CIET www.ciet.org
building the community voice into planning

Project Report
PR-PK-pn2khp-05

Pakistan

Social audit of governance and delivery of public services: Khairpur district 2005 -- Preventive child health

Anne Cockcroft, Khalid Omer, Sohail Saeed, Amar Dass, Manuel Pascual-Salcedo, Md Ijas and Neil Andersson

CIET www.ciet.org
building the community voice into planning

Social audit of governance and delivery of public services

Khairpur District 2005
Preventive child health

A Cockcroft, K Omer, S Saeed, A Dass, M. Salcedo, M Ilyas, N Andersson
Khairpur, February 2006

Contents

List of tables....ii
List of figures....iii
Acknowledgements....iv
Summary....v
Methods....v
Findings....vi
Introduction....1
The social audit in focus districts....1
Operationalising the social audit in focus districts....2
Focus district national core group....4
Methods....5
The topic for the social audit cycle....5
Data collection instruments....7
Sample and sampling....8
Field teams....9
Data collection....9
Data entry and analysis....10
Findings....12
The information base....12
Childhood diarrhoea....13
Frequency of childhood diarrhoea....13
Variables potentially related to childhood diarrhoea....13
Analysis of risk of diarrhoea in children....16
Treatment of diarrhoea in children....17
Experience of treatment for diarrhoea....19
Childhood respiratory infections....21
Frequency of childhood respiratory infections....21
Variables potentially related to ARI....21
Analysis of risk of childhood ARI....23
Information from the lady health worker....24
Treatment of ARI....24
Childhood measles....27
Frequency of childhood measles....27
Analysis of risk of measles....27
Payment for cases of measles....28
Childhood immunisations....29
Immunisation status of the children....29
Why children are not immunised....30
Mothers' knowledge and perceptions about immunisations....31
Decisions about immunisation for children....33
Measles immunisation....34
Frequency of immunisation....34
Analysis of receiving measles vaccine....34
Lady health workers....37
Public satisfaction with basic services....40
Commentary....47
Annexes....50

List of tables

1. The household sample by *taluka* 11
2. Household features by *taluka* 11
3. Children in the survey by *taluka* 11
4. % households using different sources of drinking water 12
5. % households with different conditions for drinking water containers 12
6. % households using and having latrines 13
7. % households observed with different hygienic conditions in and around the house 14
8. Frequency of LHW visits to visited households 14
9. Variables potentially associated with the risk of diarrhoea in children 15
10. Model of effects of variables on risk of diarrhoea in children whose mothers had some education 15
11. % children taken to different types of facilities for treatment of diarrhoea in the past 12 months 17
12. Why mothers were satisfied with the treatment from the facility (% mothers) 19
13. Why mothers were dissatisfied with the treatment from the facility (% mothers) 19
14. % that paid, mean and median amounts paid for travel for treatment of diarrhoea 19
15. % that paid, mean and median amounts paid for diarrhoea treatment at the facility 19
16. % that paid, mean and median amounts paid for diarrhoea medicines or investigations outside facility 19
17. % households with different stove types for cooking 20
18. % households with different heating systems 21
19. Variables potentially associated with the risk of ARI in children 22
20. Model of effects of variables on risk of not having ARI 22
21. Potential gains in ARI prevention 22
22. % children taken to different types of facilities for treatment of ARI in the past 12 months 23
23. % that paid, mean and median amounts paid for travel for treatment of ARI 25
24. % that paid, mean and median amounts paid for ARI treatment at the facility 25
25. % that paid, mean and median amounts paid for ARI medicines/investigations outside the facility 25
26. Variables potentially associated with the risk of measles in children 26
27. Model of effects of variables on the chance of *not* having measles 26
28. Potential gains in measles prevention in children 10-59 months old 27
29. % children 12-23 months immunised% children 12-23 months immunised 28
30. Reasons why children (12-59 months) are not immunised 29
31. Mothers' sources of information about immunisation for children 30
32. Why mothers felt immunisation was not worthwhile 31
33. Where mothers had heard about adverse effects of immunisations 31
34. Mother's recall about advice on immunisations given by LHWs 32
35. Mother's involvement in decisions about immunisation for the child (% children) 32
36. Variables potentially associated with the risk of measles in children 33
37. Model of effects of variables on the chance of having measles vaccine 34
38. Potential gains in increasing measles immunisation 35
39. Where LHWs heard about adverse effects of immunisation 36
40. Why children are not always immunised: LHW views 37
41. Suggestions of LHWs to ensure all children are immunised 37
42. Advice reportedly given by LHWs about diarrhoea prevention 37
43. Advice reportedly given by LHWs about diarrhoea treatment 37
44. Advice reportedly given by LHWs about ARI treatment 38
45. % households reporting access to roads and public transport 39
46. % households reporting access to garbage, sewerage, and water services 41
47. % households reporting access to agricultural, education and health services 42
48. % households reporting access to gas and electricity services 44

List of figures

1. Sample sites for Khairpur social audit 2005 7
2. % of "very vulnerable" households 11
3. % of children with diarrhoea in the last 2 weeks 12
4. % children under 5 years with diarrhoea in the last two weeks 12
5. % households with covered, clean, raised drinking water container 13
6. % households with a formal latrine 13
7. % households with excreta observed inside or at the doorstep 14
8. % of mothers who could correctly cite a cause of diarrhoea in children 15
9. % children under 5 years old given more fluids during last episode of diarrhoea 16
10. % children under 5 years old given anti-diarrhoea medicine during last episode of diarrhoea 16
11. % children under 5 years old taken for treatment during their last episode of diarrhoea 17
12. % of children provided ORS and other medicines from health facilities or practitioners 18
13. % of mothers of children with diarrhoea who thought they got a full explanation of their child's illness 18
14. % of children under 60 months old with ARI during the last 2 weeks 20
15. % children under 5 years old with ARI in the last two weeks 20
16. % children with ARI taken to different health care providers 23
17. % children under 5 years old taken anywhere for treatment in last episode of ARI 23
18. % mothers/caregivers provided with a full explanation of their child's illness, for children with ARI 24
19. % of parents of children with ARI provided with all medicines prescribed 24
20. % children aged 10-59 months who have had measles (excluding cases at under 10 months old) 26
21. % children 10-59 months who have had measles(excluding cases at less than 10 months old) 26
22. % children 21-23 months who had BCG 28
23. % children 12-23 months who had full course DPT 28
24. % children 12-23 months who had measles vaccine 29
25. % children (12-23 months) who have received measles vaccine 33
26. % households satisfied with roads 39
27. % households satisfied with roads (map) 39
28. % households satisfied with public transport 40
29. % households satisfied with public transport (map) 40
30. % households satisfied with garbage disposal 40
31. % households satisfied with garbage disposal (map) 40
32. % households satisfied with sewerage services 41
33. % households satisfied with sewerage services (map) 41
34. % households satisfied with government water supply 41
35. % households satisfied with government water supply (map) 42
36. % households satisfied with agriculture services 42
37. % households satisfied with agriculture services (map) 42
38. % households satisfied with government education services 43
39. % households satisfied with government education services (map) 43
40. % households satisfied with govt health services 43
41. % households satisfied with govt health services (map) 43
42. % households satisfied with gas supply 44
43. % households satisfied with gas supply (map) 44
44. % households satisfied with electricity supply 45
45. % households satisfied with electricity supply (map) 45

Acknowledgements

We thank the funders of the social audit: a consortium of donors through the Devolution Trust for Community Empowerment (DTCE) and the United Nations Development Programme (UNDP); and the Canadian International Development Agency (CIDA).

We are very grateful to Ms. Nafisa Shah Jeelani, Ex, Zila Nazima Khairpur for her initiative, support, and leadership to help establish the focus district scheme in Khairpur district. We appreciate the ongoing support and facilitation of the Pir Niaz Hussain Shah Jeelani, newly elected Zila Nazim, Khairpur to provide continuity to the initiative, guidance and facilitation to the District team and complete ownership to the Social audit process in Khairpur. We would also like to thank efforts made by Ms. Rana Shah (advocate), member zila council, Khairpur for her liaison and facilitation support for the process.

We are thankful to Mr. Rizwan Ahmed Memon DCO Khairpur for his support and guidance, and provision of premises for the social audit office and the Officers' Club for training. We are grateful to Dr Abdul Haque Sheikh, EDO Health, Khairpur and his team particularly Dr. Anwar Ali Mahesar, DO health for their support and input into design, and for providing relevant information for the design of instruments.

We thank Mr. Ghulam Shabbir Soomro EDO Community Development (district focal person) and his office staff for their support and guidance, and provision of premises.

We thank Mr. Qazi Shahid Pervez, EDO revenue, Mr. Rashid H. Qazi EDO Finance & Planning, Mr. Abdul Sattar Mir Jat, DO, F&P, and Mr. Ahmed Khan Abro, DO, PHED for facilitation and logistic support in organizing events for the social audit and inputs into the design of the cycle. We are grateful to Mr. Khadim Hussain Mirani, coordinator, Aurat Foundation, Khairpur, for his support and facilitation of logistic arrangements of data collection.

We are grateful to the members of the social audit sub technical group (Annex 2) for their great help in design and planning of the social audit.

We extend sincere thanks to Dr. Sikandar Ali Panhwar, Officer on Special Duty for foreign funded projects, Local Govt. & Rural Development Department, Government of Sindh, for provincial liaison support, and guidance in developing a strong base for the social audit in Sindh. We greatly appreciate the support and advice of Mr. Mohammad Naeem ul Haq, Member NRB, including in his role as a member of the social audit National Core Group.

We thank all the CIET team in Pakistan who contributed to this report, and Steve Mitchell for producing the maps. We thank Mr Naveen Ahmed Sheikh, Assistant Professor, Shah Abdul Latif University, Khairpur and Mr. Zulfiqar Gilal, DDO Social Welfare Khairpur, who contributed to this report during the recent CIET course on evidence based planning in the University of Peshawar.

Most importantly we thank the thousands of citizens across Khairpur who took the time and trouble to share their views and offer suggestions in household interviews and focus group discussions. We hope that use of the social audit findings to improve the lives of the people of Khairpur will repay them for their time.

Summary

Commissioned by the National Reconstruction Bureau (NRB), the CIET social audit tracks the public views, use and experience of public services under devolved local government and provides a mechanism for including citizens' views and suggestions in planning and policy making, particularly at local level.

The first and second national social audits took place in 2001/2 and 2004/5. During the first half of 2006 findings from the second national social audit will be discussed widely with the public, civil society, service providers, planners and policy makers. The social audit programme continues until 2009, with alternating years of data collection and dissemination and use of findings.

To help involve citizens in local planning and to support evidence-based planning, CIET is implementing a district social audit in five focus districts. Work in Lasbela began in 2003, and Khairpur, Haripur, Sialkot, and Khanewal joined in late 2004. In these districts the social audit aims to help governments to plan and implement services tailored to the needs of their people. A national core group supports the social audit in the focus districts.

Methods

After discussions in all the focus districts, the NCG agreed the topic of 'public and preventive health' as the main area for the first district social audit. Working with sub technical groups in each district, we designed the instruments for the cycle, including a household questionnaire, a community profile record, an institutional review of government health facilities, an interview with lady health workers (LHWs), and a feedback focus group guide.

In each district we drew a stratified random cluster sample of communities to represent the *talukas* of the district. In Khairpur district the sample comprised 25 rural and 7 urban communities across the *talukas*.

Trained field teams (mainly women) collected household information in April 2005 and conducted the feedback focus groups in July 2005.

Double data entry with validation ensured a clean dataset. We categorized household vulnerability of the

Table s1. The household sample by taluka

Taluka	No. households	Total people
Kingri	421	3467
Kot Diji	413	3293
Sobho dero	413	3156
Thari Mirwah	420	3172
Nara	404	2988
Faiz Ganj	385	3066
Gambat	401	3134
Khairpur	392	3170

Table s2. Household features by taluka

Feature	Very vulnerable	Vulnerable	Educated Head	Male head
Kingri	18	49	46	96
Kot Diji	20	50	39	97
Sobho dero	11	42	56	99
Thari Mirwah	19	51	57	97
Nara	27	69	30	99
Faiz Ganj	28	58	48	98
Gambat	29	63	40	99
Khairpur	12	44	51	93
Khairpur District	19	51	47	97
Sindh	18	46	56	94
Pakistan	13	47	53	93

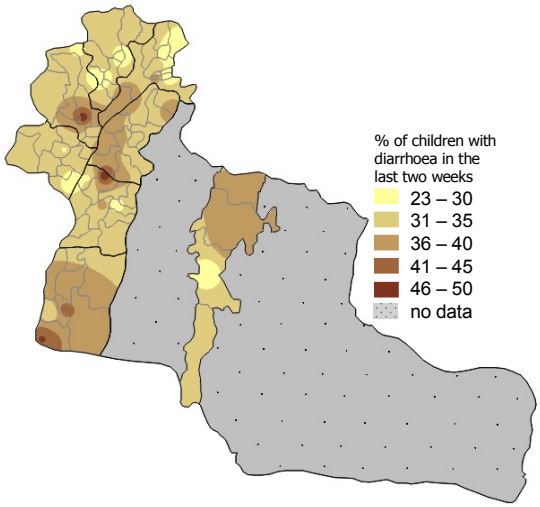


Figure s1 % children under 5 years with diarrhoea in the last

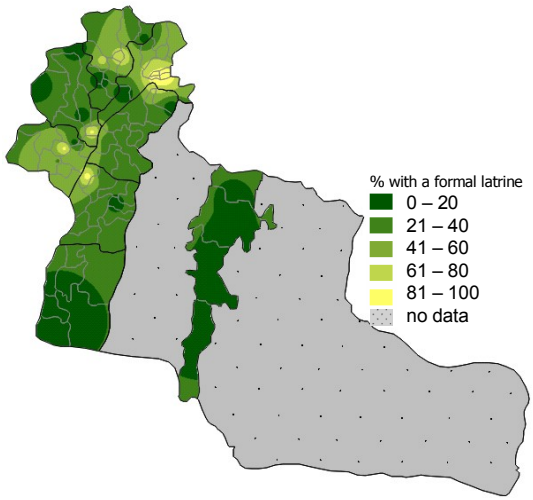


Figure s2 % households with a formal latrine

basis of roof construction, room occupancy, and occupation of the main breadwinner. Analysis produced data on key indicators across the district, weighted to reflect any uneven sample distribution, and examined the potential effects of interventions to improve outcomes.

Findings

Information base

The survey covered 3249 households (representing 25446 people). The sample in each *taluka* is shown in Table s1. Some 51% of the households were 'vulnerable' and 19% were 'very vulnerable'. Table s2 shows household features by *taluka*.

In the 3249 households we interviewed 3421 mothers or caregivers. Only 17% had any formal education. The 3421 mothers provide information about 4739 children below the age of 60 months. We also interviewed 46 LHWs covering the sample communities.

Childhood diarrhoea

Among children aged less than 60 months, 34% had suffered diarrhoea during the last two weeks and 74% had suffered diarrhoea in the past 12 months. The proportion of children with diarrhoea during the last two weeks varied across the district (Figure s1). Some household features and practices are potentially related to the risk of diarrhoea in children.

Drinking water
early all (94%) households in Khairpur district rely on ground water as their main source of drinking water with very few using either piped water or surface water. Nearly all households (94%) have a water source defined as protected.

Of the drinking water containers inspected, 96% were covered, 83% were clean, 80% were raised, and 72% were covered, clean *and* raised.

Latrines and household hygiene
Some 80% of households used a latrine but only 35% had a formal type of latrine (Figure s2).
Most community focus groups believed that having a formal latrine in the household could help prevent diarrhoea in children but pointed out that a sewerage

system in the community was also needed. They felt households would need financial and technical support to help them install latrines.

The field teams observed garbage inside or at the doorstep in 70% of households, sewage water in 33%, and excreta in 64%.

Information and knowledge about diarrhoea
Some 45% of mothers said an LHW visited their household, but few of these mothers (13%) recalled the LHW telling them about preventing diarrhoea in children. Six out of ten mothers (59%) could correctly identify a cause of childhood diarrhoea.

Analysis of risk of diarrhoea
The risk of diarrhoea in children was lower in households where the head had some education and higher in younger children.

Treatment of diarrhoea
Only 18% of mothers visited by an LHW recalled she told them about treating diarrhoea in children. More than half (60%) of mothers said they would give a child more fluids during an episode of diarrhoea and 61% said they would give the child either the same or more food. When actually treating an episode of diarrhoea, 56% of mothers gave children more fluids and 60% gave children either the same or more food.

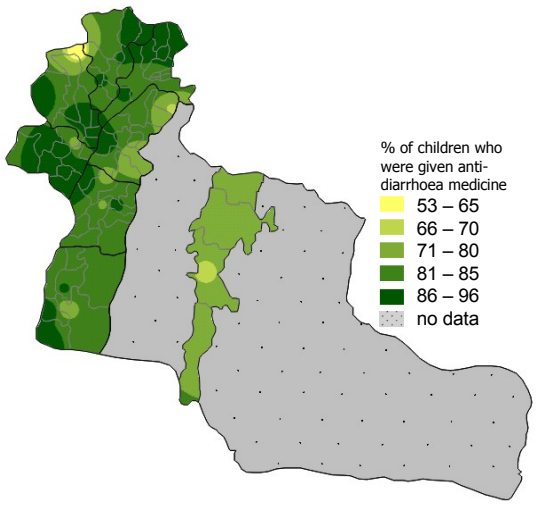


Figure s3 % children under 5 years old given anti-diarrhoea medicine during last episode of diarrhoea

In most cases (83%) the mother gave the child medicine to stop the diarrhoea (Figure s3). This is generally *not* good practice and these anti-diarrhoeal medications can be dangerous for young children.

A third (36%) of children with diarrhoea were not taken anywhere for treatment. Nearly half (44%) were taken to a private facility, 10% to a government facility, 10% to an unqualified practitioner and less than 1% to an NGO service. More than half were given ORS: 63% at government facilities, 60% at private facilities, and 59% who visited unqualified practitioners. Unqualified practitioners (28%) more commonly provided other medicines if prescribed than did government facilities (17%) or private facilities (13%).

Less than half of parents felt they were given a full explanation about the child's condition, more among those who used a private practitioner (49%), than among those who used a government facility (40%) or

an unqualified practitioner (38%). For all service providers, more than 9 out of every 10 parents were satisfied with the behaviour of the health worker.

Most parents paid for travel to government or private practitioners but not to unqualified practitioners. The average payments for treatment were lowest in government facilities. Most parents had to pay for medicines or investigations outside the facility: 92% of those who used a private facility, 83% at a government facility, and 79% at unqualified practitioners.

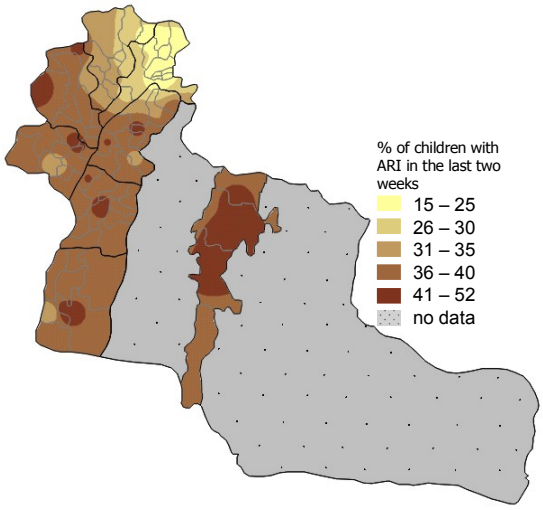


Figure s4 % children under 5 years old with ARI in the last two weeks

Childhood respiratory infections

Among children les than 60 months old, 36% had suffered an acute respiratory infection (ARI) during the last two weeks and 68% during the past year (Figure s4). Some household features and practices are potentially related to the risk of ARI in children.

Cooking and heating
Most (86%) households had their cooking area separate from the main living area, and 87% had their cooking area separate from the sleeping area. Most cooking was on wood stoves and only 17% used non-smoky cooking fuels. A third of households (34%) had some type of heating system, mostly wood stoves.

Smoking and ventilation
Nearly half (41%) the households had a least one member who smoked inside the house. Most (84%) households had some form of ventilation arrangement.

Analysis of risk of ARI
Children in households where the kitchen was not separated from the living area and those perceived by their mothers as small for their age had a higher risk of ARI. If all households had their cooking area separate from the living area this could potentially prevent ARI in 14 per thousand children.

Treatment of ARI
Of mothers visited by an LHW, very few recalled being told how to recognize (4%) or treat (7%) ARI.

Of children with ARI in the last 12 months, 40% were not taken anywhere for treatment, 43% were taken to a private qualified practitioner, 9% to an unqualified practitioner, only 8% to a government facility, and 1% to an NGO service.

Private practitioners provided a full explanation for 47% of children, unqualified practitioners for 42% and government practitioners for 41%. All the prescribed medicines were provided in the facility for 29% of visits to unqualified practitioners, 25% to government facilities and 14% to private facilities.

Most families (78%) paid for travel to a private facility, 56% for travel to unqualified practitioners, and 43% to a government facility. Payments for treatment in government facilities were less than those for private or unqualified practitioners. But most (79%) of those visiting government facilities had to pay for medicines outside the facility.

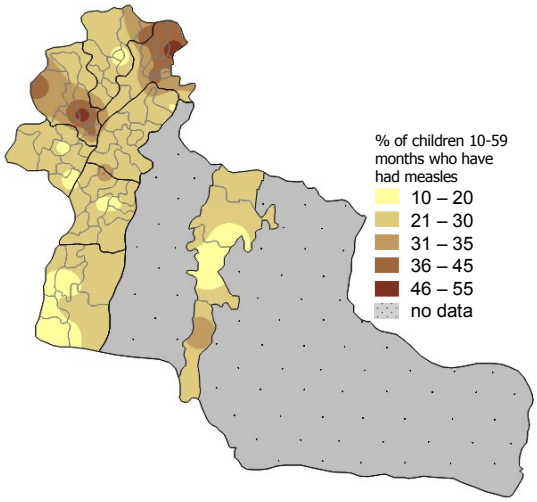


Figure s5 % children 10-59 months who have had measles (excluding cases of measles at less than 10 months old)

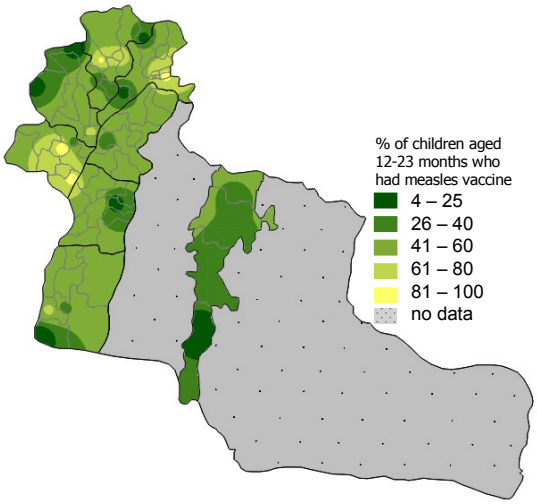


Figure s6 % children 12-23 months who had measles vaccine

Childhood measles

The description of measles frequency is among children 10-59 months old and excludes cases in children less than 10 months old. In these children, 27% were reported to have had measles (Figure s5).

Analysis of risk of measles
Younger children were less likely to have had measles than older children. Children who had not been immunised against measles had 1.5 times the risk of having measles compared with children who had been immunized. The analysis indicated that if all children were immunized, this could potentially protect 40 per thousand children from having measles.

Costs of measles
Of those children aged 10-59 months who had measles in the last 24 months, 84% of their parents paid something for treatment. Among those who paid, the mean amount was Rs545 (median Rs300).

Childhood immunisations

Among children aged 12-23 months, 75% had received BCG vaccine, 52% had received a full course of DPT injections, and 50% had received measles vaccine (Figure s6). All children less than 60 months old had received polio drops at least once during the last year, and most of them had received drops many times.

Knowledge and perceptions about immunisation
Most (82%) mothers had heard something about immunisations, but sometimes no more than information about where to go to get the immunisation.

Some 76% of mothers were able to mention at least one illness preventable by immunisation. Almost all (91%) thought it was worthwhile to immunise children. Only 11% had heard of any adverse effect of immunisation. Among mothers visited by an LHW, 25% recalled being told something about immunisations. Most (83%) of the mothers had discussed immunisation in the family. For 47% of children the mother and father decided together about immunisation, for 33% the mother alone decided, and for 20% the mother was not involved at all.

Analysis of receiving measles vaccine
Children were more likely to be immunised if: their mothers had some education, they were from less vulnerable households, their mothers knew some vaccine preventable illness, their mothers thought immunisation was worthwhile, their family had discussed immunisations, their mothers had been told by the LHW about immunisations, and if their community was within 5Km of a government facility offering vaccinations. Potential gains of interventions to address these factors need to be balanced against the costs.

Public satisfaction with basic services

Isolated satisfaction ratings must be interpreted with caution as they may be influenced by many factors, but they nevertheless offer a feedback to district governments about a range of services provided by district and *taluka* governments.

Roads
Some 40% of households were satisfied with the roads and 66% said they had access to roads.

Public transport
Some 53% of households were satisfied with public transport and 72% said they had access to it.

Government garbage disposal
Some 13% of households were satisfied with garbage disposal and 26% said they had access to a service.

Government sewerage system
Only 19% of households were satisfied with the sewerage system and 32% said they had access to a service.

Government water supply
Only 6% of households were satisfied with government water supply and 12% said they had access to a supply.

Agriculture services
Some 37% of households were satisfied with agriculture services and 68% said they had access to a service.

Government education services
Some 59% of households were satisfied with government education services and 91% said they had access to a service.

Government health services
Some 32% of households were satisfied with government health services and 56% said they had access to a service.

Gas supply
Some 16% of households were satisfied with gas supply and 23% said they had access to a supply.

Electricity supply
Some 47% of households were satisfied with the electricity supply and 87% said they had access to a supply.

Commentary

This report presents the main findings of the social audit in Khairpur district. It will hopefully be a useful reference. But the main work of disseminating the findings and making use of them to support evidence-based planning is only just beginning. Over the coming months the social audit findings will be presented and discussed in many settings within the district, both within and outside government.

Some findings worth highlighting for further discussion include:

- the high rate of childhood diarrhoea and relatively high proportion of households with *desi* latrines
- the high use of anti-diarrhoea medicines in children
- the low use of government health services and high use of private practitioners for treatment of both diarrhoea and ARI

- the high rate of measles and local evidence of the protective effect of measles vaccine on the risk of measles
- the need to increase the rate of childhood immunisations and the evidence for possible interventions to do this
- the contrast between LHW reports of giving information to most mothers and few mothers recalling being given information
- the information about public satisfaction with services and services where Khairpur district is above and below the overall figures for Sindh

Introduction

Commissioned by the National Reconstruction Bureau (NRB), the CIET social audit tracks the public views, use and experience of public services under devolved local government and provides a mechanism for including citizens' views and suggestions in planning and policy making, particularly at local level.

The aims of the five year social audit programme are:

- To provide citizen's views and experience of devolution
- To examine delivery of public services to citizens and track changes over time
- To provide a means of input for citizens into district level planning
- To support evidence-based planning, especially at district level

CIET conducted the baseline national social audit in 2001/2 and the second cycle in 2004/5. The second cycle allowed an assessment of changes since the baseline at the beginning of devolution, and identified factors related to positive outcomes. During the coming months the findings of the second national social audit will be shared and discussed widely with the public, civil society, service providers, planners and policy makers. The third national social audit will begin in the second half of 2006. The social audit programme is set to continue until 2009, with alternating years of data collection and dissemination and use of the findings.

The national social audit collects information from a representative sample of some 54,000 households in communities in all districts. The social audit goes beyond information gathering, analysis, and reporting. It goes on to facilitate discussion with communities, formulation of solutions and strategies, validation with other institutions such as health and education facilities, and discussion with local government authorities.

The social audit in focus districts

In order to achieve the second two aims of the social audit (above) it is necessary to work in more detail within districts, and CIET is implementing a district social audit in five focus districts. Experience in these districts will facilitate the roll-out of district level social

audit to additional districts over time. Work in the first focus district, Lasbela, began in 2003, and four further districts – Khairpur, Haripur, Sialkot, and Khanewal – joined towards the end of 2004.

In the focus districts the social audit aims to help governments to plan and implement services tailored to the needs of their local populations. It is a means of giving form to the intention of the Local Government Order 2001 to empower citizens to participate in an informed way in decisions that affect their lives, and encourage them to engage in local democratic processes. A key element of the district social audit is the close involvement of government officers, elected representatives and civil society groups, building their skills over time institutionalising the process so that it can be sustained beyond the time of the project. In summary, the aims of the district social audit are:

- To assist evidence-based planning at district, *taluka* and union levels
- To provide a means of input for citizens into district level planning
- To build capacities of district officers and elected representatives for evidence-based planning
- To produce a sustainable process (over a five year programme)

The five focus districts all joined the scheme based primarily on the interest and enthusiasm of the nazims and other members of their district governments, beginning at the time of disseminating the findings of the baseline (2001/2) social audit in regional meetings. Provincial governments, especially through the provincial departments of local government and rural development, endorsed the choice of focus districts in their respective provinces.

Operationalising the social audit in focus districts

In each of the five districts, CIET and the district government have made similar arrangements for the social audit.

An initial *district orientation meeting(s)*, attended by key stakeholders inside and outside government (at district and *taluka* levels), introduced the concepts of the social audit and the objectives of the district social

audit scheme, and provided an opportunity for questions and discussion about the proposed processes in the district. Participants identified the issues they considered to be the first priorities to be covered by the district social audit, bearing in mind that the priority issue should be one where it could possible for the district to act to change the situation. Participants also agreed to form a district social audit steering group, identified a suitable person to be the social audit focal point on behalf of the district government, agreed arrangements for providing office space for the CIET social audit district coordinator, and agreed arrangements for *taluka* level orientation meetings. In Khairpur district the initial district orientation meeting took place on 18 October 2004.

A series of *taluka orientation meetings* across the district introduced participants to the social audit and heard their priority topics for the district social audit. The office of the EDO community development facilitated these *taluka* meetings. Participants included *taluka* level government officers and elected representatives, as well as representatives from union councils, from civil society, and from the media.

District steering group meeting, Khairpur

The *district steering group* discusses policy issues and makes decisions about the social audit at district level. It coordinates support to the CIET team for social audit activities. It also gives inputs into the design of the social audit cycles. It is the forum for discussing recommended actions emerging from the social audit evidence and helping to incorporate these into district planning.

In general, the steering group comprises:

- District Nazim & Naib Nazim
- From district administration:
    - DCO
    - Finance and planning department
    - Community development department
    - Key line departments such as health, education, public health engineering, agriculture, livestock
- Representatives from the district council
- Representatives from *taluka* councils and administrations
- Civil society representatives such as NGOs/CBOs/CCBs, academic institutions, media, or other professional bodies

Sub-technical group meeting, Khairpur

Annex 1 gives the list of members of the social audit district steering group in Khairpur district.

Each district government nominated a *sub-technical group* to work in detail with the CIET team on selection of the household sample and design of the instruments for the social audit. The groups generally included representation from relevant line departments including finance and planning, community development, health, public health engineering, members from the district council, selected TMOs, and relevant civil society representatives. Annex 2 lists the members of the sub-technical group in Khairpur district.

The CIET district coordinator collected *basic information about the district* to facilitate sampling, mapping and communication. This included:

- A list of all important contacts within the district and all *talukas* with full contact details
- Population data about district *taluka* and union councils with urban and rural distribution.
- A list of union councils in each *taluka*, marked as urban or rural
- A recent map of the district with *taluka* and union boundaries

Focus district national core group

A national core group supports the social audit in the focus districts. The group includes representation from all the focus districts, from provincial local government departments, and from NRB, with CIET providing the logistic and secretarial support. The terms of reference for the national core group are shown in Annex 3. The national core group shares experiences of the district social audit between the focus districts, identifying what has worked especially well, so that a tool-box for district social audit in other districts can be developed.

The inaugural meeting of the group took place on 3 December 2004 in Islamabad, with a follow-up meeting on 11 June 2005 in Lasbela. In these meetings the group agreed their terms of reference, approved a memorandum of understanding between CIET and focus districts (subsequently sent to provincial governments for endorsement), agreed a common topic for the social audit in all the focus districts, received

preliminary findings from the social audit and discussed plans for their dissemination.

Methods

A social audit cycle

- Clarify the strategic focus
- Design instruments, pilot test
- Collect information from households on use, perceptions and their experience of public services
- Link this with information from key informants and relevant services
- Analyse the findings in a way that points to action
- Take findings back to the communities for their views about how to improve the situation
- Bring evidence and community voice into discussions between service providers, planners and community representatives to plan and implement changes

Annex 4 gives a general description of the CIET social audit methods. The concept of the social audit is simple: collect information about a key problem from the people concerned and from service providers. Then use this information as a basis for involving the public and service providers in making changes to improve the services. The key steps include: collect information from women and men in households in representative communities about their knowledge, use, perceptions and experience of the problem and their use of relevant services; link this with information from the services and service providers; analyse the findings in a way that points to what actions might improve matters; take the findings back to the communities for their views about what could improve the situation; bring the findings and suggestions to discussions between service providers, planners and community representatives to plan and implement changes. The loop is closed when a repeat fact-finding exercise assesses the changes and their effects.

The topic for the social audit cycle

In each district, a short list of topics emerged from the consultative process in district and *taluka* level meetings including government and civil society (see Introduction). Four topics came up in all the focus districts, in slightly differing orders of priority.

1. Health (including public and preventive health issues such as hygiene, sanitation and drinking water)
2. Education (with emphasis on girls' education, special and technical education)
3. Irrigation (*islahe aabpashi*)
4. Roads and communication

These district priorities were discussed in the first national core group meeting. The group agreed on "Public and preventive health" as the topic for the first cycle, noting that others on the shortlist could be topics of subsequent social audit cycles. In the case of Lasbela, some aspects of public health, water supply and sanitation had already been covered in their first

social audit cycles, so they extended the focus more onto aspects of childhood immunisation.

Data collection instruments

CIET worked with district sub-technical groups to design the instruments for social audit, with an emphasis on collecting information that could be useful for planning service improvements. This exercise was also an opportunity for skills transfer to the district teams. Sharing of expertise and suggestions between districts ensured that a common set of instruments emerged with inputs from all districts, suitable for collecting information in the diverse circumstances of the five focus districts.

The social audit instruments are standards-based, drawing on CIET experience as well as other relevant sources. In this case, we used in particular the experience of the first social audit in Lasbela as a guide for relevant sections of the instruments.

The instruments for the social audit cycle included: a household questionnaire, a community profile, an institutional review of health facilities, a key informant interview for lady health workers, and a feedback focus group guide.

The household questionnaire comprised two sections:

- general household information from a household respondent, including demographics of the household, household hygiene practices and water supply, and satisfaction and perceived access to a range of public services
- information from mothers of under five years old children, concerning their education, knowledge, attitudes and practices, as well as illnesses in the children and their management, and immunisation of the children

The community profile was completed by means of discussion with a knowledgeable person in the community and observations by the field workers. It covered garbage disposal, the sewerage system, community drinking water sources, type and location of health facilities, and information about any community organizations.

The institutional review of government health facilities serving communities collected information about records and supplies, and, by observation, the presence and functioning of facilities and equipment. It included

an interview with the vaccinator or other person responsible for the facility vaccination services.

A *key informant interview* collected information from lady health workers in those sites where they worked, including their education and training, visits to the households, any problems they faced, and their relevant knowledge and practice.

Feedback focus group guides were developed once the basic findings from the households were available. They presented *taluka* level key findings and invited discussion and suggestions for solutions. The guide covered the use of latrines and childhood diarrhoea, management of diarrhoea, the household environment and respiratory infection in children, and how to encourage and support parents to vaccinate children.

Sample and sampling

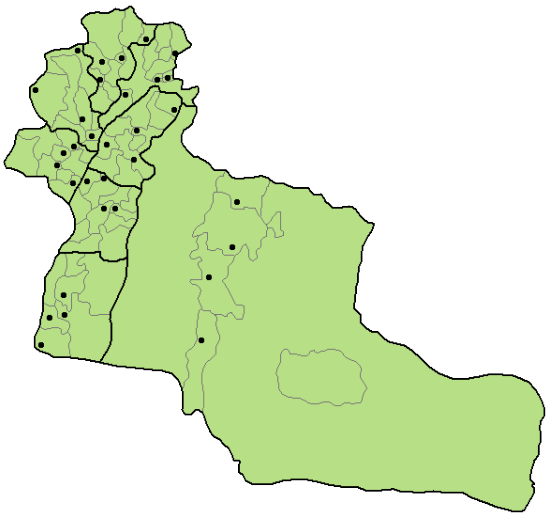


Figure 1. Sample sites for Khairpur social audit 2005

The CIET team and the sub-technical group in each district selected a stratified random cluster sample of communities to give representation of the situation in the different *tehsils* or *talukas*. First union councils were randomly selected from each *tehsil*/*taluka,* reflecting urban/rural spread and with the number according to the population in each *tehsil/taluka*. We included a minimum of four union councils per *tehsil/taluka*. The official list of union councils from the district government was used as the sampling frame for the selection of union councils. From each union council we randomly selected one community (village or mohalla) from the list of communities in the union.

Khairpur district consists of eight *talukas* and has 76 union councils – 22 urban and 54 rural. The sample (Figure 1) comprised the following urban and rural sites from each *taluka*:

	Urban	Rural
Kingri	1	3
Kot Diji	1	3
Sobho dero	1	3
Thari Mirwah	1	3
Nara	-	4
Faiz Ganj	-	4
Gambat	1	3
Khairpur	2	2
Total	7	25

In each selected community, the sample included a group of 100 contiguous households with children under five years, spreading out from a random starting point. There was no sampling within the site, all the households were included.

Field teams

The field teams comprised district residents, with a majority of women since the main household interviews were with women. In the different focus districts, team members included members of NGOs, senior university students, recent graduates, and councillors.

Training of field teams

Teams for the household survey and key informant interviews attended a three-day training, including classroom sessions and field practice. Each field team comprised eight female interviewers, one female quality control associate and one male logistic control associate.

The field teams trained to conduct the community focus group discussions each comprised two men and two women. More than half of them had participated in the household data collection. Their training lasted three days, including classroom and field practice.

Data collection

The field teams undertook data collection for the 32 sites in the sample of Khairpur district in April 2005.

Generally, each team completed the household survey in one community in one day. In come cases a site could not be completed in a single day due to difficult terrain or weather conditions. The field teams took with them a letter from DCO, giving official status to the work. On entering each community, the team logistic control associate made contact with community leaders to explain the purpose of the survey and to seek their support for the field work in the community.

After preliminary analysis of the household findings, the teams returned to the same communities in and conducted focus group discussions. The focus group discussions in Khairpur district took place in July 2005.

Data entry and analysis

The field supervisers checked the registers and sent them to the CIET data management unit (DMU) in Karachi. Data entry by trained operators used the public domain software package Epi Info. Double data entry with validation reduced key stroke errors.

After validation further cleaning of the dataset looked for logical errors, out of range responses and duplications. The cleaning was completed by checking back to the original data registers as necessary.

Analysis used CIETmap software. For questions that had multiple responses, we used SPSS software to generate frequencies. Analysis followed and elaborated the analysis plan outlined during the design phase, which identified key outcomes of interest in relation to preventive child health, and factors potentially related to these outcomes. Initial analysis generated frequencies of all main indicators were generated. The values for all main indicators at district and *taluka* level are shown in the tables in Annex 5.

Although the sample size in each *tehsil/taluka* reflected the relative population in that *tehsil/taluka*, this was not exact. Therefore, to take into account under- and over-sampling between *tehsils/talukas*, we calculated *weights* and applied these when making district level estimates. All the figures shown in this report are weighted, unless stated otherwise.

Further analysis examined the associations between outcomes and related risk and resilience factors, first in a univariate analysis and then in a multivariate model to examine the effects of relevant variables simultaneously. In this analysis, we included factors measured in instruments other than the household questionnaire, linked to the household and child data by means of linking code numbers. For example, this *meso-analysis* allowed us to examine the relationship between the distance of the nearest government health facility from the community and vaccination in children, taking into account the effects of other variables related to vaccination.

To investigate the relationship between household economic status and important outcomes, we defined a composite variable for household vulnerability, based

on household roof construction, degree of overcrowding, and occupation of the main breadwinner. If all three factors were adverse, we defined the household as very vulnerable, while if two out of three were adverse, we defined the household as vulnerable.

In analysing the reports of the focus group discussions, we identified certain themes mentioned by groups and coded the reports according to whether the theme was present or not. We entered this into the computer to allow us to compare it with household findings. We also used the reports to provide a qualitative understanding of some of the quantitative findings, including extracting quotes of people describing the situation in their own words.

Household information base

- 3249 households
- 25446 people
- 2386 boys aged less than 60 months
- 2276 girls aged less than 60 months

Table 1. The household sample by *taluka*

Taluka	No. households	Total people
Kingri	421	3467
Kot Diji	413	3293
Sobho dero	413	3156
Thari Mirwah	420	3172
Nara	404	2988
Faiz Ganj	385	3066
Gambat	401	3134
Khairpur	392	3170

Table 2. Household features by taluka

Feature	Very vulnerable	Vulnerable	Educated Head	Male head
Kingri	18	49	46	96
Kot Diji	20	50	39	97
Sobho dero	11	42	56	99
Thari Mirwah	19	51	52	97
Nara	27	69	30	99
Faiz Ganj	28	58	48	98
Gambat	29	63	40	99
Khairpur	12	44	51	93
Khairpur District	19	51	47	97
Sindh	18	46	56	94
Pakistan	13	47	53	93

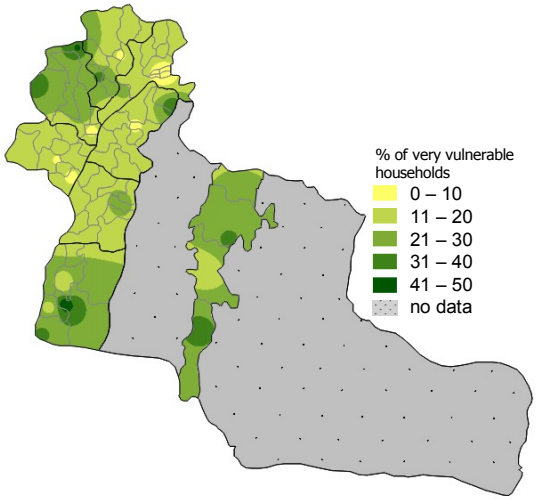


Figure 2 % of "very vulnerable" households

Table 3 Children in the survey by taluka

Feature	Total children	Children <60 months	Children 12-23 months
Kingri	714	650	105
Kot Diji	643	598	104
Sobho dero	639	577	101
Thari Mirwah	687	624	102
Nara	685	579	91
Faiz Ganj	617	535	94
Gambat	655	592	86
Khairpur	654	584	98
Khairpur District	5294	4739	781

Findings

The information base

Households

The survey covered 3249 households (representing 25446 people) in 32 representative communities (Box). The number of households in the sample in each *taluka* and the total population covered in the households are shown in Table 1.

The general household respondent was a woman in 87% (2759/3218) of households. Almost all (97%; 3153/3242) household heads were male and about half (47%; 1462/3229) of them had some formal education.

Some 51% (1690/3183) of the households were 'vulnerable' and 19% (649/3183) were 'very vulnerable' (Table 2). The proportions of vulnerable and very vulnerable households were higher in Khairpur than in Sindh and Pakistan overall, while the proportion of household heads with some education was lower. The map in Figure 2 shows household vulnerability across the district.

Mothers/caregivers

In the 3249 households we interviewed 3421 mothers or caregivers. Most of them were the mothers of the children being inquired after (95%; 3232/3404). Only 17% (517/3410) had any formal education.

Children

The 3421 mothers provided information about 4739 children less than 60 months old. Just over half (51%; 2386/4662) were male. Table 3 shows the number of children in each *taluka* by age group.

Lady health workers (LHW)

We interviewed 46 LHWs. Most (35/46) of them were aged between 18 and 30, 11/46 had less than a 10th grade education while 35/46 had at least a 10th grade education. More than three quarters of them (36/46) had been working as an LHW for 5 years. All of them had worked as LHW for more than one year.

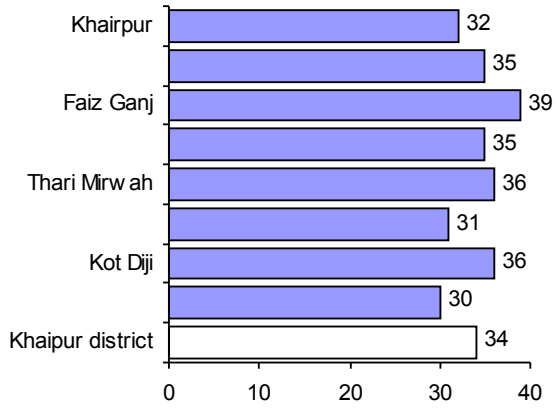


Figure 3 % of children with diarrhoea in the last 2 weeks

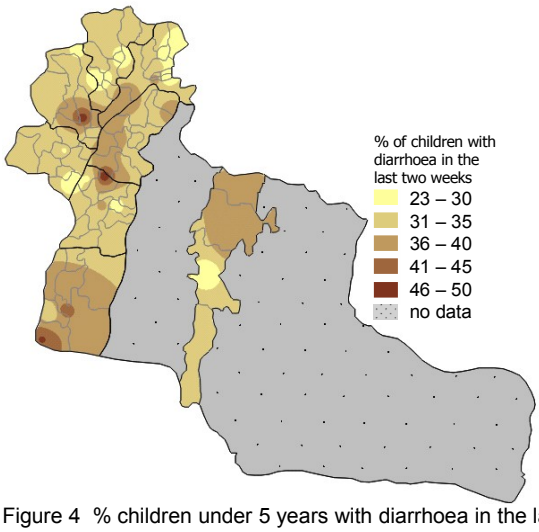


Figure 4 % children under 5 years with diarrhoea in the last two weeks

Table 4 % households using different sources of drinking water

	Piped	Ground Water	Surface Water	N
Kingri	1	99	-	418
Kot Diji	-	81	19	410
Sobho dero	-	100	-	412
Thari Mirwah	-	100	-	417
Nara	<1	>99	-	403
Faiz Ganj	-	100	-	383
Gambat	1	99	-	401
Khairpur	6	84	<1	390
Khairpur district	1	94	3	3234

Table 5 % households with different conditions for drinking water containers

	Covered	Clean	Raised	Covered, clean, raised
Kingri	95	85	81	73
Kot Diji	97	83	82	75
Sobho dero	98	88	90	82
Thari Mirwah	94	82	85	73
Nara	95	66	39	35
Faiz Ganj	97	77	87	70
Gambat	95	83	66	60
Khairpur	96	91	85	80
Khairpur district	96	83	80	72

Childhood diarrhoea

Frequency of childhood diarrhoea

Among children aged less than 60 months, 34% (1542/4500) had suffered diarrhoea during the last two weeks and 74% (3378/4500) had suffered diarrhoea in the past 12 months.

As shown in figure 3, the proportion of children with diarrhoea during the last two weeks was highest in Faiz Ganj and lowest in Kingri, Sobho Dero, and Khairpur. The map in Figure 4 shows the variation across the district in the proportion of children under 5 years old with diarrhoea in the last two weeks.

About half (54%; 1362/2946) the children who suffered diarrhoea in the past 12 months their last episodes went on for longer than three days and 6% (201/3347) had blood in their stool during the last episode.

Variables potentially related to childhood diarrhoea

The field teams collected information about variables at household level potentially related to the risk of diarrhoea in children.

Drinking water

Nearly all (94%; 3082/3234) households in Khairpur district rely on ground water as their main source of drinking water with only a few using either surface water (3%; 81/32340 or piped water (1%; 34/3234) (Table 4). As a consequence, nearly all households have a water source defined as a protected source (94%; 3064/3219).

Very few households treated their water in any way (2%; 65/3175) and those that did most commonly boiled it.

Across the district 96% (3120/3236) respondents allowed interviewers to inspect the household drinking water container. Of these, 96% (2985/3111) were covered, 83% (2545/3111) were clean, and 80%

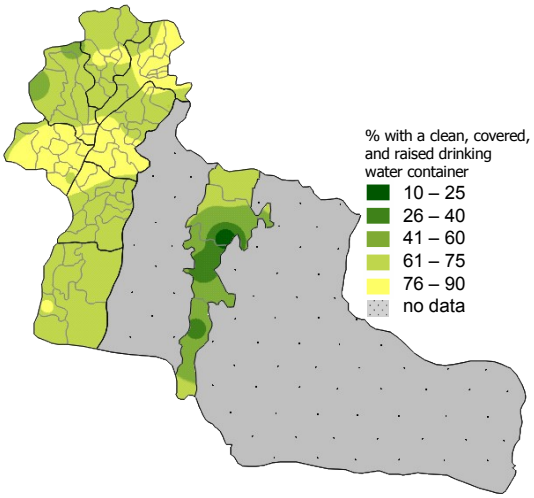


Figure 5 % households with covered, clean, raised drinking water container

Table 6 % households using a latrine and having a formal latrine

	Use a latrine	Have a formal latrine
Kingri	81	43
Kot Diji	79	22
Sobho dero	91	46
Thari Mirwah	83	37
Nara	31	6
Faiz Ganj	57	13
Gambat	90	25
Khairpur	96	60
Khairpur district	80	35

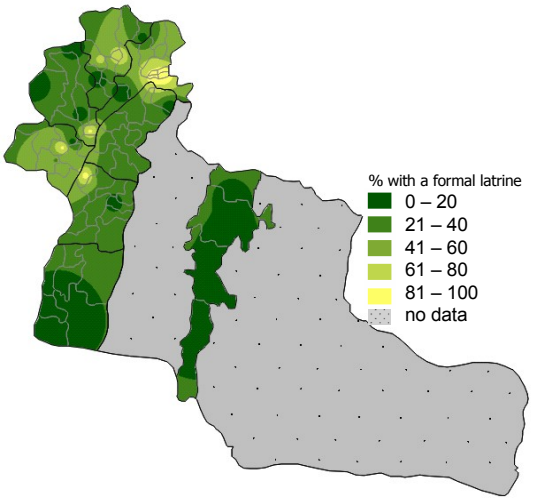


Figure 6 % households with a formal latrine

"When children use drains in place of latrines, diseases are sure to spread."
Male focus group. Khairpur *taluka*

"Diarrhoea spreads due to heat or extreme cold. Using a latrine has nothing to do with it."
Female focus group, Kot Diji *taluka*

"We don't have any resources. From where can we get a latrine constructed?".
Male focus group. Sobho Dero *taluka*

"We need awareness and information. There is a diarrhoea patient in every household."
Male focus group. Khairpur *taluka*

"A door-to-door campaign must be organized, telling people not to let their children use drains as latrines."
Male focus group. Khairpur *taluka*

"Here, nobody is willing to give even a pinch of snuff to another person. How can we help each other in the construction of a latrine?"
Male focus group, Gambat *taluka*

(2391/3104) were raised above ground level. Some 72% (2132/3107) met the ideal conditions of being covered, clean *and* raised (Table 5).

The map in Figure 5 shows the variation in proportion of households with a covered, clean, raised drinking water container across the district.

Latrines

Across the district, 80% (2464/3241) of household respondents said household members used a latrine (either a communal or household latrine). However, only 35% (1018/3230) of households had a formal latrine; many had a simple *desi* latrine, often no more than a shallow, uncovered pit. From the hygiene point of view, having a *desi* latrine in the household may be worse than having no latrine at all. Over half the households without a formal latrine (54%; 357/699) said this was because they could not afford to have one. The proportions of households using a latrine and having a formal latrine in the household in the different *talukas* are shown in Table 6.

The map in Figure 6 shows the variation in households with a formal latrine across the district.

Focus group views about latrines

The community focus groups (of men and women separately) in the sample communities discussed some of the issues around latrines. They first discussed whether, from what they knew, children from households without a formal latrine seemed to get more diarrhoea. Most groups agreed this was the case. A few people were not convinced that latrines made any difference.

Coming to the issue of what could be done to help households install and use latrines, most groups considered that outside financial or technical support was needed, although some also mentioned the need to raise awareness of the benefits of latrines in some households. Most groups were of the opinion that there was little communities could do to help themselves, mentioning that their neighbours would be unlikely to take their advice or that they were too poor to help themselves. Generally they felt it was the responsibility

"The government should construct latrines for us. We are too poor to do that."
Female focus group, Kot Diji *taluka*

"Dirty water from our latrines stands and collects outside our boundary walls and the walls collapse due to this. So we are unable to use our latrines."
Female focus group, Kot Diji *taluka*

"The government should lay drains for us here. We will construct latrines ourselves."
Male focus group, Kingri *taluka*

"What can the government do for us? It has not been able to construct roads, how can it be expected to construct latrines for us?"
Male focus group, Nara *taluka*

of the government to help them. This help should, they suggested, be financial and technical. Some participants pointed out that building latrines was no use without a proper sewerage system and water supply. On the other hand, in some communities the focus groups suggested they needed to help themselves, with or without assistance from the government. And some were sceptical about the government helping them even if there were funds to do so.

Household hygiene

The field teams conducting the household interviews observed and noted some aspects of household hygiene. They observed garbage in the household compound or at the doorway in 70% (2252/3236) of households. They noted sewage water inside the compound or at the doorstep in 33% (994/3237) of households and excreta (animal or human) inside or at the doorstep of 64% (2099/3233) of households. Table 7 summarises the observations about household hygiene in the four *talukas*.

Table 7 % households observed with different hygienic conditions in and around the house

	Garbage	Sewage water	Excreta
Kingri	78	52	67
Kot Diji	71	41	68
Sobho dero	61	33	53
Thari Mirwah	70	23	64
Nara	62	10	67
Faiz Ganj	75	18	75
Gambat	71	30	69
Khairpur	68	38	56
Khairpur district	70	33	64

The map in Figure 7 shows the variation in proportion of households with excreta observed in or around the homestead across the district.

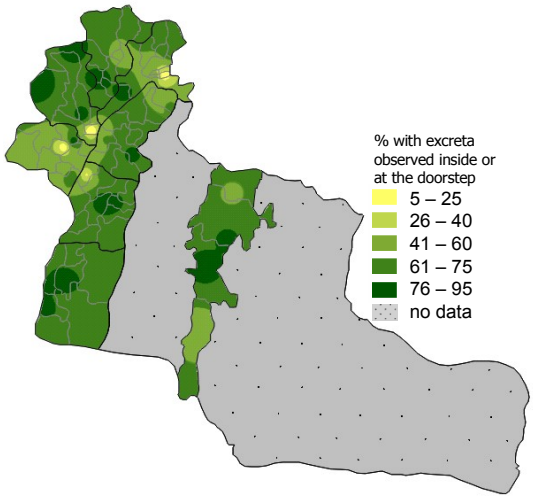


Figure 7 % households with excreta observed inside or at the doorstep

Information about prevention of diarrhoea from the lady health worker (LHW)

Some 45% (1464/3415) of mothers said an LHW visited their household. In some households more than one mother was interviewed. Some 45% (1216/3080) of households had been visited by an LHW, over a third 40% (1170/3080) reporting to have been visited within the last month (Table 8).

Few (13%; 185/1437) of those mothers reporting being visited by an LHW recalled that the LHW told them anything about preventing diarrhoea in children. When considered all mothers (including those not visited by an LHW) only 6% (185/3421) had been told by an LHW about prevention of diarrhoea.

The mothers' recall of what the LHW told them about prevention of childhood diarrhoea contrasts with the information from the interviews with LHWs covering some of the sample communities (see later section). Most of the LHWs reported telling the mothers they visited about prevention of diarrhoea.

Table 8 Frequency of LHW visits to households

	% households
Never visited	55
Within the last month	40
More than a month ago, within last 3 months	4
More than 3 months ago, within last 6 months	1
More than 6 months ago but within a year	<1
N	3080

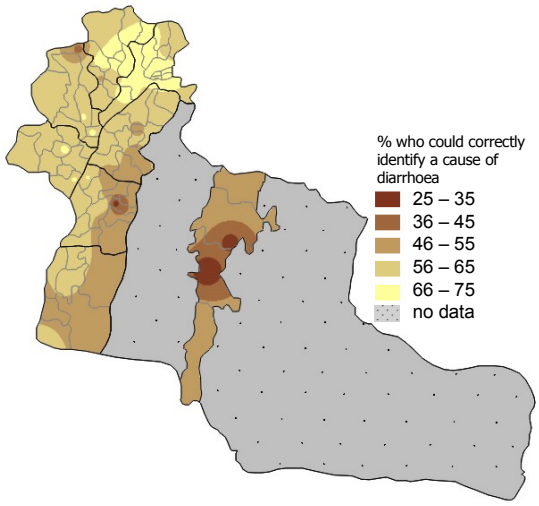


Figure 8 % of mothers who could correctly cite a cause of diarrhoea in children

Mothers' knowledge of causes of diarrhoea

Some 59% of mothers (1932/3353) could correctly identify a cause of diarrhoea in children. The map in Figure 8 shows the variation across the district in the proportion of mothers who could cite a correct cause of diarrhoea in children.

Analysis of risk of diarrhoea in children

We collected information about a number of variables that might be associated (positively or negatively) with the risk of diarrhoea in children (diarrhoea in the last two weeks in children aged less than 60 months old). These are listed in Table 9. Several of these variables, examined separately, were associated with the risk of diarrhoea. For example, the presence of a formal latrine was associated with less risk of diarrhoea, as was the presence of a sewerage system in the community. We then undertook multivariate analysis to examine the effects of each of these variables, taking into account the effects of the others. In the model from this analysis, only two variables remained with a significant association with diarrhoea: education of the household head and age of the child (Table 10). The effects of the other variables could have been due to chance.

Education of the household head
Children from households where the head had any formal education where less likely to have had diarrhoea during last 15 days than children from households where the head was uneducated[1]

Younger children
Younger children (up to 36 months of age) had twice the risk of having had diarrhoea during the last 15 days compared with older children (aged 37 to 59 months)[2].

Table 9 Variables potentially associated with the risk of diarrhoea in children

- Urban/rural location*
- Taluka*
- Education of the household head*
- Education of the mother
- Household vulnerability*
- Sex of the child
- Age of the child*
- Nutritional status of the child*
- Mother's knowledge of causes of diarrhoea
- LHW advice about diarrhoea
- Protected water source
- Good water storage
- Household latrine*
- Sewage in household or around door
- Excreta in household or around door*
- Garbage in household or around door
- Garbage in streets (from community profile)*
- Sewage in streets (from community profile)
- Stagnant water in streets (from CP)*
- Household garbage disposal system
- Community garbage disposal system*
- Community sewage disposal system*

* variables related to risk of measles in univariate

Table 10 Model of effects of variables on risk of diarrhoea

	Crude OR	Weighted OR	95% CI of weighted OR
Educated head of household	0.83	0.84	0.74-0.95
Younger age	1.89	1.9	1.67-2.17

OR=Odds Ratio, a measure of relative risk

[1] Weighted OR 0.84, 95%CI 0.74-0.95, 669/2081 children from households with educated head had diarrhoea compared with 855/2345 children from households with an uneducated head

[2] Weighted OR 1.9, 95%CI 1.67-2.17,1090/2747 children aged 0-36 months had diarrhoea compared with 452/1753 children aged 37-59 months

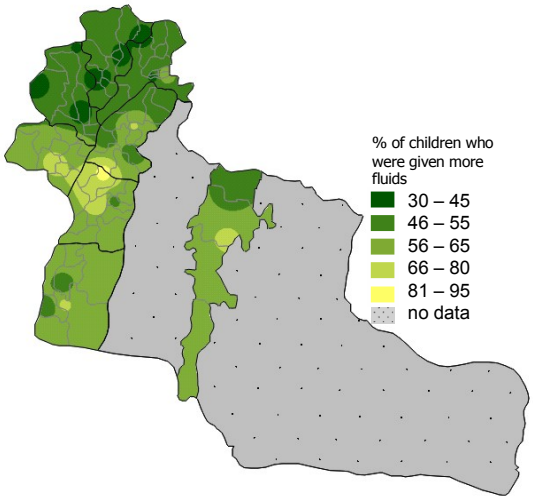


Figure 9 % children under 5 years old given more fluids during last episode of diarrhoea

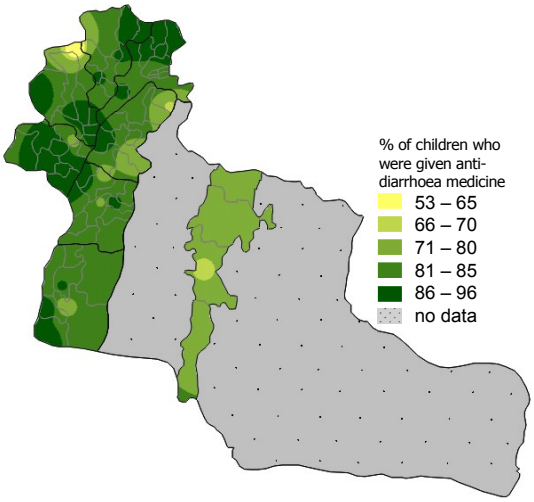


Figure 10 % children under 5 years old given anti-diarrhoea medicine during last episode of diarrhoea

Treatment of diarrhoea in children

The following descriptions of experiences with treating diarrhoea are based on the 74% (3378/4500) of children less than 60 months old who had suffered an episode of diarrhoea in the last 12 months. Recall of episodes longer than 12 months ago is less likely to be clear.

Advice from the LHW

Few of those mothers reporting being visited by an LHW (18%; 264/1444) recalled that the LHW told them anything about treating diarrhoea in children. Considering all mothers (including those not visited by an LHW) only 8% had been told by an LHW about treatment (264/3395) of diarrhoea.

Mothers' knowledge and household management of diarrhoea

Some 60% (2043/3386) of mothers reported they would give a child more fluids during an episode of diarrhoea while 61% (2053/3384) said they would give the child either the same or more food.

When actually treating an episode of diarrhoea in the last 12 months in children under five years old, mothers provided 56% (1876/3358) of the children with more fluids and 60% (2044/3360) with either the same or more food. The variation across the district in the proportion of children given more fluids in their last episode of diarrhoea during the last year is shown in the map in Figure 9.

In most cases (83%; 2712/3312) the mothers or other carers in the home gave the child medicine to stop the diarrhoea. The variation across the district is shown in Figure 10. This is generally <u>not</u> good practice and these anti-diarrhoeal medications can be dangerous for young children. However, it is clearly a common practice, both in home management and advised by health care practitioners (see below).

"If we don't give more water, the veins of a child dry up and become white. That's why we try to give him more water."
Female focus group, Sobho Dero *taluka*

"A child can die if he is not given enough water during diarrhoea."
Female focus group, Faiz Ganj *taluka*

"Mothers are not sensible. They don't know what to do if their child has become weak with diarrhoea."
Male focus group, Thari Mirwah *taluka*

"Mothers are busy. That's why some of them forget to give more water to a child during diarrhoea."
Male focus group, Nara *taluka*

"Some mothers are afraid that giving more water would mean that the child would pass out more water during diarrhoea. That's why they don't give extra water."
Male focus group, Faiz Ganj *taluka*

"An LHW can give this information to mothers."
Male focus group, Thari Mirwah *taluka*

"Household elders must tell mothers to give their children more water and food during diarrhoea."
Female focus group, Kingri *taluka*

Table 11 % children taken to different types of facilities for treatment of diarrhoea in the past 12 months

	No where	Gov't facility	Private facility	Unqualified	NGO
Kingri	27	12	48	13	-
Kot Diji	38	10	45	7	<1
Sobho dero	31	22	43	4	-
Thari Mirwah	39	6	48	6	<1
Nara	41	5	42	12	-
Faiz Ganj	38	5	50	7	-
Gambat	47	4	36	13	-
Khairpur	29	13	44	13	1
Khairpur district	36	10	44	10	<1

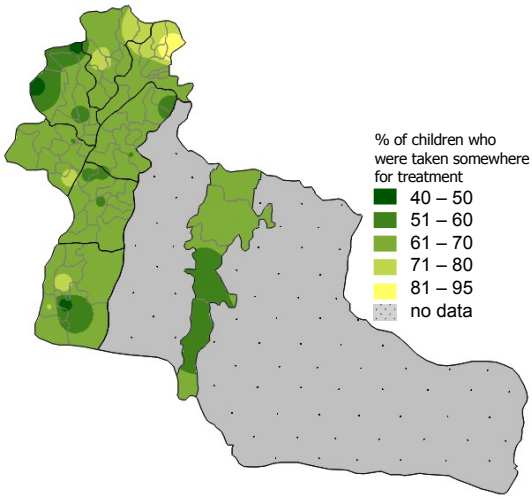


Figure 11 % children under 5 years old taken for treatment during their last episode of diarrhoea

Focus group views about fluids for children with diarrhoea

Clearly not all mothers or caregivers know to give children with diarrhoea extra fluids, and even less manage to do this in practice. We discussed this in the community focus groups.

The groups first discussed why many mothers *do* give extra fluids to children with diarrhoea. Participants explained that giving fluids prevented children from becoming sick with dehydration and that they may even die if not given water. Others noted that giving extra fluids could avoid having to take the child with diarrhoea for medical attention outside the home.

In discussing why some mothers do *not* give children with diarrhoea extra fluids, most groups mentioned poor education or lack of knowledge among mothers, while others noted mothers may not have time to give the extra fluids, or that they had misconceptions about adverse effects of giving extra fluids.

The groups suggested that health workers, especially LHWs, community and religious leaders, and parents or other family members could give the message about extra fluids to mothers.

Taking children with diarrhoea for treatment

Among those children less than 60 months old who had suffered diarrhoea in the last 12 months, 36% (1232/3346) were not taken anywhere for treatment. The most popular choice for treatment was a private qualified practitioner. Nearly half (44%; 1481/3346) of children with diarrhoea were taken to a private qualified practitioner, 10% (308/3346) to a government facility and another 10% (319/3346) to an unqualified practitioner. Very few (6/3346) were taken to an NGO service. The type of service used is shown by *taluka* in Table 11.

The variation across the district in the proportion of children with diarrhoea taken somewhere for medical care is shown in the map in Figure 11.

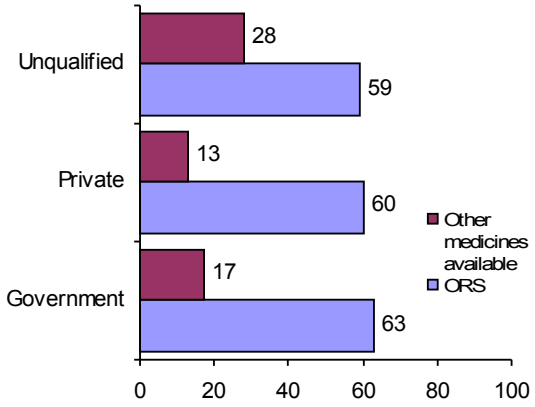


Figure 12 % of children provided ORS and availability of other medicines from health facilities or practitioners

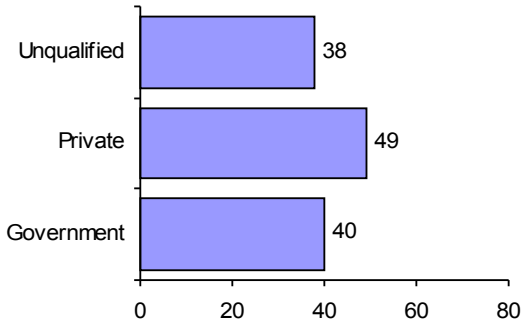


Figure 13 % of mothers of children with diarrhoea who thought they got a full explanation of their child's illness

Experience of treatment for diarrhoea

Virtually all children (99%; 2055/2063) who were taken for treatment were seen by a doctor/ practitioner or health worker regardless of the type of facility they went to.

ORS and other medication

Nearly two thirds of children (63%; 194/307) taken to a government facility for treatment were provided with ORS, and ORS was given to nearly as many children taken to a private facility (60%; 880/1459) or an unqualified practitioner (59%; 181/305). Unqualified practitioners (28%; 89/303) more commonly provided other medicines if prescribed than did government facilities (17%; 54/306) or qualified private practitioners (13%; 203/1461) (Figure 12). As mentioned above, the use of medicines to stop diarrhoea is not good practice in young children, and nor is the use of antibiotics advisable in most cases of diarrhoea. It is encouraging to see that in all types of health care providers in Khairpur, more than half the children with diarrhoea were given ORS.

Explanation of illness

More parents who took their child to a private practitioner or clinic felt they were given a full explanation about the child's condition (49%; 678/1448), than the parents who took their child to a government facility (40%;114/298) or to an unqualified practitioner (38%; 137/301) (Figure 13)

Satisfaction with service received

Generally, satisfaction with the behaviour of the doctor or health worker was high. Satisfaction among users of private practitioners (98%; 1428/1461) was slightly greater than among users of unqualified (95%;287/303) and government facilities (92%; 281/306). But for all service types, more than 9 out of every 10 parents of children with diarrhoea said they were satisfied with the behaviour of the doctor or health worker.

Similarly, nearly all mothers were satisfied with the treatment received from the facility for all facility types. Some 91% (280/307) were satisfied with the treatment at a government facility, 96% (1405/1467) were

Table 12 Why mothers were satisfied with the treatment from the facility (% mothers)

Reasons	Govt	Private	Unqualified
Good doctor/staff	6	10	7
Good facilities/services	-	<1	<1
Good treatment	92	89	91
Low cost/free treatment	1	<1	<1
Good access/nearby	1	<1	1
N	274	1391	276

Table 13 Why mothers were dissatisfied with the treatment from the facility (% mothers)

Reasons	Govt	Private	Unqualified
Doctor/staff not available	5	-	6
Poor/bad treatment	85	96	71
Too expensive / can't afford it	4	4	3
Medicines not available	5	-	-
No other choice	-	-	20
N	26	59	20

Table 14 % cases that paid, mean and median amounts paid (of those who paid) for travel for treatment of diarrhoea

Facility type	% cases paid	Mean amount (Rs)	Median amount (Rs)
Government	44	74	50
Private	75	88	50
Unqualified	51	69	50

Table 15 % cases that paid, mean and median amounts paid (of those who paid) for diarrhoea treatment at the facility

Facility type	% cases paid	Mean amount (Rs)	Median amount (Rs)
Government	92	56	5
Private	95	107	50
Unqualified	91	79	50

Table 16 % cases that paid, mean and median amounts paid (out of those who paid) for diarrhoea medicines or investigations outside the facility

Facility type	% cases paid	Mean amount (Rs)	Median amount (Rs)
Government	83	283	100
Private	92	326	200
Unqualified	79	234	150

satisfied with treatment from a private facility and 94% (276/302) were satisfied with their treatment an unqualified practitioner.

For all facility types mothers most frequently reported being satisfied with the treatment at the facility simply because they received "good treatment". Some were satisfied because of the good doctors and staff available at the facility (Table 12).

Those few people who were dissatisfied with the facility most commonly simply cited poor or bad treatment as their reason for all types of facilities. Other reasons mentioned are shown in Table 13.

Costs of treatment

Travel

In 75% (1115/1441) of cases where children were taken for treatment to a private health care provider, families had to pay something for travel. The mean amount for these families was Rs88.For unqualified practitioners, families had to pay for travel in 51% (163/300) of cases with a mean amount of Rs69. Families who took their children to government facilities had any travel costs some less frequently (44%; 134/303) , averaging Rs74. (Table 14)

Treatment at the facility

Most families had to pay for treatment at the facility or practitioner for all types of facilities. The mean amount paid at a government facility (Rs56) was less than that paid at either a private facility (Rs107) or an unqualified practitioner (Rs79) (Table 15)

Medicines or investigations outside the facility

In 92% (1303/1422) of cases of children going for treatment to a private facility and in 83% (246/298) of those going to a government facility, families had to pay for medicines or investigations outside the facility. Families had to pay in fewer cases (79%; 228/292) when getting treatment at unqualified practitioners. The mean amount paid for medicines or investigations after visiting a private facility (Rs326) was higher than for either government (Rs283) or an unqualified facility (Rs234). (Table 16)

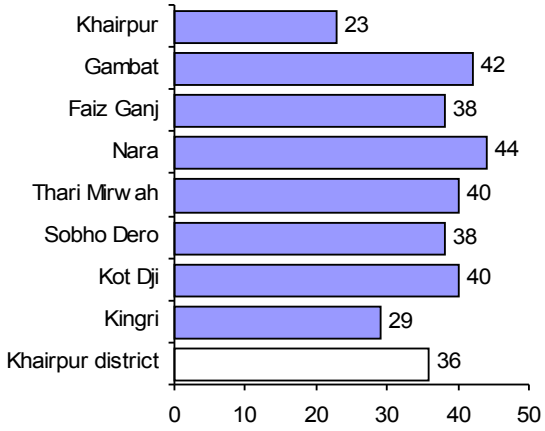


Figure 14 % of children under 60 months old with ARI during the last 2 weeks

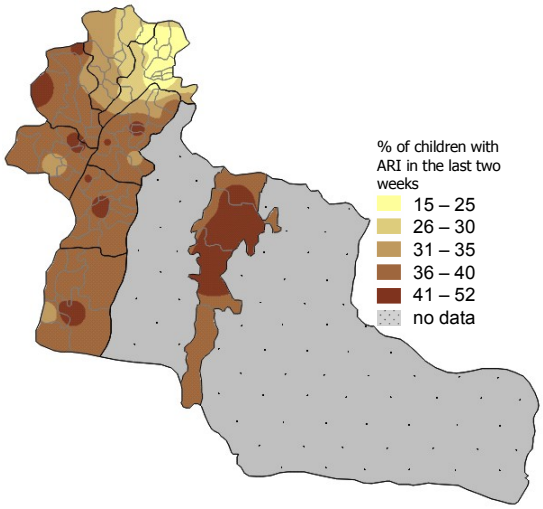


Figure 15 % children under 5 years old with ARI in the last two weeks

Table 17 % households with different stove types for cooking

Stove type	% households
Wood stove	82
Sui gas stove	17
Kerosene stove	<1
Cow dung	<1
Gas cylinder	<1
N	3235

Childhood respiratory infections

Frequency of childhood respiratory infections

Among children aged less than 60 months, 36% (1624/4410) had suffered an acute respiratory infection (ARI) during the last two weeks and 68% (3072/4410) suffered from ARI during the past year. The information about episodes of ARI came from the mother or main carer of the child. They were asked about episodes when the child had a cough, fever and rapid breathing.

The proportions of children with ARI during the last two weeks are shown by *taluka* in Figure 14. ARI seems to be rather less frequent in Khairpur and Kingri than in the rest of *talukas*, while in Nara and Gambat *talukas* frequency of ARI seems to higher than in the others

The map in Figure 15 shows the variation across the district in proportion of children under 60 months old with ARI in the last two weeks.

Variables potentially related to ARI

The field teams collected information about factors at household level that might have an impact on the risk of respiratory infections in children.

Kitchen and cooking arrangements

Most households had their kitchen or cooking area separate from the main living area (86%; 2786/3246) as well as from the sleeping area (87%; 2800/3246).

The types of cooking stove used are shown in Table 17. They were mostly wood stoves. We categorized stoves into those producing smoke and those not producing smoke on the basis of the type of fuel. Across the district just 17% (472/3219) of households used a cooking stove that did not produce smoke.

Table 18 % households with different heating systems

Heater type	% households
None	66
Wood heater	24
Sui gas heater	6
Coal heater	2
Electric heater	2
Cow dung	<1
N	3224

Heating arrangements

Table 18 shows the heating methods used in households. Some 34% (1134/3224) of households used some type of heating system, mostly wood stoves. We categorised heating systems into those producing smoke and those not producing smoke. Some 74% (2303/3224) of households used a heating system not producing smoke (or no heating system at all) and 26% (921/3224) used a heating system likely to produce smoke.

Smoking in the household

We asked about smoking by members of the household, and in particular about smoking within the household. Some 41% (1336/3229) of households had a least one member who smoked inside the household.

Ventilation

The field teams observed ventilation arrangements in the households. They recorded some sort of ventilation system in 84% (2574/3206) of households across the district.

Focus group views about smoke in the household

There is evidence from the literature that exposure to smoke in the household, through cooking stoves, heating arrangements, or smoking by members of the household, increases a child's risk of ARI and can have adverse long term consequences for lung development. In the community focus groups we discussed what could be done to improve the household environment so as to prevent children's exposure to smoke.

The group participants suggested keeping the kitchen and sleeping areas separate, providing more ventilation, using alternative fuels and ensuring that household members did not smoke indoors. However, they also mentioned problems with implementing these ideas.

The groups suggested that while they themselves could do things like avoiding smoking in front of children, the government would have to help, for example by providing access to gas as a fuel and giving funds to construct a separate kitchen and to improve ventilation in the household.

"If the kitchen is separated from the living room and if our men go outside to smoke, our children may be kept safe from the smoke."
Female focus group. Khairpur *taluka*

"Some people have chimneys installed over their stoves. That helps to get rid of the smoke."
Female focus group, Kot Diji *taluka*

"Smokers should go outside and smoke away from children."
Male focus group. Gambat *taluka*

"People in our community cannot do anything for anyone. They are forced to burn wood since they don't have gas in their houses."
Female focus group. Khairpur *taluka*

"If we are given gas, our stoves will not produce smoke."
Male focus group. Faiz Ganj *taluka*

Analysis of risk of childhood ARI

Table 19 Variables potentially associated with the risk of ARI in children

- Urban/rural location*
- Taluka*
- Education of the household head*
- Education of the mother*
- Household vulnerability*
- Sex of the child
- Age of the child
- Nutritional status of the child*
- Measles vaccination of the child
- Household heating system
- Heating system producing smoke
- Kitchen separate from living area*
- Sleeping area separate from kitchen*
- Cooking stove producing smoke
- Ventilation for household*
- Household members smoking inside

* variables related to risk of ARI in univariate analysis

We collected information about several variables that might be associated with the risk of ARI in children (ARI in the last two weeks in children aged less than 60 months old). These are listed in Table 20.

We examined the effects of these variables separately and found that some of them were associated with the risk of ARI. They are marked with an asterisk in Table 19. Then we examined the effects of these variables together, each taking into account the effect of all the others, in a multivariate analysis. Two variables remained in the final model of this analysis of the factors related to the risk of ARI: nutritional status of the child as perceived by the mother and whether the kitchen was separated from the living area (Table 20).

Table 20 Model of effects of variables on risk of *not* having ARI

	Crude OR	Weighted OR	95% CI of weighted OR
Children normal or big for age	1.23	1.28	1.08-1.51
Kitchen separated from living area	1.33	1.38	1.15-1.64

OR=Odds Ratio, a measure of relative risk

Nutritional status
Children perceived by their mothers as normal or big for their age were less likely to have ARI than children perceived as small for their age[3]. This association might also reflect that children with frequent episodes of ARI tend to be less well nourished.

Kitchen separated from living area
Children from households where the kitchen was separated from the living area were less likely to have ARI than those living in households where the kitchen and living areas were not separated[4]

Based on the same information, we can also calculate the potential population gains of interventions to reduce ARI. If all households had kitchens separate from the living area, this could be predicted to reduce the number of cases of ARI in the last two weeks in the district by 13 per thousand children (Table 21).

Table 21 Potential gains in ARI prevention

Intervention	Proportion requiring intervention (%)	Weighted risk difference	95% CI weighted risk difference	Weighted gain per 1000 children
All children well nourished	15.5	0.064	0.027-0.102	10
All households have kitchen and living area separated	13.8	0.094	0.042-0.147	13

Proportion requiring intervention means those who do not currently have the favourable condition, eg % of children from households without kitchen and living area separate

[3] Weighted OR 1.28, 95%CI 1.08-1.51, 2372/3708 children perceived normal or big did not have ARI compared with 402/684 children perceived as small for their age

[4] Weighted OR 1.38, 95%CI 1.15-1.64, 2406/3753 children from households with kitchen and living areas separated did not have ARI compared with 343/599 children from households with kitchen and living areas not separated

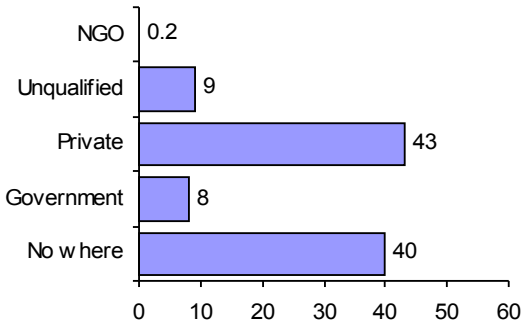


Figure 16 % children with ARI taken to different health care providers

Table 22 % children taken to different types of facilities for treatment of ARI in the past 12 months

	No where	Gov't facility	Private facility	Unqualified	NGO
Kingri	30	12	44	13	-
Kot Diji	36	7	47	10	<1
Sobho dero	38	14	42	6	-
Thari Mirwah	47	5	42	6	-
Nara	52	2	36	9	-
Faiz Ganj	34	6	52	7	<1
Gambat	54	5	30	12	-
Khairpur	31	10	49	10	<1
Khairpur district	40	8	43	9	<1

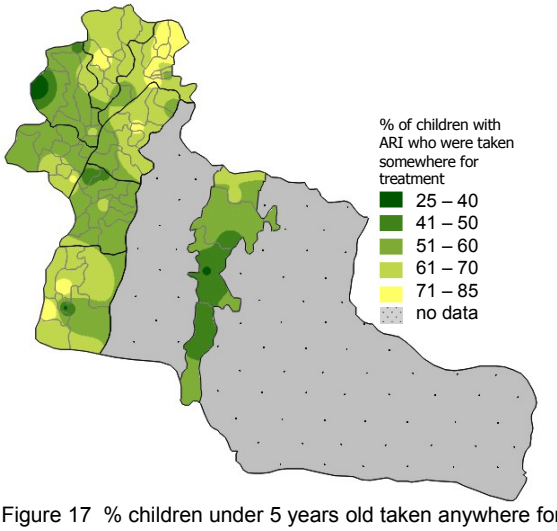


Figure 17 % children under 5 years old taken anywhere for treatment in last episode of ARI

"Some people here have 5 children, some have 8. How can we be expected to take them to a hospital, if they fall ill?"
Female focus group. Sobho Dero *taluka*

"Hospitals are too far away and fares are also very high."
Male focus group. KIngri *taluka*

"Even when we do take our children to hospitals we are not even given medicine there."
Male focus group. Kot Diji *taluka*

Information from the lady health worker

Of the 45% (1464/3415) of mothers that reported an LHW visited their household, 4% (55/1421) recalled that the LHW told them anything about recognising when a child has ARI and 7% (99/1426) recalled being told anything about treating a child with ARI.

Considering all mothers, including those not visited by an LHW, only 2% (55/3372) were told by an LHW about recognition of ARI and 3% (99/3377) about treatment for ARI.

F

Treatment of ARI

The following description of experiences with treating ARI are based on the 68% if children under 60 months who had suffered an ARI episode in the last 12 months. Recall of episodes longer than 12 months ago is less likely to be clear.

Source of treatment

Among those children less than 60 months old and who suffered an ARI episode in the last 12 months, 40% (1249/3041) were not taken anywhere for treatment. The most common choice for treatment was a private qualified facility. Across the district, 43% (1286/3041) were taken to a private qualified facility, 9% (273/3041) were taken to a private unqualified practitioner, 8% (228/3041) to a government health facility and less than 1% to an NGO service (0.2%; 5/3041) (Figure 16). Table 22 shows the proportions of children taken to different types of facilities for treatment for ARI in each *taluka*.

The map in Figure 17 shows the variation across the district in the proportion of children with ARI taken anywhere for treatment.

Views of community focus groups

The focus groups discussed why some children with ARI are not taken anywhere for treatment. They also considered the ways in which parents could be encouraged and supported to take children with ARI for treatment.

"When a man is not free to take us to the hospital, we are rendered helpless. If a hospital was close by, we could go there ourselves."
Female focus group. Khairpur *taluka*

"Some people are too careless. They feel that ARI is a minor ailment and the child will get better by himself in a short time."
Male focus group, Thari Mirwah *taluka*

"We believe in domestic, herbal treatment."
Female focus group. Kingri *taluka*

"People must be given transport facilities so that they are able to go to hospitals."
Male focus group. Kingri *taluka*

"We must have access to a hospital. We must be provided with medicine and a doctor must be available there."
Female focus group, Gambat *taluka*

Focus group participants explained the problems of poverty and having too many children, meaning they could not afford the visit, and especially the cost of medicines which were usually not available from the health facility or were of poor quality. The groups cited problems of access to facilities far from their homes, especially for women. Some expressed the view that the children would get better without the need for taking them for treatment or even that some parents did not pay attention to the needs of their children.

The main suggestions from the groups to support people to take their children with ARI for treatment were concerned with better access to health facilities, as well as more medicines available in health facilities, and better treatment from doctors and health workers.

Service received from health care providers

Virtually all children (1734/1741) who were taken for treatment were seen by a doctor or health worker regardless of the type of facility they went to.

Private practitioners provided a full explanation of the child's illness slightly more often than either government or unqualified practitioners. Private practitioners provided a full explanation for 47% (592/1259) of children, unqualified practitioners for 42% (110/258) of children and government practitioners for 41% (87/223) of children (Figure 18).

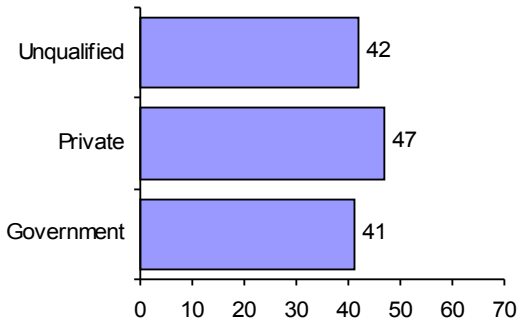


Figure 18 % mothers/caregivers provided with a full explanation of their child's illness, for children with ARI

There was greater variation between service providers in provision of the prescribed medicines from the facility where the child with ARI was taken for treatment. Parents using an unqualified practitioner were more frequently (29%; 78/262) provided with all medicines than those who sought treatment at a government facility (25%; 54/225) or from a private qualified practitioner (14%; 185/1262) (Figure 19).

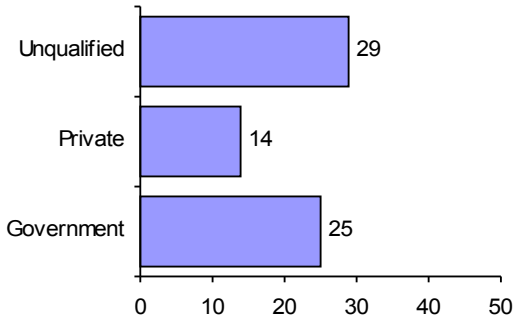


Figure 19 % of parents of children with ARI provided with all medicines prescribed

Satisfaction with treatment received

Nearly all mothers were satisfied with the behaviour of the doctor or health worker (97%; 1713/1765) and with the treatment from the facility (95%; 1674/1771) for all facility types.

For all three types of facilities, the main reason why respondents were satisfied was the "good treatment" received (92%; 1523/1660). A few respondents said they were satisfied because there were good doctors and staff at the facility (6%; 111/1660).

Those few parents who were dissatisfied with the facility most commonly cited "poor treatment" as their reason (88%; 83/95), for all types of facilities. Not having any other choice (4%; 5/95) and not having good doctors or staff available (5%; 4/95) were also mentioned.

Costs of treatment of ARI

Travel

In 78% (995/1255) of cases where children were taken for treatment to a private facility, families had to pay something for travel. The mean amount for these families was Rs86. When children were taken to unqualified practitioners, families had to pay in 56% (145/256) of cases with a mean amount of Rs77. For government facilities, families had to pay in 43% (96/223) of cases averaging Rs59. (Table 23)

Table 23 % cases that paid, mean and median amounts paid (out of those who paid) for travel for treatment of ARI

Facility type	% cases paid	Mean amount (Rs)	Median amount (Rs)
Government	43 (96/223)	59	40
Private	78 (995/1255)	86	50
Unqualified	56 (145/256)	77	50

Treatment costs at the facility

Most families had to pay for treatment at the facility or practitioner for all types of facilities. The mean amount paid at a government facility (Rs24) was less than that paid at either an unqualified practitioner (Rs87) or private facility (Rs129). (Table 24)

Table 24 % cases that paid, mean and median amounts paid (out of those who paid) for ARI treatment at the facility

Facility type	% cases paid	Mean amount (Rs)	Median amount (Rs)
Government	88 (196/224)	24	5
Private	96 (1204/1253)	129	70
Unqualified	88 (223/253)	87	50

Medicine and investigation costs outside the facility

Children taken for treatment at a government facility had to pay for medicines or investigations outside the facility in 79% (175/218) of cases, less frequently than when families took their children to a private facility (90%;1101/1231) or an unqualified practitioner (82%; 204/253). The mean amount paid after visits to a government facility (Rs215) was also less than after visits to either a private qualified (Rs362) or an unqualified practitioner (Rs241). (Table 25)

Table 25 % cases that paid, mean and median amounts paid (out of those who paid) for ARI medicines or investigations outside the facility

Facility type	% cases paid	Mean amount Rs)	Median amount (Rs)
Government	79 (175/218)	215	100
Private	90 (1101/1231)	362	200
Unqualified	82 (204/253)	241	150

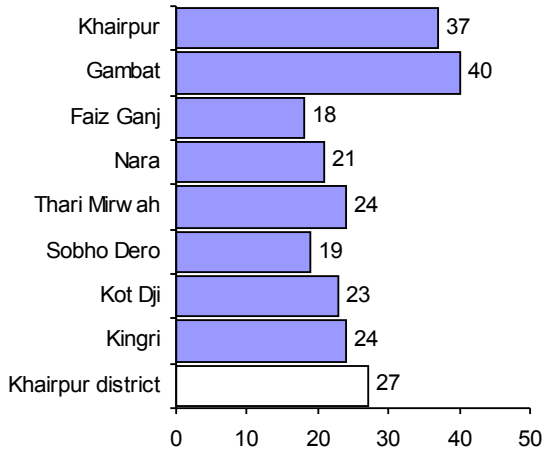


Figure 20 % children aged 10-59 months who have had measles (excluding measles cases at under 10 months old)

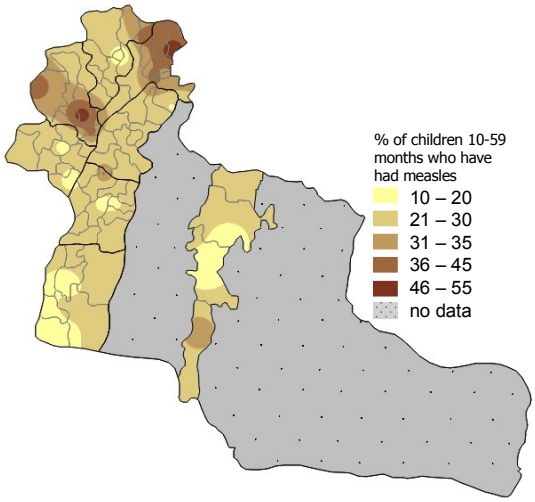


Figure 21 % children 10-59 months who have had measles (excluding cases of measles at less than 10 months old)

Table 26 Variables potentially associated with the risk of measles in children

- Urban/rural location
- Taluka*
- Education of the household head
- Education of the mother
- Household vulnerability*
- Sex of the child
- Age of the child*
- Nutritional status of the child
- Measles vaccination of the child*

* variables related to risk of measles in univariate analysis

Table 27 Model of effects of variables on the chance of *not* having measles

	Crude OR	Weighted OR	95% CI of weighted OR
Younger age	3.32	3.52	2.98-4.16
Measles immunisation	1.45	1.5	1.26-1.79

OR=Odds Ratio, a measure of relative risk

Childhood measles

Frequency of childhood measles

The following analysis and description of the frequency of measles excludes children who were less than 10 months old at the time of the survey as well as those children who had measles at less than 10 months of age, because diagnosis of measles in children under 10 months of age can be unreliable.

Among children 10-59 months old, 27% (923/3576) had had measles, excluding measles cases at under 10 months old. The rate of measles infection in the different *talukas* is shown in Figure 20. Measles was notably more common in Gambat and Khairpur *talukas*.

The map in Figure 21 shows the variation across the district in the proportion of children aged 10-59 months who have had measles.

Analysis of risk of measles

We collected information about a number of variables that might be associated (positively or negatively) with the risk of measles in children (measles children aged 10-59 months and excluding 'measles' occurring at less than 10 months old). These are listed in Table 26. Note that we excluded from the analysis cases of measles that occurred before measles vaccination or within one month after the vaccination (it takes a month for the protection to be fully developed). Those variables associated with the risk of measles when examined separately are marked with a (*) in Table 26. We then undertook multivariate analysis to examine the effects of each of these variables, taking into account the effects of the others. The model from the multivariate analysis is shown in Table 27.

Age of the child

Table 28 Potential gains in measles prevention in children 10-59 months old

Intervention	Proportion requiring intervention (%)	Weighted risk difference	95% CI weighted risk difference	Weighted gain per 1000 children
Ensure all children are vaccinated	52.7	0.076	0.043-0.108	40

*Proportion requiring intervention means those who do not currently have the favourable condition, eg % who are unvaccinated

Younger children were less likely to have had measles than older children[5]. This may simply reflect that they have had a longer time at risk, since we are examining the risk of *ever* having had measles.

Measles immunisation

Children who had not been immunised against measles had 1.5 times the risk of having measles compared with children who had been immunised[6]. This is the protective effect of measles vaccine, taking into account other variables potentially related to the risk of contracting measles.

Population benefit from measles immunisation

We can estimate the number of children in the population of Khairpur district who could be prevented from having measles if all children were immunised against measles.

If all children were immunised against measles, this could reduce the number of cases of measles in the district by 40 per thousand children (Table 28). At present, 270 per thousand children in Khairpur have had measles, so this would be a useful reduction.

Payment for cases of measles

We asked mothers whose children had had measles about the cost of treating the child. In order to ensure a reasonable recall of events, we restricted our analysis of costs to cases of measles in the last 24 months, among children 10-59 months old.

Of those children aged 10-59 months who had measles in the last 24 months, 84% (500/592) of their parents paid something for the treatment of the disease. Among those who paid, the weighted mean amount was Rs545 (median Rs 300, range 10-9000).

[5] Weighted OR 3.52, 95% CI 2.98-4.16, 1580/1864 children aged 10-36 months had not measles compared with 1073/1712 children aged 37-59 months

[6] Weighted OR 1.49, 95% CI 1.29-1.83, 1225/1558 children who had received measles vaccine did *not* have measles compared with 1244/1736 children who had not received measles vaccine

Table 29 % children 12-23 months immunised

	BCG	DPT (full course)	Measles	Polio drops (in last 12 m)
Kingri	84	50	58	100
Kot Diji	79	48	45	100
Sobho dero	93	76	73	99
Thari Mirwah	75	49	44	100
Nara	44	23	26	98
Faiz Ganj	57	45	40	98
Gambat	58	32	35	99
Khairpur	84	66	62	99
Khairpur district	75	52	50	99

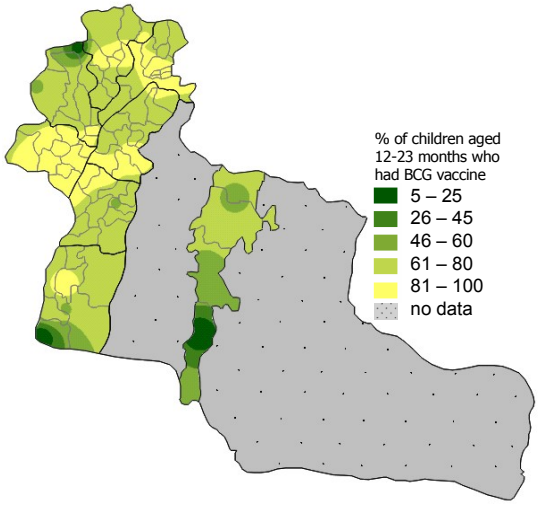


Figure 22 % children 21-23 months who had BCG vaccine

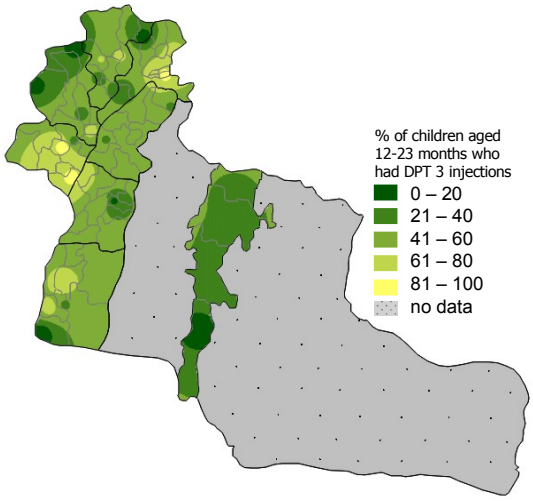


Figure 23 % children 12-23 months who had full course of DPT injections

Childhood immunisations

Immunisation status of the children

In this section, the immunisation status of the children is described among children aged 12-23 months old, who should by then have completed all their immunisations. Table 29 summaries the immunisation status of children across the district, for the basic childhood vaccines.

BCG

Some 75% (562/775) of the children aged 12-23 months had received BCG vaccine, normally given at birth or soon after (Table 29). The map in Figure 22 shows the variation in BCG vaccination rate across the district.

DPT

Among the children aged 12-23 months, 66% (480/757) had received at least one DPT injection, and 52% (371/757) had received at least three injections (or a 'full course') during their first year of life. We may have over-estimated the number of children who received three injections of DPT vaccine because we included children whose mothers were only able to say they had "completed the course" without saying how many injections this comprised. The proportion of children who had received three injections, or a full course, of DPT vaccine, was rather lower in Nara than in other *talukas*, and highest in Sobho Dero *taluka* (Table 29). The map in Figure 23 shows the variation in rate of completion of a full course of DPT vaccine across the district.

Measles

Some 50% (356/737) of children aged 12-23 months had received the measles vaccine, usually given at around nine months old. The measles vaccine is the last in the series of childhood vaccines, and many children have apparently "dropped out" of the immunisation schedule before the age of nine months. Once again, Nara *taluka* had the lowest rate of measles immunisation and Sobho Dero *taluka* had the highest rate (Table 29). The variation in measles immunisation rate across the district is shown in the map in Figure 24.

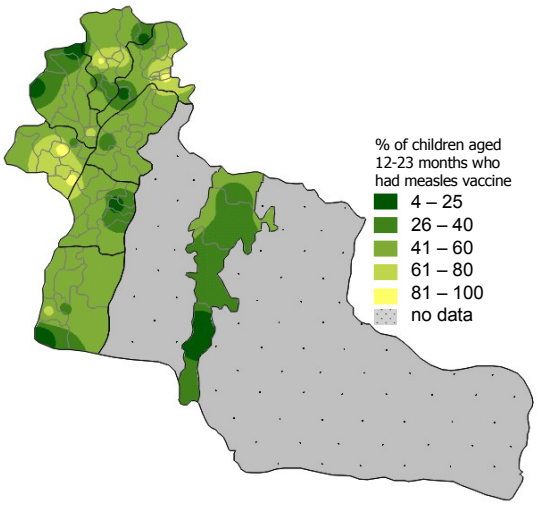


Figure 24 % children 12-23 months who had measles vaccine

Polio

Among children aged over 12-23 months, 99% (760/767) had received polio drops at least once in the last 12 months. This was also the case when all children aged 12-59 months were included (99%; 3544/3566) (Table 29). Many of the children had received polio drops several times during the last year, with mothers reporting they got them "every time" the polio team visited.

Why children are not immunised

For each child (12-59 months) that had not received all the immunisations (or any of them), we asked the mother or main caregiver why not. The mothers most commonly cited problems of access: either that the health facility for immunisations was too far away, followed by "carelessness of family members" and "can not afford it/too poor". Table 30 shows the reasons given for children not being immunised. Carelessness or lack of awareness implied that immunisation of children was not prioritised by the family over other calls on their time and household economy. Other reasons were "do not have time/no one to take the child", do not believe in vaccination/no tradition, vaccination would cause harm and lack of awareness. A few mothers said that their families did not allow to vaccinate children.

Table 30 Reasons why children (12-59 months) are not immunised

Reasons	% children
No facility nearby/difficult access	60
Carelessness of family	10
Can't afford it / too poor	8
Don't have time/ no one to take child	6
Don't believe in it / no tradition	6
Vaccination would cause harm	5
Lack of awareness	4
Family does not allow	2
N	1646

Views from community focus groups

The community focus groups explored the reasons why some families did not have their children immunised. The participants were asked if they thought parents who did not immunise their children understood the risk they were taking and why they might still not immunise even if they did understand the risk.

Many of the focus groups agreed that probably people did not fully understand the risk they were taking by failing to immunise their children. Mostly they ascribed this to lack of education, or lack of access to the information about the risks. Some mentioned that people did not realise how serious measles could be.

To explain why people who understood the risk would still not immunise their children, many groups mentioned that women were not allowed to take their children to get vaccinated, there was no tradition of immunisation, and even that some people were careless

"People are uneducated. What can they understand?"
Male focus group, Gambat *taluka*

"Some mothers don't want to understand the risks of non-vaccination. They say their child is fine and healthy and doesn't need anything else."
Female focus group, Kot Diji *taluka*

"Immunisation teams do not visit our village. If they came, people would automatically understand the risk of not immunizing their children."
Male focus groups. Sobho Dero *taluka*

"We are not allowed to go to hospitals. That's why we cannot have our children immunised."
Female focus group, Kot Diji *taluka*

"People don't immunise their children because they have lots of them. Even if one or two were to die, they would not be troubled a lot."
Female focus group, Gambat *taluka*

"We are well aware. But immunization teams do not come here."
Female focus group. Kot Diji *taluka*

"Some children have died after getting a vaccine injection. The rest of the mothers around here are now scared."
Female focus group, Kingri *taluka*

"A doctor can inform parents better on immunizations."
Male focus groups. Gambat *taluka*

"People must be given awareness about immunizations."
Male focus groups. Sobho Dero *taluka*

"A hospital must be close by and our children must be immunized for free over there."
Female focus groups. Kot Diji *taluka*

"We will take our children for immunizations if transport becomes better."
Female focus groups. Gambat *taluka*

"Teams must come door-to-door and immunize small children."
Female focus groups. Gambat *taluka*

about getting their children immunised. Many groups also cited poverty, as well as lack of immunisation services and mobile teams. Some also mentioned misconceptions about vaccinations, fear of side effects, access problems, and lack of time to take children for vaccination.

To help parents to have their children immunised, the groups suggested both increasing public awareness of the importance of immunisation, and at the same time increasing access to immunisation services. The idea of visiting immunisation teams was especially popular, but participants also mentioned improving access to health facilities offering immunisation.

Mothers' knowledge and perceptions about immunisations

Awareness about immunisation

Some 82% (2760/3400) of the mothers (or carers) had heard about immunisation for children from some source. Mothers sometimes gave more than one source for their information. Their sources of information about immunisation for children are shown in Table 31. The most common source of knowledge is doctors or health facilities, followed by electronic media.

Table 31: Mothers' sources of information about immunisation for children

Indicator	% mothers
Doctor/hospital	30
Electronic media	29
LHV/ LHW/ Dai	11
Family, neighbours, friends	8
Vaccination team	6
Announcement	1
Written material (newspapers, books, pamphlets)	1

Among the mothers, 78% (2583/3357) were able to mention least one illness preventable by immunisation. In some cases, their perceptions about which diseases could be prevented by immunisation were incorrect. For example, some mothers thought "all illnesses" could be prevented by immunisation. Including only correct perceptions about diseases preventable by immunisation, 76% (2503/3357) of mothers were able to mention at least one illness preventable by immunisation.

Views about benefits of immunisation

The interviewers first asked the mothers what they believed their neighbours thought about immunising children. Not all the mothers knew what their neighbours' views on this matter were. Some 86% (2850/3376) of the mothers said their neighbours thought it was worthwhile to immunise children, 3% (129/3376) said their neighbours did not think it

worthwhile, and 11% (397/3376) said they did not know what their neighbours thought about it.

Coming to their own views on the question, 91% (3047/3374) of mothers thought it was worthwhile to immunise children, 3% (85/3374) thought it was not worthwhile, and 6% (242/3374) did not know if it was worthwhile or not.

Almost all mothers (99%; 2955/2981) who thought it was worthwhile to immunise children cited protection from illness as their reason.

Those few mothers who thought it was *not* worthwhile to immunise children most often said they thought the vaccine would make the child sick or that they did not feel immunisation was necessary (Table 32).

Table 32 Why mothers felt immunisation was not worthwhile

Reasons	% mothers
Child gets sick from vaccine	45
Feel it is not necessary	40
Child may die	7
Immunisation has no effect	3
No practice in family	3
Hospital too far	1
N	51

Views about adverse effects of immunisation

Parents might avoid immunising their children because of fear of adverse effects, justified or not. In fact, very few mothers could mention any adverse effects of immunisation that they knew of.

Some 11% (359/3333) of mothers had heard of any adverse effect of immunisation. Most of the effects they mentioned were recognised adverse effects of immunisation, including fever and swelling or pain at the injection site. A few mentioned things that are not recognised adverse effects of immunisation, such as stomach problems and family planning. This last perception is a belief that vaccinations will make children sterile or cause them to have only female children in the future. Overall, 89% (2974/3333) of mothers mentioned no adverse effects of immunisation, 8% (249/3333) mentioned actual side effects, and 3% (96/3333) mentioned misconceptions about adverse effects.

The interviewers asked mothers who mentioned they had heard of adverse effects of immunisation where they heard this. Table 33 shows the main sources of information. In many cases, the mothers could not give a specific source for their information. The source they most commonly mentioned was family or neighbours (26%; 84/364), followed by doctor or hospital.

Table 33: Where mothers had heard about adverse effects of immunisations

Source:	% mothers
Don't know/ myself	47
Family, neighbours	26
Doctor/hospital	12
Vaccination team	5
No where	5
Electronic media (TV, radio)	3
LHW	3
N	364

Information from the lady health worker

Among the 45% (1464/3415) of mothers that reported an LHW visited their household, just 25% (350/1427) recalled that the LHW told them anything about immunisations. Those who recalled any information mentioned the LHW told them immunisations were to protect against illness and that it was important to immunise children (Table 34). Among *all* mothers (including those not visited by an LHW), only 11% (350/3421) had been given any advice about immunisations from an LHW.

Table 34 Mother's recall about advice on immunisations given by LHWs

Advice given	% mothers
Nothing	75
Protects against illness	13
Important to immunise	12
Get vaccination from birth	1
Always complete the vaccination course	<1
N	1427

The recall of mothers contrasts with the information from interviews with LHWs covering some of the sample communities (see below). The LHWs nearly all reported telling the mothers they visited about the benefits and importance of immunising children.

Decisions about immunisation for children

Some 83% (2733/3334) of mothers said they had discussed immunisation of children within the family.

For each child under 60 months we asked the mother who had been involved in deciding about immunisation for that child. For 47% (1892/3989) of children the mother and father decided together, for 33% (1276/3989) of the children mothers alone had made the decision and for 20% (821/3989) of children mothers were not involved in deciding about immunisations. Table 35 shows who was involved in decision making in each *taluka*.

Table 35 Mother's involvement in decisions about immunisation for the child (% children)

	Mother alone	Mother and father	Mother not involved
Kingri	40	41	19
Kot Diji	34	39	27
Sobho dero	36	50	14
Thari Mirwah	29	53	18
Nara	22	51	28
Faiz Ganj	28	52	20
Gambat	29	47	24
Khairpur	34	48	18
Khairpur district	33	47	20

Measles immunisation

We collected additional information about measles immunisation specifically and analysed the variables related to the chances of children being immunised against measles. This supplements the analysis of the variables related to the risk of contracting measles (see above), which showed the beneficial effects of measles immunisation on the risk of suffering measles.

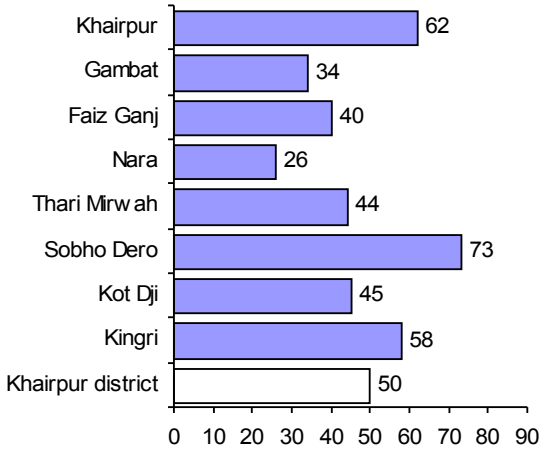


Figure 25 % children (12-23 months) who have received measles vaccine

Frequency of immunisation

As reported above, 50% (356/737) of children aged 12-23 months had received the measles vaccine, usually given at around nine months old. Figure 25 shows the variation in measles immunisation between the four *talukas*.

Among children 10-59 months also 50% (1704/3579) had received the measles vaccine.

Analysis of receiving measles vaccine

We collected information about a number of variables that might be associated (positively or negatively) with the chances of a child being immunised against measles. These are listed in Table 36. All these variables, except age of the child, examined separately, were associated with the chances of a child being immunised against measles. We then undertook a multivariate analysis to examine the effects of each of these variables, taking into account the effects of the others. The model from the multivariate analysis is shown in Table 37.

Table 36 Variables potentially associated with the risk of measles in children

- Urban/rural location
- Taluka
- Education of the household head
- Education of the mother
- Household vulnerability
- Sex of the child
- Age of the child
- Mother has heard about immunisations
- Mother knows a vaccine-preventable illness
- LHW told mother about vaccines
- Mother thinks it worthwhile to immunise
- Family have discussed immunisations
- Immunisation facility within 1km
- Immunisation facility within 5Km
- Vaccination team visits community

Education of the mother
Children whose mothers had any formal education were more likely to have been immunised than children whose mother did not have education[7].

[7] Weighted OR 2.36, 95% CI 1.84 - 3.02 , 410/534 children whose mother were educated had measles vaccine compared with 1289/3037 children whose mothers were uneducated

Table 37 Model of effects of variables on the chance of having measles vaccine

	Crude OR	Weighted OR	95% CI of weighted OR
Education of the mother	2.88	2.51	1.83 - 3.44
Mother knows illness preventable by immunisation	2.64	2.26	1.63 - 3.15
LHW told something about vaccines	1.64	1.70	1.27 - 2.28
Mother thinks immunisation is worthwhile	7.08	5.06	2.12 - 12.06
Immunisations discussed with family	2.45	1.73	1.08 - 2.79
Immunisation team visited community	1.84	1.57	1.21 - 2.04
Government immunisation facility within 5 km	2.73	2.19	1.70 - 2.82

OR=Odds Ratio, a measure of relative risk

Household vulnerability
Children from less vulnerable households were more likely to be vaccinated than those from vulnerable households[8].

Mothers' knowledge about illnesses preventable by immunisation
Children whose mothers could identify some illness preventable by immunisation were nearly twice as likely to have been immunised as children whose mothers did not have this knowledge[9].

Mothers thinking vaccination is worthwhile
Children whose mothers thought that vaccination was worthwhile were much more likely to have had the measles vaccine than those whose mothers thought it was not worthwhile or who did not know.[10]

Discussion in the family about immunisations
Children whose families had discussed immunisations were twice as likely to have been immunised as children whose families had not discussed immunisation[11].

Visits from an LHW
Children whose mothers were visited by an LHW were more likely to have had measles vaccine than those whose mothers were not visited[12].

Information from LHW
Children whose mothers had been visited by an LHW and recalled being told about immunisations were more likely to have been immunised than children whose mothers had not received such information[13].

Distance to immunisation facility
Children from communities with an immunisation facility within five kilometres were more likely to be vaccinated than children from communities where the government immunisation facility was further away[14].

[8] Weighted OR 1.51, 95% CI 1.28-1.78, 972/1633 children from less vulnerable households had measles vaccine compared with 691/1837 from vulnerable households

[9] Weighted OR 1.85, 95%CI 1.48 - 2.30, 1472/2636 children whose mothers could identify an illness prevented by immunisation had measles vaccine compared with 201/889 whose mothers did not have this knowledge

[10] Weighted OR 9.05, 95% CI 4.83 – 16.95, 1692/3234 children whose mothers thought immunisation was worthwhile had measles vaccine compared with 11/325 whose mothers thought it was not worthwhile or did not know

[11] Weighted OR 2.61, 95% CI 1.97 - 3.46, 1608/2918 children whose family discussed immunisation had measles vaccine compared with 84/597 whose family did not discuss immunisation

[12] Weighted OR 2.39, 95% CI 2.01-2.84, 1026/1548 children of mothers visited by an LHW had measles vaccine compared with 675/2027 of mothers not visited

[13] Weighted OR 1.57, 95% CI 1.17 - 2.10, 302/406 children whose mothers recalled an LHW telling them about immunisations had measles vaccine compared with 1372/3132 whose mothers did not get such information from an LHW

[14] Weighted OR 2.26, 95% CI 1.92 - 2.67, 849/1180 children from communities with a government immunization facility within 5Km had measles vaccine compared with 855/2398 from communities where the government facility is further away

Table 38 Potential gains in increasing measles immunisation

Intervention	Proportion requiring intervention (%)	Weighted risk difference	95% CI weighted risk difference	Weighted gain per 1000 children
Education for all mothers	82.2	0.112	0.008-0.015	10
Focus on more vulnerable households	51.6	0.068	0.041-0.094	35
Educate mothers about immunisation benefits	20.1	0.018	0.011-0.024	4
Convince mothers immunisation is worthwhile	18.3	0.199	0.142-0.256	37
Encourage discussion about immunisation	14	0.233	0.165-0.302	33
Ensure all mothers visited by LHW	62	0.020	0.016-0.025	13
Ensure all mothers get vaccine info from LHW	72	0.042	0.015-0.069	30
Ensure immunisation facility within 5 km	41.2	0.063	0.050-0.076	26

Proportion requiring intervention means those who do not currently have the favourable condition, eg % children whose mothers are not educated

Potential population gains in measles immunisation

We can estimate the number of additional children who could be vaccinated as a result of different interventions. The model of the potential population gains in measles immunisation is shown in Table 38. From this table, we can see that ensuring convincing mothers that vaccination is worthwhile could have the biggest impact and could increase the number of children who receive measles vaccine by 37 per thousand. A focus particularly on mothers in vulnerable households would help (35 per thousand additional children immunised), as would encouraging discussion about immunisation (33 per thousand additional children immunised).

LHWs have an important role. If all mothers were visited by an LHW this could increase the number of immunised children by 13 per thousand. It is important the mother recalls the information; if all mothers could recall vaccine information from an LHW, this could increase the number of immunised children by 30 per thousand.

Ensuring a government immunisation facility within five kilometres of every community could achieve an additional 26 children per thousand immunised. However, this would be an expensive option.

Lady health workers

The data collection teams interviewed 46 LHWs identified as visiting the sample communities, to collect information about their work, knowledge and views about childhood diarrhoea, ARI, measles, and immunisation.

Training

All of the LHWs interviewed had received some initial training to work as an LHW and almost all (43/46) had received additional training after this. For 33/43 LHWs this additional training this had been within the last year.

Work load

Most of the LHWs (15/46) covered more than 150 households in their catchment area. All of them said they visited each household at least once a month

Some 19/46 of the LHWs reported having difficulty visiting the households in their catchment area and their suggestions for helping them to get to the households included to increase community support (9/46), to provide transport (5/46), more medicines and equipment available (4/46) and less work load: more LHWs or fewer households per LHW (1/46).

Supervision

Most of the LHWs reported they were visited by a supervisor once a month or less frequently (34/46) and 12/46 reported they were visited more than once a month.

Knowledge and attitudes about immunisation

All the LHWs could correctly identify at least one illness prevented by immunisation. More than half of them (28/44) had heard something about adverse effects of immunisation. Of those who had heard about adverse effects 26/28 mentioned actual side effects and 2/28 mentioned misconceptions about side effects. The LHWs' sources of information about adverse effects of immunisation are shown in Table 39.

Table 39 Where LHWs heard about adverse effects of immunisation

	No of LHWs
Family, neighbours, friends	7/28
Doctor/health worker	6/28
During training	12/28
During visits (from parents)	3/28

Most LHWs said they provided their clients (mothers) with information about the importance and benefits of immunisation (42/46), 6/46 told mothers about the scheduling of immunisations and 5/46 said they gave explanations and removed misconceptions. This reported passing on of information to mothers was not reflected in interviews with mothers visited by LHWs, few of whom could recall the LHW telling them anything about immunisations.

LHWs most commonly (22/46) gave lack of awareness as the reason for children in their communities not being immunised. They also mentioned "carelessness' (13/46) and fear of side effects (9/46). Other reasons they cited are shown in Table 40.

Table 40 Why children are not always immunised: LHW views

Reason	No. responses
Lack of awareness	22
"Carelessness"	13
Fear of side effects	9
Don't believe in it	4
Facility too far	3
Don't have time/no one to take	2
Family problems/migration	2
Not allowed	2
No reason	2

The most common suggestion from the LHWs to ensure that all children got immunised was to provide information and raise awareness about the issue (22/46). Other suggestions are shown in Table 41.

Table 41 Suggestions of LHWs to ensure all children are immunised

Suggestion	No. responses
Give information/ increase awareness	22
Facility nearby/transport	12
More staff/vaccinators/training	6
Mobile teams	4
Ensure vaccine availability/electricity	3
Nothing	2

Knowledge and attitudes about diarrhoea

Virtually all the LHWs (44/46) could correctly state at least one cause of childhood diarrhoea. Some 42/46 of them said a child should be given more fluids during an episode of diarrhoea and 41/46 said a child should be given the same or more food.

All the LHWs reported they gave advice to mothers and families about preventing and treating childhood diarrhoea (Tables 42 and 43). Most (40/46) reported they gave advice about good hygiene practices and cleanliness to prevent diarrhoea and (41/46) about giving more fluids and ORS to treat diarrhoea. This is in contrast to the reports from mothers visited by LHWs (see above), few of whom could recall the LHW telling them anything about diarrhoea prevention or management.

Table 42 Advice reportedly given by LHWs about diarrhoea prevention

Advice	No of responses
Good hygiene and cleanliness	40
Good nutrition	18
Give more fluids/ ORS	13
Contact doctor	2
No advice/don't know	1

When directly asked, most of the LHWs (36/46) said children with diarrhoea *should* be given anti-diarrhoeal drugs, although these can in fact be dangerous in young children. They presumably pass on this misconception to the mothers they visit.

Table 43 Advice reportedly given by LHWs about diarrhoea treatment

Reason	No of responses
Give more fluids/ ORS	41
Contact doctor	22
Good nutrition/food	11
Hygiene/cleanliness	8

Table 44 Advice reportedly given by LHWs about ARI treatment

Advice	No of responses
Take to doctor or contact doctor	36
Give medicines	27
Protect from cold	11
Take care of eating	1
Feed eggs and honey/hot foods	1

Knowledge and attitudes of LHWs about ARI

All the LHWs could mention some correct advice about recognising ARI in children.

Most of the LHWs reported that they advised mothers to treat a child with ARI by taking the child to a doctor or consulting a doctor (36/46) and by giving medicines (27/46) (Table 44)

Again, the report from the LHWs is in contrast to the information from mothers visited by LHWs, few of whom could recall the LHW telling them anything about recognition or treatment of ARI.

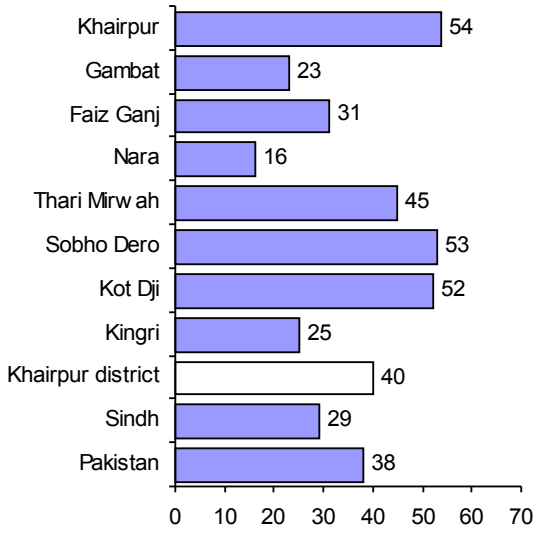


Figure 26 % households satisfied with roads

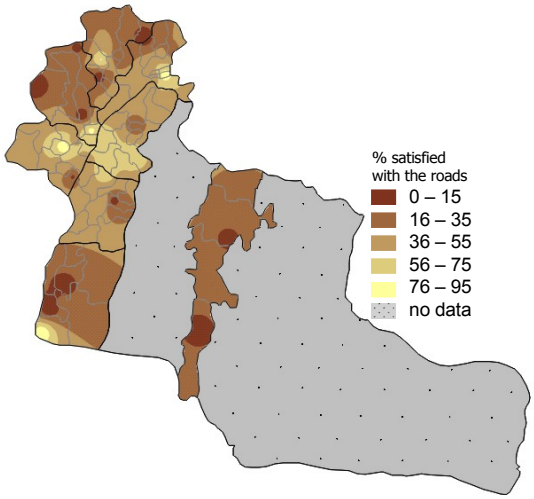


Figure 27 % households satisfied with the roads

Table 45. % households reporting access to roads and public transport

	Roads	Public transport
Kingri	53	73
Kot Diji	84	78
Sobho dero	82	81
Thari Mirwah	68	84
Nara	36	48
Faiz Ganj	49	60
Gambat	41	56
Khairpur	85	76
Khairpur district	66	72
Sindh	85	88
Pakistan	92	93

Public satisfaction with basic services

In a general section of the household interview we asked households about their satisfaction with a range of basic public services provided by the government. In some cases, household respondents said that they had no such service available to them. This same information was also collected as part of the 2004/05 national social audit, so comparison with national and provincial figures is possible.

As mentioned in the report of the national social audit, isolated satisfaction ratings of public services must be interpreted with caution, as they may be influenced by many factors other than the quality of a service. However, they do provide some guide to how citizens view the public services supposed to be available to them. It can be useful to track satisfaction ratings over time, but again care must be taken not to over-interpret changes, especially small changes, which may even be due to chance. In the focus districts, we have the opportunity to compare satisfaction with a range of public services in different parts of the district.

Roads

Across the district, 40% (1208/3225) were satisfied with the roads in their area. Figure 26 includes a comparison with the findings about satisfaction with roads at national and provincial levels. Satisfaction with roads is relatively high in Khairpur.

The map in Figure 27 shows the variation across the district in household satisfaction with roads.

Most (66%; 2014/3225) households across the district considered they had access to roads in their area. This is shown by *taluka* and in comparison with national and provincial figures in Table 45.

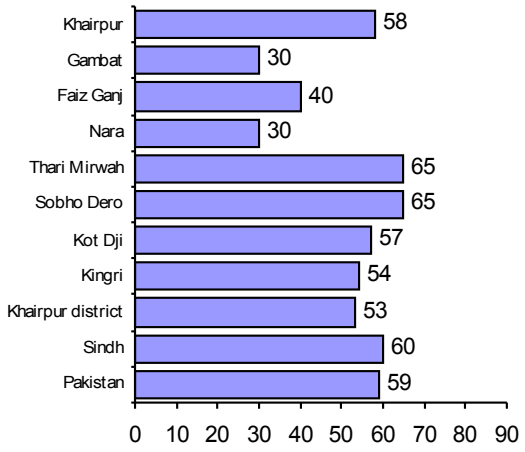


Figure 28 % households satisfied with public transport

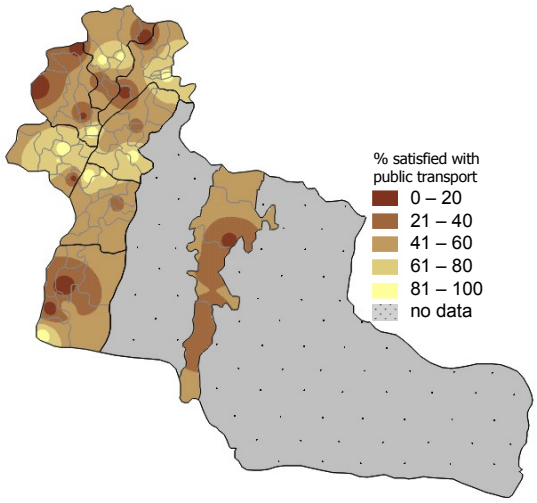


Figure 29 % households satisfied with public transport

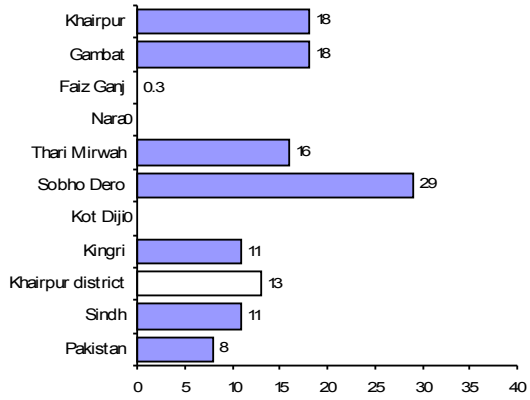


Figure 30 % households satisfied with garbage disposal

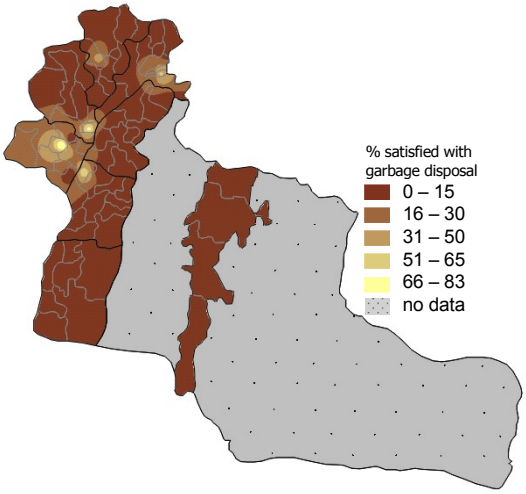


Figure 31 % households satisfied with garbage disposal

Public transport

Across the district, 53% (1619/3230) were satisfied with the public transport in their area. Figure 28 includes a comparison with the findings about satisfaction with public transport at national and provincial levels.

Figu

The map in Figure 29 shows the variation across the district in the proportion of households satisfied with public transport.

Some 72% (2254/3230) of households across the district considered they had access to public transport in their area. This is shown by *taluka* and in comparison with national and provincial figures in Table 46.

Government garbage disposal

Across the district, some 13% (376/3235) of households were satisfied with the government garbage disposal in their community. Figure 30 includes a comparison with the findings about satisfaction with garbage disposal at national and provincial levels. Satisfaction with garbage disposal services in Khairpur district, except in Nara, Kot Diji and Faiz Ganj *talukas*, is a little higher than in Sindh as a province and in Pakistan overall.

The map in Figure 31 shows the variation across the district in household satisfaction with government garbage disposal services. Satisfaction is confined to the urban area in Sobho Dero.

Some 26% (726/3235) of households across the district considered they had access to garbage disposal in their community. This is shown by *taluka* and in comparison with national and provincial figures in Table 46.

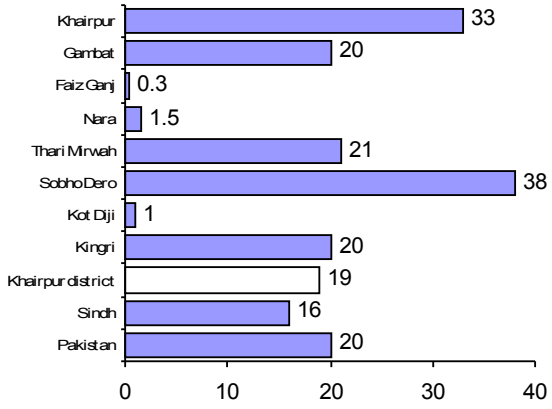


Figure 32 % households satisfied with sewerage services

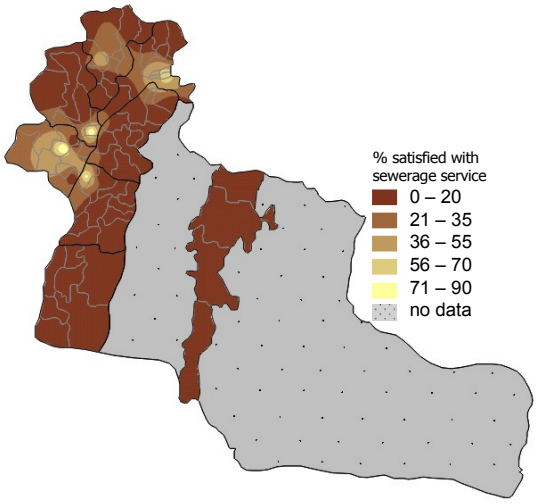


Figure 33 % households satisfied with sewerage services

Table 46. % households reporting access to garbage, sewerage, and water services

	Garbage	Sewerage	Water
Kingri	28	40	8
Kot Diji	1	3	1
Sobho dero	42	50	1
Thari Mirwah	29	31	1
Nara	0	2	1
Faiz Ganj	0.5	0.5	0
Gambat	24	24	24
Khairpur	53	68	43
Khairpur district	26	32	12
Sindh	50	61	53
Pakistan	64	53	44

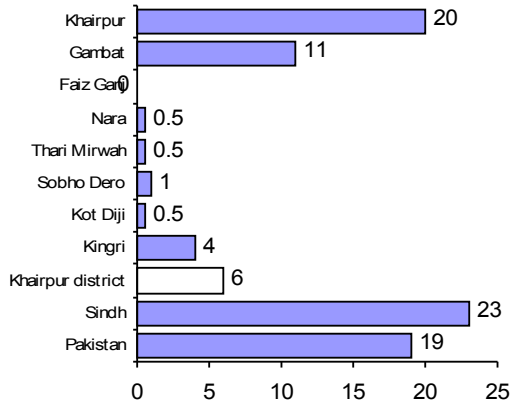


Figure 34 % households satisfied with government water supply

Government sewerage services

Across the district, 19% (549/3224) of households were satisfied with the government sewerage services in their community. Figure 32 includes a comparison with the findings about satisfaction with sewerage services at national and provincial levels. The overall satisfaction with government sewerage services is higher in Khairpur than across Sindh and similar to Pakistan, but there is marked variation between *talukas*.

The map in Figure 33 shows the variation across the district in household satisfaction with government sewerage services.

Some 32% (888/3224) of households across the district considered they had access to sewerage services in their community. This is shown by *taluka* and in comparison with national and provincial figures in Table 46.

Government water supply

Across the district, only 6% (146/3215) were satisfied with the government water supply in their area. Figure 34 includes a comparison with the findings about satisfaction with government water supply at national and provincial levels. Household satisfaction with government water supply in Khairpur district was lower than for Sindh province and for Pakistan as a whole. But this is largely because few households actually had access to a *government* water supply (see below). The map in Figure 35 shows the variation across the district in the proportion of households satisfied with the government water supply. Satisfaction with the *government* water supply is confined to two areas in Khairpur and Gambat *talukas*.

Only 12% (310/3215) of households across the district considered they had access to a government water supply in their area. This is shown by *taluka* and in comparison with national and provincial figures in Table 46. Most households make use of a private source of underground water, for example through a household pump.

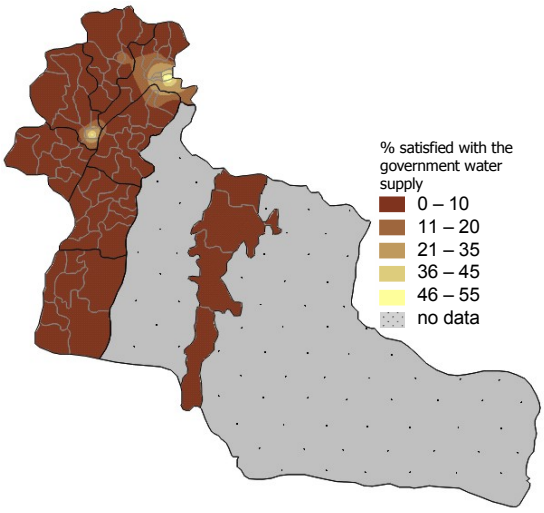


Figure 35 % households satisfied with government water supply

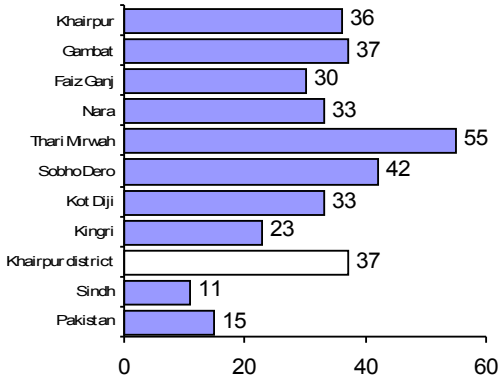


Figure 36 % households satisfied with agriculture services

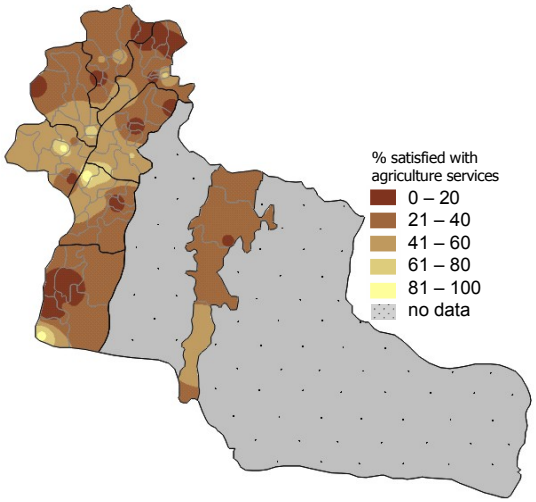


Figure 37 % households satisfied with agriculture services

Table 47. % households reporting access to agricultural, education and health services

	Agriculture	Education	Health
Kingri	47	92	65
Kot Diji	71	94	39
Sobho dero	71	95	84
Thari Mirwah	80	89	60
Nara	55	65	17
Faiz Ganj	54	84	13
Gambat	93	96	39
Khairpur	62	97	87
Khairpur district	68	91	56
Sindh	36	94	68
Pakistan	49	96	78

Agriculture services

Across the district, 37% (1150/3145) of households were satisfied with the agriculture services in their area. Figure 36 includes a comparison with the findings about satisfaction with agriculture services at national and provincial levels. The satisfaction with agriculture services in Khairpur district is considerably higher than in Sindh province or in Pakistan as a whole. This is partly because of the higher access to agriculture services in this agricultural district (see below).

The map in Figure 37 shows the variation across the district in the proportion of households satisfied with government agriculture services.

Some 68% (2102/3145) of households across the district considered they had access to agriculture services in their area. This is shown by *taluka* and in comparison with national and provincial figures in Table 47. Note the much higher access to agriculture services in Khairpur than in Sindh as a whole.

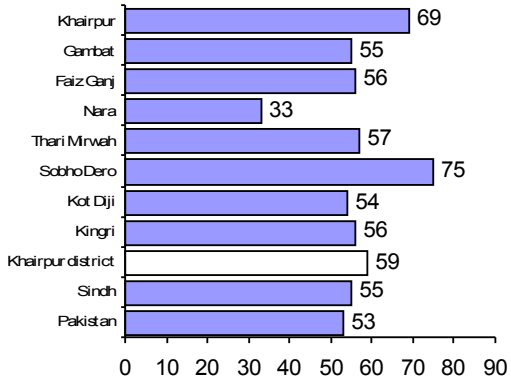


Figure 38 % households satisfied with government education services

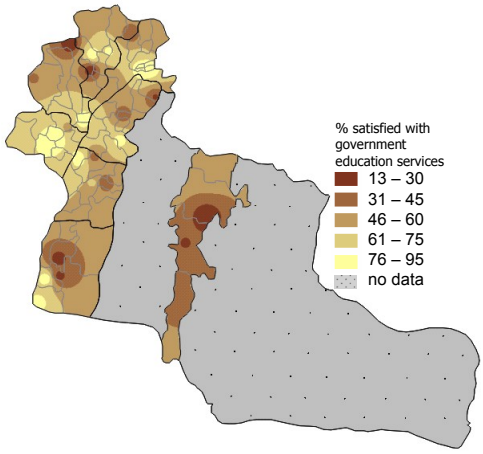


Figure 39 % households satisfied with government education services

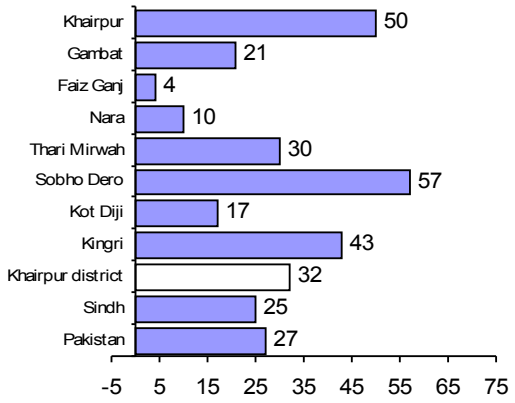


Figure 40 % households satisfied with govt health services

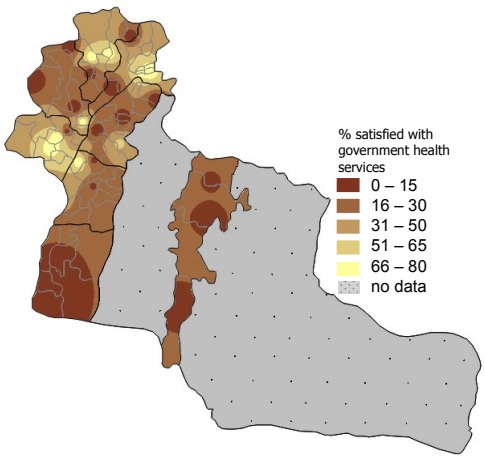


Figure 41 % households satisfied with govt health services

Education

Across the district, 59% (1827/3228) of households were satisfied with the government education service in their area. Figure 38 includes a comparison with the findings about satisfaction with the government education service at national and provincial levels. The satisfaction with government education services in Khairpur district is slightly better than the figures for Sindh province and for Pakistan as a whole.

The map in Figure 39 shows the variation across the district in proportion of households satisfied with the government education services in their area.

Majority (91%; 2873/3228) of households across the district considered they had access to a government education service in their area. This is shown by *taluka* and in comparison with national and provincial figures in Table 47.

Health

Across the district, 32% (935/3214) of households were satisfied with the government health services in their area. Figure 40 includes a comparison with the findings about satisfaction with the government health services at national and provincial levels. Satisfaction with government health services in Khairpur district overall compares favourably with the satisfaction across Sindh province and in Pakistan as a whole, but there is marked variation between *talukas*.

The map in Figure 41 shows the variation across the district in the proportion of households satisfied with the government health services in their area

Some 56% (1631/3214) households across the district considered they had access to government health services in their area. Although satisfaction with health services was higher in Khairpur district than in Sindh and Pakistan as a whole, perceived access to government health services was relatively lower than in Sindh overall and Pakistan. Access to government health services is shown by *taluka* and in comparison with national and provincial figures in Table 47.

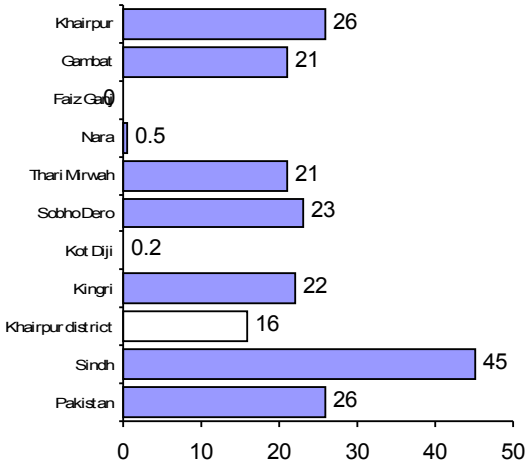


Figure 42 % households satisfied with gas supply

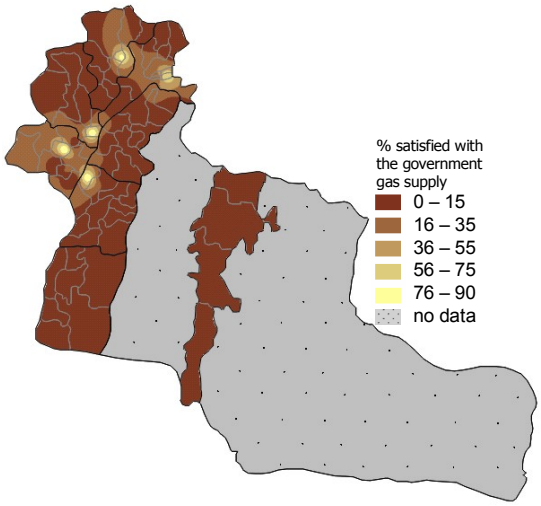


Figure 43 % households satisfied with gas supply

Table 48. % households reporting access to gas and electricity services

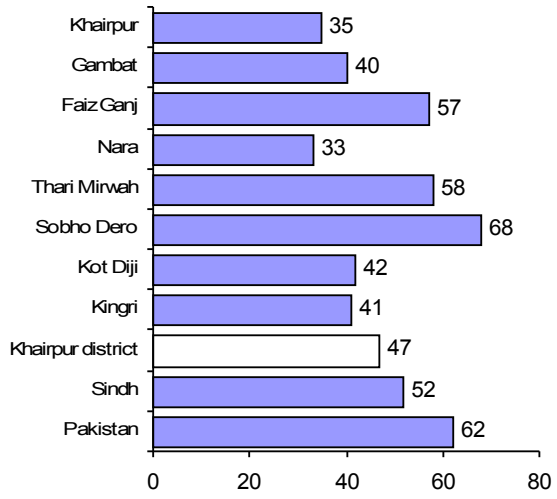
	Gas	Electricity
Kingri	28	86
Kot Diji	1	82
Sobho dero	26	96
Thari Mirwah	25	100
Nara	0.5	55
Faiz Ganj	1	82
Gambat	25	88
Khairpur	52	90
Khairpur district	23	87
Sindh	52	88
Pakistan	30	93

Gas supply

Across the district, 16% (464/3232) of households were satisfied with the gas supply in their area. Figure 42 includes a comparison with the findings about satisfaction with gas supply at national and provincial levels. The satisfaction with gas supply in Khairpur district was much lower than for Sindh province and lower than for Pakistan as a whole. Three of the *talukas* have virtually no gas supply at all.

The map in Figure 43 shows the variation across the district in the proportion of households satisfied with the gas supply. It illustrates that satisfaction is confined to small areas with a supply.

Only 23% (636/3232) of households across the district reported they had a gas supply, and there was virtually no supply in three of the *talukas*. Access to a gas supply is shown by *taluka* and in comparison with national and provincial figures in Table 48.



igure 44 % households satisfied with electricity supply

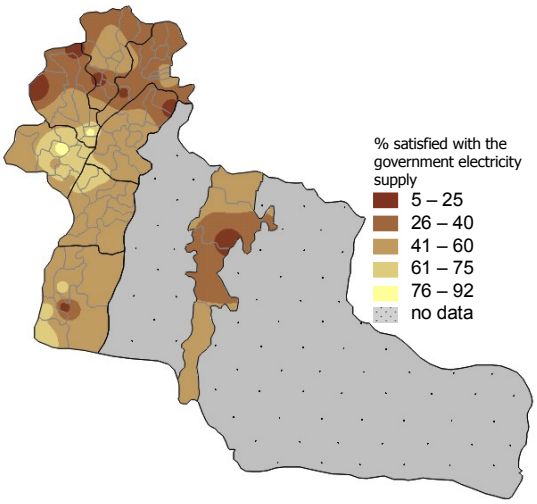


Figure 45 % households satisfied with electricity supply

Electricity supply

Across the district, 47% (1517/3241) of households were satisfied with the electricity supply in their area. Figure 44 includes a comparison with the findings about satisfaction with electricity supply at national and provincial levels. The satisfaction with electricity in Khairpur is lower than for Sindh as a province and Pakistan as whole. Again, there is quite marked variation between *talukas*.

The map in Figure 45 shows the variation across the district in the proportion of households satisfied with the government electricity supply.

F

Most (87%; 2755/3241) households across the district reported they had an electricity supply. This is shown by *taluka* and in comparison with national and provincial figures in Table 48.

Commentary

This report presents the main findings of the social audit in Khairpur district. It is by no means the end of the process. It will hopefully be a useful reference. But the main work of disseminating the findings and making use of them to support evidence-based planning is only just beginning. Over the coming months the social audit findings will be presented and discussed in many settings within the district, both within and outside government.

During this process many people will no doubt examine the findings closely and look beyond what is included in this report, relating the findings to what they know about the district and *taluka* settings and looking for feasible ways to improve outcomes. Some findings that bear highlighting even at this stage.

Childhood diarrhoea

The rate of diarrhoea –34% of children under five years old with diarrhoea in the last two weeks – is high by international standards. In many studies the quality of drinking water is found to be a factor, with children whose households do not have a protected water source having a higher rate of diarrhoea. In Khairpur district, almost all households have a water source that is classified as 'protected' as it is underground water. So it was not possible to examine the effect of water source protection on the risk of diarrhoea.

We found that children from a household with an educated head had a lower rate of diarrhoea, but we were not about to demonstrate a protective effect of a formal latrine in the household. The proportion of households in Khairpur with a *desi* latrine is relatively high and this type of latrine might in fact increase the risk of diarrhoea in children.

Coming to treatment of diarrhoea, it is encouraging that some 60% of mothers know (and believe) children with diarrhoea should be given extra fluids. There is still work to be done to convince them all and to help them do it in practice. Of concern is the high rate of use of anti-diarrhoea medicines. Most (83%) mothers give anti-diarrhoea medicines to children when they have diarrhoea episodes and this is supported by the views of LHWs on the matter.

The most popular source of treatment for children with diarrhoea is a private qualified practitioner (44%), while only 10% of children with diarrhoea were taken to a government facility. Focus group participants complained about services from government health facilities, and clearly prefer to use private facilities when they can. It is encouraging to see that more than half the children with diarrhoea taken to any type of health care provider in Khairpur were given ORS.

Childhood acute respiratory infections (ARI)

Evidence from the literature suggests that smoke in the household increases the risk of ARI in children. The findings in Khairpur support this, in that children from households where the cooking area was not separate from the living area had a higher risk of ARI.

Children with ARI do need medical attention so it was encouraging to see that only 15% were not taken anywhere for treatment. Once again, the usual choice of parents was private qualified practitioners, and only 8% of children with ARI were taken to a government facility for treatment.

Childhood measles

Measles is common in Khairpur district: 27% of children aged 1-59 months old have had measles, even excluding those cases under 10 months old (which may not be measles). Taking other factors into account, we were able to show that children who were not immunised had one and half times the risk of measles compared with immunised children. This recent information specifically from Khairpur district is useful to give to parents deciding whether to immunise their children. We were also able to show that 40 per thousand children in Khairpur district could be protected from measles if all children were immunised. Actually, this could be an underestimate because once nearly all children are immunised there is a "herd immunity" effect further reducing the risk of measles, even in non-immunised children.

Childhood immunisations

Khairpur district is a long way from universal immunisation. Most (75%) children receive BCG at birth, but the rates of immunisation fall off afterwards,

so that only half of children receive the full course of DPT injections (52%) and measles vaccine (50%).

Some of the discussions held with parents in focus groups help to explain reasons why children are not immunised and could be useful inputs into an advocacy campaign, together with the evidence about the beneficial effects of measles immunisation. The analysis of variables related to the chances of a child being immunised against measles offers a number of options for interventions that could help to increase the number of immunised children. Which of these options might be feasible in Khairpur will be a subject for discussion over the coming months. Some interventions would be much cheaper than others.

The role of lady health workers (LHWs)

The coverage of mothers by LHWs in Khairpur district is far from complete: only 45% of mothers reported they were visited by an LHW. Even if coverage could be improved, it is striking that most mothers visited by an LHW did not recall being told anything about prevention or treatment of diarrhoea in children, recognition and treatment of ARIs in children, or immunisations. On the other hand, nearly all the LHWs we interviewed said they did tell mothers about these things. The reasons for this contrast need to be explored and perhaps LHWs need to be equipped with different methods of getting over information to mothers.

Satisfaction with a range of government services

We asked households a general question about their satisfaction (and access) to a range of basic services, provided from different levels of government. While we caution against over-interpretation of these isolated satisfaction ratings, they do provide a general guide. Khairpur district has a higher level of public satisfaction than Sindh province and Pakistan overall, with some services such as roads, agriculture, education and health but lower satisfaction with gas, electricity, and government water supply. These ratings can provide an ongoing feedback from citizens, but bearing in mind their limitations.

Annexes

1. Members of Khairpur district social audit steering group
2. Members of Khairpur district social audit sub-technical group
3. Terms of reference of social audit national core group
4. CIET methods
5. Main indicators from household interviews, by *taluka*
6. Main indicators from community profiles and LHW interviews
7. Main themes from focus group discussions

Annex 1

Members of Khairpur social audit district steering group

1. Ms.Nafisa Shah Jillani, Zila Nazima, Khairpur (Chairperson)
2. Syeda Irshad Jillani, Naib Zila Nazima, Khairpur
3. Rizwan Ahmed Memon, District Coordination Officer (DCO), Khairpur
4. Ghulam Shabbir Soomro, DO, Community Development Department & district government focal person for social audit, Khairpur
5. Rashid H.Qazi, EDO, Finance & Planning Department, Khairpur
6. Dr. Abdul Haque Sheikh, EDO, Health Department, Khairpur
7. Abdul.Salam Shah, DO, Education Department, Kahirpur
8. Professor Najma Noor, Shah Abdul Latif.University, Khairpur
9. Professor Imdad Sahto, Shah Abdul Latif.University, Khairpur
10. Ms.Rana Shah (Advocate), member, Zila Council, Khairpur
11. Ms.Sughra Majeed, member, Zila Council, Khairpur
12. Ghulam Qadir Jiskani, U.C.Nazim & member Zila council, Khairpur
13. Syed Amjad Ali Shah, U.C.Nazim & member Zila council, Khairpur
14. Khadim Hussain Mirani, U.C.Nazim & member Zila council, Khairpur
15. Niaz Hussain Khaskheli, NGO representative
16. Nazir Ahmed Ujjan, NGO representative
17. Ali Gul Mirani, CCB representative
18. Ms.Zareena Jalbani, NGO representative
19. Ms. Khalida Riaz, NGO representative
20. Ms. Sana Zaidi, NGO representative
21. Mansoor Mirani, Media representative
22. M.B.Soomro, Media representative
23. M.Ilyas Sahto, District Coordinator for CIET in Khairprur
24. Dr. Khalid Omer, National coordinator for CIET in Pakistan

Annex 2

Members of Khairpur social audit sub-technical group

1. Syeda Irshad Jillani, Naib Zila Nazima
2. Ghulam Shabeer Soomro, EDO, CDD
3. Dr. Anwar Ali Mahessar, DO.Health
4. Ahmed Khan Abro, DO, PHED.
5. Abdul Sattar Mir Jat, DO, F&P
6. Sobdar Ali Jalbani, TMO, Khairpur
7. Ms. Najma Noor, Assist. Professor, Shah Abdul Latif University, Khairpur
8. Dr. Raheem Bux Bhatti, NGO representative, *taluka* Gambat
9. Ms. Rana Shah (advocate), member Zila Council, Khairpur
10. Ms:Sughra Majeed, member, Zila Council, Khairpur
11. Ms. Sheeren Sial, Marie Stopes, Society, Khairpur
12 Naveed Ahmed Khayal, Indus Resource Centre (IRC), Khairpur

Annex 3: Terms of reference of social audit national core group

Membership

The membership will include:

- From each focus district: the zila nazim or representative and the DCO or district focal person for the social audit
- The social audit focal point from each provincial department of Local Government and Rural Development
- The CIET district coordinator from each focus district, CIET provincial coordinators and national coordinator, and representation from the CIET liaison office in Islamabad
- A representative from NRB
- Other members as may be co-opted for specific purposes from time to time

The group will be chaired by one of the members from the focus districts, to be elected by the core group members. The group members will elect a chair every six months. CIET will provide the secretariat for the group.

Purposes of the group

The intention of the national core group is to share experiences of the district social audit scheme between the districts, identifying what has worked especially well, so that a tool-box for district social audit schemes in other districts can be developed.

The group will:

- develop means of *horizontal connectivity*: methods of sharing learning between the participating districts, both in terms of how best to apply the social audit effectively and in terms of findings and action plans developed as a result. These might include email listserves, a newsletter, shared reports, and meetings.
- explore means of increasing *vertical connectivity*: identifying common issues arising from the social audit to bring to the attention of the NRB; developing the role of the provincial LGRD departments in supporting the district social audit schemes; and findings ways to involve sub-district governments and civil society in social audit.
- provide a forum for discussing and agreeing matters of common interest, such as the focus of each social audit cycle and methods of publicizing the findings
- act as a point of reference for other districts that wish to develop district social audit schemes

Meetings

Meetings will be held six monthly. The venue for each meeting will be one of the participating districts, to be agreed in the preceding meeting.

The Minutes of the meetings will be circulated to the members and to the Chief Secretary, the head of the Planning and Development, and the head of the Local Government department in each province.

In between physical meetings, matters of interest or importance to the Group will be circulated for comment and discussion, mostly electronically.

Annex 4: CIET methods

Rooted in modern epidemiology and participatory research techniques, CIET methods have been applied in health[15], education[16], water and sanitation[17], land mines[18], economic sanctions[19], prevention of sexual violence[20] and the impact of structural adjustment measures on the vulnerable. The method has been used to measure impact, coverage and cost in the fields of environment[21], urban transport[22], agricultural extension[23] and judiciary[24]. It has proved useful for community-designed strategies to combat corruption in the public services in several countries[25][26]. CIET processes have been established in over 40 countries during the last decade.

A representative sample of communities is selected to represent conditions across the entire country. In these sentinel communities, *all* public services to be included in the audit are reviewed. This allows for conclusions not just on the performance of each department, but on the performance of the services taken together. In each sentinel community, several types of interaction are developed with the community, including a service delivery household survey. The fact that the public services are reviewed in the same sentinel communities as the household survey and focus groups means that these different types of information – community and service, quantitative and qualitative – can be combined economically and rapidly.

There are several specific steps in the social audit that examine and strengthen community participation:
- the sample is carefully chosen to cover all types of community; information they provide includes their experience with services, their satisfaction and willingness to pay;
- community members and service providers participate in the fact finding;
- community members and service providers participate in analysis of the evidence, adding their experience and ideas to formulate local solutions;
- the workshopping process allows both one-to-one interaction and group discussion of the evidence and the ways forward; and
- the reiterative nature of the process helps to build community capacities and confidence.

[15] Cockcroft A. Performance and Perceptions of Health and Agriculture Services in Uganda. CIETinternational/World Bank/UNICEF/CIDA: Washington, D.C., December 1996.

[16] CIETinternational. Gender gap in primary education. Secretary Planning & Development Department, Government of Sindh, Pakistan/UNICEF Karachi 1996.

[17] Andersson N, Villegas A, Paredes S. Micro-regional Planning. in Four Essays on Evidence-based Planning . EDI/World Bank, 1995.

[18] Andersson N, da Sousa C, Paredes C. Social costs of land mines in four countries: Afghanistan, Bosnia, Cambodia and Mozambique. *British Medical Journal.* 1995;311:718-721.

[19] Andersson N. The social conditions for health in Serbia. CIETinternational: New York. 1994

[20] Andersson, N., Mhatre S, Mqotsi N., Penderis, M. Prevention of sexual violence - a social audit of the role of the police in the jurisdiction of Johannesburg's Southern Metropolitan Local Council. Johannesburg, October 1998.

[21] Arostegui J and Andersson N. Nicaragua: Impact of the National Environmental Program. EDI/World Bank, December 1995.

[22] Arostegui J and Andersson N. Results-oriented management of Managua urban public transport. EDI/World Bank December 1995.

[23] Cockcroft A. Performance and Perceptions of Health and Agriculture Services in Uganda. CIETinternational/World Bank/UNICEF/CIDA: Washington, D.C., December 1996.

[24] Massoud N. Measuring client satisfaction and expectations: The Case of the Mali Public Service. EDI/World Bank. September 1995.

[25] Cockcroft A. Tanzania Service Delivery Survey: Corruption in the Police, Judiciary, Revenue & Lands Service. EDI/World Bank July 1996.

[26] Cockcroft A, Legorreta J. National Integrity Survey, Uganda. Inspectorate of Government, Uganda & CIETinternational, August 1998.

Taken together with hard evidence of what needs to change and how it should be changed, this participation can produce a radical change in public services, increasing accountability and providing the public with value for money.

In addition to a detailed review of public services, and interviews with service providers, community-based social audits collect information on users and non-users of a service from the standpoint of the community. A community-based audit compares users and non users in the same community, and it can compare entire communities that benefit form a service with entire communities that do not benefit. This is a strong analytical position for understanding programme performance. Since it places community dynamics at the centre of the audit, it is very easy to answer questions about who the programme leaves out and why they are left out, something that service-based approaches cannot do easily. It also allows for evaluation of 'knock-on' or secondary effects, for example, when some women in a community are exposed to programme content and they relay the benefits to others in some way or another.

Analysis

The most basic level of analysis is simply a description of the levels of the different indicators of service performance. However, this does not in itself contribute to changing the situation. Formal epidemiological analysis probes behind the indicators to reach a deeper understanding of what is happening and how it be changed to improve outcomes for the well-being of the population in question.

The CIET community-based cross-design methods focus principally on what is working (the proof that something is not working requires considerably bigger sample sizes). Even when a relationship is found between a particular intervention or service and a positive outcome, in order to be sure it is the intervention that produces the positive outcome, it is necessary to exclude other possible factors as explanations of the outcome. This leads to the development of several higher-level indicators, each with a purpose in planning.

Modern epidemiological methods, for example the Mantel-Haenszel[27] procedure and the Mantel-Extension[28] test for trend, widely used for studying causes in the medical sphere, have been adapted to look behind the indicators in management in other sectors, including justice, transport, environment, customs services, water, sanitation, agriculture, food security and education. These techniques allow detailed analysis of factors that contribute to impact at national and sub-national levels. They can be used in analysis of data from social audits.

GIS component: maps for planning

CIET mapping techniques are an important means of displaying findings for planners and policy makers. The CIETmap geographic information process is designed for communication and modelling of epidemiological data for planning.[29] It represents the spatial variations of

[27]Mantel N, Haenszel W. Statistical aspects of the analysis of data from retrospective studies of disease. *J Natl Cancer Inst* 1959;22:719_748.

[28]Mantel N. Chi_square tests with one degree of freedom: extensions of the Mantel Haenszel procedure. *J Amer Stat Assoc* 1963;58:690_700.

[29] Andersson N., Mitchell S. CIETmap: free GIS and epidemiology software from the CIET group, helping to build the community voice into planning. World Congress of Epidemiology, Montreal, Canada, 19 August, 2002.

indicators but it can also model the effects of interventions, programme changes, and time-series data.

Sample data collected in the field are linked to a set of sentinel sites on the map and interpolated to create a raster surface of the study area. An adjustment is made to the interpolation in order to account for the population weighting of the sites. This transforms the map into one which represents proportion of the population rather than simply geographic area. A colour palette is then applied to show the gradient changes between classes of data, with darker colours representing high values and lighter colours representing low values.

CIET raster maps are interpreted much like a standard weather map where regional trends are more accurate than the exact location of any contour gradient. However, since they are population weighted, if 30% of the map falls within a certain class range then 30% of the population is in that range.

CIETmaps can be used to measure community participation and coverage of services in different sectors including social welfare, health, education, sports, art and culture. Each level of CIET indicators can be displayed on the maps in order to show access to services, the current effect of services on the community, and the possible effects of any programme change or reallocation.

For example, a level 0 ‘coverage’ map can show which households have access to, say, government health services and which do not. This can be helpful in determining where the gaps of services occur based upon community reported needs.

This map can then be compared with the coverage with roads of different types in different areas. Satisfaction is partly a function of expectations. The level 0 maps can demonstrate regional variations of satisfaction or access to services which may be important to consider for any reallocation or reform of services.

CIETmaps can then be used to determine how any projected road construction might change overall satisfaction with this service. These ‘gains’ can be clearly modelled on the maps through a ‘morph’ series. The morph series is so named due to the visible change that occurs in the indicator on the map, much like a series of steps in an animation. For example, the morph series may show a significant increase in user satisfaction if ‘Reform A’ was implemented. The Morph series not only shows how much of an effect there may be, but also where the effect takes place. Morph series maps can also be used to compare interventions, such as the effect of Reform A vs. Reform B, or the effect of A and B together.

Annex 5: Main indicators from household interviews

Table 1. General household indicators by *taluka*

(Part A: Includes indicators for district and for Kingri, Kot Diji, Sobho Dero and Thari Mirwah *talukas*)

Indicator	DISTRICT % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Household demographic and socio-economic characteristics										
Total households interviewed	3249		421		413		413		420	
Total population covered	25446		3467		3293		3156		3172	
Mean household size	7.8 7.7 - 7.9	3249	8.2 7.8 - 8.5	421	7.9 7.6 - 8.3	413	7.6 7.3 - 7.9	413	7.3 7.0 - 7.8	420
Households where a women responded	86.57(85.74) 85.38 - 87.76	3218	83.21 79.48 - 86.95	411	86.31 82.85 - 89.76	409	93.33 90.78 - 95.89	405	92.53 89.88 - 95.18	415
Households with a male head	96.8(97.25) 96.18 - 97.42	3242	96.19 94.24 - 98.14	420	96.84 95.02 - 98.65	411	98.53 97.25 - 99.82	409	97.38 95.73 - 99.03	420
Household head with any education	46.52(45.28) 44.79 - 48.26	3229	45.8 40.90 - 50.71	417	38.59 33.77 - 43.41	412	56.48 51.55 - 61.41	409	52.27 47.37 - 57.17	419
Houses with poor roof construction	46.32(49.03) 44.59 - 48.06	3231	42.11 37.25 - 46.96	418	43.35 38.41 - 48.29	406	30.75 26.18 - 35.32	413	42.86 38.01 - 47.71	420
Houses with >4 people/room	51.49(51.44) 49.75 - 53.23	3233	53 48.09 - 57.91	417	48.78 43.82 - 53.74	410	47.19 42.23 - 52.15	409	52.51 47.61 - 57.41	419
Main breadwinner unemployed or unskilled	55.26(56.35) 53.53 - 57.00	3214	54.33 49.42 - 59.23	416	60.35 55.44 - 65.26	401	55.26 50.32 - 60.20	409	56.87 51.98 - 61.75	415
Vulnerable households	51.35(53.09) 49.60 - 53.10	3183	49.03 44.08 - 53.98	412	50.13 45.04 - 55.21	391	41.98 37.05 - 46.91	405	50.72 45.79 - 55.66	414
Very vulnerable households	19.25(20.39) 17.86 - 20.63	3183	17.72 13.91 - 21.53	412	19.95 15.86 - 24.04	391	11.36 8.14 - 14.57	405	18.6 14.73 - 22.47	414
General opinion about services										
Roads		*n=3225*		*n=415*		*n=409*		*n=411*		*n=417*
Satisfied	40.42(37.46) 38.71 - 42.13	1208	25.06 20.77 - 29.35	104	52.08 47.11 - 57.04	213	53.04 48.09 - 57.99	218	45.08 40.19 - 49.98	188
Not satisfied	25.92(24.99) 24.39 - 27.45	806	27.71 23.28 - 32.14	115	32.03 27.39 - 36.67	131	28.47 23.98 - 32.95	117	23.02 18.86 - 27.18	96
No service	33.66(37.55) 32.01 - 35.31	1211	47.23 42.31 - 52.15	196	15.89 12.23 - 19.56	65	18.49 14.62 - 22.37	76	31.89 27.30 - 36.49	133
Public transport		*n=3230*		*n=415*		*n=411*		*n=408*		*n=418*
Satisfied	52.63(50.12) 50.89 - 54.36	1619	54.22 49.30 - 59.13	225	57.18 52.27 - 62.08	235	64.71 59.95 - 69.47	264	65.31 60.63 - 69.99	273
Not satisfied	19.6(19.66) 18.21 - 20.98	635	19.04 15.14 - 22.93	79	20.68 16.64 - 24.72	85	16.42 12.70 - 20.14	67	19.14 15.25 - 23.03	80
No service	27.78(30.22) 26.22 - 29.34	976	26.75 22.37 - 31.13	111	22.14 18.01 - 26.28	91	18.87 14.95 - 22.79	77	15.55 11.96 - 19.14	65

Indicator	DISTRICT % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Sewerage service		*n=3224*		*n=419*		*n=410*		*n=411*		*n=417*
Satisfied	18.88(17.03) 17.51 - 20.24	549	19.57 15.65 - 23.49	82	1.46 0.18 - 2.75	6	38.2 33.38 - 43.02	157	21.1 17.07 - 25.14	88
Not satisfied	12.79(10.51) 11.62 - 13.96	339	20.76 16.76 - 24.77	87	1.95 0.49 - 3.41	8	11.68 8.45 - 14.91	48	9.83 6.85 - 12.81	41
No service	68.33(72.46) 66.71 - 69.95	2336	59.67 54.85 - 64.48	250	96.59 94.71 - 98.47	396	50.12 45.17 - 55.08	206	69.06 64.51 - 73.62	288
Garbage service		*n=3235*		*n=418*		*n=410*		*n=412*		*n=420*
Satisfied	12.62(11.62) 11.46 - 13.78	376	10.53 7.46 - 13.59	44	0	0	29.13 24.62 - 33.63	120	16.43 12.77 - 20.09	69
Not satisfied	13.11(10.82) 11.93 - 14.29	350	17.94 14.14 - 21.74	75	1.22 0.04 - 2.40	5	12.62 9.29 - 15.95	52	12.86 9.54 - 16.18	54
No service	74.27(77.56) 72.75 - 75.79	2509	71.53 67.09 - 75.98	299	98.78 97.60 - 99.96	405	58.25 53.37 - 63.14	240	70.71 66.24 - 75.19	297
Government water supply		*n=3215*		*n=416*		*n=407*		*n=408*		*n=419*
Satisfied	5.61(4.54) 4.80 - 6.42	146	3.85 1.88 - 5.81	16	0.49 -0.31 - 1.29	2	0.74 -0.22 - 1.69	3	0.48 -0.30 - 1.26	2
Not satisfied	6.41(5.1) 5.55 - 7.28	164	4.33 2.25 - 6.40	18	0.25 -0.36 - 0.85	1	0.49 -0.31 - 1.29	2	0.48 -0.30 - 1.26	2
No service	87.98(90.36) 86.84 - 89.12	2905	91.83 89.07 - 94.58	382	99.26 98.31 - 100.22	404	98.77 97.58 - 99.96	403	99.05 97.99 - 100.10	415
Gas supply		*n=3232*		*n=412*		*n=411*		*n=412*		*n=419*
Satisfied	15.92(14.36) 14.65 - 17.20	464	22.09 17.96 - 26.21	91	0.24 -0.35 - 0.84	1	23.3 19.10 - 27.50	96	21.24 17.21 - 25.28	89
Not satisfied	7(5.32) 6.10 - 7.89	172	5.58 3.24 - 7.92	23	1.22 0.04 - 2.40	5	2.43 0.82 - 4.03	10	3.82 1.86 - 5.77	16
No service	77.08(80.32) 75.61 - 78.54	2596	72.33 67.89 - 76.77	298	98.54 97.26 - 99.82	405	74.27 69.93 - 78.61	306	74.94 70.67 - 79.21	314
Electricity supply		*n=3241*		*n=419*		*n=412*		*n=411*		*n=420*
Satisfied	46.75(46.81) 45.01 - 48.48	1517	41.05 36.22 - 45.88	172	41.75 36.86 - 46.63	172	67.88 63.25 - 72.52	279	57.86 53.02 - 62.70	243
Not satisfied	40.56(38.2) 38.86 - 42.27	1238	45.35 40.46 - 50.23	190	40.05 35.20 - 44.90	165	27.98 23.52 - 32.44	115	41.67 36.83 - 46.50	175
No service	12.69(15) 11.53 - 13.85	486	13.6 10.20 - 17.01	57	18.2 14.36 - 22.05	75	4.14 2.09 - 6.18	17	0.48 -0.30 - 1.25	2
Government health service		*n=3214*		*n=417*		*n=410*		*n=405*		*n=419*
Satisfied	31.73(29.09) 30.11 - 33.36	935	42.93 38.05 - 47.80	179	16.59 12.86 - 20.31	68	56.54 51.59 - 61.49	229	30.07 25.56 - 34.58	126
Not satisfied	23.93(21.66) 22.44 - 25.42	696	22.06 17.96 - 26.16	92	22.68 18.51 - 26.86	93	27.41 22.94 - 31.88	111	29.83 25.33 - 34.33	125
No service	44.33(49.25) 42.60 - 46.07	1583	35.01 30.31 - 39.71	146	60.73 55.88 - 65.58	249	16.05 12.35 - 19.75	65	40.1 35.28 - 44.91	168

Indicator	DISTRICT % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Government education service		*n=3228*		*n=418*		*n=410*		*n=411*		*n=417*
Satisfied	58.63(56.6) 56.91 - 60.34	1827	55.98 51.10 - 60.86	234	53.66 48.71 - 58.61	220	74.94 70.63 - 79.25	308	56.59 51.72 - 61.47	236
Not satisfied	32.43(32.4) 30.80 - 34.06	1046	35.65 30.93 - 40.36	149	40.49 35.61 - 45.36	166	19.71 15.74 - 23.68	81	32.13 27.53 - 36.74	134
No service	8.94(11) 7.94 - 9.94	355	8.37 5.60 - 11.15	35	5.85 3.46 - 8.25	24	5.35 3.06 - 7.65	22	11.27 8.12 - 14.43	47
Government agriculture service		*n=3145*		*n=386*		*n=408*		*n=407*		*n=418*
Satisfied	37.16(36.57) 35.46 - 38.87	1150	23.32 18.97 - 27.66	90	33.09 28.40 - 37.78	135	41.77 36.85 - 46.68	170	55.26 50.38 - 60.15	231
Not satisfied	30.37(30.27) 28.75 - 32.00	952	24.09 19.70 - 28.49	93	37.75 32.92 - 42.57	154	29.48 24.93 - 34.04	120	24.64 20.39 - 28.89	103
No service	32.46(33.16) 30.81 - 34.12	1043	52.59 47.48 - 57.70	203	29.17 24.63 - 33.70	119	28.75 24.23 - 33.27	117	20.1 16.13 - 24.06	84
Household environment and ventilation										
Houses with some arrangement for ventilation	84(80.29) 82.71 - 85.28	3206	83.21 79.51 - 86.92	417	93.33 90.78 - 95.89	405	92.14 89.40 - 94.88	407	90.21 87.25 - 93.18	419
Kitchen/cooking area separate from main living area	85.98(85.83) 84.77 - 87.19	3246	80.71 76.82 - 84.61	420	85.68 82.18 - 89.18	412	90.78 87.86 - 93.69	412	90.71 87.82 - 93.61	420
Kitchen/cooking area separate from sleeping area	86.69(86.26) 85.51 - 87.87	3246	83.33 79.65 - 87.02	420	89.08 85.94 - 92.21	412	91.26 88.41 - 94.11	412	91.19 88.36 - 94.02	420
Types of cooking stove used by households		*n=3235*		*n=420*		*n=409*		*n=410*		*n=419*
None	0.47(0.49) 0.22 - 0.72	16	1.19 0.03 - 2.35	5	0	0	0.49 -0.31 - 1.28	2	0.24 -0.35 - 0.83	1
Sui gas stove	17.01(14.53) 15.70 - 18.32	470	22.14 18.05 - 26.23	93	0	0	19.02 15.10 - 22.95	78	13.37 9.99 - 16.74	56
Wood stove	82.41(84.85) 81.08 - 83.73	2745	76.67 72.50 - 80.83	322	99.51 98.71 - 100.31	407	80.49 76.53 - 84.45	330	86.4 82.99 - 89.80	362
Kerosene stove	0.04(0.03) -0.04 - 0.12	1	0	0	0.24 -0.36 - 0.85	1	0	0	0	0
Cow dung (Ooplay)	0.02(0.03) -0.04 - 0.07	1	0	0	0	0	0	0	0	0
Gas Cylinder	0.06(0.06) -0.04 - 0.16	2	0	0	0.24 -0.36 - 0.85	1	0	0	0	0
Households using cooking stove that doesn't produce smoke	17.15(14.66) 15.84 - 18.47	3219	22.41 18.28 - 26.54	415	0.24 -0.36 - 0.85	409	19.12 15.18 - 23.06	408	13.4 10.01 - 16.78	418
Households use some heating system	33.56(35.17) 31.91 - 35.20	3224	34.13 29.47 - 38.79	419	27.14 22.71 - 31.57	409	32.35 27.69 - 37.01	408	25.9 21.57 - 30.22	417
Types of heating system used by households	66.44(64.83) 64.80 - 68.09	*n=3224*		*n=419*		*n=409*		*n=408*		*n=417*
None	5.57(4.96) 4.76 - 6.38	2090	65.87 61.21 - 70.53	276	72.86 68.43 - 77.29	298	67.65 62.99 - 72.31	276	74.1 69.78 - 78.43	309

Indicator	DISTRICT % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Sui gas stove	23.65(26.3) 22.16 - 25.13	160	6.44 3.97 - 8.91	27	0.24 -0.36 - 0.85	1	7.35 4.70 - 10.01	30	3.12 1.33 - 4.91	13
Wood heater stove	1.93(1.71) 1.44 - 2.42	848	23.63 19.44 - 27.81	99	22.74 18.55 - 26.92	93	21.81 17.68 - 25.94	89	19.18 15.29 - 23.08	80
Coal heater stove	1.76(1.64) 1.29 - 2.23	55	0.72 -0.21 - 1.64	3	1.96 0.49 - 3.42	8	1.23 0.04 - 2.42	5	2.64 0.98 - 4.30	11
Electric heater stove	0.65(0.56) 0.36 - 0.94	53	3.1 1.32 - 4.88	13	0.98 -0.10 - 2.05	4	1.72 0.33 - 3.10	7	0.72 -0.21 - 1.65	3
Cow dung (Ooplay)	73.77(71.43) 72.24 - 75.30	18	0.24 -0.35 - 0.83	1	1.22 0.04 - 2.41	5	0.25 -0.36 - 0.85	1	0.24 -0.35 - 0.83	1
Households using heating system that doesn't produce smoke	73.77(71.43) 72.24 - 75.30	3224	75.42 71.18 - 79.66	419	74.08 69.71 - 78.45	409	76.72 72.49 - 80.94	408	77.94 73.84 - 82.04	417
Households with someone smoking inside the household	41.28(41.38) 39.57 - 43.00	3229	46.04 41.14 - 50.95	417	47.33 42.39 - 52.27	412	37.01 32.20 - 41.82	408	38.81 34.03 - 43.59	420
Household drinking water supply										
Type of water supply		*n=3234*		*n=418*		*n=410*		*n=412*		*n=417*
Piped water	1.43(1.05) 1.01 - 1.86	34	1.2 0.03 - 2.36	5	0	0	0	0	0	0
Underground water	93.94(95.3) 93.10 - 94.78	3082	98.8 97.64 - 99.97	413	80.73 76.79 - 84.67	331	100 99.88 - 100.12	412	100 99.88 - 100.12	417
Surface water	2.89(2.5) 2.30 - 3.48	81	0	0	19.27 15.33 - 23.21	79	0	0	0	0
Tanker/vendor/hydrant/bottled	1.74(1.14) 1.28 - 2.21	37	0	0	0	0	0	0	0	0
Distance of source from the household										
Household with water supply within the household	81.89(81.2) 80.54 - 83.23	3234	94.98 92.76 - 97.19	418	70.73 66.21 - 75.26	410	95.87 93.83 - 97.92	412	92.81 90.21 - 95.41	417
Water source with in 500m of the households including those within the household	92.06(91.3) 91.11 - 93.02	3184	99.76 99.16 - 100.35	413	81.33 77.42 - 85.24	407	100 99.88 - 100.12	408	98.81 97.65 - 99.97	419
Protection of water source										
Households getting their drinking water from a protected source	94.28(95.18) 93.46 - 95.10	3219	99.28 98.35 - 100.21	418	80.54 76.57 - 84.52	406	99.51 98.72 - 100.31	412	100 99.88 - 100.12	417
Use some method to treat drinking water	2.37(2.05) 1.83 - 2.92	3175	0.25 -0.36 - 0.86	400	14.39 10.81 - 17.98	396	0	410	0	418
Household use of latrine										
Use household or communal latrine	80.31(76.03) 78.92 - 81.69	3241	80.91 77.02 - 84.79	419	79.32 75.28 - 83.36	411	91.04 88.17 - 93.92	413	82.82 79.08 - 86.55	419
Household with formal type of latrine	35.17(31.52) 33.51 - 36.83	3230	42.79 37.91 - 47.66	416	22.38 18.23 - 26.54	411	45.74 40.80 - 50.68	411	36.99 32.25 - 41.73	419
Reasons for not having a latrine		*n=699*		*n=77*		*n=76*		*n=29*		*n=71*
No Money/Latrine not provided	54.05(51.07) 50.29 - 57.82	357	46.75 34.96 - 58.55	36	80.26 70.66 - 89.87	61	65.52 46.49 - 84.54	19	60.56 48.49 - 72.64	43

Indicator	DISTRICT % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
No need/no tradition/no awareness	10.29(11.3) 7.97 - 12.62	79	14.29 5.82 - 22.75	11	5.26 -0.42 - 10.94	4	20.69 4.22 - 37.16	6	8.45 1.28 - 15.62	6
No space/damaged by rain	3.28(3.15) 1.89 - 4.67	22	11.69 3.86 - 19.51	9	2.63 -1.63 - 6.89	2	3.45 -4.92 - 11.81	1	1.41 -2.04 - 4.85	1
No water/no electricity/no sewerage/bad smell	32.38(34.48) 28.84 - 35.92	241	27.27 16.68 - 37.87	21	11.84 3.92 - 19.76	9	10.34 -2.46 - 23.15	3	29.58 18.26 - 40.90	21
Observations on household hygiene										
Garbage present in the household around the door step	69.99(69.59) 68.39 - 71.58	3236	78.33 74.27 - 82.39	420	70.83 66.30 - 75.37	408	60.83 55.99 - 65.67	411	70.24 65.75 - 74.73	420
Excreta present in the household around the doorstep	64.09(64.92) 62.42 - 65.76	3233	66.59 61.95 - 71.22	419	67.97 63.33 - 72.61	409	53.41 48.46 - 58.37	410	64.35 59.64 - 69.07	418
Sewage water present in the household around the doorstep	32.7(30.71) 31.07 - 34.33	3237	52.03 47.13 - 56.93	419	40.59 35.71 - 45.47	409	33.17 28.51 - 37.83	413	23.02 18.86 - 27.18	417
Proportion of households where observation of drinking water container was possible	96.19(96.42) 95.52 - 96.87	3236	94.74 92.48 - 97.00	418	97.07 95.31 - 98.82	409	99.27 98.33 - 100.21	412	97.38 95.73 - 99.03	420
Drinking water container is covered	96.01(95.95) 95.30 - 96.71	3111	95.2 92.97 - 97.43	396	96.71 94.82 - 98.59	395	98.28 96.89 - 99.67	406	94.36 92.00 - 96.72	408
Drinking water container was clean	83.41(81.81) 82.08 - 84.73	3111	85.1 81.47 - 88.73	396	83.04 79.21 - 86.87	395	87.78 84.48 - 91.07	409	81.57 77.68 - 85.46	407
Water container is raised from ground level	79.97(77.03) 78.55 - 81.40	3104	80.76 76.75 - 84.77	395	81.77 77.84 - 85.71	395	90.46 87.50 - 93.43	409	84.77 81.15 - 88.38	407
Households with their water container clean, covered and raised	71.58(68.62) 69.98 - 73.19	3107	72.98 68.48 - 77.48	396	75.19 70.80 - 79.58	395	82.35 78.53 - 86.17	408	73.46 69.05 - 77.88	407
LHW visits to the household										
Proportion of households ever visited by a LHW	46.04(43.91) 44.28 - 47.80	3145	61.48 56.62 - 66.34	405	34.26 29.46 - 39.05	397	81.3 77.36 - 85.24	401	73.53 69.13 - 77.93	408
Time since last visit by an LHW		*n=3080*		*n=393*		*n=393*		*n=387*		*n=394*
Never visited by an LHW	55.16(57.27) 53.38 - 56.93	1764	39.69 34.73 - 44.66	156	66.41 61.62 - 71.21	261	19.38 15.31 - 23.45	75	27.41 22.88 - 31.94	108
Last visit within a month	39.62(37.99) 37.88 - 41.36	1170	52.93 47.86 - 57.99	208	25.19 20.77 - 29.61	99	75.45 71.04 - 79.87	292	64.97 60.14 - 69.81	256
More than one but within last three months	3.94(3.67) 3.23 - 4.64	113	6.87 4.24 - 9.50	27	4.58 2.39 - 6.77	18	4.65 2.42 - 6.88	18	6.85 4.23 - 9.47	27
More than three but within last six months	1(0.81) 0.63 - 1.37	25	0.51 -0.32 - 1.34	2	2.8 1.04 - 4.56	11	0.52 -0.33 - 1.36	2	0.76 -0.22 - 1.75	3
More than six months but within the last year	0.29(0.26) 0.08 - 0.49	8	0	0	1.02 -0.10 - 2.14	4	0	0	0	0

(Part B: Includes indicators for district and for Nara, Faiz Ganj, Gambat and Khairpur *talukas*)

Indicator	DISTRICT % wt (unwt) 95% CI	Based on	NARA % unwt 95% CI	Based on	FAIZ GANJ % unwt 95% CI	Based on	GAMBAT % unwt 95% CI	Based on	KHAIRPUR % unwt 95% CI	Based on
Household demographic and socio-economic characteristics										
Total households interviewed	3249		404		385		401		392	
Total population covered	25446		2988		3066		3134		3170	
Mean household size	7.8		7.3		7.9		7.8		8.08	
	7.6-8.0	3249	7.0 - 7.7	404	7.5 - 8.3	385	7.4 - 8.1	401	7.7 - 8.4	392
Households where a women responded	86.57(85.74)	3218	76.49	404	81.77	384	84.79	401	87.15	389
	85.38 - 87.76		72.23 - 80.74		77.78 - 85.76		81.15 - 88.43		83.69 - 90.60	
Households with a male head	96.8(97.25)	3242	99.26	404	97.92	385	99	401	92.86	392
	96.18 - 97.42		98.30 - 100.22		96.37 - 99.48		97.91- 100.10		90.18 - 95.53	
Household head with any education	46.52(45.28)	3229	29.78	403	47.92	384	40.35	399	51.04	386
	44.79 - 48.26		25.19 - 34.37		42.79 - 53.04		35.41 - 45.29		45.92 - 56.15	
Houses with poor roof construction	46.32(49.03)	3231	79.9	403	52.36	382	61.15	399	40.77	390
	44.59 - 48.06		75.86 - 83.94		47.22 - 57.50		56.25 - 66.06		35.76 - 45.77	
Houses with >4 people/room	51.49(51.44)	3233	46.65	403	55.58	385	58	400	50	390
	49.75 - 53.23		41.66 - 51.64		50.49 - 60.68		53.04 - 62.96		44.91 - 55.09	
Main breadwinner unemployed or unskilled	55.26(56.35)	3214	58.75	400	63.19	383	59.25	400	42.82	390
	53.53 - 57.00		53.80 - 63.70		58.22 - 68.15		54.31 - 64.19		37.78 - 47.86	
Vulnerable households	51.35(53.09)	3183	68.59	398	57.63	380	62.97	397	44.04	386
	49.60 - 53.10		63.91 - 73.28		52.53 - 62.73		58.10 - 67.85		38.96 - 49.12	
Very vulnerable households	19.25(20.39)	3183	26.88	398	27.89	380	28.97	397	12.18	386
	17.86 - 20.63		22.40 - 31.37		23.25 - 32.54		24.38 - 33.56		8.78 - 15.57	
General opinion about services										
Roads		*n=3225*		*n=403*		*n=381*		*n=398*		*n=391*
Satisfied	40.42(37.46)	1208	16.13	65	30.71	117	22.86	91	54.22	212
	38.71 - 42.13		12.41 - 19.84		25.95 - 35.47		18.61 - 27.12		49.15 - 59.29	
Not satisfied	25.92(24.99)	806	20.35	82	18.64	71	18.34	73	30.95	121
	24.39 - 27.45		16.29 - 24.40		14.59 - 22.68		14.41 - 22.27		26.24 - 35.66	
No service	33.66(37.55)	1211	63.52	256	50.66	193	58.79	234	14.83	58
	32.01 - 35.31		58.70 - 68.35		45.50 - 55.81		53.83 - 63.76		11.18 - 18.48	
Public transport		*n=3230*		*n=404*		*n=384*		*n=399*		*n=391*
Satisfied	52.63(50.12)	1619	30.45	123	39.84	153	29.82	119	58.06	227
	50.89 - 54.36		25.83 - 35.06		34.82 - 44.87		25.21 - 34.44		53.04 - 63.08	
Not satisfied	19.6(19.66)	635	17.57	71	20.31	78	26.57	106	17.65	69
	18.21 - 20.98		13.74 - 21.41		16.16 - 24.47		22.11 - 31.03		13.74 - 21.55	
No service	27.78(30.22)	976	51.98	210	39.84	153	43.61	174	24.3	95
	26.22 - 29.34		46.98 - 56.98		34.82 - 44.87		38.62 - 48.60		19.92 - 28.68	

Indicator	DISTRICT % wt (unwt) 95% CI	Based on	NARA % unwt 95% CI	Based on	FAIZ GANJ % unwt 95% CI	Based on	GAMBAT % unwt 95% CI	Based on	KHAIRPUR % unwt 95% CI	Based on
Sewerage service		*n=3224*		*n=400*		*n=380*		*n=398*		*n=389*
Satisfied	18.88(17.03) 17.51 - 20.24	549	1.5 0.18 - 2.82	6	0.26 -0.38 - 0.91	1	20.1 16.04 - 24.16	80	33.16 28.35 - 37.97	129
Not satisfied	12.79(10.51) 11.62 - 13.96	339	0.25 -0.36 - 0.86	1	0.26 -0.38 - 0.91	1	4.27 2.16 - 6.38	17	34.96 30.09 - 39.83	136
No service	68.33(72.46) 66.71 - 69.95	2336	98.25 96.84 - 99.66	393	99.47 98.61 - 100.33	378	75.63 71.28 - 79.97	301	31.88 27.12 - 36.64	124
Garbage service		*n=3235*		*n=401*		*n=383*		*n=399*		*n=392*
Satisfied	12.62(11.62) 11.46 - 13.78	376	0	0	0.26 -0.38 - 0.90	1	17.54 13.69 - 21.40	70	18.37 14.41 - 22.33	72
Not satisfied	13.11(10.82) 11.93 - 14.29	350	0	0	0.26 -0.38 - 0.90	1	6.77 4.18 - 9.36	27	34.69 29.85 - 39.53	136
No service	74.27(77.56) 72.75 - 75.79	2509	100 99.88 - 100.12	401	99.48 98.63 - 100.33	381	75.69 71.35 - 80.02	302	46.94 41.87 - 52.01	184
Government water supply		*n=3215*		*n=400*		*n=382*		*n=394*		*n=389*
Satisfied	5.61(4.54) 4.80 - 6.42	146	0.5 -0.32 - 1.32	2	0	0	11.42 8.15 - 14.69	45	19.54 15.47 - 23.61	76
Not satisfied	6.41(5.1) 5.55 - 7.28	164	0.25 -0.36 - 0.86	1	0	0	12.44 9.05 - 15.82	49	23.39 19.06 - 27.73	91
No service	87.98(90.36) 86.84 - 89.12	2905	99.25 98.28 - 100.22	397	100 99.87 - 100.13	382	76.14 71.81 - 80.48	300	57.07 52.02 - 62.12	222
Gas supply		*n=3232*		*n=404*		*n=385*		*n=398*		*n=391*
Satisfied	15.92(14.36) 14.65 - 17.20	464	0.5 -0.31 - 1.30	2	0	0	21.36 17.20 - 25.51	85	25.58 21.12 - 30.03	100
Not satisfied	7(5.32) 6.10 - 7.89	172	0	0	0.78 -0.23 - 1.79	3	3.27 1.39 - 5.14	13	26.09 21.61 - 30.57	102
No service	77.08(80.32) 75.61 - 78.54	2596	99.5 98.70 - 100.31	402	99.22 98.21 - 100.23	382	75.38 71.02 - 79.74	300	48.34 43.26 - 53.42	189
Electricity supply		*n=3241*		*n=403*		*n=384*		*n=400*		*n=392*
Satisfied	46.75(46.81) 45.01 - 48.48	1517	33.25 28.53 - 37.97	134	57.03 51.95 - 62.11	219	39.75 34.83 - 44.67	159	35.46 30.60 - 40.32	139
Not satisfied	40.56(38.2) 38.86 - 42.27	1238	22.08 17.91 - 26.26	89	25 20.54 - 29.46	96	48.5 43.48 - 53.52	194	54.59 49.54 - 59.65	214
No service	12.69(15) 11.53 - 13.85	486	44.67 39.69 - 49.64	180	17.97 14.00 - 21.94	69	11.75 8.47 - 15.03	47	9.95 6.86 - 13.04	39
Government health service		*n=3214*		*n=397*		*n=381*		*n=398*		*n=387*
Satisfied	31.73(29.09) 30.11 - 33.36	935	9.82 6.77 - 12.88	39	3.94 1.85 - 6.02	15	21.11 16.97 - 25.24	84	50.39 45.28 - 55.50	195
Not satisfied	23.93(21.66) 22.44 - 25.42	696	7.05 4.41 - 9.70	28	8.66 5.71 - 11.62	33	18.09 14.18 - 22.00	72	36.69 31.76 - 41.62	142
No service	44.33(49.25) 42.60 - 46.07	1583	83.12 79.31 - 86.93	330	87.4 83.94 - 90.86	333	60.8 55.88 - 65.73	242	12.92 9.45 - 16.39	50

Indicator	DISTRICT % wt (unwt) 95% CI	Based on	NARA % unwt 95% CI	Based on	FAIZ GANJ % unwt 95% CI	Based on	GAMBAT % unwt 95% CI	Based on	KHAIRPUR % unwt 95% CI	Based on
Government education service		*n=3228*		*n=400*		*n=382*		*n=399*		*n=391*
Satisfied	58.63(56.6) 56.91 - 60.34	1827	32.5 27.78 - 37.22	130	55.76 50.65 - 60.87	213	54.64 49.63 - 59.65	218	68.54 63.81 - 73.27	268
Not satisfied	32.43(32.4) 30.80 - 34.06	1046	32 27.30 - 36.70	128	28.53 23.87 - 33.19	109	41.6 36.64 - 46.57	166	28.9 24.28 - 33.52	113
No service	8.94(11) 7.94 - 9.94	355	35.5 30.69 - 40.31	142	15.71 11.93 - 19.49	60	3.76 1.77 - 5.75	15	2.56 0.86 - 4.25	10
Government agriculture service		*n=3145*		*n=400*		*n=369*		*n=380*		*n=377*
Satisfied	37.16(36.57) 35.46 - 38.87	1150	33.25 28.51 - 37.99	133	30.35 25.53 - 35.18	112	37.37 32.37 - 42.36	142	36.34 31.35 - 41.33	137
Not satisfied	30.37(30.27) 28.75 - 32.00	952	21.5 17.35 - 25.65	86	23.85 19.36 - 28.33	88	55.26 50.13 - 60.39	210	25.99 21.43 - 30.55	98
No service	32.46(33.16) 30.81 - 34.12	1043	45.25 40.25 - 50.25	181	45.8 40.58 - 51.02	169	7.37 4.61 - 10.13	28	37.67 32.64 - 42.69	142
Household environment and ventilation										
Houses with some arrangement for ventilation	84(80.29) 82.71 - 85.28	3206	40.4 35.47 - 45.33	401	77.25 72.89 - 81.61	378	72.7 68.17 - 77.24	392	92.25 89.45 - 95.04	387
Kitchen/cooking area separate from main living area	85.98(85.83) 84.77 - 87.19	3246	88.86 85.67 - 92.05	404	80.52 76.43 - 84.61	385	81.3 77.36 - 85.24	401	87.76 84.38 - 91.13	392
Kitchen/cooking area separate from sleeping area	86.69(86.26) 85.51 - 87.87	3246	88.37 85.12 - 91.62	404	80.26 76.15 - 84.37	385	76.56 72.29 - 80.83	401	89.54 86.38 - 92.70	392
Types of cooking stove used by households		*n=3235*		*n=404*		*n=382*		*n=400*		*n=391*
None	0.47(0.49) 0.22 - 0.72	16	1.24 0.04 - 2.44	5	0	0	0	0	0.77 -0.23 - 1.76	3
Sui gas stove	17.01(14.53) 15.70 - 18.32	470	0.25 -0.36 - 0.86	1	0	0	19.75 15.72 - 23.78	79	41.69 36.67 - 46.70	163
Wood stove	82.41(84.85) 81.08 - 83.73	2745	98.27 96.87 - 99.66	397	100 99.87 - 100.13	382	80 75.96 - 84.05	320	57.54 52.52 - 62.57	225
Kerosene stove	0.04(0.03) -0.04 - 0.12	1	0	0	0	0	0	0	0	0
Cow dung (Ooplay)	0.02(0.03) -0.04 - 0.07	1	0.25 -0.36 - 0.86	1	0	0	0	0	0	0
Gas Cylinder	0.06(0.06) -0.04 - 0.16	2	0	0	0	0	0.25 -0.36 - 0.86	1	0	0
Households using cooking stove that doesn't produce smoke	17.15(14.66) 15.84 - 18.47	3219	0.25 -0.37 - 0.87	399	0	382	20 15.96 - 24.05	400	42.01 36.97 - 47.05	388
Households use some heating system	33.56(35.17) 31.91 - 35.20	3224	61.56 56.65 - 66.46	398	29.77 25.06 - 34.47	383	33.25 28.51 - 37.99	400	37.95 33.00 - 42.89	390
Types of heating system used by households		*n=3224*		*n=398*		*n=383*		*n=400*		*n=390*
None	66.44(64.83) 64.80 - 68.09	2090	38.44 33.54 - 43.35	153	70.23 65.53 - 74.94	269	66.75 62.01 - 71.49	267	62.05 57.11 - 67.00	242

Indicator	DISTRICT % wt (unwt) 95% CI	Based on	NARA % unwt 95% CI	Based on	FAIZ GANJ % unwt 95% CI	Based on	GAMBAT % unwt 95% CI	Based on	KHAIRPUR % unwt 95% CI	Based on
Sui gas stove	5.57(4.96) 4.76 - 6.38	160	0	0	0	0	10.75 7.59 - 13.91	43	11.79 8.47 - 15.12	46
Wood stove	23.65(26.3) 22.16 - 25.13	848	59.05 54.09 - 64.00	235	26.37 21.83 - 30.91	101	20.75 16.65 - 24.85	83	17.44 13.54 - 21.33	68
Coal stove	1.93(1.71) 1.44 - 2.42	55	0.5 -0.32 - 1.32	2	1.57 0.19 - 2.94	6	1.5 0.18 - 2.82	6	3.59 1.62 - 5.56	14
Electric	1.76(1.64) 1.29 - 2.23	53	1.76 0.34 - 3.18	7	1.31 0.04 - 2.57	5	0	0	3.59 1.62 - 5.56	14
Cow dung (Ooplay)	0.65(0.56) 0.36 - 0.94	18	0.25 -0.37 - 0.87	1	0.52 -0.33 - 1.37	2	0.25 -0.36 - 0.86	1	1.54 0.19 - 2.89	6
Households using heating system that doesn't produce smoke	73.77(71.43) 72.24 - 75.30	3224	40.2 35.26 - 45.14	398	71.54 66.89 - 76.19	383	77.5 73.28 - 81.72	400	77.44 73.16 - 81.71	390
Households with someone smoking inside the household	41.06(41.38) 39.35 - 42.78	3229	48.5 43.48 - 53.52	400	39.32 34.31 - 44.34	384	34.09 29.31 - 38.86	399	39.59 34.60 - 44.58	389
Household drinking water supply										
Type of water supply		*n=3234*		*n=403*		*n=383*		*n=401*		*n=390*
Piped water	1.43(1.05) 1.01 - 1.86	34	0.25 -0.36 - 0.86	1	0	0	0.75 -0.22 - 1.72	3	6.41 3.85 - 8.97	25
Underground water	93.94(95.3) 93.10 - 94.78	3082	99.75 99.14 - 100.36	402	100 99.87 - 100.13	383	99.25 98.28 - 100.22	398	83.59 79.79 - 87.39	326
Surface water	2.89(2.5) 2.30 - 3.48	81	0	0	0	0	0	0	0.51 -0.32 - 1.35	2
Tanker/vendor/hydrant/bottled	1.74(1.14) 1.28 - 2.21	37	0	0	0	0	0	0	9.49 6.45 - 12.52	37
Distance of source from the household										
Household with water supply within the household	81.89(81.2) 80.54 - 83.23	3234	72.46 67.97 - 76.94	403	45.17 40.06 - 50.28	383	97.76 96.18 - 99.33	401	76.92 72.61 - 81.23	390
Water source with in 500m of the households including those within the household	92.06(91.3) 91.11 - 93.02	3184	84.96 81.33 - 88.60	399	68.01 62.96 - 73.06	347	100 99.88 - 100.13	400	93.86 91.35 - 96.37	391
Protection of water source										
Households getting their drinking water from a protected source	94.28(95.18) 93.46 - 95.10	3219	95.41 93.21 - 97.61	392	99.74 99.10 - 100.38	383	100 99.88 - 100.12	401	86.67 83.16 - 90.17	390
Use some method to treat drinking water	2.37(2.05) 1.83 - 2.92	3175	0.25 -0.36 - 0.86	400	0	383	0.25 -0.37 - 0.88	394	1.34 0.04 - 2.63	374
Household use of latrine										
Use household or communal latrine	80.31(76.03) 78.92 - 81.69	3241	30.69 26.07 - 35.31	404	56.77 51.69 - 61.86	384	90 86.94 - 93.06	400	95.65 93.50 - 97.80	391
Household with formal type of latrine	35.17(31.52) 33.51 - 36.83	3230	5.69 3.31 - 8.08	404	13.05 9.55 - 16.56	383	24.81 20.42 - 29.20	395	59.85 54.86 - 64.83	391
Reasons for not having a latrine		*n=699*		*n=240*		*n=151*		*n=39*		*n=16*
No Money/Latrine not provided	54.05(51.07) 50.29 - 57.82	357	40.83 34.41 - 47.26	98	42.38 34.17 - 50.60	64	71.79 56.39 - 87.20	28	50 22.38 - 77.63	8

Indicator	DISTRICT % wt (unwt) 95% CI	Based on	NARA % unwt 95% CI	Based on	FAIZ GANJ % unwt 95% CI	Based on	GAMBAT % unwt 95% CI	Based on	KHAIRPUR % unwt 95% CI	Based on
No need/no tradition/no awareness	10.29(11.3) 7.97 - 12.62	79	15 10.27 - 19.73	36	10.6 5.36 - 15.84	16	0	0	0	0
No space/damaged by rain	3.28(3.15) 1.89 - 4.67	22	2.5 0.32 - 4.68	6	1.32 -0.83 - 3.48	2	2.56 -3.68 - 8.81	1	0	0
No water/no electricity/no sewerage/bad smell	32.38(34.48) 28.84 - 35.92	241	41.67 35.22 - 48.11	100	45.7 37.42 - 53.97	69	25.64 10.65 - 40.63	10	50 22.38 - 77.63	8
Observations on household hygiene										
Garbage present in the household around the door step	69.99(69.59) 68.39 - 71.58	3236	61.88 57.02 - 66.74	404	75.13 70.67 - 79.60	382	71.25 66.69 - 75.81	400	68.29 63.55 - 73.03	391
Excreta present in the household around the doorstep	64.09(64.92) 62.42 - 65.76	3233	67.33 62.63 - 72.02	404	75.46 71.02 - 79.90	383	69 64.34 - 73.66	400	55.64 50.58 - 60.70	390
Sewage water present in the household around the doorstep	32.7(30.71) 31.07 - 34.33	3237	9.9 6.86 - 12.94	404	18.28 14.28 - 22.28	383	29.68 25.08 - 34.27	401	37.85 32.92 - 42.79	391
Proportion of households where observation of drinking water container was possible	96.19(96.42) 95.52 - 96.87	3236	98.26 96.86 - 99.66	403	98.96 97.81- 100.10	383	91.27 88.38 - 94.16	401	94.36 91.94 - 96.78	390
Drinking water container is covered	96.01(95.95) 95.30 - 96.71	3111	94.7 92.36 - 97.03	396	96.57 94.61 - 98.53	379	95.34 93.04 - 97.64	365	96.45 94.42 - 98.48	366
Drinking water container was clean	83.41(81.81) 82.08 - 84.73	3111	66.24 61.45 - 71.04	394	77.04 72.68 - 81.41	379	82.74 78.73 - 86.75	365	91.26 88.23 - 94.29	366
Water container is raised from ground level	79.97(77.03) 78.55 - 81.40	3104	39.49 34.55 - 44.44	395	86.51 82.93 - 90.08	378	66.39 61.37 - 71.41	360	85.48 81.73 - 89.23	365
Households with their water container clean, covered and raised	71.58(68.62) 69.98 - 73.19	3107	35.19 30.35 - 40.03	395	69.66 64.90 - 74.42	379	59.83 54.64 - 65.03	361	79.78 75.53 - 84.03	366
LHW visits to the household										
Proportion of households ever visited by a LHW	46.04(43.91) 44.28 - 47.80	3145	2.28 0.68 - 3.89	394	39.41 34.32 - 44.50	373	26.09 21.61 - 30.57	391	29.79 25.03 - 34.54	376
Time since last visit by an LHW		*n=3080*		*n=393*		*n=364*		*n=387*		*n=369*
Never visited by an LHW	55.16(57.27) 53.38 - 56.93	1764	97.96 96.44 - 99.49	385	62.09 56.97 - 67.21	226	74.68 70.22 - 79.14	289	71.54 66.81 - 76.28	264
Last visit within a month	39.62(37.99) 37.88 - 41.36	1170	1.53 0.19 - 2.87	6	37.09 31.99 - 42.19	135	22.22 17.95 - 26.49	86	23.85 19.36 - 28.33	88
More than one but within last three months	3.94(3.67) 3.23 - 4.64	113	0.25 -0.37 - 0.88	1	0.82 -0.24 - 1.89	3	2.84 1.06 - 4.63	11	2.17 0.55 - 3.79	8
More than three but within last six months	1(0.81) 0.63 - 1.37	25	0.25 -0.37 - 0.88	1	0	0	0	0	2.17 0.55 - 3.79	8
More than six months but within the last year	0.29(0.26) 0.08 - 0.49	8	0	0	0	0	0.26 -0.38 - 0.89	1	0.27 -0.39 - 0.94	1

Table 2. Mother and child indicators by *taluka*

(Part A: Includes indicators for district and for Kingri, Kot Diji, Sobho Dero and Thari Mirwah *talukas*)

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
INFORMATION BASE										
Total mothers/care takers interviewed	3421		439		439		423		440	
Respondents in each age group		*n=3389*		*n=438*		*n=438*		*n=420*		*n=435*
Less then 18 years	0.9(0.86)	29	0.46	2	0.91	4	0.48	2	0.23	1
18-30 years	56.95(56.71)	1922	56.85	249	56.16	246	53.81	226	56.09	244
31-50 years	40.6(40.81)	1383	41.55	182	40.41	177	44.52	187	42.99	187
51 years and above	1.55(1.62)	55	1.14	5	2.51	11	1.19	5	0.69	3
Mothers/caretakers with some formal education	16.7(15.16) 15.43 - 17.97	517/3410	17.85 14.14 - 21.55	78/437	10.25 7.30 - 13.20	45/439	20.62 16.64 - 24.59	87/422	15.91 12.38 - 19.44	70/440
Total children aged <60 months	4739		650		598		577		624	
Among children 0-59 months of age										
Proportion of boys	50.84(51.18) 49.40 - 52.29	2386/ 4662	50.41 46.38 - 54.43	311/617	51.69 47.58 - 55.81	305/590	50.7 46.51 - 54.89	289/570	51.37 47.35 - 55.39	318/619
Proportion of girls aged	49.16(48.82) 47.71 - 50.60	2276/ 4662	49.59 45.57 - 53.62	306/617	48.31 44.19 - 52.42	285/590	49.3 45.11 - 53.49	281/570	48.63 44.61 - 52.65	301/619
Children for whom their mothers provided the information	94.77(94.87) 94.12 - 95.41	4479/ 4721	96.45 94.95 - 97.95	625/648	93.28 91.18 - 95.37	555/595	95.81 94.08 - 97.54	549/573	95.35 93.62 - 97.08	595/624
MOTHERS'/CARETAKERS' KNOWLEDGE, ATTITUDE AND PRACTICES ABOUT CHILD HEALTH AND CARE										
Awareness about immunization										
Mothers having heard about immunization	82.6(81.18) 81.31 - 83.89	2760/ 3400	84.72 81.21 - 88.23	366/432	81.24 77.46 - 85.01	355/437	91.19 88.36 - 94.02	383/420	86.76 83.47 - 90.05	380/438
Sources to hear about immunization from (multiple responses recorded)		*n=3400*		*n=432*		*n=437*		*n=420*		*n=438*
Nowhere	14.4	491	9.0	39	17.4	76	6.9	29	11.4	50
Electronic media	28.5	969	30.8	133	30.9	135	31.4	132	23.5	103
Written material (newspaper, pamphlet)	0.8	26	1.4	6	0.7	3	0.5	2	1.6	7
Family, neighbors, friends	8.3	283	8.1	35	8.9	39	6.2	26	5.9	26
School	0.2	8	0.2	1	0	0	0.2	1	0	0
Doctor, hospital	30.0	1020	33.1	143	25.6	112	25.5	107	28.8	126
LHW, LHV, Dai	11.3	383	13.7	59	7.3	32	27.6	116	19.4	85
Vaccination team	5.6	189	1.9	8	9.8	43	5.0	21	9.1	40
NGO	0.1	2	0	0	0	0	0	0	0.2	1
Announcement	0.9	31	1.4	6	1.6	7	2.4	10	0.2	1

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Don't know (incl. I knew myself)	4.5	153	6.3	27	1.4	6	1.9	8	1.8	8
Mothers mentioning at least one illness prevented by immunization (even if incorrect)	78.15(76.94) 76.73 - 79.56	2583/3357	78.4 74.38 - 82.43	334/426	75.63 71.48 - 79.78	329/435	87.07 83.70 - 90.44	357/410	84.45 80.92 - 87.99	364/431
Mothers mentioning at least one correct illness that can be prevented by immunization	75.76(74.56) 74.29 - 77.22	2503/3357	76.06 71.89 - 80.23	324/426	70.8 66.42 - 75.19	308/435	84.88 81.29 - 88.47	348/410	83.06 79.41 - 86.72	358/431
Views about benefits of immunization										
Neighbours' views about immunizing as reported by mothers/caretakers		*n=3376*		*n=439*		*n=431*		*n=418*		*n=427*
Thinks it's worthwhile	85.57(84.42) 84.37 - 86.77	2850	86.33 83.01 - 89.66	379	85.38 81.93 - 88.83	368	94.5 92.19 - 96.80	395	95.78 93.76 - 97.81	409
Don't think it's worthwhile	3.49(3.82) 2.86 - 4.13	129	2.73 1.09 - 4.37	12	4.87 2.72 - 7.02	21	0.96 -0.10 - 2.01	4	1.41 0.17 - 2.64	6
Don't know	10.93(11.76) 9.87 - 12.00	397	10.93 7.90 - 13.97	48	9.74 6.83 - 12.66	42	4.55 2.43 - 6.66	19	2.81 1.13 - 4.49	12
Mothers' own perception about immunizing the child		*n=3374*		*n=438*		*n=431*		*n=418*		*n=426*
Thinks it's worthwhile	91.31(90.31) 90.35 - 92.28	3047/3374	92.47 89.88 - 95.05	405	92.11 89.45 - 94.77	397	97.61 96.02 - 99.19	408	96.95 95.20 - 98.70	413
Don't think it's worthwhile	2.51(2.52) 1.97 - 3.06	85/3374	1.14 0.03 - 2.25	5	1.62 0.31 - 2.93	7	0	0	1.17 0.03 - 2.31	5
Don't know if it's worthwhile or not	6.17(7.17) 5.35 - 7.00	242/3374	6.39 3.99 - 8.80	28	6.26 3.86 - 8.67	27	2.39 0.81 - 3.98	10	1.88 0.47 - 3.28	8
Reasons for being worthwhile		*n=2981*		*n=400*		*n=384*		*n=402*		*n=409*
Protection against illness	99.15(99.13) 98.81 - 99.50	2955	99.5 98.68 - 100.32	398	99.22 98.21 - 100.23	381	99.5 98.69 - 100.31	400	99.76 99.15 - 100.36	408
Important to immunize	0.77(0.77) 0.44 - 1.10	23	0.5 -0.32 - 1.32	2	0.78 -0.23 - 1.79	3	0.5 -0.31 - 1.31	2	0.24 -0.36 - 0.85	1
Create immunities against	0.04(0.03) -0.05 - 0.13	1	0	0	0	0	0	0	0	0
Govt order	0.03(0.07) -0.05 - 0.12	2	0	0	0	0	0	0	0	0
Reasons for not being worthwhile		*n=51*		*n=2*		*n=3*		*n=0*		*n=5*
Felt it is not necessary	39.95(47.06) 25.53 - 54.37	24	100 75.00 - 125.00	2	33.33 -36.68 - 103.3	1	0	0	60 7.06 - 112.94	3
Child gets sick from vaccine	44.86(37.25) 30.23 - 59.49	19	0	0	33.33 -36.68 - 103.3	1	0	0	20 -25.06 - 65.06	1
Immunization has no effect	3.43(3.92) -2.55 - 9.41	2	0	0	33.33 -36.68 - 103.3	1	0	0	0	0
Limbs stop working	3.48(3.92) -2.53 - 9.48	2	0	0	0	0	0	0	20 -25.06 - 65.06	1
Child may die	6.83(5.88) -1.07 - 14.74	3	0	0	0	0	0	0	0	0

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Hospital too far	1.45(1.96) -2.81 - 5.70	1	0	0	0	0	0	0	0	0
Views about adverse effects of immunization										
Mothers who have heard about any bad effects of immunization	11.27(10.77) 10.19 - 12.36	359/3333	13.95 10.53 - 17.37	59/423	10.26 7.24 - 13.29	43/419	12.95 9.61 - 16.29	54/417	10.77 7.72 - 13.83	46/427
Types of bad effects of immunization that mothers had heard of		*n=3333*		*n=423*		*n=419*		*n=417*		*n=427*
Nothing	88.73(89.23) 87.64 - 89.81	2974	86.05 82.63 - 89.47	364	89.74 86.71 - 92.76	376	87.05 83.71 - 90.39	363	89.23 86.17 - 92.28	381
Actual side-effects	7.78(7.47) 6.86 - 8.71	249	8.27 5.53 - 11.02	35	9.07 6.20 - 11.94	38	8.15 5.41 - 10.90	34	6.79 4.29 - 9.30	29
Incorrect perceptions	2.98(2.88) 2.39 - 3.57	96	5.67 3.35 - 8.00	24	0.48 -0.30 - 1.26	2	4.8 2.63 - 6.97	20	3.75 1.83 - 5.67	16
No effect of vaccine	0.1(0.09) -0.02 - 0.23	3	0	0	0.48 -0.30 - 1.26	2	0	0	0.23 -0.34 - 0.81	1
Not specified	0.41(0.33) 0.18 - 0.64	11	0	0	0.24 -0.35 - 0.83	1	0	0	0	0
Heard from somewhere specific	48.52(46.7) 43.24 - 53.79	170/364	31.15 18.71 - 43.59	19/61	24.44 10.78 - 38.11	11/45	56.86 42.29 - 71.44	29/51	60 44.58 - 75.42	27/45
Source of information about bad effects of immunization		*n=364*		*n=61*		*n=45*		*n=51*		*n=45*
Nowhere	4.62(4.67) 2.33 - 6.91	17	4.92 -1.33 - 11.16	3	6.67 -1.73 - 15.07	3	0	0	0	0
Electronic media (TV, Radio)	2.97(3.3) 1.09 - 4.86	12	8.2 0.49 - 15.90	5	0	0	0	0	0	0
Print media (newspaper, books)	0.27(0.27) -0.40 - 0.93	1	1.64 -2.37 - 5.65	1	0	0	0	0	0	0
family, neighbours	25.68(23.08) 21.06 - 30.31	84	13.11 3.82 - 22.41	8	24.44 10.78 - 38.11	11	13.73 3.30 - 24.15	7	26.67 12.63 - 40.70	12
Dctor/hospital	12.15(12.64) 8.66 - 15.65	46	6.56 -0.47 - 13.59	4	0	0	21.57 9.30 - 33.84	11	22.22 8.96 - 35.48	10
LHW	2.55(2.47) 0.79 - 4.31	9	1.64 -2.37 - 5.65	1	0	0	5.88 -1.56 - 13.32	3	6.67 -1.73 - 15.07	3
Vaccination team	4.89(4.95) 2.54 - 7.24	18	0	0	0	0	15.69 4.72 - 26.65	8	4.44 -2.69 - 11.58	2
Dn't know where (including i knew it from myself)	46.86(48.63) 41.60 - 52.13	177	63.93 51.06 - 76.80	39	68.89 54.25 - 83.53	31	43.14 28.56 - 57.71	22	40 24.58 - 55.42	18
Mothers who had discussed immunization in their family	83.44(81.97) 82.16 - 84.72	2733/ 3334	85.95 82.54 - 89.36	367/427	81 77.13 - 84.86	341/421	94.71 92.44 - 96.98	394/416	91.47 88.69 - 94.25	386/422
Knowledge about diarrhoea and its management										
Mentioned something as a reason for diarrhoea even if incorrect or non specific	85.62(84.79) 84.42 - 86.82	2843/ 3353	85.34 81.85 - 88.83	361/423	79.03 75.09 - 82.98	343/434	86.06 82.61 - 89.51	358/416	88.28 85.14 - 91.41	384/435
Mentioned correct reasons for diarrhoea	59.26(57.62) 57.58 - 60.93	1932/ 3353	67.14 62.55 - 71.73	284/423	55.99 51.21 - 60.78	243/434	64.18 59.46 - 68.91	267/416	52.87 48.07 - 57.68	230/435

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Mother would give more fluid during diarrhoea	59.73(60.34) 58.06 - 61.40	2043/ 3386	44.29 39.47 - 49.11	190/429	58.53 53.77 - 63.28	254/434	68.42 63.85 - 73.00	286/418	75.29 71.13 - 79.44	329/437
Mother would give same or more food during diarrhoea	60.76(60.67) 59.10 - 62.42	2053/ 3384	58.74 53.97 - 63.52	252/429	57.74 52.97 - 62.51	250/433	67.7 63.10 - 72.31	283/418	57.89 53.15 - 62.64	253/437
Mothers' interaction with LHW										
Proportion of mothers ever visited by a LHW	44.89(42.87) 43.21 - 46.58	1464/ 3415	59.5 54.78 - 64.21	260/437	32.12 27.64 - 36.60	141/439	80.09 76.17 - 84.02	338/422	72.95 68.69 - 77.22	321/440
Period since last LHW visit		*n=3348*		*n=425*		*n=436*		*n=409*		*n=425*
Never	56.26(58.27) 54.57 - 57.96	1951	41.65 36.84 - 46.45	177	68.35 63.87 - 72.83	298	20.54 16.50 - 24.58	84	28 23.61 - 32.39	119
Within the last one month	38.56(37.04) 36.90 - 40.22	1240	51.06 46.19 - 55.93	217	24.08 19.95 - 28.21	105	74.33 69.97 - 78.68	304	64.24 59.56 - 68.91	273
More than one but within last 6 months	3.84(3.58) 3.17 - 4.51	120	6.59 4.11 - 9.06	28	3.9 1.97 - 5.83	17	4.65 2.48 - 6.81	19	7.06 4.51 - 9.61	30
More than six month but within 1 year	1(0.81) 0.64 - 1.35	27	0.71 -0.21 - 1.62	3	2.52 0.94 - 4.11	11	0 	0	0.71 -0.21 - 1.62	3
More than a year ago	0.34(0.3) 0.13 - 0.56	10	0	0	1.15 0.03 - 2.26	5	0.49 -0.31 - 1.29	2	0	0
Among mothers/caretakers ever visited by LHW										
LHW did tell something about diarrhoea prevention	12.99(12.87) 11.21 - 14.76	185/1437	11.81 7.65 - 15.98	30/254	9.93 4.64 - 15.22	14/141	19.1 14.75 - 23.46	64/335	14.15 10.16 - 18.14	45/318
LHW did tell something about diarrhoea treatment	18.34(18.28) 16.31 - 20.37	264/1444	15.56 10.94 - 20.19	40/257	12.06 6.33 - 17.79	17/141	30.06 25.01 - 35.11	101/336	18.61 14.17 - 23.05	59/317
LHW did tell something about recognizing ARI	3.9(3.87) 2.86 - 4.94	55/1421	1.19 -0.35 - 2.72	3/253	2.84 -0.26 - 5.93	4/141	6.36 3.58 - 9.15	21/330	6.17 3.32 - 9.02	19/308
LHW did tell something about treatment for ARI	7.09(6.94) 5.72 - 8.45	99/1426	3.19 0.81 - 5.56	8/251	5.71 1.51 - 9.92	8/140	10.91 7.39 - 14.42	36/330	10.76 7.18 - 14.33	34/316
LHW did tell something about vaccination	25.16(24.53) 22.88 - 27.45	350/1427	26.1 20.45 - 31.76	65/249	25.9 18.26 - 33.54	36/139	28.74 23.74 - 33.75	96/334	28.57 23.42 - 33.72	90/315
CHILD HEALTH AND CARE										
Total children aged <60 months	4739		650		598		577		624	
Proportion of children attending a school (incl. pre-primary schooling)	4.13(3.91) 3.55 - 4.71	183/4680	4.41 2.73 - 6.09	28/635	2.2 0.93 - 3.46	13/592	5.06 3.18 - 6.94	29/573	2.1 0.89 - 3.32	13/618
Proportion of children 0-6 months of age being exclusively breastfed	87.15(87.4) 84.39 - 89.90	527/603	82.42 74.05 - 90.79	75/91	89.87 82.59 - 97.16	71/79	96.15 91.25 - 101.06	75/78	89.86 82.01 - 97.70	62/69
Childhood Diarrhoea										
Prevalence of diarrhoea										
Children 0-59 months who suffered from diarrhoea during last 15 days	34.08(34.27) 32.69 - 35.48	1542/ 4500	29.75 26.03 - 33.48	180/605	36.28 32.23 - 40.34	205/565	30.81 26.83 - 34.79	167/542	35.8 31.91 - 39.69	218/609
Children 0-59 months who suffered from diarrhoea during last 12 months	74.17(75.07) 72.88 - 75.46	3378/ 4500	68.1 64.30 - 71.90	412/605	72.21 68.43 - 75.99	408/565	72.88 69.04 - 76.71	395/542	76.52 73.07 - 79.97	466/609

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Among those who suffered from diarrhoea during last 12 months										
Children whose last episode of diarrhoea lasted for more than 3 days	53.84(53.77) 52.03 - 55.66	1362/ 2946	50.55 45.28 - 55.82	184/364	44 38.66 - 49.34	154/350	46.33 40.89 - 51.77	158/341	46.85 41.82 - 51.89	186/397
Children who had blood in stools during last episode of diarrhoea	6.10(6.01) 5.27 - 6.92	201/3347	7.32 4.67 - 9.96	30/410	6.67 4.11 - 9.22	27/405	5.64 3.22 - 8.06	22/390	5.19 3.06 - 7.33	24/462
Treatment of diarrhoea (among those who suffered from diarrhoea during last 12 months)										
Household management of diarrhoea										
Proportion of children who were given more fluid during last episode of diarrhoea	55.71(55.87) 54.02 - 57.41	1876/ 3358	42.48 37.58 - 47.37	175/412	54.32 49.35 - 59.30	220/405	63.87 58.99 - 68.74	251/393	71.65 67.43 - 75.86	331/462
Proportion of children who were given same or more quantity of food during diarrhoea	60.38(60.83) 58.71 - 62.05	2044/ 3360	60.68 55.84 - 65.52	250/412	54.7 49.73 - 59.68	221/404	69.97 65.32 - 74.63	275/393	58.35 53.74 - 62.96	269/461
Proportion of children who were given anti-diarrhoeal drugs during last episode of diarrhoea	82.78(81.88) 81.48 - 84.09	2712/ 3312	88.21 84.95 - 91.46	359/407	78.17 73.97 - 82.38	308/394	86.32 82.73 - 89.90	328/380	83.44 79.93 - 86.95	383/459
Taking children with diarrhoea to a health facility/provider										
Type of health facility where the child taken for treatment		*n=3346*		*n=405*		*n=403*		*n=390*		*n=465*
Nowhere	36.05(36.82) 34.41 - 37.69	1232	27.16 22.71 - 31.62	110	38.46 33.59 - 43.34	155	31.28 26.55 - 36.01	122	39.14 34.60 - 43.68	182
Government health facility	9.69(9.21) 8.68 - 10.71	308	11.85 8.58 - 15.12	48	9.68 6.67 - 12.69	39	21.79 17.57 - 26.02	85	6.45 4.11 - 8.79	30
Private qualified facility/practitioner	44.49(44.26) 42.79 - 46.19	1481	48.15 43.16 - 53.14	195	44.67 39.69 - 49.64	180	42.56 37.53 - 47.60	166	48.17 43.52 - 52.82	224
Private, non medically qualified practitioner	9.51(9.53) 8.50 - 10.52	319	12.84 9.46 - 16.22	52	6.95 4.34 - 9.55	28	4.36 2.20 - 6.51	17	6.02 3.75 - 8.29	28
NGO/services facility	0.25(0.18) 0.07 - 0.44	6	0	0	0.25 -0.36 - 0.86	1	0	0	0.22 -0.31 - 0.74	1
Proportion of children taken somewhere for treatment	63.95(63.18) 62.31 - 65.59	2114/ 3346	72.84 68.38 - 77.29	295/405	61.54 56.66 - 66.41	248/403	68.72 63.99 - 73.45	268/390	60.86 56.32 - 65.40	283/465
Experience at the health facility										
Doctor or a health worker present at the time of visit										
Government health facility	100(100) 99.83 - 100.17	303/303	100 98.91 - 101.09	46/46	100 98.72 - 101.28	39/39	100 99.40 - 100.60	83/83	100 98.33 - 101.67	30/30
Private qualified health provider	99.86(99.86) 99.62 - 100.09	1436/ 1438	100 99.73 - 100.27	188/188	100 99.72 - 100.28	177/177	100 99.69 - 100.31	160/160	99.55 98.45 - 100.65	222/223
Private unqualified health provider	97.74(97.97) 95.87 - 99.61	289/295	97.6 91.82 - 103.42	41/42	100.0 98.00 - 102.00	25/25	100.0 95.83 - 104.17	12/12	96.4 87.77 - 105.09	27/28
Proportion of children who were provided ORS										
Government health facility	63.33(63.19) 57.78 - 68.88	194/307	60.42 45.54 - 75.29	29/48	63.16 46.50 - 79.81	24/38	76.47 66.86 - 86.08	65/85	60 40.80 - 79.20	18/30

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Private qualified health provider	60.48(60.32) 57.94 - 63.03	880/1459	51.79 44.53 - 59.06	101/195	58.19 50.64 - 65.74	103/177	66.46 58.86 - 74.06	107/161	72.2 66.09 - 78.30	161/223
Private unqualified health provider	58.51(59.34) 52.82 - 64.20	181/305	67.39 52.76 - 82.03	31/46	70.37 51.29 - 89.45	19/27	53.85 22.90 - 84.79	7/13	60.71 40.84 - 80.59	17/28
Proportion of children who had all prescribed medicines from the health facility										
Government health facility	17.05(17.65) 12.67 - 21.43	54/306	12.5 2.10 - 22.90	6/48	20.51 6.56 - 34.47	8/39	25 15.14 - 34.86	21/84	3.45 -4.92 - 11.81	1/29
Private qualified health provider	13.43(13.89) 11.65 - 15.22	203/1461	8.76 4.53 - 13.00	17/194	10.17 5.43 - 14.90	18/177	14.91 9.09 - 20.72	24/161	20.18 14.69 - 25.67	45/223
Private unqualified health provider	28.35(29.37) 23.11 - 33.59	89/303	23.91 10.50 - 37.33	11/46	29.63 10.55 - 48.71	8/27	7.69 -10.64 - 26.02	1/13	15.38 -0.41 - 31.18	4/26
Proportion of children for whom the health worker gave full explanation about illness										
Government health facility	40.33(38.26) 34.59 - 46.07	114/298	36.96 21.92 - 51.99	17/46	37.84 20.86 - 54.82	14/37	50 38.57 - 61.43	41/82	50 30.44 - 69.56	15/30
Private qualified health provider	48.69(46.82) 46.09 - 51.30	678/1448	44.21 36.89 - 51.54	84/190	45.71 38.05 - 53.38	80/175	48.13 40.07 - 56.18	77/160	49.32 42.50 - 56.14	109/221
Private unqualified health provider	38.08(45.51) 32.43 - 43.74	137/301	47.83 32.30 - 63.35	22/46	38.46 17.84 - 59.09	10/26	23.08 -3.67 - 49.83	3/13	38.46 17.84 - 59.09	10/26
Satisfaction with the service provider										
Government health facility										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	91.87(91.83) 88.64 - 95.09	281/306	85.42 74.39 - 96.44	41/48	94.87 86.67 - 103.08	37/39	95.24 90.09 - 100.39	80/84	90 77.60 - 102.40	27/30
Proportion of children whose parents were satisfied with the treatment	90.93(91.21) 87.55 - 94.30	280/307	89.58 79.90 - 99.27	43/48	92.31 82.66 - 101.95	36/39	91.67 85.16 - 98.17	77/84	83.33 68.33 - 98.34	25/30
Reason for being satisfied		*n=274*		*n=41*		*n=33*		*n=77*		*n=25*
Good doctor/staff available	6.15(5.84) 3.13 - 9.18	16	7.32 -1.87 - 16.51	3	3.03 -4.33 - 10.39	1	3.9 -1.08 - 8.87	3	16 -0.37 - 32.37	4
Good treatment	92.34(92.34) 89.00 - 95.67	253	92.68 83.49 - 101.87	38	96.97 89.61 - 104.33	32	94.81 89.20 - 100.41	73	84 67.63 - 100.37	21
Low cost/free treatment	0.62(0.73) -0.49 - 1.73	2	0	0	0	0	1.3 -1.88 - 4.48	1	0	0
Good access/nearby	0.89(1.09) -0.40 - 2.19	3	0	0	0	0	0	0	0	0
Reason for being dissatisfied		*n=26*		*n=1*		*n=2*		*n=0*		*n=4*
Good doctor/staff not available	5.46(3.85) -5.20 - 16.12	1	0	0	0	0	0	0	25 -29.94 - 79.94	1
Treatment not good	85.47(88.46) 70.00 - 100.94	23	100 50.00 - 150.00	1	100 75.00 - 125.00	2	0	0	50 -11.50 - 111.50	2
Too expensive/can't afford	3.61(3.85) -5.48 - 12.70	1	0	0	0	0	0	0	0	0
Medicines not available	5.46(3.85) -5.20 - 16.12	1	0	0	0	0	0	0	25 -29.94 - 79.94	1

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Private qualified health provider										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	97.72(97.74) 96.92 - 98.52	1428/1461	98.96 97.26 - 100.65	190/192	97.93 95.66 - 100.20	189/193	96.3 93.08 - 99.51	156/162	99.38 97.85 - 100.90	160/161
Proportion of children whose parents were satisfied with the treatment	95.9(95.77) 94.86 - 96.95	1405/1467	94.85 91.48 - 98.21	184/194	96.37 93.48 - 99.27	186/193	94.44 90.61 - 98.28	153/162	97.53 94.83 - 100.23	158/162
Reason for being satisfied		*n=1391*		*n=183*		*n=184*		*n=151*		*n=157*
Good doctor/staff available	10.32(10.93) 8.69 - 11.96	152	11.48 6.58 - 16.37	21	13.59 8.36 - 18.81	25	13.91 8.06 - 19.76	21	5.1 1.34 - 8.85	8
Good facilities/services	0.2(0.22) -0.07 - 0.46	3	0	0	0	0	1.32 -0.83 - 3.48	2	0	0
Good treatment	89.29(88.57) 87.62 - 90.95	1232	87.43 82.36 - 92.51	160	85.87 80.56 - 91.17	158	84.11 77.94 - 90.27	127	94.9 91.15 - 98.66	149
Low cost/free treatment	0.04(0.07) -0.10 - 0.17	1	0.55 -0.79 - 1.89	1	0	0	0	0	0	0
Good access/nearby	0.16(0.22) -0.09 - 0.41	3	0.55 -0.79 - 1.89	1	0.54 -0.79 - 1.88	1	0.66 -0.96 - 2.29	1	0	0
Reason for being dissatisfied		*n=59*		*n=8*		*n=7*		*n=9*		*n=4*
Treatment not good	96.27(96.61) 90.58 - 101.95	57	100 93.75 - 106.25	8	100 92.86 - 107.14	7	100 94.44 - 105.56	9	100 87.50 - 112.50	4
	3.73(3.39) -1.95 - 9.42	2	0	0	0	0	0	0	0	0
Private unqualified health provider										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	94.52(94.72) 91.79 - 97.25	287/303	96.3 90.33 - 102.26	52/54	100 98.28 - 101.72	29/29	91.38 83.29 - 99.46	53/58	93.88 86.14 - 101.61	46/49
Proportion of children whose parents were satisfied with the treatment	93.84(93.05) 90.97 - 96.72	276/302	87.04 77.15 - 96.92	47/54	96.55 88.19 - 104.92	28/29	93.1 85.72 - 100.49	54/58	95.92 89.36 - 102.48	47/49
Reason for being satisfied		*n=276*		*n=46*		*n=28*		*n=54*		*n=46*
Good doctor/staff available	6.79(6.52) 3.64 - 9.94	18	4.35 -2.63 - 11.33	2	14.29 -0.46 - 29.03	4	5.56 -1.48 - 12.59	3	8.7 -0.53 - 17.93	4
Good facilities/services	0.33(0.36) -0.53 - 1.18	1	0	0	0	0	1.85 -2.67 - 6.37	1	0	0
Good treatment	91.47(92.03) 87.99 - 94.94	254	95.65 88.67 - 102.63	44	82.14 66.17 - 98.11	23	92.59 84.68 - 100.50	50	86.96 76.14 - 97.78	40
Low cost/free treatment	0.3(0.36) -0.53 - 1.13	1	0	0	3.57 -5.09 - 12.23	1	0	0	0	0
Good access/nearby	1.11(0.72) -0.31 - 2.53	2	0	0	0	0	0	0	4.35 -2.63 - 11.33	2
Reason for being dissatisfied		*n=20*		*n=7*		*n=1*		*n=4*		*n=2*
Good doctor/staff not available	5.81(5) -6.94 - 18.57	1	42.86 -0.95 - 86.66	3	*0*	0	0	0	0	0

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Treatment not good	70.85(65) 48.43 - 93.26	13	0	0	100 50.00 - 150.00	1	100 87.50 - 112.50	4	100 75.00 - 125.00	2
Too expensive/can't afford	2.93(5) -6.96 - 12.82	1	14.29 -18.78 - 47.35	1	0	0	0	0	0	0
No other choice	20.41(25.00) 0.25 - 40.58	5	42.86 -0.95 - 86.66	3	0	0	0	0	0	0
Cost of treatment of diarrhoea										
Travel cost										
Government health facility										
Paid some cost	44.06(44.22) 38.30 - 49.81	134/303	45.45 22.37 - 68.53	10/22	85 66.85 - 103.15	17/20	60 31.87 - 88.13	9/15	42.55 27.35 - 57.75	20/47
Mean amount paid in Pak Rs.	74.493 (84.157) 53.712 - 95.275	134	347 67.04 - 626.96	10	79.706 36.07 - 123.34	17	124.444 69.912 - 178.977	9	91.5 61.436 - 121.564	20
Private qualified health provider										
Paid some cost	75.38(77.38) 73.13 - 77.64	1115/ 1441	95.24 91.94 - 98.54	180/189	89.47 84.85 - 94.10	170/190	71.79 64.41 - 79.18	112/156	60.63 52.74 - 68.51	97/160
Mean amount paid in Pak Rs.	88.234 (96.857) 75.31 - 101.158	1115	190.333 151.4 - 229.3	180	86.176 73.97 - 98.38	170	83.741 69.30 - 98.18	112	92.773 65.21 - 120.34	97
Private unqualified health provider										
Paid some cost	51.14(54.33) 45.32 - 56.97	163/300	69.09 55.97 - 82.21	38/55	58.62 38.97 - 78.27	17/29	50 36.27 - 63.73	29/58	29.17 15.27 - 43.07	14/48
Mean amount paid in Pak Rs.	69.32 (82.70) 48.34 - 90.30	163	173.842 123.8 - 223.9	38	52.941 41.06 - 64.83	17	80.862 63.856 - 97.868	29	56.786 37.874 - 75.697	14
Treatment cost at the facility										
Government health facility										
Paid some cost	91.56(90.76) 88.27 - 94.86	275/303	75 53.52 - 96.48	15/20	100 97.62 - 102.38	21/21	93.75 78.76 - 108.74	15/16	95.74 88.91 - 102.58	45/47
Mean amount paid in Pak Rs.	55.95 (64.20) 6.56 - 105.33	274	497.467 -147.7 -1142.7	15	28.8 4.389 - 53.211	20	100.667 -24.07 - 225.41	15	97.267 -76.66 - 271.19	45
Private qualified health provider										
Paid some cost	95.45(95.21) 94.34 - 96.56	1371/ 1440	93.33 89.41 - 97.26	168/180	96.3 93.34 - 99.25	182/189	92.99 88.68 - 97.30	146/157	96.89 93.90 - 99.88	156/161
Mean amount paid in Pak Rs.	107.84(111.53) 89.55 - 126.14	1370	163.81 131.6 - 196.1	168	101.484 57.90 - 145.06	182	112.877 95.238 - 130.515	146	104.359 75.699 - 133.019	156
Private unqualified health provider										
Paid some cost	90.72(90.07) 87.29 - 94.16	272/302	88 77.99 - 98.01	44/50	93.1 82.16 - 104.05	27/29	86.67 77.23 - 96.10	52/60	95.92 89.36 - 102.48	47/49
Mean amount paid in Pak Rs.	79.30 (97.75) 59.30 - 99.29	271	289.34 183.04 - 395.6	44	49.808 37.76 - 61.85	26	71.25 57.389 - 85.111	52	60.532 43.971 - 77.093	47

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Cost of medicines or investigations outside the facility										
Government health facility										
Paid some cost	83.08(82.55) 78.66 - 87.51	246/298	78.95 57.98 - 99.91	15/19	78.95 57.98 - 99.91	15/19	87.5 68.17 - 106.83	14/16	85.11 73.86 - 96.35	40/47
Mean amount paid in Pak Rs.	283.42(268.17) 173.93 - 392.92	245	336 186.3 - 485.7	15	109.286 79.23 - 139.34	14	723.571 -92.63 - 1539.77	14	510.25 135.64 - 884.86	40
Private qualified health provider										
Paid some cost	91.95(91.63) 90.50 - 93.40	1303/ 1422	82.78 76.98 - 88.57	149/180	96.26 93.27 - 99.24	180/187	92.16 87.57 - 96.74	141/153	90.63 85.80 - 95.45	145/160
Mean amount paid in Pak Rs.	326.63(319.89) 300.40 - 352.87	1302	355.50 302.1 - 408.9	149	326.389 251.70-401.07	180	244.894 208.46 - 281.33	141	475.772 281.90 - 669.64	145
Private unqualified health provider										
Paid some cost	79.4(78.08) 74.59 - 84.21	228/292	58.33 43.34 - 73.32	28/48	85.71 70.97 - 100.46	24/28	76.79 64.83 - 88.74	43/56	74.47 60.94 - 88.00	35/47
Mean amount paid in Pak Rs.	234.34 (252.64) 178.40 - 290.28	228	331.286 224.99-437.59	28	627.542 20.98 - 1234.1	24	184.651 142.06 - 227.24	43	162.286 119.20 - 205.37	35
Childhood Acute Respiratory Infections (ARI)										
Prevalence of ARI										
Proportion of 0-59 children who suffered from ARI within last 15 days	35.53(36.83) 34.10 - 36.95	1624/ 4410	44.34 40.09 - 48.59	243/548	38.29 33.95 - 42.64	193/504	42.25 38.00 - 46.50	229/542	23.34 19.63 - 27.05	123/527
Proportion of 0-59 children who suffered from ARI in the last 12 months	67.94(69.66) 66.55 - 69.33	3072/ 4410	81.93 78.62 - 85.25	449/548	73.41 69.46 - 77.37	370/504	73.43 69.62 - 77.24	398/542	53.7 49.35 - 58.05	283/527
Taking children with ARI for treatment at the health facility (Among children who suffered from ARI during last 12 months)										
Type of health facility where the child was taken for treatment		*n=3041*		*n=444*		*n=366*		*n=396*		*n=281*
Nowhere	39.81(41.07) 38.05 - 41.57	1249	52.03 47.27 - 56.79	231	34.43 29.42 - 39.43	126	53.54 48.50 - 58.57	212	31.32 25.72 - 36.92	88
Government health facilities	7.93(7.5) 6.95 - 8.91	228	2.25 0.76 - 3.75	10	6.01 3.44 - 8.58	22	5.05 2.77 - 7.33	20	9.61 5.98 - 13.23	27
Private qualified facility/practitioners	43.08(42.29) 41.31 - 44.86	1286	36.49 31.90 - 41.08	162	52.19 46.93 - 57.44	191	29.8 25.17 - 34.43	118	48.75 42.73 - 54.78	137
Private unqualified practitioners incl. spiritual or religious healer	8.98(8.98) 7.95 - 10.01	273	9.23 6.43 - 12.04	41	7.1 4.34 - 9.87	26	11.62 8.33 - 14.90	46	9.96 6.28 - 13.64	28
Ngo/services facilities	0.19(0.16) 0.02 - 0.37	5	0	0	0.27 -0.40 - 0.94	1	0	0	0.36 -0.52 - 1.23	1
Proportion children taken somewhere or consulted for treatment of ARI	60.19(58.93) 58.43 - 61.95	1792/ 3041	69.81 64.93 - 74.68	252/361	64.40 59.37 - 69.63	237/368	62.10 57.03 - 67.16	231/372	53.42 48.72 - 58.13	242/453
Experience at the health facility										
Doctor or a health worker present at the time of visit										
Government health facility	99.18(99.11) 97.77 - 100.58	222/224	97.78 92.36 - 103.20	44/45	100 98.08 - 101.92	26/26	100 99.02 - 100.98	51/51	100 97.92 - 102.08	24/24

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Private qualified health provider	99.91(99.92) 99.70 - 100.12	1254/ 1255	100 99.67 - 100.33	153/153	100 99.70 - 100.30	168/168	100 99.67 - 100.33	152/152	99.47 98.16 - 100.77	187/188
Private unqualified health provider	98.7(98.84) 97.13 - 100.28	255/258	100 98.86 - 101.14	44/44	100 98.21 - 101.79	28/28	100 97.50 - 102.50	20/20	100 98.15 - 101.85	27/27
Proportion of children who had all prescribed medicines from the health facility										
Government health facility	25.18(24) 19.28 - 31.07	54/225	13.33 2.29 - 24.38	6/45	22.22 4.69 - 39.76	6/27	28 14.55 - 41.45	14/50	25 5.59 - 44.41	6/24
Private qualified health provider	14.03(14.66) 12.08 - 15.99	185/1262	11.61 6.25 - 16.98	18/155	10.78 5.78 - 15.78	18/167	15.03 9.04 - 21.02	23/153	22.99 16.70 - 29.29	43/187
Private unqualified health provider	29.33(29.77) 23.63 - 35.04	78/262	20 7.20 - 32.80	9/45	33.33 14.80 - 51.87	10/30	14.29 -3.06 - 31.63	3/21	25.93 7.54 - 44.31	7/27
Proportion of children for whom the health worker gave full explanation about illness										
Government health facility	41.02(39.01) 34.34 - 47.70	87/223	40.91 25.24 - 56.57	18/44	37.04 16.97 - 57.10	10/27	46 31.19 - 60.81	23/50	50 27.91 - 72.09	12/24
Private qualified health provider	47.19(47.02) 44.39 - 49.99	592/1259	46.71 38.45 - 54.97	71/152	44.24 36.36 - 52.12	73/165	46.41 38.18 - 54.63	71/153	47.12 39.78 - 54.46	90/191
Private unqualified health provider	41.74(42.64) 35.53 - 47.96	110/258	60 44.58 - 75.42	27/45	40 20.80 - 59.20	12/30	5.26 -7.41 - 17.94	1/19	33.33 13.70 - 52.97	9/27
Satisfaction with the service provider										
Government health facility										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	91.46(91.11) 87.58 - 95.33	205/225	93.02 84.25 - 101.80	40/43	100 98.15 - 101.85	27/27	92.31 84.10 - 100.51	48/52	95.83 85.76 - 105.91	23/24
Proportion of children whose parents were satisfied with the treatment	87.62(86.78) 83.11 - 92.12	194/227	80 67.20 - 92.80	36/45	92.59 80.86 - 104.32	25/27	94.23 86.93 - 101.53	49/52	91.67 78.53 - 104.81	22/24
Reason for being satisfied		*n=194*		*n=37*		*n=23*		*n=49*		*n=22*
Good doctor/staff available	2.76(3.09) 0.19 - 5.32	6	0	0	0	0	4.08 -2.48 - 10.64	2	4.55 -6.43 - 15.52	1
Good facilities/services	0.44(0.52) -0.75 - 1.63	1	0	0	0	0	0	0	0	0
Good treatment	90.91(89.69) 86.61 - 95.21	174	89.19 77.83 - 100.55	33	100 97.83 - 102.17	23	89.8 80.30 - 99.29	44	95.45 84.48 - 106.43	21
low cost/free treatment	4.03(4.64) 1.00 - 7.05	9	5.41 -3.23 - 14.04	2	0	0	4.08 -2.48 - 10.64	2	0	0
Good access/nearby	1.86(2.06) -0.30 - 4.02	4	5.41 -3.23 - 14.04	2	0	0	2.04 -2.94 - 7.02	1	0	0
Reason for being dissatisfied		*n=28*		*n=7*		*n=1*		*n=3*		*n=2*
Treatment not good	83.35(85.71) 67.77 - 98.94	24	85.7 52.65 - 118.87	6	0	0	100 83.33 - 116.67	3	100 75.00 - 125.00	2
Too expensive/can't afford	4.22(3.57) -5.01 - 13.46	1	0	0	100 50.00 - 150.00	1	0	0	0	0
Medicines not available	9.34(7.14) -3.22 - 21.91	2	14.3 -18.78 - 47.35	1	0	0	0	0	0	0

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
No other choice	3.08(3.57) -5.11 - 11.27	1	0	0	0	0	0	0	0	0
Private qualified health provider										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	97.85(97.95) 97.01 - 98.69	1245/ 1271	100 99.68 - 100.32	155/155	96.43 93.32 - 99.53	162/168	98.69 96.57 - 100.82	151/153	98.43 96.40 - 100.45	188/191
Proportion of children whose parents were satisfied with the treatment	95.91(95.84) 94.78 - 97.04	1221/ 1274	96.15 92.82 - 99.49	150/156	93.45 89.41 - 97.49	157/168	96.77 93.67 - 99.88	150/155	96.34 93.41 - 99.26	184/191
Reason for being satisfied		n=1212		*n=147*		*n=154*		*n=150*		*n=184*
Good doctor/staff available	7.29(7.84) 5.79 - 8.80	95	4.76 0.98 - 8.54	7	6.49 2.28 - 10.71	10	7.33 2.83 - 11.84	11	4.89 1.50 - 8.28	9
Good treatment	92.26(91.67) 90.72 - 93.81	1111	95.24 91.46 - 99.02	140	93.51 89.29 - 97.72	144	92.67 88.16 - 97.17	139	94.02 90.32 - 97.72	173
low cost/free treatment	0.26(0.25) -0.07 - 0.59	3	0	0	0	0	0	0	0	0
Good access/nearby	0.14(0.17) -0.11 - 0.39	2	0	0	0	0	0	0	0	0
Medicines available	0.04(0.08) -0.11 - 0.20	1	0	0	0	0	0	0	0	0
Reason for being dissatisfied		*n=53*		*n=6*		*n=11*		*n=5*		*n=7*
Good doctor/staff not available	1.61(1.89) -2.72 - 5.94	1	0	0	0	0	0	0	0	0
Treatment not good	88.91(86.79) 79.51 - 98.30	46	83.33 45.18 - 121.49	5	90.91 69.37 - 112.44	10	80 34.94 - 125.06	4	100 92.86 - 107.14	7
Too expensive/can't afford	5.92(5.66) -1.38 - 13.22	3	16.67 -21.49 - 54.82	1	9.09 -12.44 - 30.63	1	20 -25.06 - 65.06	1	0	0
No other choice	3.56(5.66) -2.37 - 9.50	3	0	0	0	0	0	0	0	0
Private unqualified health provider										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	97.49(97.74) 95.42 - 99.56	259/265	100 98.91 - 101.09	46/46	100 98.44 - 101.56	32/32	100 97.62 - 102.38	21/21	100 98.15 - 101.85	27/27
Proportion of children whose parents were satisfied with the treatment	94.92(94.74) 92.09 - 97.75	252/266	97.87 92.68 - 103.06	46/47	96.88 89.28 - 104.47	31/32	95.24 83.75 - 106.73	20/21	96.3 87.32 - 105.27	26/27
Reason for being satisfied		*n=250*		*n=46*		*n=31*		*n=20*		*n=25*
Good doctor/staff available	4.62(4) 1.82 - 7.42	10	6.52 -1.70 - 14.74	3	0	0	0	0	0	0
Good facilities/services	92.84(93.6) 89.44 - 96.23	234	91.30 82.07 - 100.53		100 98.39 - 101.61	31	100 97.50 - 102.50	20	92.00 79.37 - 104.63	23
Good treatment	0.82(0.8) -0.50 - 2.14	2	0	0	0	0	0	0	4.00 -5.68 - 13.68	1
Good access/nearby	1.72(1.6) -0.09 - 3.53	4	2.17 -0.13 - 7.48		0	0	0	0	4.00 -5.68 - 13.68	1

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Reason for being dissatisfied		*n=14*		*n=1*		*n=1*		*n=1*		*n=1*
Treatment not good	96.14(92.86) 82.49 - 109.80	13	100 50.00 - 150.00	1	100 50.00 - 150.00	1	100 50.00 - 150.00	1	100 50.00 - 150.00	1
No other choice	3.86(7.14) -9.80 - 17.51	1	0	0	0	0	0	0	0	0
Cost of treatment of ARI										
Travel cost										
Government health facility										
Paid some cost	42.7(43.05) 35.98 - 49.41	96/223	25 11.07 - 38.93	11/44	59.26 38.87 - 79.65	16/27	39.22 24.84 - 53.60	20/51	50 27.91 - 72.09	12/24
Mean amount paid in Pak Rs.	58.665 (58.458) 41.474 - 75.855	96	52.273 -16.49-121.04	11	34.625 17.28 - 51.97	16	37.3 24.049 - 50.551	20	73.75 23.114 - 124.386	12
Private qualified health provider										
Paid some cost	77.57(79.28) 75.23 - 79.92	995/1255	50.32 42.13 - 58.52	78/155	93.53 89.54 - 97.52	159/170	75.5 68.31 - 82.69	114/151	82.63 76.98 - 88.28	157/190
Mean amount paid in Pak Rs.	85.764 (93.666) 74.992 - 96.536	995	66.449 52.86 - 80.04	78	81.792 66.33 - 97.26	159	96.281 67.337 - 125.224	114	66.466 55.015 - 77.918	157
Private unqualified health provider										
Paid some cost	56.23(56.64) 49.95 - 62.50	145/256	34.09 18.95 - 49.23	15/44	50 29.69 - 70.31	14/28	95 82.95 - 107.05	19/20	92.31 80.14 - 104.47	24/26
Mean amount paid in Pak Rs.	77.311 (79.552) 43.13 - 111.491	145	56.667 34.685-78.648	15	61.071 42.144-79.999	14	22.105 14.648 - 29.562	19	38.75 21.824 - 55.676	24
Treatment cost at the facility										
Government health facility										
Paid some cost	88.25(87.5) 83.81 - 92.69	196/224	86.67 75.62 - 97.71	39/45	100 98.08 - 101.92	26/26	86.27 75.85 - 96.70	44/51	83.33 66.34 - 100.33	20/24
Mean amount paid in Pak Rs.	24.176 (26.168) 17.405 - 30.947	196	21.513 2.050 - 40.976	39	38.885 10.53 - 67.24	26	20.091 7.697 - 32.485	44	14.45 3.710 - 25.190	20
Private qualified health provider										
Paid some cost	95.92(96.09) 94.79 - 97.06	1204/ 1253	91.67 87.01 - 96.32	143/156	98.2 95.89 - 100.52	164/167	96.1 92.72 - 99.48	148/154	95.77 92.63 - 98.90	181/189
Mean amount paid in Pak Rs.	128.64(139.40) 112.36 - 144.92	1204	139.406 77.41 -201.41	143	117.5 99.49 - 135.51	164	106.365 87.342 - 125.388	148	109.834 94.579 - 125.090	181
Private unqualified health provider										
Paid some cost	88.31(88.14) 84.15 - 92.47	223/253	83.33 70.87 - 95.79	35/42	82.76 67.29 - 98.23	24/29	95 82.95 - 107.05	19/20	92.59 80.86 - 104.32	25/27
Mean amount paid in Pak Rs.	86.84 (97.38) 64.49 - 109.19	223	102.714 20.16 - 185.27	35	84.375 57.70 - 111.05	24	58.421 32.336 - 84.506	19	67.2 53.159 - 81.241	25

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Cost of medicines or investigations outside the facility										
Government health facility										
Paid some cost	79.05(80.28) 73.42 - 84.68	175/218	88.89 78.60 - 99.18	40/45	73.08 54.10 - 92.05	19/26	84.31 73.35 - 95.28	43/51	83.33 66.34 - 100.33	20/24
Mean amount paid in Pak Rs.	214.98(196.58) 111.96 - 318.0	175	151.875 115.07-188.68	40	178.947 125.76-232.13	19	117.326 95.31 - 139.35	43	185.3 123.48 - 247.12	20
Private qualified health provider										
Paid some cost	90.21(89.44) 88.51 - 91.91	1101/ 1231	96.08 92.68 - 99.48	147/153	92.64 88.32 - 96.95	151/163	90.91 86.04 - 95.77	140/154	81.91 76.15 - 87.68	154/188
Mean amount paid in Pak Rs.	362.48(355.38) 311.04 - 413.92	1098	381.374 259.83-502.92	147	311.954 260.33-363.58	151	301.812 250.17 - 353.46	138	267.598 202.98 - 332.21	154
Private unqualified health provider										
Paid some cost	81.56(80.63) 76.59 - 86.54	204/253	97.78 92.36 - 103.20	44/45	76.67 59.86 - 93.47	23/30	85.71 68.37 - 103.06	18/21	81.48 64.98 - 97.99	22/27
Mean amount paid in Pak Rs.	241.13(238.86) 149.19 - 333.06	204	200.932 150.62-251.24	44	172.174 125.69-218.66	23	159.5 107.15 - 211.85	18	479.773 23.751 - 935.794	22
Prevalence and cost on treatment of measles										
Proportion of children 10-59 months ever suffering from measles	26.77(25.81) 25.54 - 28.00	923/3576	20.83 16.89 - 24.78	90/432	17.94 14.09 - 21.79	73/407	39.95 35.25 - 44.66	175/438	36.96 32.34 - 41.58	163/441
Proportion of children 10-59 months suffering from measles during last 24 months	18.08(17.42) 16.80 - 19.35	623/3576	15.51 11.98 - 19.04	67/432	11.55 8.32 - 14.78	47/407	26.26 22.02 - 30.49	115/438	26.53 22.30 - 30.76	117/441
Among 10-59 children who suffered from measles during last 24 months										
Paid some cost for treatment of measles	84.46(85.61) 82.70 - 88.52	500/592	72.58 60.67 - 84.49	45/62	77.27 63.75 - 90.79	34/44	91.74 86.12 - 97.37	100/109	88.39 82.01 - 94.77	99/112
Mean amount paid in Pak Rs.	544.500(555.461) 449.318 - 639.689	499	597.556 257.49-937.61	45	1023.529 573.4-1473.7	34	518.889 423.09 - 614.69	99	542.475 347.16 - 737.80	99
Immunization of Children										
Who decides about immunizing the child (children 0-59 months of age)		*n=3989*		*n=580*		*n=519*		*n=550*		*n=545*
Mothers alone (incl step mother)	32.66(31.99) 31.19 - 34.12	1276	40.34 36.27 - 44.42	234	34.1 29.93 - 38.28	177	36 31.90 - 40.10	198	28.81 24.91 - 32.70	157
mother with father	47.19(47.43) 45.63 - 48.76	1892	40.52 36.44 - 44.60	235	38.73 34.44 - 43.02	201	50.36 46.09 - 54.63	277	53.21 48.93 - 57.49	290
mother not involved at all	20.15(20.58) 18.89 - 21.41	821	19.14 15.85 - 22.43	111	27.17 23.24 - 31.09	141	13.64 10.68 - 16.60	75	17.98 14.67 - 21.30	98
Mother decides or is involved in the decision	79.85(79.42) 78.59 - 81.11	3168/ 3989	80.86 77.57 - 84.15	469/580	72.83 68.91 - 76.76	378/519	86.36 83.40 - 89.32	475/550	82.02 78.70 - 85.33	447/545

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Vaccine coverage										
No. children aged 12 to 23 months	781		105		104		101		102	
Among children 12-23 months of age										
Proportion reported to have received BCG (TB) vaccine	75.29(72.52) 72.19 - 78.39	562/775	83.65 76.07 - 91.24	87/104	78.64 70.24 - 87.04	81/103	93.07 87.62 - 98.52	94/101	75.25 66.34 - 84.16	76/101
Proportion having BCG scar on the left upper arm	59.36(56.83) 55.60 - 63.12	387/681	69.23 59.20 - 79.26	63/91	66.67 56.37 - 76.96	60/90	80.95 71.96 - 89.95	68/84	54.44 43.60 - 65.29	49/90
Proportion reported to have received any DPT vaccine	65.67(63.41) 62.22 - 69.12	480/757	70.87 61.61 - 80.13	73/103	66.33 56.46 - 76.19	65/98	84.69 77.06 - 92.33	83/98	64.65 54.72 - 74.57	64/99
Proportion reported to have received full course of DPT vaccine	51.61(49.01) 47.99 - 55.24	371/757	49.51 39.37 - 59.66	51/103	47.96 37.56 - 58.36	47/98	75.51 66.49 - 84.53	74/98	48.48 38.13 - 58.83	48/99
Proportion reported to have received measles vaccine	50.35(48.3) 46.67 - 54.03	356/737	57.58 47.34 - 67.82	57/99	44.79 34.32 - 55.26	43/96	72.73 63.45 - 82.01	72/99	44.21 33.70 - 54.72	42/95
Mean age at which received measles vaccine	9.074 (9.086) 8.969 - 9.178	327	9.5 8.943 - 10.057	52	9.205 9.064 - 9.346	39	9.075 8.971 - 9.178	67	8.8 8.396 - 9.204	40
Proportion of children 10-59 months old reported to have received measles vaccine	49.72(47.61) 48.33 - 51.10	1704/ 3579	23.11 19.73 - 26.49	104/450	39.9 35.78 - 44.02	162/406	30.67 26.98 - 34.35	138/450	57.08 53.07 - 61.08	250/438
Proportion reported to have received at least one dose of polio vaccine during last 12 months	99.22(99.09) 98.63 - 99.81	760/767	100 99.51 - 100.49	102/102	100 99.51 - 100.49	102/102	99.01 96.58 - 101.44	100/101	100 99.51 - 100.49	102/102
Among children 12-59 months of age										
Proportion reported to have received at least one dose of polio vaccine during last 12 months	99.46(99.38) 99.20 - 99.71	3544/ 3566	99.58 98.89 - 100.27	473/475	99.56 98.83 - 100.28	449/451	99.77 99.21 - 100.33	438/439	100 99.90 - 100.10	480/480
Among children 0-59 months of age										
Reasons for not being vaccinated at all or only partially vaccinated		*n=1646*		*n=161*		*n=174*		*n=68*		*n=230*
Carelessness on part of family members	9.62(8.81) 8.16 - 11.07	145	12.42 7.02 - 17.83	20	8.05 3.72 - 12.37	14	20.59 10.24 - 30.93	14	10.87 6.63 - 15.11	25
Family members don't have time/no one to take	6.22(5.47) 5.02 - 7.42	90	5.59 1.73 - 9.45	9	13.22 7.90 - 18.54	23	7.35 0.41 - 14.29	5	6.52 3.11 - 9.93	15
vaccination would cause harm to the child	5.39(4.31) 4.27 - 6.52	71	4.97 1.30 - 8.64	8	6.9 2.84 - 10.95	12	10.29 2.34 - 18.25	7	3.91 1.19 - 6.64	9
Lack of awareness/ misperception about schedule	4.36(4.13) 3.34 - 5.38	68	2.48 -0.23 - 5.20	4	3.45 0.45 - 6.45	6	2.94 -1.81 - 7.69	2	3.48 0.89 - 6.06	8
No facility nearby/access issue	59.69(62.94) 57.29 - 62.09	1036	61.49 53.66 - 69.32	99	56.32 48.66 - 63.98	98	32.35 20.50 - 44.21	22	51.74 45.06 - 58.41	119
Don't believe/useless/no tradition	5.51(5.1) 4.38 - 6.64	84	7.45 3.09 - 11.82	12	4.02 0.82 - 7.23	7	13.24 4.45 - 22.03	9	13.48 8.85 - 18.11	31
Family members don’t allow	1.57(1.58) 0.94 - 2.20	26	0.62 -0.90 - 2.15	1	1.72 -0.50 - 3.95	3	1.47 -2.13 - 5.07	1	1.3 -0.38 - 2.99	3
Can't afford/poor	7.63(7.65) 6.32 - 8.95	126	4.97 1.30 - 8.64	8	6.32 2.42 - 10.23	11	11.76 3.37 - 20.16	8	8.7 4.84 - 12.55	20

Indicator	District % wt (unwt) 95% CI	Based on	KINGRI unwt 95% CI	Based on	KOT DIJI unwt 95% CI	Based on	SOBHO DERO unwt 95% CI	Based on	THARI MIRWAH unwt 95% CI	Based on
Nutritional status of the child (Mid upper arm circumference MUAC)										
Proportion of 0-59 months old children perceived by their mothers to be normal or big for their age	84.35(84.53) 83.30 - 85.40	3984/ 4713	79.91 76.74 - 83.07	517/647	84.01 80.97 - 87.04	499/594	85.99 83.05 - 88.92	491/571	87.62 84.95 - 90.29	545/622
Proportion of 0-59 months old children measured as malnourished (MUAC < 12.5 cm)	17.17(17.58) 16.00 - 18.34	717/4078	19.83 16.75 - 22.92	96/484	19.12 16.05 - 22.19	91/476	19.58 16.64 - 22.52	103/526	13.03 10.43 - 15.64	64/491

(Part B: Includes indicators for district and for Nara, Faiz Ganj, Gambat and Khairpur *talukas*)

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
INFORMATION BASE										
Total mothers/care takers interviewed	3421		433		407		420		420	
Respondents in each age group		*n=3389*		*n=429*		*n=395*		*n=418*		*n=416*
Less then 18 years	0.9(0.86)	29	0.7	3	1.52	6	0.96	4	1.68	7
18-30 years	56.95(56.71)	1922	57.34	246	53.67	212	59.09	247	60.58	252
31-50 years	40.6(40.81)	1383	39.16	168	42.78	169	39	163	36.06	150
51 years and above	1.55(1.62)	55	2.8	12	2.03	8	0.96	4	1.68	7
Mothers/caretakers with some formal education	16.7(15.16) 15.43 - 17.97	517/3410	4.87 2.72 - 7.02	21/431	7.92 5.16 - 10.68	32/404	15.07 11.52 - 18.62	63/418	28.88 24.42 - 33.34	121/419
Total children aged <60 months		4739		579		535		592		584
Among children 0-59 months of age										
Proportion of boys	50.84(51.18) 49.40 - 52.29	2386/ 4662	55.77 51.61 - 59.93	319/572	51.04 46.69 - 55.38	271/531	49.07 44.94 - 53.19	289/589	49.48 45.30 - 53.65	284/574
Proportion of girls aged	49.16(48.82) 47.71 - 50.60	2276/ 4662	44.23 40.07 - 48.39	253/572	48.96 44.62 - 53.31	260/531	50.93 46.81 - 55.06	300/589	50.52 46.35 - 54.70	290/574
Children for whom their mothers provided the information	94.77(94.87) 94.12 - 95.41	4479/ 4721	93.76 91.70 - 95.82	541/577	93.82 91.68 - 95.96	501/534	97.46 96.11 - 98.81	576/591	92.75 90.55 - 94.95	537/579
MOTHERS'/CARETAKERS' KNOWLEDGE, ATTITUDE AND PRACTICES ABOUT CHILD HEALTH AND CARE										
Awareness about immunization										
Mothers having heard about immunization	82.6(81.18) 81.31 - 83.89	2760/ 3400	66.36 61.78 - 70.93	286/431	79.8 75.77 - 83.83	324/406	72.97 68.59 - 77.34	305/418	86.36 82.95 - 89.77	361/418
Sources to hear about immunization from (multiple responses recorded)		*n=3400*		*n=431*		*n=406*		*n=418*		*n=418*
Nowhere	14.4	491	24.4	105	12.3	50	23.4	98	10.5	44
Electronic media	28.5	969	10.0	43	29.3	119	30.9	129	41.9	175
Written material (newspaper, pamphlet)	0.8	26	0.2	1	1.0	4	0.7	3	0	0
Family, neighbours, friends	8.3	283	7.4	32	10.3	42	11.7	49	8.1	34
School	0.2	8	0.2	1	0.2	1	0.7	3	0.2	1
Doctor, hospital	30.0	1020	41.3	178	27.3	111	27.5	115	30.6	128
LHW, LHV, Dai	11.3	383	0.5	2	12.3	50	3.8	16	5.5	23
Vaccination team	5.6	189	7.4	32	5.7	23	3.3	14	1.9	8
NGO	0.1	2	0.2	1	0	0	0	0	0	0
Announcement	0.9	31	1.2	5	0	0	0	0	0.5	2

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Don't know (incl. I knew myself)	4.5	153	9.3	40	8.6	35	3.8	16	3.1	13
Mothers mentioning at least one illness prevented by immunization (even if incorrect)	78.15(76.94) 76.73 - 79.56	2583/ 3357	60.8 56.04 - 65.55	259/426	79.75 75.69 - 83.81	319/400	70.91 66.43 - 75.40	295/416	78.93 74.88 - 82.99	326/413
Mothers mentioning at least one correct illness that can be prevented by immunization	75.76(74.56) 74.29 - 77.22	2503/ 3357	59.15 54.37 - 63.94	252/426	77.5 73.28 - 81.72	310/400	68.03 63.43 - 72.63	283/416	77.48 73.33 - 81.63	320/413
Views about benefits of immunization										
Neighbours' views about immunizing as reported by mothers/caretakers		*n=3376*		*n=431*		*n=402*		*n=409*		*n=419*
Thinks it's worthwhile	85.57(84.42) 84.37 - 86.77	2850	68.68 64.18 - 73.17	296	85.07 81.47 - 88.68	342	76.53 72.30 - 80.76	313	83.05 79.34 - 86.77	348
Don't think it's worthwhile	3.49(3.82) 2.86 - 4.13	129	7.66 5.03 - 10.28	33	4.98 2.73 - 7.23	20	4.89 2.68 - 7.10	20	3.1 1.32 - 4.88	13
Don't know	10.93(11.76) 9.87 - 12.00	397	23.67 19.54 - 27.79	102	9.95 6.90 - 13.00	40	18.58 14.69 - 22.47	76	13.84 10.42 - 17.27	58
Mothers' own perception about immunizing the child		*n=3374*		*n=431*		*n=402*		*n=409*		*n=419*
Thinks it's worthwhile	91.31(90.31) 90.35 - 92.28	3047/ 3374	78.89 74.92 - 82.86	340	88.81 85.60 - 92.01	357	84.11 80.44 - 87.77	344	91.41 88.61 - 94.21	383
Don't think it's worthwhile	2.51(2.52) 1.97 - 3.06	85/3374	3.02 1.29 - 4.75	13	4.73 2.53 - 6.93	19	4.4 2.29 - 6.51	18	4.3 2.24 - 6.36	18
Don't know if it's worthwhile or not	6.17(7.17) 5.35 - 7.00	242/3374	18.1 14.35 - 21.85	78	6.47 3.94 - 9.00	26	11.49 8.28 - 14.70	47	4.3 2.24 - 6.36	18
Reasons for being worthwhile		*n=2981*		*n=333*		*n=344*		*n=336*		*n=373*
Protection against illness	99.15(99.13) 98.81 - 99.50	2955	97.9 96.21 - 99.59	326	99.42 98.47 - 100.37	342	99.11 97.95 - 100.26	333	98.39 96.98 - 99.80	367
Important to immunize	0.77(0.77) 0.44 - 1.10	23	1.5 0.05 - 2.96	5	0.58 -0.37 - 1.53	2	0.89 -0.26 - 2.05	3	1.61 0.20 - 3.02	6
Create immunities against	0.04(0.03) -0.05 - 0.13	1	0	0	0	0	0	0	0	0
Govt order	0.03(0.07) -0.05 - 0.12	2	0.6 -0.38 - 1.58	2	0	0	0	0	0	0
Reasons for not being worthwhile		*n=51*		*n=1*		*n=10*		*n=13*		*n=17*
Felt it is not necessary	39.95(47.06) 25.53 - 54.37	24	0	0	60 24.64 - 95.36	6	84.62 61.16 - 108.07	11	5.88 -8.24 - 20.01	1
Child gets sick from vaccine	44.86(37.25) 30.23 - 59.49	19	100 50.00 - 150.00	1	10 -13.59 - 33.59	1	7.69 -10.64 - 26.02	1	82.35 61.29 - 103.42	14
Immunization has no effect	3.43(3.92) -2.55 - 9.41	2	0	0	10 -13.59 - 33.59	1	0	0	0	0
Limbs stop working	3.48(3.92) -2.53 - 9.48	2	0	0	10 -13.59 - 33.59	1	0	0	0	0
Child may die	6.83(5.88) -1.07 - 14.74	3	0	0	0	0	7.69 -10.64 - 26.02	1	11.76 -6.49 - 30.02	2

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Hospital too far	1.45(1.96) -2.81 - 5.70	1	0	0	10 -13.59 - 33.59	1	0	0	0	0
Views about adverse effects of immunization										
Mothers who have heard about any bad effects of immunization	11.27(10.19) 10.19 - 12.36	359/3333	7.6 4.95 - 10.25	32/421	11.5 8.25 - 14.75	46/400	4.18 2.11 - 6.24	17/407	14.8 11.28 - 18.32	62/419
Types of bad effects of immunization that mothers had heard of		*n=3333*		*n=421*		*n=400*		*n=407*		*n=419*
Nothing	88.73(89.23) 87.64 - 89.81	2974	92.4 89.75 - 95.05	389	88.5 85.25 - 91.75	354	95.82 93.76 - 97.89	390	85.2 81.68 - 88.72	357
Actual side-effects	7.78(7.47) 6.86 - 8.71	249	5.7 3.37 - 8.03	24	9.75 6.72 - 12.78	39	1.97 0.49 - 3.44	8	10.02 7.03 - 13.02	42
Incorrect perceptions	2.98(2.88) 2.39 - 3.57	96	1.9 0.48 - 3.32	8	1 -0.10 - 2.10	4	1.97 0.49 - 3.44	8	3.34 1.50 - 5.18	14
No effect of vaccine	0.1(0.09) -0.02 - 0.23	3	0	0	0	0	0	0	0	0
Not specified	0.41(0.33) 0.18 - 0.64	11	0	0	0.75 -0.22 - 1.72	3	0.25 -0.36 - 0.85	1	1.43 0.18 - 2.69	6
Heard from somewhere specific	48.52(46.7) 43.24 - 53.79	170/364	24.32 9.15 - 39.50	9/37	54.17 39.03 - 69.30	26/48	70.59 45.99 - 95.19	12/17	61.67 48.53 - 74.80	37/60
Source of information about bad effects of immunization		*n=364*		*n=37*		*n=48*		*n=17*		*n=60*
Nowhere	4.62(4.67) 2.33 - 6.91	17	8.11 -2.04 - 18.25	3	6.25 -1.64 - 14.14	3	5.88 -8.24 - 20.01	1	6.67 -0.48 - 13.81	4
Electronic media (TV, Radio)	2.97(3.3) 1.09 - 4.86	12	0	0	2.08 -3.00 - 7.17	1	35.29 9.64 - 60.95	6	0	0
Print media (newspaper, books)	0.27(0.27) -0.40 - 0.93	1	0	0	0	0	0	0	0	0
family, neighbours	25.68(23.08) 21.06 - 30.31	84	16.22 2.99 - 29.44	6	16.67 5.08 - 28.25	8	23.53 0.42 - 46.63	4	46.67 33.21 - 60.12	28
Dctor/hospital	12.15(12.64) 8.66 - 15.65	46	2.7 -3.87 - 9.28	1	29.17 15.27 - 43.07	14	11.76 -6.49 - 30.02	2	6.67 -0.48 - 13.81	4
LHW	2.55(2.47) 0.79 - 4.31	9	0	0	2.08 -3.00 - 7.17	1	0	0	1.67 -2.41 - 5.74	1
Vaccination team	4.89(4.95) 2.54 - 7.24	18	5.41 -3.23 - 14.04	2	4.17 -2.53 - 10.86	2	0	0	6.67 -0.48 - 13.81	4
Dn't know where (including i knew it from myself)	46.86(48.63) 41.60 - 52.13	177	67.57 51.13 - 84.00	25	39.58 24.71 - 54.46	19	23.53 0.42 - 46.63	4	31.67 19.06 - 44.27	19
Mothers who had discussed immunization in their family	83.44(81.97) 82.16 - 84.72	2733/3334	64.1 59.45 - 68.76	275/429	80.95 76.97 - 84.93	323/399	73.51 69.09 - 77.94	297/404	84.13 80.50 - 87.77	350/416
Knowledge about diarrhoea and its management										
Mentioned something as a reason for diarrhoea even if incorrect or non specific	85.62(84.79) 84.42 - 86.82	2843/3353	77.18 73.07 - 81.28	328/425	83.96 80.23 - 87.69	335/399	87.47 84.16 - 90.78	363/415	91.38 88.53 - 94.23	371/406
Mentioned correct reasons for diarrhoea	59.26(57.62) 57.58 - 60.93	1932/3353	39.53 34.76 - 44.30	168/425	54.14 49.12 - 59.15	216/399	59.76 54.92 - 64.60	248/415	67.98 63.32 - 72.64	276/406

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Mother would give more fluid during diarrhoea	59.73(60.34) 58.06 - 61.40	2043/ 3386	67.82 63.30 - 72.35	293/432	64.18 59.37 - 68.99	258/402	49.76 44.85 - 54.67	208/418	54.09 49.18 - 59.00	225/416
Mother would give same or more food during diarrhoea	60.76(60.67) 59.10 - 62.42	2053/ 3384	60.56 55.83 - 65.29	261/431	63.68 58.86 - 68.51	256/402	54.78 49.89 - 59.68	229/418	64.66 59.95 - 69.38	269/416
Mothers' interaction with LHW										
Proportion of mothers ever visited by a LHW	44.89(42.87) 43.21 - 46.58	1464/ 3415	2.31 0.78 - 3.84	10/433	40.29 35.41 - 45.18	164/407	26.01 21.69 - 30.33	109/419	28.95 24.48 - 33.41	121/418
Period since last LHW visit		*n=3348*		*n=433*		*n=395*		*n=414*		*n=411*
Never	56.26(58.27) 54.57 - 57.96	1951	97.69 96.16 - 99.22	423	61.52 56.59 - 66.44	243	74.88 70.58 - 79.18	310	72.26 67.81 - 76.71	297
Within the last one month	38.56(37.04) 36.90 - 40.22	1240	1.85 0.46 - 3.23	8	37.22 32.32 - 42.11	147	22.22 18.10 - 26.35	92	22.87 18.69 - 27.05	94
More than one but within last 6 months	3.84(3.58) 3.17 - 4.51	120	0.23 -0.34 - 0.80	1	1.27 0.04 - 2.49	5	2.66 0.99 - 4.33	11	2.19 0.65 - 3.73	9
More than six month but within 1 year	1(0.81) 0.64 - 1.35	27	0.23 -0.34 - 0.80	1	0 	0	0 	0	2.19 0.65 - 3.73	9
More than a year ago	0.34(0.3) 0.13 - 0.56	10	0 	0	0 	0	0.24 -0.35 - 0.84	1	0.49 -0.31 - 1.28	2
Among mothers/caretakers ever visited by LHW										
LHW did tell something about diarrhoea prevention	12.99(12.87) 11.21 - 14.76	185/1437	10 -13.59 - 33.59	1/10	7.01 2.70 - 11.32	11/157	3.77 -0.33 - 7.87	4/106	13.79 7.09 - 20.50	16/116
LHW did tell something about diarrhoea treatment	18.34(18.28) 16.31 - 20.37	264/1444	10 -13.59 - 33.59	1/10	9.62 4.67 - 14.56	15/156	6.54 1.39 - 11.69	7/107	20 12.43 - 27.57	24/120
LHW did tell something about recognizing ARI	3.9(3.87) 2.86 - 4.94	55/1421	100 95.00 - 105.00	10/10	1.3 -0.81 - 3.41	2/154	2.8 -0.79 - 6.40	3/107	2.54 -0.72 - 5.81	3/118
LHW did tell something about treatment for ARI	7.09(6.94) 5.72 - 8.45	99/1426	100 95.00 - 105.00	10/10	2.58 -0.24 - 5.40	4/155	1.87 -1.16 - 4.90	2/107	5.98 1.26 - 10.71	7/117
LHW did tell something about vaccination	25.16(24.53) 22.88 - 27.45	350/1427	10 -13.59 - 33.59	1/10	12.26 6.77 - 17.74	19/155	8.49 2.71 - 14.27	9/106	28.57 20.03 - 37.11	34/119
CHILD HEALTH AND CARE										
Total children aged <60 months		4739		579		535		592		584
Proportion of children attending a school (incl. pre-primary schooling)	4.13(3.91) 3.55 - 4.71	183/4680	2.43 1.09 - 3.77	14/576	4.7 2.81 - 6.59	25/532	3.28 1.74 - 4.81	19/580	7.32 5.10 - 9.53	42/574
Proportion of children 0-6 months of age being exclusively breastfed	87.15(87.4) 84.39 - 89.90	527/603	82.09 72.16 - 92.02	55/67	87.67 79.44 - 95.90	64/73	91.14 84.24 - 98.04	72/79	79.1 68.62 - 89.59	53/67
Childhood Diarrhoea										
Prevalence of diarrhoea										
Children 0-59 months who suffered from diarrhoea during last 15 days	34.08(34.27) 32.69 - 35.48	1542/ 4500	35.06 31.02 - 39.11	196/559	39.29 34.95 - 43.63	200/509	35.36 31.37 - 39.34	204/577	32.21 28.15 - 36.27	172/534
Children 0-59 months who suffered from diarrhoea during last 12 months	74.17(75.07) 72.88 - 75.46	3378/ 4500	83.18 79.99 - 86.37	465/559	77.41 73.68 - 81.14	394/509	80.07 76.72 - 83.42	462/577	70.41 66.45 - 74.38	376/534

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Among those who suffered from diarrhoea during last 12 months										
Children whose last episode of diarrhoea lasted for more than 3 days	53.84(53.77) 52.03 - 55.66	1362/ 2946	47.45 42.50 - 52.39	195/411	43.06 37.75 - 48.37	152/353	45.7 40.74 - 50.66	186/407	45.51 39.93 - 51.10	147/323
Children who had blood in stools during last episode of diarrhoea	6.10(6.01) 5.27 - 6.92	201/3347	5.17 3.05 - 7.30	24/464	7.65 4.89 - 10.41	30/392	4.19 2.23 - 6.14	19/454	6.76 4.06 - 9.45	25/370
Treatment of diarrhoea (among those who suffered from diarrhoea during last 12 months)										
Household management of diarrhoea										
Proportion of children who were given more fluid during last episode of diarrhoea	55.71(55.87) 54.02 - 57.41	1876/ 3358	60.43 55.88 - 64.98	281/465	59.08 54.08 - 64.08	231/391	42.39 37.77 - 47.02	195/460	51.89 46.67 - 57.12	192/370
Proportion of children who were given same or more quantity of food during diarrhoea	60.38(60.83) 58.71 - 62.05	2044/ 3360	63.44 58.96 - 67.93	295/465	64.03 59.15 - 68.91	251/392	56.09 51.44 - 60.73	258/460	60.32 55.22 - 65.42	225/373
Proportion of children who were given anti-diarrhoeal drugs during last episode of diarrhoea	82.78(81.88) 81.48 - 84.09	2712/ 3312	71.24 66.99 - 75.49	327/459	85.05 81.37 - 88.73	330/388	78.81 74.93 - 82.68	357/453	86.02 82.36 - 89.68	320/372
Taking children with diarrhoea to a health facility/provider										
Type of health facility where the child taken for treatment		n=3346		n=461		n=391		n=457		n=374
Nowhere	36.05(36.82) 34.41 - 37.69	1232	41 36.40 - 45.60	189	37.6 32.67 - 42.52	147	47.48 42.80 - 52.17	217	29.41 24.66 - 34.16	110
Government health facility	9.69(9.21) 8.68 - 10.71	308	4.77 2.72 - 6.83	22	5.37 3.01 - 7.73	21	3.5 1.71 - 5.30	16	12.57 9.07 - 16.06	47
Private qualified facility/practitioner	44.49(44.26) 42.79 - 46.19	1481	42.3 37.68 - 46.92	195	49.62 44.53 - 54.70	194	35.89 31.38 - 40.39	164	43.58 38.42 - 48.74	163
Private, non medically qualified practitioner	9.51(9.53) 8.50 - 10.52	319	11.93 8.86 - 15.00	55	7.42 4.69 - 10.14	29	13.13 9.92 - 16.33	60	13.37 9.79 - 16.95	50
NGO/services facility	0.25(0.18) 0.07 - 0.44	6	0	0	0	0	0	0	1.07 -0.11 - 2.25	4
Proportion of children taken somewhere for treatment	63.95(63.18) 62.31 - 65.59	2114/ 3346	59 54.40 - 63.60	272/461	62.4 57.48 - 67.33	244/391	52.52 47.83 - 57.20	240/457	70.59 65.84 - 75.34	264/374
Experience at the health facility										
Doctor or a health worker present at the time of visit										
Government health facility	100(100) 99.83 - 100.17	303/303	100 97.73 - 102.27	22/22	100 97.50 - 102.50	20/20	100 96.88 - 103.13	16/16	100 98.94 - 101.06	47/47
Private qualified health provider	99.86(99.86) 99.62 - 100.09	1436/ 1438	100 99.74 - 100.26	190/190	100 99.74 - 100.26	191/191	99.34 97.71 - 100.96	150/151	100 99.68 - 100.32	158/158
Private unqualified health provider	97.74(97.97) 95.87 - 99.61	289/295	98.1 93.63 - 102.67	53/54	96.6 88.19 - 104.92	28/29	100.0 99.12 - 100.88	57/57	95.8 89.14 - 102.53	46/48
Proportion of children who were provided ORS										
Government health facility	63.33(63.19) 57.78 - 68.88	194/307	54.55 31.47 - 77.63	12/22	42.86 19.31 - 66.40	9/21	50 22.38 - 77.63	8/16	61.7 46.74 - 76.66	29/47

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Private qualified health provider	60.48(60.32) 57.94 - 63.03	880/1459	64.77 57.77 - 71.77	125/193	45.26 37.92 - 52.60	86/190	63.52 55.73 - 71.32	101/159	59.63 51.74 - 67.52	96/161
Private unqualified health provider	58.51(59.34) 52.82 - 64.20	181/305	61.11 47.18 - 75.04	33/54	34.48 15.46 - 53.51	10/29	69.49 56.89 - 82.09	41/59	46.94 31.94 - 61.93	23/49
Proportion of children who had all prescribed medicines from the health facility										
Government health facility	17.05(17.65) 12.67 - 21.43	54/306	18.18 -0.21 - 36.57	4/22	23.81 3.21 - 44.41	5/21	12.5 -6.83 - 31.83	2/16	14.89 3.65 - 26.14	7/47
Private qualified health provider	13.43(13.89) 11.65 - 15.22	203/1461	20.21 14.28 - 26.13	39/193	6.22 2.55 - 9.88	12/193	20.13 13.58 - 26.67	32/159	9.94 5.01 - 14.87	16/161
Private unqualified health provider	28.35(29.37) 23.11 - 33.59	89/303	40.74 26.71 - 54.77	22/54	13.79 -0.48 - 28.07	4/29	40.68 27.30 - 54.06	24/59	30.61 16.69 - 44.54	15/49
Proportion of children for whom the health worker gave full explanation about illness										
Government health facility	40.33(38.26) 34.59 - 46.07	114/298	19.05 -0.13 - 38.22	4/21	19.05 -0.13 - 38.22	4/21	40 11.87 - 68.13	6/15	28.26 14.16 - 42.36	13/46
Private qualified health provider	48.69(46.82) 46.09 - 51.30	678/1448	36.79 29.73 - 43.85	71/193	46.35 39.04 - 53.67	89/192	56.6 48.59 - 64.62	90/159	49.37 41.25 - 57.48	78/158
Private unqualified health provider	38.08(45.51) 32.43 - 43.74	137/301	44.44 30.26 - 58.62	24/54	55.17 35.35 - 75.00	16/29	59.32 45.94 - 72.70	35/59	35.42 20.84 - 49.99	17/48
Satisfaction with the service provider										
Government health facility										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	91.87(91.83) 88.64 - 95.09	281/306	95.45 84.48 - 106.43	21/22	85.71 68.37 - 103.06	18/21	87.5 68.17 - 106.83	14/16	93.48 85.26 - 101.70	43/46
Proportion of children whose parents were satisfied with the treatment	90.93(91.21) 87.55 - 94.30	280/307	95.45 84.48 - 106.43	21/22	90.48 75.54 - 105.41	19/21	100 96.88 - 103.13	16/	91.49 82.45 - 100.53	43/47
Reason for being satisfied		*n=274*		*n=21*		*n=19*		*n=15*		*n=43*
Good doctor/staff available	6.15(5.84) 3.13 - 9.18	16	4.76 -6.73 - 16.25	1	5.26 -7.41 - 17.94	1	0	0	6.98 -1.80 - 15.75	3
Good treatment	92.34(92.34) 89.00 - 95.67	253	85.71 68.37 - 103.06	18	89.47 73.04 - 105.90	17	100 96.67 - 103.33	15	90.7 80.85 - 100.54	39
Low cost/free treatment	0.62(0.73) -0.49 - 1.73	2	0	0	5.26 -7.41 - 17.94	1	0	0	0	0
Good access/nearby	0.89(1.09) -0.40 - 2.19	3	9.52 -5.41 - 24.46	2	0	0	0	0	2.33 -3.34 - 7.99	1
Reason for being dissatisfied		*n=26*		*n=1*		*n=2*		*n=0*		*n=4*
Poor facilities/services	5.46(3.85) -5.20 - 16.12	1	0	0	0	0	0	0	25 -29.94 - 79.94	1
	85.47(88.46) 70.00 - 100.94	23	100 50.00 - 150.00	1	100 75.00 - 125.00	2	0	0	50 -11.50 - 111.50	2
	3.61(3.85) -5.48 - 12.70	1	0	0	0	0	0	0	0	0
Treatment not good	5.46(3.85) -5.20 - 16.12	1	0	0	0	0	0	0	25 -29.94 - 79.94	1

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Private qualified health provider										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	97.72(97.74) 96.92 - 98.52	1428/1461	98.96 97.26 - 100.65	190/192	97.93 95.66 - 100.20	189/193	96.3 93.08 - 99.51	156/162	99.38 97.85 - 100.90	160/161
Proportion of children whose parents were satisfied with the treatment	95.9(95.77) 94.86 - 96.95	1405/1467	94.85 91.48 - 98.21	184/194	96.37 93.48 - 99.27	186/193	94.44 90.61 - 98.28	153/162	97.53 94.83 - 100.23	158/162
Reason for being satisfied		*n=1391*		*n=183*		*n=184*		*n=151*		*n=157*
Good doctor/staff available	10.32(10.93) 8.69 - 11.96	152	11.48 6.58 - 16.37	21	13.59 8.36 - 18.81	25	13.91 8.06 - 19.76	21	5.1 1.34 - 8.85	8
Good facilities/services	0.2(0.22) -0.07 - 0.46	3	0	0	0	0	1.32 -0.83 - 3.48	2	0	0
Good treatment	89.29(88.57) 87.62 - 90.95	1232	87.43 82.36 - 92.51	160	85.87 80.56 - 91.17	158	84.11 77.94 - 90.27	127	94.9 91.15 - 98.66	149
Low cost/free treatment	0.04(0.07) -0.10 - 0.17	1	0.55 -0.79 - 1.89	1	0	0	0	0	0	0
Good access/nearby	0.16(0.22) -0.09 - 0.41	3	0.55 -0.79 - 1.89	1	0.54 -0.79 - 1.88	1	0.66 -0.96 - 2.29	1	0	0
Reason for being dissatisfied		*n=59*		*n=8*		*n=7*		*n=9*		*n=4*
Treatment not good	96.27(96.61) 90.58 - 101.95	57	100 93.75 - 106.25	8	100 92.86 - 107.14	7	100 94.44 - 105.56	9	100 87.50 - 112.50	4
Too expensive/can't afford	3.73(3.39) -1.95 - 9.42	2	0	0	0	0	0	0	0	0
Private unqualified health provider										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	94.52(94.72) 91.79 - 97.25	287/303	96.3 90.33 - 102.26	52/54	100 98.28 - 101.72	29/29	91.38 83.29 - 99.46	53/58	93.88 86.14 - 101.61	46/49
Proportion of children whose parents were satisfied with the treatment	93.84(93.05) 90.97 - 96.72	276/302	87.04 77.15 - 96.92	47/54	96.55 88.19 - 104.92	28/29	93.1 85.72 - 100.49	54/58	95.92 89.36 - 102.48	47/49
Reason for being satisfied		*n=276*		*n=46*		*n=28*		*n=54*		*n=46*
Good doctor/staff available	6.79(6.52) 3.64 - 9.94	18	4.35 -2.63 - 11.33	2	14.29 -0.46 - 29.03	4	5.56 -1.48 - 12.59	3	8.7 -0.53 - 17.93	4
Good facilities/services	0.33(0.36) -0.53 - 1.18	1	0	0	0	0	1.85 -2.67 - 6.37	1	0	0
Good treatment	91.47(92.03) 87.99 - 94.94	254	95.65 88.67 - 102.63	44	82.14 66.17 - 98.11	23	92.59 84.68 - 100.50	50	86.96 76.14 - 97.78	40
Low cost/free treatment	0.3(0.36) -0.53 - 1.13	1	0	0	3.57 -5.09 - 12.23	1	0	0	0	0
Good access/nearby	1.11(0.72) -0.31 - 2.53	2	0	0	0	0	0	0	4.35 -2.63 - 11.33	2
Reason for being dissatisfied		*n=20*		*n=7*		*n=1*		*n=*		*n=2*
Good doctor/staff not available	5.81(5) -6.94 - 18.57	1	42.86 -0.95 - 86.66	3	*0*	0	0	0	0	0

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Treatment not good	70.85(65) 48.43 - 93.26	13	0	0	100 50.00 - 150.00	1	100 87.50 - 112.50	4	100 75.00 - 125.00	2
Too expensive/can't afford	2.93(5) -6.96 - 12.82	1	14.29 -18.78 - 47.35	1	0	0	0	0	0	0
No other choice	20.41(25.00) 0.25 - 40.58	5	42.86 -0.95 - 86.66	3	0	0	0	0	0	0
Cost of treatment of diarrhoea										
Travel cost										
Government health facility										
Paid some cost	44.06(44.22) 38.30 - 49.81	134/303	45.45 22.37 - 68.53	10/22	85 66.85 - 103.15	17/20	60 31.87 - 88.13	9/15	42.55 27.35 - 57.75	20/47
Mean amount paid in Pak Rs.	74.493 (84.157) 53.712 - 95.275	134	347 67.04-626.96	10	79.706 36.07-123.34	17	124.444 69.912 - 178.977	9	91.5 61.436 - 121.564	20
Private qualified health provider										
Paid some cost	75.38(77.38) 73.13 - 77.64	1115/1441	95.24 91.94 - 98.54	180/189	89.47 84.85 - 94.10	170/190	71.79 64.41 - 79.18	112/156	60.63 52.74 - 68.51	97/160
Mean amount paid in Pak Rs.	88.234 (96.857) 75.31 - 101.158	1115	190.333 151.35-229.32	180	86.176 73.97 - 98.38	170	83.741 69.302 - 98.181	112	92.773 65.207 - 120.340	97
Private unqualified health provider										
Paid some cost	51.14(54.33) 45.32 - 56.97	163/300	69.09 55.97 - 82.21	38/55	58.62 38.97 - 78.27	17/29	50 36.27 - 63.73	29/58	29.17 15.27 - 43.07	14/48
Mean amount paid in Pak Rs.	69.32 (82.70) 48.34 - 90.30	163	173.842 123.80-223.89	38	52.941 41.06 - 64.83	17	80.862 63.856 - 97.868	29	56.786 37.874 - 75.697	14
Treatment cost at the facility										
Government health facility										
Paid some cost	91.56(90.76) 88.27 - 94.86	275/303	75 53.52 - 96.48	15/20	100 97.62 - 102.38	21/21	93.75 78.76 - 108.74	15/16	95.74 88.91 - 102.58	45/47
Mean amount paid in Pak Rs.	55.95 (64.20) 6.56 - 105.33	274	497.467 -147.7-1142.7	15	28.8 4.389 - 53.211	20	100.667 -24.07 - 225.406	15	97.267 -76.66 - 271.19	45
Private qualified health provider										
Paid some cost	95.45(95.21) 94.34 - 96.56	1371/1440	93.33 89.41 - 97.26	168/180	96.3 93.34 - 99.25	182/189	92.99 88.68 - 97.30	146/157	96.89 93.90 - 99.88	156/161
Mean amount paid in Pak Rs.	107.84(111.53) 89.55 - 126.14	1370	163.81 131.55-196.07	168	101.484 57.90-145.06	182	112.877 95.238 - 130.515	146	104.359 75.699 - 133.019	156
Private unqualified health provider										
Paid some cost	90.72(90.07) 87.29 - 94.16	272/302	88 77.99 - 98.01	44/50	93.1 82.16 - 104.05	27/29	86.67 77.23 - 96.10	52/60	95.92 89.36 - 102.48	47/49
Mean amount paid in Pak Rs.	79.30 (97.75) 59.30 - 99.29	271	289.341 183.04-395.64	44	49.808 37.76 - 61.85	26	71.25 57.389 - 85.111	52	60.532 43.971 - 77.093	47

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Cost of medicines or investigations outside the facility										
Government health facility										
Paid some cost	83.08(82.55) 78.66 - 87.51	246/298	78.95 57.98 - 99.91	15/19	78.95 57.98 - 99.91	15/19	87.5 68.17 - 106.83	14/16	85.11 73.86 - 96.35	40/47
Mean amount paid in Pak Rs.	283.42(268.17) 173.93 - 392.92	245	336 186.3 - 485.7	15	109.286 79.23 - 139.34	14	723.571 -92.63 - 1539.78	14	510.25 135.64 - 884.86	40
Private qualified health provider										
Paid some cost	91.95(91.63) 90.50 - 93.40	1303/ 1422	82.78 76.98 - 88.57	149/180	96.26 93.27 - 99.24	180/187	92.16 87.57 - 96.74	141/153	90.63 85.80 - 95.45	145/160
Mean amount paid in Pak Rs.	326.63(319.89) 300.40 - 352.87	1302	355.503 302.08-408.93	149	326.389 251.7 - 401.07	180	244.894 208.46 - 281.33	141	475.772 281.90 - 669.64	145
Private unqualified health provider										
Paid some cost	79.4(78.08) 74.59 - 84.21	228/292	58.33 43.34 - 73.32	28/48	85.71 70.97 - 100.46	24/28	76.79 64.83 - 88.74	43/56	74.47 60.94 - 88.00	35/47
Mean amount paid in Pak Rs.	234.34 (252.64) 178.40 - 290.28	228	331.286 224.99-437.59	28	627.542 20.98-1234.10	24	184.651 142.06 - 227.24	43	162.286 119.20 - 205.37	35
Childhood Acute Respiratory Infections (ARI)										
Prevalence of ARI										
Proportion of 0-59 children who suffered from ARI within last 15 days	35.53(36.83) 34.10 - 36.95	1624/ 4410	44.34 40.09 - 48.59	243/548	38.29 33.95 - 42.64	193/504	42.25 38.00 - 46.50	229/542	23.34 19.63 - 27.05	123/527
Proportion of 0-59 children who suffered from ARI in the last 12 months	67.94(69.66) 66.55 - 69.33	3072/ 4410	81.93 78.62 - 85.25	449/548	73.41 69.46 - 77.37	370/504	73.43 69.62 - 77.24	398/542	53.7 49.35 - 58.05	283/527
Taking children with ARI for treatment at the health facility (Among children who suffered from ARI during last 12 months)										
Type of health facility where the child was taken for treatment		*n=3041*		*n=444*		*n=366*		*n=396*		*n=281*
Nowhere	39.81(41.07) 38.05 - 41.57	1249	52.03 47.27 - 56.79	231	34.43 29.42 - 39.43	126	53.54 48.50 - 58.57	212	31.32 25.72 - 36.92	88
Government health facilities	7.93(7.5) 6.95 - 8.91	228	2.25 0.76 - 3.75	10	6.01 3.44 - 8.58	22	5.05 2.77 - 7.33	20	9.61 5.98 - 13.23	27
Private qualified facility/practitioners	43.08(42.29) 41.31 - 44.86	1286	36.49 31.90 - 41.08	162	52.19 46.93 - 57.44	191	29.8 25.17 - 34.43	118	48.75 42.73 - 54.78	137
Private unqualified practitioners incl. spiritual or religious healer	8.98(8.98) 7.95 - 10.01	273	9.23 6.43 - 12.04	41	7.1 4.34 - 9.87	26	11.62 8.33 - 14.90	46	9.96 6.28 - 13.64	28
NGO/services facilities	0.19(0.16) 0.02 - 0.37	5	0	0	0.27 -0.40 - 0.94	1	0	0	0.36 -0.52 - 1.23	1
Proportion children taken somewhere or consulted for treatment of ARI	60.19(58.93) 58.43 - 61.95	1792/ 3041	47.97 43.21 - 52.73	213/444	65.57 60.57 - 70.58	240/366	46.46 41.43 - 51.50	184/396	68.68 63.08 - 74.28	193/281
Experience at the health facility										
Doctor or a health worker present at the time of visit										
Government health facility	99.18(99.11) 97.77 - 100.58	222/224	100 95.00 - 105.00	10/10	100 97.62 - 102.38	21/21	95 82.95 - 107.05	19/20	100 98.15 - 101.85	27/27

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Private qualified health provider	99.91(99.92) 99.70 - 100.12	1254/ 1255	100 99.68 - 100.32	158/158	100 99.74 - 100.26	189/189	100 99.56 - 100.44	113/113	100 99.63 - 100.37	134/134
Private unqualified health provider	98.7(98.84) 97.13 - 100.28	255/258	100 98.75 - 101.25	40/40	96.15 86.84 - 105.47	25/26	97.83 92.52 - 103.13	45/46	96.3 87.32 - 105.27	26/27
Proportion of children who had all prescribed medicines from the health facility										
Government health facility	25.18(24) 19.28 - 31.07	54/225	10 -13.59 - 33.59	1/10	31.82 10.08 - 53.55	7/22	15 -3.15 - 33.15	3/20	40.74 20.35 - 61.13	11/27
Private qualified health provider	14.03(14.66) 12.08 - 15.99	185/1262	24.22 17.30 - 31.15	39/161	6.38 2.62 - 10.14	12/188	17.39 10.03 - 24.75	20/115	8.82 3.69 - 13.96	12/136
Private unqualified health provider	29.33(29.77) 23.63 - 35.04	78/262	42.5 25.93 - 59.07	17/40	15.38 -0.41 - 31.18	4/26	39.13 23.94 - 54.32	18/46	37.04 16.97 - 57.10	10/27
Proportion of children for whom the health worker gave full explanation about illness										
Government health facility	41.02(39.01) 34.34 - 47.70	87/223	20 -9.79 - 49.79	2/10	14.29 -3.06 - 31.63	3/21	20 -0.03 - 40.03	4/20	55.56 34.96 - 76.15	15/27
Private qualified health provider	47.19(47.02) 44.39 - 49.99	592/1259	46.58 38.57 - 54.60	75/161	48.66 41.23 - 56.09	91/187	45.61 36.03 - 55.20	52/114	50.74 41.97 - 59.51	69/136
Private unqualified health provider	41.74(42.64) 35.53 - 47.96	110/258	42.5 25.93 - 59.07	17/40	50 28.86 - 71.14	13/26	51.11 35.39 - 66.83	23/45	30.77 11.11 - 50.43	8/26
Satisfaction with the service provider										
Government health facility										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	91.46(91.11) 87.58 - 95.33	205/225	90 66.41 - 113.59	9/10	81.82 63.43 - 100.21	18/22	80 59.97 - 100.03	16/20	88.89 75.18 - 102.60	24/27
Proportion of children whose parents were satisfied with the treatment	87.62(86.78) 83.11 - 92.12	194/227	70 36.60 - 103.40	7/10	68.18 46.45 - 89.92	15/22	85 66.85 - 103.15	17/20	88.89 75.18 - 102.60	24/27
Reason for being satisfied		*n=194*		*n=7*		*n=15*		*n=17*		*n=24*
Good doctor/staff available	2.76(3.09) 0.19 - 5.32	6	0	0	13.33 -7.20 - 33.87	2	5.88 -8.24 - 20.01	1	0	0
Good facilities/services	0.44(0.52) -0.75 - 1.63	1	0	0	0	0	5.88 -8.24 - 20.01	1	0	0
Good treatment	90.91(89.69) 86.61 - 95.21	174	100 92.86 - 107.14	7	60 31.87 - 88.13	9	76.47 53.37 - 99.58	13	100 97.92 - 102.08	24
low cost/free treatment	4.03(4.64) 1.00 - 7.05	9	0	0	20 -3.58 - 43.58	3	11.76 -6.49 - 30.02	2	0	0
Good access/nearby	1.86(2.06) -0.30 - 4.02	4	0	0	6.67 -9.29 - 22.62	1	0	0	0	0
Reason for being dissatisfied		*n=28*		*n=3*		*n=6*		*n=3*		*n=3*
Treatment not good	83.35(85.71) 67.77 - 98.94	24	100 83.33 - 116.67	3	83.3 45.18 - 121.49	5	100 83.33 - 116.67	3	66.7 -3.34 - 136.86	2
Too expensive/can't afford	4.22(3.57) -5.01 - 13.46	1	0	0	0	0	0	0	0	0
Medicines not available	9.34(7.14) -3.22 - 21.91	2	0	0	0	0	0	0	33.3 -36.68 - 103.34	1

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
No other choice	3.08(3.57) -4.08 - 10.24	1	0	0	16.7 -21.49 - 54.82	1	0	0	0	0
Private qualified health provider										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	97.85(97.95) 97.01 - 98.69	1245/ 1271	98.14 95.74 - 100.54	158/161	96.3 93.34 - 99.25	182/189	100 99.57 - 100.43	117/117	96.35 92.85 - 99.86	132/137
Proportion of children whose parents were satisfied with the treatment	95.91(95.84) 94.78 - 97.04	1221/ 1274	95.03 91.36 - 98.70	153/161	95.77 92.63 - 98.90	181/189	94.02 89.29 - 98.74	110/117	96.35 92.85 - 99.86	132/137
Reason for being satisfied		*n=1212*		*n=151*		*n=182*		*n=111*		*n=133*
Good doctor/staff available	7.29(7.84) 5.79 - 8.80	95	7.28 2.81 - 11.76	11	16.48 10.82 - 22.15	30	10.81 4.58 - 17.04	12	3.76 0.15 - 7.37	5
Good treatment	92.26(91.67) 90.72 - 93.81	1111	92.05 87.41 - 96.70	139	81.87 76.00 - 87.74	149	89.19 82.96 - 95.42	99	96.24 92.63 - 99.85	128
Good access/nearby	0.26(0.25) -0.07 - 0.59	3	0	0	0.55 -0.80 - 1.90	1	0	0	0	0
	0.14(0.17) -0.11 - 0.39	2	0	0	1.1 -0.69 - 2.89	2	0	0	0	0
	0.04(0.08) -0.11 - 0.20	1	0.66 -0.96 - 2.29	1	0	0	0	0	0	0
Reason for being dissatisfied		*n=53*		*n=8*		*n=7*		*n=4*		*n=4*
Good doctor/staff not available	1.61(1.89) -2.72 - 5.94	1	0	0	14.29 -18.78 - 47.35	1	0	0	0	0
Treatment not good	88.91(86.79) 79.51 - 98.30	46	75 38.74 - 111.26	6	71.43 30.82 - 112.04	5	100 90.00 - 110.00	5	100 87.50 - 112.50	4
Too expensive/can't afford	5.92(5.66) -1.38 - 13.22	3	0	0	0	0	0	0	0	0
No other choice	3.56(5.66) -2.37 - 9.50	3	25 -11.26 - 61.26	2	14.29 -18.78 - 47.35	1	0	0	0	0
Private unqualified health provider										
Proportion of children whose parents were satisfied with behaviour of doctor/health worker	97.49(97.74) 95.42 - 99.56	259/265	95 87.00 - 103.00	38/40	100 98.08 - 101.92	26/26	97.83 92.52 - 103.13	45/46	88.89 75.18 - 102.60	24/27
Proportion of children whose parents were satisfied with the treatment	94.92(94.74) 92.09 - 97.75	252/266	92.5 83.09 - 101.91	37/40	92.31 80.14 - 104.47	24/26	93.48 85.26 - 101.70	43/46	92.59 80.86 - 104.32	25/27
Reason for being satisfied		*n=250*		*n=36*		*n=24*		*n=43*		*n=25*
Good doctor/staff available	4.62(4) 1.82 - 7.42	10	2.8 -3.98 - 9.53	1	8.3 4.81 - 21.47	2	0	0	16.0 -0.37 - 32.37	4
Good treatment	92.84(93.6) 89.44 - 96.23	234	94.4 85.97 - 103.82	34	87.5 72.19 - 102.81	21	100 98.84 - 101.16	43	80.0 62.32 - 97.68	20
low cost/free treatment	0.82(0.8) -0.50 - 2.14	2	0	0	4.2 -5.91 - 14.24	1	0	0	0	0
Good access/nearby	1.72(1.6) -0.09 - 3.53	4	2.8 -3.98 - 9.53	1	0	0	0	0	4 -5.68 - 13.68	1

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Reason for being dissatisfied		*n=14*		*n=3*		*n=2*		*n=3*		*n=2*
Treatment not good	96.14(92.86) 82.49 - 109.80	13	66.67 -3.34 - 136.68	2	100 75.00 - 125.00	2	100 83.33 - 116.67	3	100 75.00 - 125.00	2
No other choice	3.86(7.14) -9.80 - 17.51	1	33.33 -36.68-103.34	1	0	0	0	0	0	0
Cost of treatment of ARI										
Travel cost										
Government health facility										
Paid some cost	42.7(43.05) 35.98 - 49.41	96/223	10 -13.59 - 33.59	1/10	76.19 55.59 - 96.79	16/21	63.16 38.84 - 87.48	12/19	29.63 10.55 - 48.71	8/27
Mean amount paid in Pak Rs.	58.665 (58.458) 41.474 - 75.855	96	300 299.5 - 300.5	1	45.313 30.76 - 59.87	16	91.417 43.110 - 139.724	12	91.25 54.625 - 127.875	8
Private qualified health provider										
Paid some cost	77.57(79.28) 75.23 - 79.92	995/1255	95.51 91.94 - 99.08	149/156	93.55 89.75 - 97.35	174/186	68.75 59.72 - 77.78	77/112	64.44 56.00 - 72.89	87/135
Mean amount paid in Pak Rs.	85.764 (93.666) 74.992 - 96.536	995	171.678 137.2 - 206.1	149	90.126 76.72 - 103.54	174	82.013 60.291 - 103.735	77	69.207 53.521 - 84.893	87
Private unqualified health provider										
Paid some cost	56.23(56.64) 49.95 - 62.50	145/256	62.5 46.25 - 78.75	25/40	65.38 45.17 - 85.59	17/26	38.64 23.11 - 54.16	17/44	50 29.69 - 70.31	14/28
Mean amount paid in Pak Rs.	77.311 (79.552) 43.13 - 111.491	145	155.2 93.93 - 216.43	25	61.471 44.27 - 78.67	17	68.529 51.531 - 85.528	17	170.714 10.539 - 330.889	14
Treatment cost at the facility										
Government health facility										
Paid some cost	88.25(87.5) 83.81 - 92.69	196/224	60 24.64 - 95.36	6/10	90.91 76.62 - 105.19	20/22	89.47 73.04 - 105.90	17/19	88.89 75.18 - 102.60	24/27
Mean amount paid in Pak Rs.	24.176 (26.168) 17.405 - 30.947	196	30.833 10.756 - 50.91	6	72.75 15.04 - 130.46	20	21.412 -7.182 - 50.006	17	4.25 3.698 - 4.802	24
Private qualified health provider										
Paid some cost	95.92(96.09) 94.79 - 97.06	1204/ 1253	98.68 96.54 - 100.82	150/152	96.74 93.90 - 99.58	178/184	95.65 91.49 - 99.81	110/115	95.59 91.77 - 99.41	130/136
Mean amount paid in Pak Rs.	128.64(139.40) 112.36 - 144.92	1204	283.7 169.99-397.41	150	133.315 101.2 - 165.5	178	108.591 88.242 - 128.940	110	113.669 80.675 - 146.663	130
Private unqualified health provider										
Paid some cost	88.31(88.14) 84.15 - 92.47	223/253	88.89 77.23 - 100.54	32/36	92.31 80.14 - 104.47	24/26	84.44 72.74 - 96.15	38/45	92.86 81.53 - 104.18	26/28
Mean amount paid in Pak Rs.	86.84 (97.38) 64.49 - 109.19	223	222.656 166.7 - 278.7	32	81.458 46.25 - 116.66	24	65.395 50.042 - 80.747	38	66.923 32.249 - 101.597	26

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Cost of medicines or investigations outside the facility										
Government health facility										
Paid some cost	79.05(80.28) 73.42 - 84.68	175/218	83.33 45.18 - 121.49	5/6	71.43 49.73 - 93.13	15/21	89.47 73.04 - 105.90	17/19	61.54 40.91 - 82.16	16/26
Mean amount paid in Pak Rs.	214.98(196.58) 111.96 - 318.00	175	235.2 31.14 - 439.26	5	141 82.73 - 199.27	15	220 58.153 - 381.847	17	571.563 -21.88 - 1165.01	16
Private qualified health provider										
Paid some cost	90.21(89.44) 88.51 - 91.91	1101/ 1231	73.29 65.77 - 80.81	107/146	97.21 94.51 - 99.90	174/179	91.23 85.60 - 96.86	104/114	92.54 87.71 - 97.36	124/134
Mean amount paid in Pak Rs.	362.48(355.38) 311.04 - 413.92	1098	372.243 322.43-422.06	107	375.862 254.22-497.50	174	318.202 220.19 - 416.21	104	535.382 240.13 - 830.63	123
Private unqualified health provider										
Paid some cost	81.56(80.63) 76.59 - 86.54	204/253	58.33 40.84 - 75.83	21/36	98 86.32 - 105.68	24/25	76.74 62.95 - 90.53	33/43	73.08 54.10 - 92.05	19/26
Mean amount paid in Pak Rs.	241.13(238.86) 149.19 - 333.06	204	296.667 222.73-370.60	21	183.75 128.64-238.86	24	221.97 104.851 - 339.09	33	238.684 118.19 - 359.18	19
Prevalence and cost on treatment of measles										
Proportion of children 10-59 months ever suffering from measles	26.77(25.81) 25.54 - 28.00	923/3576	23.53 19.61 - 27.45	112/476	23.35 19.35 - 27.35	106/454	19.27 15.48 - 23.07	85/441	24.44 20.52 - 28.35	119/487
Proportion of children 10-59 months suffering from measles during last 24 months	18.08(17.42) 16.80 - 19.35	623/3576	15.97 12.57 - 19.36	76/476	15.20 11.79 - 18.61	69/454	12.70 9.48 - 15.92	56/441	15.61 12.28 - 18.93	76/487
Among 10-59 children who suffered from measles during last 24 months										
Paid some cost for treatment of measles	84.46(85.61) 82.70 - 88.52	500/592	74.29 63.33 - 85.24	52	84.85 75.44 - 94.26	56	79.25 67.38 - 91.11	42	94.74 89.06 - 100.42	72/76
Mean amount paid in Pak Rs.	544.500(555.461) 449.318 - 639.689	499	459.423 298.4 - 620.4	52	454.643 334.87-574.42	56	624.048 191.423-1056.67	42	484.028 378.21 - 589.85	72
Immunization of Children										
Who decides about immunizing the child (children 0-59 months of age)		*n=3989*		*n=401*		*n=441*		*n=424*		*n=529*
Mothers alone (incl step mother)	32.66(31.99) 31.19 - 34.12	1276	21.7 17.54 - 25.85	87	27.89 23.59 - 32.19	123	28.54 24.12 - 32.95	121	33.84 29.71 - 37.96	179
mother with father	47.19(47.43) 45.63 - 48.76	1892	50.62 45.61 - 55.64	203	52.15 47.38 - 56.93	230	47.17 42.30 - 52.04	200	48.39 44.04 - 52.75	256
mother not involved at all	20.15(20.58) 18.89 - 21.41	821	27.68 23.18 - 32.18	111	19.95 16.11 - 23.80	88	24.29 20.09 - 28.49	103	17.77 14.42 - 21.12	94
Mother decides or is involved in the decision	79.85(79.42) 78.59 - 81.11	3168/ 3989	72.32 67.82 - 76.82	290/401	80.05 76.20 - 83.89	353/441	75.71 71.51 - 79.91	321/424	82.23 78.88 - 85.58	435/529

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Vaccine coverage										
No. children aged 12 to 23 months	781		91		94		86		98	
Among children 12-23 months of age										
Proportion reported to have received BCG (TB) vaccine	75.29(72.52) 72.19 - 78.39	562/775	44.44 33.62 - 55.27	40/90	56.99 46.39 - 67.59	53/93	57.65 46.55 - 68.74	49/85	83.67 75.85 - 91.50	82/98
Proportion having BCG scar on the left upper arm	59.36(56.83) 55.60 - 63.12	387/681	31.58 20.47 - 42.69	24/76	40.7 29.73 - 51.66	35/86	38.46 27.02 - 49.90	30/78	67.44 56.96 - 77.93	58/86
Proportion reported to have received any DPT vaccine	65.67(63.41) 62.22 - 69.12	480/757	43.18 32.26 - 54.10	38/88	53.85 43.05 - 64.64	49/91	42.35 31.26 - 53.45	36/85	75.79 66.65 - 84.93	72/95
Proportion reported to have received full course of DPT vaccine	51.61(49.01) 47.99 - 55.24	371/757	22.73 13.40 - 32.05	20/88	45.05 34.28 - 55.83	41/91	31.76 21.28 - 42.25	27/85	66.32 56.29 - 76.35	63/95
Proportion reported to have received measles vaccine	50.35(48.3) 46.67 - 54.03	356/737	26.44 16.60 - 36.28	23/87	40 29.32 - 50.68	36/90	34.52 23.76 - 45.29	29/84	62.07 51.30 - 72.84	54/87
Mean age at which received measles vaccine	9.074 (9.086) 8.969 - 9.178	327	8.95 8.701 - 9.199	20	9 8.986 - 9.014	35	9.111 8.972 - 9.250	27	8.894 8.539 - 9.248	47
Proportion of children 10-59 months old reported to have received measles vaccine	49.72(47.61) 48.33 - 51.10	1704/ 3579	59.45 55.65 - 63.26	283/476	41.52 37.58 - 45.46	186/448	79.55 76.29 - 82.81	354/445	48.71 44.80 - 52.63	227/466
Proportion reported to have received at least one dose of polio vaccine during last 12 months	99.22(99.09) 98.63 - 99.81	760/767	97.8 94.24 - 101.36	89/91	97.83 94.30 - 101.35	90/92	98.8 95.85 - 101.74	82/83	98.94 96.33 - 101.54	93/94
Among children 12-59 months of age										
Proportion reported to have received at least one dose of polio vaccine during last 12 months	99.46(99.38) 99.20 - 99.71	3544/ 3566	98.42 97.14 - 99.69	435/442	99.49 98.67 - 100.32	393/395	98.87 97.76 - 99.97	436/441	99.32 98.45 - 100.20	440/443
Among children 0-59 months of age										
Reasons for not being vaccinated at all or only partially vaccinated		*n=1646*		*n=321*		*n=243*		*n=280*		*n=169*
Carelessness on part of family members	9.62(8.81) 8.16 - 11.07	145	5.92 3.18 - 8.66	19	7 3.58 - 10.41	17	3.57 1.22 - 5.92	10	15.38 9.65 - 21.12	26
Family members don't have time/no one to take	6.22(5.47) 5.02 - 7.42	90	1.56 0.05 - 3.07	5	2.06 0.07 - 4.05	5	5.36 2.54 - 8.17	15	7.69 3.38 - 12.01	13
vaccination would cause harm to the child	5.39(4.31) 4.27 - 6.52	71	0.93 -0.27 - 2.14	3	0.82 -0.52 - 2.16	2	1.79 0.06 - 3.52	5	14.79 9.14 - 20.44	25
Lack of awareness/ misperception about schedule	4.36(4.13) 3.34 - 5.38	68	4.98 2.45 - 7.52	16	4.12 1.41 - 6.82	10	2.14 0.27 - 4.02	6	9.47 4.76 - 14.18	16
No facility nearby/access issue	59.69(62.94) 57.29 - 62.09	1036	75.7 70.85 - 80.55	243	76.54 71.01 - 82.08	186	70.71 65.21 - 76.22	198	42.01 34.27 - 49.75	71
Don't believe/useless/no tradition	5.51(5.1) 4.38 - 6.64	84	1.87 0.23 - 3.51	6	2.06 0.07 - 4.05	5	3.93 1.47 - 6.38	11	1.78 -0.51 - 4.06	3
Family members don't allow	1.57(1.58) 0.94 - 2.20	26	2.18 0.43 - 3.93	7	1.23 -0.36 - 2.83	3	1.43 -0.14 - 3.00	4	2.37 -0.22 - 4.95	4
Can't afford/poor	7.63(7.65) 6.32 - 8.95	126	6.85 3.93 - 9.77	22	6.17 2.94 - 9.40	15	11.07 7.22 - 14.93	31	6.51 2.49 - 10.52	11

Indicator	District % wt (unwt) 95% CI	Based on	NARA Unwt 95% CI	Based on	FAIZ GANJ unwt 95% CI	Based on	GAMBAT unwt 95% CI	Based on	KHAIRPUR unwt 95% CI	Based on
Nutritional status of the child (Mid upper arm circumference MUAC)										
Proportion of 0-59 months old children perceived by their mothers to be normal or big for their age	84.35(84.53) 83.30 - 85.40	3984/ 4713	87.18 84.36 - 89.99	503/577	83.68 80.45 - 86.91	446/533	84.84 81.85 - 87.82	498/587	83.33 80.22 - 86.45	485/582
Proportion of 0-59 months old children measured as malnourished (MUAC < 12.5 cm)	17.17(17.58) 16.00 - 18.34	717/4078	15.83 13.19 - 18.46	88/556	20.3 17.33 - 23.28	107/527	15.71 12.85 - 18.58	74/471	17.18 14.44 - 19.93	94/547

Annex 6
Main indicators from community profiles and LHW interviews

Table 1. Indicators from community profiles

Indicator		Number of communities
Total number of communities visited		88
Urban communities		16
Rural communities		72
Garbage disposal system		
Communities with a system for removing garbage from individual households		14/88
Communities with a government system for removing garbage from the community		14/88
Frequency of removal of garbage by the government system		*(n=13)*
	Daily	6
	Not every day but at least once in a week	3
	Not once in a week but at least once every 15 days	2
	Not once in 15 days but at least once in a month	1
	Less frequently than once in a month	1
Communities with a proper method for disposal of garbage (including those with government system)		54/81
Communities with large amounts of garbage piled in the streets		74/85
Communities with large amounts of human/animal excreta in the streets		73/85
Sewerage system		
Communities with a government sewerage system		20/88
Communities with a better sewerage system		15/88
Communities with large amounts of stagnant water/ sewage in the streets		25/84
Drinking water		
Communities with sweet ground water		72/83
Availability of health facilities		
Within 5 km		
Availability of a health facility		*(n=88)*
	Government	58
	Private	13
	Any (government or private)	61
Availability of an evening/24 hr health facility		*(n=88)*
	Government	19/88
	Private	13/87
	Any (government or private)	30/88
Within 1 km		
Availability of a health facility		*(n=88)*
	Government	25
	Private	29
	Any (government or private)	34
Availability of an evening/24 hr health facility		
	Government	7/88
	Private	8/87
	Any (government or private)	14/88
Availability of immunization services		
Availability of a health facility with immunization services for children within 5 km		
	Government	46/86
	Private	4/87
	Any (government or private)	48/88
Availability of a health facility with immunization services for children within 1 km		
	Government	20/88

Indicator	Number of communities
Private	3/87
Any (government or private)	21/88
Usual place for people in the community to take their children to be immunized	*(n=73)*
Nowhere	10
Government health facility	52
Private qualified facility/practitioner	3
Vaccination team visit at home	8
Communities where people take their children to a health facility for immunization	55/73
Communities visited by a vaccination team/person for routine immunization	34/87
Frequency of visit by a vaccination team to the community for routine immunization	*(n=77)*
Never visited	53
At least once every month	10
Not every month but at least once every 6 months	9
Not every six months but at least once a year	3
Less frequently than once a year	2
Period since last visit by a vaccination team for routine immunization	*(n=82)*
Never visited	53
Last visit with in a month	18
More than one month, but with in the last 6 months	5
More than 6 months , but with in last year	2
More than a year ago	4
Polio campaign	
Communities with a Polio Campaign/Day celebrated within last one month	74/85
Number of polio campaign/days in the community in the last 12 months	*(n=36)*
1	4
2	2
3	5
4	8
5	9
6	6
7	3
8	1
10	1
12	7
14	1
Yes but numbers not specified	36
Community organization	
Communities with any NGOs/CBOs/voluntary organizations/committees	20/85
Communities with any women organization	1/85
Communities with any existing CCB	17/86
Communities with any project done by a CCB	8/85
Type of projects done by CCBs	*(n=9)*
Construction of Eidgah/graveyard/mosque	2
Water supply scheme	3
Sanitation/drainage	1
Education	3

Table 2. Indicators from LHW interviews

Indicator		Number of LHWs
General information		
Total number of LHWs interviewed		46
Age distribution of LHWs		*(n=46)*
	18-30 years	35
	31-40 years	7
	41 years and above	4
Formal education level		*(n=46)*
	Less than 10th grade	11
	Up to 10th grade	23
	More then 10th grade	12
Period since started working as an LHW		*(n=46)*
	More then a year up to 5 years	10
	More then 5 years up to 10 years	29
	More then 10 years	7
Training of LHWs		
Period since received initial training		*(n=46)*
	Within last one year	1
	More than a year but within last two years	9
	More than two years ago	36
LHWs receiving any further refresher training		43/46
Period since received refresher training		*(n=40)*
	Within last three months/still going on	24
	More than three months but within the last six months	3
	More than six months but within the last one year	6
	More than a year but within last five years	7
Household visits		
Number of households covered by LHWs		*(n=46)*
	150 or less households	31
	More than 150 households	15
Factors that would aid LHWs to visit the households (multiple responses recorded)		*(n=46)*
	Nothing needed	29
		9
		4
	Community support	5
	More medicines/equipment	1
Supervisory support		
Frequency of visit by a supervisor		*(n=46)*
	Once a month or less frequently (including “no one visits”)	12
	More than once a month	34
LHWs visited by a supervisor within last one month		39/44
Knowledge and practices about immunization		
LHWs that could mention at least one correct illness prevented by immunisation		46/46
LHWs that have heard about any bad effects of immunization		28/44
Type of bad effects of immunisation heard by LHWs		*(n=46)*
	Nothing	16
	Actual side-effects	26
	Incorrect perceptions	2
Source from where heard about bad effects of immunization		*(n=28)*
	Family/neighbours, (including knew myself)	7
	Doctor/other health workers/health facility	6
	During training/material	12

Indicator	Number of LHWs
During household visits (from parents)	3
Advice given by LHWs to mothers and care givers about immunization of their children	*(n=46)*
Illness protection	14
Important to immunize	33
Get vaccination form birth	5
Always complete course	4
Information provide by LHWs to mothers/care givers about immunization (multiple responses recorded)	*(n=46)*
Importance and benefit	42
Schedule/follow schedule/ follow rules	6
Remove misconceptions / explain	5
Main reasons as reported by LHWs for some children not being immunized (multiple responses recorded)	*(n=46)*
No reason	2
Carelessness	13
Don't have time/no one to take	2
Facility too far	3
Fear of side effects	9
Lack of awareness	22
Don't believe in it	4
Not allowed	2
Family problem/migration	2
Suggestions to help ensure that all children get immunized (multiple responses recorded)	*(n=46)*
Nothing	2
Mobile teams	4
Facility nearby/transport	12
Provide information/awareness	22
Mare staff/vaccinators/train LHWs	6
Ensure vaccine availability/generator/electricity	3
Knowledge and practices about childhood diarrhea	
LHWs mentioning at least one correct reasons for diarrhoea among children 0-5 years	44/46
LHWs thinking that child should be given more fluids than usual during diarhoea	42/46
LHWs thinking that child should be given more or same amount of food than usual during diarhoea	41/46
Advice given by LHWs to the mothers about preventing diarrhea in children (multiple responses recorded)	*(n=46)*
No advice/don't know	1
Hygiene/cleanliness	40
Nutrition/food	18
More fluids/ORS	13
Contact doctor	2
Advice given by LHWs to the mothers about treating diarrhea in children (multiple responses recorded)	*(n=46)*
Hygiene/cleanliness	8
Nutrition/food	11
More fluids/ORS	41
Contact doctor	22
LHWs thinking that children suffering from diarrhea should be given anti-diarrhoeal drugs	36/46
Knowledge and practices about childhood Acute Respiratory Infections (ARI)	
LHWs telling mother at least one correct information about ARI recognition	46/46
Advice given by LHWs to the mothers about treating a child with ARI (multiple responses recorded)	*(n=46)*
Take care of eating	1
Take to Doctor	36
Protect form coldness	11
Provide medicine (co-trimoxazol/paraceutamol syrup)	27
Give eggs and honey/ hot foods	1

Annex 7. Main themes from community focus group discussions

Theme	Male	Female
Total number of focus groups		
Urban	7	7
Rural	25	25
Most important problem in relation to child health in the community		
No problem	0	2
Lack of staff/bad behaviour of staff at health facility	13	23
Lack of medicines at the health facility	11	13
Poor services/management at the health facility	4	3
Expensive/extra payments at the health facility	3	2
Health facility too far/difficult access	16	26
Poor sanitation/unhygienic conditions in the community	29	20
Lack/poor quality of drinking water in the community	16	9
Specific diseases such as malaria/diarrhoea/ARI/skin diseases/immunize able diseases	41	10
Group agreed that children seem to get more diarrhoea if their family does not use a latrine	29/31	29/32
Suggestions for helping households to install and use latrines		
Government should help	12	11
Financial/material technical support to communities from outside	20	15
Raise awareness about importance benefits of latrines	7	4
Self help/already have latrine	3	8
Provide water supply/sewerage system	23	20
What can people in the community do install and use latrines?		
Can't do anything	22	28
Collective effort/self help	13	5
Make each other aware about importance/benefits	7	0
Collect funds/contributions within community	2	4
Provide material/labour	2	1
What can be done by the government to help communities install and use latrines?		
Govt. does not help	6	6
Financial/material/technical help	23	29
Construct latrines for us	7	9
Create awareness	4	0
Provide sewerage/water supply system	17	20
Create economic opportunities/employment	1	2
Reasons for mothers to give extra fluid to children during diarrhoea		
To avoid dehydration/ deficiency of water in the child	31	32
Child may die if water is not given	10	11
That’s the only thing needed to manage diarrhoea/we won’t have to go to the doctor	1	1
Child thirsty/ demands water frequently	3	3
They are aware about the importance of giving extra fluid during diarrhoea	4	2
Reasons for mothers who don’t give extra fluid to the chills during diarrhoea		
Due to lack of awareness / illiteracy	31	27
Mothers don’t have time to think about it	6	16
Misconception about giving extra fluid during diarrhoea	11	17
Due to bad quality of drinking water	2	1
Such mothers are careless	10	20
Due to lack of awareness / illiteracy	0	1
Best person in the community to convince mothers about giving extra fluid to the child during diarrhoea		
No one in the community/only God can convince	1	2
Doctor/health department	18	20
Community leader/influential/Pesh Imam	28	16
Parents/family members	19	21
NGOs/social workers/teams from outside	5	8

Theme	Male	Female
Community women to each other	5	3
LHW	23	16
Other ways to convey such messages to mothers		
Pesh Imam in Friday sermon/prayers	4	5
Media/poster/pamphlet	23	19
Community meetings/events	7	3
NGOs/Social workers/trained community members/teachers/teams from outside	12	25
Through doctors and health workers	16	24
Community centres from info	1	2
Suggestions for improving household environment to prevent children's exposure to smoke from fuel and smoking		
Kitchen should be made away from the place of sitting/sleeping in home	24	25
Alternative fuels - If gas is made available then there would be no smoke	16	27
Smoking of cigarettes should not be done inside home	28	20
Cooking should be done when children were in school or not at home	5	14
Outlets to exit smoke out of kitchen/home	14	9
Create awareness about proper ventilation and hazards of smoky environment	4	1
What can householders and people in the community do improve household environment?		
Nothing	17	29
Form committee to create awareness	7	1
Separate cooking area/keep children away from cooking area	11	7
Use gas/alternate fuel with less smoke	7	7
Control smoking	16	2
Proper ventilation for smoke exit from kitchen/house	2	2
What can be done by the government/ NGOs to help communities for improving household environment?		
Nothing	3	0
Provide gas	21	28
Awareness about hazards of smoking	12	4
Legislation to Ban smoking	14	4
Provide funds to construct separate kitchen/cooking area, ventilation	11	10
Reasons why children were not taken anywhere for treatment of ARI		
Poverty/too many children	30	33
Facility too far/No transport	28	21
No doctor/Bad behaviour of doctor	12	6
Medicines not available/poor quality of medicines	11	12
Lack of awareness/misconceptions/tradition/self medication	11	13
Careless/ignorant	4	6
Suggestions to encouraged /support parents so that they take their children to a health facility for treatment of ARI		
More/free/good quality medicines	14	18
Financial support/employment/control price	15	11
Health facility nearby/better roads	25	27
Awareness among people	12	10
Doctors available/better behaviour of doctors	6	17
Focus groups who parents who don't immunise fully understand the risk that they are taking	12/30	15/32
Reasons for those who don't understand the risk from not having their children immunized		
Illiteracy/lack of education	25	24
Don't take measles as a serious disease	4	9
No info about the risk/no one comes to tell	18	5
People ignorant/careless	7	15
Reasons for those who understand the risk, but still are unable to get their children immunized		
Lack/poor immunization services/no mobile team	15	20
No transport/roads	9	12
Poverty	20	16
Carelessness/no tradition/women not allowed	19	19

Theme	Male	Female
Misconceptions about vaccination/fear of side effects/family planning	10	18
No time to take child for vaccination	3	4
Suggestions to help parents to have their children immunized		
Nothing would help/no need	2	0
Send mobile vaccination teams	16	25
Better access to health facility/nearby/transport/employment	9	12
More staff at health facility	10	6
Create awareness about immunization	22	22
More vaccines/use of disposable syringe/stop corruption	1	3