



Report of
Profile Of Slums/Underserved Areas of
Islamabad City – The Federal Capital Of Pakistan
July 2020



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Abbreviations

BISP	Benazir Income Support Programme
BCG	Bacillus Calmette–Guérin
CBV	Community Based Volunteers
CDA	Capital Development Authority
CHIP	Civil Society Human and Institutional Development Programme
CI	Confidence Interval
CNIC	Computerized National Identity Card
CSO	Civil Society Organization
DEFF	Design Effect Factor
EPI	Expanded Programme on Immunization
ESS	Effective Sample Size
GDP	Gross Domestic Product
HR	Human Resource
Hep-B	Hepatitis B
Hib	Haemophilus Influenza type b
ICT	Islamabad Capital Territory
ILR	Ice-Lined Refrigerator
LEAD	Leadership for Environment & Development
LHV	Lady Health Visitor
LHW	Lady Health Worker
MCI	Metropolitan Corporation of Islamabad
OPV	Oral Polio Vaccine
PDHS	Pakistan Demographic & Health Survey
Penta	Pentavalent vaccine
PKR	Pakistani Rupee
PVC	Pneumococcal Conjugate Vaccine
SATA	Statistics and Data
SoP	Standard Operating Procedure
SPSS	Statistical Package for Social Sciences
TB	Tuberculosis
UC	Union Council
UN HABITAT	United Nations Human Settlement Programme
US \$	United States Dollar
WASH	Water, Sanitation and Hygiene
WCBA	Women of Child Bearing Age
WHO	World Health Organization



Executive Summary

An in-depth profiling of the slums/underserved areas of Islamabad city, the federal capital of Pakistan, is conducted to compile information on the number of slums/underserved areas, availability of health facilities and vaccination services. The profiling also collected information about the types of residents, their housing structures, availability of water and sanitation facilities, schools and the social welfare schemes.

There are 63 slums/underserved areas located in 20 of the 26 UCs of Islamabad city. 16 UCs fall under the Directorate of Health while 4 UCs fall under ICT administration. Islamabad city has 1 million population¹, of which 379,620 (38%) lives in slums/underserved areas. 3% residents of slums/underserved areas are temporarily displaced or migrants from other parts of the country while 8% belong to other Nationalities.

Around 38% houses of slums/underserved areas are *Kacha* (non-concrete) or *Kacha/Pacca*. Assessment of the water and sanitation conditions reveals that government water supply is non-existent in 73% slums/underserved areas. In terms of drainage system, the data shows that around 75% of the areas have either no drains or are filthy or choked drains. 75% of the slums/underserved do not have waste pickup facility by the government. 32% slums/underserved areas do not have any kind of schools. Civil Society Organisations (CSOs) are not found in 71% slums/underserved areas.

35% UCs do not have Public Health facilities; while 31% UCs do not have EPI facilities. 50% UCs do not have Nutrition services and LHWs. 65% slums/underserved areas are not covered by Lady Health Workers (LHW). 37% slums and 29% underserved areas are unaware of 1122 emergency services. 54% EPI facilities do not have gender-segregated waiting areas; whereas, 21% EPI facilities do not have drinking water facility and 8% EPI facilities do not have toilets. Standard Operating Procedures are absent in 83% facilities, whereas, 25% facilities operate for less than 06 hours. Although vaccinators are available in 88% EPI facilities, Lady Health Visitors are found in 79% EPI facilities.

51% children are fully immunized (records+recall) and the number reduces to only 14% when checked against records. Vaccination card is retained in cases of only 31% children. 49% children are either zero dose or partially vaccinated. 89% mothers of zero dose children are unaware of childhood vaccination and therefore have not vaccinated their children; while 11% mothers of zero dose children do not have permission from their family members to get them vaccinated.

The report concludes that majority of slum residents are living under extreme level of vulnerability. The housing structures are weak, access to safe sanitation and water is limited. Liquid and solid waste management services are unavailable hence surroundings are extremely unhygienic. Chances of disease outbreaks are very high. Realistic micro planning of vaccinators, Community Based Volunteers (CBV) and LHWs is extremely important for generating demand for health and EPI services. The overall profiles of slums/underserved areas demand for an integrated service delivery model to address the issues holistically and in a coordinated manner.

Box 1: Major Inequities

Health Facilities

- 35% UCs are without health facilities.
- 31% UCs are without EPI facilities.
- 65% slums/underserved areas are not covered by LHWs.

Childhood Immunization

- 16% children have not received any dose of routine vaccinations hence are zero dose.
- 51% children are fully immunized (records+ recall) while it reduces to 14% against records.
- 33% children are partially vaccinated.

Infrastructure

- 38% houses of slums/underserved areas are *Kacha* or *Kacha/Pacca*

WASH Facilities

- 73% slums/underserved areas do not have Government water supply system.
- 50% slums have traditional open pit toilets.
- 75% slums/underserved areas either do not have drains or have choked drains.
- 72% slums/underserved areas throw their waste on an empty plot or on the streets.

Education Facilities

- 32% slums/underserved areas do not have schools.

¹ National census 2017



Chapter 1 Introduction





Chapter 1: Introduction

Islamabad is the capital of Pakistan and was transferred from Punjab province to make it a federal unit in 1960. As per the Federal Bureau of Statistics, the population density of Islamabad is 888.8 sq. km, with an urban population having a major share of 67%². Administratively speaking, the capital city is divided into five zones, two of which are reserved for urban city and federal institutional development, and three zones to administer development of the rural areas. There are 23 UCs of Islamabad that belong to the rural areas and comprises of 133 villages, whereas the urban part of the capital comprises 21 UCs.³

The capital is a cosmopolitan area, with the most diverse population makeup, which is steadily growing over the years. *Punjabis* are 65% of the total population of the city, whereas, *Pashtuns* are 10.51%, Urdu-speaking are 14% and the remaining 7% of the population consists of *Sindhi*, *Kashmiris* and *Balochis*⁴. Islamabad has the highest literacy rate in the country where around 88% of the people are educated, over 10% hold a bachelor's degree; whereas, 5.2% have a master's degree. The relatively better literacy rate of the city can be accredited to the thriving higher education system of the city, which houses 16 recognized universities⁵. The Multi-dimensional Poverty Index of Islamabad stands at 0.013⁶.

The development of the capital is entrusted with the Capital Development Authority (CDA), which has been given the responsibility: to look after the planning and development of the city; to take up municipal committee role; and, to ensure cleanliness, health and education, sufficient food supply and other basic amenities for the residents. CDA is also responsible for urban city planning; however, the unchecked urbanization and rapid population growth of the city has led to the mushrooming of various residential societies and housing schemes in the surrounding of Islamabad, which is taking a toll on the green spaces and clean image of the city⁷. Not only this, the unmonitored growth has led to the development of slums- the informal settlements with high population density, poor living conditions and weak infrastructural provisions, in and around the city⁸. An analysis of the prevailing inequities in the slum areas of Islamabad has been conducted in the light of the existing studies.

1.1 Demography

1.1.1 Population Growth

According to World Population Review, the population of Islamabad is 1,095,064⁹. The trend analysis for population growth for the city reveals that by 2020, the city population will be almost 1.7 million and it is expected to exceed 2.2 million by the year 2030 (Review, 2019). The further analysis of the demographic trends of Islamabad reveals that the city mostly consists of people within the age bracket of 15-64 years, which makes up-to 59% of the population.

Islamabad has also seen a proliferation in its slum development in the last two decades. About 20 years ago, there were only 12 slums in and around the city; whereas, the number is now at more than 42¹⁰. The areas in and around *Sihala*, *Tarnol*, *Rawal Dam*, *Bani Gala*, *Barakahu* and *Golra* have seen an evident surge in the population and the number of slums¹¹. Analysis of the rapid urban development in Islamabad further reveals that the expansion of new slums, along with the old ones are appearing in the sectors like I-12 and I-14, which will further stress the already dwindling natural resources of the city. It has been estimated that more than 0.1 million people reside in more than two dozen slums situated around sectors G-7, H-9, F-6, F-7, I-11 and I-12¹².

² Pakistan Bureau of Statistics

³ <http://www.ictadministration.gov.pk/>

⁴ Review, W. (2019). World Population Review. (online) Worldpopulationreview.com. Available at: <http://worldpopulationreview.com/world-city/islamabad-population/> (Accessed 17 Oct. 2019).

⁵ Review, W. (2019). World Population Review. (online) Worldpopulationreview.com. Available at: <http://worldpopulationreview.com/world-city/islamabad-population/> (Accessed 17 Oct. 2019).

⁶ <https://www.undp.org/content/dam/pakistan/docs/MPI/Multidimensional%20Poverty%20in%20Pakistan.pdf>

⁷ Qureshi, Z. (2018). Concern over proliferation of slums in Islamabad. Gulf News Asia.

⁸ Habitat, United Nations. 2016. Housing & slum upgrading. Retrieved from <http://unhabitat.org/urban-themes/housing-slum-upgrading/>

⁹ Review, W. (2019). World Population Review. (online) Worldpopulationreview.com. Available at: <http://worldpopulationreview.com/world-city/islamabad-population/> (Accessed 17 Oct. 2019).

¹⁰ Qureshi, Z. (2018). Concern over proliferation of slums in Islamabad. Gulf News Asia.

¹¹ Butt, T. (2017). Islamabad — a city with maximum slums. (online) Thenews.com.pk. Available at: <https://www.thenews.com.pk/print/227624-Islamabad-a-city-with-maximum-slums> (Accessed 17 Oct. 2019).

¹² Mohal, S. (2018). Slums continue to mushroom across Islamabad. (online) Pakistantoday.com.pk. Available at: <https://www.pakistantoday.com.pk/2018/05/28/slums-continue-to-mushroom-across-islamabad/> (Accessed 17 Oct. 2019).



Additionally, a study by (LEAD) refers to the three slums of Islamabad named, *Chora Stop Slum*, *Akram Gill Colony*, and *Mera Jaffar Slum*¹³ with the approximate population as 5,000, 2,000 and 1,000 respectively. It is significant to note that a dozen of these slums are legally occupied by their inhabitants and are given 'ownership' rights by the courts¹⁴. However, everyday amenities, including clean water and sanitation, gas and electricity are unavailable to many of them. Absence of basic facilities has led to poor health conditions, social and economic disparities in these slums, the highlights of which have been discussed below.

1.2 Status of Health

A study conducted by *Rehman, Shaikh and Ronis* (2014) studies 7 out of 11 registered slums of Islamabad for out of pocket payment expenses for children under five years of age. The study first highlights the national healthcare system of Pakistan which is poorly subsidized, and people have to consult both formal and informal private sector for healthcare facilities. Since the private sector is profit-oriented, citizens acquire high out of pocket expenses. For the year 2011-12, the Growth Domestic Product (GDP) outlay for the health sector was only 0.27%, lowest than the previous allocations. This results in 86.3% out of pocket expenses which is not only high in Eastern Mediterranean region but is also high as per the world standards. The private expenditures constitute 72% of the total health expenditures in Pakistan. The conditions are even poor for the slum dwellers when studied for Islamabad¹⁵.

The study highlights that the average household income of the studied slums is PKR.10, 000 (approximately US\$80) per month¹⁶. Fever, diarrhea, cough and common cold are the illnesses most prevent in slums of Islamabad. About 48% of the mothers are illiterate and are either consulting a private local dispenser in their locality or a private doctor¹⁷. The education level of mothers is found to be significantly associated with the type of health provider consulted in case their child falls sick. A majority of the participants (86%) bear expense on health as out of pocket or borrow money from the neighbor or a relative (42%). However, 23% of the households reported of selling household belonging to pay for the health expense of their child¹⁸. The population studied is reported to be the most vulnerable and in need of a multi-sectorial approach to deal with the healthcare issues which are also associated with problems of poor sanitation, education and underutilization of vaccination services.

1.2.1 Situation of Immunization in Slums

According to PDHS (2017-18), all basic vaccinations are provided to 67.8% children in Islamabad¹⁹. A study on the reasons of incomplete vaccination in children of Islamabad, samples 803 children, out of which 70.6% are completely vaccinated, 4.1% have ongoing status of vaccination, another 4.4% are partially vaccinated; whereas, 20.7% have never been vaccinated²⁰ (zero dose). Most of the zero-dose children have uneducated parents, or those who have received education up-to primary level only. 15.4% of the parents are unaware about the need for vaccination. 84.3% of the parents are not acquainted about the existence of vaccinators in their area. 64.7% of the parents of zero-dose children report long waiting hours, ranging between 04-05 hours, as the major reason for not vaccinating their children. 55.3% of the parents are apprehensive of the long distance to the health facility²¹. Around 40% of the parents of zero-dose children have trust issues when it comes to vaccination or vaccinator; whereas 38% reported the regular absence of vaccinator from their health facility²².

¹³ Quadri, F., Nasrin, D., Khan, A., Bokhari, T., Tikmani, S., & Nisar, M. et al. (2013). Health Care Use Patterns for Diarrhea in Children in Low-Income Periurban Communities of Karachi, Pakistan. *The American Journal of Tropical Medicine and Hygiene*, 89(1_Suppl), 49-55. doi: 10.4269/ajtmh.12-0757

¹⁴ 14 Mohal, S. (2018). Slums continue to mushroom across Islamabad. (online) *Pakistantoday.com.pk*. Available at: <https://www.pakistantoday.com.pk/2018/05/28/slums-continue-to-mushroom-across-islamabad/> (Accessed 17 Oct. 2019).

¹⁵ Rahman, A. and Shaikh, B. (2014). Health care seeking patterns and out of pocket payments for children under five years of age living in Katchi Abadis (slums), in Islamabad, Pakistan. *International Journal for Equity in Health*, 13(30).

¹⁶ Rahman, A. and Shaikh, B. (2014). Health care seeking patterns and out of pocket payments for children under five years of age living in Katchi Abadis (slums), in Islamabad, Pakistan. *International Journal for Equity in Health*, 13(30).

¹⁷ Rahman, A. and Shaikh, B. (2014). Health care seeking patterns and out of pocket payments for children under five years of age living in Katchi Abadis (slums), in Islamabad, Pakistan. *International Journal for Equity in Health*, 13(30).

¹⁸ Rahman, A. and Shaikh, B. (2014). Health care seeking patterns and out of pocket payments for children under five years of age living in Katchi Abadis (slums), in Islamabad, Pakistan. *International Journal for Equity in Health*, 13(30).

¹⁹ All basic vaccination includes; BCG, three doses of DPT-HepB-Hib (pentavalent), three doses of oral polio vaccine (excluding polio vaccine given at birth), and one dose of measles.

²⁰ Shah, H. and Pervaiz, S. (2016). Reasons for Incomplete Vaccination in Children of Rawalpindi and Islamabad.

²¹ 21 Shah, H. and Pervaiz, S. (2016). Reasons for Incomplete Vaccination in Children of Rawalpindi and Islamabad.

²² 22 Shah, H. and Pervaiz, S. (2016). Reasons for Incomplete Vaccination in Children of Rawalpindi and Islamabad.



The findings of the study indicate that an improvement is needed in the provision of vaccination facilities so that they are more accessible to the underprivileged residents of slums. Moreover, awareness about the need for vaccination in the prevailing unhygienic living conditions of slums are essential for the urban poor.

1.3 Other Inequities

1.3.1 Housing Infrastructure

A study by *Naeem Akhtar* on “Measuring well-being of the people living in Slums of Islamabad by Wealth Index and by household deprivations as an application to Human Development Index” covers four slums of sectors G-7/1, G-7/2; slum of F-6/2 (also called 100 quarters)²³; and the France colony (F-7/4) in Islamabad. The study covers 156 households and reveals that on average, there are 8.82 person living per household in the slums of Islamabad, with the population of 1,376 people (Table 1). 26% of the households have 1-2 rooms per house, which are also used for cooking²⁴. Poor living and hygiene conditions are associated with over-populated households in these slums.

Sectors	HH Covered	Average HH size	Population Covered
F-6/2	50	6.88	344
F-7/4	50	9.54	477
G-7/1	29	8.15	318
G7/2	17	8.94	152
Total	156	8.82	1,376

1.3.2 Water, Sanitation and Solid Waste Disposal

A study by *Ghazanfar and Saleem* (2017) on “Safe drinking water and sanitary measures: A cross-sectional study in peri-urban community of Islamabad” investigates the WASH conditions in *Nurpur Shahan*, a peri-urban slum area of Islamabad²⁵ surveyed 2,078 households. 76.4% of the households depend on government water supply; however, 3.6% depend on ground water and other sources.

77% of the residents’ reported of consuming water without disinfecting it; whereas, 18% boil their water and 3% use solar disinfection. Majority of the households in the selected slum have toilets inside the household (93%). 70% houses have flush to sewage toilet system. In only 9.9% of the cases, the government collects the solid waste, whereas, in the other 90.1% of the cases, solid waste is disposed by the residents by dumping on the streets or burning²⁶.

1.3.3 Education

A report on non-Formal Education by Ministry of Human Rights (2018), indicates that 70% of the sample population in slums of Islamabad is out of school constituting 2,174 children²⁷. Poverty, lack of parental care and education facilities and absence of B-form have been identified as the major reasons for out of school children in sampled slums of Islamabad²⁸.

1.3.4 Income

The slum dwellers in Islamabad are wage laborers or earn their income through other small occupations. Average income per household is PKRs.10, 000 per month for the slum dwellers²⁹.

1.4 Objectives

The general objective of this study was to prepare the in-depth profiling of slums and underserved areas located within the Islamabad City- the federal capital of Pakistan. The specific objectives of this study were to:

- a. To collect the socio-demographic information of the residents of slums and underserved areas
- b. To assess the fixed EPI centers located in the slums and underserved areas
- c. To compile the data of health and EPI recourses at the union councils level

²³ Akhtar, N. (2016). Measuring well-being of the people living in Slums of Islamabad by Wealth Index and by household deprivations as an application to Human Development Index (HDI).

²⁴ Akhtar, N. (2016). Measuring well-being of the people living in Slums of Islamabad by Wealth Index and by household deprivations as an application to Human Development Index (HDI).

²⁵ Ghazanfar, H. and Saleem, S. (2017). Safe drinking water and sanitary measures: A cross-sectional study in peri-urban community of Islamabad. JPMA, 67(220).

²⁶ Ghazanfar, H. and Saleem, S. (2017). Safe drinking water and sanitary measures: A cross-sectional study in peri-urban community of Islamabad. JPMA, 67(220).

²⁷ Tribune, E. (2018). (online) Available at: <https://tribune.com.pk/story/1723314/1-70-children-school-capitals-slums/> (Accessed 17 Oct. 2019).

²⁸ Tribune, E. (2018). (online) Available at: <https://tribune.com.pk/story/1723314/1-70-children-school-capitals-slums/> (Accessed 17 Oct. 2019).

²⁹ Rahman, A. and Shaikh, B. (2014). Health care seeking patterns and out of pocket payments for children under five years of age living in Katchi Abadis (slums), in Islamabad, Pakistan. International Journal for Equity in Health, 13(30).



d. To determine the childhood immunization coverage rates in the slums and underserved areas

1.5 Rationale

The review of literature reveals that the data on housing infrastructures, water and sanitation practices and immunization status of children in slum areas is limited. Therefore, this study was designed and conducted for the following reasons:

- There is no comprehensive report or tangible dataset available specifically for slums/underserved areas. The studies are carried out in one specific slum or a few sampled slums and are not a true representation of inequities prevalent in all slums. Moreover, existing studies rely on outdated or nationally non-representative datasets, bringing the validity of research in question;
- The city are growing very fast and are most popular for urban migration. Systematically collected scientific data on geographical scale, locations and population of slums is not only essential to inform policy-makers for needed interventions. ;
- The available literature does not have comprehensive information about the scale and situation of slums/ underserved areas;
- A comprehensive list and profile of slums is not available which would inform planners about the geographical scale, locations and population of slums;
- Additionally, it is not clear whether people living in slums which are not considered legal/registered/regularized in the records of relevant public departments were included in the National Census or not. The current resource allocations and provision of public services is decided according to the available information hence do not cater slums which are not recognised officially;
- No secondary dataset is available which provides a complete picture of the status of health and immunization practices in slums and underserved areas. Although some studies mention a few reasons for zero-dose and unimmunized children, an extensive approach on the pattern of coverage survey has not been adopted by any of the studies to understand the reasons for under-immunization. An extensive understanding of slum lifestyle and their socioeconomic conditions is to be undertaken to draft and implement better immunization-related policies;
- Coverage surveys have never been undertaken in slums hence status of immunization was never known for realistic planning and resource allocation.
- The micro plans of vaccinators and LHWs are prepared based on targets only and do not include specific coverage of slums. The comprehensive data on slums/underserved areas would help in setting up realistic targets for slums/underserved areas.
- Action plans for improvement of vaccination and general health conditions in slums/underserved areas would become possible.
- There is little or no data available on the role of private and not-for-profit sector on the kind of interventions undertaken by these sectors for the urban poor. The potential for these sectors to provide for the urban poor has not yet been explored.





Chapter 2 **Methodology**

Life In A Tented Slum!

Mehrabad, a slum of 400 families is situated in the Union Council “Dehi 1” of Islamabad. Although it is a registered slum, it is still deprived of the basic necessities of life. The residents of Mehrabad have been living here since 1975 in small-tented houses. By occupation, most of the residents are daily wage workers. Mehrabad is also devoid of government water supply. 100 households do not have functional toilets and therefore practice open defecation practices. In the absence of solid waste disposal system, the residents are forced to throw their solid waste on the streets or in empty plots near their houses. Poor sanitation and drainage system in the area has made Mehrabad prone to the spread of diseases. During Monsoon season, it is difficult to even walk across this residential area. Children from the community study in a private school situated 01 kilometer away from the slum area. There is neither a private, nor a public health facility in Mehrabad. Lady Health Workers do not visit this slum either. Slum dwellers are so caught up with their everyday problems that preventive healthcare is among the lowest of their priorities. This is the reason that several children in the age bracket of 12-23 months have not received any or some of the vaccination.



Chapter 2: Methodology

This part describes the detailed methodology adopted for the profiling of slums / underserved areas. This methodology was designed in close consultation with the UNICEF Pakistan Country Office, UNICEF Pakistan Field Office and Provincial Expanded Programme on Immunization (EPI) Cell. The process was made participatory and engaging for having community driven perspectives. Triangulation, validation and supportive monitoring were adopted as the key principles and formed the backbone of the entire process. The methodology was finalized according to the security situation and local context.

2.1 Study Design

This was a cross-sectional study undertaken to prepare the in-depth profiling of slums / underserved areas. The following four key activities were conducted for the purpose of this study (Figure 1).

2.2 Study Sites

The study was conducted in the slums / underserved areas located in the city and its periphery. The administrative structure of Pakistan distributes the country into four provinces and Islamabad, Azad Kashmir and Gilgit Baltistan as federally administered areas. The provinces are further distributed into districts. Each district is distributed into multiple towns (*tehsils*), which are further distributed into union councils. Each union council has 5 to 15 villages/areas depending on the context and rural/urban settings in each province. Previously, the performance of the country used to be assessed either at the provincial level and or at the district level. Gradually it has been realized that the performance needs to be monitored at the administrative unit level, which is union council.

Each union council has a union council office, which is headed by the Secretary. The Secretary gets certain resources for the development of villages/areas for that particular union council. The resources of each union council have direct correlations with the performance outputs of that particular union council.

2.3 Study Duration

This study was conducted between 2018 and 2019 with different intervals.

2.4 Study Respondents

For the purpose of this study, four key activities were conducted and each activity had different respondents.

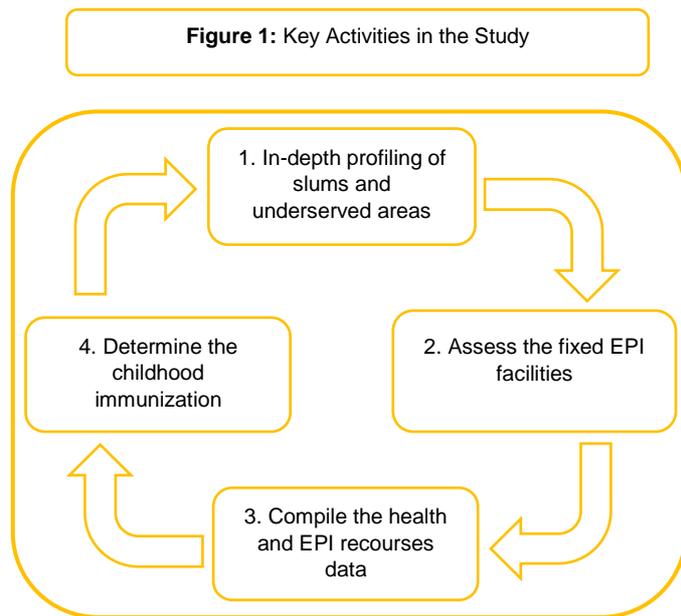


Table 2: Respondents of The Study

Activities	Study Respondents	Study Instruments
In-depth profiling of slums and underserved areas	Residents of slums / underserved areas	A. Questionnaire for Group Discussion in Slums / Underserved Areas
Assess the fixed EPI facilities	In-charge of EPI facilities	B. Questionnaire for EPI Facility Assessment
Compile the health and EPI recourses data at union council levels	District Health Officer, District EPI Coordinator and District Supervisor Vaccination or their nominees for providing official information on health and EPI resources	C. Questionnaire for District or Town Health Office
Determine the childhood immunization coverage rates	Mothers of the children aged between 12 and 23 months	D. Questionnaire for Household Coverage Survey



2.5 Sampling Procedures and Sample Size

Activities 1: In-depth profiling of slums and underserved areas

Slums/underserved areas form a major portion of the largest City' population. Consolidated information about the names, addresses and population sizes of slum / underserved areas were not available for realistic planning and extension of the health and EPI services. In order to identify the locations and scale of slums/underserved areas, to know the approximate size of target population and to prepare basic characteristics of these locations, their holistic profiles were prepared.

Step 1: Desk Research: For the purpose of this activity, initially extensive desk research were carried out by the study team. The purpose was to understand the different dynamics of the urban poor living in the five largest City of Pakistan. These conditions were assessed by gathering the literature retrieved from search engines on internet, academic research journals, and policy papers on slums / underserved areas.

Step 2: Verification of the Study Areas: As there was no data (i.e. listing) available on the slums / underserved areas the team visited and physically verified these areas.

Step 3: Interactive Group Discussions: Once these areas were verified and listed by the study team, the process of collecting socio-demographic information of the residents of slums and underserved areas were started through interactive group discussions. The study team conducted one group discussion from each union council located in the slums and underserved areas.

Sampling Method: A convenience sampling method was used for the purpose of interactive group discussions among the residents of slums and underserved areas. This was done because of the following three key reasons:

- A. There were no lists or records of the households. The lists of households prepared by Community Based Volunteers (CBVs) did not differentiate between the slums and non-slums areas
- B. The security situations and general hostility as well as unwillingness to share information rendered a simple random sampling nearly improbable
- C. 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

Sample Size: 3 to 5 respondents were selected based on inclusion and exclusion criteria for the interactive group discussions.

Inclusion and Exclusion Criteria: Following criteria were designed and adopted for the purpose of identifying the respondents for these interactive group discussions.

Inclusion Criteria	Exclusion Criteria
A. Resident of either slum or underserved area which was to be profiled	A. Not the resident of either slum or underserved area which was to be profiled
B. Have been living there for more than two years	B. Have been living there for less than two years
C. Have knowledge about physical infrastructure and other facilities of that particular area	C. No knowledge about the physical infrastructure and other facilities available in the area

Activities 2: Assess the fixed EPI facility's

The overall objectives of the assessment of fixed EPI facilities were to know the strengths and weaknesses of the service delivery system and to analyse correlations between coverage rates and strengths and weakness of the system.

Step 1: Obtaining the list of fixed EPI facilities: The study team obtained the list of all fixed EPI facilities from the department of health authorities.

Step 2: Assessment of fixed EPI facilities: Once the lists were obtained, fixed EPI facilities were physically visited by the study team for assessment.



No sampling method was used for this activity. All listed fixed EPI facilities (i.e. 228) were physically visited and assessed by the study team.

Activities 3: Compile the health and EPI recourses data

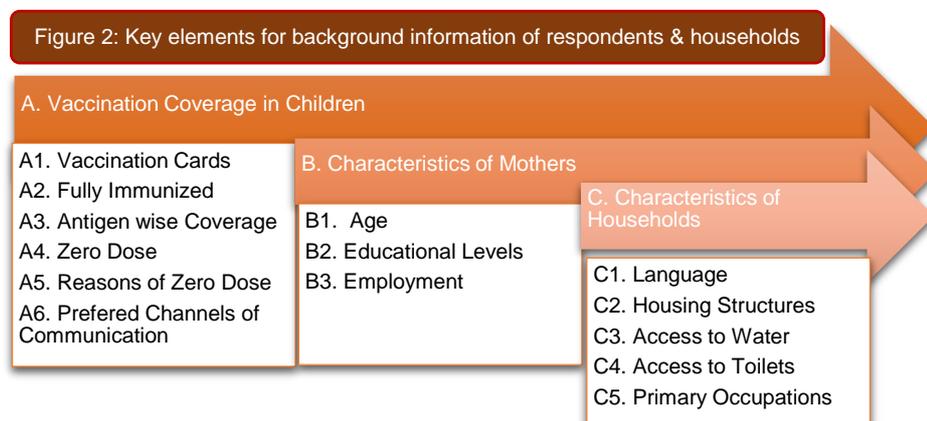
Step 1: Obtaining data of health and EPI resources: The data of health and EPI resources available at the union council’s level were collected from the department of health. The study team used ‘Questionnaire for District or Town Health Office’ for this purpose.

Step 2: Triangulation of Data: This data was triangulated with the information collected from the residents of slums and underserved areas through interactive group discussions (activity 1).

No sampling method was used and data on the key variables (section 2.6) were collected by the study team through study instrument.

Activities 4: Determine the childhood immunization coverage rates

The coverage survey was conducted to determine the childhood immunization rates by the study team. This background information about the households and respondents were also collected (Figure 2.).



The correlations of these broader categories i.e. i). Vaccination coverage in children, ii). Characteristics of the mothers, and iii). Vaccination coverage of the children were undertaken to comprehend the real reasons of high / low or no coverage rates in the slums and underserved areas.

Step 1: Sampling Methodology: This was conducted according to the methodology of World Health Organization (WHO). The following six points were utilized in calculating the sample size for this coverage survey.

1. Penta 3 coverage rates from 3rd party sources
2. Effective Sample Size (ESS)
3. Design Effect Factor (DEFF)
4. Estimation of number of children aged between 12 and 23 months
5. Calculation of inflation or no response
6. Steps for determining sample size and cluster

1. Penta 3 Coverage Rates: The city was taken as an independent stratum and Pakistan Demographic and Housing Survey 2017-18 was used for using Penta 3 coverage rates. 90% coverage rate for Penta 3 was taken as a basis for calculating sample size.

2. Calculation of Effective Sample Size: ESS was determined through expected coverage and desired precision level was set at 95 percent Confidence Interval (CI) as per Table B - 1, Page 118, WHO reference manual.

3. Design Effect Factor: Post measles campaign design effect factor 4.6 calculated for the 3rd party survey 2018 was utilized as a basis for calculating the sample size.



4. Estimation of Number of Children Aged between 12 and 23 Months: The number of children aged between 12 and 23 months were determined by using the 3.5 percent of the total population are children between 0 and 1 year and 3.5 percent are between 1 and 2 years. The estimation of the number of 12-23 months old children was calculated as follows:

- = Percentage of 12 – 23 months children in 100 household
- = $100 / 3 / 6.5$
- = 5
- = This means that from every 5th to 6th house one child will be available
- = If the required # of children were not available in a cluster, new clusters were included and existing cluster was stopped.

5. Calculation of Inflation or No Response: Inflation or No Response factor from households was calculated by using the following formula mentioned in WHO manual. This factor is usually intended to include additional houses in case a child is not available at a set interval or has refused to participate. In order to overcome this, additional houses were also listed and profiled. The inflation or no-response factor was calculated as follows:

$$\begin{aligned} \text{No Response} &= 100 / 100 - P (\text{Household Did not Respond}) \\ &= 100 / 100-5 \\ &= 1.05 \end{aligned}$$

6. Calculation of Sample Size and Clusters: Calculation of sample size was done once the DEFF and ESS, including No Response Inflation factor were all set. The following steps were undertaken to ascertain the sample-size:

Total Completed Interviews

$$= \# \text{ of strata} \times \text{ESS target from table B of WHO guidelines} \times \text{DEFF}^{30}$$

Total Households to be visited to get the Target # of Households to be interviewed

$$= \text{ESS} \times \text{DEFF} \times \text{household to find a child} \times \text{no response inflation factor}$$

Number of Households to Visit per Strata

$$= \text{ESS} \times \text{DEFF} \times \text{household to find a child} \times \text{no response inflation factor}$$

Number of Clusters

$$= \text{ESS} \times \text{DEFF} / \text{Household to be interviewed per cluster}$$

Total Households to Visit per Cluster

$$= \text{Household to find a child} \times \text{no response inflation factor} \times \text{household to be interviewed per cluster.}$$

Step 2: Sampling Procedure:

The slum was taken as a cluster. The following steps were undertaken during survey taking:

1. Since the number of slums and underserved areas in Islamabad are only 63 therefore all of them were considered as one cluster.
 2. Maps were prepared for each slum/underserved area (cluster). The buildings including government schools were numbered and marked. Maps of the areas/clusters/slums were prepared and residential buildings were marked for the listing of the households
 3. Then by throwing a pencil on the map, the residential block was selected randomly
 4. The selected block was listed and number of children were also listed
 5. A list of minimum 80 to 150 houses was prepared
 6. The total listed households were divided by 15 to calculate the random number for selecting a household for checking availability of children
 7. Listed households with the final random number were picked for interview
- In case of unavailability of 15 children in a cluster, additional clusters were added

³⁰ Taken from Post Measles Campaign Analysis by WHO



2.6 Key Variables

Table 3: Key Variables in The Study

Activities	Key Variables
In-depth profiling of slums and underserved areas	<ol style="list-style-type: none"> 1. Slums and Underserved Areas 2. Demography 3. Health and EPI Resources 4. Infrastructure 5. Social Welfare Services
Assess the fixed EPI facilities	<ol style="list-style-type: none"> 1. Infrastructures 2. System 3. Management and Facilities 4. Equipment and Supplies 5. Waste Management 6. Human Resources
Compile the health and EPI recourses data	<ol style="list-style-type: none"> 1. Administrative Layout 2. Healthcare Facilities 3. Equipment and Supplies 4. Human Resources 5. Nutrition Services
Determine the childhood immunization coverage rates	<ol style="list-style-type: none"> 1. Vaccination Coverage 2. Characteristics of the Mothers 3. Characteristics of the Households 4. Characteristics of Fully Immunized Vs. Zero Dose Children

2.7 Data Collection Instruments

The data collection instruments were designed by the senior investigators and finalized in consultation with the UNICEF Pakistan officials. The instruments were pre-tested in order to ensure the consistency, appropriateness of language and sequencing of the questions. Based on the feedback from the pre-testing, the instruments were modified and rephrased, where necessary. These data collection instruments were not only translated into local languages but also culturally adopted, where necessary. All study instruments are attached in annexures.

2.8 Operational Definitions

The operational definitions were defined based on the desk reviews as well as discussions with the health authorities.

2.8.1 Slums

The definition of slums was reviewed from UN Habitat, *Kachi Abadi* Cell, Town Municipal Offices and Offices of Development Authority. Slums are a contiguous settlement where the inhabitants are characterized as having inadequate housing and basic services. A slum is often not recognized and addressed by the public authorities as an integral or equal part of the city. According to UN Habitat, the generic definition of a slum suggests that it is:

...a contiguous settlement where the inhabitants are characterized as having inadequate housing and basic services. A slum is often not recognized and addressed by the public authorities as an integral or equal part of the city (UN Habitat, 2010, p. 13³¹).

Similarly, a slum household is defined as a group of individuals who live under the same roof that lacks one or more³² of the following conditions:

- Limited access to improved water and sanitation
- Weak housing structures
- Insufficient living area
- Uncertain about legal ownership of the residential area

2.8.2 Peri-Urban Slums

Slums located at the periphery of urban areas that join the borders of City and rural areas.

³¹ UN Habitat (2010), *The Challenge of Slums: Global Report on Human Settlements 2003*

³² This definition may be locally adapted for where some factors may be similar between the slums and majority of the society (UN Habitat).



2.8.3 Legal Status

Concerned government department recognizes slums as either registered or regularized officially. Documentary evidence such as electricity bill or Computerized National Identity Card (CNIC) shows the address.

2.8.4 Underserved Areas

Underserved Areas includes both planned residential areas with *majority of the plastered housing structures*. Underserved areas have one or more of the following conditions:

- Low immunisation coverage or
- High number of refusal

2.8.5 Expanded Programme on Immunization

Expanded Programme on Immunization of the government of Pakistan for children and women of child-bearing age (WCBA).

2.8.6 Outreach Vaccination

Within remote and inaccessible areas where EPI or healthcare facilities have difficult access or do not exist, an outreach vaccinator covers the area through house to house visits.

2.8.7 Ice Lined Refrigerators

Ice Lined Refrigerator (ILR) for maintaining a particular temperature required for storage of vaccines.

2.8.8 Kacha Housing Structure

All walls and ceilings are made of mud, straws, bamboos or material other than cement, concrete and iron and are vulnerable to damage due to excessive rains, floods or earthquake etc.

2.8.9 Pacca Housing Structure

All walls and ceilings are made of cement, concrete and iron.

2.8.10 Kacha-Pacca Housing Structure

Walls are made of concrete and iron while ceiling is made of mud, straw or bamboo or vice versa.

2.8.11 Antigen

A liquid medicine, which develops immunity in the body of an individual.

2.8.12 Fully Immunized

Children aged between 12 and 23 months who have completed vaccination of all doses starting from BCG-OPV0, Penta 1, Penta 2, Penta 3, and Measles-1.

2.8.13 Partially Vaccinated

Children aged between 12 and 23 months who have received some doses of vaccination but could not complete it according to age wise requirements.

2.8.14 Defaulter

Any child aged between 12 and 23 months who has received BCG+OPV0 and Penta 1 and Penta 2 but did not receive Penta 3 or Measles-1.

2.8.15 Zero Dose

Children aged between 12 and 23 months who have not received any doses of vaccines including polio, which may protect children from vaccine preventable diseases.

2.8.16 Records

Under two years of children whose vaccination cards containing record of their age wise doses administered are available in readable condition for any confirmation.

2.8.17 Recall

Under two years of children whose record of vaccination is not presented on any paper or card at the time of the survey and mother shares the vaccination status based on her memory or recall.



2.8.18 Vaccine Preventable Diseases

The vaccine preventable diseases for children aged between 0 and 23 months are prevented through offering basic vaccination. The names of these diseases are Childhood Tuberculosis, Poliomyelitis, Rotavirus Diarrhea, Pneumonia, Diphtheria, Pertussis (Whooping Cough), Tetanus, Hepatitis B (Hep B), Haemophilus Influenza type b (Hib) and Measles.

2.8.19 Antigens as Part of Basic Vaccine

The following antigens are administered to children aged between 0 and 15 months old with different age intervals:

Table 4: Vaccination Schedule

1 st Dose	2 nd Dose	3 rd Dose	4 th Dose	5 th Dose	6 th Dose
Immediately After Birth	6 Weeks	10 Weeks	14 Weeks	9 Months	15 Months
BCG+OPV0	OPV 1, Rota 1, Pneumococcal Conjugate Vaccine (PCV) 1, Penta 1	OPV 2, Rota 2, PCV 2, Penta 2	OPV 3, Rota 3, PCV 3, Penta 3	Measles-1	Measles-2

2.9 Data Analysis Techniques

Systematic approach was adopted for cleaning, and verification and further entering of data in excel sheets as per the variables defined for this study. The data was analyzed by the Data Manager in Statistical Package for Social Sciences (SPSS) and Statistics and Data (STATA). The processed data is interpreted through tabular and graphical presentation required for quantitative analysis. The data of slums was segregated in the following categories.

Table 5: Categories of slums data

Categories	Size	Housing Structure	Legal Status	Facilities	Location
Category A	More than 60 households	Mostly <i>Kacha</i> /mud made/Tented	Mostly illegal	No solid/liquid waste management system No government water supply	Mostly under the bridge, near river, railway station and any empty land within the city
Category B	Less than 60 households	Mostly <i>Kacha</i> /mud made/Tented	Mostly Illegal	No solid/liquid waste management system No government water supply	Surrounded by big houses
Category C	More than 60 households	Mostly <i>Paccal</i> Plastered	Mostly legal	Mostly garbage management system and drains exist	Mostly upgraded from slums or housing societies
Category D	More than 100 households	Mostly un-plastered	Mostly legal	No solid/liquid waste management system No government water supply	Originally rural area but gradually became part of the city hence located at the periphery of the city

2.10 Monitoring Mechanism

For the purpose of this study, timely review and rigorous monitoring system was put in place to ensure there were no detractions. This included engagement of a full-time team dedicated to holding surveys and field visits, timely submission of data, physical verification and further cleaning process of the data, and assignment for each team member. The monitoring ensured the following:

- Verification of data either through telephonic correspondence or physical on-field visits
- Supportive supervision and daily review of field performance
- Trouble shooting in case of problems
- Review of survey forms to ensure that no information was missed or fake or contradictory



2.11 Study Team and Training

A three-tiered teams were engaged in in-depth profiling of slums and underserved areas, assessment of fixed EPI facilities in slums and underserved areas, compilation of health and EPI resources data of union councils and childhood vaccination coverage in slums / underserved areas.

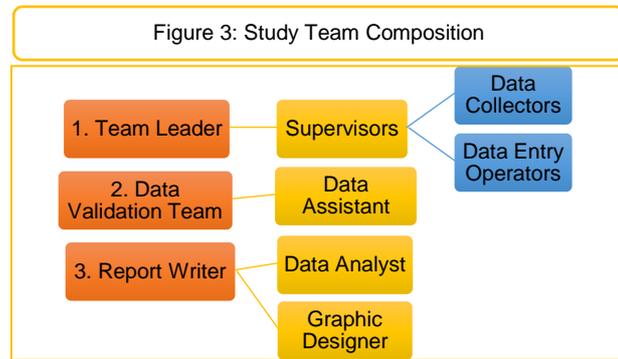
The first tier of team comprised of a team leader, survey supervisors and data collectors.

The team leader provided overall guidelines and end-to-end management of the process, the supervisors extended supportive supervision and monitoring of the data collection and ensured quality standards while surveyors collected the data from the field through physical visits, group discussions and individual interviews.

The 2nd tier of the team consisted of data validation, cleaning, entry and analysis.

The 3rd tier of the team comprised report writers responsible for undertaking desk researches and interpreting the results in an effective manner.

The training of study teams was conducted by the professionals prior to commencing data collection activities that includes study objectives, basic concepts on healthcare and immunization services, data collection, ethical considerations as well as confidentiality. In addition, they were trained on data entry processes (i.e. validation and cleaning before their final consolidation).





Chapter 3 Profile Of Slums/Underserved Areas

Dropouts Among The Shackles Of Poverty

Malala looked up at the ceiling while lying on the floor, it was made up of mud and straws. She touched the wall next to her that her mother has recently coated with the fresh dung of their donkey. 'Is there a world beyond Dareek Mairi Chowk, Golra?', she wondered. "Is there an alternate better life for her away from this slum where she can have a prosperous life?", she asked herself. She would like to live in a house similar to the little girl she saw yesterday in

F-7, who was sitting next to her father in a luxury car and got off outside a big bricked house, which to Malala was like a Mansion. Malala's father, Yar Muhammad Khan, along with his family has been residing in this slum since the last 12 years. These 12 'long' years have been pretty predictable for Yar's family. They were predictable since the family was now well-aware about the sacrifices they have to make while living under the unbreakable shackles of poverty. Yar's family has 5 male and 9 female members who live in a one room small mud-house. Although the house has electricity connection, there is no toilet facility connected to the drains. However, Yar has provided a small temporary room, next to their house for their family, where the family utilizes open pits as toilet facilities. Although this situation is not ideal, but it protects the family's honor since now at least they do not have to engage in open defecation. There is no access to government water directly to their home, so they collect water from a water pump nearby. The family has a water storing capacity of up-to two days. After two days, Yar's wife sends her 4 elder kids to collect water from the pump. This has always been a routine since Malala opened her eyes in this world. When she was younger, she would like to tag along with her siblings to play with the water while the elder siblings filled the cans and the bottles given to them by their mother. Now that Malala has to collect and carry the water herself, the 'excitement' of the regular feat has been replaced with exasperation and occasional frustration.

"Da Jwand!"

"This Life!": Malala mutters in Pashto, the commonly spoken language of their household, while collecting water from the pump. Malala observes her father work really hard every day. He is a garbage pick and is the only breadwinner of the entire family. Malala's mother is a 35 years old illiterate woman whose life revolves around her family. She is busy taking care of her 12 children, 4 of which are under five years of age. Malala notices that a team of health workers visits their slum occasionally who are usually insistent on the need for 'vaccination'. Malala does not understand what vaccination is but she realizes that these are some injections which are integral for the safety and health of her younger siblings. She asks her mother as to why their younger siblings have only gotten 2 injections each till now though the health worker insists on more. To this, her mother always has the following answer; which to her is pretty much a standard reply to all her need based questions;

"We are poor and the distance to the health center is a lot. I cannot walk there with your siblings alone and we are unable to afford the fee of the private clinic which is nearby." Malala regularly prays for the well-being and health of her little siblings. To her 10 year old mind; tetanus, meningitis and tuberculosis are diseases personified as big monsters ready to take her siblings away. She is not sure what 'drop-out' means which she heard the health workers call her younger siblings' but she is sure that it signifies something alarming for the little ones.



Chapter 3: Profile of Slums/Underserved Areas

Slums/Underserved areas form a major portion of the largest City' population. Consolidated information about names, addresses and population sizes of these areas are unavailable for realistic planning and extension of health and EPI services. In order to identify the locations and scale of slums and underserved areas, to know the approximate size of target population and to prepare basic characteristics of these location, their holistic profiles are being prepared. This chapter presents the profile of slums/underserved areas of the Islamabad city. The profile is presented around the following five broader categories:

3.1 Slums/Underserved Areas

- 3.1.1 Union Councils with/without Slums/Underserved Areas
- 3.1.2 Number of Slums/Underserved Areas
- 3.1.3 Timelines of Existence
- 3.1.4 Legal Status

3.2 Demography

- 3.2.1 Population
- 3.2.2 Types of Residents

3.3 Health Resources

- 3.3.1 Health Facilities
- 3.3.2 EPI Facilities
- 3.3.3 Outreach Vaccination
- 3.3.4 Health Workers
- 3.3.5 Emergency Health Services

3.4 Infrastructure

- 3.4.1 Housing Structures
- 3.4.2 Household Toilets
- 3.4.3 Domestic Water
- 3.4.4 Waste Management

3.5 Social Welfare

- 3.5.1 Schools
- 3.5.2 Civil Society Organisations
- 3.5.3 Informal Groups
- 3.5.4 Social Welfare Schemes



3.1 Slums/Underserved Areas

3.1.1 Union Councils with/without Slums/Underserved

Islamabad is administratively distributed into rural and urban UCs. 21 urban UCs are managed by Directorate of Health and remaining UCs are managed by Islamabad Capital Territory (ICT). Over a period of time, some of the rural UCs located at the periphery of the city have been urbanized and became part of the city. Due to administrative structure, these UCs are still managed by ICT administration. The profiling found slums/underserved areas in 15 UCs under Directorate of Health and 05 UCs under ICT. 05 UCs under Directorate of Health do not have any slum/underserved areas.

3.1.2 Slums/Underserved Areas

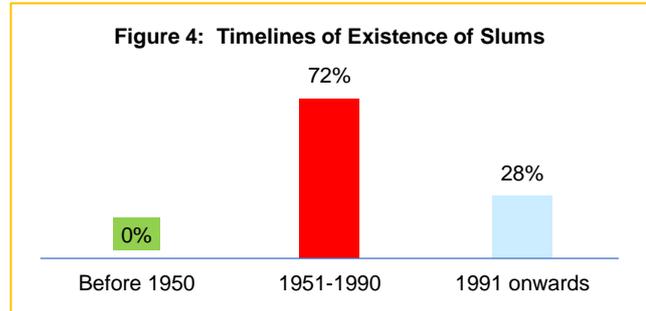
Overall, there are 49 slums and 14 underserved areas located in 15 UCs under Directorate of Health and 05 UCs under ICT. These slums/underserved areas vary in their size by area and population density.

Category	Count	Percentage
Slums	49	78%
Underserved Areas	14	22%
Total	63	100%



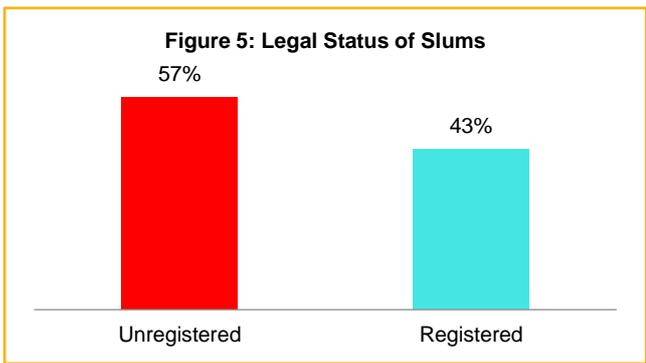
3.1.3 Timelines of Existence

The rural areas that existed in Islamabad before 1960s were asked to vacate their residential areas in compensation with the alternate land in other areas of Punjab province. Some of the residents of these rural areas have not vacated the area even after availing the compensations and constructed their temporary houses on vacant plots. These type of houses cannot have any facilities by CDA hence are called unregistered slums. The emergence of majority of the slums (72%) is recorded between 1960-1990. Most of these slums are planned and are created by CDA as part of the city's design since 1960 onwards. Slum establishment has been highest before 1990 at 72%. The establishment of new slums reduced to 16% from 1991-2005. Likewise, slum growth has been almost similar after 2005 where 12% more slums were established. (Annex 5 Table 2).



3.1.4 Legal Status

57% slums are unregistered and are ineligible to have official resource allocation for public services like water and sanitation, health and education etc.; whereas, 43% are registered. The residents of slums showed utility bills as an evidence of registration. These utility bills had names of their slums, which shows that the government recognise these areas.



3.2 Demography

3.2.1 Population

The overall population of slums/underserved areas is approximately 0.37 Million, with a higher population share of people residing in slums (72%) than underserved areas. The children aged 0-11 months are 12,224 and children under 5 years of age are 64,539 while 83,521 women are of child bearing age.

Table 7: Population in Slums/ Underserved Areas

Total Population Count					
Slums		Underserved		Total	
273,840	72%	105,800	28%	379,640	100%
Population of 0-11 Months (3.5% and 92% Survival)					
8,818	72%	3,407	28%	12,224	100%
Population under 5 Years (17%)					
46,553	72%	17,986	28%	64,539	100%
Population of Child Bearing Age Women (22%)					
60,245	72%	23,276	28%	83,521	100%

3.2.2 Types of Residents

Overall 90% residents of slums/underserved areas are permanent settlers of their localities; whereas, 3% are either displaced and 8% belong to other Nationalities. Underserved have greater number of temporary displaced and slums have greater number in families belonging to other Nationalities.

Table 8: Types of Residents

Areas	Permanent Settlers	Temporary Displaced	Other Nationality
Slums	88%	2%	10%
Underserved	95%	5%	0%
Total	90%	3%	8%

3.3 Health Resources

3.3.1 Health Facilities

Overall 35% UCs do not have public health facilities; although 65% of UCs do have public health facilities, but only 4% residents of slums report the presence of Public health facilities within 2 kilometers access; whereas, 12% residents of slums and 21% underserved areas report access to private health facilities within 2 kilometers access (Annex 5 Table 8a-8b).

Table 9: UCs with/without Health Facilities

UCs with Health Facilities	UCs without Health Facilities
65%	35%

It is important to note that none of underserved areas report about presence of health facilities.

3.3.2 EPI Facilities

31% UCs do not have EPI facilities. Although 69% UCs have EPI facilities, it is interesting to

Table 10: UCs with/without EPI Facilities

UCs with EPI Facilities	UCs without EPI Facilities
69%	31%



note that only 6% residents of slums report about the presence of EPI facilities within 2 kilometers access. None of the underserved areas report about presence of EPI facility (Annex 5 Table 10)

3.3.3 Outreach Vaccination

Although 62% UCs with slums/underserved areas have outreach vaccination services, there are still 29% slums without outreach services; whereas, 43% underserved areas do not have these services (Annex 5 Table 11c).

Areas	With Outreach	Without Outreach
Slums	71%	29%
Underserved	57%	43%
Total	68%	32%

3.3.4 Health Workers

3.3.4 a. Lady Health Workers

Overall 65% LHW do not extend their services in slums/underserved areas. A higher percentage of slums (65%) are uncovered by Lady Health Workers as compared to underserved areas (64%).

Areas	Works	Not Works
Slums	35%	65%
Underserved	36%	64%
Total	35%	65%

3.3.4 b. Dengue Workers

Overall (54%) dengue workers are not available in slums/underserved areas. More slums (55%) are without dengue workers than underserved areas (50%). The working of dengue workers are managed only during dengue season. Capital Development Authority and Metropolitan Corporation Islamabad Human Resource (CDA/MCI HR) is deployed on temporary basis to meet the challenge.

Areas	Works	Not Works
Slums	45%	55%
Underserved	50%	50%
Total	46%	54%

3.3.5 Emergency Health Services

Overall 35% slums/underserved areas are not aware of services of 1122. The utilization of 1122 is greater in underserved areas (71%) when compared to that in slums (63%). It is important to note that 86% slums and underserved areas are not aware of 1038 services.

Areas	Aware of 1122	Aware of 1038
Slums	63%	10%
Underserved	71%	29%
Total	65%	14%

3.4 Infrastructure

3.4.1 Housing Structures

Overall 62% houses in slums/underserved areas are found with Pacca/concrete structures. Greater percentage of housing structures of slums is pacca (69%) compared to underserved areas (41%). The percentage of *Kacha* houses is higher in slums (17%) as compared to underserved areas where no *kacha* structures exist. A similar pattern is found for *Kacha-Pacca* (mixed) housing structures where underserved areas have higher percentage (59%) as compared to slums (14%). The sizes of houses in the cases of majority of *Kacha* houses are very small and comprise of one room only for the entire family. The cooking places are also part of the one room accommodation.

Areas	Kacha	Kacha-Pacca	Pacca	Total
Slums	17%	14%	69%	100%
Underserved	0%	59%	41%	100%
Total	12%	26%	62%	100%





3.4.2 Household Toilets

Overall 50% housing structures in slums/underserved areas have open pits/traditional toilets. Greater percentage of underserved areas (51%) have open pits/traditional toilets compared to slums (49%). Same as 50% toilets of slums/underserved areas are connected with the street drains. Greater percentage of slums (51%) have toilets connected with street drains as compare to underserved areas (49%). Areas where toilets are found, majority of them are choked or filthy. On an average, 7 persons use a single toilet in slums/underserved areas. (Annex 5 Table 20c).

Table 16: Household Toilets

Areas	Traditional/Open Pit	Connected with Street Drain	Total
Slums	49%	51%	100%
Underserved	51%	49%	100%
Total	50%	50%	100%

Denominator for calculating percentages for the above two rows are houses where toilets exist

Although only 3% slums do not have toilets at the household level but open defecation is reported by a greater number of slums. The residents of slums practicing open defecation are (27%). None of the underserved areas report open defecation practices.

Table 17: Open Defecation Practices

Status	Slums	Underserved	Total
No Toilets	3%	0%	2%
Open Defecation	27%	0%	21%

3.4.3 Domestic Water

Overall 73% of slums/underserved areas do not have access to government water system and thus rely on other sources of water. A higher percentage of slums (75%) do not have government water supply connection as compared to underserved areas (64%). Majority of residents rely on ground water (well or hand pumps or tube wells) as a major source of water supply. Slums/underserved areas where government water supply is installed, the water is available for a minimum duration of 1 to 5 hours per day in most of the areas. The quality of domestic water is questionable as the containers used for domestic water storage were found to be very dirty and contaminated (Annex 5 Table 17c).

Table 18: Source of Water

Status	Slums	Underserved	Total
Access to Government water	25%	36%	27%
Ground Water	63%	36%	56%
Acquire from Other Source	12%	28%	17%
Total	100%	100%	100%

3.4.4 Waste Management

3.4.4 a) For Liquid Waste

Overall 75% slums/underserved areas either do not have any drains or have choked and filthy drains. The percentage of filthy and choked drains is higher in underserved areas (64%) in comparison to slums (33%). Only 25% slums/underserved areas have drains with running water.

Table 19: Liquid Waste Management

Areas	No Drains	Drains Filthy/Choked	Drains have Running Water	Total
Slums	39%	33%	28%	100%
Underserved	22%	64%	14%	100%
Total	35%	40%	25%	100%

3.4.4 b) For Solid Waste

Overall 75% slums/underserved areas do not have waste pick up facility provided by the government hence majority of them throw their waste on empty plots or in streets. Similar percentage (72%) of slums/underserved areas throw waste on empty plots or in streets. Such insanitary conditions facilitate breeding of mosquitoes. People exposed to such poor sanitary conditions are more likely to suffer from diarrhea, typhoid and dengue. A small percentage (3%) of slums/underserved areas have their own system, which includes burning/burying of the waste.

Table 20: Solid Waste Management

Areas	Thrown on Empty Plots/Streets	Govt System	Self System	Total
Slums	71%	27%	2%	100%
Underserved	71%	22%	7%	100%
Total	72%	25%	3%	100%



3.5 Social Welfare

3.5.1 Schools

Overall 32% slums/underserved areas are without schools. Greater number of slums (33%) are without schools compared to 29% underserved areas without schools. A large number of children were found out of school in these areas.

Table 21: Schools

Areas	Schools Available	Schools Not Available	Total
Slums	67%	33%	100%
Underserved	71%	29%	100%
Total	68%	32%	100%

The areas where schools exist, a largest proportion is run by government as well as private set ups. The percentage of schools run by welfare/trust is lower in underserved areas (20%) as compared to slums (24%). There is still need to focus on resource allocation for establishing Government schools in underserved areas as well as in slums. Majority of these schools in slums/underserved areas are located within 2 kilometer radius from the center of the slum or underserved area.

Table 22: Types of Schools³³

Characteristics	Slums	Underserved	Total
Government	73%	60%	70%
Private	48%	90%	58%
Welfare/Trust	24%	20%	23%
Madrassas	15%	0%	12%

3.5.2 Civil Society Organizations

Overall 31% slums/underserved areas have presence of CSOs. Greater percentage of presence of CSOs are in slums (29%) as compare to underserved areas (7%). These CSOs have focus on education, health, human rights, water and micro loans.

Table 23: Social Welfare

Characteristics	Slums	Underserved	Total
CSOs works	29%	7%	31%
Informal Groups Exist	51%	29%	46%
Public Welfare Schemes Exist	43%	29%	40%

3.5.3 Informal Groups

Overall 46% slums/underserved areas have informal groups with greater percentage in slums (51%) compared to underserved areas (29%). Majority of these informal groups are *Masjid Committees/ church committees*, unregistered community based organizations and Zakat committees.

3.5.4 Public Welfare Schemes

Overall 40% slums/underserved areas report about public welfare schemes by government. Highest percentage in slums (43%) as compare to underserved areas (29%) report about public welfare schemes by the government. These schemes primarily focus on social benefit card (Sehat Card, BISP Card), stipend scheme and loan schemes.



³³ There are cases of slums/underserved areas where there were more than one type of school was found. For example government and private school or government and informal school etc.



Chapter 4 Health Resources in Union Councils





Chapter 4: Health Resources in Union Councils

Administratively, Pakistan is sub divided into four provinces and federally administered areas including Islamabad, Azad Kashmir and Gilgit Baltistan. These provinces are sub-divided into districts, which are further divided into tehsils/towns. The latter are split into smaller administrative structures called UCs. Depending on the context and rural/urban settings of each province, each UC has approximately 5-15 villages/areas located within them. Headed by the UC Secretary, each UC has a UC office and has at his disposal, certain resources for the development of villages/areas of that particular UC. These resources are directly correlated to the performance output of that particular UC. This chapter is focused on the status of health resources of UCs where slums/underserved areas are located. The data has been collected from the Directorate of health and office of ICT. The prevalent situation of health resources at the level of UC is split into the following sub-topics:

4.1 Administrative Lay Out

4.1.1 UCs with/without Slums/Underserved Areas

4.2 Health Facilities

4.2.1 UCs with/without Health Facilities

4.2.2 Number of Health Facilities vs. UCs

4.3 EPI Facilities

4.3.1 UCs with/without EPI Facilities

4.3.2 Number of EPI Facilities Vs. UCs

4.3.3 Outreach Vaccination

4.3.4 Cold Chain

4.4 Nutrition Services

4.4.1 Presence of Nutrition Services

4.4.2 Types of Nutrition Services

4.5 Human Resources

4.5.1 Vaccinators per EPI Facility

4.5.2 Lady Health Workers

4.5.3 Dengue Workers



4.1 Administrative Lay Out

4.1.1 UCs with/without Slums/Underserved Areas

21 UCs of Islamabad are administratively managed by Directorate of Health while 23 UCs having rural areas are managed by Islamabad Capital Territory (ICT). With the increasing urbanization, some of the periphery UCs have been urbanized and many slums have been created there. Total 77% UCs (16 managed under Directorate of Health and 4 managed by (ICT) have presence of slums/underserved areas. 29% UCs do not have any slums/underserved areas.

Table 24: UCs with/without Slums/Underserved

Total UCs	UCs with Slums/Underserved Areas	%
26	20	77%

4.2 Health Facilities

4.2.1 UCs with/without Health Facilities

35% UCs do not have Public Health Facilities while 65% UCs have Public Health facilities. These slums/underserved areas are expected to access health facilities located in UCs other than their own.

Table 25: UCs with/without Public Health Facilities

UCs with Public Health Facilities	UCs without Public Health Facilities
65%	35%



4.2.2 Health Facilities Vs. UCs

Overall, there are 30 Public Health facilities located in 65% UCs. These 30 Public Health facilities are suppose to cater one Million population of Islamabad.

Table 26: Number of Public Health Facilities Vs UCs

Total UCs	# of Public Health Facilities in Total UCs
26	30

4.3 EPI Facilities

4.3.1 UCs with/without EPI Facilities

31% UCs are without EPI facilities; whereas, 69% UCs have EPI facilities. The residents of 8% UCs without EPI facilities are expected to utilize services of EPI facilities located in neighbouring UCs.

Table 27: UCs with/without EPI Facilities

UCs with EPI Facilities	UCs without EPI Facilities
69%	31%

4.3.2 EPI Facilities Vs. Union Councils

There are 24 EPI facilities for 69% UCs; while 31% UCs are without any EPI facility. Most of these EPI facilities are located inside the health facility.

Table 28: Number of EPI Facilities

# of EPI Facilities	# of UCs with EPI Facilities
24	18

4.3.3 Outreach Vaccination

Although 62% UCs have outreach vaccination services. Outreach vaccination services are essential for areas where EPI facilities are not accessible by the public.

Table 29: Outreach Vaccination

UCs with Outreach	UCs without Outreach
62%	38%

4.3.4 Cold Chain

ILR is available in 100% EPI facilities. None of the EPI facilities report about non-functional ILR.

Table 30: Cold Chain

Functional ILR	Non Functional ILR
100%	0%

4.4 Nutrition Services

4.4.1 Presence of Nutrition Services

Nutrition services are not offered in 50% UCs. Absence of nutrition services clearly reflect the weak integration of health services.

Table 31: Nutrition Services

Available	Not Available
50%	50%

4.4.2 Types of Nutrition Services

Three types of nutrition services are offered at various levels i.e. fixed sites, school sessions and LHW sessions. 19% UCs have fixed nutrition services. 31% UCs report that sessions are delivered through LHWs. None of the UCs offer nutrition sessions in schools.

Table 32: Types of Nutrition Services

Fixed Site	Nutrition Sessions	School Sessions	LHW Sessions
19%	0%	0%	31%

4.5 Human Resources

4.5.1 Vaccinator per EPI Facility

There are 41 vaccinators for 24 EPI facilities. This means there are around 1.7 vaccinators per EPI facility.

Table 33: Number of Vaccinators Vs Number of EPI Facilities

# of Vaccinators	# of EPI Facilities
41	24

4.5.2 Lady Health Workers

There are 145 LHWs available for 54% UCs. 65% slums/underserved areas report LHWs do not visit their areas (Annex 6 Table 11). The areas where LHW provide services, majority of them deliver information on maternal and child health care.

Table 34: Number of LHWs Vs Number of UCs

# of LHWs	# of UCs where they are Deployed
145	14

4.5.3 Dengue Workers

Temporary staff is deployed during dengue season, by CDA/MCI.



Chapter 5 **EPI Facilities**





Chapter 5: EPI Facilities

In Pakistan, vaccine service delivery for children and women is being offered through EPI facilities, outreach camps and mobile services according to the systems and procedures of each Provincial EPI Cell. The previous chapters describe the situation of slums/underserved areas and availability of health resources at the UCs level. Chapter 3 and Chapter 4 clearly articulate that besides availability of health and EPI facilities at the UC levels, their access and utilization at the slum/underserved areas are very low. This chapter amplifies the situation of EPI facilities based on the physical assessment of EPI facilities. The overall objectives of the assessment of EPI facilities is to know the strengths and weaknesses of the service delivery system and analyze correlations between coverage rates and strengths and weakness of the system. The physical assessment of 24 EPI facilities checked the following variables:

5.1 Infrastructure

- 5.1.1 Ownership of Buildings
- 5.1.2 Waiting Areas
- 5.1.3 Drinking Water
- 5.1.4 Toilets

5.2 System

- 5.2.1 Standard Operating Procedures
- 5.2.2 Working Hours

5.3 Equipment and Supplies

- 5.3.1 Ice Lined Refrigerators
- 5.3.2 Supplies
- 5.3.3 Vaccines

5.4 Waste Management

- 5.4.1 Types of Practices

5.5 Human Resources

- 5.5.1 Vaccinators
- 5.5.2 Lady Health Visitors



5.1 Infrastructure

5.1.1 Ownership of Buildings

Overall, 79% of buildings of EPI facilities are owned by the government, while 21% facilities are present in rented buildings or housed in private health facilities. Building and infrastructure of EPI facilities have a direct impact on the quality of services and attraction for caregivers. Insufficient facilities e.g. absence of waiting areas, insufficient seating capacity in waiting areas and absence of toilets and drinking water discourages caregivers particularly females for visiting these EPI facilities. Likewise, absence of gender segregated waiting areas, gender segregated clean and useable toilets and unavailability of drinking water creates difficulties for female caregivers. The following section further assesses the conditions of EPI centers on these essential parameters.

Owned	Rented /Landed	Total
79%	21%	100%

5.1.2 Waiting Areas

The waiting areas of the EPI facilities were assessed for two main parameters, which include availability of adequate space and gender-segregated space for women. The cultural and religious requirements demand for a gender segregated waiting area especially for women caregivers.

Gender Lens	
Gender Segregated	Gender Mixed
46%	54%
Seating Capacity	
Adequate	Inadequate
83%	17%



Most of the waiting areas are observed to have gender-mixed (54%) seating arrangement; whereas, gender segregated waiting areas are present in 46% EPI facilities. 17% EPI facilities have waiting areas but they have inadequate seating capacity.

5.1.3 Drinking Water

Overall 21% EPI facilities do not have drinking water facility that could be discouraging for caregivers traveling from distant places. Considering the hot weather conditions during summer, availability of an adequate drinking water facility is important for EPI facilities.

Table 37: Drinking Water

Available	Not Available
79%	21%

5.1.4 Toilets

Availability of useable toilets is extremely important for the patients and their attendants. Overall 8% of the total assessed EPI facilities report about unavailability of toilets, also 9% facilities where toilets exist are not useable. In addition 21% facilities available where toilets are available but they are not gender segregated.

Table 38: Toilets

Availability	
Available	Not Available
92%	8%
Gender Lens	
Gender Segregated	Gender Mixed
71%	21%
Usability	
Useable	Unusable
83%	9%

5.2 Systems

5.2.1 Standard Operating Procedures

SoP guide facility staff about the quality standards and help them avoid malpractices thus availability of SoP is a basic step towards its compliance. It is alarming that only 17% facilities in Islamabad have SoP..

Table 39: Standard Operating Procedures

Standard Operating Procedures	
Available	Not Available
17%	83%
Average Working Hours	
Six Hours Per Day	Less than Six Hours Per Day
75%	25%

5.2.2 Working Hours

The EPI facilities usually work for 08 hours a day. Two hours are dedicated for the working of vaccinators for record keeping while 06 hours are dedicated for the provision of vaccination services. 75% EPI facilities extend their services for 06 hours; whereas, 25% of the EPI facilities operate for less than 06 hours a day.

5.3 Equipment and Supplies

5.3.1 Ice Lined Refrigerators

100% EPI facilities have functional ILRs.

Table 40: Ice Lined Refrigerator

Functional	Non Functional
100%	0%

5.3.2 Supplies

EPI facilities report no shortage of vaccine supplies in their respective facilities.

Table 41: Supply of Vaccines

Status	Vaccines
No Shortage	100%

As for the availability of vaccine supplies, safety boxes/sharp containers, vaccine carriers and ice packs are readily available; however, 04% of EPI facilities do not have auto disable syringes.

Table 42: Supply of Supplies

Types of Supplies	Available	Not Available	Total
Auto Disable Syringes	96%	4%	100%
Safety Boxes	100%	0%	100%
Vaccine Carriers	100%	0%	100%
Ice Packs	100%	0%	100%

5.4 Waste Management

Waste management of supplies is extremely important and it has to be done according to the laid down SoP to avoid the misuse of syringes. 100% EPI facilities burn and bury their waste material.

Table 43: Waste Management

Burn and Bury	WMC Vehicle
100%	0%



5.5 Human Resources

5.5.1 Vaccinators

Overall 88% EPI facilities report availability of vaccinators whereas, vaccinators are not available in 12% of EPI facilities.

Table 44: Human Resource

Vaccinators		
Available	Not Available	Total
88%	12%	100%

Lady Health Visitors		
Available	Not Available	Total
79%	21%	100%

5.5.2 Lady Health Visitors

The deployment of Lady Health Visitors (LHVs) is done according to the administrative level of each health facility. EPI facilities housed in secondary and tertiary hospitals and Basic Health Unit may have deployment of LHVs but an independent EPI Center may not have deployment of LHVs under the administrative system. Primary purpose of the LHV in any of the health facilities is to offer maternal child health care, but they are also made responsible for the vaccination as well. 21% EPI facilities do not have LHVs whereas, they are available in 79% of the facilities.





Chapter 6 **Childhood Vaccination**

Bilo Without Vaccine

Bilo is 1 year and 1 month old and therefore he is not yet aware about the conditions in which he is born and would be raised into. Bilo is a resident of Rimsha colony, a slum situated in H-9, Islamabad. His father, Bagha, is a daily wage worker who is lucky to find a job some days; whereas, there are days where there is no work for Bagha and no food for his family. Bilo has two other siblings, a brother and a sister. This family of five lives in a one room tented house where the toilet facility is not available and there is no access to government water. The household is always operational in deficit since Bagha is not able to find lucrative opportunities for daily sustenance of his family. Bilo's mother is a 23 years old illiterate woman who is unaware about the working of Lady Health Workers in her area. She is not aware about the significance of routine immunization and does not believe in preventive healthcare. As per Bilo's mother, "*when you do not have food, you do not worry about something as lavish as preventive healthcare*". She quotes how she has only seen the children of her neighbors being suffering from temperature after they receive a vaccine. She comments that they have almost little to no resources to spend on healthcare in case Bilo falls sick due to a vaccine. Moreover, she highlights how taking her child to a health center which is a few kilometers away is an ordeal for her and family. It is due to the irrational fear of Bilo's mother and the prevailing socio-economic conditions of the household, that Bilo has not yet received even one routine vaccination.



Chapter 6: Childhood Vaccination

This chapter presents the analysis of vaccination coverage rates of children aged 12-23 months. The coverage rates are correlated with background characteristics of mothers and their households. This chapter comprehensively covers the following variables:

6.1 Vaccination Coverage

- 6.1.1 Sample Size
- 6.1.2 Retention of Vaccination Cards
- 6.1.3 Fully Immunized Coverage
- 6.1.4 Antigen wise Coverage
- 6.1.5 Partially Vaccinated
- 6.1.6 Zero Dose
- 6.1.7 Reasons of Zero Dose
- 6.1.8 Information about Working of LHWs
- 6.1.9 Preferred Channels of Communication

6.2 Characteristics of Mothers

- 6.2.1 Age
- 6.2.2 Education Levels
- 6.2.3 Engagement in Livelihood

6.3 Characteristics of Households

- 6.3.1 Commonly Spoken Language
- 6.3.2 Housing Structures
- 6.3.3 Domestic Water
- 6.3.4 Household Toilets
- 6.3.5 Major Professions

6.4 Background Characteristics of Fully-immunized Vs. Zero-Dose

- 6.4.1 Illiteracy in Mothers
- 6.4.2 Living in Kacha Housing Structures
- 6.4.3 Availability of Household Toilets
- 6.4.4 Caregivers Working as Daily Wage Workers
- 6.4.5 Debt Burden

6.1 Vaccination Coverage

This section presents the sample size, retention of vaccination card and childhood immunization coverage rates. The status of vaccination is checked for both record and recall basis. The coverage rates are higher on recall basis when compared to records. Since 58% mothers are illiterate and 15% are educated between grades 1-5 therefore reliability of recall is limited.

6.1.1 Sample Size

A total of 1,072 households with 1,072 mothers and 1,072 children aged 12-23 months are part of this survey. Out of 1072 children aged 12-23 months, 45% are girls and 55% are boys. These households have a total of 8,452 family members with 49% male and 51% female members while the average family size is 8 (Annex 8 Table 5).

Table 45: Sample Size

Children	Mothers	Households
1072	1072	1072

6.1.2 Retention of Vaccination Card

Only 31% children have vaccination cards. Retention of vaccination card is greater in boys (56%) compared to only 44% girls.

Table 46: Retention of Vaccination Cards

Children with Vaccination Card	Boys	Girls
31%	56%	44%

When checked for living conditions, 59% of the children without vaccination cards live in either Kacha or Kacha/Pacca houses. 69% families without the card depend on daily wages for their livelihood; whereas, 53% of them face constant debt burden. 51% mothers of children without the card are illiterate.



6.1.3 Fully Immunized Children³⁴

a) Record + Recall Basis

51% children are fully immunized. Greater percentage of boys (56%) are fully immunized compared to girls (44%). The recall basis children are checked for BCG scar so that reliability of data can be enhanced. The communities have different myths associated with childhood immunization.

Table 47: Fully Immunized

Records+ Recall Basis		
Fully Immunized	Boys	Girls
51%	56%	44%
Records Basis		
14%	66%	34%

b) Record Basis

14% children are fully immunized on record basis. On a gender lens, the share of boys within fully immunized children is greater (66%) as compared to that of girls (34%).

6.1.4 Antigen Wise Coverage

a) Record + Recall

84% children have received BCG + OPV0 dose, the coverage rate for Penta 3 is 60% and coverage rate for Measles 1 is only 55%. The dropout from BCG-OPV0 to Penta 3 is 29%; whereas, the dropout from BCG-OPV0 to Measles 1 is 35%. This reflects a greater need for extensive follow up and tracking of children so that dropout rates can be reduced and coverage rates increased.

Table 48: Antigen Wise Coverage

Antigens	Record+ Basis	Recall	Record Basis
BCG OPV0	84%		31%
Penta 1	76%		27%
Penta 2	68%		23%
Penta 3	60%		20%
Measles 1	55%		18%

b) Record Basis

The antigen wise coverage rates drop even further when these are checked against records. The coverage rate for BCG+OPV0 31%, while it is 18% for Measles 1.

6.1.5 Partially Vaccinated³⁵

33% children are partially vaccinated (Record+ Recall). Gender wise analysis found greater percentage of boys (55%) partially vaccinated compared to girls (45%). When analyzed for the living conditions of partially vaccinated children, 58% of houses of partially vaccinated children are either Kacha or Kacha Pacca. 70% families depend on daily wage for their livelihood activities; while 56% of these families face constant debt burden. 53% mothers of partially vaccinated children are illiterate.

Table 49: Partially Vaccinated

Gender	Partially Vaccinated
Girls	45%
Boys	55%
Total	33%

6.1.6 Zero Dose Children

16% children have not received any antigen hence are zero dose. The gender segregation shows that 51% of zero dose children are girls compared to 49% boys. As for the living conditions of zero dose children, houses of 86% zero-dose children are *Kacha* or tented while houses of 8% zero dose children are *Kacha-Pacca* combination structures. 81% zero-dose children have illiterate mothers. 71% households of zero dose are in constant pressure of debt against family expenditures (Annex 8 Table 36).

Table 50: Zero Dose Children

Zero Dose	Male	49%
	Female	51%

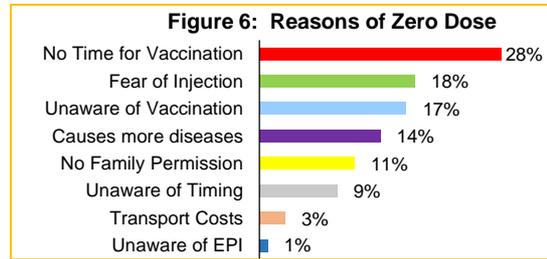
³⁴ Fully Immunized means a child who has completed all vaccination up to Measles 1

³⁵ This means that although they have received a few antigens of vaccination, they have not received all up to Measles 1.



6.1.7 Reasons of Zero Dose

89% reasons of zero dose are directly linked with the unawareness of the need for vaccination. Fear or side effects and fear of pain of injection are also associated with unawareness level of mothers. Another major reason (11%) for not vaccinating children is non-permission by family decision makers.



6.1.8 Information about Working of LHWs

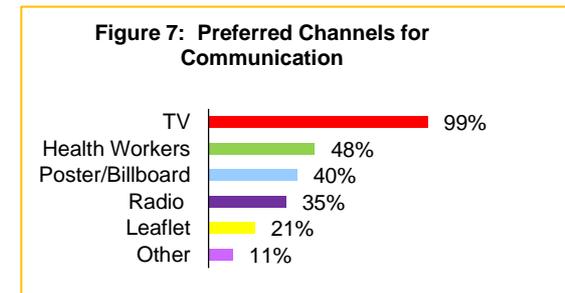
08% mothers are not aware of the working of LHWs in their locality. As for the types of services provided by LHWs, 89% mothers believe that LHWs promote health services; whereas, 2% of the mothers think that LHWs supply family planning products. None of the mother reported LHWs providing information on routine immunization (Annex 8 Table 18).

Table 51: Awareness Level of Mothers About LHWs

Aware of LHWs	Not Aware of LHWs	Total
92%	8%	100%

6.1.9 Preferred Channels of Communication

99% mothers prefer medium of communication to receive information is television, whereas, along with television, mothers preferred health workers (48%) as communicators for providing information on vaccination. Posters/billboard (40%), radio (35%). Leaflet (21%) is the least popular medium of receiving information on vaccination.



6.2 Background Characteristics of Mothers

In order to comprehend the real reasons of low or no coverage, it is important to know the background characteristics of mothers. Three major variables i.e. mother's age, education level and engagement in livelihood activities were checked.

6.2.1 Age

Majority (44%) of mothers have ages ranging between 25-29 years while 1% mothers are in the age bracket of 14-19 years and another 1% mothers are of more than 39 years of age (Annex 8 Table 20).

6.2.2 Education Level

58% mothers have no education while 23% have 6-10 years of education. Only 5% mothers have 11-15 years of education (Annex 8 Table 21).

6.2.3 Engagement in Livelihood

91% mothers serve as home makers while only 9% are engaged in some kind of livelihood activities (Annex 8 Table 22).

6.3 Background Characteristics of Households

The background characteristics of households are checked to know the family background, living conditions and economic pressure. Five major variables are analyzed i.e. spoken language to know the ethnic background, housing structures, access to domestic water and toilets, major profession and financial debt.

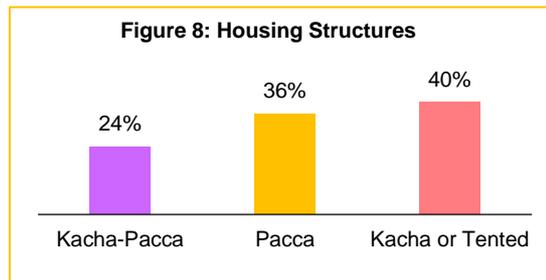
6.3.1 Commonly Spoken Language

Punjabi is the most commonly spoken language by 58% households; whereas, Pashto is the spoken language of 21% families. Furthermore, a combination of languages including Urdu, Potohari, Balochi, Persian, Saraiki, Hindko is spoken by the majority of the families (Annex 8 Table 23).



6.3.2 Housing Structures

40% housing structure of children are *Kacha/tented* house; whereas, 24% houses are *Kacha/Pacca* combination (mixed structures). Majority of the (59%) houses have 2-3 rooms, while 39% houses have only 1 room. Average family size is 8 in which females constitute 51% and males constitute 49% family members. The operational electricity connections are available in majority (88%) of the housing structures. (Annex 8 Table 26).



6.3.3 Access to Domestic Water

Majority (74%) of the houses do not have *Government water supply* connections and they use either ground water or acquire water from other sources. 79% of the houses which have access to government water supply receive water for 1-5 hours (Annex 8 Table 27).

6.3.4 Household Toilets

Majority of the houses (44%) have traditional or open pit toilets. 16% houses where toilet facilities are absent practice open defecation. An average of 7 people use a single toilet on a daily basis (Annex 8 Table 29).

6.3.5 Major Professions

73% households rely on daily wage labor for income followed by 15% households earning income from small businesses; whereas, only 12% households hold regular jobs. 57% households face constant debt because households have to borrow household groceries, the money of which is to be returned every month (Annex 8 Table 32).

6.4 Background Characteristics of Zero Dose Vs Fully Immunized Children

81% mothers of zero dose children are illiterate as compared to a smaller share of 53% illiterate mothers of fully immunized children. The source of income for a majority (88%) of households belonging to zero dose is daily wage work in comparison to household of fully immunized children (68%). The comparison of economic situation reflects better state of families of fully immunized children as compared to zero dose. As 71% households of zero dose have debt burden in contrast to 53% households of fully immunized. 94% zero dose children live in either Kacha or Kacha Pacca (mixed) structures in comparison 59% fully immunized children living in Kacha or Kacha Pacca (mixed) structures. 67% of the houses belonging to zero-dose children do not have any toilets and hence, residents mostly practice open defecation. On the other hand, 98% houses of fully immunized children have toilet facilities.

Table 52: Fully Immunized Vs Zero Dose

Variables	Fully Immunized	Zero Dose
Illiteracy in Mothers	53%	81%
Caregivers Working as Daily Wage Labour	68%	88%
Debt	53%	71%
Live in Kacha or Kacha Pacca House	59%	94%
No Toilets	2%	67%





Chapter 7 **Conclusion and Recommendations**





Chapter 7: Conclusion and Recommendations

This chapter draws main conclusions and present key recommendations. The recommendations can be transformed into a coasted action plan through participatory exercise at the provincial level.

7.1 Conclusion

More than a quarter of the population lives in slums/underserved areas which is an indication of unplanned city growth and the vulnerable state under which most of the city residents are living. The city saw major slum proliferation before-1990s the era of urbanization in Pakistan. The economy of Pakistan saw a transition from an agrarian to a semi-industrialized economy during this time period, initiating a wave of migration from rural to urban areas by residents in pursuit of better life opportunities, thereby creating informal settlements in the process. Only 43% slums are registered by city authorities, which means that the rest of the settlements are illegal and therefore, do not have access to public health, water and sanitation system and schools. 11% of the residents of slums/underserved areas of Islamabad are either temporarily displaced or are of other Nationality. The temporarily displaced people and other Nationality need special attention from city authorities since they either keep moving from one locality to another creating shanty towns, or in the case of refugees, they may not have the legal right to work in Pakistan which contributes further to their state of marginalization.

When assessed for their *infrastructural facilities*, 38% of the houses in slums/underserved areas are either *Kacha/Kacha Pacca*, making them vulnerable to extreme weather conditions. Although most of the households in slums/underserved areas of Islamabad have toilet facilities, more than half of the slums/underserved areas are without proper solid and liquid waste disposal system. These households have either open or running drains and for solid waste disposal, they dump their waste material either on streets or in open empty plots. This contributes to poor hygiene and cleanliness related issues which in turn leads to the spread of diseases among the residents of these informal settlements. Further analysis on access to government supply of water reveals that it is only available to around 27% of the residents of slums/underserved areas. The rest of the residents rely on ground water or acquire it from other sources. When assessed for the availability of social welfare schemes, more than a half quarter of slums do not have any schools which means that either the children in these areas do not attend school or have to travel a long distance to have access to the nearest school.

The UCs where public health and EPI facilities are present, more than 80% of the residents of slums/underserved areas report that they are outside the accessible vicinity of 2 Km. Health facilities situated outside easy accessible distance makes it difficult for slum dwellers to reach these facilities in case of a health-related emergency. Moreover, the distance from EPI facilities means that caregivers, considering their state of financial deprivation, are less likely to take their children for routine immunization. This in turn contributes to poor immunization coverage and the outbreak of preventable diseases which strains the already limited budget of the Federal Health Department. As for the availability of nutrition services, half of the UCs of the city do not have nutrition services.

The assessment of *EPI facilities* reveals that almost half of the EPI facilities do not have gender-segregated waiting areas; whereas, 21% of the EPI facilities do not have gender-segregated toilets. In the cultural context of *Afghan* and *Pathan* communities, gender segregated facilities are essential to enable female caregivers to visit EPI facilities on their own for vaccinating their children. The *coverage analysis* on sample population reveals that only half of the children (51%) are fully-immunized; whereas, the other 49% are either zero-dose or partially vaccinated. The reason for poor immunization coverage is primarily attributed to low level of awareness about routine immunization among the mothers of children and the absence of permission from their families. Further analysis indicates that the families of zero-dose children are living under more vulnerable conditions with constant debt burden, illiteracy, *Kacha* housing structures and absence of sanitation system, when compared to the families of fully-immunized children.

7.2 Study Limitations

- The profiling of slums / underserved areas is done by conducting interactive group interviews. There is a possibility of exaggeration and biased input from the participants due to prevailing group dynamics.



- The study provides accurate listing of the slums and provides substantial details on the profiling of the slums. However, since it is a sample-based study, the input from the sample does not precisely represent the true opinion of the entire slum population.
- Although the study provides an insight into the water and sanitation conditions of the dwellers of slums/underserved areas, the study does not, in detail, cover the hygiene of water in terms of water safety for human consumption. The study also does not cover the poor sanitation related ordeals of the slum dwellers.
- The data on existing healthcare facilities has been collected from the department of health. It has been organized and analysed under the existing study but the healthcare facilities (except EPI centers) located in the union councils, were not physically visited and verified by the study team.
- The data presented on EPI centers is the observation/input of the survey team and information provided by the technical staffs / doctors. The department of health may have different information about EPI centers in their records.
- The profiling of slums/underserved areas was conducted to have a cursory view of the situation therefore participatory group discussions were conducted in each slum and underserved areas. Since the detailed house-to-house information has not been collected from the residents, some of the information may have exaggeration according to the participants of the group.
- The status of vaccinations explored through childhood vaccination coverage survey in the community were not triangulated with the data obtained from fixed EPI centers through assessment. Therefore, the survey records for recall basis may have some variation.
- The childhood vaccination coverage survey was conducted only with mothers of children aged between 12 and 23 months, living in slums/underserved areas. The majority of mothers were either had no formal education or had very low levels of education. Their responses may have some understanding gaps.
- Since majority of the respondents of coverage survey were mothers with no formal education therefore the status of vaccination on recall basis has limited reliability.
- Since majority of the mothers of zero dose children had no formal education therefore reasons of zero dose may have missed some more aspects.
- Almost 68 percent population (slums and underserved areas) has access to school (i.e. access to primary education) in the study areas. However, type and quality of school education had not been assessed.

7.3 Recommendations

The communities living in the slums/underserved areas have equal right to basic facilities just as people living in urban and rural areas.

7.3.1 Service Delivery

7.3.1.1 Health Facilities

There are 30 Public health facilities in 17 UCs while 9 UCs remain without any health facility. Areas without health facilities could be facilitated for other alternatives for an easy access such as free shuttle services to and from the Public hospitals and slums/underserved areas. It is also interesting to note that although 17 of the UCs do have Public Health facilities, only 19% residents of the slums in these areas are aware about the presence of these facilities. It is vital that through proper communication sessions, the slum dwellers are informed about the existence and availability of the public health facilities.

If 30 Public health facilities are calculated against one Million population of Islamabad, each health facility seems responsible to cater minimum 33000 people. This should be critically analyzed whether the burden on each health facility is appropriate and the health facilities are accordingly prepared for catering the needs of this much population.

7.3.1.2 Vaccination Services

32% slums/underserved areas report non-provision of outreach vaccination services. It is extremely important to ensure availability of vaccination services in 100% slums/underserved areas on an immediate basis. This would improve the coverage for routine immunization.

Standard Operating Procedures is a guiding document for maintaining quality standards for running and managing the EPI facilities. Standard Operating Procedures are not available in 83% EPI facilities. It is extremely important to maintain quality standards according to approved Standard



Operating Procedures, which will keep facilities working, more smooth, standardized and regular to attract more caregivers. There is an immediate need to ensure provision of Standard Operating Procedures and its compliance in all EPI and health facilities.

Drinking water is not available in 21% of the facilities, 8% facilities are without toilets and another 9% toilets are not useable due to unavailability of water supply system. If these facilities are improved, it will facilitate and encourage caregivers for visiting the EPI facilities particularly females.

25% EPI facilities provide services for less than 6 hours a day; whereas, 75% remain operational for only up to 6 hours a day. It is extremely important to ensure strict accountability and performance management system for the staff of EPI facilities. The EPI centers must at least operate for the standard 06 hours 6 days a week.

12% EPI facilities do not have vaccinators, it is a missed opportunity for those children who happen to visit the facilities but go without any vaccination due to unavailability of the vaccinator. It is very important to cover the children who access and reach to the health facilities.

7.3.2 Demand Generation

7.3.2.1 Community Engagement

89% mothers of zero dose do not know that vaccination is done to protect child from deadly diseases and a larger percentage of caregivers expressed fear of pain of injection or fear of side effects of the vaccination. This indicates dire need for massive awareness raising campaign for correcting the knowledge and changing the practices of caregivers.

11% caregivers of zero dose report non-permission for the vaccination of their children. It is important to design targeted demand generation strategy for changing the mindset of decision makers. It is also important to create a support structure in the form of influencers and religious leaders for mobilizing the hard-core refusals of childhood vaccination.

54% slums/underserved areas do not have any functional and active informal groups. It is extremely important to organise residents of slums/underserved areas into an organised group to become a support tier for facilitating mobilization of caregivers during outreach vaccination.

7.3.2.2 Effectiveness of LHWs

65% slums/underserved areas are not covered by LHWs and where they work. LHWs can play an effective role in mobilizing mothers for the vaccination of their children. It is extremely important to guide LHWs about their awareness raising topics on a monthly basis. It is also important to facilitate a coordinated micro planning between LHWs and vaccinators for complementing their efforts for the success of outreach vaccination.

7.3.3 Gender in Immunization

Gender balance is not limited to the analysis of coverage data for girls and boys. There is a need to remove all types of barriers, which discourage female caregivers to access and utilize EPI services. 54% waiting areas at EPI facilities are not gender segregated. Moreover, 17% of the waiting areas have inadequate seating capacity. Similarly, 21% of the EPI facilities have no drinking water facility, 21% EPI facilities do not have gender segregated toilets and another 8% do not have toilets. It is extremely important to provide gender friendly infrastructure facilities at EPI centers to attract women caregivers. This may have direct impact on the improvement of coverage rates.

LHVs offer multiple benefits because of their qualifications and gender. They provide maternal child health care, services for safe delivery and vaccination to women and children. The cultural practices of Pakistan demand for women friendly services in which gender of the vaccinator is one such service which may attract women caregivers. LHVs are not deployed in 21% of the EPI facilities. More LHVs need to be trained to provide services in the underserved EPI facilities in Islamabad city. Presence of LHVs encourages female caregivers to access fixed EPI facilities not only for childhood vaccination but also for maternal child health care.



7.3.4 Nutrition

7.3.4.1 Fixed Sites for Nutrition Services

According to National Nutrition Survey 2018, 40.2% children under the age of 5 years are stunted and 9.5% are underweight³⁶. Fixed nutrition services available only in 5 out of 26 UCs. It is extremely important to add component of Nutrition services in the current set of health and EPI facilities. This would economize the costs and multiply the impact of vaccination services.

7.3.5 Water, Sanitation and Hygiene (WASH)

7.3.5.1 Water

73% slums/underserved areas do not have access to government water system and thus they rely on other source of water. The containers used for the storage of water are very dirty and open. Most of these containers become breeding places for dengue mosquitoes. It is extremely important to establish regular water supply system in slums/underserved areas to avoid contamination as well as prevent any breeding place for dengue mosquitoes.

7.3.5.2 Household Toilets

Although 57% slums are registered even then a large majority of them do not have access to proper sewerage system. 21% residents of slums practice open defecation. 50% slums have traditional open pit toilets. Any outbreaks due to unhygienic conditions may affect the residents of entire city of Islamabad. It is important to engage CSOs for introducing safe sanitation in slums/underserved areas.

7.3.5.3 Waste Management

35% slums/underserved areas do not have drains. Areas where drains exist, 40% slums/underserved areas have filthy/choked drains. The solid waste is also thrown in either streets and or empty plots in 72% slums/underserved areas. Streets are playing area for children and make them highly vulnerable to catch preventable diseases. Since 43% slums and 100% Underserved areas are registered therefore system for solid waste management could be easily be enforced.

7.3.6 Other Alternatives

7.3.6.1 Literacy for Generating Demand for Immunization

81% mothers of zero dose children are illiterate. Improving the education level of mothers and young girls is a long-term strategy but some strategy needs to be developed for the education of mothers and childbearing age women. The high literacy rates will not only impact immunization coverage rates but will bring improvement in the quality of life of families living in these slums/underserved areas. There could be subsidized programmes for adult literacy and some welfare schemes could be offered aiming to educate mothers.



36 <https://www.unicef.org/pakistan/media/1951/file/Final%20Key%20Findings%20Report%202019.pdf>



Annex 1: Questionnaire for Group Discussion in Slums/Underserved Areas

BS02	Name of facilitator of group interview
BS04	What is the name of your province? Select from below by typing the correct number: 1. Punjab 2. KP 3. Balochistan 4. Islamabad
BS05	Enter the name of your city
BS06	Enter name of your town
Bs07a	What is the NEW NAME of this Union Council?
BS07b	What is the NEW NUMBER of this Union Council?
BS08a	What is the OLD name of this Union Council? If there is no OLD name, type X
BS08b	What is the OLD NUMBER of this Union Council? If there is no old number, type X
BS09	Is this a ... 1. Slum 2. Underserved area
PART B	
SP01	Please share current publicly known name of slum or underserved area (this should be name of the slum/underserved area that is also used in their postal address)
SP02	What is the status of registration of slum or underserved area with the relevant government department? Type 1 if its registered, or 2 if its unregistered. 1. Registered 2. Unregistered
SP03	Do you have documentary evidence? Type 1 for "yes" or 2 for "no". Skip if answer to question S02 is no. 1. Yes – check the evidence. If any utility bill is available in the name of the area, this can be treated as evidence 2. No
SP04	Which year was this area established?
SP05a	What is the name of the nearest landmark of this area?
SP05b	Please enter distance in kilometers from the slum/underserved area to the landmark
SP06	How many Mohallas do you have in this slum or underserved area?
SP07a	How many total families live in this slum or underserved area?
SP07b	What is the total population of this slum/underserved area?
PART C	
MT01	Do you have families other than permanent residents living here? If answer to this question is no then skip questions MT02b 1. Yes 2. No
MT02a	What is the number of permanent resident families settled here? Please enter number of FAMILIES only, and not individuals
MT02b	What is the number of temporary displaced families settled here? Please enter number of FAMILIES only, and not individuals. If none, type 0. Skip this question if answer to the question MT01 is no
MT02c	What is the number of nomad families settled here? Please enter number of FAMILIES only, and not individuals. If none, type 0. Skip if answer to questions SP08a is no
MT02d	What is the number of families from conflict affected areas that are settled here? Please enter number of FAMILIES only, and not individuals. If none, type 0. Skip if answer to questions SP08a is no
MT02e	What is the number of non-Pakistani families settled here? Please enter number of FAMILIES only, and not individuals. If none, type 0. Skip if answer to questions SP08a is no
MT02f	Any there families settled other than explained in answers to the earlier questions? Please enter number of FAMILIES only, and not individuals. If none, type 0. Skip if answer to questions SP08a is no
PART D	
HF01	Are there any functional public or private health facilities having MBBS qualified doctors in this slum or underserved area? If answer to this question is no then skip questions from HF02a to HF02d 1. Yes 2. No
HF02a	If there are any functional health facilities having MBBS qualified doctor then how many of these are public health facilities? Reply with a number. If there are none, type X. Skip this question if the answer to the question HF01 is no
HF04	Please share distance of nearest Public health facility located within your slum or underserved area in kilometers from the centre of your slum or underserved area. Skip this question if the answer to the question HF01 is no. Type a number from the select: 1) 0 - 1 Km 2) 1 - 2 Km 3) 2 - 3 Km 4) 3 - 4 Km 5) 4 - 5 Km 6) 5 + Km
HF05a	Does this public health facility offer the service of vaccination of children? Skip this question if the answer to the question HF01 is no 1. Yes 2. No



HF05b	Does this public health facility offer the service of maternal and child health care? Skip this question if the answer to the question HF01 is no 1. Yes 2. No
HF05c	Does this public health facility offer the service of administration of polio drops? Skip this question if the answer to the question HF01 is no 1. Yes 2. No
HF05d	Does this public health facility offer the service of obstructive care and delivery? Skip this question if the answer to the question HF01 is no 1. Yes 2. No
HF05e	Does this public health facility offer any other facilities? Skip this question if the answer to the question HF01 is no If yes, please describe. If none other, type X
HF 06	Does this public health facility have functional ambulance? 1. Yes 2. No
HF02b	How many Private profit making health facilities having MBBS doctor are located in this slum or underserved area? Reply with a number. If there are no private health facility in this slum or underserved area then type X
HF07.	Please share distance of nearest private facility (for-profit) in kilometers from the centre of the area. Type a number from the select. Skip this question if the answer to the question HF01 is no 1) 0 - <1 Km 2) 1 - <2 Km 3) 2 - <3 Km 4) 3 - <4 Km 5) 4 - <5 Km 6) 5 + Km
HF 08.	Does this private for-profit health facility have functional ambulance? Skip this question if the answer to the question HF01 is no 1. Yes 2. No
HF09a.	Does this private for-profit facility offer vaccination of children? Skip this question if the answer to the question HF01 is no 1. Yes 2. No
HF09b.	Does this private for-profit facility offer maternal and child health care services? Skip this question if the answer to the question HF01 is no 1. Yes 2. No
HF09c.	Does this private for-profit facility offer the service of administration of polio drops? Skip this question if the answer to the question HF01 is no 1. Yes 2. No
HF09d.	Does this private for-profit facility offer obstructive care and delivery services? Skip this question if the answer to the question HF01 is no 1. Yes 2. No
HF09e.	Does this private for-profit facility offer any other services? If yes, please describe what those services are in meaningful text and correct spellings. If the private health facility does not offer any other services defined in earlier questions then type "X". Skip this question if the answer to the question HF01 is no
HF02c.	How many health facilities having MBBS qualified doctor located in your slum or underserved area are run by any WELFARE or TRUST ? Reply with a number. If none of the health facilities are run by any welfare or trust then type X. Skip this question if the answer to the question HF01 is no
HF02d.	Are there any other types of functional health facilities having MBBS qualified doctor which are not been mentioned by you in the answers of earlier questions? If yes how many of these are located in your slum or underserved area. Please answer in number. if there is no health facility other than already explained in the answers of earlier questions then type X. Skip this question if the answer to the question HF01 is no
HF10.	Are you aware of transport services offered by the government for any health related emergencies? 1. Yes 2. No
HF11a.	Are you aware of 1122 by the government to respond to any domestic accidental emergency? 1. Yes 2. No
HF11b.	Are you aware of 1038 by the government to respond to emergency related to the situation of pregnant women? 1. Yes 2. No
HF12.	Do Lady Health Workers work in this slum or underserved area? If the answer to this question is no then skip questions from HF13a to HF14f 1. Yes 2. No
	PART E
EP01.	Are there any vaccination services offered for children and women in this slum or underserved area? If the answer to this question is no then skip questions from EP02a to EP02f 1. Yes



	2. No
EP02a	Are there any fixed EPI facilities for vaccination in this slum or underserved area? Skip this question if answer to question EP01 is no 1. Yes 2. No
EP03.	Who is running this fixed EPI facility? Skip this question if answer to question EP01 is no 1. Government 2. Private 3. Welfare organisation 4. Cantonment 5. Other
EP04.	What is the average distance of the facility from the centre of the slum? Skip this question if answer to question EP01 is no 1. 0 - 1 Km 2. 1 - 2 Km 3. 2 - 3 Km 4. 3 - 4 Km 5. 4 - 5 Km 6. 5 + Km
EP02b.	Are there outreach vaccination camps in this slum or underserved area? Skip this question if answer to question EP01 is no 1. Yes 2. No
EP02c.	Do Lady Health Workers do the vaccination? Skip this question if answer to question EP01 is no 1. Yes 2. No
EP02d.	Are there overnight stay of mobile vaccinators for vaccination camps Skip this question if answer to question EP01 is no 1. Yes 2. No
EP02e.	Do doctors in private health facility do the vaccination? Skip this question if answer to question EP01 is no 1. Yes 2. No
EP02f.	Are there any system for vaccination in this slum or underserved area which is not explained in the answers to earlier questions? If yes, please explain in a meaningful sentence and there is no other system for vaccination which is not explained in earlier questions then type X. Skip this question if answer to question EP01 is no
PART F & G	
WA01	What is the MAIN source of water for domestic purposes for the majority of the houses of this slum or underserved area? 1. Government water supply 2. Well 3. Hand pump 4. Tube wells 5. Other
WA02	If acquire domestic water through any water supply system is available in this slum what is the duration of water availability? Please enter number of hours, e.g., type "4" if the water comes for 4 hours. If no running water available, type X
TO01.	Are toilets available in any of the houses of this slum or underserved area? Skip questions TO02a if the answer to this question is no 1. Yes 2. No
To02a.	Approximately how many houses of this slum or underserved area have toilets? Enter number only. If the answer to the question TO01 is no then skip this question
To02b.	How many total houses of this slum or underserved area do NOT have toilets? Enter number only. if answer of TO02a is less than the total number of houses in this slum or underserved area then this question will filled otherwise skip it
To02c.	How many total houses are located in this slum or underserved area? Enter number only. (This question is asked to check that the answer to the question TO02a and To02b should not be greater than the total houses located in this slum or underserved area
TO 03a	If toilet exists in any of the houses of this slum or underserved area, please specify how many flush to sewage toilets are there? (Flush to sewage toilet refers to sewer connected pour flush toilet fixed with a household and main sewer outside the house leading to a disposal point or sedimentation tank). Please enter NUMBER of such type of toilets only. If there are none, type 0. Skip if answer to question TO01 is no
TO 03b	If toilets exist in any of the houses of this slum or underserved area, please specify how many traditional pits toilets are there in the slum/underserved area? (Constructed over simple dug well without any p-trap provision). Please enter NUMBER of such type of toilets only. If there are none, type 0. Skip if answer to question TO01 is no
TO 03c	If toilets exist in any of the houses of this slum or underserved area, please specify how many open pits are there in the slum/underserved area which people use as toilets? Please enter NUMBER of such type of toilets only. If there are none, type 0. Skip if answer to question TO01 is no
TO 03d	Please specify if there are ANY OTHER types of toilets in the slum/underserved area, which we have not asked you



	about yet. If so, please describe what type and how many are there. If there is no other type, type X. Skip if answer to question TO01 is no
TO 04.	If toilet exists in all or some of the houses of this slum or underserved area, please explain approximately how many persons in majority of the houses share one toilet? Enter number only. Skip if answer to question TO01 is no
To05.	If there are houses without any toilets in this slum or underserved area then where do generally men and women go for defecation? 1. Neighbor's toilet 2. Public toilet 3. Open defecation 4. Other
	PART H, I & J
TH 01a.	How many total houses are located in this slum or underserved area
TH 01b.	How many houses of this slum or underserved area have Kacha type of infrastructure as the main residential area of the household? If yes, please enter answer in number only. If there are no Kacha houses in this slum or underserved area then type X
TH 01c.	How many houses of this slum or underserved area have Pacca type of infrastructure as the main residential area of the household? If yes then enter answer in number only. If there are no Pacca houses in this slum or underserved area then type X
TH 01d.	How many houses of this slum or underserved area have mixed type of infrastructure (partially Pacca and partially Kacha) as the main residential area of the household. If yes then enter answer in number only. If there are no houses having mixed infrastructure in this slum or underserved area then type X
TH 01e.	How many houses of this slum or underserved area have tented type of infrastructure as the main residential area of the household? If yes then enter answer in number only. If there are no tented houses in this slum or underserved area then type X
TH01f	Are there houses in this slum or underserved area having infrastructure other than explained in earlier questions as the main residential area of the household? If yes then enter answer in number. If there are no houses constructed in infrastructure other than explained above in this slum or underserved area then type X
SWM 01a	Are there any paved or unpaved drains in this slum or underserved area. If the answer to this question is no then skip question SWM01b 1. Yes 2. No
SWM 01b	What is the condition of drains regarding disposal of waste water? 1. Drains have running water 2. Drains are filthy 3. Drains are choked 4. Any other
SWM02a.	Is there any system available for disposal of solid waste in this slum or underserved area? If the answer to this question is no then question SWM02b will be skipped 1. Yes 2. No
SWM 02b.	What is the system for the disposal of solid waste in this slum or underserved area? Type a number to select from the following list. Skip this question if answer to the question SWM02a is no 1. Government/WMC vehicle comes to pick 2. Welfare organisation arrange disposal with some intervals 3. Residents dump it on an empty plot 4. Residents throw it on streets 5. Any other
ED 01.	Are there schools in this slum or underserved area? If the answer to this question is no then skip questions ED02a to ED03a 1. Yes 2. No
ED02a.	Are there schools by government? Skip this question if the answer to question ED01 is no 1. Yes 2. No
ED02b.	Are there for profit schools by private sector? Skip this question if the answer to question ED01 is no 1. Yes 2. No
ED02c.	Are there schools by welfare trust or charity? Skip this question if the answer to question ED01 is no 1. Yes 2. No
ED02d.	Are there any Maktab schools by religious group(s)? Skip this question if the answer to question ED01 is no 1. Yes 2. No
ED02e.	Are there any other type of schools which are not explained while answering earlier questions? If yes, please describe what type of schools in meaning full text and correct spellings. If there are no schools types, which are not explained in earlier questions, then type X. Skip this question if the answer to question ED01 is no
Ed03a.	What is the approximate distance of nearest school (it could be any type of school) from the centre of the slum or underserved area? Type a number to select: Skip this question if the answer to question ED01 is no 1. Less than 1 km 2. Between 1-2 km 3. Between 2-3 km 4. Between 3-4 km 5. More than 4 km



PART K	
CSO01.	Are there any not for profit registered welfare or charity organisation working in this slum or under served area (NGOs-CSOs)? If the answer to this question is no then skip questions from CSO02 and CSO03. 1. Yes 2. No
CSO02	If registered not for profit organisations are working in this slum or underserved area, please mention its number? This question will be answered if the answer to question CSO01 is yes otherwise type X. Skip this question if answer to the question CSO1 is no
CSO03	If registered not for profit organisations are working in this slum or underserved area, please share their full names in correct spellings. Skip this question if the answer to question CSO01 is no
CSO04	Are there any informal groups or committee working in this slum or underserved area? If answer to this question is no then skip question CSO05 1. Yes 2. No
CSO05	Do the informal groups/committees include the following. Skip this question if the answer to the question CSO04 is no 1. Health committee 2. School committee 3. Masjid/church committee 3. Jirga or Panchait 4. Zakat committee 5. Unregistered Community Based Organisation 6. If other than stated above then explain in meaningful text in correct spellings
CSO06a	Are there any public welfare schemes or initiatives by government? If answer to this question is no then skip questions CSO06b, CSO06c, CSO06d, CSO06e, CSO06f 1. Yes 2. No
CSO06b	Does the government provide a loan scheme? Skip this question if the answer to the question CSO06a is no 1. Yes 2. No
CSO06c	Does the government provide a stipend scheme? 1. Yes 2. No
CSO06d	Does the government provide a Social Benefit Card scheme? Skip this question if the answer to the question CSO06a is no 1. Yes 2. No
CSO06e	Does the government provide a vocational skills scheme? Skip this question if the answer to the question CSO06a is no 1. Yes 2. No
CSO06f	Are there any other types of government scheme for the welfare of people of slum or underserved area, which is not explained in the answers of earlier questions? If the answer is yes, please explain it in a meaningful text and correct spelling and if there is no other type of welfare scheme by the government then type X.
Please enter names and mobile phone numbers of participants of this group discussion (minimum three names and numbers required).	
	Participant 1 name ----- Participant 1 number-----
	Participant 2 name----- Number-----
	Participant 3 name----- Number-----



Annex 2: Questionnaire for Household Coverage Survey

Questionnaire for Household Coverage Survey	
	Name of Enumerator
	Date of interview
	Select your province by typing the number from below, e.g., 2 for KP: 1. Punjab 2. KP 3. Balochistan 4. Islamabad
	Enter district name
	Enter Union Council name
	Enter the name of location
HHM1	Is this location a slum or underserved 1. Slum 2. Underserved
	Enter name of household head
	Enter household number. Please insert household numbers as 1, 2, 3 etc. as you begin filling questionnaires from different households
	Enter Converted ID number (CID) Instructions for Supervisors: The logic of having Converted ID number (CID) is to ensure a unique ID for each HOUSEHOLD. The household number cannot be unique as different enumerators will collect data from different households on the same time and will enter household number of their own such as 1, 2, 3 etc. Once data collection by all enumerators is completed for the day, the supervisor or Team Leader) enter CID for each of the completed interviews on the MS EXCEL sheet. The supervisor should know the last CID entered. This will be continued in the following day. The supervisor will enter CIDs considering the last CID entered in the previous day.
HHMa	How many members are currently living in your household?
HHMb	How many of them are males? Please write your answer in numbers e.g. 2, 3, 4
HHMc	How many females are in the household? Please write your answer in numbers e.g. 2, 3, 4
SE01	Since how long you (and your family members) are living here in this house/slum? Enter the duration in number of years and months, e.g. 2 years and 3 months
SE02	In case of nomads please specify the reason for moving and write this correct spellings and complete meaningful sentence
SE03	Which language is primarily used in your house with family members? Type the correct number from below. If they choose 8: Please write which language is primarily spoken at home and not stated in the above mentioned list of languages 1. Urdu 2. Punjabi 3. Potohari 4. Balochi 5. Pashto 6. Sindhi 7. Siraiki 8. Other
SE04	What is type of infrastructure of main living room/bedroom of the house? If they choose 5: Please specify what is the other type of infrastructure of the main room of the house in correct spellings and complete meaningful sentence 1. Kacha 2. Pacca 3. Mixed 4. Tented 5. Other type of infrastructure
SE05	How many (living rooms and bedrooms) are in the house? (Do not include kitchen, toilet, cattle-shed etc). Please write your answer in number only e.g. 1 or 2 or 3
SE06	How many members were in the house yesterday including any guests? Please write your answer in number only e.g. 1 or 2 or 3
SE07	Is electricity available/installed in your house? Please write your answer either in 1 or 2 or yes or no 1. Yes 2. No
SE08	What is the main source of water for ALL PURPOSES in your house? If they select 7, please specify the water source in words other than stated above 1. Government water supply 2. Well 3. Hand pump 4. Tube wells 5. Other
SE09	What is the main source of DRINKING water? If the answer is other than specified the above please specify it in correct spelling and meaningful sentence 1. Government water supply 2. Well 3. Hand pump 4. Tube wells 5. Other



SE10	Do you have running water system installed in your house The answer could be in 1 or 2 or in yes or no if the answer is no then skip to question SE12 1. Yes 2. No
SE11	If the running water system is installed in your house, then what is the duration of water availability? Please write your answer in number of hours only, e.g., 4. If there is no running water, type X
SE12	Do you have functional or useable toilet available within your house? If the answer is no then skip to question number SE15 1. Yes 2. No
SE13	If you have toilet in your house, please specify its type of toilet, which is used by elder family members (not by children)? (Please check the availability of toilet if conveniently possible). Please write your answer in numbers by selecting from the stated list. If they select option 5, they will be taken to SE15 1. Flush to sewage 2. Traditional toilet 3. Open pit 4. Any other type of toilet
SE14	If you do have toilet in your house, how many people share one toilet in the house? Please write your answer in number only
SE15	If you do not have toilet in your house, where do you go for defecation? If they choose 4: Please specify your answer in correct spellings and complete meaningful sentence. 1. Neighbour's toilet 2. Public toilet 3. Open defecation 4. Other
SE16	What is the primary source of income of the household? Please write your answer in numbers by selecting from the stated list. If they choose 7: Please specify the primary source of income in correct spelling and complete meaningful sentence 1. Government Job 2. Private job (factory worker, etc.) 3. Work in foreign country 4. Small business (shop keeper, etc.) 5. Work as daily wage labors 6. Taxi driver 7. Other
SE17	Do you have any type of debt burden? Yes No
Household Survey Questionnaire Part B. It is about knowledge, behaviors and practices of mothers on immunization. Repeat this questionnaire if there is more than 1 mother in this house	
Enter Converted ID number (CID). Please enter mother number, e.g., type "1" if its the first mother of the house you are interviewing. Please enter mother's mobile number if mother does not have a mobile number, please record mobile number of any other family member who lives in the same house	
SD01	How old are you? Please write your answer in number of years e.g. 20, 25, 30 etc.
SD02	How many years of schooling did you finish? Please write your answer in numbers e.g. 0,1, 2, 3, 4 etc.
SD03	Are you employed outside home? 1. Yes 2. No
SD04	How many children under the age of 2 do you have? Please write your answer in number e.g. 1, 2, 3, 4 etc.
KP01	Have you ever heard of childhood vaccination or immunization or EPI from any of the sources? If the answer is no then please skip to question KP04a 1. Yes 2. No
KP02	Please tell us the purposes of vaccinating or immunizing children? If they select option 2, please specify the purpose of vaccination in a correct spelling and complete meaningful sentence 1. To protect from diseases 2. Other purpose 3. Do not know
KP03	What is your preferred channel for receiving information on childhood vaccination? 1. TV 2. Radio 3. Bill Board/Poster 4. Leaflet 5. Health Worker 6. Other
KP04	Have you gotten your children immunised? If the answer to this question is no then skip questions CH04-C11 1. Yes 2. No
KP05	If you do not get your child immunised, please share reason for not getting your child immunised? 1. Was not aware of EPI/outreach center 2. Did not know the timing/hours 3. Did not have time to go 4. No enabling environment in EPI center



	<ul style="list-style-type: none"> 5. Transport cost/opportunity cost 6. Family/husband did not allow 7. Fear of injection 8. It is haram 9. It causes more diseases 10. Wastage of time 11. Other
KP06	<p>Have you ever heard of Lady Health Workers (LHWs) working in your area?</p> <ul style="list-style-type: none"> 1. Yes 2. No
KP07	<p>Please tell us what they (LHWs) do? (As the interviewer, do not read the following options to the respondent.)</p> <ul style="list-style-type: none"> 1. Promote health education 2. Supply FP methods 3. Treat illness 4. Refer to hospital 5. Vaccinate/help vaccinator 6. Don't know
<p>Household Questionnaire Part C. It is about immunization status of children under 2. For each child ask her mother to answer the following question</p>	
CH01	<p>What is the gender of child?</p> <ul style="list-style-type: none"> 1. Male 2. Female
CH02	<p>What is the age of child in months? If the age of the child is in days, please specify number with a word e.g. 01 year, 009 months or 15 days</p>
CH03	<p>Has the child ever been given vaccine? Please write your answer either in 1 or 2 or yes or no. If the answer to this question is no then skip to question CH12</p> <ul style="list-style-type: none"> 1. Yes 2. No
CH04	<p>If the child was given any vaccine, please ask the mother to show the vaccination card? If the card is available then answer yes or 1. (If card is available, then use it to record immunization status of the child below. Ask the following question if the child has not received all expected doses). If card is not available then record the status of vaccination on re-call basis.</p> <ul style="list-style-type: none"> 1. Yes 2. No
CH05	<p>Has the child ever been given BCG vaccination immediately after the birth? You may ask first dose of the vaccine Please write your answer either in 1 or 2 or yes or no. Interviewer: Confirm if BCG is given by asking how was given, any scar mark on the arm of the child. The question can be filled by verifying it from the vaccination card or on recall basis</p> <ul style="list-style-type: none"> 1. Yes 2. No
CH06	<p>Has the child been given OPV to protect him/her from getting polio immediately after the birth or later? This is usually given with BCG.. Please write your answer either in 1 or 2 or yes or no Interviewer: Confirm by asking more questions. The question can be filled by verifying it from the vaccination card or on recall basis</p> <ul style="list-style-type: none"> 1. Yes 2. No
CH07	<p>Has the child' been given Penta 1 at the age of 06 weeks or later? Please write your answer either in 1 or 2 or yes or no. Interviewer: Confirm by asking more questions. The question can be filled by verifying it from the vaccination card or on recall basis</p> <ul style="list-style-type: none"> 1. Yes 2. No
CH08	<p>Has the child' been given Penta 2 at the age of 10 weeks or later? Please write your answer either in 1 or 2 or yes or no. Interviewer: Confirm by asking more questions. The question can be filled by verifying it from the vaccination card or on recall basis</p> <ul style="list-style-type: none"> 1. Yes 2. No
CH09	<p>Has the child' been given Penta 3 at the age of 14 weeks or later? Please write your answer either in 1 or 2 or yes or no. Interviewer: Confirm by asking more questions. The question can be filled by verifying it from the vaccination card or on recall basis</p> <ul style="list-style-type: none"> 1. Yes 2. No
CH10	<p>Has the child' been given Measles 1 at the age of 09 months or later? Please write your answer either in 1 or 2 or yes or no. Interviewer: Confirm by asking more questions. The question can be filled by verifying it from the vaccination card or on recall basis</p> <ul style="list-style-type: none"> 1. Yes 2. No
CH11	<p>Has the child' been given Measles 2 at the age of 15 months or later? Interviewer: Confirm by asking more questions. The question can be filled by verifying it from the vaccination card or on recall basis</p> <ul style="list-style-type: none"> 1. Yes 2. No



CH12

Does this mother have another child under 2 years of age?

1. Yes
2. No

If the answer is yes, please fill the section C of the questionnaire for the 2nd child.



Annex 3: Questionnaire for Compiling Health Resource in Union Councils

BASIC INFORMATION: This questionnaire is to be filled in through individual interview of district health officer or district EPI coordinator

BS 01. Date:	__ / __ / 201__
BS 02. Name of Interviewer	
BS 03. Signature of Interviewer	
BS 04. Name of Province:	
BS 05. Name of District:	
BS 06. Name of Town / Tehsil:	
BS 07. New Name of Union Council:	

TEHSIL/TOWN INFORMATION

TI 01. How many Union Councils are in this city? Please include all towns of this city. Number.....

TI 02. Enlist new and old names and number of all the Union Councils of this city for each town

#	List of New Name of Union Council	List of Old name of Union Council	List of New Number of Union Council	List of Old Number of Union Council

TI 03. Enlist Union Council wise names of slum or underserved area if available. (you may attach separate list of slums or underserved area in case of long list)

#	New Names of Union Council	Name of slums	Name of underserved area

TI 04. What is the population in each Union Council? (Kindly mention population including and excluding population of slum or underserved area). Please define source of population size as well

#	New Names of Union Council	Population of Slum or underserved area	Population of Union Council (Excluding Population of Slum or underserved are	Total Population of Union Council

HF 01. How many Public Health Facilities are in each Union Council?

#	Names of Union Council	List of Public Health Facilities

HF 02. How many Public Health Facilities are located in slum or underserved areas?

#	New Names of Union Council	Name of slum or underserved area	List of Public Health Facilities	List of Private Health Facilities	Total

HF 04. How many Lady Health Worker are currently active in each Union Council?

#	Names of Union Council	List of Lady Health Workers

HF 06. Is Dengue staff working in union council
 1. Yes
 2. No

HF 7. If yes, then how many staff members are working
 Total

NUTRITION

NU 01. Any nutrition service delivered in the Union Councils?
 1. Yes
 2. No

NU 02. If yes than what type of nutrition services are delivered?
 1. Fixed
 2. Temporary
 3. School Nutrition Session
 4. LHW Sessions on Nutrition in Communities
 9. Other.....

VACCINATION

VA 01. How many Fixed EPI Facilities (Vaccination centres) are available in each Union Council?

#	Names of Union Councils	List Public of Fixed EPI Facilities	List of Private Fixed EPI Facilities	List of Welfare Fixed EPI Facilities	List of Any Other Type of Fixed EPI Facilities	No EPI Facility



VA 02. State the number and functionality of ILR or Refrigerator in Fixed EPI Facility (vaccination centres)?

#	Names of Union Council	Public Fixed EPI Facilities		Private Fixed EPI Facilities		Welfare Fixed EPI Facilities		Any Other Type of Fixed EPI Facilities	
		Functional	Non Functional	Functional	Non Functional	Functional	Non Functional	Functional	Non Functional

VA 03. What is the number and status of availability of currently active vaccinator?

#	New Name of Union Council	List of vaccinator in Public Health Facility	List of vaccinator in Private Health Facility	List of Vaccinator in Fixed EPI Facility (vaccination centre) established by other than public sector organisation



Annex 4: Questionnaire for EPI Facility Assessment

Objective: This questionnaire will be used for the assessment of fixed EPI Facility and undertake group interview with the facility team.

#	Identification	Answer and code
ID1	Date of assessment	
ID2	Name of assessor	
ID3	Signature of assessor	
ID4	Name of Province	
ID5	Name of District	
ID6	Name of Town (or <i>Tehsil</i>)	
ID7	Name of the EPI Facility	
ID8	Record longitude and latitude of the fixed EPI Facility	Longitude Latitude
ID9	Take photo of the fixed EPI Facility	1 – Photos taken 2 – Not taken

#	Infrastructure
IM1	What is the type of building (rented, owned)? 1 - Rented 2 - Owned 9 - Other (specify):
#	Management
IM2	Are Standard Operating Procedures for child immunizations available in this facility at the time of visit? 1 – Yes (Assessor: Please verify) 2 – Not available today 3 – Facility never had Standard Operating Procedures
IM4 a	Are auto disable syringes available in this facility at the time of visit? 1.-Yes 2.-No
IM4 b	Are sharp containers available in this facility at the time of visit? 1.-Yes 2.-No
IM4 c	Are vaccine carrier(s) available in this facility at the time of visit? 1.-Yes 2.-No
IM4 d	Set of icepacks for vaccine carriers available in this facility at the time of visit? 1.-Yes 2.-No
IM4 e	Anything else available in this facility at the time of visit, which we have not asked about? If yes please specify and if not available type X
IM5	Does this facility has Ice Lined Refrigerator available at the time of visit with power supply for the storage of vaccines? Please physically verify the answer. 1 – Available with power supply 2 – Available but no regular power supply 3 – Ice Lined Refrigerator is out of order 4 – No Ice Lined refrigerator is available
IM6	Did the facility experience any problem in getting vaccines in last one year ? 1 – No 2 – Yes, sometimes 3 - Yes, facility has frequent shortage of supplies 4. – Other (specify):

#	Human Resource
EP4a	Are vaccinators available in this EPI Facility? 1- Yes 2- No
EP4b	If vaccinators are available, please share number of vaccinators currently providing services in this EPI facility? If there are no vaccinators type X
EP4c	Are LHVs available in this EPI facility
EP4d	If LHVs are available, please share number of LHVs currently providing services in this EPI facility? If there are no LHVs type X
EP5a	What are the timings of this fixed health facility open? type number only "8" (24 hours format) Opens at:
EP5b	What are the timings of this fixed health facility closed? type number only "15" (24 hours format) Closes at:
EP5c	What are total working hours of the facility per day? Type a number only e.g."8" Total working hours.....



#	Environment & Facilities For The Patients
EN1	Is there any waiting area (separate for men and women patients) in the facility? 1 – Yes, separate for men and women 2 – Yes, mixed waiting area for men and women 3 – No waiting area available
EN2	Is adequate seating capacity/ arrangement available in the waiting area? 1 - Yes, has adequate seating capacity 2 – No, seating capacity is not adequate 9 – No seating area available /NA
EN3	Is drinking water available for patients and their attendants in the facility? 1 – Yes 2 - No
EN4	Is toilet facility available for both men and women patients and their attendants in the facility? 1 – Yes, separate for men and women 2 – Yes but NOT separate for men and women 3 – No toilet facilities available
EN5	Is the toilet facility usable for patients and their attendants in the facility? 1 – Yes, usable 2 – Not usable
EN6	How health facility/ EPI waste is being disposed from the site 1. Buried 2. Burnt 3. Burn and Buried 4. Dumped in health facility / garbage cane 5. Others



Annex 5: Analysis of Profiling of Slums/Underserved Areas

City	Slums	Underserved	Sub Total
Islamabad	49	14	63

City	Before 1950	1950-1990	1991-2005	After 2005	Total
Islamabad	0	35	8	6	49

City	# of slums in each city	Registered slums	Unregistered slums	Sub Total
Islamabad	49	21	28	49

City	Population in Slums	Population in Underserved Areas	Sub Total
Islamabad	273,840	105,800	379,640

City	Permanent Resident	Temporary Displaced	Other Nationality	Total
Islamabad	30,920	590	3,806	35,316

City	Permanent Resident	Temporary Displaced	Other Nationality	Total
Islamabad	12,205	620	0	12,825

City	Permanent Resident	Temporary Displaced	Other Nationality	Total
Islamabad	43,125	1,210	3,806	48,141

City	Slums					Underserved					Grand Total
	Public	Private	Welfare/Trust	Other	Total	Public	Private	Welfare/Trust	Other	Total	
Islamabad	4	10	0	0	14	0	4	0	0	4	18

City	With Public Health Facilities	With Private Health Facilities	With Both Public and Private Health Facilities	Total	Without any Health Facilities	Total
Islamabad	2	7	0	9	40	49

City	With Public Health Facilities	With Private Health Facilities	With Both Public and Private Health Facilities	Total	Without any Health Facilities	Total
Islamabad	0	3	0	3	11	14

City	With Public Health Facilities	With Private Health Facilities	With Both Public and Private Health Facilities	Total	Without any Health Facilities	Total
Islamabad	2	10	0	12	51	63

City	0-2km	3km	# of Slums Without Private Health Facilities	Subtotal
Islamabad	6	1	42	49

City	0-2km	3km	# of Underserved Without Private Health Facilities	Subtotal
Islamabad	3	0	11	14

City	0-2km	3km	# of Slums/Underserved Without Private Health Facilities	Subtotal
Islamabad	9	1	53	63

City	Slums		Underserved Areas		Slums/Underserved Total	
	Available	Not Available	Available	Not Available	Available	Not Available
Islamabad	3	46	0	14	3	60

City	0-2km	3km	4km	5+km	Slums without EPI facility	Total
Islamabad	3	0	0	0	46	49



City	0-2km	3km	4km	5+km	Slums without EPI facility	Total
Islamabad	0	0	0	0	14	14

Table 10c: Distance Between Fixed EPI Facilities in Slums and Underserved (Total)

City	0-2km	3km	4km	5+km	Slums without EPI facility	Total
Islamabad	3	0	0	0	60	63

Table 11a: Outreach of Vaccination Services in Slums

City	Slums with Outreach	Total # of Slums
Islamabad	35	49

Table 11b: Outreach of Vaccination Services in Underserved

City	Underserved with Outreach	Total Underserved
Islamabad	8	14

Table 11c: Outreach of Vaccination Services in Slums/Underserved (Total)

City	Slums/Underserved with Outreach	Total Slums/Underserved
Islamabad	43	63

Table 12a: Lady Health Worker in Slums

City	LHWs Covered	LHWs Uncovered	Total Slums
Islamabad	17	32	49

Table 12b: Lady Health Worker in Underserved

City	LHWs Covered	LHWs Uncovered	Total Underserved
Islamabad	5	9	14

Table 12c: Lady Health Worker in Slums/Underserved (Total)

City	LHWs Covered	LHWs Uncovered	Total Slums/Underserved
Islamabad	22	41	63

Table 13a: Availability of 1122 Services

City	# of Slums	Slums		# of Underserved	Underserved Areas		Slums/Underserved Areas	
		Slums With 1122	Slums Without 1122		Underserved With 1122	Underserved Without 1122	Slums/Underserved With 1122	Slums/Underserved Without 1122
Islamabad	49	31	18	14	10	4	41	22

Table 13b: Availability of 1038 Services

City	Slums			# of Underserved	Underserved Areas		Slums/Underserved Areas	
	# of Slums	Slums With 1038	Slums Without 1038		Underserved With 1038	Underserved Without 1038	Slums/Underserved With 1038	Slums/Underserved Without 1038
Islamabad	49	5	44	14	4	10	9	54

Table 14: Dengue Workers

City	Slums		Underserved		Slums/Underserved Total		
	Available	Not Available	Available	Not Available	Available	Not Available	Sub Total
Islamabad	22	27	7	7	29	34	63

Table 15a: Types of Housing Structure in Slums

City	Kacha or Tented	Pacca	Kacha-Pacca (Mixed)	Total
Islamabad	5,826	24,383	5,107	35,316

Table 15b: Types of Housing Structure in Underserved

City	Kacha or Tented	Pacca	Kacha-Pacca (Mixed)	Total
Islamabad	0	5,295	7,530	12,825

Table 15c: Types of Housing Structures in Slums/Underserved (Total)

City	Kacha or Tented	Pacca	Kacha-Pacca (Mixed)	Total
Islamabad	5,826	29,678	12,637	48,141

Table 16a: Sources of Domestic Water in Slums

City	Government Water Supply	Ground Water (Well, Hand Pump, Tube Well)	Acquire From Other Sources Of Water
Islamabad	12	31	6

Table 16b: Sources of Domestic Water in Underserved

City	Government Water Supply	Ground Water (Well, Hand Pump, Tube Well)	Acquire From Other Sources Of Water
Islamabad	5	5	4

Table 16c: Sources of Domestic Water in Slums/Underserved (Total)

City	Government Water Supply	Ground Water (Well, Hand Pump, Tube Well)	Acquire From Other Sources Of Water
Islamabad	17	35	11

Table 17a: Duration of Water Availability (in case of Government Water Supply) in Slums

City	Duration of Water Availability (in case of Government Water Supply) in Slums
Islamabad	



City	1-5 hours	6-10 hours	11-15 hours	16-20 hours	20+ hours	Slums without Government Water Supply	Sub Total
Islamabad	7	3	0	0	2	37	49

Table 17b: Duration of Water Availability (in case of Government Water Supply) in Underserved

City	1-5 hours	6-10 hours	11-15 hours	16-20 hours	20+ hours	Slums without Government Water Supply	Sub Total
Islamabad	3	0	0	0	2	9	14

Table 17c: Duration of Water Availability (in case of Government Water Supply) in Slums/Underserved (Total)

City	1-5 hours	6-10 hours	11-15 hours	16-20 hours	20+ hours	Slums without Government Water Supply	Sub Total
Islamabad	10	3	0	0	4	46	63

Table 18a: Availability of Household Toilets in Slums

City	# of House Having Toilets	# of Household Not Having Toilet	Total Household
Islamabad	34,173	1,143	35,316

Table 18b: Availability of Household Toilet in Underserved

City	# of House Having Toilets	# of Household Not Having Toilet	Total Household
Islamabad	12,825	0	12,825

Table 18c: Availability of Household Toilet in Slums/Underserved

City	# of House Having Toilets	# of Household Not Having Toilet	Total Household
Islamabad	46,998	1,143	48,141

Table 19a: Type of Household Toilet in Slums

City	Connected with Street Drain	Traditional/Open pit	Sub-Total
Islamabad	17,501	16,672	34,173

Table 19b: Type of Household Toilet in Underserved

City	Connected with Street Drain	Traditional/Open pit	Sub-Total
Islamabad	6,222	6,603	12,825

Table 19c: Type of Household Toilet in Slums/Underserved (Total)

City	Connected with Street Drain	Traditional/Open pit	Sub-Total
Islamabad	23,723	23,275	46,998

Table 20a: Average # of People using Toilet

City	Average # of People Using Toilet
Islamabad	8

Table 20b: Average # of People using Toilet in Underserved

City	Average # of People Using Toilet
Islamabad	5

Table 20c: Average # of People using Toilet in Slums and Underserved Areas (Total)

City	Average # of People Using Toilet
Islamabad	7

Table 21a: Modes of Defecation Without Toilet in Slums

City	Neighbor's Toilets	Public Toilet	Open Defecation	Not Applicable	Sub-Total
Islamabad	2	0	13	34	49

Table 21b: Modes of Defecation Without Toilet in Underserved

City	Neighbor's Toilets	Public Toilet	Open Defecation	Not Applicable	Sub-Total
Islamabad	0	0	0	14	14

Table 21c: Modes of Defecation Without Toilet in Slums/Underserved (Total)

City	Neighbor's Toilets	Public Toilet	Open Defecation	Not Applicable	Sub-Total
Islamabad	2	0	13	48	63

Table 22a: Condition of Drains in Slums

City	Drains Have Running Water	Drains Are Filthy/Choked	# Of Areas With No Drains	Sub-Total
Islamabad	14	16	19	49



Table 22b: Condition of Drains in Underserved				
City	Drains Have Running Water	Drains Are Filthy/Choked	# Of Areas With No Drains	Sub-Total
Islamabad	2	9	3	14

Table 22c: Condition of Drains in Slums and Underserved (Total)				
City	Drains have running water	Drains are filthy/choked	# of Areas with no drains	Sub-Total
Islamabad	16	25	22	63

Table 23a: Solid Waste Disposal Practices in Slums				
City	Govt/WMC vehicle	Other Systems	Dumping on Empty Plot and Street	Total
Islamabad	13	1	35	49

**Note: The option of other includes burnt and buried*

Table 23b: Solid Waste Disposal Practices in Underserved				
City	Govt/WMC vehicle	Other Systems	Dumping on Empty Plot and Street	Total
Islamabad	3	1	10	14

Table 23c: Solid Waste Disposal Practices in Slums and Underserved (Total)				
City	Govt/WMC vehicle	Other Systems	Dumping on Empty Plot and Street	Total
Islamabad	16	2	45	63

Table 24a: Schools in Slums and Underserved						
City	Slums			Underserved Areas		
	Available	Not Available	Total Slums	Available	Not Available	Total Underserved
Islamabad	33	16	49	10	4	14

Table 24 b: Schools in Slums and Underserved (Total)			
City	# of Areas With Schools	# of Areas Without Schools	Total slums/Underserved
Islamabad	43	20	63

Table 25a: Types of Schools in Slums						
City	Government	Private	Welfare/Trust	Maktab/Madrsa	Other	No Schools
Islamabad	24	16	8	5	0	16

Table 25b: Types of Schools in Underserved						
City	Government	Private	Welfare/Trust	Maktab/Madrsa	Other	No Schools
Islamabad	6	9	2	0	0	4

Table 25c: Types of Schools in Slums and Underserved Areas (Total)						
City	Government	Private	Welfare/Trust	Maktab/Madrsa	Other	No Schools
Islamabad	30	25	10	5	0	20

Table 26a: Distance of Nearest School from Slums						
City	0-2km	3km	4km	5+km	Slums Without schools	Sub Total
	#	#	#	#	#	#
Islamabad	33	0	0	0	16	49

Table 26b: Distance of Nearest School from Underserved						
City	0-2km	3km	4km	5+km	Slums Without schools	Sub Total
Islamabad	10	0	0	0	4	14

Table 26c: Distance of Nearest School and Slums/Underserved						
City	0-2km	3km	4km	5+km	Slums Without schools	Sub Total
Islamabad	43	0	0	0	20	63

Table 27: Availability of Working by CSOs						
City	Slums		Underserved Areas		Slum/Underserved Areas	
	Available	Not Available	Available	Not Available	Available	Not Available
Islamabad	14	35	1	13	15	48

Table 28a: Types of Services by CSOs in Slums	
Types of Services	Islamabad
Education	4
Health	3
Human Rights (Micro Loans)	3
Water	2
Areas with no charity organization	2
Total	35
	49



Table 28b: Types of Services by CSOs in Underserved Areas	
Types of Services	Islamabad
Education	1
Health	0
Human Rights	0
Loans	0
Water	0
No CSO	13
Grand Total	14

Table 28c: Types of Services by CSOs in Slums/Underserved Areas (Total)	
Types of Services	Islamabad
Education	5
Health	3
Human Rights	3
Loans	2
Water	2
No CSO	48
Grand Total	63

Table 29: Presence of Informal Groups						
City	Slums		Underserved		Slum/Underserved (Total)	
	Available	Not Available	Available	Not Available	Available	Not Available
Islamabad	25	24	4	10	29	34

Table 30a: Type of Informal Groups in Slums	
Types of Informal Groups	Islamabad
Health Committee	0
Jirga/Punchaiyat	1
Masjid/Church Committee	18
School Committee	0
Unregistered Community-Based Organization	4
Zakat Committee	2
No Informal Groups or Committees	24
Total	49

Table 30b: Types of Informal Groups in Underserved Areas	
Types of Informal Groups	Islamabad
Health Committee	0
Jirga/Punchaiyat	0
Masjid/Church Committee	0
School Committee	4
Unregistered Community-Based Organization	0
Zakat Committee	0
No Informal Groups or Committees	10
Grand Total	14

Table 30c: Types of Informal Groups in Slums/Underserved Areas	
Types of Informal Groups	Islamabad
Health Committee	0
Jirga/Punchaiyat	1
Masjid/Church Committee	18
School Committee	4
Unregistered Community-Based Organization	4
Zakat Committee	2
No Informal Groups or Committees	34
Grand Total	63

Table 31: Availability of Welfare Scheme by Government									
City	Slums			Underserved Areas			Slums/Underserved		
	Total Slums	Covered	Uncovered	Total Underserved	Covered	Uncovered	Total slums/Underserved	Covered	Uncovered
Islamabad	49	21	28	14	4	10	63	25	38

Table 32: Types of Welfare Schemes by Government											
City	Type of work	Loan Scheme		Stipend Scheme		Social Benefit Card		Vocational Skills Scheme		Other	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
		Islamabad	Slum	0	21	1	20	20	1	0	21
Underserved	1		3	1	3	2	0	0	4	0	4
Total	1		24	2	23	22	1	0	25	0	25



Annex 6: Analysis of Health Resources of Union Councils

Table 1: Town Wise Number of UCs with/ without Slums/ Underserved	
Islamabad	
Town	Total UCs
NA	26

Table 1b: Status of Slums/Underserved in Union Councils			
City	UCs with Slums/Underserved	UCs without Slums/Underserved	Total
Islamabad	20	6	26

Table 2: Town wise Number of UCs and Population	
UCs	Population
26	1529887

Table 3: Population of UCs	
City	Population
Islamabad	1,529,887

Table 4: Number of Health Facilities in UCs	
City	Health Facilities in Total UCs
Islamabad	30

Table 4a: UCs with/ without Health Facilities			
City	# of UCs with Health Facilities	# of UCs without Health Facilities	
Islamabad	17	9	26

Table 5: Number of EPI Facilities	
City	Public EPI Facilities
Islamabad	24

Table 6: UCs with/ without EPI Facilities			
City	# of UCs with EPI Facilities	# of UCs without EPI Facilities	Total
Islamabad	18	8	26

Table 7: Availability of Functional ILR/Refrigerator in Fixed EPI Facility			
City	EPIs with Functional ILR	EPIs without Functional ILR	Total
Islamabad	24	0	24

Table 8: Outreach Vaccination Services		
City	UCs with Outreach Vaccination	Total UCs
Islamabad	16	26

Table 9a: Nutrition Services			
City	Available in UCs	Not Available in UCs	Total
Islamabad	13	13	26

Table 9b: Types of Nutrition Services in UCs					
City	Fixed	Temporary Sites	School Session	Sessions by LHWs	No Nutrition Services
Islamabad	5	0	0	8	13

Table 10: Number of Vaccinators in Public Health Facilities		
City	Total EPI Facilities	Total Vaccinators
Islamabad	24	41

Table 11: Number of UCs Covered by LHWs				
City	UCs Covered by LHWs	UCs Uncovered by LHWs	Total UCs	Total Number of LHWs
Islamabad	14	12	26	145

Table 12: Availability of Dengue Workers			
City	Dengue Workers Available in UCs	Dengue Workers not Available in UCs	Total UCs
Islamabad	NA	NA	NA

Annex 7: Analysis of Results of EPI Facility Assessment

Table 1: Number of EPI Facilities			
Names of Towns	Number of UCs	UCs with EPI Facilities	Number of EPI Facilities
Islamabad			
NA	26	21	24

Table 2: Status of Ownership of Building of EPI Facilities			
City	Owned	Rented	Total
Islamabad	19	5	24

Table 3: Types of EPI Facilities				
City	Government	Private	Charity	Total
Islamabad	19	5	0	24

Note: There is 1 EPI Centre Other than mentioned variables

Table 4: Average Working Hours of EPI Facilities			
City	Less than 6 Hours	6 Hours	Total
Islamabad	6	18	24

Table 5: Availability of Standard Operating Procedures			
City	Available	Not Available	Total
Islamabad	4	20	24

Table 6: Availability of LHVs in EPI Facilities				
City	Available	Not Available	Total	Total # of LHVs
Islamabad	19	5	24	31

LHVs are deployed according to the status of health facility. If some facilities offer only vaccination services then LHVs are not deployed there as per government system.

Table 7: Availability of Vaccinators in EPI Facilities				
City	Available	Not Available	Total	Total # of Vaccinators
Islamabad	21	3	24	31

Table 8: Vaccine Supplies				
City	Availability of Types of Vaccine Supplies			
	Auto Disable Syringes	Safety Boxes/ Sharp Containers	Vaccine Carrier (s)	Icepacks
Islamabad	23	24	24	24

Table 9: Supply of Vaccines				
City	Infrequent Shortage	Frequent Shortage	No Shortage	Total
Islamabad	0	0	24	24

Table 10: Availability of Ice Lined Refrigerators				
City	Available Functional	Available Non-Functional	Not Available	Total
Islamabad	24	0	0	24

Table 11: Availability of Waiting Areas			
City	Gender Mixed Waiting Area	Gender Segregated Waiting Area	Total
Islamabad	13	11	24

Table 12: Seating Capacity of Waiting Areas in EPI Facilities			
City	Adequate	Inadequate	Total
Islamabad	20	4	24

Note: 12 EPI Facilities having no waiting areas

Table 13: Availability of Drinking Water			
City	Available	Not Available	Total
Islamabad	19	5	24

Table 14: Availability of Toilets				
City	Gender Segregated Available	Gender Mixed Available	Not Available	Total
Islamabad	17	5	2	24

Table 15: Usability of Toilet				
City	Useable	Not Useable	Toilet Not Available	Total
Islamabad	20	2	2	24

Table 16: Waste Management Practices			
City	Buried/Burnt	WMC Vehicle	Total
Islamabad	24	0	24

Annex 8: Analysis of Household Coverage Survey

City	Households	Mothers	Children
Islamabad	1072	1072	1072

City	Boys	Girls	Total
Islamabad	586	486	1072

City	1	2	3	Total
Islamabad	1072	0	0	1072

City	Total Household members	Male	Female
Islamabad	8452	4111	4341

City	Average Family Size	Average Male Members	Average Female Members
Islamabad	8	4	4

City	With Card (Records)			Without Card (Recall)			Zero Dose	Total Children
	Male	Female	Total	Male	Female	Total		
Islamabad	187	144	331	318	256	574	167	1072

City	Total Eligible Children	# of Fully Immunized Children	Male	Female
Islamabad	1072	549	310	239

City	Total Eligible Children	# of Fully Immunized Children	Male	Female
Islamabad	1072	148	98	100

City	Total Eligible Children	BCG	Penta 1	Penta 2	Penta 3	Measles 1
Islamabad	1072	897	814	728	642	588

City	Total Eligible Children	BCG	Penta 1	Penta 2	Penta 3	Measles 1
Islamabad	1072	327	289	246	214	192

City	FI (Records +Recall)	ZD	Partially Vaccinated
Islamabad	549	167	356

City	Male	Female	Total
Islamabad	195	161	356

City	FI (Records)	With Card	Partially Vaccinated
Islamabad	148	331	183
			17%

City	Zero Dose		
	Male	Female	Total
Islamabad	81	86	167



Reasons for Zero Dose	IBD
Mother Number of Zero Dose	167
Vaccination causes more diseases	23
Unavailability of Time for Vaccination/Wastage of time	46
Unaware of EPI/ outreach Centre	1
Unaware of Vaccination Timings	15
No Family Permission	18
Fear of Injection	30
Transport cost to EPI facility is High	5
Environment in EPI facility is not good	0
Unaware of Childhood Vaccination	29
Child Was Sick	0
No Facility Available	0

City	To Protect from Disease	Other Purpose	Do Not Know	Total
Islamabad	447	335	290	1072

City	Mothers having knowledge	Mothers not having knowledge	Total
Islamabad	985 92%	87 8%	1072 100%

City	Promote Health Education	Supply Family Planning Products	Refer to Hospital	Information About Immunization	Give Guidance about treatment of illness	Help Vaccinator	Don't Know	Not Applicable	Total
Islamabad	957	23	0	0	0	0	5	87	1072

City	T.V	Radio	Poster/Billboard	Leaflet	Health Worker	Others
Islamabad	899	316	364	188	432	100

City	14-19	20-24	25-29	30-34	35-39	40+	Total
Islamabad	12	134	472	327	111	16	1072

City	0	1-5	6-10	11-15	15+	Total
Islamabad	617	160	241	49	5	1072

City	Yes	No	Total
Islamabad	99	973	1072

City	Urdu	Punjabi	Potohari	Balochi	Pashto	Sindhi	Siraiki	Others	Total
Islamabad	98	622	96	0	226	1	7	22	1072

City	Kacha	Kacha-Pacca	Pacca	Total
Islamabad	432	256	384	1072

City	1 Room	2-3 Rooms	4-6 Rooms	7-10 Rooms	10+ Rooms	Total
Islamabad	422	632	16	2	0	1072

City	Houses With Electricity	Houses Without Electricity	Total
Islamabad	938	134	1072

City	Government Water Supply	Ground Water	Acquire Water	Total
Islamabad	278	778	16	1072

City	Less than 1 hour	1-5 hours	6-10 hours	11-15 hours	16-20 hours	20+ Hours	Total
Islamabad	0	221	57	0	0	0	278



City	Connected with Street Drains	Traditional Latrine/ Open Pit	Houses Without Toilets	Total
Islamabad	430	468	174	1072

City	Average Toilets Users
Islamabad	7

City	Neighbor's Toilet	Public Toilet	Open Defecation	Houses with Toilets	Total
Islamabad	0	0	174	898	1072

City	Job (Government Job, Private Job, Work in Foreign Country)	Small Business	Daily Wage Labor	Total
Islamabad	126	164	782	1072

City	Debt (Always / Occasional)	No Debt, No Savings	Savings	Total
Islamabad	608	462	2	1072

Background Characteristics of Zero Dose Children

City	0 (Illiterate)	01—05	06—10	11—15	Total
Islamabad	136	22	9	0	167

City	Job Holders	Small Business	Daily wage Labor	Other	Total
Islamabad	2	6	147	12	167

City	Debt (Always / Occasional)	No Debt, No Savings	Savings	Total
Islamabad	119	48	0	167

City	Average Family Size	Male Members	Female Members	Total Members
Islamabad	7	593	645	1238

City	Kacha	Kacha-Pacca	Pacca	Total
Islamabad	143	14	10	167

City	Connected with Street Drain	Traditional latrine/Open pit	Houses without Toilets	Total
Islamabad	13	42	112	167

City	Neighbor's Toilets	Public toilet	Open Defecation	Total
Islamabad	0	0	112	112

Background Characteristics of Fully Immunized Children

City	0 (Illiterate)	01--05	06--10	11--15	15+	Total
Islamabad	293	87	145	24	0	549

City	Job Holders	Small Business	Daily wage Labor	Total
Islamabad	80	95	374	549

City	Debt (Always / Occasional)	No Debt, No Savings	Savings	Total
Islamabad	289	259	1	549

City	Average Family Size	Male Members	Female Members	Total Members
Islamabad	8	2122	2260	4382



Table 45: Housing Structures of Fully immunized Children

City	Kacha	Kacha-Pacca	Pacca	Total
Islamabad	173	153	223	549

Table 46: Households Toilets in Fully Immunized Children

City	Connected With Drains	Traditional latrine/open pit	Houses without Toilets	Total
Islamabad	247	291	11	549

Table 47: Modes of Defecation in the Absence of Toilets in the Houses of Fully Immunized

City	Neighbor's Toilets	Public toilet	Open Defecation	Total
Islamabad	0	0	11	11

