

VI. CHILD HEALTH

Vaccinations

The Millennium Development Goal 4 (MDG 4) is to reduce child mortality by two thirds between 1990 and 2015. Immunization plays a key part in achieving this goal. In addition, the Global Vaccine Action Plan (GVAP) was endorsed by the 194 Member States of the World Health Assembly in May 2012 to achieve the Decade of Vaccines vision by delivering universal access to immunization. Immunization has saved the lives of millions of children in the four decades since the launch of the Expanded Programme on Immunization (EPI) in 1974. Worldwide, there are still millions of children not reached by routine immunization and as a result, vaccine-preventable diseases cause more than 2 million deaths every year.

The WHO Recommended Routine Immunizations for Children²⁶ aims at all children to be vaccinated against tuberculosis, diphtheria, pertussis, tetanus, polio, measles, hepatitis B, haemophilus influenzae type b, pneumonia/meningitis, rotavirus, and rubella.

All doses in the primary series are recommended to be completed before the child's first birthday, although depending on the epidemiology of disease in a country, the first doses of measles and rubella containing vaccines may be recommended at 12 months or later. The recommended number and timing of most other doses also vary slightly with local epidemiology and may include booster doses later in childhood.

Pakistan National Immunization Programme provides all the above mentioned vaccinations with birth doses of BCG, Polio, and Hepatitis B vaccines, three doses of the Pentavalent vaccine containing DPT, Hepatitis B, and *Haemophilus influenzae* type b (Hib) antigens, three doses of Polio vaccine, three doses of Pneumococcal (conjugate) vaccine, two or three doses of rotavirus vaccine (depending on vaccine used), two doses of the MMR vaccine containing measles, mumps, and rubella antigens. All vaccinations should be received during the first year of life except the doses of MMR at 12 and 15 months. Taking into consideration this vaccination schedule, the estimates for full immunization coverage from the MICS Punjab, 2014 are based on children age 12-23 months.

Information on vaccination coverage was collected for all children under three years of age. All mothers or caretakers were asked to provide vaccination cards. If the vaccination card for a child was available, interviewers copied vaccination information from the cards onto the MICS questionnaire. If no vaccination card was available for the child, the interviewer proceeded to ask the mother to recall whether or not the child had received each of the vaccinations, and for Polio, DPT/HEPB/HIB and PENTA, how many doses were received. The final vaccination coverage estimates are based on information obtained from the vaccination card and the mother's report of vaccinations received by the child.

²⁶ <http://www.who.int/immunization/diseases/en>. Table 2 includes recommendations for all children and additional antigens recommended only for children residing in certain regions of the world or living in certain high-risk population groups.

Table CH.1: Vaccinations in the first years of life

Percentage of children age 12-23 months and 24-35 months vaccinated against vaccine preventable childhood diseases at any time before the survey and by their first birthday, Punjab, 2014.

	Children age 12-23 months:				Children age 24-35 months:			
	Vaccinated at any time before the survey according to:			Vaccinated by 12 months of age ^a	Vaccinated at any time before the survey according to:			Vaccinated by 12 months of age
	Vaccination card	Mother's report	Either		Vaccination card	Mother's report	Either	
Antigen								
BCG ¹	58.4	34.7	93.1	92.8	36.7	55.3	92.0	90.3
Polio								
At birth	57.6	33.8	91.4	91.2	36.2	52.3	88.6	87.2
1	58.0	37.4	95.3	94.7	36.4	57.2	93.6	91.1
2	56.9	33.9	90.8	89.7	35.9	53.1	89.0	85.5
3 ²	55.3	31.2	86.6	84.8	35.2	49.9	85.1	80.8
PENTA								
1	58.2	27.5	85.7	85.2	36.7	45.3	82.0	79.8
2	57.1	24.8	81.8	80.9	36.2	41.4	77.6	74.7
3 ^{3,4,5}	55.6	17.7	73.3	71.7	35.5	31.8	67.3	63.9
Measles								
1 ⁶	50.9	26.9	77.8	71.6	33.9	49.1	83.0	71.8
2	28.7	0.5	29.2	na	29.8	0.0	0.0	na
Fully vaccinated ^{7, b}	50.3	11.9	62.3	56.0	33.9	24.8	58.7	48.7
No vaccinations	0.0	3.5	3.5	3.5	0.0	4.5	4.5	5.2
Number of children	5,300	5,300	5,300	5,300	5,326	5,326	5,326	5,326
¹ MICS indicator 3.1 - Tuberculosis immunization coverage								
² MICS indicator 3.2 - Polio immunization coverage								
³ MICS indicator 3.3 - Diphtheria, pertussis and tetanus (DPT) immunization coverage								
⁴ MICS indicator 3.5 - Hepatitis B immunization coverage								
⁵ MICS indicator 3.6 - Haemophilus influenzae type B (Hib) immunization coverage								
⁶ MICS indicator 3.4; MDG indicator 4.3 - Measles immunization coverage								
⁷ MICS indicator 3.8 - Full immunization coverage								
^a All MICS indicators refer to results in this column								
^b Includes: BCG, Polio3, PENTA3, and Measles-1 (MCV1) as per the vaccination schedule in Punjab								
na: not applicable								

The percentage of children age 12-23 months and 24-35 months who have received each of the specific vaccinations by source of information (vaccination card, mother's recall or either) is shown in Table CH.1 and Figure CH.1. The denominators for the table are number of children age 12-23 months and 24-35 months so that only those children who are old enough to be fully vaccinated are counted. In the first three columns in each panel of the table, the numerator includes all children who were vaccinated at any time before the survey according to the vaccination card, mother's recall or either. In the last column in each panel, only those children who were vaccinated before their first birthday, as recommended, are included. For children without vaccination cards, the proportion of vaccinations given before the first birthday is assumed to be the same as for children with vaccination cards.

Approximately 93 percent of children age 12-23 months received a BCG vaccination by the age of 12 months and the first dose of PENTA vaccine was given to 85 percent. The percentage declines to 81 percent for the second dose of PENTA, and to 72 percent for the third dose. Similarly, 95 percent of

children received Polio 1 by age 12 months and this declines to 85 percent by the third dose. The coverage for the first dose of measles vaccine by 12 months is 72 percent although 78 percent of children 12-23 months received the measles vaccine. As a result, the percentage of children who had all the recommended vaccinations by their first birthday is low at 56 percent. The coverage figures for children age 24-35 months are generally similar to those age 12-23 months suggesting that immunization coverage has been on average stagnant in Punjab between 2012 and 2014²⁷.

Figure CH.1: Vaccinations by age 12 months (measles by 24 months) MICS Punjab, 2014

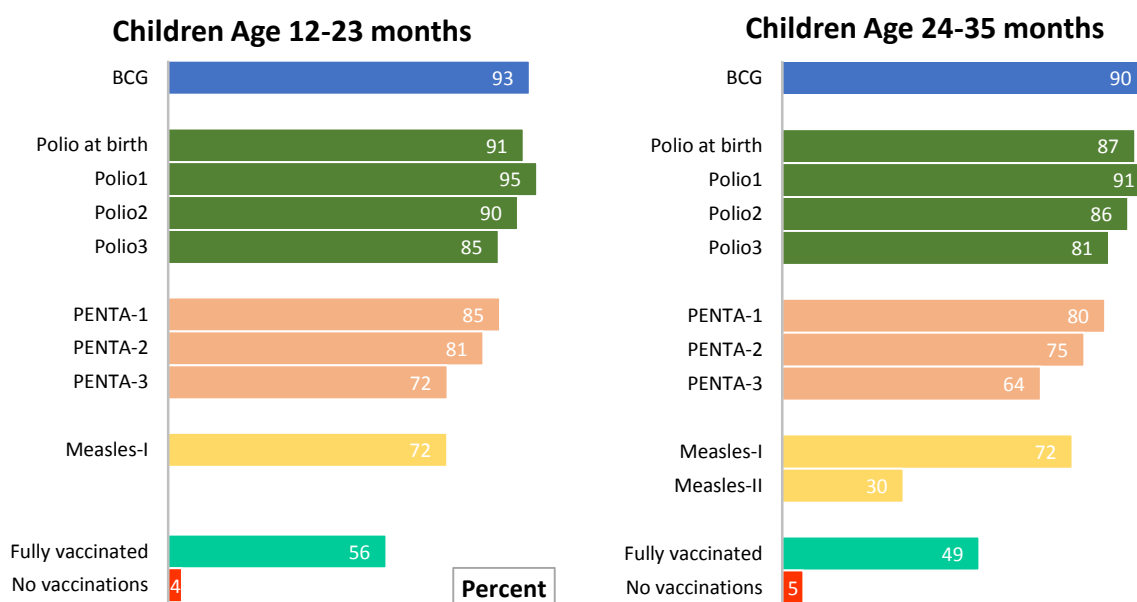


Table CH.2 presents vaccination coverage estimates among children age 12-23 months by background characteristics. The figures indicate children receiving the vaccinations at any time up to the date of the survey, and are based on information from both the vaccination cards and mothers'/caretakers' report. Vaccination cards have been seen by the interviewer for 59 percent of children age 12-23 months.

About 62 percent of the children aged 12-23 months are fully vaccinated, the rates being higher in urban (68%) compared to rural (60%). At division level, children age 12-23 months that are fully vaccinated are lowest (39%) in DG Khan division and highest (75%) in Gujranwala division. Vaccination is positively associated with mother's education as it is highest (76%) for the children whose mothers have higher education and lowest (51%) for those whose mothers have only pre-school or no education. About three

²⁷ It is important to note that data recorded on the vaccination cards was not universally endorsed by the mothers/ caretakers. In some places the field teams received comments from the mothers that sometimes cards were filled without vaccination to show progress. Since this was not in the scope of the survey, it is therefore suggested that health department may initiate a study through a neutral agency to find out the extent of such happenings. It is important to achieve 100 percent coverage of immunization in real.

in four children living in the households in the highest quintile are fully vaccinated (74%) compared to 42 percent of children living in the households in lowest quintile.

Table CH.2: Vaccinations by background characteristics													
Percentage of children age 12-23 months currently vaccinated against vaccine preventable childhood diseases, Punjab, 2014.													
	Percentage of children age 12-23 months who received:											Percentage with vaccination card seen	Number of children age 12-23 months
	BCG	Polio				PENTA			Measles-1 (MCV1)	Full ^a	None		
		At birth	1	2	3	1	2	3					
Punjab	93.1	91.4	95.3	90.8	86.6	85.7	81.8	73.3	77.8	62.3	3.5	58.5	5,300
Area of residence													
Rural	92.4	90.4	95.3	91.1	86.6	83.8	79.8	70.9	76.7	59.8	3.5	57.7	3,682
All Urban	94.4	93.6	95.3	89.9	86.4	90.1	86.5	78.7	80.3	68.0	3.6	60.4	1,618
Major Cities	94.1	93.8	94.6	86.0	83.1	93.2	88.3	78.2	79.1	68.1	3.9	59.5	813
Other Urban	94.8	93.4	96.1	93.9	89.8	86.9	84.7	79.2	81.5	67.8	3.2	61.4	804
Sex													
Male	93.2	92.3	95.5	90.5	86.9	86.7	83.0	74.0	79.1	63.7	3.4	58.3	2,766
Female	92.9	90.5	95.1	91.0	86.1	84.7	80.6	72.5	76.4	60.7	3.7	58.7	2,534
Mother's education													
None/pre-school	88.9	87.3	93.4	88.8	83.7	78.8	74.2	63.5	68.2	51.2	5.1	50.4	2,388
Primary	96.4	94.6	96.4	94.0	89.9	89.2	85.9	80.2	84.2	70.1	2.3	66.3	978
Middle	94.6	93.1	96.5	90.6	87.0	91.3	87.4	79.7	82.4	67.9	2.7	66.3	581
Secondary	96.2	93.9	96.9	92.3	89.2	92.6	89.7	83.4	83.7	71.8	2.8	64.9	725
Higher	98.6	97.7	97.8	91.7	88.7	93.8	90.3	82.4	93.4	75.9	0.8	62.7	628
Wealth index quintile													
Lowest	85.2	83.4	92.4	87.0	81.1	73.0	67.1	55.4	59.2	42.2	6.0	42.3	1,136
Second	93.5	91.3	95.0	90.8	86.6	84.2	79.7	70.5	76.4	58.8	3.5	60.8	1,047
Middle	94.8	92.7	95.6	92.7	88.4	88.5	86.1	77.7	82.6	67.8	3.2	63.4	1,084
Fourth	95.5	94.1	96.5	92.3	88.9	90.7	88.2	82.5	84.6	70.5	2.8	64.1	1,040
Highest	97.0	96.4	97.5	91.3	88.3	93.7	89.5	82.3	88.3	74.1	1.7	63.4	993
Division													
Bahawalpur	89.4	88.0	95.3	90.6	84.6	85.9	81.1	67.7	64.0	51.6	2.6	44.5	544
D.G. Khan	81.2	81.3	89.1	84.7	80.1	75.6	67.0	52.1	56.1	38.6	8.9	42.7	557
Faisalabad	93.8	91.9	95.5	91.1	87.4	91.4	88.8	78.4	78.6	66.2	3.5	58.3	617
Gujranwala	97.1	96.0	96.5	93.2	88.7	91.7	88.9	84.3	89.8	75.2	2.2	70.8	851
Lahore	93.5	92.1	95.9	89.0	83.8	85.7	82.4	71.0	76.0	61.3	3.4	54.9	886
Multan	93.6	90.0	95.0	91.6	89.6	90.1	86.9	78.2	78.3	66.7	4.2	57.8	581
Rawalpindi	96.5	96.2	96.4	87.5	82.9	94.3	87.2	82.5	86.7	70.4	2.2	64.9	422
Sahiwal	97.9	95.8	98.5	96.6	93.7	75.4	73.4	71.6	86.4	65.1	1.0	69.8	433
Sargodha	94.1	90.4	95.8	93.6	90.2	73.9	72.8	69.1	84.4	60.4	3.3	63.7	408
^a Includes: BCG, Polio3, PENTA3 and Measles-1 (MCV1) as per the vaccination schedule in Punjab													

^a Includes: BCG, Polio3, PENTA3 and Measles-1 (MCV1) as per the vaccination schedule in Punjab

Neonatal Tetanus Protection

One of the MDGs is to reduce by three quarters the maternal mortality ratio, with one strategy to eliminate maternal tetanus. Following on the 42nd and 44th World Health Assembly calls for elimination of neonatal tetanus, the global community continues to work to reduce the incidence of neonatal tetanus to less than one case of neonatal tetanus per 1,000 live births by 2015.

The strategy for preventing maternal and neonatal tetanus is to ensure that all pregnant women receive at least two doses of tetanus toxoid vaccine. If a woman has not received at least two doses of tetanus toxoid during a particular pregnancy, she (and her newborn) are also considered to be protected against tetanus if the woman:

- Received at least two doses of tetanus toxoid vaccine, the last within the previous 3 years;
- Received at least 3 doses, the last within the previous 5 years;
- Received at least 4 doses, the last within the previous 10 years;
- Received 5 or more doses anytime during her life.²⁸

To assess the status of tetanus vaccination coverage, women who had a live birth during the two years before the survey were asked if they had received tetanus toxoid injections during the pregnancy for their most recent birth, and if so, how many. Women who did not receive two or more tetanus toxoid vaccinations during this recent pregnancy were then asked about tetanus toxoid vaccinations they may have previously received. Interviewers also asked women to present their vaccination card on which dates of tetanus toxoid are recorded and referred to information from the cards when available.

Table CH.3: Neonatal tetanus protection							
Percentage of women age 15-49 years with a live birth in the last 2 years protected against neonatal tetanus, Punjab, 2014.							
	Percentage of women who received at least 2 doses during last pregnancy	Percentage of women who did not receive two or more doses during last pregnancy but received:				Protected against tetanus ¹	Number of women with a live birth in the last 2 years
		2 doses, the last within prior 3 years	3 doses, the last within prior 5 years	4 doses, the last within prior 10 years	5 or more doses during lifetime		
Punjab	70.5	4.7	0.8	0.4	0.1	76.4	10,653
Area of residence							
Rural	69.0	4.1	0.7	0.3	0.1	74.2	7,369
All Urban	73.6	5.9	1.2	0.6	0.1	81.4	3,284
Major Cities	74.4	5.9	1.4	0.3	0.1	82.3	1,692
Other Urban	72.8	5.8	0.9	0.8	0.1	80.4	1,592
Mother's education^a							
None/pre-school	59.0	4.7	0.9	0.4	0.2	65.1	4,816
Primary	75.7	3.9	1.0	0.6	0.0	81.3	1,961
Middle	78.4	5.6	0.6	0.1	0.2	84.9	1,096
Secondary	81.5	5.1	0.9	0.4	0.0	87.9	1,467
Higher	85.7	4.4	0.3	0.2	0.1	90.7	1,311
Wealth index quintile							
Lowest	56.2	4.6	1.1	0.4	0.1	62.5	2,321
Second	64.3	4.1	0.8	0.3	0.2	69.8	2,198
Middle	74.0	5.3	0.5	0.5	0.1	80.4	2,118
Fourth	77.6	3.9	1.0	0.3	0.1	83.0	2,094
Highest	82.9	5.4	0.7	0.4	0.0	89.4	1,922
Division							
Bahawalpur	63.2	2.2	1.0	0.2	0.1	66.7	1,068
D.G. Khan	59.8	5.4	0.5	0.5	0.1	66.2	1,181
Faisalabad	71.4	5.0	0.8	0.3	0.1	77.6	1,237
Gujranwala	81.5	4.9	0.5	0.5	0.1	87.4	1,578
Lahore	69.3	4.9	1.5	0.6	0.2	76.4	1,914
Multan	68.4	2.9	0.6	0.2	0.2	72.3	1,162
Rawalpindi	79.4	5.1	0.5	0.1	0.1	85.1	882
Sahiwal	70.0	4.0	0.6	0.8	0.0	75.5	827
Sargodha	69.2	7.9	0.8	0.2	0.4	78.5	804
¹ MICS indicator 3.9 - Neonatal tetanus protection							
^a Total includes 2 unweighted cases of mother's education missing							

²⁸ Deming, M.S. et al. 2002. *Tetanus toxoid coverage as an indicator of serological protection against neonatal tetanus*. Bulletin of the World Health Organization 80(9):696-703

Table CH.3 shows the protection status from tetanus of women who have had a live birth within the last 2 years. Seventy six percent of the women are reported to be protected against tetanus, the proportion being higher in urban (81%) compared to rural (74%). At the divisional level, DG Khan had the lowest proportion of women protected against tetanus (60%) compared to Gujranwala (82%). Women with higher education are more likely to be protected against tetanus (91%) compared to women with only pre-school or no education (65%). Similarly, protection against tetanus is positively correlated with household wealth.

Care of Illness

A key strategy for accelerating progress toward MDG 4 is to tackle the diseases that are the leading killers of children under 5. Diarrhoea and pneumonia are two such diseases. The Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (GAPPD) aims to end preventable deaths from pneumonia and diarrhoea by reducing mortality from pneumonia to 3 deaths per 1000 live births and mortality from diarrhoea to 1 death per 1000 live births by 2025.

Malaria is also a major killer of children under 5, killing about 900 children every day, especially in sub-Saharan Africa. The Global Malaria Action Plan (GMAP) aims to reduce deaths from malaria to near zero by 2015.

Table CH.4 presents the percentage of children under 5 years of age who were reported against an episode of diarrhoea, symptoms of acute respiratory infection (ARI), or fever during the 2 weeks preceding the survey. These results are not measures of true prevalence, and should not be used as such, but rather the period-prevalence of these illnesses over a two-week time period.

Table CH.4: Reported disease episodes				
Percentage of children age 0-59 months for whom the mother/caretaker reported an episode of diarrhoea, symptoms of acute respiratory infection (ARI), and/or fever in the last two weeks, Punjab, 2014.				
	Percentage of children who in the last two weeks had:			Number of children age 0-59 months
	An episode of diarrhoea	Symptoms of ARI	An episode of fever	
Punjab	17.4	2.5	20.8	27,495
Area of residence				
Rural	17.4	2.8	20.8	19,002
All Urban	17.5	1.8	20.7	8,493
Major Cities	18.3	1.3	21.4	4,364
Other Urban	16.6	2.4	20.0	4,129
Sex				
Male	17.9	2.8	21.5	13,915
Female	16.9	2.1	20.1	13,580
Age				
0-11 months	23.7	3.2	25.7	5,343
12-23 months	25.4	2.4	26.0	5,300
24-35 months	17.9	2.5	19.9	5,326
36-47 months	12.6	2.5	18.2	5,894
48-59 months	8.5	1.9	14.8	5,633
Mother's education				
None/pre-school	17.5	3.1	21.0	13,140
Primary	18.5	2.7	22.9	4,991
Middle	18.7	1.7	21.5	2,740
Secondary	17.0	1.5	19.6	3,563
Higher	14.2	1.2	17.3	3,062
Wealth index quintile				
Lowest	18.7	4.2	21.7	6,316
Second	18.7	2.7	22.5	5,560
Middle	17.4	2.2	21.0	5,335
Fourth	16.1	1.8	20.2	5,380
Highest	15.7	1.0	18.2	4,904
Division				
Bahawalpur	12.5	2.7	14.8	3,080
D.G. Khan	19.2	4.8	24.0	3,151
Faisalabad	15.3	2.0	19.7	3,272
Gujranwala	18.9	2.1	23.7	4,100
Lahore	19.7	1.9	22.2	4,670
Multan	17.9	1.8	17.9	3,019
Rawalpindi	13.2	1.4	16.2	2,165
Sahiwal	20.5	3.2	24.4	2,032
Sargodha	17.9	2.9	23.2	2,005

The definition of a case of diarrhoea or fever, in this survey, was the mother's (or caretaker's) report that the child had such symptoms over the specified period; no other evidence were sought beside the opinion of the mother. A child was considered to have had an episode of ARI if the mother or caretaker reported that the child had, over the specified period, an illness with a cough with rapid or difficult breathing, and whose symptoms were perceived to be due to a problem in the chest or both a problem in the chest and a blocked nose. While this approach is reasonable in the context of a MICS survey, these basically simple case definitions must be kept in mind when interpreting the results, as well as the potential for reporting and recall biases. Further, diarrhoea, fever and ARI are not only seasonal but are also characterized by the often rapid spread of localized outbreaks from one area to another at different points in time. The timing of the survey and the location of the teams might thus considerably affect the results, which must

consequently be interpreted with caution. For these reasons, although the period-prevalence over a two-week time window is reported, these data should not be used to assess the epidemiological characteristics of these diseases but rather to obtain denominators for the indicators related to use of health services and treatment.

Overall, 17 percent of under five children were reported to have had diarrhoea in the two weeks preceding the survey, 3 percent of children had symptoms of ARI, and 21 percent had an episode of fever (Table CH.4). Children age 12-23 months had the highest prevalence of diarrhoea (25%) and diarrhoea was reported to be lowest (9%) for children age 48-59 months. Similarly, the prevalence of an episode of fever was 26 percent for children age 0-11 month compared to 15 percent of children age 48-59 months.

Diarrhoea

Diarrhoea is a leading cause of death among children under five worldwide. Most diarrhoea-related deaths in children are due to dehydration from loss of large quantities of water and electrolytes from the body in liquid stools. Management of diarrhoea – either through oral rehydration salts (ORS) or a recommended home fluid (RHF) – can prevent many of these deaths. In addition, provision of zinc supplements has been shown to reduce the duration and severity of the illness as well as the risk of future episodes within the next two or three months. Preventing dehydration and malnutrition by increasing fluid intake and continuing to feed the child are also important strategies for managing diarrhoea.

In the MICS, mothers or caretakers were asked whether their child under age five years had an episode of diarrhoea in the two weeks prior to the survey. In cases where mothers reported that the child had diarrhoea, a series of questions were asked about the treatment of the illness, including what the child had been given to drink and eat during the episode and whether this was more or less than what was usually given to the child.

The highest period-prevalence (25%) is seen among children age 12-23 months which grossly corresponds to the weaning period.

Table CH.5 shows the percentage of children with diarrhoea in the two weeks preceding the survey for whom advice or treatment was sought and where. Overall, a health facility or provider was seen in 72 percent of cases for advice or treatment, predominantly in the private sector (64%).

Table CH.5: Care-seeking during diarrhoea							
Percentage of children age 0-59 months with diarrhoea in the last two weeks for whom advice or treatment was sought, by source of advice or treatment, Punjab, 2014.							
	Percentage of children with diarrhoea for whom: Advice or treatment was sought from:						Number of children age 0- 59 months with diarrhoea in the last two weeks
	Health facilities or providers		Community health provider ^a	Other source	A health facility or provider ^{1, b}	No advice or treatment sought	
	Public	Private					
Punjab	11.1	63.6	0.4	8.1	72.1	18.8	4,784
Area of residence							
Rural	10.4	61.6	0.5	9.7	69.2	19.9	3,297
All Urban	12.4	67.9	0.2	4.5	78.6	16.4	1,487
Major Cities	13.3	70.8	0.0	2.6	82.7	13.9	801
Other Urban	11.4	64.5	0.4	6.7	73.7	19.2	686
Sex							
Male	11.8	64.5	0.4	7.3	73.8	18.0	2,491
Female	10.3	62.6	0.4	8.9	70.3	19.7	2,293
Age							
0-11 months	9.8	67.2	0.3	6.9	74.9	17.8	1,266
12-23 months	10.9	67.2	0.5	6.9	75.8	16.6	1,348
24-35 months	12.1	60.6	0.4	9.2	69.9	19.8	954
36-47 months	11.0	58.6	0.3	9.9	66.3	21.9	740
48-59 months	12.9	57.7	0.4	9.5	68.0	20.9	477
Mother's education							
None/pre-school	10.9	61.2	0.5	10.2	68.8	19.5	2,306
Primary	11.9	61.4	0.3	8.5	70.9	19.6	926
Middle	11.9	64.8	0.1	6.3	75.2	18.3	511
Secondary	10.9	72.7	0.5	3.1	81.2	14.9	605
Higher	9.7	66.9	0.3	4.5	76.1	19.6	436
Wealth index quintile							
Lowest	11.0	56.9	0.6	12.4	64.9	21.6	1,181
Second	10.9	58.7	0.3	10.6	67.1	21.6	1,038
Middle	10.8	65.4	0.4	7.4	72.7	18.2	931
Fourth	13.9	67.9	0.3	4.4	79.9	14.5	866
Highest	8.5	73.4	0.4	3.0	80.7	16.3	769
Division							
Bahawalpur	10.0	65.1	1.0	6.4	69.3	18.7	386
D.G. Khan	10.5	45.3	0.0	15.4	53.7	30.8	605
Faisalabad	10.4	70.5	0.4	9.2	78.3	11.4	500
Gujranwala	7.8	71.8	0.7	5.6	76.9	16.4	776
Lahore	13.5	65.4	0.1	6.0	76.8	17.0	918
Multan	13.3	64.2	0.3	9.5	75.2	15.5	540
Rawalpindi	16.8	55.6	0.8	3.1	71.6	25.0	285
Sahiwal	7.3	69.3	0.7	3.9	75.9	20.0	416
Sargodha	11.5	59.8	0.2	13.1	67.0	17.4	359
¹ MICS indicator 3.10 - Care-seeking for diarrhoea							
^a Community health providers includes both public (<i>Lady health worker and Mobile/Outreach clinic</i>) and private (<i>Mobile clinic</i>) health facilities							
^b Includes all public and private health facilities and providers, but excludes private pharmacy							

Table CH.6 provides statistics on drinking and feeding practices during diarrhoea. Ten percent of under five children with diarrhoea were given more than usual, while 89 percent the same or less to drink. Overall, 4 percent of children were given more than usual to eat, while 89 percent of children were given the same or less and 7 percent of children ate nothing.

Table CH.6: Feeding practices during diarrhoea

Percent distribution of children age 0-59 months with diarrhoea in the last two weeks by amount of liquids and food given during episode of diarrhoea, Punjab, 2014.

	Drinking practices during diarrhoea							Eating practices during diarrhoea							Number of children aged 0-59 months with diarrhoea
	Child was given to drink:							Child was given to eat:							
	Much less	Somewhat less	About the same	More	Nothing	Missing/ DK	Total	Much less	Somewhat less	About the same	More	Nothing	Missing/ DK	Total	
Punjab	7.6	30.0	51.3	9.6	1.3	0.2	100.0	9.2	32.3	47.3	3.6	7.4	0.1	100.0	4,784
Area of residence															
Rural	7.1	30.4	50.7	10.2	1.4	0.2	100.0	9.1	32.1	46.7	3.6	8.3	0.2	100.0	3,297
All Urban	8.6	29.2	52.7	8.4	0.9	0.1	100.0	9.6	32.7	48.7	3.6	5.4	0.0	100.0	1,487
Major Cities	10.1	27.9	51.7	9.4	0.9	0.0	100.0	10.7	34.7	46.3	3.1	5.1	0.0	100.0	801
Other Urban	7.0	30.7	53.9	7.3	1.0	0.1	100.0	8.3	30.4	51.5	4.2	5.7	0.0	100.0	686
Sex															
Male	7.3	30.4	51.9	9.0	1.3	0.2	100.0	9.1	33.6	47.4	3.4	6.4	0.1	100.0	2,491
Female	8.0	29.6	50.7	10.4	1.2	0.2	100.0	9.3	30.9	47.3	3.9	8.5	0.1	100.0	2,293
Age															
0-11 months	7.8	28.8	53.1	8.5	1.5	0.1	100.0	9.2	25.2	42.0	3.3	20.3	0.1	100.0	1,266
12-23 months	7.4	29.2	51.8	11.3	0.3	0.1	100.0	9.8	31.4	49.2	3.9	5.3	0.3	100.0	1,348
24-35 months	8.1	32.5	48.9	8.2	2.0	0.2	100.0	10.8	37.4	47.0	3.2	1.5	0.1	100.0	954
36-47 months	9.0	30.8	49.5	9.0	1.3	0.4	100.0	8.3	38.0	49.2	4.1	0.4	0.0	100.0	740
48-59 months	4.3	29.3	53.0	11.8	1.6	0.0	100.0	5.8	34.9	53.8	3.8	1.7	0.0	100.0	477
Mother's education															
None/pre-school	7.1	30.6	50.6	10.4	1.2	0.2	100.0	9.3	31.7	46.9	4.2	7.7	0.2	100.0	2,306
Primary	7.1	29.9	53.0	8.5	1.4	0.0	100.0	9.0	31.5	49.1	2.3	8.0	0.0	100.0	926
Middle	8.4	29.8	50.5	9.6	1.5	0.2	100.0	8.8	34.7	45.9	3.4	7.1	0.0	100.0	511
Secondary	10.1	28.6	52.2	7.6	1.0	0.5	100.0	9.7	32.4	49.1	2.1	6.5	0.3	100.0	605
Higher	6.8	29.4	51.6	10.9	1.0	0.2	100.0	9.0	34.3	44.7	6.1	5.9	0.0	100.0	436
Wealth index quintile															
Lowest	6.7	32.9	49.7	9.5	1.0	0.1	100.0	9.2	32.4	47.3	3.4	7.5	0.3	100.0	1,181
Second	6.6	27.6	53.1	10.7	1.8	0.2	100.0	8.1	30.7	48.8	2.8	9.4	0.2	100.0	1,038
Middle	7.6	30.7	51.4	8.9	1.1	0.2	100.0	9.9	34.3	44.7	4.3	6.6	0.1	100.0	931
Fourth	8.8	27.2	52.2	10.2	1.4	0.2	100.0	10.3	29.5	48.5	3.9	7.9	0.0	100.0	866
Highest	8.8	31.3	50.3	8.6	0.9	0.1	100.0	8.9	35.2	47.2	4.0	4.8	0.0	100.0	769

Table CH.6: Feeding practices during diarrhoea

Percent distribution of children age 0-59 months with diarrhoea in the last two weeks by amount of liquids and food given during episode of diarrhoea, Punjab, 2014.

	Drinking practices during diarrhoea							Eating practices during diarrhoea							Number of children aged 0-59 months with diarrhoea
	Child was given to drink:							Child was given to eat:							
	Much less	Somewhat less	About the same	More	Nothing	Missing /DK	Total	Much less	Somewhat less	About the same	More	Nothing	Missing /DK	Total	
Division															
Bahawalpur	1.9	22.5	51.9	23.2	0.6	0.0	100.0	8.2	25.3	48.3	8.8	9.4	0.0	100.0	386
D.G. Khan	7.8	44.5	42.4	4.7	0.6	0.0	100.0	9.2	43.8	41.0	2.7	3.2	0.0	100.0	605
Faisalabad	8.1	26.4	57.5	6.3	1.5	0.1	100.0	7.9	30.0	52.8	2.9	6.2	0.1	100.0	500
Gujranwala	8.5	30.0	52.8	7.0	1.6	0.0	100.0	9.0	31.6	51.0	2.4	6.0	0.0	100.0	776
Lahore	8.6	28.2	51.6	10.3	1.2	0.3	100.0	9.4	34.9	44.2	4.4	7.0	0.1	100.0	918
Multan	10.5	32.8	50.5	5.9	0.0	0.2	100.0	12.8	29.9	45.9	2.2	8.9	0.2	100.0	540
Rawalpindi	6.4	34.2	46.1	10.3	2.7	0.3	100.0	8.2	42.0	36.6	4.8	8.4	0.0	100.0	285
Sahiwal	1.8	22.5	54.1	18.3	2.9	0.5	100.0	5.2	21.3	56.6	3.5	12.9	0.6	100.0	416
Sargodha	11.4	24.7	55.5	7.2	1.0	0.3	100.0	12.4	27.2	49.0	2.5	8.5	0.4	100.0	359
Punjab	7.6	30.0	51.3	9.6	1.3	0.2	100.0	9.2	32.3	47.3	3.6	7.4	0.1	100.0	4,784

Table CH.7 shows the percentage of children receiving ORS, various types of recommended homemade fluids and zinc during the episode of diarrhoea. Since children may have been given more than one type of liquid, the percentages do not necessarily add to 100. About 37 percent of children with diarrhoea received fluids from any ORS source (ORS packets and pre-pack ORS fluids) and 17 percent of the children were given recommended homemade fluids (boiled water with sugar and salt including other fluids). Overall, 19 percent of children with diarrhoea received zinc in one form or another.

Table CH.7: Oral rehydration solutions, recommended homemade fluids, and zinc												
Percentage of children age 0-59 months with diarrhoea in the last two weeks, and treatment with oral rehydration salts (ORS), recommended homemade fluids, and zinc, Punjab, 2014.												
	Percentage of children with diarrhoea who received:											
	Oral rehydration salts (ORS)			Recommended homemade fluids				Zinc				Number of children aged 0-59 months with diarrhoea
	Fluid from packet	Pre-pack aged fluid	Any ORS	Homemade fluid (Boiled water, sugar & salt)	Others	Any recommended homemade fluid	ORS or any recommended homemade fluid	Tablet	Syrup	Any zinc	ORS and zinc ¹	
Punjab	33.6	5.8	37.2	11.4	6.5	17.3	45.2	3.8	17.8	19.1	9.7	4,784
Area of residence												
Rural	30.4	5.5	33.8	11.1	5.8	16.4	41.5	4.0	17.5	18.9	9.0	3,297
All Urban	40.6	6.4	44.7	12.1	8.2	19.3	53.3	3.5	18.4	19.6	11.1	1,487
Major Cities	44.2	7.0	48.9	10.8	7.3	17.1	56.1	2.9	18.1	19.0	11.3	801
Other Urban	36.4	5.7	39.8	13.6	9.2	22.0	49.9	4.2	18.8	20.3	10.9	686
Sex												
Male	35.0	6.7	39.2	11.5	6.6	17.4	46.6	3.8	17.3	18.7	10.2	2,491
Female	32.0	4.8	35.0	11.3	6.5	17.1	43.7	3.9	18.3	19.5	9.1	2,293
Age												
0-11 months	31.3	5.9	35.5	11.0	5.1	15.3	42.7	3.4	17.5	18.4	9.6	1,266
12-23 months	35.1	7.2	39.6	12.9	6.6	19.0	47.6	4.0	19.8	21.3	11.0	1,348
24-35 months	34.1	4.3	36.3	8.9	6.8	15.6	42.8	3.8	14.8	16.3	7.9	954
36-47 months	33.9	5.3	37.4	12.1	7.9	18.9	47.3	3.6	19.9	20.9	10.7	740
48-59 months	33.5	5.3	36.4	12.4	7.4	18.6	46.2	4.8	15.4	17.5	8.2	477
Mother's education												
None/pre-school	29.9	5.1	33.1	10.5	5.4	15.6	40.9	4.5	16.5	18.1	8.2	2,306
Primary	30.6	4.8	33.5	10.7	5.8	16.1	40.9	3.0	14.9	15.9	7.5	926
Middle	38.9	5.8	41.5	11.8	7.1	18.1	49.7	3.9	17.7	19.0	8.5	511
Secondary	40.1	6.0	44.2	13.6	6.9	19.3	53.0	3.7	19.9	21.3	12.1	605
Higher	43.9	11.1	52.0	14.3	12.6	25.0	61.0	1.8	27.7	28.3	20.0	436
Wealth index quintile												
Lowest	28.7	5.2	32.3	10.1	4.9	14.8	39.1	4.7	16.9	18.4	8.4	1,181
Second	28.3	4.0	30.8	10.5	6.3	16.5	40.4	4.2	15.2	16.8	7.2	1,038
Middle	31.6	4.4	33.7	11.2	6.5	16.8	41.0	3.7	17.3	18.7	8.2	931
Fourth	39.6	5.8	43.0	12.6	7.1	19.1	51.8	3.9	18.3	19.6	10.6	866
Highest	43.6	10.8	50.9	13.5	8.7	20.8	58.5	1.9	22.5	23.1	15.7	769
Division												
Bahawalpur	36.0	4.3	39.3	17.9	5.8	22.7	49.4	2.4	29.6	30.9	17.5	386
D.G. Khan	26.3	5.3	29.1	8.5	6.1	14.4	35.6	7.4	16.7	19.4	8.8	605
Faisalabad	40.6	5.9	45.2	12.1	8.3	20.2	54.4	10.7	32.1	34.0	17.6	500
Gujranwala	28.8	5.9	32.4	11.1	3.7	14.1	40.1	2.1	9.9	11.1	5.1	776
Lahore	38.3	4.3	41.7	8.1	4.7	12.7	48.6	3.4	21.2	22.1	10.8	918
Multan	43.3	6.7	47.0	16.4	5.1	20.9	53.8	1.9	17.0	17.6	9.0	540
Rawalpindi	46.5	13.4	53.2	26.4	23.2	45.3	68.8	2.7	23.2	23.8	16.6	285
Sahiwal	17.7	4.1	19.6	3.6	5.7	9.2	25.1	0.2	5.4	5.6	1.6	416
Sargodha	25.0	6.1	28.9	7.1	6.1	12.8	37.9	2.6	6.5	8.6	3.6	359
¹ MICS indicator 3.11 - Diarrhoea treatment with oral rehydration salts (ORS) and zinc												

More than 45 percent of children with diarrhoea received one or more of the recommended home treatments (i.e., were treated with ORS or any recommended homemade fluid), while 10 percent received ORS and zinc. Across divisions, treatment with ORS or any recommended homemade fluid, ranged from 25 percent in Sahiwal division to 69 percent in Rawalpindi division. Children from mothers with higher education are more likely to receive ORS and zinc (20%) compared to children from mothers with only pre-school or no education (8%). Figure CH.2 shows the variation in prevalence of children under-5 with diarrhoea who received ORS or recommended homemade liquids among different division and with reference to education of mother/caretaker.

Figure CH.2: Children under-5 with diarrhoea who received ORS or recommended homemade liquids, MICS Punjab, 2014

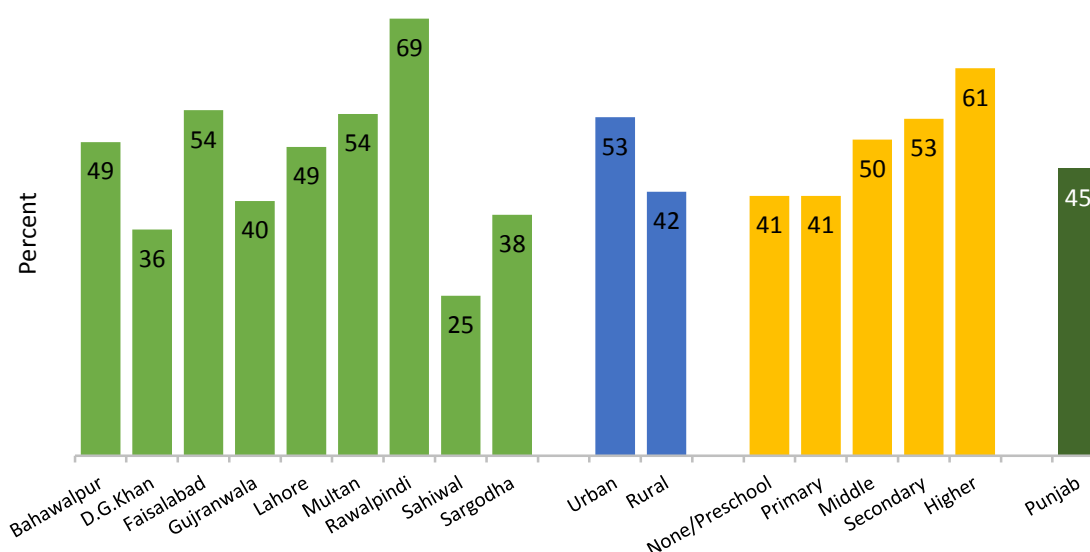


Table CH.8 provides the proportion of children age 0-59 months with diarrhoea in the last two weeks who received oral rehydration therapy with continued feeding, and the percentage of children with diarrhoea who received other treatments. Overall, 42 percent of children with diarrhoea received ORS or increased fluids, 47 percent received ORT (ORS or recommended homemade fluids or increased fluids). Combining the information in Table CH.6 with that of Table CH.7 on oral rehydration therapy, it is observed that 39 percent of children received ORT and, at the same time, feeding was continued, as is the recommendation.

There are some differences in the home management of diarrhoea by background characteristics. The figures for ORT and continued feeding ranges from 30 percent in Sahiwal division to 53 percent in Rawalpindi division. Similarly, the percentage is higher in urban areas (45%) compared to rural areas (36%). Home management of diarrhoea is also more likely among children whose mothers have higher education and children living in the households in the highest quintile.

Table CH.8: Oral rehydration therapy with continued feeding and other treatments

Percentage of children age 0-59 months with diarrhoea in the last two weeks who were given oral rehydration therapy with continued feeding and percentage who were given other treatments, Punjab, 2014.

	Children with diarrhoea who were given:															Number of children age 0-59 months with diarrhoea in the last two weeks
	Other treatments															
					Pill or syrup			Injection			Intra-venous	Home remedy, herbal medicine	Other	Not given any treatment or drug		
	Zinc	ORS or increased fluids	ORT (ORS or recommended homemade fluids or increased fluids)	ORT with continued feeding ¹	Anti- biotic	Anti- motility	Other	Unknown	Anti- biotic	Non- antibiotic					Unknown	
Punjab	19.1	42.1	46.7	38.9	4.0	14.5	0.5	21.7	1.6	0.2	4.3	1.5	2.7	6.7	17.7	4,784
Area of residence																
Rural	18.9	39.2	43.6	36.0	3.8	15.6	0.5	21.8	1.7	0.2	4.9	1.6	3.1	6.9	18.9	3,297
All Urban	19.6	48.5	53.5	45.3	4.6	12.0	0.5	21.4	1.6	0.2	2.8	1.4	1.7	6.2	15.0	1,487
Major Cities	19.0	53.2	57.0	47.2	3.6	8.7	0.4	21.2	1.4	0.1	1.5	0.9	1.2	4.4	15.7	801
Other Urban	20.3	43.0	49.3	43.2	5.7	15.9	0.6	21.5	1.9	0.3	4.3	2.1	2.3	8.2	14.3	686
Sex																
Male	18.7	43.6	47.7	40.6	4.2	14.6	0.7	22.1	1.3	0.3	4.5	1.4	2.9	6.6	17.1	2,491
Female	19.5	40.5	45.6	37.0	3.8	14.3	0.3	21.2	2.0	0.1	4.0	1.7	2.5	6.8	18.4	2,293
Age																
0-11 months	18.4	39.1	43.4	30.7	4.5	13.4	0.6	20.9	2.1	0.3	3.3	1.6	2.3	7.4	20.1	1,266
12-23 months	21.3	45.9	50.4	42.0	4.6	15.6	0.4	20.8	1.9	0.0	4.2	2.3	2.5	7.0	15.0	1,348
24-35 months	16.3	40.2	43.2	38.1	3.4	14.6	0.5	23.8	1.2	0.2	6.0	1.3	3.4	6.1	18.0	954
36-47 months	20.9	42.0	48.0	44.1	3.9	14.0	0.7	21.0	0.9	0.1	5.1	0.5	3.1	6.8	17.6	740
48-59 months	17.5	43.5	49.4	45.1	2.7	14.6	0.6	22.9	1.5	0.5	2.4	1.4	2.1	5.1	18.9	477
Mother's education																
None/pre-school	18.1	38.9	43.5	35.4	3.7	14.7	0.5	24.4	1.4	0.1	5.7	1.5	3.2	5.3	19.7	2,306
Primary	15.9	38.6	42.6	36.5	2.7	13.0	0.5	23.2	1.5	0.2	3.8	1.9	2.0	8.5	19.2	926
Middle	19.0	45.6	50.3	43.0	5.1	15.6	0.3	21.4	1.8	0.0	2.8	1.8	1.2	8.9	13.5	511
Secondary	21.3	47.3	52.2	43.1	4.9	15.7	0.7	15.7	2.5	0.4	3.0	1.0	2.7	7.6	14.9	605
Higher	28.3	55.5	60.2	51.4	6.0	13.4	0.7	12.3	1.7	0.7	1.0	1.4	3.0	6.8	13.1	436
Wealth index quintile																
Lowest	18.4	37.5	41.7	34.5	3.3	14.6	0.3	22.5	1.4	0.0	6.0	1.6	4.3	5.4	22.0	1,181
Second	16.8	37.6	42.3	35.3	3.0	15.2	0.4	22.2	1.3	0.1	6.2	1.3	3.3	8.2	20.2	1,038
Middle	18.7	38.3	42.6	35.4	3.2	14.3	1.0	25.3	1.9	0.4	3.2	2.0	1.9	6.5	16.7	931
Fourth	19.6	47.5	52.2	43.2	6.5	16.3	0.4	21.1	1.7	0.5	2.8	1.4	1.4	7.7	13.7	866
Highest	23.1	54.0	58.7	49.7	4.6	11.5	0.6	15.7	2.1	0.1	2.2	1.4	2.0	5.7	13.5	769

Table CH.8: Oral rehydration therapy with continued feeding and other treatments

Percentage of children age 0-59 months with diarrhoea in the last two weeks who were given oral rehydration therapy with continued feeding and percentage who were given other treatments, Punjab, 2014.

	Children with diarrhoea who were given:															Number of children age 0-59 months with diarrhoea in the last two weeks
	Other treatments															
	Zinc	ORS or increased fluids	ORT (ORS or recommended homemade fluids or increased fluids)	ORT with continued feeding ¹	Pill or syrup				Injection			Intra-venous	Home remedy, herbal medicine	Other	Not given any treatment or drug	
					Anti-biotic	Anti-motility	Other	Unknown	Anti-biotic	Non-antibiotic	Unknown					
Division																
Bahawalpur	30.9	50.4	57.3	48.3	9.0	14.8	0.0	15.3	2.7	0.4	7.8	2.1	5.5	5.3	17.0	386
D.G. Khan	19.4	32.0	36.2	32.0	3.1	20.6	0.5	11.9	2.1	0.0	6.2	1.1	4.4	7.0	23.5	605
Faisalabad	34.0	46.6	52.2	45.7	0.8	8.6	0.4	19.9	1.3	0.0	2.2	1.7	4.2	3.4	12.2	500
Gujranwala	11.1	35.6	40.4	34.2	4.5	18.6	0.6	24.3	1.8	0.3	3.3	2.0	1.5	9.8	17.8	776
Lahore	22.1	46.0	49.5	41.5	5.4	11.1	0.9	23.3	2.5	0.1	2.5	1.0	1.3	3.7	17.7	918
Multan	17.6	49.4	54.4	40.2	3.2	20.8	0.9	27.0	0.2	0.1	3.6	0.9	2.7	4.4	12.9	540
Rawalpindi	23.8	57.6	64.4	52.8	2.7	11.7	0.2	3.6	2.4	0.7	0.2	1.3	1.0	8.1	17.7	285
Sahiwal	5.6	34.2	35.6	29.7	4.1	3.9	0.1	41.5	0.6	0.0	12.6	2.7	0.4	11.9	20.1	416
Sargodha	8.6	33.9	38.5	31.9	2.3	16.8	0.6	20.9	0.3	0.5	1.3	2.0	4.7	9.8	21.0	359
Punjab	19.1	42.1	46.7	38.9	4.0	14.5	0.5	21.7	1.6	0.2	4.3	1.5	2.7	6.7	17.7	4,784
¹ MICS indicator 3.12 - Diarrhoea treatment with oral rehydration therapy (ORT) and continued feeding																

¹ MICS indicator 3.12 - Diarrhoea treatment with oral rehydration therapy (ORT) and continued feeding

Table CH.8 also shows the percentage of children having had diarrhoea in the two weeks preceding the survey who were given various forms of treatment, leaving 18 percent of them without any treatment or drug. The proportion of children without any treatment or drug is highest among those living in the households in the lowest quintile and in rural areas. Figure CH.3 shows the disparity among children with diarrhoea in taking ORT and continued feeding with respect to divisions, levels of mother's education and area of residence.

Figure CH.3: Children under-5 with diarrhoea receiving oral rehydration therapy (ORT) and continued feeding, MICS Punjab, 2014

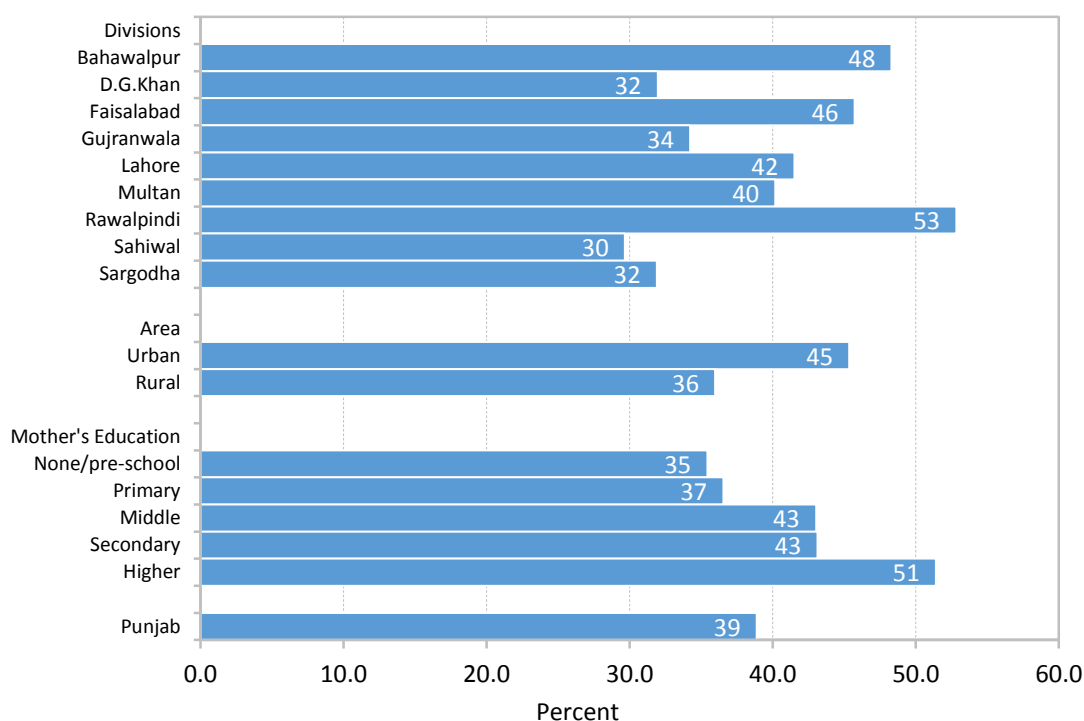


Table CH.9 provides information on the source of ORS and zinc for children who benefitted from these treatments. The main source of ORS is the private sector (68%) and the same applies for zinc (74%).

Table CH.9: Source of ORS and zinc

Percentage of children age 0-59 months with diarrhoea in the last two weeks who were given ORS, and percentage given zinc, by the source of ORS and zinc, Punjab, 2014.

	Percentage of children who were given as treatment for diarrhoea:		Number of children age 0-59 months with diarrhoea in the last two weeks	Percentage of children for whom the source of ORS was:					Number of children age 0-59 months who were given ORS as treatment for diarrhoea in the last two weeks	Percentage of children for whom the source of zinc was:					Number of children age 0-59 months who were given zinc as treatment for diarrhoea in the last two weeks
	ORS	zinc		Health facilities or providers			Other	A health facility or provider ^b		Health facilities or providers			Other	A health facility or provider ^b	
				Public	Private	Community health provider ^a				Public	Private	Community health provider ^a			
Punjab	37.2	19.1	4,784	13.8	67.7	2.1	18.3	81.5	1,779	15.1	74.3	1.2	10.1	89.5	914
Area of residence															
Rural	33.8	18.9	3,297	14.8	67.3	2.8	17.8	82.1	1,115	15.2	73.3	1.2	11.0	88.5	622
All Urban	44.7	19.6	1,487	12.1	68.3	0.9	19.2	80.4	665	15.0	76.5	1.0	8.2	91.5	291
Major Cities	48.9	19.0	801	13.7	66.1	0.8	19.7	79.8	392	9.9	79.4	0.7	10.1	89.3	152
Other Urban	39.8	20.3	686	9.8	71.4	1.0	18.6	81.1	273	20.5	73.4	1.3	6.1	93.9	139
Sex															
Male	39.2	18.7	2,491	13.8	68.5	1.4	17.4	82.3	977	14.9	75.6	1.5	9.4	90.5	465
Female	35.0	19.5	2,293	13.7	66.7	2.9	19.4	80.4	802	15.4	73.0	0.8	10.9	88.4	448
Age															
0-11 months	35.5	18.4	1,266	10.9	73.6	1.4	15.5	84.4	449	12.1	80.4	1.2	7.2	92.5	233
12-23 months	39.6	21.3	1,348	13.7	69.1	2.2	17.2	82.8	534	15.1	76.3	0.8	8.3	91.5	288
24-35 months	36.3	16.3	954	12.1	62.6	2.4	24.4	74.6	346	16.8	68.6	1.1	13.0	85.5	155
36-47 months	37.4	20.9	740	18.7	64.0	1.9	17.3	82.7	277	15.3	72.1	1.5	12.5	87.5	155
48-59 months	36.4	17.5	477	17.3	64.2	3.5	18.5	81.5	174	20.3	65.1	1.5	14.6	85.4	83
Mother's education															
None/pre-school	33.1	18.1	2,306	13.2	68.2	2.3	18.2	81.4	763	17.5	71.4	0.9	10.5	88.9	417
Primary	33.5	15.9	926	15.8	63.7	1.1	20.5	79.5	310	17.9	68.6	1.5	13.0	86.5	147
Middle	41.5	19.0	511	15.5	61.5	3.1	23.0	77.0	212	10.1	80.7	0.7	9.2	90.8	97
Secondary	44.2	21.3	605	16.0	68.2	2.1	15.7	84.3	268	14.7	74.1	3.0	10.5	88.8	129
Higher	52.0	28.3	436	8.5	76.7	1.8	14.3	85.2	227	8.1	86.3	0.0	5.5	94.5	123
Wealth index quintile															
Lowest	32.3	18.4	1,181	13.0	66.5	1.3	19.8	79.5	381	16.8	70.4	1.0	11.7	87.2	218
Second	30.8	16.8	1,038	16.5	62.5	3.6	21.1	78.9	320	19.8	66.9	0.0	13.3	86.7	174
Middle	33.7	18.7	931	17.0	65.7	3.1	17.3	82.7	314	16.7	76.6	2.2	5.8	93.3	174
Fourth	43.0	19.6	866	13.8	68.2	1.9	17.8	82.0	373	15.5	76.6	1.0	7.9	92.1	170
Highest	50.9	23.1	769	9.8	74.2	1.0	15.9	84.0	391	6.7	82.0	1.5	11.3	88.7	177

Table CH.9: Source of ORS and zinc

Percentage of children age 0-59 months with diarrhoea in the last two weeks who were given ORS, and percentage given zinc, by the source of ORS and zinc, Punjab, 2014.

Division	Percentage of children who were given as treatment for diarrhoea:		Number of children age 0-59 months with diarrhoea in the last two weeks	Percentage of children for whom the source of ORS was:					Number of children age 0-59 months who were given ORS as treatment for diarrhoea in the last two weeks	Percentage of children for whom the source of zinc was:					Number of children age 0-59 months who were given zinc as treatment for diarrhoea in the last two weeks
	ORS	zinc		Health facilities or providers				A health facility or provider ^b		Health facilities or providers				A health facility or provider ^b	
				Public	Private	Community health provider ^a	Other			Public	Private	Community health provider ^a	Other		
Bahawalpur	39.3	30.9	386	9.8	78.1	1.9	10.8	87.9	152	8.5	87.4	1.7	4.2	95.8	119
D.G. Khan	29.1	19.4	605	16.1	55.9	0.9	27.6	72.0	176	20.2	54.1	1.3	25.0	74.4	117
Faisalabad	45.2	34.0	500	13.1	73.1	2.9	13.8	86.2	226	16.3	79.7	1.0	4.0	96.0	170
Gujranwala	32.4	11.1	776	11.4	82.6	2.8	5.7	93.9	252	20.8	77.8	2.1	1.4	98.6	86
Lahore	41.7	22.1	918	12.5	56.2	0.2	31.3	68.7	383	11.1	73.9	0.0	14.9	85.1	203
Multan	47.0	17.6	540	11.4	76.4	1.6	12.2	87.8	254	14.1	79.5	0.0	3.0	93.6	95
Rawalpindi	53.2	23.8	285	23.3	58.2	0.8	18.2	81.6	152	21.5	65.5	3.2	13.0	87.0	68
Sahiwal	19.6	5.6	416	23.5	60.3	15.0	16.2	83.8	81	(9.9)	(82.7)	(0.0)	(7.4)	(92.6)	23
Sargodha	28.9	8.6	359	11.9	65.4	0.9	22.7	77.3	104	(19.4)	(60.7)	(4.0)	(19.9)	(80.1)	31
Punjab	37.2	19.1	4,784	13.8	67.7	2.1	18.3	81.5	1,779	15.1	74.3	1.2	10.1	89.5	914
^a Community health provider includes both public (<i>Lady health worker and Mobile/Outreach clinic</i>) and private (<i>Mobile clinic</i>) health facilities															
^b Includes all public and private health facilities and providers															
() Figures that are based on 25-49 unweighted cases															

Acute Respiratory Infections

Symptoms of ARI are collected during the MICS Punjab, 2014 to capture suspected pneumonia disease, the leading cause of death in children under five. Once diagnosed, pneumonia is treated effectively with antibiotics. Studies have shown a limitation in the survey approach of measuring pneumonia because many of the suspected cases identified through surveys are, in fact, not true pneumonia.²⁹ While this limitation does not affect the level and patterns of care-seeking for suspected pneumonia, it limits the validity of the level of treatment of pneumonia with antibiotics, as reported through household surveys. The treatment indicator described in this report must therefore be taken with caution, keeping in mind that the accurate level is likely to be higher.

Table CH.10 presents the percentage of children with symptoms of ARI in the two weeks preceding the survey for whom care was sought, by source of care and the percentage who received antibiotics. Seventy seven percent of children age 0-59 months with symptoms of ARI were taken to a health facility or provider. Slightly more children with ARI in urban areas visited a health facility or provider (82%) compared to rural areas (76%). More children were taken to private facility or provider (68%) compared to public facility or provider (11%).

Table CH.10 also presents the use of antibiotics for the treatment of children under 5 years with symptoms of ARI by area and sex. Overall, 39 percent of under-5 children with symptoms of ARI received antibiotics during the two weeks prior to the survey. The treatment was received mostly from private health facilities (83%) followed by public (9%). The percentage was higher in rural (42%) than in urban areas (30%).

²⁹ Campbell H, el Arifeen S, Hazir T, O’Kelly J, Bryce J, et al. (2013) Measuring Coverage in MNCH: Challenges in Monitoring the Proportion of Young Children with Pneumonia Who Receive Antibiotic Treatment. *PLoS Med* 10(5): e1001421. doi:10.1371/journal.pmed.1001421

Table CH.10: Care-seeking for and antibiotic treatment of symptoms of acute respiratory infection (ARI)

Percentage of children age 0-59 months with symptoms of ARI in the last two weeks for whom advice or treatment was sought, by source of advice or treatment, and percentage of children with symptoms who were given antibiotics, Punjab, 2014.

	Percentage of children with symptoms of ARI for whom: Advice or treatment was sought from:						Percentage of children with symptoms of ARI in the last two weeks who were given antibiotics ²	Number of children age 0-59 months with symptoms of ARI in the last two weeks	Percentage of children with symptoms of ARI for whom the source of antibiotics was:					Number of children with symptoms of ARI in the last two weeks who were given antibiotics
	Health facilities or providers					Health facilities or providers								
	Public	Private	Community health provider ^a	Other source	A health facility or provider ^{1, b}	No advice or treatment sought			Public	Private	Community health provider ^a	Other source	A health facility or provider ^c	
Punjab	10.9	68.2	1.0	9.5	77.1	12.0	39.1	683	9.4	82.8	0.2	6.1	92.1	267
Area of residence														
Rural	10.5	67.4	0.0	10.5	75.9	12.2	41.8	529	10.1	81.4	0.0	6.3	91.5	221
All Urban	12.4	71.0	4.2	6.0	81.6	11.2	30.1	153	6.2	89.0	1.2	4.8	95.2	46
Major Cities	(20.8)	(69.7)	(9.8)	(0.9)	(90.5)	(9.5)	(36.0)	56	(*)	(*)	(*)	(*)	(*)	20
Other Urban	7.6	71.8	1.0	9.0	76.4	12.2	26.7	97	(10.9)	(80.5)	(2.2)	(8.6)	(91.4)	26
Sex														
Male	9.9	70.3	0.1	9.2	78.2	10.9	40.4	392	12.4	83.0	0.0	4.3	95.5	159
Female	12.2	65.3	2.0	9.8	75.7	13.4	37.5	290	5.0	82.3	0.5	8.7	87.3	109

¹ MICS indicator 3.13 - Care-seeking for children with acute respiratory infection (ARI) symptoms

² MICS indicator 3.14 - Antibiotic treatment for children with ARI symptoms

^a Community health providers includes both public (*Lady health worker and Mobile/Outreach clinic*) and private (*Mobile clinic*) health facilities

^b Includes all public and private health facilities and providers, but excludes private pharmacy

^c Includes all public and private health facilities and providers

() Figures that are based on 25-49 unweighted cases

(*) Figures that are based on fewer than 25 unweighted cases

Table CH.11: Knowledge of the two danger signs of pneumonia

Percentage of women age 15-49 years who are mothers or caretakers of children under age 5 by symptoms that would cause them to take a child under age 5 immediately to a health facility, and percentage of mothers who recognize fast or difficult breathing as signs for seeking care immediately, Punjab, 2014.

	Percentage of mothers/caretakers who think that a child should be taken immediately to a health facility if the child:									Mothers/caretakers who recognize at least one of the two danger signs of pneumonia (fast and/or difficult breathing)	Number of mothers / caretakers of children age 0-59 months
	Is not able to drink or breastfeed	Becomes sicker	Develops a fever	Has fast breathing	Has difficult breathing	Has blood in stool	Is drinking poorly	Suffered from loose motion	Has other symptoms		
Punjab	10.7	58.8	81.4	14.6	14.8	11.1	12.6	58.5	26.3	24.8	18,096
Area of residence											
Rural	11.6	57.8	81.4	15.0	15.8	12.2	13.1	57.8	24.8	25.7	12,253
All Urban	8.6	60.8	81.5	13.7	12.6	8.7	11.5	59.8	29.2	22.8	5,843
Major Cities	6.1	60.8	81.8	12.4	10.9	7.0	9.8	61.0	33.7	20.7	3,075
Other Urban	11.4	60.7	81.2	15.2	14.4	10.6	13.5	58.5	24.2	25.2	2,768
Women's education^a											
None/pre-school	12.9	59.3	81.5	16.1	17.4	14.1	14.4	58.3	23.7	27.4	8,447
Primary	8.7	59.2	82.9	12.5	12.2	8.6	11.0	59.5	28.0	21.7	3,283
Middle	8.5	56.9	81.0	13.6	12.6	9.5	10.2	58.3	27.3	22.8	1,787
Secondary	8.6	57.7	81.4	12.1	12.6	7.1	10.2	56.6	28.5	21.5	2,433
Higher	9.1	58.9	79.3	15.3	12.7	8.7	12.9	60.1	30.3	24.5	2,142
Wealth index quintile											
Lowest	17.1	59.9	82.3	18.7	20.3	16.9	17.1	58.8	22.0	30.4	3,939
Second	10.8	56.8	82.5	14.5	14.9	13.1	12.8	59.0	27.1	25.1	3,586
Middle	9.0	58.7	81.2	13.2	14.2	9.0	12.1	58.8	26.0	23.8	3,490
Fourth	7.9	58.7	80.6	12.9	11.5	8.4	10.4	57.8	27.4	21.4	3,658
Highest	7.7	59.7	80.4	13.2	12.2	7.2	10.1	58.1	29.3	22.5	3,423
Division											
Bahawalpur	19.3	44.7	69.1	16.9	22.7	16.5	18.3	54.3	5.3	36.8	1,938
D.G. Khan	33.2	73.2	89.1	35.8	35.9	29.2	28.7	62.6	21.7	48.6	2,024
Faisalabad	11.5	64.3	84.2	15.4	12.4	9.3	17.2	57.7	31.6	25.7	2,064
Gujranwala	4.9	58.3	78.5	8.4	9.8	5.6	8.0	57.1	24.9	16.2	2,672
Lahore	4.9	54.6	84.3	11.4	10.0	4.8	8.2	61.9	34.5	19.2	3,255
Multan	7.1	74.4	85.4	12.6	12.9	12.0	12.1	69.3	21.2	22.6	1,959
Rawalpindi	8.4	64.4	72.0	11.5	7.8	5.0	5.6	37.0	20.6	17.3	1,536
Sahiwal	2.6	45.1	79.6	12.1	12.2	15.2	8.0	57.4	32.4	22.0	1,292
Sargodha	4.1	44.2	88.8	6.8	9.7	6.3	6.2	64.0	45.8	15.1	1,355

^a Total includes 4 unweighted cases of women's education missing

Mothers' knowledge of danger signs is an important determinant of care-seeking behaviour. In the MICS, mothers or caretakers were asked to report symptoms that would cause them to take a child under-five for care immediately at a health facility. The knowledge of mother/caretaker about danger signs of pneumonia are presented in Table CH.11. Overall, 25 percent of women know at least one of the two danger signs of pneumonia – fast and/or difficult breathing. The most commonly identified symptom for taking a child to a health facility is if a child develops a fever. About 15 percent of mothers identified fast breathing and difficult breathing as symptoms for taking children immediately to a health care provider. Almost half of the women in DG Khan division (49%) have knowledge of at least one of the two danger signs of pneumonia compared to only 15 percent of women in Sargodha division.

Solid Fuel Use

More than 3 billion people around the world rely on solid fuels for their basic energy needs, including cooking and heating. Solid fuels include biomass fuels, such as wood, charcoal, crops or other agricultural waste, dung, shrubs and straw, and coal. Cooking and heating with solid fuels leads to high levels of indoor smoke which contains a complex mix of health-damaging pollutants. The main problem with the use of solid fuels is their incomplete combustion, which produces toxic elements such as carbon monoxide, polyaromatic hydrocarbons, and sulphur dioxide (SO₂), among others. Use of solid fuels increases the risks of incurring acute respiratory illness, pneumonia, chronic obstructive lung disease, cancer, and possibly tuberculosis, asthma, or cataracts, and may contribute to low birth weight of babies born to pregnant women exposed to smoke. The primary indicator for monitoring use of solid fuels is the proportion of the population using solid fuels as the primary source of domestic energy for cooking, shown in Table CH.12.

Overall, 61 percent of the household population use solid fuels for cooking, consisting mainly of wood (33%). Use of solid fuels is low in urban areas (17%), but high in rural where they are used by 83 percent of the household population. Differentials with respect to household wealth and the educational level of the household head are also notable. All of the population living in the households in the lowest quintile use solid fuel and this proportion declines to only 4 percent of population living in the households in the highest quintile.

The use of solid fuel by place of cooking is depicted in Table CH.13. The presence and extent of indoor pollution are dependent on cooking practices, places used for cooking, as well as types of fuel used. According to the findings, 17 percent of the population living in households using solid fuels for cooking, cook food in a separate room that is used as a kitchen. Eighty two percent have food cooked within the dwelling unit elsewhere in the household. The use of separate room as kitchen is higher (42%) in the households in the highest quintile and vice versa.

Table CH.12: Solid fuel use

Percent distribution of household members according to type of cooking fuel mainly used by the household, and percentage of household members living in households using solid fuels for cooking, Punjab, 2014.

	Percentage of household members in households using:													Total	Solid fuels for cooking ¹	Number of household members
	Electricity	Liquefied Petroleum Gas (LPG)	Natural Gas	Biogas	Kerosene	Coal/ Lignite	Charcoal	Wood	Straw/ Shrubs/ Grass	Animal dung	Agricultural crop residue	Other / Missing	No food cooked in the household			
Punjab	0.0	3.6	34.9	0.2	0.0	0.1	0.3	33.2	1.5	15.0	11.1	0.2	0.1	100.0	61.1	246,396
Area of residence																
Rural	0.0	3.0	13.6	0.1	0.0	0.1	0.4	43.2	2.0	21.3	16.0	0.2	0.1	100.0	83.0	165,174
All Urban	0.0	4.8	78.2	0.2	0.0	0.0	0.1	12.8	0.4	2.3	1.1	0.2	0.1	100.0	16.6	81,222
Major Cities	0.0	2.2	91.4	0.2	0.0	0.0	0.1	4.7	0.4	0.6	0.0	0.1	0.1	100.0	5.9	42,289
Other Urban	0.0	7.5	63.9	0.1	0.0	0.0	0.0	21.6	0.3	4.1	2.2	0.2	0.1	100.0	28.2	38,933
Education of household head^a																
None/pre-school	0.0	1.3	22.5	0.1	0.0	0.1	0.3	37.0	2.2	20.5	15.7	0.2	0.1	100.0	75.8	99,632
Primary	0.0	3.1	33.3	0.1	0.0	0.0	0.4	34.6	1.5	15.6	11.2	0.1	0.1	100.0	63.3	43,176
Middle	0.0	4.4	37.7	0.1	0.0	0.1	0.3	35.2	1.0	13.0	8.1	0.2	0.0	100.0	57.6	31,941
Secondary	0.0	5.9	45.3	0.3	0.0	0.1	0.2	30.0	0.9	10.2	6.9	0.2	0.0	100.0	48.3	44,624
Higher	0.1	8.3	62.6	0.4	0.0	0.0	0.0	20.0	0.3	4.0	4.1	0.1	0.1	100.0	28.5	26,950
Wealth index quintile																
Lowest	0.0	0.0	0.2	0.0	0.0	0.0	0.2	48.0	4.7	22.1	24.5	0.1	0.2	100.0	99.5	49,280
Second	0.0	0.3	4.3	0.0	0.0	0.0	0.6	50.0	1.4	25.6	17.6	0.1	0.1	100.0	95.1	49,278
Middle	0.1	2.0	22.6	0.2	0.0	0.1	0.4	43.9	0.9	18.9	10.6	0.3	0.1	100.0	74.8	49,279
Fourth	0.0	7.5	59.9	0.3	0.0	0.1	0.1	21.4	0.5	7.4	2.5	0.3	0.0	100.0	32.0	49,281
Highest	0.0	8.2	87.5	0.3	0.0	0.0	0.0	2.7	0.0	1.0	0.3	0.0	0.0	100.0	4.0	49,278
Division																
Bahawalpur	0.0	2.8	15.4	0.2	0.0	0.1	0.1	29.1	2.5	10.1	39.7	0.0	0.1	100.0	81.5	25,956
D.G. Khan	0.0	2.3	6.2	0.0	0.0	0.0	0.6	66.1	3.6	9.5	11.6	0.0	0.0	100.0	91.4	23,418
Faisalabad	0.0	3.2	37.7	0.2	0.0	0.0	0.4	38.0	4.6	13.0	2.3	0.4	0.1	100.0	58.4	30,970
Gujranwala	0.0	6.0	42.9	0.3	0.0	0.2	0.2	19.3	0.3	30.5	0.1	0.3	0.1	100.0	50.5	36,313
Lahore	0.0	3.1	62.8	0.1	0.0	0.0	0.3	15.6	0.2	17.4	0.2	0.2	0.1	100.0	33.7	43,847
Multan	0.0	2.8	26.6	0.2	0.0	0.0	0.0	23.1	1.2	4.7	41.2	0.0	0.1	100.0	70.3	27,788
Rawalpindi	0.0	6.6	52.0	0.1	0.0	0.0	0.2	38.8	0.2	1.8	0.1	0.0	0.0	100.0	41.2	21,767
Sahiwal	0.0	2.6	20.1	0.2	0.0	0.0	0.2	34.2	0.8	30.1	11.4	0.3	0.1	100.0	76.8	17,255
Sargodha	0.0	2.1	18.9	0.1	0.0	0.0	0.5	64.8	0.3	13.1	0.2	0.0	0.1	100.0	78.9	19,082

¹ MICS indicator 3.15 - Use of solid fuels for cooking

^a Total includes 80 unweighted cases of household head's education missing

Table CH.13: Solid fuel use by place of cooking

Percent distribution of household members in households using solid fuels by place of cooking, Punjab, 2014.

	Place of cooking:							Number of household members in households using solid fuels for cooking
	In the house		In a separate building	Outdoors	Other place	Missing	Total	
	In a separate room used as kitchen	Elsewhere in the house						
Punjab	17.4	81.8	0.4	0.1	0.1	0.3	100.0	150,517
Area of residence								
Rural	17.1	82.1	0.4	0.1	0.1	0.2	100.0	137,039
All Urban	20.5	78.3	0.5	0.2	0.0	0.5	100.0	13,478
Major Cities	14.8	83.1	0.9	0.5	0.1	0.5	100.0	2,482
Other Urban	21.8	77.2	0.4	0.1	0.0	0.4	100.0	10,995
Education of household head^a								
None/pre-school	12.3	86.8	0.5	0.1	0.1	0.2	100.0	75,542
Primary	18.2	81.3	0.3	0.1	0.0	0.1	100.0	27,325
Middle	21.9	77.4	0.3	0.1	0.1	0.3	100.0	18,412
Secondary	25.9	73.3	0.3	0.1	0.1	0.4	100.0	21,533
Higher	30.7	68.7	0.1	0.0	0.0	0.5	100.0	7,676
Wealth index quintile								
Lowest	8.0	91.1	0.4	0.1	0.1	0.2	100.0	49,038
Second	15.1	84.2	0.4	0.1	0.0	0.2	100.0	46,861
Middle	24.3	74.8	0.4	0.1	0.1	0.3	100.0	36,875
Fourth	34.3	65.0	0.2	0.1	0.0	0.3	100.0	15,765
Highest	41.8	56.9	0.0	0.0	0.0	1.2	100.0	1,978
Division								
Bahawalpur	8.5	91.0	0.2	0.0	0.0	0.2	100.0	21,148
D.G. Khan	17.2	82.0	0.4	0.0	0.2	0.2	100.0	21,402
Faisalabad	12.5	86.8	0.2	0.1	0.0	0.5	100.0	18,075
Gujranwala	24.6	74.7	0.1	0.2	0.0	0.4	100.0	18,340
Lahore	9.7	89.3	0.7	0.2	0.0	0.2	100.0	14,773
Multan	12.6	86.1	0.8	0.1	0.0	0.4	100.0	19,521
Rawalpindi	55.8	43.0	0.1	0.1	0.5	0.5	100.0	8,958
Sahiwal	7.9	91.7	0.3	0.0	0.0	0.1	100.0	13,246
Sargodha	26.9	72.7	0.4	0.0	0.0	0.0	100.0	15,054

^a Total includes 47 unweighted cases of household head's education missing

Malaria/Fever

Malaria is a major cause of death of children under age five worldwide. Preventive measures and treatment with an effective antimalarial can dramatically reduce malaria mortality rates among children.

In 2010 the World Health Organization issued a recommendation for universal use of diagnostic testing to confirm malaria infection and apply appropriate treatment based on the results. According to the guidelines, treatment solely on the basis of clinical suspicion should only be considered when a parasitological diagnosis is not accessible. This recommendation was based on studies that showed substantial reduction in the proportion of fever that are associated with malaria to a low level.³⁰ This recommendation implies that the indicator on proportion of children with fever that received antimalarial treatment is no longer an acceptable indicator of the level of treatment of malaria in the population of children under age five. However, as it remains the MDG indicator and for purposes of comparisons, as well as assessment of patterns across socio-demographic characteristics, it remains a standard MICS indicator.

³⁰ D'Acremont, V et al. 2010. *Reduction in the proportion of fevers associated with Plasmodium falciparum parasitaemia in Africa: a systematic review*. Malaria Journal 9(240).

Table CH.14 provides information on care-seeking behaviour during an episode of fever in the past two weeks. As shown in Table CH.14, advice is sought from a health facility or a qualified health care provider for 79 percent of children with fever; 68 percent of these services are provided by the private sector and 10 percent by public. However, no advice or treatment is sought in 15 percent of the cases. No correlation is observed between care-seeking from health facility or provider and mother's education.

Table CH.14: Care-seeking during fever							
Percentage of children age 0-59 months with fever in the last two weeks for whom advice or treatment was sought, by source of advice or treatment, Punjab, 2014.							
	Percentage of children for whom:					No advice or treatment sought	Number of children with fever in last two weeks
	Advice or treatment was sought from:						
	Health facilities or providers		Community health provider ^a	Other source	A health facility or provider ^{1, b}		
	Public	Private					
Punjab	9.7	68.3	0.4	8.5	79.3	14.6	5,714
Area of residence							
Rural	11.5	69.2	0.8	4.8	80.8	15.7	933
All Urban	10.9	69.9	0.6	6.6	81.9	14.1	824
Major Cities	9.8	69.8	0.2	8.6	80.9	12.7	2,986
Other Urban	9.6	66.6	0.6	8.4	77.5	16.7	2,728
Sex							
Male	9.1	67.7	0.2	9.8	78.4	14.5	3,957
Female	11.2	69.5	0.7	5.7	81.3	15.0	1,757
Age							
0-11 months	8.0	69.9	0.3	8.0	79.0	14.9	1,375
12-23 months	10.4	71.8	0.2	6.3	83.6	12.3	1,379
24-35 months	7.5	67.2	0.1	10.6	77.1	15.9	1,060
36-47 months	11.6	66.2	1.0	9.5	78.5	14.2	1,070
48-59 months	11.7	63.8	0.4	9.0	76.3	16.8	831
Mother's education							
None/pre-school	9.2	65.8	0.3	11.2	76.8	14.8	2,754
Primary	10.9	69.8	0.6	6.6	81.1	14.4	1,144
Middle	10.6	69.4	0.3	6.7	80.9	14.0	590
Secondary	11.1	70.5	0.2	4.4	82.3	14.8	697
Higher	7.2	73.7	0.4	5.7	82.2	14.6	528
Wealth index quintile							
Lowest	9.2	62.0	0.2	14.1	73.0	15.6	1,368
Second	9.5	66.5	0.5	9.2	78.0	16.0	1,249
Middle	10.6	69.9	0.2	6.9	81.7	13.7	1,119
Fourth	11.9	70.9	0.7	5.2	83.4	12.9	1,085
Highest	7.1	75.1	0.3	5.1	82.6	14.5	893
Division							
Bahawalpur	7.3	74.5	0.9	6.3	84.8	12.7	455
D.G. Khan	10.3	52.5	0.1	16.5	63.8	21.9	757
Faisalabad	8.3	73.0	0.0	9.6	82.5	9.6	643
Gujranwala	6.5	74.6	0.1	7.4	82.6	12.4	972
Lahore	11.6	65.4	0.8	9.6	79.4	15.2	1,036
Multan	14.4	68.4	0.7	5.3	82.4	14.0	541
Rawalpindi	14.8	60.7	0.4	2.3	75.3	23.4	350
Sahiwal	6.8	78.3	0.0	4.1	86.6	11.2	495
Sargodha	9.3	69.4	0.4	9.1	78.8	12.5	465
¹ MICS indicator 3.20 - Care-seeking for fever							
^a Community health providers include both public (<i>Lady health worker</i> and <i>Mobile/Outreach clinic</i>) and private (<i>Mobile clinic</i>) health facilities							
^b Includes all public and private health facilities and providers as well as shops							

Mothers were asked to report all of the medicines given to a child to treat the fever, including medicines given at home and/or prescribed at a health facility. Artemisinin-based Combination therapy (ACT) is the recommended first line antimalarial recommended by the World Health Organization. In addition, confirmation of malaria is done on all fever cases through rapid diagnostic test.

More than one third (36%) of the children with fever were given Paracetamol, Panadol or Acetaminophen followed by 28 percent of children who received antibiotic pill or syrup. Children with fever in the last two weeks were rarely treated with an artemisinin-based combination therapy (ACT) or other antimalarial (Table CH.15).

Table CH.15: Treatment of children with fever

Percentage of children age 0-59 months who had a fever in the last two weeks, by type of medicine given for the illness, Punjab, 2014.

	Children with a fever in the last two weeks who were given:														Number of children with fever in last two weeks
	Anti-malarials						Other medications								
	SP/ Fansidar	Chloroquine	Amodia-quine	Quinine	Artemisinin-based Combination Therapy (ACT)	Other anti-malarial	Antibiotic pill or syrup	Antibiotic injection	Paracetamol/ Panadol/ Acetaminophen	Aspirin	Ibuprofen	Other	Missing/DK		
Punjab	0.3	0.4	0.1	0.1	0.1	0.4	28.3	11.6	35.6	1.6	24.0	12.9	6.2	5,714	
Area of residence															
Rural	0.2	0.3	0.1	0.0	0.1	0.4	27.0	12.2	35.9	1.8	24.3	12.3	6.4	3,957	
All Urban	0.4	0.7	0.0	0.1	0.1	0.3	31.2	10.1	35.0	1.2	23.5	14.3	5.8	1,757	
Major Cities	0.3	1.1	0.0	0.1	0.1	0.2	35.1	9.7	34.0	1.3	22.7	13.5	5.7	933	
Other Urban	0.5	0.2	0.0	0.1	0.1	0.5	26.8	10.5	36.1	1.1	24.5	15.3	6.0	824	
Sex															
Male	0.3	0.4	0.2	0.1	0.1	0.4	28.7	11.8	35.7	1.6	23.7	12.9	6.7	2,986	
Female	0.2	0.4	0.0	0.0	0.1	0.4	27.9	11.3	35.6	1.6	24.4	13.0	5.6	2,728	
Age															
0-11 months	0.2	0.4	0.1	0.1	0.2	0.3	26.7	10.1	40.7	0.7	16.4	13.4	5.9	1,375	
12-23 months	0.2	0.2	0.0	0.1	0.1	0.6	28.7	11.4	37.3	2.1	23.5	12.8	7.0	1,379	
24-35 months	0.4	0.1	0.1	0.0	0.1	0.4	28.4	11.8	31.7	2.2	27.3	13.7	6.2	1,060	
36-47 months	0.4	0.8	0.2	0.0	0.1	0.1	32.8	13.8	32.7	1.6	26.7	10.9	4.7	1,070	
48-59 months	0.2	0.7	0.1	0.0	0.1	0.2	24.5	11.2	33.3	1.4	30.0	14.0	7.2	831	
Mother's education															
None/pre-school	0.2	0.3	0.1	0.0	0.0	0.3	27.5	13.5	30.5	1.9	25.9	11.9	7.7	2,754	
Primary	0.8	0.3	0.1	0.0	0.1	0.5	26.1	9.0	36.6	1.5	21.9	14.1	6.9	1,144	
Middle	0.0	0.0	0.0	0.1	0.3	0.3	31.0	11.0	40.8	1.1	23.2	10.6	5.8	590	
Secondary	0.1	0.2	0.0	0.2	0.2	0.3	31.1	10.1	42.0	1.2	23.7	14.9	2.0	697	
Higher	0.0	1.8	0.0	0.0	0.2	0.5	30.4	9.4	46.1	1.0	20.4	15.5	2.9	528	
Wealth index quintile															
Lowest	0.2	0.4	0.1	0.1	0.1	0.3	24.1	14.5	29.9	2.8	28.2	11.1	7.5	1,368	
Second	0.3	0.1	0.2	0.2	0.1	0.3	27.6	13.2	30.8	1.2	23.6	13.7	8.0	1,249	
Middle	0.1	0.1	0.1	0.0	0.2	0.5	28.0	10.0	39.2	1.1	21.7	13.6	6.5	1,119	
Fourth	0.5	0.5	0.0	0.0	0.0	0.6	30.7	8.7	39.2	1.1	21.1	13.7	5.3	1,085	
Highest	0.2	0.9	0.0	0.0	0.2	0.0	33.3	10.1	42.2	1.4	24.9	12.6	2.5	893	
Division															
Bahawalpur	0.4	0.6	0.7	0.0	0.0	0.2	20.2	13.2	30.4	2.9	38.0	9.8	6.5	455	
D.G. Khan	0.4	0.5	0.3	0.0	0.2	0.1	21.6	14.3	39.5	3.6	28.8	10.3	4.7	757	
Faisalabad	0.2	0.1	0.0	0.3	0.2	0.0	32.4	12.5	38.0	1.9	20.1	10.1	5.5	643	
Gujranwala	0.6	0.2	0.0	0.0	0.2	0.6	29.5	6.3	33.5	0.9	18.7	14.4	7.4	972	
Lahore	0.0	0.9	0.0	0.0	0.2	0.4	31.5	8.8	34.2	0.3	20.0	12.4	9.6	1,036	
Multan	0.2	0.9	0.0	0.2	0.0	0.1	42.6	22.1	30.0	2.5	27.8	7.5	2.8	541	
Rawalpindi	0.4	0.0	0.0	0.0	0.0	0.9	19.2	5.1	54.9	1.5	15.5	15.8	2.5	350	
Sahiwal	0.0	0.0	0.0	0.0	0.0	0.2	35.9	20.5	30.2	0.3	26.7	14.0	2.6	495	
Sargodha	0.1	0.0	0.0	0.1	0.0	0.8	14.1	4.5	36.4	1.4	27.6	24.9	10.0	465	

Overall, 4 percent of children with a fever in the previous two weeks had blood taken from a finger or heel for testing. The responses are similar with respect to area of residence, mother's education and wealth. Around 1 percent of the children were given any anti-malarial treatment (Table CH.16). Of the children who had fever and received an anti-malarial, only 9 percent were treated with an ACT, however this percentage should be interpreted with caution and has been removed from the tables because the total number of children in the entire sample who had fever in the last 2 weeks and who had received anti-malarial was only between 25-40 unweighted cases.

Table CH.16: Diagnostics and anti-malarial treatment of children

Percentage of children age 0-59 months who had a fever in the last two weeks who had a finger or heel stick for malaria testing, who were given Artemisinin-combination Treatment (ACT) and any anti-malarial drugs, Punjab, 2014.

	Had blood taken from a finger or heel for testing ¹	Percentage of children who:				Number of children age 0-59 months with fever in the last two weeks
		Were given:				
		Artemisinin-combination Treatment (ACT)	ACT the same or next day	Any antimalarial drugs ²	Any antimalarial drugs same or next day	
Punjab	4.0	0.1	0.1	1.3	0.8	5,714
Area of residence						
Rural	4.0	0.1	0.1	1.1	0.7	3,957
All Urban	3.9	0.1	0.1	1.6	1.2	1,757
Major Cities	3.1	0.1	0.0	1.7	1.3	933
Other Urban	4.8	0.1	0.1	1.4	1.1	824
Sex						
Male	4.4	0.1	0.1	1.3	0.9	2,986
Female	3.6	0.1	0.0	1.2	0.8	2,728
Age						
0-11 months	3.4	0.2	0.1	1.3	1.0	1,375
12-23 months	4.1	0.1	0.0	1.2	0.4	1,379
24-35 months	4.2	0.1	0.0	0.9	0.6	1,060
36-47 months	4.2	0.1	0.1	1.6	1.5	1,070
48-59 months	4.2	0.1	0.1	1.3	0.9	831
Mother's education						
None/pre-school	3.4	0.0	0.0	1.1	0.6	2,754
Primary	3.4	0.1	0.1	1.6	1.2	1,144
Middle	5.9	0.3	0.3	0.7	0.6	590
Secondary	5.4	0.2	0.0	1.0	0.6	697
Higher	4.3	0.2	0.0	2.5	2.3	528
Wealth index quintile						
Lowest	3.5	0.1	0.1	1.1	0.4	1,368
Second	3.5	0.1	0.1	1.2	0.9	1,249
Middle	3.8	0.2	0.1	1.0	0.7	1,119
Fourth	5.4	0.0	0.0	1.5	1.1	1,085
Highest	3.9	0.2	0.1	1.4	1.3	893
Division						
Bahawalpur	4.8	0.0	0.0	1.9	1.3	455
D.G. Khan	3.7	0.2	0.1	1.5	1.1	757
Faisalabad	2.4	0.2	0.0	0.8	0.6	643
Gujranwala	3.5	0.2	0.1	1.5	0.9	972
Lahore	3.9	0.2	0.2	1.4	1.3	1,036
Multan	3.6	0.0	0.0	1.4	0.6	541
Rawalpindi	3.8	0.0	0.0	1.3	0.5	350
Sahiwal	7.1	0.0	0.0	0.2	0.0	495
Sargodha	4.1	0.0	0.0	1.0	0.6	465
¹ MICS indicator 3.21 - Malaria diagnostics usage						
² MICS indicator 3.22 - MDG indicator 6.8 - Anti-malarial treatment of children under age 5						

Table CH.17 presents the source of antimalarial for children under age five who were treated with an antimalarial. The treatment was obtained from a health facility or provider in 82 percent of the cases treated with antimalarials, mostly from the private sector (62%).

Pregnant women living in places where malaria is highly prevalent are highly vulnerable to malaria. Once infected, pregnant women risk anemia, premature delivery and stillbirth. Their babies face increased risk of low birth weight, which carries an increased chance to die in infancy.³¹ WHO

³¹ Shulman CE, Dorman EK. Importance and prevention of malaria in pregnancy. *Trans R Soc Trop Med Hyg.* 2003; 97(1), 30–55

recommends that in areas of moderate-to-high malaria transmission, all pregnant women be provided an intermittent preventive treatment with sulfadoxine-Pyrimethamine (SP) at every scheduled antenatal care visit. In the MICS Punjab, 2014, women were asked of the medicines they had received to prevent malaria in their last pregnancy during the 2 years preceding the survey. Women are considered to have received intermittent preventive therapy if they have received at least 3 doses of SP/Fansidar during the pregnancy, at least one of which was taken during antenatal care.

Table CH.17: Source of anti-malarial

Percentage of children age 0-59 months with fever in the last two weeks who were given anti-malarial by the source of anti-malarial, Punjab, 2014.

	Percentage of children who were given anti-malarial	Number of children age 0-59 months with fever in the last two weeks	Percentage of children for whom the source of anti-malarial was:					Number of children age 0-59 months who were given anti-malarial as treatment for fever in the last two weeks
			Health facilities or providers		Community health provider ^a	Other source	A health facility or provider ^b	
			Public	Private				
Punjab	1.3	5,714	14.6	61.7	0.0	18.2	81.5	72

^a Community health providers include both public (*Lady health worker and Mobile/Outreach clinic*) and private (*Mobile clinic*) health facilities

^b Includes all public and private health facilities and providers as well as shops

Table CH.18: Intermittent preventive treatment for malaria								
Percentage of women age 15-49 years who had a live birth during the two years preceding the survey and who received intermittent preventive treatment (IPT) for malaria during pregnancy at any antenatal care visit, Punjab, 2014.								
	Percentage of women who received antenatal care (ANC)	Number of women with a live birth in the last two years	Who took any medicine to prevent malaria at any ANC visit during pregnancy	Percentage of pregnant women: who took SP/Fansidar at least once during an ANC visit and in total took:				Number of women with a live birth in the last two years and who received antenatal care
				At least once	Two or more times	Three or more times ¹	Four or more times	
Punjab	78.8	10,653	3.2	1.4	0.8	0.4	0.2	8,392
Area of residence								
Rural	74.4	7,369	3.1	1.1	0.7	0.3	0.2	5,480
All Urban	88.7	3,284	3.3	1.8	1.1	0.5	0.4	2,912
Major Cities	91.3	1,692	3.0	2.0	1.3	0.6	0.6	1,545
Other Urban	85.9	1,592	3.7	1.5	0.9	0.4	0.2	1,367
Women's education ^a								
None/pre-school	65.4	4,816	3.3	1.6	1.1	0.4	0.3	3,149
Primary	83.1	1,961	2.3	0.6	0.4	0.3	0.2	1,630
Middle	89.0	1,096	2.9	1.3	0.3	0.1	0.1	976
Secondary	93.4	1,467	3.8	1.7	1.1	0.6	0.4	1,370
Higher	96.5	1,311	3.3	1.5	0.8	0.3	0.2	1,265
Wealth index quintile								
Lowest	56.3	2,321	3.7	1.3	0.7	0.2	0.2	1,306
Second	72.3	2,198	2.7	1.1	0.8	0.3	0.0	1,589
Middle	84.6	2,118	3.2	1.3	1.0	0.6	0.4	1,790
Fourth	89.7	2,094	3.4	1.3	0.7	0.3	0.2	1,878
Highest	95.1	1,922	2.9	1.7	1.0	0.5	0.3	1,828
Division								
Bahawalpur	60.2	1,068	6.6	3.5	3.5	2.6	2.6	643
D.G. Khan	62.3	1,181	5.3	2.1	0.7	0.2	0.1	736
Faisalabad	85.2	1,237	3.3	2.1	1.0	0.6	0.1	1,054
Gujranwala	86.5	1,578	1.8	0.2	0.1	0.0	0.0	1,364
Lahore	82.1	1,914	2.0	0.6	0.2	0.1	0.0	1,571
Multan	79.8	1,162	3.2	1.9	1.4	0.0	0.0	927
Rawalpindi	88.3	882	5.0	2.6	1.6	0.7	0.3	779
Sahiwal	80.4	827	1.2	0.3	0.2	0.0	0.0	665
Sargodha	81.3	804	2.8	0.2	0.1	0.1	0.0	654
¹ MICS indicator 3.25 - Intermittent preventive treatment for malaria								
^a Total includes 2 unweighted cases of women's education missing								

Intermittent preventive treatment for malaria in pregnant women who gave birth in the two years preceding the survey is presented in Table CH.18. Less than 1 percent of the women took the Intermittent preventive treatment (three or more doses of SP/Fansidar) for malaria, whereas 3 percent took any medicine to prevent malaria at any ANC visit during pregnancy.