standard definition for the term "city" other than "larger than a town[1]". "The traditional distinction between urban and rural areas within a country has been based on the assumption that urban areas, no matter how they are defined, provide a different way of life and usually a higher standard of living than are found in rural areas. In many industrialized countries, this distinction has become blurred and the principal difference between urban and rural areas in terms of the circumstances of living tends to be a matter of the degree of concentration of population.[2]" Common characteristics of areas considered urban are the high mobility of those who live there and the uneven distribution of wealth and services. As urban areas or cities have grown, in many cities, informal settlements or slums develop, with some considered illegal. These settlements are comprised of people who arrive attracted by opportunity and/or fleeing insecurity and poverty, people who leave for larger cities or to return to rural areas, people who move within the city, creating an intermixing of social groups which is less common in rural areas. There are often temporary migrants as well seeking seasonal work. While countries may have criteria for what qualifies as a city or urban, for the purposes of this document, the authors consider it applicable to any area characterized by a relatively large number of residents with high mobility.

The world is urbanizing rapidly, with small and medium size cities in Africa and Asia driving most of this trend. An estimated 54% of the world's population lives in cities as of 2017[2]. Socio-economic development has not always followed rapid urbanization. Some pockets or settings within cities are poorer than many rural areas. The general perception that urban populations have more resources and greater access to health services masks the underlying truth of pockets of under-served or excluded populations in urban areas. Health outcomes among urban poor or deprived can be worse than the rural average (see figure 1 below).

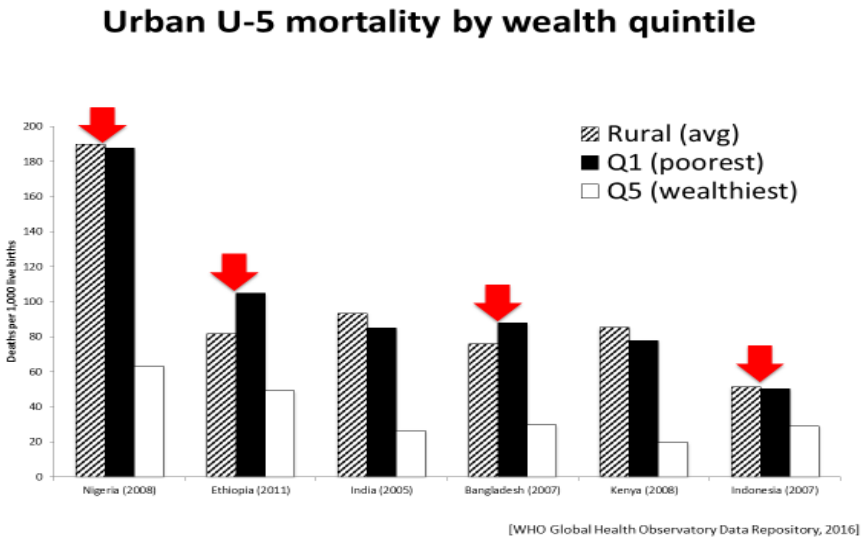

Figure 1. Urban Under-5 mortality by wealth quintile

[1] Webster's dictionary

[2] https://unstats.un.org/unsd/demographic/sconcerns/densurb/densurbmethods.htm

This disparity in under-5 mortality is related to the in-equitable access of the urban poor to health services including immunization. As seen in these data from India, access to services (deliveries in health facilities, immunization and modern family planning) is lower for the urban poor than for the urban rich. Immunization rates and underweight are as low as for the urban poor as for those in the rural areas.

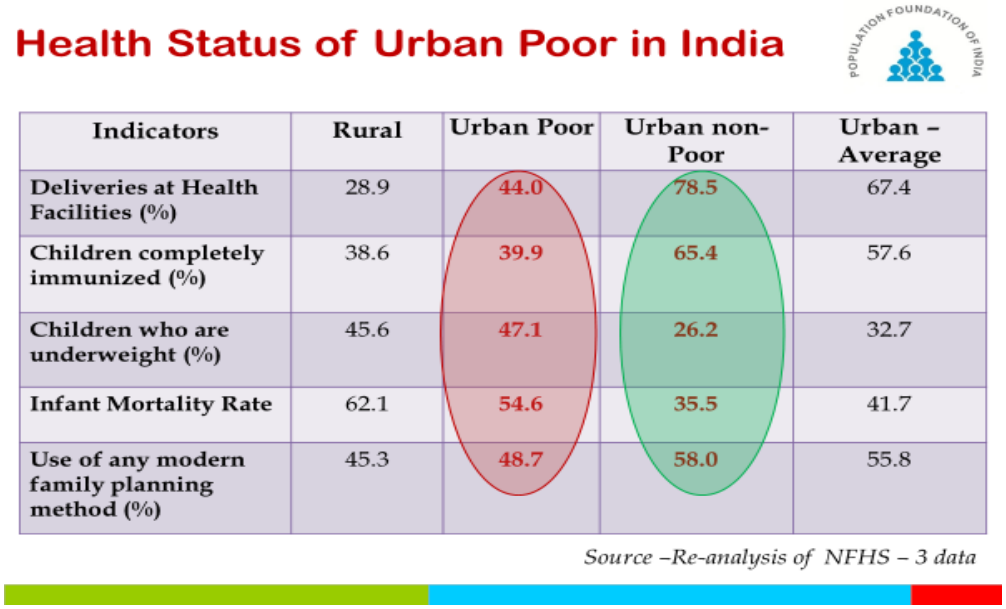

Figure 2. Health Status of the Urban Poor in India

Though the availability of accurate disaggregated data on this population is limited, the unvaccinated are more likely to be poor, socially marginalized, recently arrived due to economic or security related migration or other dimension of inequity. The concentration of a large number of unimmunized creates risks for outbreaks of vaccine preventable diseases among those already victims of circumstance which can spread to the rest of the population quickly.

In recognition of the needs of this unique population, partners are calling for a particular focus on identifying and addressing those needs. This document is aimed at providing those responsible the tools they need to do this, recognizing that:

- The equity-focused models that have been built for rural village structures must be adapted to urban realities.
- There is a need to strengthen cross-sector collaborations particularly with education and WASH which have worked with an urban focus for many years.
- Policy makers must be engaged to develop policies that prioritize the needs of disadvantaged populations in urban areas.
- Key actors including those in the private sector, Civil Society Organizations (CBO) and municipal authorities have influence on urban health projects.

It is hoped that readers will following the example of health staff in Pnom Penh, Cambodia who created the opportunity to visit an urban poor community to understand the situation of the urban disadvantaged. They heard of challenges facing families to balance work, visits to health facilities and other obligations. They spoke with health workers who described how fast the population had grown and how difficult it was

to serve everyone with limited resources. And they visited city managers and planners to understand their how they worked and the potential to work more closely. Together, they plan to work to bring essential health services to all.

Who should use this tool kit?

Anyone who is working to improve immunization and health outcomes for the urban disadvantaged should use this tool kit. While written with immunization staff in mind, the tools and methods can be used for any program, policy makers and planners, by Municipal civil authorities, by any Ministry, by non-governmental organizations and the private sector[3]. Ideally, it would be used by a coalition of all those working in the urban area to better locate, identify, characterize and serve the urban disadvantaged in a coordinated fashion with the aim of improving health outcomes.

How to use this tool kit

This tool kit is a complement to the many guides and handbooks already available including the World Health Organization's Urban Heart, providing tips and suggestions for how to tailor those to an urban disadvantaged context. It is organized using the 5 components of the Reaching Every District (RED) strategy[4] and could be used to tailor that strategy in urban areas at same time as district and sub district teams for unimmunized communities in rural areas.

Each urban center is unique. There are several literatures reviews[5],[6] that summarize the challenges in urban areas but there is currently a lack of publications on effective interventions[7] tailored to them, so while this tool kit includes information on proven interventions, it also links users to new ideas, articles and innovations that are not yet proven. Users are encouraged to contact their counterparts in other countries, reach out to corresponding authors of related articles many of whom will share tools and details of methods as well as challenges not detailed in the articles, do their own searches on PubMed, Google or other search engine and share their experiences through the Urban Immunization Community of Practice.

Terms commonly used when discussing urban centers are "peri-urban", "suburban" and "slum" all of whose definitions may vary by country and even by urban area. In this toolkit, we have tried to avoid use of the terms given this lack of standardization but also given that the disadvantaged are not always living in any one area, nor are they necessarily defined purely by socio-economic standing. Each country/ urban area is encouraged to decide geographically, socioeconomically or otherwise who the disadvantaged are in their context and tailor the approach accordingly.

[3] In this tool kit, Private Sector includes not-for-profit, for-profit, enterprise-owned and operated and anything that is not government run unless otherwise specified

[4] RED components: 1. Planning, Coordination and Management of Resources, 2. Reaching all Eligible Populations, 3. Engaging with the Community and Social Mobilization, 4. Conducting Supportive Supervision and 5. Monitoring and Using Data for Action

[5] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5465583/pdf/12889_2017_Article_4473.pdf

[6] https://www.ncbi.nlm.nih.gov/pubmed/28595624

[7] http://europepmc.org/articles/pmc5309783

The tool kit is meant to be brief, allowing users to take advantage of the links provided on an as-needed basis. Users are encouraged to do a thorough situation analysis which will steer them to the relevant sections of this and other guides.

The document is organized with brief sections outlining the tools and methods available to adapt other approaches to the urban disadvantaged setting, with links to annexes or websites that provide more detailed instructions to those interested. There are also annexes for how to incorporate parts of this into training programs, EPI reviews or other standardized activities. It requires an internet connection but once tools and strategies are chosen and adapted from among those included here, they should be downloaded and adapted for use where internet is not available. Users are encouraged to browse the tool kit but only use those portions that are applicable to their situation and their setting.

A potential process for implementing this guide:

The icon  indicates that there is a link in the text that will provide definitions, descriptions or examples to the reader. The actual link can be followed by clicking on the underlined, blue text. This icon is not used in the tables.

Each Component begins with a flow chart (e.g. figure 3) which outlines the steps included in the RED guide that are applicable to any setting. The tables following the flow chart present possible challenges and potential interventions to address them.

Boxes are used for examples from the field. Unless a link is provided, there is no additional information. They are intended only to spark creative thinking, exchange and – if potentially interesting - experimentation.

1. Planning, Coordination and Management of Resources

1.1 Existing resources for Planning, Coordination and Management of Resources:

- MLM, module 6
- Immunization in Practice, Module 4
- Reaching Every District, chapter 3

1.2 Planning, coordination and management of resources: addressing the disadvantaged in urban settings

The urban setting may provide great facilities for service provision given the relatively smaller distances and greater availability of resources, including health workers, networks, transportation and other amenities. The proximity of several administrative and political authorities, non-governmental organizations, civil society organizations and for-profit enterprises can be both a complication for planning and an advantage in terms of resources and common interest. The same can be said of private health practitioners who may be co-opted into the provision of immunization services while complicating the assurance of quality service delivery, planning and monitoring. These can be brought together to address the needs of a population who, in urban settings, is typically more recently arrived, has fewer ties to traditional structures, is more mobile and may be financially, socially or otherwise disadvantaged. They may also be in newly settled areas that are not officially recognized – or explicitly illegal – and are therefore not included in planning.

Immunization plans in the urban setting should be structured to show the involvement and contributions of civil authorities, non-governmental and civil society organizations as well as the for-profit private sector. There should be specific, measurable targets for reaching and vaccinating the urban disadvantaged. Some examples of targets and measurements are included in the annex.

This section provides some tools and examples on how to conduct a thorough situation analysis in an urban setting especially in urban poor or underserved communities; some service delivery models that address the unique challenges for mobile, newly arriving, double employed families, living in informal/ not sanctioned settlements; and opportunities for garnering resources.

In the Cite de Soleil, an urban area with a large disadvantaged population in Haiti, partners conducted a detailed situation analysis which allowed them to jointly plan short and long-term strategies to address the challenges in that area. Over 9 months in 2017, they were able to achieve measurable improvements in data quality, number of children vaccinated and vaccine supply chain. More details are available on-line.

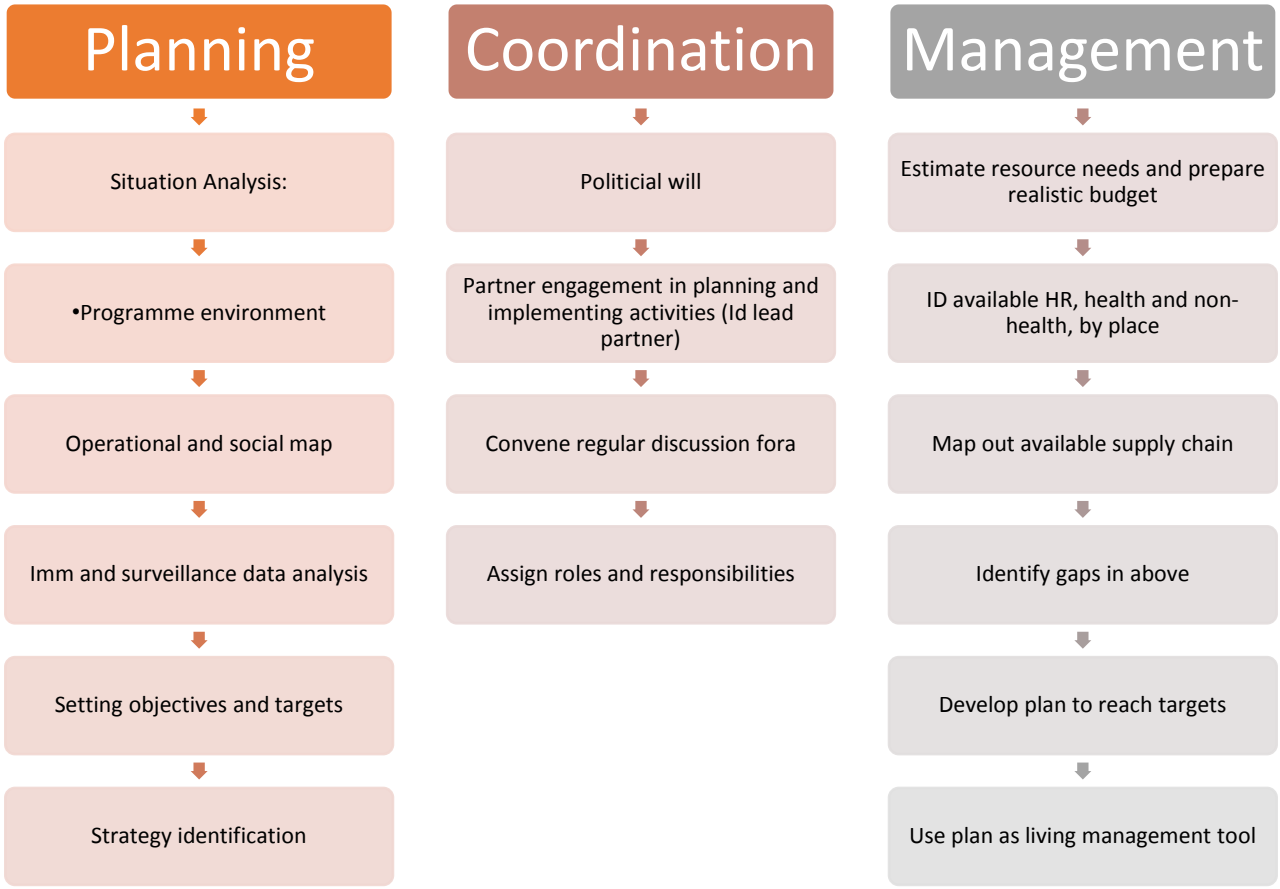

Figure 3. Planning, Coordination and Management of Resources Flow Chart

1.2.1 Situation Analysis

The presence of NGOs, CSOs, the private sector, academic/training institutions and research organizations presents a great opportunity for collaboration and / or contracting for a situation analysis.

Table 1. Challenges and Potential actions, urban situation analysis

Challenge	Potential actions	Comment
Multiple actors in health / immunization / social services	Define roles and responsibilities for health in the urban area.	Is there already a forum for collaboration and coordination among the actors in general or for immunization?
	Conduct thorough situation analysis (Example: Kenya, Pakistan) with partners	Include private sector evaluation, assessing patterns of vaccination seeking behavior and practices
Denominators out of date	Assign targets based on past performance and comparison of trends and data from public and private sector	If an urban area finds that the denominator is greatly different from the official figures, this can have serious implications on national planning for resources, including vaccines. It may also signal the need for additional staff, public facilities and reallocation of supplies and equipment.
	Calculate based on population figures used in polio or measles campaigns (for a 0-5-year-old campaign, surviving infants is 1/5 the campaign target)	
	Collaboration with civil registration	
	Capture/recapture	
Catchment areas may not correspond to patterns of care seeking behavior Care givers may change facilities Private sector provision of services	Comprehensive, sortable list of health facilities, including pharmacies, by public/private non-profit/private for-profit and services provided.	Mapping of HF, including pharmacies, by population density.
	Frequent updating of populations.	Grid overlay with annual census Microcensus
Illegal settlements may be ineligible to be covered or counted officially	Mapping of the political landscape Intersectoral advocacy (for example education, WASH nutrition)	Potential negative effects of highlighting illegal settlements

1.2.2 Strategies for Service Delivery

Once a thorough and updated situation analysis has been done, a bottleneck analysis examining 5 indicators of supply and demand as well as levels of initial utilization, adequate coverage and effective coverage (Ghana example) should be conducted to facilitate planning health services including immunizations to reach the disadvantaged. All potential actors for service delivery should be tapped to offer care-givers access to high-quality, affordable health services. Roles and responsibilities for NGOs, CSOs and other partners should be delineated, including participation in planning, representing a sector of the disadvantaged population or service provision. To succeed in reaching the most disadvantaged, service delivery must be planned as CLIENT centered rather than the traditional service centered approach – who are they, where are they and how would they like to be served?

Table 2. Challenges and Potential actions, urban service delivery

Challenge	Potential actions	Comment
New settlements outside of currently delineated catchment areas	Mobile clinics	Coordinate between partners to avoid overlapping service delivery
	Semi-permanent structures for outreach (refurbished containers, schools etc)	
	Advocacy for new health structures	
	Contracting with private providers	
	Update catchment area maps	
	Liaise with settlement administrators and local authorities to assure that all are covered in planning	
	Review policies on allocation of health facilities and personnel by administrative unit, adjusting them for population	
Caregivers in full time economic activity	Extended service hours (evening, weekend)	Extended hours might require additional payments, additional security to staff
	Permanent vaccination sites in markets, near transit stations, along migratory routes	
	Daily vaccination in all fixed sites that have cold chain	Also facilitates implementation of MOV
	Coordination of vaccination days, e.g. every Wednesday	
	Outreach in workplaces (factories, markets, etc)	Advocacy with large employers to encourage vaccination and allow absence for preventive services, for example highlighting days lost due to children's illness.
	Outreach in day care centers is helpful	Permission from care givers will probably be needed beforehand. Be careful not to create a problem.
Children of mobile families fall behind on schedule	Use appropriate, tailored communications for reminder/recall	
	Assure that policies allow for catching a child up on missing vaccinations beyond the first birthday	This may require additional vaccine and should be carefully planned
Poor security in slum areas for facilities, equipment, staff and caregivers	Collaboration with security officials and communities for safety	This should be planned jointly with the community in case of negative impact
Children never begin vaccination	Initiate defaulter tracking during ANC visits	
Costs of vaccination cards or services put it out of reach of urban disadvantaged	Contract for free services for urban disadvantaged	
	Provide vouchers for vaccination cards and services for urban disadvantaged	

1.2.3 Resources

Urban immunization may have the advantage of having more resources available, for instance a large pool of health workers either trained or enrolled in training institutions. But with the competition for these resources, they may be more expensive and they are often not allocated to those areas/families in greatest need. Availability of technology and networks allows for early adoption of the use of SMS and real time reporting to monitoring and replenishment of vaccines and supplies.

Table 3. Challenges and Potential actions, urban resource management

Challenge	Potential actions	Comment
High turnover / shortage of staff due to competition	Establish/take advantage of Continuing Education requirements	
	Enhanced supervision, including SMS messaging	
	Contracting with private sector, Universities, training institutions or private companies for appropriate requirements	Examples include surveys, independent monitoring, evaluations, financial accountability and service provision
	Recruit and train health workers/ mobilizers from within the communities for job-creation and community engagement	
Community health workers unwilling to work for free	Partnership with NGOs, CSOs large companies	
High cost transport/ rent for facilities	Partnership with NGOs, CSOs large companies	Can include organizations not working in health such as Mobile phone networks for 2-way communication, banks for direct contributions and others
	Partnership with municipality	
Outdated/inaccurate denominators lead to insufficient resources allocated to vaccination among urban disadvantaged, new/informal settlements etc.	Advocacy for acceptance of more accurate population figures	
	Prioritize low cost interventions that make use of existing infrastructure / staff	
Inefficient, ineffective planning and resource mobilization	Involve non-traditional actors in planning, contract out resource mobilization	Universities with urban planning section, planning and accounting firms Taking advantage of increased availability in urban settings

In a small city in Guinea, the local fish company was owned by a member of the Red Cross. When planning a measles campaign, health staff realized that they did not have enough cold chain to properly prepare the ice packs. Doing a quick mapping exercise of potential partnerships, they approached the owner of the fish company who volunteered to lend his solar cold chain for preparing ice packs free of charge.

2. Reaching all Eligible Populations

2.1 Existing resources for reaching all eligible populations:

- Reaching Every District, chapter 4, Tool 1b
- Immunization in Practice, Module 4
- Measles and SIA Planning and Implementation Field Guide, 3.5 Planning to reach "hard-to-reach" populations

2.2 Reaching all Eligible Populations: Identifying the disadvantaged in urban settings

This component hones the plans developed in the first chapter to focus on the un-reached and planning specific interventions to reach them. While in some cases, the urban disadvantaged may be living in slum areas, in other cities, they are more scattered or defined more by social norms than poverty or location. These populations may have been described in the situation analysis above. In this section, we cover some additional steps to assuring equity and reaching the disadvantaged in social mapping.

It is important to remember that "Eligible" in the context of vaccination does not refer to legal or other status but only to being in the age range for vaccination. As mentioned above, exclusion of any segment of the population from the life-saving benefits of vaccination not only harms that individual but creates an un-necessary and unacceptable risk to the entire population of that urban area and beyond by allowing highly communicable diseases to take hold.

Figure 4. Reaching all Eligible Populations Flow Chart

Table 4. Challenges and Potential actions, reaching all eligible urban populations

Challenge	Potential actions	Comment
Identifying, understanding and characterizing the urban unreached.	Add urban focus to all assessments, quantitative and qualitative data and CSO analyses	Involve private sector in microplanning and mapping;
	Add fields to surveillance for malnutrition etc.	Recruit private sector providers in surveillance. Identify and include private laboratories in surveillance.
	Partner with urban poor communities as key champions	
	Snowballing	
	Partnering with NGOs, CSOs	
	Map the unvaccinated	
	Check immunization status for young children in schools	Disadvantaged may not attend school, recall may be poor by age of school entry, gender bias may be greater for school than for immunization
	If non-enrolled school age children are reachable, they can help to identify unvaccinated siblings	
	Review accessibility of fixed facilities via social mapping to ensure that potential urban-specific barriers (conflict/security, transport time/cost, etc.) are taken into account.	
Legal status of some new settlements	Mapping of political landscape	Potential negative effects of highlighting illegal settlements
	Intersectoral advocacy	

3. Engaging with the Community and Social Mobilization

3.1 Existing resources for engaging with the community and social mobilization:

- Immunization in Practice, Module 7
- Reaching Every District, Chapter 5

3.2 Engaging with the Community and Social Mobilization: Connecting with the disadvantaged in urban settings

Some of the challenges that have been highlighted in the literature for the disadvantaged in urban areas is the loss of social cohesion, lack of traditional hierarchies, multiplicity of languages, discrimination based on ethnicity, poverty, religion and the effects of the high cost of living on volunteerism. On the other hand, urban communities are more likely to have access to media, including social media and there are more associations, civic groups and CSOs with social agendas.

Figure 5. Building Partnership Flowchart

In India, the National Urban Health Mission (NUHM, GOI program) sponsored the operation of Mahila Arogya Samitis (MAS), women's groups representing 50 -100 households among the urban disadvantaged. These could be existing groups or ones created under NUHM. More information is available in the annex.

For urban settings:

Table 5. Challenges and Potential Actions, Building partnerships in urban environments

Challenge	Potential actions	Comment
High mobility/lack of awareness of locations of HF	Signs with directions and hours of operation on major intersections and transportation routes	Public facilities may have less flexibility with signage and internet-based information Signs should resonate with the disadvantaged community as well context, i.e. their language, a flag, or a using a familiar logo.
	Make locations and schedules etc available on internet, FaceBook, etc	
	Standard vaccination schedules within the city (every Wednesday, every day at 10)	
	Home visits	
Lack of social cohesion/traditional leadership	Partnership with associations, CSO, civic groups with social agendas	Messages may need to be in multiple languages
	Radio, television, SMS and WhatsApp groups. "Help lines", where the user does not pay for airtime, can provide key messages about immunizations and vaccination services.	
	Support groups	
	Partnership with employers	
More rapid spread of rumors and mis-information	Assure that risk communications around any AEFI are planned, tested and ready to be shared through all media should the need arise.	Assure that AEFI do not result in ostracism of any groups.
	Monitor media for negative messages around vaccination and vaccines	
	Proactive training of journalists, encouraging champions of health journalism	
Lack of trust in health care system	Community health workers should be chosen from any disadvantaged segment or sub-segment of the community	
	Future qualified health workers could be recruited from among the disadvantaged communities for training	
	Integrate key principals of community engagement in all training curricula and content	
Lack of rapport between HW and community, perhaps due to differences in language and background	Encourage HW to understand community better	HW conducting focus groups or data collection can increase their contact with and thus understanding of communities
	Making supervision supportive to model interactions	See Supportive Supervision chapter
Lack of demand	Mass-media campaign with messages tailored to disadvantaged using radio, TV, print or on-line media	Messages may need to be in multiple languages

In Mongolia, many health facilities even in rural areas have internet pages, FaceBook pages and twitter accounts to maintain contact, including with the highly nomadic population they serve.

In Mali, working with community television, panels of experts from local private practitioners and the Medical school, were convened for a round table about vaccination.

4. Conducting Supportive Supervision

4.1 Existing resources for conducting supportive supervision:

- MLM (Module 4)
- Reaching Every District, Chapter 6
- Management of Health service delivery
- Guidelines for implementing supportive supervision

4.2 Conducting Supportive Supervision: Assuring high quality services for the disadvantaged in urban settings

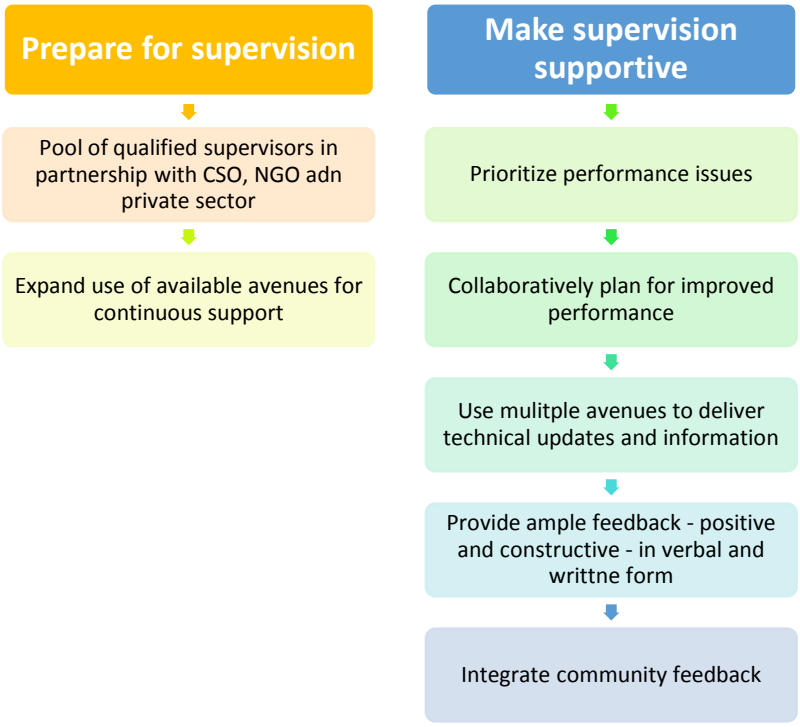

Figure 6. Supportive Supervision Flowchart

While the urban setting provides more opportunities leading to high turn-over, it also presents opportunities thanks to the closer proximity of facilities, the availability of mobile networks, mass media and the availability of Universities and training institutions.

Table 6. Challenges and Potential Actions, urban supportive supervision

Challenge	Potential actions	Comment
High turn-over, low motivation	Enhanced supervision, including SMS messaging, WhatsApp groups	Techniques take advantage of close proximity
	Partner with training facilities for coaching and training	
	Quarterly meetings for continuing education	
	Peer to peer training	
Quality of services in private sector	Establish/take advantage of licensing (social franchising) requirements	
	Establish/take advantage of Continuing Education requirements	
	Inclusion of training and supervision in private sector agreements	
	Display of "authorized provider" on wall	
Costs of vaccination cards or services put it out of reach of urban disadvantaged	Assure that public and private facilities are respecting norms, contracts etc regarding charging for vaccination during supervision and in discussion with community	

A training program in El Salvador worked with local Universities whose faculty served as coaches for the District-led in-service projects that were part of the training. Contact could be in person, by telephone, or email but were easier for those in the urban districts close to the University. Competencies were greatly improved after the training.

In Nigeria, the Government provides vaccines, training and equipment to private providers. In some local government areas, a convention is signed stipulating that vaccines will be provided free of charge for providers following all quality standards set out by government. Private providers are also to grant access GON technical staff for quality assurance purposes.

5. Monitoring and Using Data for Action

5.1 Existing resources for monitoring and using data for action:

- MLM, Module 5
- Reaching Every District, Chapter 7
- Upcoming data handbook

5.2 Monitoring and Using Data for Action: Using data to assure that the urban disadvantaged have been immunized

Figure 7. Monitoring and Use of Data Flowchart

In general, routine administrative data are not disaggregated by wealth quintile or other category permitting analysis for urban disadvantaged. All the challenges mentioned in the planning, coordination and resources section regarding the denominator will also impact efforts to monitor coverage in urban areas and among the urban disadvantaged. In addition, for surveys whose sampling frame depends on censuses completed before recent migrations and growth, those sampling frames are out of date and may miss concentrations of the most disadvantaged.

Interpretation and use of data is also complicated by the urban setting. Where coverage is low, it may be because residents go elsewhere for vaccination by choice. Coverage may be above 100% either due to the arrival of new residents in the area or because services are perceived to be superior and families are drawn from neighboring areas. Where drop out is high, staff will often claim that the family has moved.

- It is essential to assure that the highest coverage with all antigens is achieved among all segments of the population through an appropriate combination of methods mentioned below as well as the use of standard tools and methods.
- Other actions will depend on country and city priorities, for example:
    - A city may decide that it is important to assure that families are accessing and completing immunizations in the nearest, free public health facility. In which case, action would be

taken to draw families to those facilities which are currently losing families to more distant private facilities.

- Or a city may decide that they want to promote the use of private facilities and will, therefore, monitor for a progressive increase in the availability and use of those.

Table 7. Challenges and Potential Actions, monitoring and use of data in urban setting

Challenge	Potential actions	Comment
Unreliable targets and hence outcomes not accurate (Coverage data over 100% or under 50%)	Assign denominators and monitor by past performance	Care must be taken that this does not leave out recently arrived or moved populations. Surveillance data (see reaching all eligible populations), RCM or LQAS (below) can be used to spot check coverage among disadvantaged population
	Use of surveys to monitor coverage Where DHS or MICS are planned, samples should allow for disaggregation by groups of interest	Where sampling frames that surveys are based on are out of date, census information, the use of geographic grid for sampling could assure that recent arrivals are included (Representative surveys in insecure environments: a case study of Mogadishu, Somalia, Driscoll J, JSSAM (2014)2, 78-95)
	LQAS to confirm estimates at district	
	Use of rapid convenience monitoring to detect pockets of low coverage	
	Joint monitoring with community, CSO others	
Inaccurate drop out due to high mobility	Electronic registries	
	Joint monitoring with community, CSO others	
Poor timeliness and completeness of reporting	Use of technology to transfer data	
	Work with private providers to find win-win for reporting	Private providers may hesitate to report for tax related reasons or other
	Joint monitoring with community, CSO others	
No participation of community members in service delivery and monitoring	Conduct joint review and monitoring meetings with community members	Including discussions about urban health, this builds capacity within community and fosters accountability

Annex A – Use of Urban Immunizations Tool Kit

For training:

Once a program has decided which of the approaches and tools included in this toolkit are useful to them, future trainings should include a focus on the urban disadvantaged.

One approach is in the **presentations** to include examples of how the material has been or could be useful in urban settings. These examples should be identified prior to the training and provided to facilitators.

> Examples of highlighting the urban disadvantaged:
>
> "When doing situation analysis and coalition building in the urban context, the bread makers union was one association that we found to be especially active among mothers in the city of Ficticia. What groups or stakeholders do you think would be important in your city?"
>
> "When planning to Reach All Eligible Populations, District Teams should include activities to reach specific hard-to-reach populations. In the context of our country, that includes nomads in the northern districts. In urban areas, we have found that those with full time employment in clothing factories are most likely to have unvaccinated children".

When tools are presented, if specialized tools have been adopted for the urban settings, be sure to include those in the presentations and hand out only to urban teams.

For working groups and exercises, participants from urban areas should work together on specific **exercises** for their populations, using the approaches the program has adopted.

Example: Learning activity 2.1 from Mid-level Managers training, Module 2, Partnering with Communities, the facilitator of the urban working groups should be prepared to probe participants to be sure they have thought of all potential partners, with the approaches and tools the programme recommends for tracking newborns in urban areas especially in urban poor communities etc.

Learning activity 2.1: Identify community groups and prioritize their participation in strengthening the immunization programme.

List the key community groups and representatives in your health area.

Beside each item in the box below, note which community groups/representatives could assist with each activity.

Discuss and put a "*" by the three most important activities in your catchment area.

Community involvement activity	Community group / representatives
1. Advocate and provide human, financial and logistical support.	
2. Ensure effective planning (place, time and location) for immunization sessions for routine, outreach and mobile.	
3. Identify and refer newborns.	
4. Track and follow up defaulters.	
5. Publicize immunization sessions	
6. Develop advocacy and mobilization messages.	
7. Assist with transport and other resources (e.g. fuel for cold-chain equipment or meals for outreach).	
8. Encourage and train volunteers to assist at immunization sessions.	
9. Communicate with local people and inform health officials about suspected vaccine-preventable diseases (VPDs) and adverse events following immunization (AEFI).	
10. Monitor the immunization programme by going through the coverage data with the health team.	

For assessments and reviews:

For assessments and reviews, such as the EPI review, MOV assessment, surveillance review, specific mention should be made regarding the situation in the urban settings.

The desk review should include whether

- the urban disadvantaged have been highlighted as a priority group for targeting with immunization services, and where necessary prioritized in key national strategies like multi-year plans or policy documents
- specific approaches and tools are in use in the country and addressed in norms, standards and training materials

Coverage surveys should be powered to allow analysis of coverage levels by wealth quintile in the urban settings. The sampling frame should also be adjusted to take in to account new settlements, informal settlements and other urban circumstances. Consider specific sub-national studies in urban areas of concern (Vietnam 2015).

Field reviews should take concerns regarding the urban population into account in the site selection. Interviews should include administrative authorities, NGOs and CSOs in each urban center. In the absence of a coverage survey or if the survey is not detailed enough, consider RCM among the most disadvantaged to assess the situation.

The analysis and report of all assessments and evaluations should include a section dedicated to the urban disadvantaged.

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Annex B – Illustrative targets and benchmarks

A country's planning and monitoring documents should include explicit mention of the urban dis-advantaged. Urban centers should have plans developed in collaboration with civil authorities and other local partners (Education, WASH, NGOs, CSOs) which include specific targets and benchmarks for the urban disadvantaged. Some examples for an urban health plan below.

Activity	Indicator	Measure	Responsible
Develop comprehensive list of communities by place and characteristics	List completed	Report	CSO1 and CSO2
Health facilities mapped	Map completed	Report	Provincial EPI and Interfaith Coalition for Health
EPI micro plan providing sessions for disadvantaged populations developed	Micro plan completed	Plan	Provincial EPI
All vaccination sessions conducted as planned All special vaccinations for urban disadvantaged conducted as planned	% planned sessions held % planned special sessions held	Monthly reports Supervision reports "Pulse checks" among urban disadvantaged, question "have you gone for vaccination and the staff weren't there?"	Medical college under contract to monitor
% zero dose or not up to date for age <5 among urban disadvantaged	% zero dose % not up to date for age	Report measles campaign RCM reports	Provincial EPI Medical college under contract to monitor
Media campaigns targeting urban disadvantaged developed and conducted	% planned activities implemented % caregivers among urban disadvantaged aware of and accessing immunization services	Monthly reports "Pulse checks" among urban disadvantaged, question "Have you heard about vaccinations", "have you gone for vaccination?"	Medical college under contract to monitor

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Annex C – situation analysis, Kenya

Situation of Routine Immunization in Urban Poor Areas of Kisumu City, Kenya

Iqbal Hossain, Evans Mokaya, Isaac Mugoya

www.MCSprogram.org

Site Selection for the Assessment

The assessment was conducted in 14 health facilities and eight slum areas located in the catchment areas of those facilities. The facilities, representing 20% of all health facilities in the city and 40% of those providing immunization services, were a **convenience sample of facilities that provided immunization services and contained a slum in their catchment areas**. The facilities selected included seven public facilities (three hospitals, one health center, and three dispensaries), three faith-based facilities (two health centers and one dispensary), and four private facilities (hospitals).

Assessment Tools and Processes

There were 5 data collection tools for the assessment: a form for the In-depth Interview (IDI) with the subcounty Expanded Programme on Immunization (EPI) focal person, a form for IDIs with nurses at the facility, a form for Focus Group Discussions (FGDs) with mothers of partially immunized children, a form for FGDs with mothers of fully immunized children, and a form for FGDs with community health volunteers (CHVs). A total of 15 IDIs were conducted, 8 focus group discussions and 600 household surveys.

In the health facilities, the interviewer conducted the IDI with nurses, then reviewed with them the cold chain, supply chain, and EPI data for their facility. The interviewer conducted a survey with 75 households with children 12–23 months old in each of the eight slum areas visited using the World Health Organization 75 household survey protocol. The purpose of the household survey was not to estimate immunization coverage but to gain insight into the immunization status of children in the slums living in close proximity of health facilities offering immunization services and to identify mothers of partially/fully immunized children for the FGDs.

Mothers of partially immunized children were asked why they did not complete vaccination schedules. They were also asked to suggest ways to remind mothers/caregivers about vaccination due dates and how their health facility could improve RI services.

Mothers of fully immunized children were asked to explain what enabled and motivated them to fully vaccinate their children. They were also asked to give suggestions on how to improve RI services and their opinion on the best ways to remind people about vaccination due dates.

CHVs were asked about their roles in RI and the management of vaccine-preventable diseases, how they follow up on vaccination schedules, their perception of the reasons why children are never or partially immunized, their opinion on the best ways to remind people about return dates, what they believe the barriers are to accessing immunization service for the urban poor population, the duration of their immunization training and what content it included, and what they saw as their future training needs.

Written and verbal consent were collected from the assessment participants before conducting the IDIs and FGDs. The subcounty EPI focal person accompanied the team and observed the processes during the entire assessment period.

Assessment Tools

Appendix 1: In-Depth Interview Form

Name of city/health facility: _____ Position of key informant: _____

Type and ownership of health facility:_____/_____ Date of interview:_____/_____/_____

Demographic Information

How many wards in this city/served by this health facility: _____ How many slums in this city/catchment area of the facility: _____ Total slum population in the city/catchment area of the facility: ____

Name and Location of Slums in the City/Catchment Area of the Facility

Name of slums	Location	Population

Health Facilities in the City (Note: for city health manager only)

Type of facility	Ownership	# provide routine immunization service
Dispensary		
Health Center		
Hospital		

Human Resources for Expanded Programme on Immunization in the City/Health Facility

Name of the position	# available	# vacant	# trained in Expanded Programme on Immunization

Expanded Programme on Immunization Plan and Strategy

1. Do you have an Expanded Programme on Immunization (EPI) microplan for the city/catchment area?
2. Is the microplan up to date (see the microplan)?
3. What percentage of this year's plan was funded? If not, what percentage is funded?
4. Does the microplan have EPI service information (fixed and outreach)?
5. Does the microplan have EPI targets (annual/monthly)?
6. Does the microplan have targets by each immunization site?
7. Does the microplan have names of health workers by site?
8. Does the microplan have slum-specific EPI target/service info?
9. Do you have a specific plan or strategy to reach children living in the slums?

Cold Chain in the City/Facility

10. Does the micro plan list all cold chain equipment by location, it's status and costs associated with maintaining it?
11. Do you have a cold chain system in your city/health facility? If yes, what cold chain equipment do you have?

Name of equipment	# available	# functioning
Freezer		
Refrigerator		
Cold box		
Vaccine carrier		

12. Are the vaccines arranged in the fridge as per EPI guideline?
13. Is temperature-monitoring device available in the fridge?
14. Can the health worker interpret the recording of the temperature-monitoring device?
15. Availability of Vaccines in the City Store/Health Facility Store

Vaccines	Available	Stock-out (in last year)
BCG		
Penta		
Oral Polio vaccine		
IPV		
PCV		
Rotavirus Vaccine		
MCV		
TT/ Td		

Availability of EPI Logistics

Items	Available	Stock-out in last year
BCG syringe		
0.5 ml syringe		
Mixing syringe		
Sharp container		
EPI card		
Tally sheet		
EPI Register		
Report form		

Availability of Financial Resources for EPI

	Available	Amount
Fund for outreach		
Fund for vaccine transportation		
Fund for printing materials		
Fund for purchasing syringes / vaccines		
Fund for supervision		
Fund for monitoring		
Fund for cold chain maintenance		
Fund for spare parts		

Supervision System

16. How frequently do you supervise/are you being supervised?
17. Frequency of supervision visit?
18. Do you use the supervision checklist?
19. How do you give/get feedback on supervision?
20. How do you use the supervision feedback?
21. Monitoring System
22. What is your annual and monthly target for children?
23. How many planned outreach session were actually conducted last year?
24. Do you disaggregate EPI data by slum/nonslum areas?
25. How do you use data for programmatic action?
26. How do you track the defaulters?
27. Do you have a coverage-monitoring chart?
28. Is your monitoring chart up to date (see the chart)?

Community Linkage

29. How do you link with community for demand generation?
30. Do you have any specific strategy to reach slum population?
31. Do you use cell phone to communicate with parents/caregivers?

32. Any other way you communicate with the mother/caregivers?
33. Civil Society Involvement
34. How do you involve civil society (CS) in health care service?
35. Does the CS support routine immunization program? How?
36. Name the CS involved in routine immunization in your city/catchment area.
37. Coordination among Stakeholders
38. Do you have a coordination committee in your city/facility?
39. Are all stakeholders represented on the coordination committee?
40. Are there members in the committee from the slums?
41. How often does the coordination committee meet?
42. Do you have minutes of the coordination meeting?
43. Challenges
44. What challenges do you face in providing EPI services for children of people living in slums?

Focus Group Discussion Guide

Welcome and make introductions.

Thank the participants for agreeing to participate. Introduce yourself and the notetaker. Ask participants to introduce themselves. Tell the participants that we are very interested to hear your valuable opinion on how the subcounty health department can improve the routine immunization program for the children and women of this community.

Get the consent of the participants. Follow the process below:

Thank the participants again for agreeing to participate. Explain that the purpose of this discussion is to learn things that the subcounty can use to improve access to and utilization of routine immunization services for this community.

Explain that we will take note of your thoughts, opinions, and ideas, but the information you provide will be kept completely confidential. We will not associate your name with anything you say in the focus group. We will also request you to respect each other's confidentiality.

Participants may refuse to answer any question or withdraw from the discussion at any time.

If participants agree and give consent, we will go ahead with the discussion.

Explain the process of focus group discussion.

Ask the group if anyone has participated in a focus group before. Explain the focus group discussion process:

Focus group will last about 1 hour.

Feel free to move around.

Help yourself to refreshments.

We learn from you (positive and negative).

We are not trying to achieve consensus—we're gathering information.

Ground rules:

Everyone should participate.

Stay with the group, and please don't have side conversations.

Turn off cellphones if possible.

Begin Discussion

Ask question in order. Make sure to give participants time to think before answering the question, and don't move too quickly. Ask all participants to contribute. Do not give any lead, but use the probes to make sure that all issues are addressed. Move on when you feel you are starting to hear repetitive information.

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Annex D – situation analysis Pakistan

Mapping & Profiling of
Urban / Peri-Urban Slums of Karachi & Hyderabad Pakistan
March - May 2017

Chapter 2: Methodology

*Profiling of slums was done in 06 districts and 18 towns of **Karachi** and 01 district and 04 tehsils of **Hyderabad** of **Sindh province.***

Methodology

The methodology ensured that the local context and security situation was taken into account while collecting data from slums and departments. Slums were identified from official lists or shared by relevant government departments and local key informants in Karachi and Hyderabad.

Objectives

The overall objective of profiling of slums is:

- To produce holistic information about geographical scale, approximate target population and availability of EPI resources in slums (through physical verification);
- To compare low immunization coverage UCs where urban slums are located with the availability EPI resources.

The information would be utilized for planning of immunization service delivery to the target population in these slums.

Process

Desk Review

Extensive desk research was conducted to find out the breadth and scope of the existing studies on the slums, immunization in slums and the status of maternal and child health in slums internationally and nationally. It was important to identify the nature of slums and the types of identifiers for such settlements so that variables could be created for assessing the living standards in these slums. The desk research also included a review of administrative information such as number and names of districts, towns, UCs and slums in Karachi and Hyderabad. This helped in further refining the process of profiling of slums. Studies on Bangladesh and India were also reviewed to develop a sense of successful EPI strategies in other countries with similar slums.

Data Collection Instruments

The following types of tools were developed for data collection at various levels:

- Questionnaire for
    - key informant interviews

    - verification of availability of basic services
- Checklist
    - Data collection from town health offices
    - For development of maps
    - For monitoring

Training of Enumerators

Pilot and Pre-testing of Instruments

The questionnaire and checklists were piloted prior to data collection via pre-test in 32 slums after which certain changes were made and the questionnaire and checklists were finalized. Some of the major changes were about information collection about EPI resources such as availability of human resources and EPI service delivery system.

Compilation of Lists of Slums

A comprehensive list of health offices, political authorities, non-profit and civil society groups was developed by level and were visited to collect the names of slums, maps and status of health and EPI facilities in UCs.

Data Collection

Data collection was done from four information resource levels i.e. Slums, Town health offices, Provincial EPI and Micro plans prepared for polio tier 1 UCs and other UCs.

The interviews of key informants from slums were conducted at a common location of the slum itself. The discussion attracted other residents of the slums to join the process and validate the information. It was ensured that the key informants are selected based on their information levels and credibility within their own community. Where key informants were vague about certain questions, probing techniques were used and information was procured through follow-up questions.

Data Entry and Analysis

Sampling

One consolidated list of slums was prepared based on the information collected from different departments, town health offices and local key informants. For information collection, 3-5 respondents per slum were selected on the basis of convenience sampling and based on their knowledge about the infrastructure in the slum. The rationale for opting convenience sampling was:

- There were no lists or records of the households;
- Security situations and general hostility and unwillingness to share information;

- Considered to be close knit communities, slums represent wide information sharing networks; therefore, estimates by these informants were deemed to be close to accurate through cross- validation.

Team Composition

A team of 54 enumerators and 4 supervisors were engaged at various levels. In addition, one team leader, two data entry officers, one Auto-CAD expert and one GIS expert were also engaged. The team was fluent in the local languages spoken in the province. The interviews of personnel in government departments and non-government organizations were conducted by CHIP head office senior team members.

Monitoring System

The review and monitoring system was designed and the following measures were adopted for ensuring the quality of data collection:

- One field supervisor was assigned to monitor the physical verification process of 04-07 enumerators. (S) he was responsible for physically visiting the enumerators and checking the accuracy of the data collection.
- The CHIP Project Management team was assigned field supervisors for monitoring in the field and checking the accuracy of the data collection.
- Daily review meetings were held in which all questionnaires were re-checked for completeness and contradictions.
- Verification phone calls were made to the key informants to validate the information.
- Any questionnaires with incomplete or contradictory information were returned to the enumerators for corrections or re-filling.

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Annex E – Private Provider surveys

The assessment should include:

- What curative services are provided?
- Are they aware of surveillance case definitions and do they report regularly?
- What immunizations are provided and their quality?
- What are reporting practices?
- What are the perceived barriers to serving the underserved?

Examples:

Hagan JE, Knowledge, attitudes, and practices of private sector immunization service providers in Gujarat, India Vaccine. 2018 Jan 2;36(1):36-42. doi: 10.1016/j.vaccine.2017.11.046. Epub 2017 Nov 23.

Chawla PC, Knowledge, attitude & practice on human papillomavirus vaccination: A cross-sectional study among healthcare providers. Indian J Med Res. 2016 Nov;144(5):741-749. doi: 10.4103/ijmr.IJMR_1106_14.

Georges MS, How do parents and pediatricians arrive at the decision to immunize their children in the private sector? Insights from a qualitative study on rotavirus vaccination across select Indian cities. Hum Vaccin Immunother. 2016 Dec;12(12):3139-3145. doi: 10.1080/21645515.2016.1219824. Epub 2016 Nov 23.

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Annex F – Assessing patterns of vaccination seeking behavior

1) Linked coverage survey

   If the disadvantaged are definable by geographic location and the program has decided to do a coverage survey (http://www.who.int/immunization/monitoring_surveillance/routine/coverage/en/index2.html), additional questions could be added to the questionnaire to provide useful information. "Linking" in this context refers to asking where the child received their most recent vaccinations. In the example referenced above, despite difficulties presented by not having a reliable list of health facilities beforehand, the survey informed the EPI that of linked children 40% were vaccinated outside of their health district. Additional questions should also be added to allow disaggregation of the disadvantaged and some quantifiable questions that might help define the reasons for their choices. Note that it is unlikely that this survey will be powered to allow generalization for the entire disadvantaged population, but it can provide some useful ideas. A statistician should be consulted if there is strong interest in having representative numbers.

   Example: Burnett E, Individually Linked Household and Health Facility Vaccination Survey in 12 At-risk Districts in Kinshasa Province, Democratic Republic of Congo: Methods and Metadata. JID. 2017 July; 216(sup 1):S237-S243

2) Focus group

   Where resources do not permit a household survey, or the disadvantaged are scattered, the same kinds of questions can be asked of caregivers using qualitative methods. One example is a study done in Nigeria on antenatal and delivery practices. Chimaraoke O, What does quality maternity care mean in a context of medical pluralism? Perspectives of women in Nigeria, HPP. 2018 Jan; 33(1):1-8, https://academic.oup.com/heapol/article/33/1/1/4345788.

   These should be done annually or continuously and might include:

   - Interviews/ focus groups with caregivers in health care settings
   - Additional data elements included in surveillance forms and investigations
   - Interviews/focus groups in workplaces, including markets, factories, trash heaps
   - Interviews/focus groups in places of worship

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Annex G – Assigning performance targets by apportionment

Illustrative example for District Y with a 2018 population of 147,740. In 2017, the district achieved coverages levels of 85% for DTP3 and 87% for MCV1. Most vaccinations – 53% of all administered in the district - were given at HF1. The least by the Private clinic2 – less than 1%. In an attempt to reach all unimmunized in 2018, the district assumes the same relative level of effort by facilities but wants to encourage all in improve their coverage. The district therefore takes the total number of vaccinations needed to achieve 100% coverage and assigns a target that represents the same proportion as the previous year. That is HF1, which vaccinated 53% of the district's vaccinated children last year, will be asked to vaccinate 53% of the full target, thus increasing the number of children vaccinated from 2487 (DTP1) to 2741 and to reduce their dropout rate. Private clinic 2 will be asked to go from 36 vaccinated with DTP1 to 40, while also reducing their dropout rate.

District Y													
		Total	Live births	Surviving ir	12-23 m	Pregnant women							
Population	2017	142744	5710	4996	4796	5567							
	2018	147740	5910	5171	4996	5762							
Performance and targets													
	Doses administered 2017					Unvaccinated 2017				Target 2018 - 100%			
	DTP1	DTP1 % of district performance	DTP3	MCV1	MCV2	DTP1	DTP3	MCV1	MCV2	DTP1	DTP3	MCV1	MCV2
District	4646		4247	4347	2498	350	749	649	2298	5171	5171	5171	4996
HF1	2487	53.5%	2261	2306	1333					2741	2741	2741	2674
HF2	834	17.9%	767	797	488					928	928	928	897
HF3	604	13.0%	556	567	357					672	672	672	649
HF4	46	1.0%	43	44	27					52	52	52	50
HF5	186	4.0%	171	174	110					207	207	207	200
HF6	213	4.6%	196	200	126					237	237	237	229
Private1	60	1.3%	55	56	35					67	67	67	65
Private2	36	0.8%	33	34	21					40	40	40	39
Private3	180	3.9%	166	169	0					200	200	200	194
										Verify that Private3 is vaccinating MCV2			

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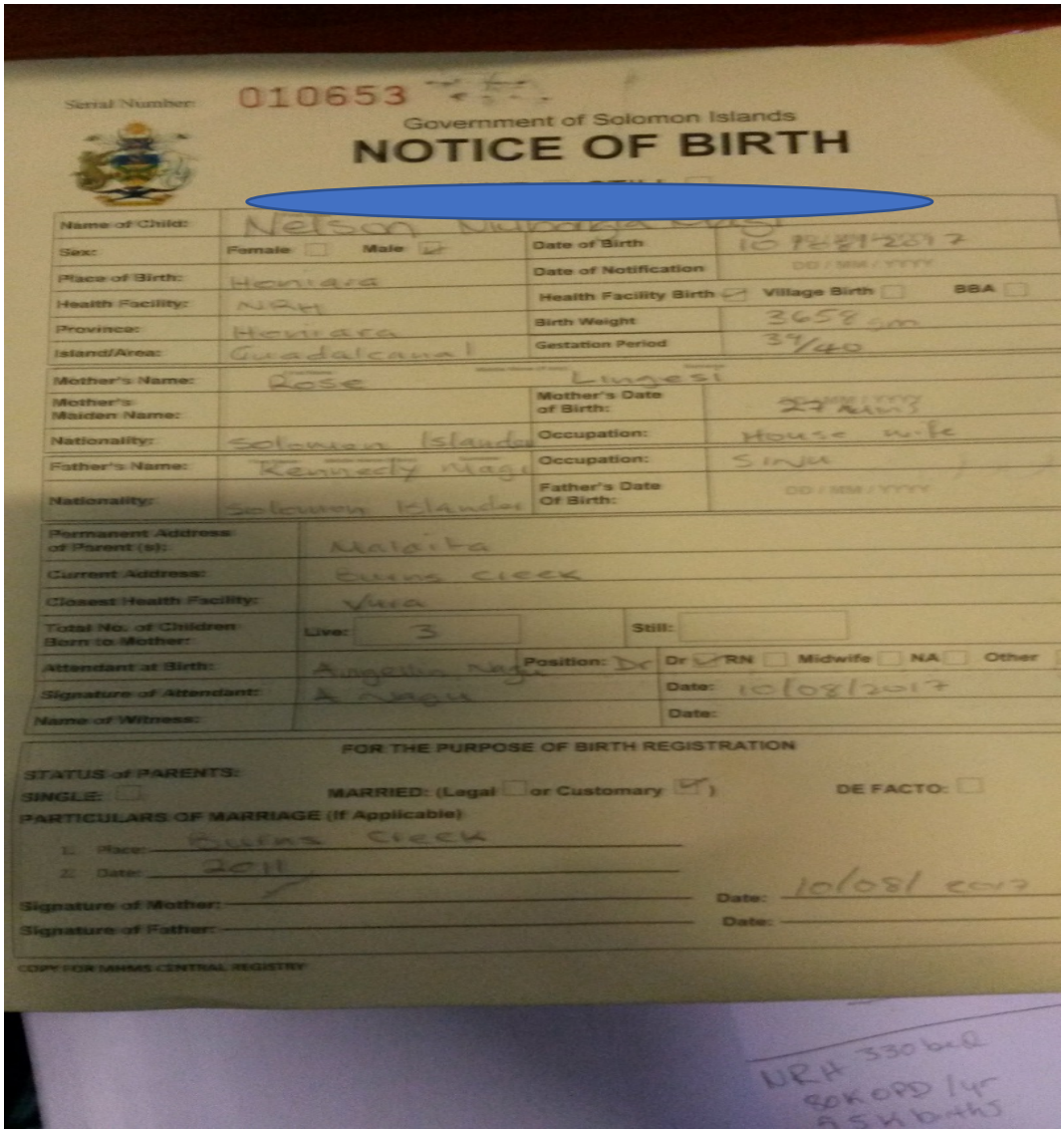
[Back to Monitoring and Use of Data]

Annex H – Partnership with civil registration

In Solomon Islands, the Health Department formed a partnership with Civil Registration. Maternity wards throughout the country were tasked with registering all births that happened in their facility in the maternity register and to complete a Notification of Birth. One copy of the Notification was given to the family to obtain a birth certificate, one copy kept in the maternity and one copy sent to the HIS of the HD.



Government of Solomon Islands

NOTICE OF BIRTH

Serial Number: 010653

These are entered by the HIS staff in the civil registration computer system. This permitted the MOH to have additional information on denominators, though it required some calculations given that many mothers traveled outside of their district to give birth.

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Annex I – List of Health Facilities

Can be prepared in Excel, Access, EpiInfo or other software to be sortable

List Health Facilities

Urban center: | District: | Region:

Date update:

Provider Name	Post, PHC, UHC, Hosp	Type: Public, private non profit, private for profit	Number mobile/ outreach sites	Date license renewed	Services offered: Surveillance	Routine vaccination	Well child clinic	Outreach	Curative	Family planning	Charge for well baby activities (yes, no, some)	GPS coordinates: Lat	Long
District			M = 2			X							
CSO1		Private not for profit	O=1; M=1			X							
HF1	PHC	Public	0		X	X	X		X	X	No		
Private1	Clinic	Private for profit	0	2014			X		X	X	Yes		
Private2	Hosp	Private not for profit	O=2	2017		X	X	X	X		Yes		

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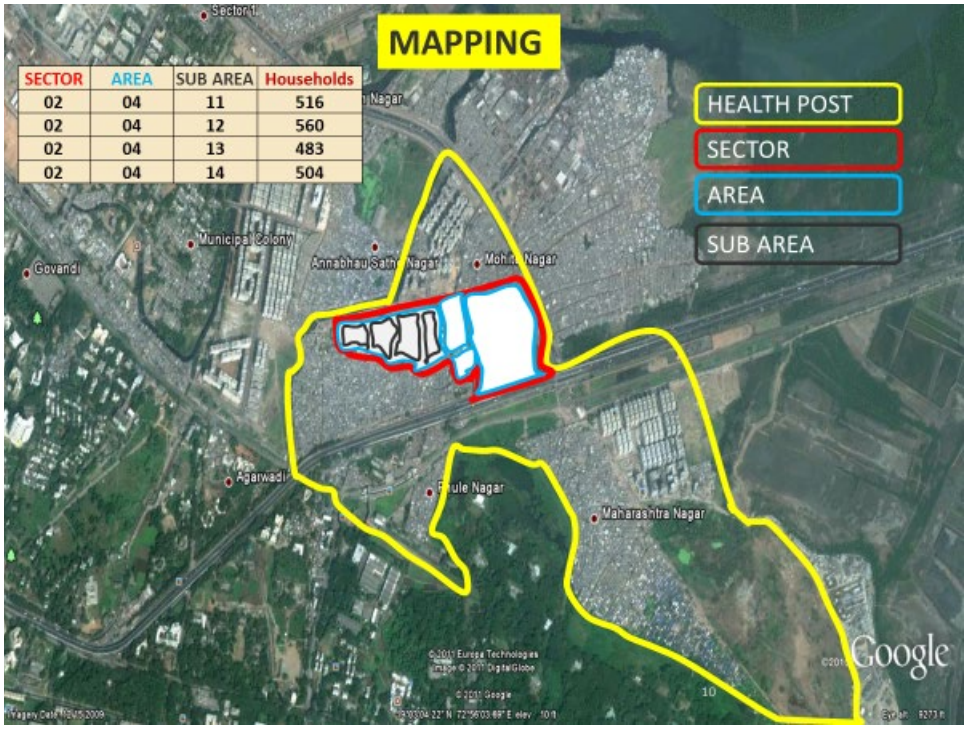
Annex J – Mapping

1) An example of mapping: Expanding and improving urban outreach immunization in Patna, India, Pradhan N et all TMIH 14 Dec 2011 (http://onlinelibrary.wiley.com/doi/10.1111/j.1365-3156.2011.02916.x/abstract;jsessionid=3986E6E3CFE0F0185ADFA13EA1C4CD29.f01t01)

2) This link is to a training for how to use free GIS software (qGIS) for entomology. While the examples are not immunization, it is a useful introduction and self-learning experience for using free software to map facilities, households etc.

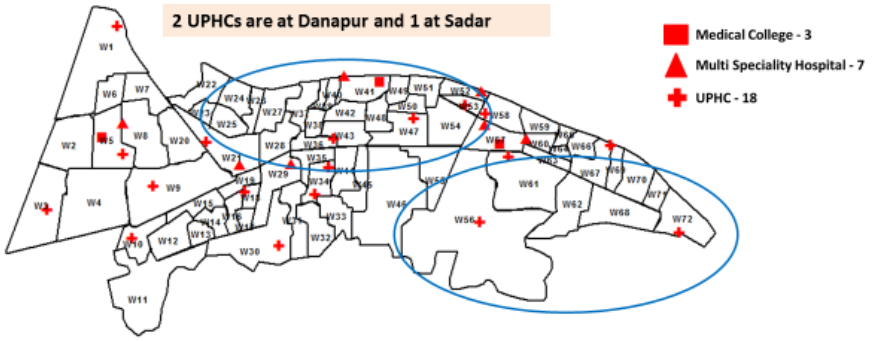
   http://www.lstmed.ac.uk/research/centres-and-units/etch/geographic-information-for-vector-surveillance-gives

3) Another example of using free satellite images for mapping population and services:



4) In one city in India, services were mapped and demonstrated several catchment areas without easy access to services. Using this information, they were able to marshal commitment from authorities to address the deficits.

UPHC and other Health Facility Location



Sl.	Particulars	Value
1	No of Urban PHC having full time MO	17
2	No of Urban PHC having staff nurse	17
3	No of Urban PHC having ANM	0
4	No of Urban PHC having Pharmacist	01
5	No of Urban PHC having Data handlers	17

- Identified area need few more U-PHC to ensure accessibility of health services
- U-PHC can be assigned catchment area for addressing delivery of National health programs, disease surveillance and addressing disease outbreak.

Details in next slide....

Advocacy meetings for Urban Validation to share the concerns and address the gaps identified

Participants	Date/ Venue	Key decisions taken
1. Chaired by Additional CMO, **Participants:** District Immunization Officer, CDPO-ICDS, NUHM-MOs , MOIC of Peri-Urban blocks SRTL/OSA-WHO,SMO-WHO	19th December 2016/ WHO-NPSP Office, Patna	Urban, peri-urban area demarcation issue discussed resolved.
2. Chaired by District Magistrate, **Participants:** Civil Surgeon-cum-CMO, Additional CMO, DPO-ICDS, District Immunization officer, MO In charge of Urban PHCs and rural PHC, CDPO and WHO officials & partners	23rd January 2017/ Officer of District magistrate, Patna	Special drive planned for urban slums as low immunization coverage is evidenced in these areas.
3. Chaired by District Magistrate, **Participants:** Additional CMO, District Immunization Officer, All concerned MO In Charge of Urban PHC and PHC, CDPO-ICDS, WHO and Unicef officials	20th February 2017/ Officer of District magistrate, Patna	Urban wards were allocated to Urban PHCs.
4. **Formation of City Task Force in Patna** **Chaired by District Magistrate,** **Participants: Members of City task force including CDPOs, Urban MOICs, SMO/SRTL of WHO and Development Partners**	April 2017	- Low coverage pockets to be covered and incorporated in RI Microplan - MO of UPHC to be responsible for the catchment area

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Annex K – MicroCensus

This website provides ideas and examples: http://www.actogetherug.org/index.php/blog/item/79-kampala-slum-profiling

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Annex L - Capture/Recapture

The capture/recapture method for estimating denominators: Where there are 2 or more fairly complete name-based registries (birth, immunization, ANC, IDP/refugee list), they can be compared and the denominator extrapolated.

n = number of entries in the register you are evaluating for completeness, for example the immunization register

K = number of entries in a register that has the same target population, perhaps vital registration or ANC if mothers' names are in the immunization register

k = overlapping entries

N = Total pop you are trying to establish

N = (K*n)/k

Example, say you have 100 people in your imm register (n), and 110 in a civil ID database (K). You examine the overlap and establish that 90 subjects are in both databases. Your estimated total population is in that case:

(100*110)/90 = 122.22

Meaning that the EIR missed 22 people, of whom 10 were captured in the ID database, and another 12 are estimated to be out there.

Reference: https://en.wikipedia.org/wiki/Mark_and_recapture

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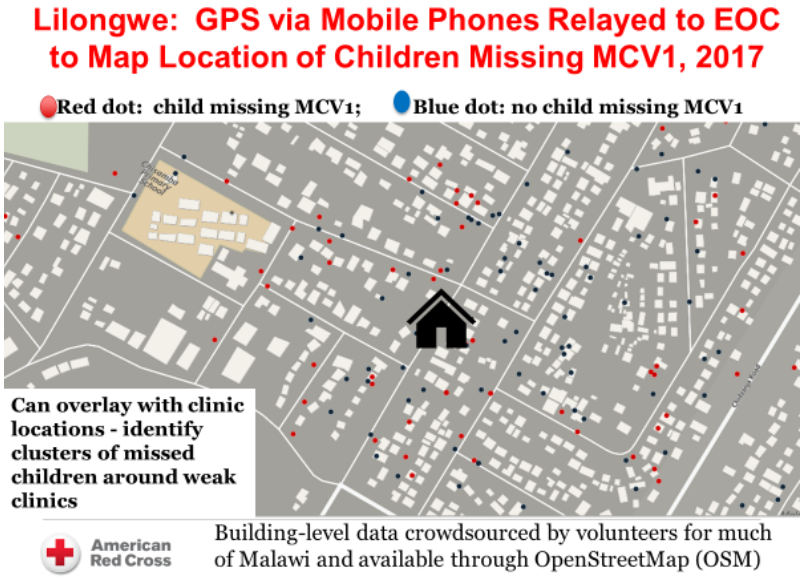
Annex M – Mapping the unvaccinated

In Lilongwe, Malawi, Red Cross volunteers conducted house to house monitoring after a measles campaign. Using hand-held devices, they located children who had missed or received measles vaccine. This was overlaid with the location of health facilities to identify areas and neighborhoods with the highest concentration of unvaccinated.

For routine immunization, the database could be expanded to additional vaccines, include “no child living in the house”, and other variables to describe the unvaccinated by disadvantaged group.



Malawi Form:

Annex II: VOLUNTEERS' HOUSEHOLD (HH) VISIT AND REVISIT REGISTRATION FORM
Date of visit: ___/___/20___ Region: ..... District: .....Name of the locality (i.e. neighborhood): .....
Name of Traditional Authority.....Name(s) of volunteer(s) .....

HH No.	The mother's name or Responsible adult	Telephone No. (if there is)	No. of children 9m-14yrs in HH	No. of children 12 months-23 months of age in the HH	No. of children 12 months-23 months of age in HH have a vaccination card?	No. of children 12 months -23months of age with vaccination against measles marked on card	Mother aware of MR campaign? Yes/No	If Yes source of info (see Coding, 1-7, below)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
Total								

*Code for sources of information:
1 : newspapers, television and radio; 2 : SMS messaging ; 3 : neighbor(s)/friend(s); 4 : imam/pastor; 5 : health personnel
6 : pamphlet/banner/brochure/poster/printed matter; 7 : other source of info (specify)

** Measles vaccine dose schedule – 1st dose given 9m-12m ; 2nd dose given 18-24months

Annex III: Daily Data Compilation Form for Supervisors

Summaries	Day 1 Date……	Day 2 Date……	Day 3 Date……	Day 4 Date……	Day 5 Date……	Day 6 Date……	Day 7 Date……	Day 8 Date……	Day 9 Date……	Total
Total number of households visited										
Total Number of children 9m-14yrs in households										
No. of children 12 months-23 months of age in the HH										
Total No. of children 12 months-23 months of age in the HH have a vaccination card?										
Total No. of children 12 months -23months of age with vaccination against measles marked on the card										
Total number of mothers aware of Measles and Rubella campaign										
Number of volunteers										

For more information, please refer to

https://measlesrubellainitiative.org/resources/reports/meeting-presentations/#2017-partner-meeting

and these two presentations:

Can House to House Social Mobilization Support Identification of Missed Children for Routine Immunization

Story From the Field – Malawi GIS

Back to Reaching all Eligible Populations

Annex N – Sample advocacy messages for addressing the plight of urban disadvantaged

- In our country, X% of the population lives in urban areas
- While overall, the urban population has greater access to health care, Y% or (number) of the children living in the urban areas is not completely vaccinated.
- The number of unvaccinated in the urban areas – ZZZ – is the same/greater than the number in rural areas – AAA.z
- Unvaccinated children living in a densely populated area are at greater risk of catching diseases, which can then spread to other areas in the city and the country-side. Until all are protected, all are at risk.
- Parents who vaccinate their children lose fewer days at work than those who must stay home to care for a sick child.

Back to Planning
Back to Engaging with Community

Annex O – Role of Mahila Arogya Simiti in a slum of Bhubaneshwar

Odisha is one of the least urbanized states in India with 17% of its population being urban However, the urban growth rate is estimated at 26.8%.

Figure 8. MAS members in meeting with community on UHND

The state has 2 473 slums comprising a population of 1 598 952 spread across 36 large cities and large towns which accounts for 23% of the urban population. In response to the growing urban slum population, the state has established the institutional mechanism mandated by the Government of India under the National Urban Health Mission. The Mission aims to improve and strengthen primary health care services in urban areas of cities and towns with population greater than 50 000. For strengthening the mechanism of community processes, the Urban health programme stipulates the formation of Mahila Arogya Samiti (MAS) or women's group for ensuring community participation in decisions related to planning and management of health services. A MAS would be formed on 50-100 households.

Figure 9. Members of MAS, Saliya Sahi, Bhubaneswar

Saliya Sahi, located in the midst of the sprawling city of Bhubaneswar, the capital city of the state of Odisha, is the largest slum or *basti* of the city comprising 36 slum clusters spread over 252-acres. This slum is the hub of migrants which come from all parts of the state to earn a livelihood. Residents are daily wage labourers, auto /cycle rickshaw drivers and small time vendors selling vegetables, incense sticks, washing detergents/ liquids, working from home on embroidery and stitching. Like most slums across the country, Saliya Sahi's residents lack public basic services such as drinking water, housing, drainage and sewerage.

There are over 40 Aaganwadi centres in this area along with a UPHC and a UCHC. The UPHC- IRC village, Nayapalli provides health facilities to the residents of Saliya Sahi. Bhubaneshwar has a target for formation of 617 MASs against which 596 MASs have been formed. Each MAS has 11-15 members and is responsible for 10-12 households.

The Mahila Arogya Samitis are the key to community mobilization in Saliya Sahi. The 121 MAS members, most drawn from the former Self-Help Groups, have been the working as a bridge between the community and the health system since their formation three years ago. The MASs have been registered and have received the seed money of Rs. 5000.

Prior to the inception of the MAS, the dwellers of the *basti* were struggling to make their voices heard with the authorities. With the assignment of the MAS, the residents, especially women and children have a responsible person to air their grievances. MAS members have started meeting their allocated households regularly, mobilizing them for services and helping them demand for health and allied services. Meetings are often organized at the Community centre located in the *bast*i and also in people's homes where MAS member give talks to the women on the various government provision for health services. Immunization and institutional delivery are the focus areas. On every 1st Wednesday, the MAS members in coordination with the AWWs organize Immunization day and Urban Health Nutrition Day on the first Tuesday of every month.

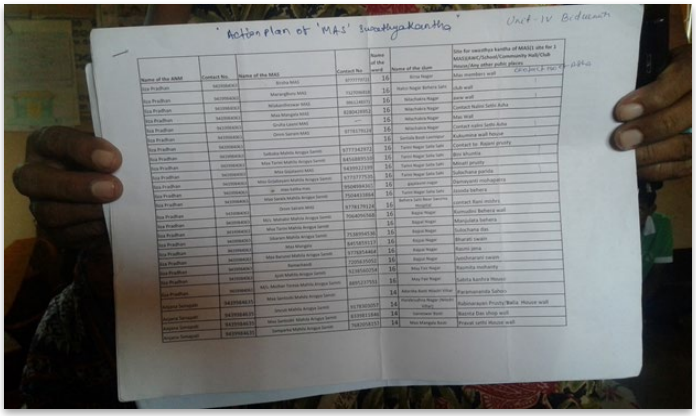


Figure 10. Action plan of the MAS, Saliya Sahi

Under the guidance support of State City Programme Management Unit (CPMU), the MASs of Saliya Sahi have made efforts to improve the awareness and knowledge levels of the community on health and other issues. The groups have used Odisha's traditional folk form of Katha (or story telling through wall paintings) to raise awareness on health issues, nutrition, sanitation and cleanliness. Communication activities are planned by the MAS members for the evenings when the men are also available. Local folk plays 'Pala', 'Daskatiya' and street plays are organized in each locality at the initiative of the MAS. The MAS members have prepared health resource maps of each area with the support of CPMU IEC officer to develop themes for painting of the Katha (wall paintings).

Figure 11. Wall writing with health messages (Katha)

Before the MAS came to existence in Saliya Sahi, hygiene and sanitation and alcoholism were major issues here – with a large open drain and flies, dirt and garbage piling up in most areas. Diseases like dengue and malaria were common. But due to the continuous and intensive effort of the MAS, the open drain has been covered and the area has become cleaner with garbage covered and burned. The MAS members are vigilant and have been talking to the community on immunization. They keep a close check on their respective households to ensure that none of the children miss their vaccines. Using mobile phones, miking and house to house visits the MAS members inform communities about UHNDs and services. The ASHAs are helped by MAS members at every mobilization efforts and

support the ANM (in preparing due list and undertaking survey) to disseminate the messages for immunization in the community.

Members of the *basti* are appreciative of the services of the women from the MASs. Their presence has brought about perceptible changes in the community, improving awareness on health and helping the community to raise a conscious voice demanding their rightful services.

Back to Engaging with the community

Annex P – Surveillance to help identify the disadvantaged

The disadvantaged are at greater risk for malnutrition, non-polio Acute Flaccid Paralysis (NP-AFP) and other communicable diseases. Variables can be added for vaccination status and potential identifiers such as religious, ethnic group, etc. If this represents too great a burden for those reporting, periodic investigations can be conducted to characterize the children found in case-based reports.

Sample case based surveillance report form with key elements for disadvantaged populations.

Case Based Disease Report Form

Official Use: **Number:** _____-_____-_____-_____- _____ Received ____/____/_____

EPID Country Region. District Year onset Case number At national level

A IDENTIFICATION Name of closest

District:_____ Region:_____ Health Facility:_____

Name of case:_____ Father/Mother:_____

DOB:____/____/_____ Age:_____years _____months Sex: M / F

Address:_____ Village:_____ City:_____

Longitude: __ Latitude: ___

B NOTIFICATION/INVESTIGATION

Case notified by:_____ Date notified:_____/_____/_____ Date investigated:_____/_____/_____

C DISEASE/ EVENT (diagnosis): _____

If malnutrition, AFP, Fever/rash illness, _____ Please complete section E

D HOSPITALIZATION Hospitalized: ☐ 1=yes Date of admission:____/____/____

Admission number:_____ Name/Address of hospital:_____

E FAMILY HISTORY

A. Vaccination History
   i. Never vaccinated
   ii. Incompletely vaccinated for age
   iii. Up to date for vaccinations
   iv. Received campaign doses

   If never or not up-to-date for vaccination, reason given by care-giver: _____

B. Length of time at current residence: ___ years ___ months
C. Length of time in this city: ___ years ___ months
D. Member of special population: Y/N
   If Yes, which
   i. IDP
   ii. Refugee
   iii. Ethnic minority
   iv. Religious minority
   v. Seasonal labor
   vi. Nomad
   vii. Other: _____

NAME:_____ TITLE:_____

HF:_____ Address:_____ Tel:_____

Back to Reaching all Eligible Populations

Annex Q – Snowballing

Any entrée that identifies members of a disadvantaged population can be followed up with more in-depth investigations among other members of that community.

As part of response to Ebola outbreak in Sierra Leone in 2014, community engagement in surveillance, reporting, contact tracing, awareness and prevention strategies were instrumental in interrupting transmission in a densely populated Kroo Bay Slum of Freetown, Sierra Leone. This entailed Identifying community leaders in Kroo Bay Slums who in turn identified other influential community members or organizations that also passed on messages to other Slum duelers. This network of community members eventually helped improve awareness about Ebola in the Slum and facilitated case identification, contact tracing and response. Unique to this setting was the nonexistence of traditional disease surveillance system and the constant movement of persons in and out of the Slum.

Back to Reaching all Eligible Populations

Annex R – Peer to Peer for Performance improvement

Some examples in the literature:

Shimp L. Immunization review meetings: "Low Hanging Fruit" for capacity building and data quality improvement? Pan Afr Med J. 2017 Jun 22;27(Suppl 3):21. doi: 10.11604/pamj.supp.2017.27.3.11516. eCollection 2017

Bazos DA The gas cylinder, the motorcycle and the village health team member: a proof-of-concept study for the use of the Microsystems Quality Improvement Approach to strengthen the routine immunization system in Uganda.
Implement Sci. 2015 Mar 8;10:30. doi: 10.1186/s13012-015-0215-3.

Nicholas DD, The Quality Assurance Project: introducing quality improvement to primary health care in less developed countries., Qual Assur Health Care. 1991;3(3):147-65.

Back to Supportive Supervision

Annex S – Rapid convenience monitoring for routine immunization

From India and DR Congo examples

Region : ----------

Date monitoring : -------/---------/----------

District : …… **Nearest HF :** ----------

Neighborhood/Village : ----------

Monitor: ----------

In the selected neighborhood or village, visit 10 households. Use a new sheet for each neighborhood/village.

1 = yes 0 = no. ***Additional information on the back of the sheet***

			Household number										Summary and notes
			1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
A	Reason for monitoring this area? High coverage (HC). Disadvantaged population (DP), far from HF (F), other (O)												
B	Number of children 0-11 months in the HH including visitors and new-borns												
The following are to be asked for the child 0-11 months who lives in the house and is the oldest in the HH													
C	Did the mother receive Tetanus vaccination(s) during the pregnancy with this child?												
D	Does the care-giver interviewed state that the child is up to date with his/her vaccinations?												
E	For the child 0-11 month : Vaccination (write dates if the car dis available, √ check mark if oral history only)	BCG											
		OPV0											
		OPV 1											
		Penta 1											
		PCV13-1											
		OPV 2											
		Penta 2											
		PCV13 2											

		OPV 3											
		Penta 3											
		PCV13-3											
		MCV											
		YF											
	Up to date per the interviewer**?												
F	If the child is not up to date, reasons? (mark all that are given)	1 – Lack money											
		2 – Lack time											
		3 – Refusal											
		4 – Vaccinater absent											
		5 – Vaccine not available											
		6 – Fever after earlier vaccination											
		7 - Other											
H	For any refusal, what reasons for refusal?	1 – Religious beliefs											
		2 – Child ill											
		3 – Not me who decides											
		4 - Vaccines dangerous											
		5 – No answer											
		6 - Other											
L	Area with low routine vaccination coverage? (3 or more children not up to date for vaccination)												
M	Area with low protection of birth (3 or more women without vaccination during this pregnancy) ?												

**Up-to-date for age:
If the child is 0-1 months, should have received BCG.
If the child is 2 months, should have received BCG, DTP1, OPV1, PCV1
If the child is 3 months, should have received BCG, DTP1, OPV1, PCV1, DTP2, OPV2, PCV2.

If the child is 4-9 months old, should have received BCG, DTP1, OPV1, PCV1, DTP2, OPV2, PCV2, DTP3, OPV3, PCV3 and IPV.
If the child is 10-11 months old, should have received BCG, DTP1, OPV1, PCV1, DTP2, OPV2, PCV2, DTP3, OPV3, PCV3, IPV, measles and yellow fever.
Any one vaccine missing and the child is NOT up to date for vaccination.

Follow-up to be discussed with the team of local health facility:

1. ***If among the 10 households, 0-1 child are not up-to-date, vaccinate them as soon as possible***
2. ***If among the 10 households, 2 or more children are not up to date, visit an additional 5 households. If in total, 3 or more children in the 15 households are not up-to-date***
    a. ***And the village is far, schedule catch-up vaccination for all the children in the village and consider establishing outreach vaccination in the area.***
    b. ***And the village is close, organize follow up with the families with the village health workers.***
3. ***If among the 10 households, 3 or more women did not receive tetanus vaccination during that pregnancy, this requires additional investigations by those familiar with the schedule to determine if they were completely vaccinated or if action is needed.***
4. ***Re-establish linkage with the community.***

NB : The fundamental reason for this monitoring is to assure that all children are vaccinated. Once the monitoring is completed in a household, it is alright to enquire about the other children in the house to be sure all are protected.

Back to Monitoring and Use

Annex T – Electronic registers

Examples can be found in the following article

Digital immunization registry: evidence for the impact of mHealth on enhancing the immunization system and improving immunization coverage for children under one year old in Vietnam, Nguyen N, mHealth 2017;3:26

Back to Planning

Back to Monitoring and Use of Data

Annex U – LQAS for routine immunization

Translated from DR Congo EPI

1.1 Brief DESCRIPTION of the LQAS method

The objective of LQAS: Identify Districts, health areas or villages whose immunization coverage does not reach the national target (80%)

LQAS allows acceptance or rejection of acceptable coverage
We accept or reject the surveyed area as vaccinated or not (eg more than 80% / less than 80%)

The LQAS could be done at the level of a district or subdistrict etc.

LQAS has these disadvantages

- Does not much reduce the distance needed to travel (relative to a cluster survey)
- A binary result (good or not good) only - does not give a coverage figure
- Reliability issue in the absence of a vaccination card
- We cannot add questions

Typically, the LQAS uses a sample of 19 persons in Supervision Areas (SA) or 6 clusters of 10 households. The EPI / DRC opted to organize the LQAS with the cluster methodology.

1.2 Frequency and objectives of this LQAS survey

LQAS is to be performed once a year at the different levels of the primary health care system according to the following table:

Level	Month	Quarter	Semester	Year
Health area	- Rapid Convenience Monitoring			
Health District	- Data validation meeting - Follow-up of corrective actions	DQS		LQAS
Antenna	- Data validation meeting	- DQS, - Review of activities (Follow-up of District DQS correction plans, ...)		LQAS
Region	- Data validation meeting		- DQS, - Review of activities (Follow-up of District DQS correction plan, ...)	LQAS
Central	- Data validation meeting		- DQS, - Mid-term review of activities	LQAS, Annual Review

2.1 Target groups

For the LQAS, we interview the parents / guardians of children from 3-11 months in the places concerned. This makes it possible to see what proportion of the target population of the current year is up to date for vaccination and allows immediate remediation.

THE LQAS FOR ROUTINE EPI IN THE DRC IS FOR CHILDREN FROM 3-11 MONTHS AND IS DONE ACCORDING TO THE FOLLOWING STEPS:

Definition of the lot - a « lot » is equivalent to an area of action defined according to the interest of the organizers, the potential for corrective actions and resources available for the survey. These may be villages within a health area, catchment areas within a district, districts within an Antenna, etc.

The LQAS is more useful when you have an "area of action" whose administrative records always give a very high CV, or a very low CV but the staff perception is that this is in error ("the denominator is wrong" Etc).

Choice of clusters

Having defined the lot, the clusters are chosen by the methodology "Probability Proportional to Size". For a catchment area:

1. List communities with total population.
2. Calculate the cumulative population.
3. Calculate sampling interval.
4. Choose a random number.
5. From the random number, use the sampling interval to choose the communities for the clusters

In detail:
1. List communities with total population.
2. Calculate the cumulative population.

No. Village	Village name	Total population	Population Cumulus	Sample number
1	AT	246	246	
2	B	1577	246 + 1577 = 1823	
3	C	468	1823 + 468 = 2291	
4	D	340	2291 + 340 = 2631	
5	E	220	2631 + 220 = 2851	
6	F	246	2851 + 246 = 3097	
7	G	190	3097 + 190 = 3287	
8	H	1124	3287 + 1124 = 4411	

3. Calculate sampling interval.

Total population / by number of clusters (6).

For our example 4411/6 = 735

4. Choose a random number.

On the random number table, choose a number at random (eyes closed, point with pencil, for example). Take the part of the number that is in your range. For example, if you come across the number "48177" and your interval is 735, take the last 3 digits = 177.

	1	2	3	4	5	6	7	8	9	10
1	77937	36192	73719	60892	88731	53312	32028	51981	52537	13792
2	62235	21784	63671	43307	27466	18725	30422	35364	22684	52940
3	41271	76943	63176	13983	76307	62649	37776	12373	27781	08448
4	74303	91599	18364	46854	5[illegible]	[illegible]6696	70329	57342	75565	00195
5	07316	19966	36871	69972	[illegible]	23919	35358	75206	83106	28462
6	19852	18979	14669	67059	3[illegible]	08989	18634	09736	58087	87453
7	44332	63036	51047	22662	60949	48177	87131	42936	06018	88193
8	18139	72389	49388	72664	65670	32657	86661	42756	64465	74816
9	98592	49059	95525	38095	08437	30024	94906	62951	94659	99819
10	40317	53391	41926	35351	85078	18072	83048	66366	05390	35376
11	62617	66075	30313	97008	78976	48652	17317	30662	60683	12054
12	16911	00422	55292	25757	16504	54582	26375	63502	80040	47941
13	68800	73988	76322	65662	32778	52376	57512	01105	12160	04995
14	33682	48961	58841	56325	66879	50433	88774	35632	71408	54487
15	97012	25698	43344	64489	03461	18996	46699	19042	54195	66669
16	67003	86784	64254	00365	22206	18449	34569	21006	96242	43069
17	67427	02409	32424	44517	56795	34543	64366	75534	39516	73236
18	97145	24129	53570	90142	99015	49437	47618	72842	85020	87873
19	34107	47747	76070	23154	82296	09290	04927	86570	62716	08756
20	79935	12969	28375	73660	47982	35603	21854	79458	12409	73075
21	66851	75572	70463	06772	67840	78904	85099	32362	44651	02838

5. Starting from the random number, use the sampling interval to choose the communities of the clusters.

No. Village	Village name	Total population	Cumulative Population	Sample number
1	A	246	246	random number: 177
2	B	1577	1823	177 + 735 (interval): 912, 912 + 735: 1647
3	C	468	2291	
4	D	340	2631	2382
5	E	220	2851	
6	F	246	3097	
7	G	190	3287	3117
8	H	1124	4411	3852

Therefore, villages A, B (with 2 clusters), D, G and H are chosen.

The example above is to see if the coverage of a catchment area is acceptable. For *higher administrative levels*, the catchment areas/districts where the LQAS is most useful would be the health facilities or districts with a CV greater than 80% per the decision flow chart. So:

1. *Make a numbered list of HF or district (depending on the level being verified) numbered. Put in order of decreasing vaccination coverage.*

2. *Decide according to the resources and time how many HF / districts to include.*
3. *Make a random choice of each using the serial number of a bank note*

Ex. We have enough resources to visit 2 AS

No.	AS	CV DPT3
1	K	105
2	L	95
3	M	82
4	N	79
5	O	50

Serial number

PD 5135175O . The numbers included in the sample are ~~5~~ 1 3 ~~5175,~~ AS K and M.

4. *Proceed with the choice of village in the concerned ASs according to the steps above*

Choosing households within a cluster

1. Once in the locality chosen, ask for a list of houses or a map that shows the houses. If these are unavailable, see if google earth or satellite or other mapping tool can provide a view of the place of inquiry. If not, a list of houses or sketches should be prepared that shows all houses with landmarks.
2. Define the sampling area
    a. If the locality has fewer than 20 households, select households
    b. If the locality has more than 20 households, divide it into equivalent blocks until the blocks are 20 houses maximum and randomly choose a block for the survey.
3. Number the houses in the chosen block. Choose a random household as a starting point in the locality.
4. In rural areas, investigate every second houses up to 10. In urban areas, surveys every third house up to 10.
5. At the exit of a house, turn right each time to go to the next household.
    a. At this stage, do not take into account the limits of the block chosen in step 2.
    b. If we reach the limits of village/town/neighborhood before reaching the 10th household, choose a direction (north, south, east, west) at random and continue into the village that lies in that direction.

Selecting interviewees

A household = a group of people who eat together in the same pot.

At the home, introduce yourself and explain that we are here to ask questions about vaccination. Ask if there is a small child living in the household and see if the child is in the 0-11-month range.

6. BUDGET

The budget must include the following elements

- salary, trainers, supervisors, investigators, drivers, data managers, support staff
- motivation?
- training
- printing of tools
- supervisors - 1 per cluster or District/regional Health Manager can provide supervision
- investigators - 2 per team (can have a team that does all 6 clusters at a rate of one per day or 6 teams doing all cluster in one day or other)
- transportation, trainers, supervisors, investigators
- Data management
- airtime to communicate with the teams

6 .2 HUMAN RESOURCES

LQAS can be done by several people with the supervision of District/regional Health Manager. That said:

- *Criteria for the selection of interviewers*. Preference will be given to health workers in the area who are familiar with the area they are going to investigate. However, at a minimum they must be able to read and count; know the language of the training, the language of the questionnaire and the language of the areas; be available for the duration of the training and the survey. Ideally, they will have had some experience with surveys and interviewing. They must be in good physical health because investigations can be physically demanding. Resources permitting, a larger number can be recruited and the final list made from those who succeed at the training.
- *Recruitment of interviewers*. Those in charge of the LQAS will recruit the field interviewers based on local resources – medical and nursing schools, hospitals, teachers, IT and IS. If recruiting from the vaccinating staff, this needs to be for alternative areas to avoid bias.
- *Financial compensation*. Financial compensation is according to local resources and local standards. The budget for the interviewers must include: per diem, salary, transport costs, possible interpretation costs, etc.
- The table below completed. If possible, add the names of the interviewers.

	No. Supervisors	No. Interviewers
Cluster 1		
Cluster 2		
Cluster 3		
Cluster 4		
Cluster 5		
Cluster 6		

7 .1 DATA ANALYSIS

Scorecard

Area Name: _____

Area number | __ | __ |

Date: | __ | __ | | __ | __ | | __ | __ |

Cluster number	1	2	3	4	5	6	Total
Number of children whose vaccination is up-to-date	/ 10	/ 10	/ 10	/ 10	/ 10	/ 10	/ 60
Result (accepted, rejected, caution)							

Accepted: <6 children not up to date

Caution: 6 - 14 children not up to date

Rejected: 15 or more children not up to date

7 .3 INTERPRETATION OF THE RESULT AND ACTIONS TO BE TAKEN

ACTIONS TO TAKE:

1. Accepted: congratulate the vaccination team and encourage them for the future
2. Caution: Share the result with the team and come back after a month to repeat the survey. If the result is again " Caution", we reject the coverage.
3. Rejected: Share the result with the team and develop a correction plan (address coverage and quality of reports) with them; repeat after 3 months

NB: unvaccinated children must be immediately vaccinated or referred for vaccination

7.4 FINAL REPORT

This section deals with the production of the final report and what will be done with the information produced by the survey. It must give the following information:

The format of the final report. Estimated size and information to cover included.

Who will be responsible for writing the final report.

Who will receive the results and in what form. For example, will there be a presentation to accompany the report?

When each of these tasks will begin and end.

ANNEX I: QUESTIONNAIRE

6 clusters

10 households by cluster

Q1: Lot: _____
Q2: Cluster Number: **|__| (1-6)**
Q3: Name village/neighborhood: _____
Q4: Interviewer: _____ Signature: _____
Q5: Superviser: _____ Signature: _____
Q6: Date: **|__|__| |__|__| |__|__|**

Vaccination status

Note: Administer questionnaire for one eligible child per HH. If more than one lives there, chose one randomly

Number of HH within cluster		1	2	3	4	5	6	7	8	9	10
Q7: Age in months	Children 3-11 months										
Q8: Sex	M=Male F=Female										
Q9 : Vaccinations received, card or history	C or H										
	BCG										
	Number doses OPV										
	Number doses Penta										
	Number doses PCV13										
	MCV										
	YF										
Q9: Is the child up to date for vaccinations**?	Y=yes/ N=No										
Q10: Relationship of respondant to child	Parent Grand parent Brother/Sister Not related										
Q11 : Does respondant know where to get vaccinations	Y=yes/ N=No										
Q12 : Does respondant know date of next vaccination	Y=yes/ N=No										

Q13: Comments: _____

**Up-to-date for age:
If the child is 3 months, should have received BCG, DTP1, OPV1, PCV1, DTP2, OPV2, PCV2.

If the child is 4-9 months old, should have received BCG, DTP1, OPV1, PCV1, DTP2, OPV2, PCV2, DTP3, OPV3, PCV3 and IPV.
If the child is 10-11 months old, should have received BCG, DTP1, OPV1, PCV1, DTP2, OPV2, PCV2, DTP3, OPV3, PCV3, IPV, measles and yellow fever.
Any one vaccine missing and the child is NOT up to date for vaccination.

Annex 2: List of supplies

Training:

- LCD Projector
- Extension cordl
- At least one spare bulb
- Flip chart
- Markers (different colors)
- Questionnaires field practice
- Syllabus and documentation for participants
- Notepad
- Pencil
- Pencil sharpener
- Eraser

Investigation

- Pencil
- Sharpener - pencil
- Eraser
- Calculator
- Clipboard
- Backpack or bag to carry questionnaires and materials
- Random Number Table x2
- Raingear if necessary
- Community map or notebook to draw Maps

Back to Monitoring and Use of Data