Report (HRA)

KAP Study on Polio and Routine Immunization- 2011

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-Submitted by-

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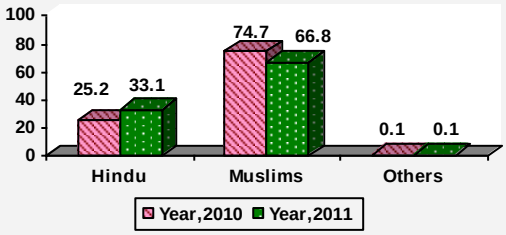
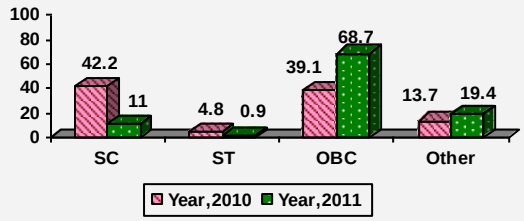
FACTSHEET-UP

1.0 PROFILE	Uttar Pradesh	
	Year, 2010	Year, 2011
Study Respondent	Sample	Covered
Total	4969	4968

Religion and Caste of the Respondents- -Year 2010/ Year 2011

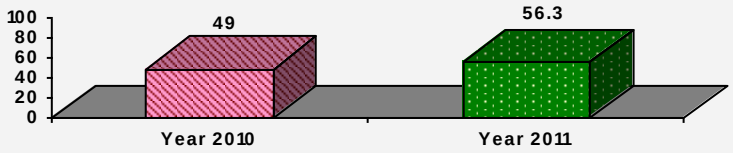




Base (Year 2010)- All Respondents - 4969 ; Base (Year 2011)- All Respondents - 4968

2.0 Knowledge, Attitude and Practice about Polio	Uttar Pradesh	
	Year, 2010	Year, 2011
Knowledge about Polio		
% Respondents who heard about Polio	100.0	100.0
Base- All Respondents	***(4969)***	***(4968)***
% Respondents reported that "Polio spreads through contaminated water or food or poor sanitation conditions or through feces"	-	26.2
% Respondents reported that "Polio can be prevented through Polio Drop" (spontaneous-2010 and prompted-2011)	94.8	98.0
Base-Respondents who are aware of Polio	***(4969)***	***(4967)***

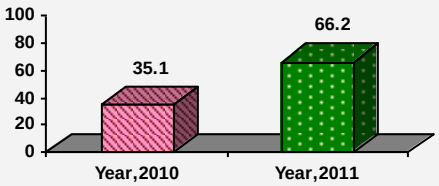
Polio affects most the "Children < 5 years"



Base : Respondents aware of polio- Year 2010- 4969 and year 2011- 4967

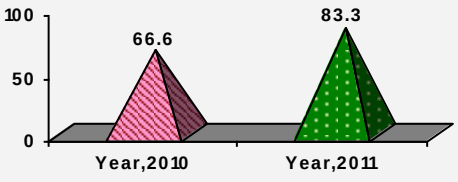
Threat Susceptibility and Severity of Polio		
% Respondents believed that polio can affect children in household	10.8	7.7
Base: Respondents aware of Polio	***(4969)***	***(4967)***
Knowledge about OPV		
% Respondents reported that the child should be given OPV up to 5 years of age	92.7	96.3
Base: Those Who Were Aware of Polio	***(4969)***	***(4967)***

Respondents who knew it is harmful if child misses polio dose any time



Base : Respondents aware of polio- Year 2010- 4969 and year 2011- 4967

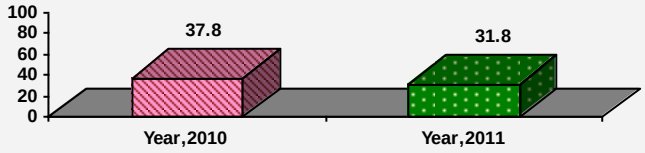
Respondents who agreed that they would give child polio drops even when s/he is sick

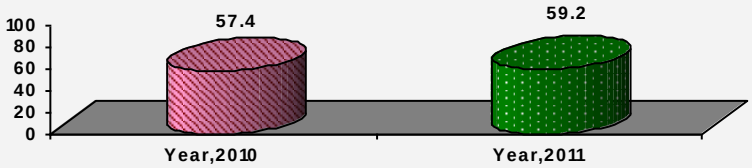


Base : Respondents aware of polio- Year 2010- 4969 and year 2011- 4967

2.0 Knowledge, Attitude and Practice about Polio	Uttar Pradesh	
	Year, 2010	Year, 2011
% Respondents reported that the child, in case misses any dose, should take OPV from the Anganwadi center or private clinic or should attend RI session	6.1	18.3
Base: Respondents who believed that it is harmful if the child misses Polio dose any time	***(1743)***	***(3291)***
Attitude towards polio and pulse polio program		
% Respondents who believed that OPV protects their child against polio	97.6	99.2
Base: Respondents Aware of Polio	***(4969)***	***(4967)***
Barriers to Self-Efficacy		
% Respondents who have heard any negative rumors about polio drops in family/community	29.5	19.1
Base: Respondents Aware of Polio	***(4969)***	***(4967)***
% Respondent who reported rumors (top three)		
Children may become sterile/ infertile	88.8	83.9
Children should not be administered polio drops when s/he is sick	-	23.0
Children are too young to be given OPV so many times	13.1	7.1
% Respondents who reported that such rumors had influenced their decision of giving OPV to their child	7.8	5.7
Base: Respondents who have heard any rumors about polio drops in family/community	***(1467)***	***(946)***
Exposure to Communication and Mass Media Sources		
Sources of information on Polio		
CMC	69.9	87.2
Family Members	25.7	79.9
Hoarding /Banners/Posters/Pamphlets	47.2	73.0
Had seen polio TV PSA with Amitabh Bachchan	73.6	70.2
Base: Respondents Aware of Polio	***(4969)***	***(4967)***
Norms		
% Respondents reported that their spouses did not have any problems in getting their kids administered with polio drops	86.7	99.3
% Respondents reported that their mother-in-law/mother did not have any problems in getting their kids administered with polio drops	67.5	26.9
% Respondents reported that people in their community support administering polio drops	86.9	93.9
Base: Respondents Aware of Polio	***(4969)***	***(4967)***
Practice/Behavior		
% Respondents who got their index child administered with polio drops during last round	98.5	95.3
Base: Respondents Aware of Polio	***(4969)***	***(4967)***
% Respondents who reported that CMC visited them last month	95.4	97.5
Base: Respondents who reported that they know the CMC/BMC working in their area	**(4523)**	**(4776)**

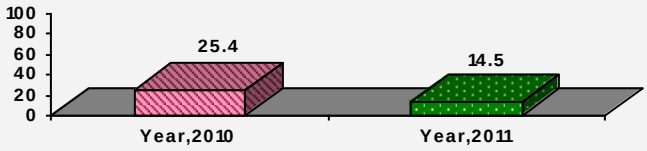
3.0 Knowledge, Attitude and Practice about Routine Immunization (RI)-HRA	Uttar Pradesh	
	Year, 2010	Year, 2011
RI Knowledge		
% Respondents who have heard about child RI	92.3	96.4
Base : All Respondents	***(4969)***	***(4968)***
% Respondents who could report at least "two diseases" that can be prevented through RI (TB/ Diphtheria/whooping cough/Tetanus/Polio/Hepatitis/Measles)	29.1	35.9
% Respondents who could recall the name of all the 6 vaccines (BCG,DPT,OPV, Hepatitis, Measles, Vitamin A)	*10.7*	*8.3*
Attitude towards RI		
% Respondents believed that RI is safe	84.5	86.5
% Respondents believed that it is easy to immunize their child through RI	75.9	82.7
% Respondents believed that the Index child is at high risk of getting diseases if s/he has not received routine immunization	79.2	78.1
% Respondents reported that they were willing to have/had their Index child fully immunized	77.7	82.5
Respondents who reported that they heard any negative rumor regarding RI in village/community		

3.0 Knowledge, Attitude and Practice about Routine Immunization (RI)-HRA	Uttar Pradesh	
	Year, 2010	Year, 2011
		
Base: Respondents who had heard about RI-Year 2010-4587 and Year 2011-4791		
Practice regarding RI		
% Respondents who have RI card for the index child	48.5	54.7
Base: Respondents who had heard about RI	***(4587)***	***(4791)***
% Respondents reported that their child has received the following vaccines (As per RI card)		
BCG	98.3	98.0
Polio 0	79.1	82.1
Polio 1	86.4	88.8
Polio 2	74.2	78.5
Polio 3	64.7	67.2
DPT 1	88.6	91.2
DPT 2	71.5	79.9
DPT 3	58.8	69.3
Measles	45.2	54.9
% Respondents reported that their child had received 1 BCG, 3 polio drops, 3 DPT injections and one Measles injection i.e. complete immunization (excluding polio 0)	40.3	50.1
Base: Respondents who have shown the RI card	***(1055)***	***(1160)***

4.0 Knowledge, Attitude and Practices Breastfeeding among Mothers	Uttar Pradesh	
Indicators	Year, 2010	Year, 2011
Awareness about benefits of breastfeeding		
% Mothers who could tell at least one benefit of breastfeeding	99.6	99.7
Practice of exclusive breastfeeding		
% Mothers who exclusively breastfed their Index child till (6 months)	15.4	8.0
Base: All mothers of Index Child (excluding Caretakers)	***(2464)***	***(2480)***
Attitude towards feeding colostrums and exclusive breastfeeding		
% Mothers agreed that it was good to feed milk "colostrums /khees" (yellowish thick milk) during the first few hours after child birth"	70.2	63.4
% Mothers agreed that the child should be exclusively breastfed until 6 months	66.0	63.1
Base: All mothers of Index Child (excluding Caretakers)	***(2464)***	***(2480)***
Practice towards breastfeeding, colostrums and exclusive breastfeeding		
% Mothers who feed milk "colostrum/khees"(yellowish thick milk) during the first few hours after child birth (*Base: All Mothers (excluding care takers Year,2010-2464,Year-2011- 2480)*		
		

4.0 Knowledge, Attitude and Practices Breastfeeding among Mothers	Uttar Pradesh	
Indicators	Year, 2010	Year, 2011
Mean Age of child reported by mothers at which the complementary food should be started (months)	-	6.6
Base: Mothers who have some understanding of complementary feeding	-	***(1625)***

5.0 Knowledge, Attitude and Practice on Diarrhea Management -HRA	Uttar Pradesh	
	Year,2010	Year, 2011
Knowledge on Diarrhea Management		
Indicators		
Respondents who were aware about at least one of the causes of diarrhea	83.0	81.0
Base: Number of respondents who were aware of causes of diarrhea	***(4030)***	***(3497)***
% Respondents who knew at least two ways of preventing diarrhea	65.5	55.5
Base: Those Who are aware about the ways diarrhea prevention	***(3515)***	***(3520)***
% Respondents reported that ORS should be given if a child gets diarrhea	-	32.7
Base : All Respondents	***(4030)***	***(4968)***
% Respondents aware of ORS	89.7	86.7
Base: Number of respondents who were aware of causes of diarrhea (2010) and All Respondents (2011)	***(4030)***	***(4968)***
% Respondents who have access to ORS	93.3	98.8
Base: Those who have heard of ORS	***(4156)***	***(4308)***
% Respondents who have heard of Zinc	2.3	1.5
Base : All Respondents (R-2) and All Who were aware of the causes of diarrhea (R-1)	***(4030)***	***(4968)***
Attitude and Belief towards Diarrhea		
% Respondents who believe that his/her child has a risk of getting diarrhea frequently	39.1	39.6
Base: Respondents who know what causes diarrhea	***(4030)***	***(3497)***
Practice towards Diarrhea		
% Respondents **whose children have suffered from diarrhea in last 15 days**		



Base: Respondents who know what causes Diarrhea, Year-2010: 4030 and Year-2011:3497

% Respondents who sought advice for the children suffered from diarrhea in last 15 days	83.6	87.8
Base: Number of respondents reported diarrhea during last 2 weeks	***(1023)***	***(506)***
% Respondents given ORS to the index child during the last episode	61.6	56.4
Base: Number of respondents reported taking advice for diarrhea	***(1023)***	***(444)***

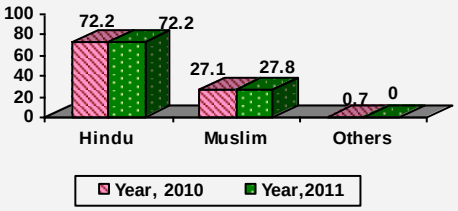
6.0 Knowledge, Attitude and Practice about Water, Sanitation and Hygiene -HRA	Uttar Pradesh	
Indicators	Year 2010	Year 2011
Knowledge on Water, Sanitation and Hygiene		
% Respondents who have flush toilet facility in their houses	67.0	61.9
% Respondents who think one <u>should</u> wash hands with soap		
After Defecation	96.2	97.2
After washing child's bottom	51.6	50.3
Before cooking/preparing food	37.3	25.8

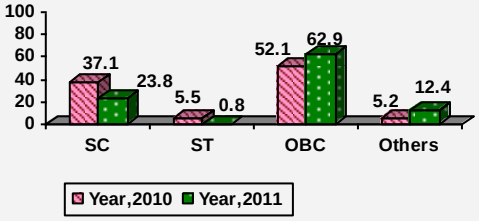
6.0 Knowledge, Attitude and Practice about Water, Sanitation and Hygiene -HRA	Uttar Pradesh	
Indicators	**Year 2010**	**Year 2011**
Base : All Respondents	***(4969)***	***(4968)***
% Respondents who thought the water they drink is safe	83.7	85.2
Base : All Respondents	***(4969)***	***(4968)***
% Respondents when they washed hands with soap <u>always</u>		
After Defecation	92.3	95.4
Before Eating	45.4	45.2
After washing child's bottom	40.5	38.2
Before cooking/preparing food	15.8	8.0
Base : All Respondents	***(4969)***	***(4968)***

FACTSHEET-BIHAR

1.0 PROFILE	Bihar	
	Year, 2010	Year, 2011
Study Respondent	**Sample**	**Covered**
Total	**4456**	**4900**

Religion and Caste of the Respondents- -Year 2010/ Year 2011

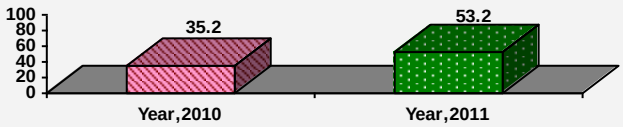




Base (Year 2010)- All Respondents -4456 ; Base (Year 2011)- All Respondents – 4900

2.0 Knowledge, Attitude and Practice about Polio	Bihar	
	Year, 2010	Year, 2011
Knowledge about Polio		
% Respondents who heard about Polio	99.60	99.97
Base- All Respondents	***(4456)***	***(4900)***
% Respondents reported that "Polio spreads through contaminated water or food or poor sanitation conditions or through faeces"	35.2	61.0
% Respondents reported that "Polio can be prevented through Polio Drop" (spontaneous-2010 and prompted-2011)	76.1	99.1
Base-Respondents who are aware of Polio	***(4441)***	***(4899)***

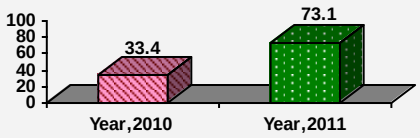
Polio affects most the " Children < 5 years"



Base : Respondents aware of polio- Year 2010- 4441 and year 2011- 4899

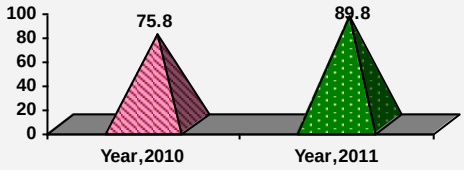
Threat Susceptibility and Severity of Polio		
% Respondents believed that polio can affect children in household	8.5	8.7
Knowledge about OPV		
% Respondents reported that the child should be given OPV up to 5 years of age	88.7	95.7
Base: Those Who Were Aware of Polio	***(4441)***	***(4899)***

Respondents who know it is harmful if child misses polio dose any time



Base : Respondents aware of polio- Year 2010 - 4441 and year 2011- 4899

Respondents who give child polio drops even when s/he is sick

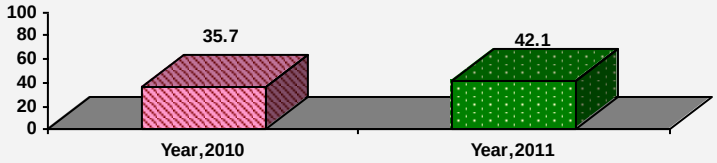


Base : Respondents aware of polio- Year 2010-4441 and year 2011- 4899

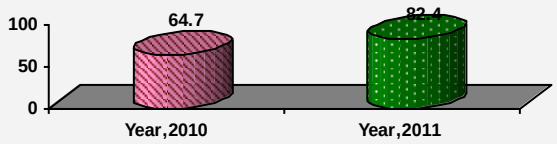
% Respondents reported that the child, in case misses any dose, should take OPV from the Anganwadi center or private clinic or should attend RI session	16.7	52.9
Base: Respondents who believed that it is harmful if the child misses Polio dose any time	***(1483)***	***(3584)***

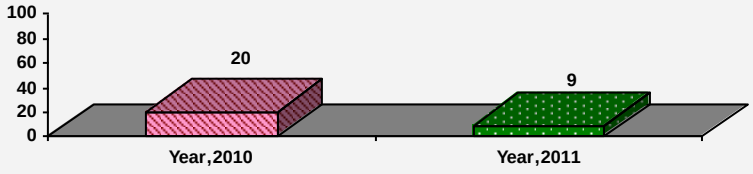
2.0 Knowledge, Attitude and Practice about Polio	Bihar	
	Year, 2010	Year, 2011
Attitude towards polio and pulse polio program		
% Respondents who believed that OPV protects their child against polio	97.7	99.5
Base: Respondents Aware of Polio	***(4441)***	***(4899)***
Barriers to Self-Efficacy		
% Respondents who have heard any negative rumors about polio drops in family/community	4.9	3.9
Base: Respondents Aware of Polio	***(4441)***	***(4899)***
% Respondent who reported rumors (top three)		
Children may become sterile/ infertile	78.6	34.6
Children should not be administered polio drops when s/he is sick	-	47.1
Children will die	3.1	13.2
% Respondents who reported that such rumors had influenced their decision of giving OPV to their child	12.7	25.1
Base: Respondents who have heard any rumors about polio drops in family / community	***(217)***	***(193)***
Exposure to Communication and Mass Media Sources		
Sources of information on Polio		
Family Members	-	87.6
AWW	-	87.2
Friends/neighbours/Relatives	-	77.3
Had seen polio TV PSA with Amitabh Bachchan	33.5	58.3
Base: Respondents Aware of Polio	***(4441)***	***(4899)***
Norms		
% Respondents reported that their spouses did not have any problems in getting their kids administered with polio drops	94.1	98.1
% Respondents reported that their mother-in-law/mother did not have any problems in getting their kids administered with polio drops	71.8	76.6
% Respondents reported that people in their community support administering polio drops	95.8	98.0
Base: Respondents Aware of Polio	***(4441)***	***(4899)***
Practice/Behavior		
% Respondents who got their index child administered with polio drops during last round	98.1	98.8
Base: Respondents Aware of Polio	***(4441)***	***(4899)***
% Respondents who reported that AWW visited them last month	88.8	92.6
Base: Respondents who reported that they know the AWW working in their area	***(4181)***	***(4806)***

3.0 Knowledge, Attitude and Practice about Routine Immunization (RI)-HRA	Bihar	
	Year, 2010	Year, 2011
RI Knowledge		
% Respondents who have heard about child RI	92.2	99.3
Base : All Respondents	***(4456)***	***4900***
% Respondents who could report at least "two diseases" that can be prevented through RI (TB/ Diphtheria/whooping cough/Tetanus/Polio/Hepatitis/Measles)	38.6	45.8
% Respondents who could recall the name of all the 6 vaccines (BCG,DPT,OPV, Hepatitis, Measles, Vitamin A)	12.8	3.4
Base: Respondents who had heard about RI	***(4111)***	***(4867)***
Attitude towards RI		
% Respondents believed that RI is safe	92.0	96.2
% Respondents believed that it is easy to immunize their child through RI	87.6	94.3

3.0 Knowledge, Attitude and Practice about Routine Immunization (RI)-HRA	Bihar	
	Year, 2010	Year, 2011
% Respondents believed that the Index child is at high risk of getting diseases if s/he has not received routine immunization	85.3	90.6
% Respondents reported that they were willing to have/had their Index child fully immunized	91.3	95.8
% Respondents who reported that they heard any negative rumor regarding RI in village/community		
	35.7	42.1
Base		
: Respondents who had heard about RI-Year 2010-4441 and Year 2011-4867		
Practice regarding RI		
% Respondents who have RI card for the index child	58.7	67.4
Base: Respondents who had heard about RI	***(4111)***	***(4867)***
% Respondents reported that their child has received the following vaccines (As per RI card)		
BCG	96.9	99.6
Polio 0	69.1	97.7
Polio 1	91.0	94.0
Polio 2	84.0	88.3
Polio 3	74.4	81.1
DPT 1	91.6	95.2
DPT 2	84.3	88.2
DPT 3	73.7	81.8
Measles	53.3	65.5
% Respondents reported that their child had received 1 BCG, 3 polio drops, 3 DPT injections and one Measles injection i.e. complete immunization (excluding polio 0)	49.9	63.5
Base: Respondents who have shown the RI card	***(1540)***	***(1904)***

4.0 Knowledge, Attitude and Practices Breastfeeding among Mothers	Bihar	
Indicators	Year, 2010	Year, 2011
Awareness about benefits of breastfeeding		
% Mothers who could tell at least one benefit of breastfeeding	98.7	99.9
Practice about exclusive breastfeeding		
% Mothers who exclusively breastfed their Index child till (6 months)	12.9	33.4
Base: All Mothers of Index Child (excluding caretakers)	***(2301)***	***(2230)***
Attitude towards feeding colostrums and exclusive breastfeeding		
% Mothers agreed that it was good to feed milk "colostrums /khees" (yellowish thick milk) during the first few hours after child birth"	66.0	88.9
% Mothers agreed that the child should be exclusively breastfed until 6 months	63.9	95.9
Base: All Mothers of Index Child (excluding caretakers)	***(2301)***	***(2454)***
Practice towards breastfeeding, colostrums and exclusive breastfeeding		
Mothers who fed milk "colostrum/khees"(yellowish thick milk) during the first few hours after child birth (*Base: All Mothers (excluding care takers Year,2010-2301, Year,2011-2230)*		

4.0 Knowledge, Attitude and Practices Breastfeeding among Mothers	Bihar	
Indicators	**Year, 2010**	**Year, 2011**
		
Mean Age of child reported by mothers at which the complementary food should be started (months)	-	6.4
Base: Mothers who have some understanding of complementary feeding	-	***(2312)***

5.0 Knowledge, Attitude and Practice on Diarrhea Management -HRA	Bihar	
	Year, 2010	**Year, 2011**
Knowledge on Diarrhea Management		
Indicators		
% Respondents who are aware about at least one of the causes of diarrhea	85.4	95.1
% Respondents who knew at least two ways of preventing diarrhea	53.8	78.5
Base: Those Who are aware about the ways diarrhea prevention	***(2725)***	***(4489)***
% Respondents reported that ORS should be given if a child gets diarrhea	-	58.8
% Respondents aware of ORS	78.8	90.9
Base : All Respondents	***(3341)***	***(4900)***
% Respondents who have access to ORS	87.3	93.9
Base: Those who have heard of ORS	***(3370)***	***(4455)***
% Respondents who have heard of Zinc	3.0	5.3
Base : All Respondents (R-2) and All Who were aware of the causes of diarrhea (R-1)	***(3341)***	***(4900)***
Attitude and Belief towards Diarrhea		
% Respondents who believe that his/her child has a risk of getting diarrhea frequently	49.9	54.2
Base: Respondents who know what causes of diarrhea	***(3341)***	***(4197)***
Practice towards Diarrhea		
Respondents whose children have suffered from diarrhea in last 15 days		
		
Base: Respondents who know what causes Diarrhea, Year-2010: 3341 and Year-2011:4197		
% Respondents who sought advice for the children suffered from diarrhea in last 15 days	85.2	93.2
Base: Number of respondents reported diarrhea during last 2 weeks	***(670)***	***378)***
% Respondents given ORS to the index child during the last episode	38.5	77.9
Base: Number of respondents reported taking advice for diarrhea	***(670)***	***353)***

6.0 Knowledge, Attitude and Practice about Water, Sanitation and Hygiene -HRA Indicators	Bihar Year 2010	 Year 2011
Knowledge on Water, Sanitation and Hygiene		
% Respondents who have flush toilet facility in their houses	16.3	18.6
% Respondents who think one should wash hands with soap		

6.0 Knowledge, Attitude and Practice about Water, Sanitation and Hygiene -HRA Indicators		Bihar	
		Year 2010	Year 2011
	After Defecation	89.3	92.3
	After washing child's bottom	33.3	42.7
	After disposing of child faeces	18.3	38.4
Base : All Respondents		***(4456)***	***(4900)***
% Respondents who thought the water they drink is safe		81.5	89.9
Base : All Respondents		***(4456)***	***(4900)***
% Respondents when they washed hands with soap <u>always</u>			
	After Defecation	55.8	73.6
	Before Eating	19.9	33.2
	After washing child's bottom	13.2	22.7
	After disposing of child faeces	10.5	24.0
Base : All Respondents		***(4457)***	***(4900)***

RECOMMENDATIONS

The findings of KAP survey conducted in high risk areas (HRAs) of UP and Bihar in 2010 and 2011 identified the following areas which the polio communication need to focus on. The survey tracked several indicators during the two rounds and noted that there has been a noticeable increase in the values of most of the indicators from KAP 2010 to KAP 2011. However, there are some indicators that indicate substantial work still to be done. The following recommendations specifically address the latter.

- All the respondents in UP and Bihar had heard of polio; however, deeper probing indicated that their awareness on many other issues such as how polio spreads, who does it affect more, threat susceptibility of polio, whether it is curable still remained low. This calls for a need to *focus on messages related to how polio spreads, age group most susceptible to polio virus infection etc., thereby impacting the polio risk perception levels.*

- Barring a few, high proportion of the respondents (98-99%) in both the states knew that polio could be prevented through polio drops; OPV should be given to children up to 5 years of age (96%) and that they would get polio drops administered even if the child is sick (83-90%). Most (95-98%) also got their children immunized during last polio round. However, around one-third of respondents still did not know that it is harmful if the child misses any polio drop. Further, the survey observed high reliability among the respondents on the home-visits of pulse polio team to make up for missed doses. *Hence, including messages on the importance of getting the children immunized during each round of polio campaign and actions to be taken such as visiting AWCs, PHCs in order to obtain missed doses would help the program become more sustainable.*

- The respondents in UP had been hearing some negative rumors about polio drops in the family or community since 2010 round (29%). Although there has been a decline in such rumors from KAP 2010 to KAP 2011 by 10 percentage points, *the rumor heard most that 'polio drops cause infertility/sterility' needs to be addressed on a priority basis.*

- The top sources of information on polio have been the family members, CMCs and polio posters/banners in UP and AWW, friend/neighbors/family members in Bihar. Amitabh Bachchan's announcement on TV has also been an important source of information on Polio. *The use of above communication channels could be continued for addressing gaps in the information at the community level.*

- *Polio communication focus on societal norms may be further strengthened* in view of the findings that around one-fourth to one-third of respondents reported that their mother/mother-in-laws still oppose getting the children administered with polio drops.

- *The gaps with respect to other low performing indicators related to routine immunization, breastfeeding, diarrhea, water sanitation and hygiene given below could be addressed as per the UNICEF's convergence programme protocol.*

    - Although the awareness of routine immunization (RI) among the respondents was high (96%), their knowledge regarding diseases that RI prevents (36-46%) and the names of all 6 vaccines (3 -15%) was low.

    - Only 35-45 percent respondents had an RI card and only 50-63 percent had got their child fully immunized. This indicator was low despite the fact that the respondents were willing to have their children fully immunized (82-96%); 87-96%believed that RI is safe; 83-94%found that it is easy to immunize their child through RI; 78-91% also believed that their child would be at risk of getting diseases if they don't get her/him immunized through RI. *Perhaps in this case there is a need to examine the availability of timely services to HRA populace.*

    - Similarly, the knowledge about exclusive breastfeeding (63%-UP and 96%-Bihar) and colostrum feeding (63%-UP and 86%-Bihar) was fairly good among respondents. However; the practice of exclusive breastfeeding (UP-8%, Bihar-33%) and colostrum feeding (59%-UP) were reportedly very low. *Perhaps a qualitative assessment of the factors hindering colostrum feeding and exclusive breast-feeding would throw light on aspects that need to be addressed while communicating with mothers and other caregivers.*

    - 40 and 54 percent respondents in UP and Bihar respectively perceived that their child had risk of getting diarrhea frequently. Despite the fact that the awareness of ORS (87-91%) and its access (94-99% among those who were aware) was high in both the states, the awareness about the use of ORS (UP: 33%; Bihar: 59%) and the actual use of ORS during diarrhea was low-especially in UP (56%).The awareness of zinc was extremely low among respondents (2-5%).

- Availability of flush toilets was poor; especially in Bihar (UP: 62%; Bihar: 19%). *This could be an area of concern for the convergence program, especially in Bihar.*

- The knowledge of and practices on hand-washing before or after certain activities, such as after washing child's bottom, before cooking and after disposing of child's feces, remained low and hence need to be addressed appropriately in the program.

1 INTRODUCTION

1.1 Background of Routine Immunization and Polio

Delivering effective and safe vaccines through an efficient delivery system is one of the most cost effective public health interventions[2]. Immunization programmes aim to reduce mortality and morbidity due to vaccine preventable diseases (VPDs). The Expanded Programme on Immunization (EPI) was launched in India in 1978 to control VPDs. Initially, six diseases were selected: diphtheria, pertusis, tetanus, poliomyelitis, typhoid and childhood tuberculosis. The aim was to cover 80% of all infants. Subsequently, the programme was universalized and renamed as Universal Immunization Programme (UIP) in 1985. Measles vaccine was included in the programme and typhoid vaccine was discontinued.

In 1995-96, intensified polio eradication activities were started under the Polio Eradication programme, beginning with National Immunization Days (NIDs). The Polio Eradication Programme was set up with the assistance of the National Polio Surveillance Project (NPSP)The Polio Eradication Programme in India is a collaborative effort between the Ministry of Health and Family Welfare (MOHFW), WHO NPSP, UNICEF, Rotary International, and the U.S. Centres for Disease Control. The program aims to eradicate polio from India by immunizing every child under 5 with the Oral Polio Vaccine (OPV). Tremendous progress has been made in the last several years to interrupt polio transmission in India. Every month, over 4, 50,000 health workers in India deliver the Oral Polio Vaccine (OPV) to 58 million children under 5 years of age. This mammoth effort, sustained over several years now, has made the India Polio Program the largest and one of the most successful public health programs in the world.[3]

What is Polio?

Poliomyelitis is a viral disease that can affect nerves and can lead to partial or full analysis[1]. This is caused by infection with poliovirus. The polio spread by (1) direct person-to-person contact (2) contact with infected mucus or phlegm from the nose or mouth (3) contact with infected faeces.

The virus enters through mouth and nose, multiply in the throat and intestinal tract and then is absorbed and spread through the blood and the lymph system. The time from being infected with the virus to develop symptoms of disease (incubation) ranges from 5-35 days. The risk factors include – (1) lack of immunization against polio and (2) travel to an area that has experienced a polio outbreak. In an areas where there has been a polio outbreak, those who most likely to get the disease include children, pregnant women and elderly person.

The number of polio cases dropped to a record low of 42 in 2010 compared to 741 in 2009.To date in 2011, India has only one case of polio in January in Howrah district of west Bengal. The traditional endemic states of Uttar Pradesh and Bihar have not reported any case of polio this year. Infact,

[1] http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0002375/

[2] http://www.whoindia.org/en/Section6/Section284/Section286_506.htm

[3] UNICEF: Strategic Communication for Polio Eradication in India; 2009-2013 UNICEF Communication Strategy

Uttar Pradesh and Bihar have not reported any polio case since April 2010 and September 2011 respectively. Closer to the eradication, now every case of polio will be treated as public health emergency. In West Bengal, the Government of West Bengal and polio partners have rolled out an emergency response to check the spread of polio virus in other parts of the state. The more efficacious bivalent oral polio vaccine, which protects against both type 1 and type 3 strains of polio viruses, is being used in the ongoing polio immunization campaign in West Bengal and the supplementary immunization campaign in Uttar Pradesh and Bihar and other high risk areas.[4]

The communication strategy for polio eradication in India aims at reducing the proportion of children missed out within the highest risk groups of **nomads, slum-dwellers, brick kiln workers and construction site workers** (2009-2011). It also suggests using the significant access and goodwill the program has achieved, to leverage behavior change in areas that will help sustain interruption of transmission: **good hygiene practices, routine immunization, exclusive breast feeding and the management of acute diarrhea** (2010-2013).

High Risk Areas for the Polio Program

UNICEF has identified 107 high-risk blocks in UP (53+13=66) and Bihar (41) i.e. the polio endemic areas wherein WPV** and WPV 1 cases last two years were reported respectively in the state of UP and Bihar.

Cut-off villages in Bihar constitute the higher risk areas than other parts of the state: Bihar, India's third most populated state is distinctly rural and largely poor: Forty Three percent of the population in Bihar lives below the poverty line. The situation of the poor is compounded by the nearly-annual flooding that takes place in the state, leading to continued and large-scale displacement. The floods in 2008 left as many as 10 million people displaced. A geographic analysis of polio cases in Bihar reveals that a significant proportion of the polio cases in the state are located in the Kosi Region. Because these districts belong to an area that is inundated by Kosi and other rivers, they are susceptible to flooding. The damage due to such frequent inundations coupled with high population density, frequent displacement and compromised access to services, leaves this area at greater risk for virus transmission than other parts of the state. At the same time, vaccinators have less access to these areas, giving the virus an increased opportunity to travel and multiply.

High Risk Groups for the Polio Program

While the polio program has achieved very high coverage in almost all SIA (Supplementary Immunization Activity) rounds, there is a need to place added emphasis on the groups most at risk for virus transmission, in the final stages of the program. The recent epidemiology and case analysis has identified the following groups as being the most vulnerable to polio virus transmission; -

Brick kiln and construction workers- These groups are migrant labourers but are the most geographically distinct migrants- therefore, they are at risk of being missed out while covering other migrant populations who would be covered under undeserved or slum dweller categories. Brick kilns are supposed to be covered in their entirety. Children are supposed to be covered under polio program both at labour

[4] http://www.unicef.org/india/health_3729.htm

camps in the brick kilns as well as the other fields where bricks are prepared.

Construction sites are labour camping sites with construction going on nearby.

Nomads are the groups of communities who travel from place to place for livelihoods; setting up dera's whenever and wherever they stop.

Slum dwellers are the people who are living in notified slums or temporary settlements on the outskirts of urban and rural areas.

Underserved Groups: All of the above mentioned groups of people - Nomads, migrants and Slum dwellers- are in fact undeserved communities. These groups represent the most socially excluded groups in society, not only in terms of access to OPV, but also in terms of access to health and other social services. Having to travel for livelihoods and economic opportunities means that these groups are often on the move and potentially moving the poliovirus along the country with them. Because of the transient nature of many of these groups, identifying them and tracking them remains difficult, particularly when their movement is from high-risk to non high-risk areas and vice versa. Among the mobile underserved groups– nomads, seasonal laborers and temporary slum dwellers – the trend is an increasing number of cases over the last two years. Monitoring data also shows that these high-risk groups have fewer immunizations than the rest of the population.

1.2 Need for the KAP study on Polio and Routine Immunization in UP and Bihar

UNICEF intended to expand the information it generates on knowledge, attitudes, beliefs and practices of caregivers of children under the age of 5 in endemic areas of UP and Bihar, on a regular basis, so as to increase the flexibility and responsiveness of the communication campaign during the next 12 months. The current activity of carrying out KAP study has been considered necessary to continually test communication assumptions at a time when a) the programme needs to be more persuasive than ever in ensuring household and community support and b) There is deeply-felt frustration over the frequency and single-mindedness of the polio programme in endemic states, where SIAs are conducted 10-12 times a year.

The current study was expected to track a discreet number of indicators linked to conceptual theory that would provide insights into underlying public perceptions of the polio campaign; illuminate areas of risk (such as the strength of prevailing myths over vaccine safety); identify gaps in data presently available; and gauge community reaction to government efforts to 'add on' to polio eradication by clubbing polio immunization with other health/non-health interventions.

As planned, the required information was collected and analyzed in 2010 and 2011 to feed directly into the programme and to communication planning for immunization activities, for more rapid adjustment of polio 'messaging' in broadcast and print media. The findings of the study would be used to; (1) Set polio eradication program priorities (2) Estimate resources required for various activities, (3) Select the most effective communication channels and messages, (4) Establish baseline levels with expanded underserved groups (5) Measure changes that result from interventions, (6) Show the magnitude of the challenge which

remains, and (7) Assess what contribution strategic communication has made to the outcomes/impacts.

1.3 Brief Comparison of KAP 2008 and KAP 2010 & 2011

The KAP 2008 study conducted by UNICEF and EPOS demonstrated an environment of impressive participation and continued engagement with the polio programme. The findings indicated that Western U.P. was consistently below the average on almost all indicators. Clear groups for focus were identified as mothers in Western U.P., as well as the expanded underserved groups mentioned above for whom no KAP data was available. In order to contribute to the 2009-2012 strategy, further data collection Water and sanitation & hygiene as these have a direct bearing on the spread of polio. on these groups was recommended. Therefore, UNICEF has entrusted ORGCSR to conduct KAP survey in 2010 and 2011 consecutively to test communication assumptions.

KAP 2010 & 2011 studies are the follow up surveys of 2008 KAP study that would gauge knowledge, attitudes, and practices of the polio programme's target group regarding polio and routine immunization. The additional components in KAP, 2010 and 2011 studies includecoverage of above mentioned underserved populations/HRGs (such as Brick Kiln workers, constructions site workers, slum dwellers and nomads in UP and migrants in Bihar) and the inclusion of issues like diarrhea, breastfeeding and

Structure of the report

The findings of surveys conducted in HRAs and among HRGs have been presented in two separate reports. The current report presents HRA-survey findings and comprises the following chapters;

- Fact sheet- UP & Fact sheet – Bihar
- Recommendations
- Chapter 1 : Background
- Chapter 2 : Objectives and Methodology
- Chapter 3 : Profile of the survey households and Respondents
- Chapter 4 : Knowledge, attitude and practice of respondents about Polio
- Chapter 5: Knowledge, attitude and practice about routine immunization
- Chapter 6 : Knowledge, attitude and practice about breastfeeding among mothers
- Chapter 7: Knowledge, attitude and practice on diarrhea management
- Chapter8 : KAP about water, sanitation and personal hygiene

The findings in each of the chapters (except Profile of the Survey households) have been presented by gender within each of the two states. The Profile of the Survey Households has been presented by type of settlement (Rural/ Urban areas). Wherever required, the findings of KAP 2010 and 2011 have also been compared.

2 RESEARCH OBJECTIVES AND METHODOLOGY

2.1 Research Objectives

Broad Objective:

The broad objective of this study is to conduct a follow up of a 2008 KAP study in two consecutive rounds that will gauge knowledge, attitudes, and practices of the polio program's target group regarding polio and routine immunization.

Specific Objective:

- Individual, group and structural barriers to addressing polio
- Current information channels/sources of information;
- Attitudes towards those information sources
    - information acceptability
    - comprehension

2.2 Issues addressed and Research Indicators

During KAP 2010 and KAP 2011, apart from Polio, other issues that were also covered in the study include: Routine Immunization, Exclusive breast feeding, Diarrhea Management and Water, Sanitation and Personal Hygiene. These issues were considered to be included in the study in view of the convergence of different programs of UNICEF in the proposed study areas.

A list of indicators for all the issues was finalized in consultation with UNICEF at the time of implementation of KAP 2010 and was also used in KAP 2011. Using the 2010 KAP study survey tools as a base, little modifications were made.

The specific objectives of the study are to probe audience knowledge, attitude, beliefs and practice related to the following issues:

- Polio in a general health context;
- Identification of polio symptoms;
- Threat perception;
- Vaccine knowledge;
- Vaccine and health-care related attitudes and practices;

2.3 Methodology

The second round of KAP study(2011) conducted in UP and Bihar follows the sampling design similar to that of the first round of KAP study conducted in 2010 in these two states.

The study design for KAP 2011 covers the two main components of the study – coverage of High Risk Areas and High Risk Groups identified by UNICEF in Uttar Pradesh and Bihar. The samples were so fixed for each of the above groups as to give reliable estimates at district level.

Component 1: Survey in identified High Risk Areas (HRAs) -In the state of UP, 53 blocks belonging to 18 districts and in Bihar 41 blocks from 19 districts were identified by UNICEF as high-risk areas with respect to polio incidence during R-2.

Component 2: Survey in identified High Risk Groups (HRGs) -In addition to the above, the survey covered expanded

universe of underserved high risk groups (HRGs) in selected districts including; Brick kiln workers, Nomads, Slum dwellers, Migrants, Construction workers.

The target respondents for Survey in HRAs and HRGs included:

- Mothers of children aged 0-59 months residing in rural/urban area
- Fathers of children aged 0-59 months residing in rural/urban area

2.3.1: Research technique used

KAP 2011, the second round, is primarily a quantitative study covering HRA.

2.3.2 Sampling Design for Survey in HRAs (Component 1)

As the 2010 KAP and 2011 KAP studies are the follow ups of KAP 2008 study, the sample size for different groups (mothers and fathers of children aged 0-59 months residing in rural and urban areas in pre decided zones) was arrived-at by adopting the same criteria followed by the KAP 2008 survey, which is given below:

- In a given group, the percentage of respondents who perceive that the polio vaccine is effective = 70 %
- Margin of Error= 5%
- Confidence Interval = 95%
- Power =80 %
- The sample size for a given group, computed on the basis of above criteria is: 580 (say 600).

The sample size considered during KAP 2008 included urban and rural x Men and Women since these categories were looked at separately for differential action. KAP 2008 also considered that each of the two states would be divided in two zones and the estimated sample size will be allocated to each of the two zones in each state to provide regional level estimates. Thus, a sample of 9600 was estimated- (2 states x 2 zones x 2 (Urban, Rural 600 each) x 2 (Men, Women).For the current study (KAP 2011), UNICEF proposed to cover the same sample size that was covered during KAP 2008 and KAP 2010- i.e. a sample size of 4800 in Bihar and 4800 in UP in Round 2. In an effort to develop sampling frames, ORGCSR interacted with UNICEF to access information on identified urban and rural HRAs and it was realized that a segregated list of HRAs by rural and urban areas was not available the time (KAP 2011).

Like during KAP 2010, in the absence of information on rural-urban break up of the high risk areas (HRAs) covered by UNICEF, it was decided in consultation with UNICEF that the sampling design to be proposed for the current study (KAP 2011) would not consider rural-urban bifurcation at the time of sample allocation; however, a provision will be made in the questionnaire to capture rural-urban break up of the sample covered during the survey.

UNICEF required estimations at the district level (lowest level), so, in view of this, it was decided that all the districts would be covered during the 2010 and 2011 round surveys; within each district two/three blocks depending on the availability of the blocks and within each block two HRAs would be selected to ensure proper representation of survey population.

It was also discussed that the sampling procedures for UP and Bihar, would remain the same till PSU selection stage; however, when it comes to selection of HHs for the

survey, the sampling procedure in Bihar would assume a different procedure. In case of UP, the sample was drawn from the lists of children maintained by CMC (s) at HRA level whereas in Bihar, the list of children was prepared through house-listing exercise in the selected HRAs for selecting children/household/parents.

It may be noted that the HRAs covered during round 1 (KAP 2010) were excluded from the sampling frames for both the states before selecting the HRAs for the second round, KAP 2011. However, in case of Barkheda block of Pilibhit district, in view of the limited number of HRAs available on the list, the HRAs covered during KAP 2010 were also covered in KAP 2011. However, the households/children covered during KAP 2010 were excluded from the house-level sampling frames/CMC lists of selected HRAs of Barkheda block.

Since the sampling procedure adopted in the two states was slightly different, it is presented in two different sections below.

2.3.3 Sampling Procedure - Uttar Pradesh and Bihar

Universe

The children aged 0-59 months belonging to 1163 high risk areas (HRAs), excluding the HRAs covered during the first round, KAP 2010, belonging to 53 blocks spread across 18 districts of UP. Similarly for Bihar, the children aged 0-59 months belonging to 1591 high risk areas (HRAs) from 41 blocks spread across 19 districts.

District coverage

In line with the discussion with UNICEF, all the 18 districts of UP and 19 districts of Bihar were covered under the study to give district level estimates. In each district a maximum of 3 blocks in UP and a maximum of 2 blocks in Bihar were selected using systematic random sampling procedure.

Selection of Blocks

Within each district, the listed blocks were arranged in descending order in terms of number of HRAs. The required numbers of blocks (i.e. maximum of 3 per district in UP and a maximum of 2 per district in Bihar) were selected using systematic random sampling technique. In case there were less than three blocks per district in case of UP and less than two blocks in case of Bihar, all the blocks were selected and the numbers of PSUs fixed per district were allocated to those blocks equally.

Selection of HRAs /PSUs

In each selected block, the required numbers of HRAs/PSUs (2 per block in the case of UP and 3 per block in case of Bihar) were selected using simple random sampling technique.

Selection of HH/Respondents

While selecting respondents/HH, slightly different procedures were followed in UP and Bihar. Hence the selection procedures have been presented separately for the two states

UP : In each PSU, 45 HHS /respondents[mothers/fathers] were selected following systematic random sampling, using the list of HHs maintained by Community Mobilizing Coordinators (CMCs) as a sampling frame. To select mothers/fathers, the list of eligible children/HHs was divided in to 2 equal halves. One half was selected on a random basis and then designated the "mothers' area" and the required number of mothers of index child (22-23) were selected using systematic random sampling technique. The other half was designated the "fathers' area" and the required number of fathers of index child (22-23) were selected by using systematic random

sampling technique. In case there were two CMCs in a HRA, it was assumed that they would be maintaining two different lists for their respective localities within HRA. Both the lists were obtained from CMCs and combined together. The HHs listed in the combined list was given continuous serial numbers and the required number of HHs was selected using systematic sampling technique as mentioned above.

Bihar: In each PSU, 43 HHs/respondents (mothers/fathers) were selected using systematic random sampling using the list of the HHs. In the absence of CMC's list of HHs, the survey team carried out a house listing exercise in the selected HRAs prior to the launch of the main survey to develop a list of eligible children/parents. For house-listing exercise, the team prepared a quick map of the HRA with the help of village key informants. Rest all the steps were similar to UP for choosing the HHs.

In view of the first round, KAP 2010's experiences with respect to non-availability of respondents, 25% over-sampling was undertaken at the respondent level in order to achieve the sample.

2.3.5 Research tools

First round's (KAP 2010) questionnaire was slightly modified for the second round (KAP 2011). In view of the comparability of KAP 2010 findings with that of KAP 2011, an attempt was made to make minimum changes in round-1 (KAP 2010) questionnaire.

It may be noted that the tools were developed on the basis of list of indicators finalized for the survey in consultation with UNICEF during the first round (KAP 2010). The modified tool was translated and pretested, especially for the additional/modified questions especially for UP.

2.4 Sample achievement

The sample targeted for each of the States was 4800- 2400 mothers and 2400 fathers. The achievement of the sample was more than the targeted sample, as given below.

State	Completed number of Interviews in the selected HRAs		
	Mother	Father	Total
UP	2481	2487	4968 (77%)
Bihar	2462	2438	4900 (98%)

2.5 Field work and project management

The field work was launched in the last week of July 2011 in both the states. It took almost a month to complete the survey. The core research team members of ORGCSR undertook the responsibility of planning the fieldwork and ensuring thorough training of the field investigators for the KAP survey. The field executives in both the states constantly accompanied the field teams to ensure quality data collection and coverage of the sampled HRAs and HRGs in the stipulated time period. The field supervisors carried out spot and back checks to ensure completeness and accuracy of the completed schedules.

In all, for the HRA component, 8 field teams in UP and 8 field teams in Bihar comprising of four investigators and a supervisor each, were deployed to complete the fieldwork across both the states. The teams comprised male as well female investigators to interview male and female respondent categories respectively. All investigators had past experience of doing various health related surveys in the concerned state.

Apart from the above, 2 supervisors and 12 listers were also involved in carrying out house-listing exercises. The training of the field teams was conducted at the two state head quarters – Patna and Lucknow. The field executives involved during the first round, KAP 2010 only were involved during second round, KAP 2011.

It may be mentioned at this juncture that the fieldwork for this study would not have been possible without the support from the UNICEF staff at all levels. The research team as well as the field team constantly got encouragement and support throughout the duration of the study right from the stage of finalizing the list of indicators to finalization of the questionnaire, training of trainers, state trainings and even while the field work was on.

2.6 Limitations of the study

In UP, the team had to resort to replacements of some HRAs due to some revisions in old HRA list in consultation with UNICEF state officials prior to the launch of survey.

3 PROFILE OF THE SURVEY HOUSEHOLD AND RESPONDENTS

3.1 Profile of the Survey Households

This chapter presents the demographic profile of the households where mothers and fathers of children below 5 years of age were interviewed for the KAP study. In all, 4968 respondents were interviewed in UP and 4900 were interviewed in Bihar State.

3.1.1: Household Size and Type of Family

The average family size of the respondents was 7 in UP and 6 in Bihar. The family size was slightly higher in rural areas as compared to urban areas. Nearly three-fourths of the respondents in both the states reported living in nuclear families.

3.1.2: Demographic Characteristics of the Respondents

Religion and Caste

A majority of respondents in UP (67 percent) were Muslims while just over one-third were Hindus (Table 3.1). On the other hand, in Bihar, the respondents were predominantly Hindus. Over 72 percent of the respondents in Bihar were Hindus while only 28 percent were Muslims. An analysis of the caste-wise composition of the sample respondents revealed that a majority of the respondents in both the States belonged to Other Backward Castes with 69 percent from UP and 63 percent of the respondents from Bihar belonging to Other Backward Castes.

3.1.3: Housing characteristics, ownership of house

Ownership of a proper dwelling unit is bound to have a positive impact on the KAP with respect to health care. A comparative analysis between the two rounds of KAP study reveals that in UP and Bihar, the proportion of families living in *pucca* houses were more or less the same (Fig 3.2). Noteworthy is that the proportion of families living in tents and houses made by bamboos and polythene had increased by 5 percent points perhaps indicating some change in the areas being covered under HRA population.

Figure 3.2 Type of Dwelling Unit – R1 (2010) Vs R2

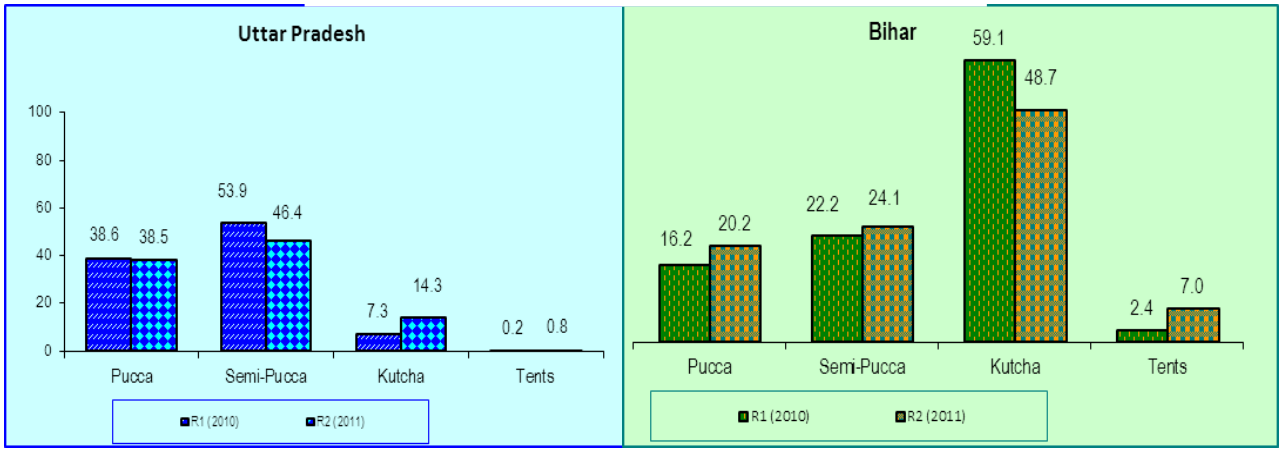
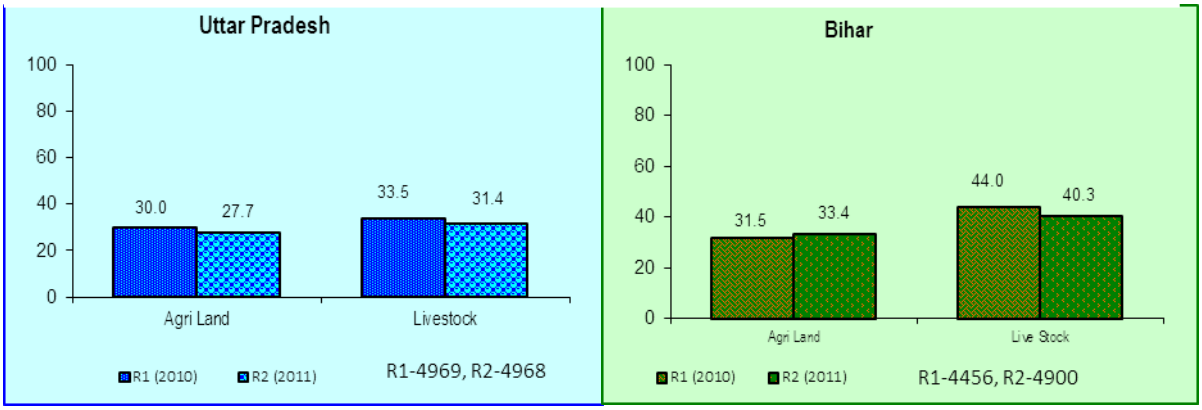


Figure 3.3 Ownership of Agricultural Land and Live Stock – R1 (2010) Vs R2 (2011)



Over 72 percent of the respondents in UP and 67 percent of the respondents in Bihar do not own any agricultural land. Even among those holding agricultural lands, the size of the land holding is quite less.

3.1.5: Ownership of Household Assets

Table 3.5 gives an idea about the ownership of various assets as reported by the respondents. The respondents in UP seemed better-off as compared to those in Bihar in terms of ownership of assets, with a majority of respondents in UP reporting possession of assets like cot/bed (99%), mobile telephone (84%), watch/clock (83%), mattress (74%), pressure cooker (73%), bicycle (68%) etc. In Bihar, percentage respondents owning these items was far lower barring cot/bed, reportedly owned by 97 percent and mobile telephone by 76 percent. Understandably, higher proportion of respondents in urban areas owned various assets as compared to the rural respondents.

3.2.1: Age

A majority of the respondents in both the States were in the 20 to 39 years age group. In both the States, higher proportion of Mothers was in the 20 to 29 years age group while higher proportion of Fathers was in the 30 to 39 years age group.

3.2.2: Education

As far as literacy status is concerned, the respondents contacted in Bihar were better educated as compared to those in Uttar Pradesh (Table 3.2). As many as 58 percent of the respondents in UP were illiterates. Nearly 72 percent of the Mothers were illiterates. Though 57 percent of the Fathers were said to be literates, the level of education attained was very low for rest of them. In case of Bihar, more than half of the respondents were literates. In fact, 66 percent of the fathers and 40 percent of the Mothers were reported to be literates. On the whole, over 14 percent of the respondents in Bihar were educated up to Secondary School or above.

Table 3.2: Education of Respondents by Gender, (2011)						
Education	**Uttar Pradesh**			**BIHAR**		
	Mother	**Father**	**Total**	**Mother**	**Father**	**Total**
Below primary	4.2	7.0	5.6	12.5	15.2	13.8
Illiterate	71.9	43.3	57.5	59.6	34.2	46.9
Literate but no formal education	1.2	3.2	2.2	4.6	8.3	6.4
Primary	8.5	16.2	12.3	7.2	9.6	8.4
Middle	5.6	15.7	10.7	8.1	12.8	10.5
Secondary	4.5	7.3	5.9	4.9	10.6	7.8
higher secondary	1.4	3.3	2.3	2.4	6.4	4.4
Graduate and above	2.7	4.0	3.4	0.7	2.9	1.8
Base: Number of Completed Interviews	**2481**	**2487**	**4968**	**2462**	**2438**	**4900**

3.2.3: Occupation

Most of the mothers were housewives (94% in UP and 75% in Bihar). Major occupations among fathers include non-agricultural laborers (44% in UP, 50% in Bihar) and Petty Businessmen (22% in UP, 10% in Bihar). In Bihar, 22 percent of the Fathers were occupied as agricultural labourers. In Bihar, over 13 percent of the mothers also were occupied as non-agricultural labourers.

Conclusion

An analysis of the profile of the households reveals that the majority of the families live in nuclear families with an average family size of 6 in both the States. The majority of the households in UP were Muslims while those in Bihar were Hindus. The majority of the households contacted in both the States were from `Other Backward Castes'. Most of the families in UP lived in *pucca* or *semi-pucca* houses while over half of the families lived in *kutcha* houses or tents in Bihar. Most of the fathers were engaged as non-agricultural labourers in both the States. Though most of the respondents were from a lower socio-economic class across the two States, respondents in UP were better off than those in Bihar. *"A good percentage owning mobile telephone in both UP and Bihar indicates that use of mobile technology such as free ringtones imparting messages on polio and other social issues may create a good impact among the target population".*

4 KNOWLEDGE, ATTITUDE AND PRACTICES ABOUT POLIO

This chapter provides information about the Polio related knowledge, attitude and practices among respondents in high risk areas of UP and Bihar.

4.1 Knowledge about Polio

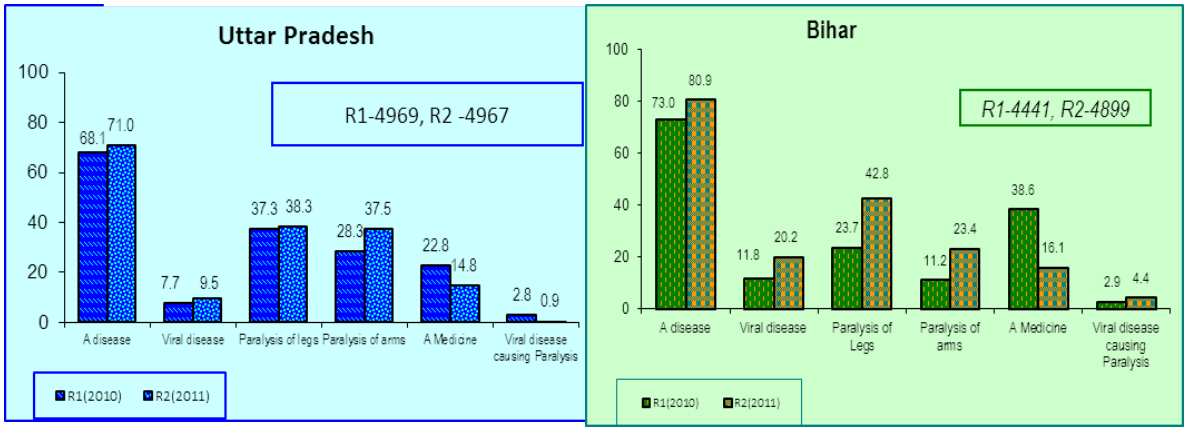
An attempt was made to get an overall view about the awareness of respondents about polio as a disease, its symptoms, how it spreads, population group that is at risk of getting it, whether it can be cured/prevented, ways to prevent polio and awareness about Polio eradication program. The findings on each of the above are described in the following sections.

4.1.1 Awareness about Polio

The respondents were first shown the Polio poster and asked whether they have seen the poster. Those who had seen the poster were also asked if they could recall the subject of the poster. Those who had not seen the poster earlier or those who could not relate the subject of the poster with polio, were asked whether they have heard about Polio. In order to arrive at the extent of awareness about Polio, the responses from the respondents who could relate the subject of the poster with polio in any way and those who had heard of polio even though they had not seen the poster, were combined. The combined responses reveled that almost all the respondents in UP (99%) and in Bihar (97%) had seen the poster of polio (Refer Annex Table 4.1.1). A comparison of the findings from KAP 2010 with KAP 2011 revealed that the already high awareness of polio in 2010 had increased by 3 percent points in UP and by 4 percent points in Bihar. In order to gauge the correct knowledge about polio, the respondents were further probed. A majority of the respondents mentioned that it was a disease (UP: 71%; Bihar: 81%). A considerable proportion also mentioned that it is a disease causing paralysis of legs and arms (UP: 38%; Bihar: 23-43%). Just less than 1 percent of the respondents in UP and 4 percent in Bihar could correctly tell that “Polio is a viral disease and causes paralysis”. There was also misconception in the minds of respondents that polio is a medicine.

A comparative analysis between the two rounds of KAP revealed that there was a marginal increase in the proportion of respondents who were aware of polio across both the states (Fig 4.1). The misconception that it was a medicine had declined from 23 percent in KAP 2010 to 15 percent in KAP 2011 in UP and from 39 percent to 16 percent in Bihar. The proportion of respondents, who could correctly answer “it is a viral disease and causes paralysis “remained constantly low during both the rounds.

Figure 4.1 Awareness about Polio – R1 (2010) Vs R2 (2011)



4.1.2 Awareness about the Spread of Polio

In UP, a major proportion of the respondents (61%) had no awareness about the spread of the disease. The corresponding proportion in Bihar was 20 percent. Only around 10-16 percent of the respondents in UP mentioned contaminated water, poor sanitation conditions and contamination with human wastes as causes responsible for the spread of the disease; whereas the proportion mentioning these in Bihar was 22-47 percent. While around one-fourth of the respondents appeared to have partial understanding about the spread of Polio in UP, encouragingly, this proportion was 61 percent in Bihar (Table 4.1)

Table 4.1: Awareness about how Polio spreads, (2011)

Mode of Polio Spread	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Through contaminated water	10.3	11.2	10.8	34.9	38.2	36.5
Polluted air	13.3	19.1	16.2	49.2	43.8	46.5
Poor sanitation conditions	9.0	12.6	10.8	14.0	12.4	13.2
Through faeces (Human waste)	9.2	12.5	10.8	23.7	20.7	22.2
Through contaminated food	5.6	2.8	4.2	17.1	15.1	16.1
By God's will	11.0	7.8	9.4	24.3	10.9	17.6
Others	3.8	1.2	2.5	2.1	0.5	1.3
Don't know/Can't say	60.8	61.9	61.4	15.6	25.0	20.2
Base: Respondents who are aware of Polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Indicator: % of respondents who have some/partial understanding of how Polio spreads#	**23.7**	**28.7**	**26.2**	**63.2**	**58.8**	**61.0**
Base: Respondents who are aware of Polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

*Responses may exceed 100 percent due to multiple responses.

#This indicator is derived by taking response in any of "Through contaminated water", "Poor sanitation conditions", "Through feces (Human waste)", "Through contaminated food"

4.1.3 Awareness about who is at higher risk of getting Polio

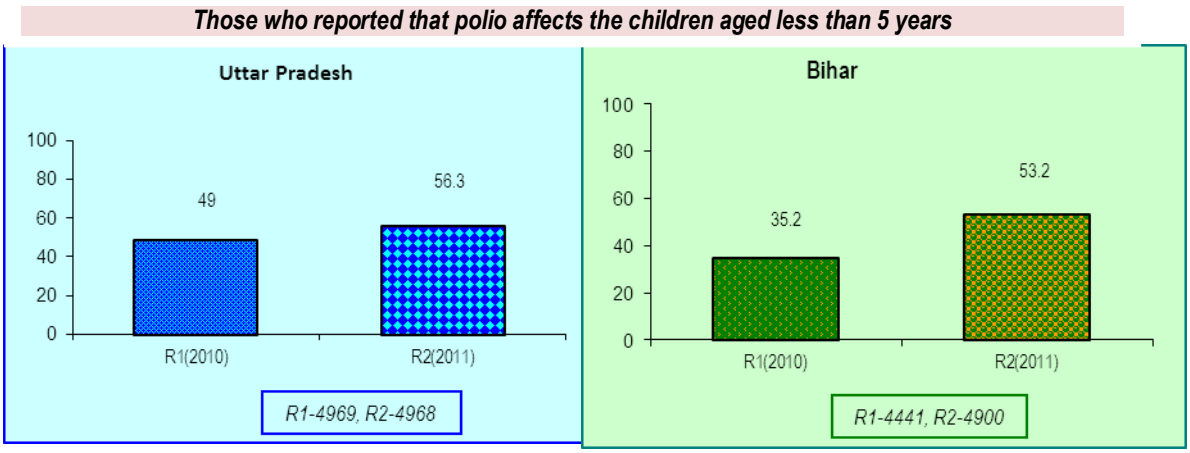
Over 56 percent of the respondents in UP and 53 percent in Bihar could correctly tell that children < 5 years were at high risk of getting the polio, as indicated in Table 4.4. The myth that it can affect anyone was reported by 15 and 24 percent in UP and Bihar respectively. It is to be noted that 15 percent of the respondents in UP (mostly mothers) and 24 percent respondents in Bihar had no knowledge at all about who is at higher risk of getting Polio (Table 4.2)

Table 4.2: Awareness about who is at high risk of getting Polio, (2011)

Polio affects the most to	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
-Anyone	22.9	7.9	15.4	25.5	23.3	24.4
-All Children	25.3	14.5	19.9	13.8	13.8	13.8
-Children < 5 years	40.5	72.0	56.3	52.3	54.2	53.2
-New Born	8.6	2.9	5.8	6.5	7.8	7.2
-Others	2.7	2.7	2.7	1.9	1.0	1.5
- DK/CS	22.9	7.9	15.4	25.5	23.3	24.4
Indicator: Those who reported that Polio affects most the " Children < 5 years"	**40.5**	**72.0**	**56.3**	**52.3**	**54.2**	**53.2**
Base: Respondents who are aware of Polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

A comparison of the indicator between the two rounds indicated an increase in the awareness from 49 percent during KAP2010 to 56 percent in KAP 2011 in UP and from 35 percent in KAP 2010 to 53 percent in KAP 2011 in Bihar (Fig 4.2).

Figure 4.2: Who does Polio affect Most – R1 (2010) Vs R2 (2011)



4.1.4

Awareness about Cure and Prevention of Polio

Prevention of Polio: In both UP and Bihar, around 95 percent of the respondents felt that Polio could be prevented. (Table 4.3)

Ways to Prevent Polio: Most of the respondents in UP as well as Bihar opined that polio can be prevented and that too, through OPV. This response was established by asking the question spontaneously as well as prompting. Apart from OPV as the way of preventing polio, the respondents also held misconceptions that polio can be prevented through medicines, injections and routine immunization, indicating that the programme needs to stress on the role of OPV in preventing polio (Table 4.3).

Table 4.3: Knowledge about prevention of Polio, (2011)

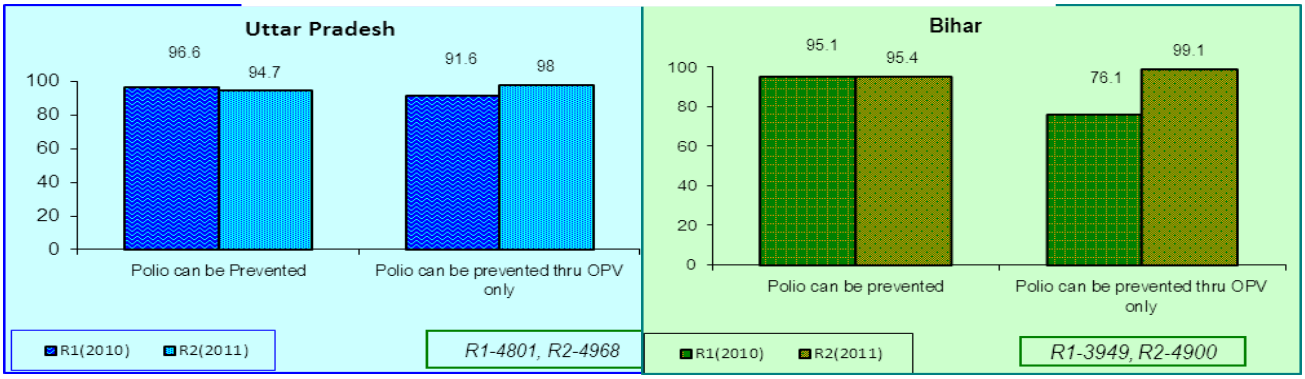
Polio Prevention	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Whether polio can be prevented						
Yes	91.0	98.3	94.7	95.9	95.0	95.4
No	2.0	0.7	1.3	2.6	3.1	2.9
Don't know/Can't say	7.0	1.0	4.0	1.5	1.9	1.7
Base: **Respondents who are aware of Polio**	2481	2486	4967	2462	2437	4899
Indicator: % of respondents who reported polio can be prevented	91.0	98.3	94.7	95.9	95.0	95.4
Base: **Respondents who are aware of polio**	2481	2486	4967	2462	2437	4899
Ways to prevent polio*						
Through oral polio vaccination (OPV) (spontaneous)	92.7	97.4	95.1	77.7	79.2	78.4
Through injections	5.0	5.2	5.1	37.5	31.2	34.4
Through medicines	22.9	20.3	21.5	40.5	35.1	37.8
Through routine immunization	6.3	7.0	6.7	12.7	14.3	13.5
Through diarrhea prevention/breast feeding	0.2	0.2	0.2	0.7	0.2	0.5
Base: **Respondents who said polio can be prevented**	2258	2445	4703	2360	2314	4674
Whether oral polio vaccine (POLIO DROPS) prevents polio (prompted)						
Yes	77.3	89.5	79.9	96.0	97.2	96.6
No	1.0	1.0	1.0	2.1	1.6	1.9
Don't know/Can't say	21.7	9.5	19.1	1.9	1.1	1.5
Base: **Respondents who spontaneously did not report that OPV prevents Polio**	388	106	494	628	605	1232
Indicator: Those who reported that "Polio can be prevented through Polio Drop"#	**96.4**	**99.6**	**98.0**	**99.0**	**99.3**	**99.1**
Base: **Respondents who are aware of Polio**	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

*Percentages exceed 100 due to multiple responses

#Indicator value is derived by combining spontaneous and prompted responses

The proportion of respondents identifying that polio can be prevented through OPV had increased from KAP 2010 to KAP 2011 in both the states (Fig.4.3).

Figure 4.3 Can Polio be Prevented? – R1 (2010) Vs R2 (2011)



Cure of Polio:

Another deep-rooted misconception in the minds of the respondents was that "Polio is curable". While this proportion was 55 percent in UP, in Bihar as high as 79 percent of the respondents still believed that polio is curable (Table 4.4).

Table 4.4: Awareness about the cure of Polio, (2011)

Is Polio curable?	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Yes	51.8	57.5	54.7	80.6	76.5	78.6
No	24.8	34.2	29.5	18.1	20.0	19.0
Don't know/Can't say	23.4	8.3	15.8	1.3	3.5	2.4
Base: W**ho are aware of Polio**	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Indicator: % of respondents those who reported Polio is not curable	**24.8**	**34.2**	**29.5**	**18.1**	**20.0**	**19.0**

4.2 Threat susceptibility and severity of Polio

In order to assess the level of awareness and perception about the susceptibility and severity of the disease, responses were elicited on 'who can get affected by polio in their community and at their household', 'heard/seen any case of polio in community', 'consequences of polio in the life of the child' and 'ranking of polio as compared to other diseases in terms of seriousness'.

4.2.1 Threat susceptibility of Polio and consequences of Polio

A good proportion of the respondents UP (56%) and Bihar (70%) had heard about or seen polio cases; when asked where had they heard or seen the cases, a majority (UP: 73%; Bihar: 82%) mentioned that they had heard/seen the polio cases in their community/locality. Around 11 percent of the respondents in both the states had heard of or seen the polio cases at a household level. (Table not presented)

4.2.2 Level at which Polio is perceived to affect children – Community / Household

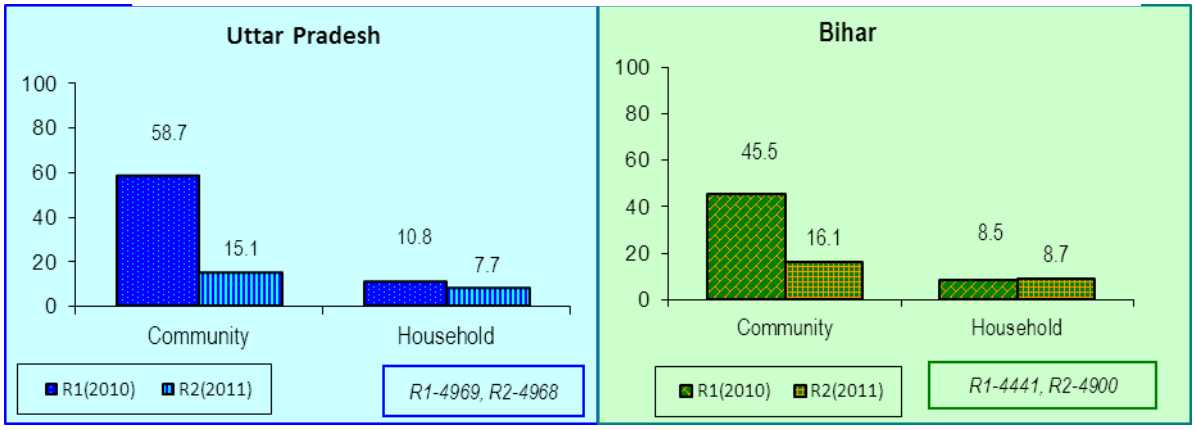
Around 15-16 percent respondents in UP and Bihar perceived that polio can happen to children in their community and around 8-9 percent perceived that it can happen to children in their household (Table 4.5).

Table 4.5: Perception on "Polio Affects Children in Community and Household Level", (2011)

Variable	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Polio affects children in community						
Yes	22.6	7.7	15.1	14.7	17.5	16.1
No	77.4	92.3	84.9	85.3	82.5	83.9
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Polio affects children in household						
Yes	11.9	3.6	7.7	7.2	10.1	8.7
No	88.1	96.4	92.3	92.8	89.9	91.3
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Indicator: % of Respondents who believe that polio affects children in community or household	**23.3**	**8.0**	**15.7**	**15.5**	**18.3**	**16.8**
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

It is to be noted that the proportion of respondents perceiving that children in community or household can be affected by Polio has decreased from the previous round in both the states, as is evident from Figure 4.4. (UP: R1=59%, R2=15%; Bihar: R1=46%, R2=16%)

Figure 4.4 Percent of Respondents who agreed that Polio affects children in Community and Household level – R1 (2010) Vs R2 (2011)



4.2.3 Perceived Consequences of Polio

Both in UP and Bihar, the respondents could perceive serious consequences of polio, with a majority mentioning that the polio affected children cannot move/ perform some functions (UP: 63%; Bihar: 70 %) and that the affected children would get paralyzed (UP: 35%; Bihar: 39%). Almost 77 percent respondents in UP and 85 percent respondents in Bihar could mention at least two consequences of Polio. (Table not presented)

4.3 Knowledge about Pulse Polio Program

The main aim of this section is to assess the awareness among respondents regarding various indicators related to the Pulse Polio Programme, which include – person administering OPV, places where OPV is administered, frequency of polio rounds, date of last round of polio in the HRA and whether they know the CMC working in the area.

4.3.1 Awareness about visits of Polio team during Polio Round

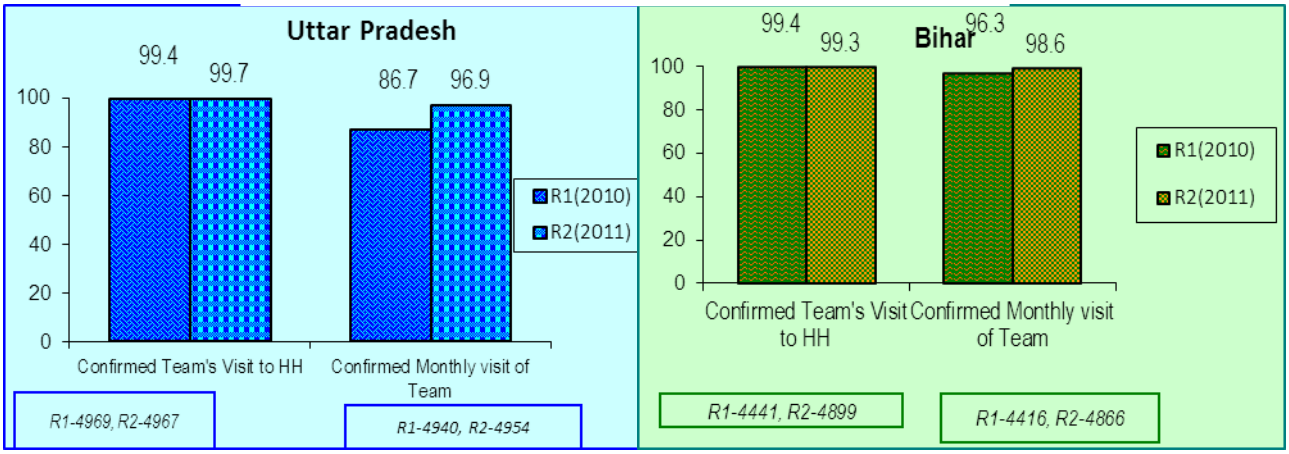
Almost all the respondents in UP and Bihar reported that polio teams visited their households during polio rounds. Monthly visits by polio teams were reported by 97 percent respondents in UP and 99 percent respondents in Bihar (Table 4.6).

Table 4.6: Awareness about visits of Polio team during Polio round, (2011)

Response	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Visits of polio team at household during polio round						
Yes	99.9	99.6	99.7	99.0	99.6	99.3
No	0.1	0.3	0.2	0.6	0.1	0.3
Don't know/Can't say	-	0.1	-	0.4	0.3	0.3
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Frequency of polio team's visit at household for administering Polio drops						
Every two weeks	2.2	0.8	1.5	0.2	0.4	0.3
Monthly	95.6	98.2	96.9	98.7	98.4	98.6
Once in two months	1.8	0.7	1.2	0.6	1.2	0.9
Quarterly	0.3	0.1	0.2	0.3	-	0.2
Don't know/Can't say	-	0.2	0.1	0.1	-	0.1
Base: Respondents who said that polio team visited their household during Pulse Polio round	**2478**	**2477**	**4954**	**2438**	**2428**	**4866**

The proportion of respondents confirming monthly visits of the polio teams to the households had substantially increased in KAP 2011 as compared to KAP 2010 in UP as well as Bihar. (Figure 4.5).

Figure 4.5 Visits of Polio Team – R1 (2010) Vs R2 (2011)



In UP, 72 percent of the respondents reported that the last polio round was conducted in August, 2011 whereas in Bihar, more than 99 percent reported June, 2011 as the month/year of the last polio round. It may be mentioned here that the KAP 2011 survey was carried out during July-September 2011 (Table 4.7).

Table 4.7: Awareness about month/year of last Pulse Polio round, (2011)

Response	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
June-2011	24.1	22.9	23.5	99.2	99.2	99.2
July-2011	2.6	2.6	2.6	0.7	0.5	0.6
Aug-2011	71.3	72.8	72.0	-	-	-
Others	2.0	1.7	1.9	-	0.3	0.1
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

4.3.2 Place of Polio Administration and the Person who Administer it

In UP, more than 91 percent of the respondents mentioned households as the place for polio drops administration, followed by booths (76%) and schools (36%).Most of the respondents in UP were aware of the location of the Polio booth in their village / area. Around 44 percent respondents in UP said that Polio booths were located at schools and 18 percent mentioned that the booths were located at street/circle/ square. In Bihar, almost all the respondents said that polio drops were administered at households, while 64 percent respondents mentioned transit locations and 60 percent mentioned AWCs

as places for polio drops administration(Table not presented).

In UP, 63 percent of the respondents mentioned health worker and 37 percent said that AWW administered polio Drops. In Bihar 88 percent respondents mentioned AWW and 64 percent said that ASHA administered polio drops to children.

As indicated in Figure 4.6, in UP, more or less equal proportion of respondents mentioned Household and booth as place of administration of Polio drops in both the rounds. In Bihar, around three-fourths of the respondents mentioned AWCs and transit locations as places of Polio Drops administration in the KAP 2011 as against KAP 2010.

Figure 4.6 Awareness about Place of Polio Administration – R1 (2010) Vs R2 (2011)

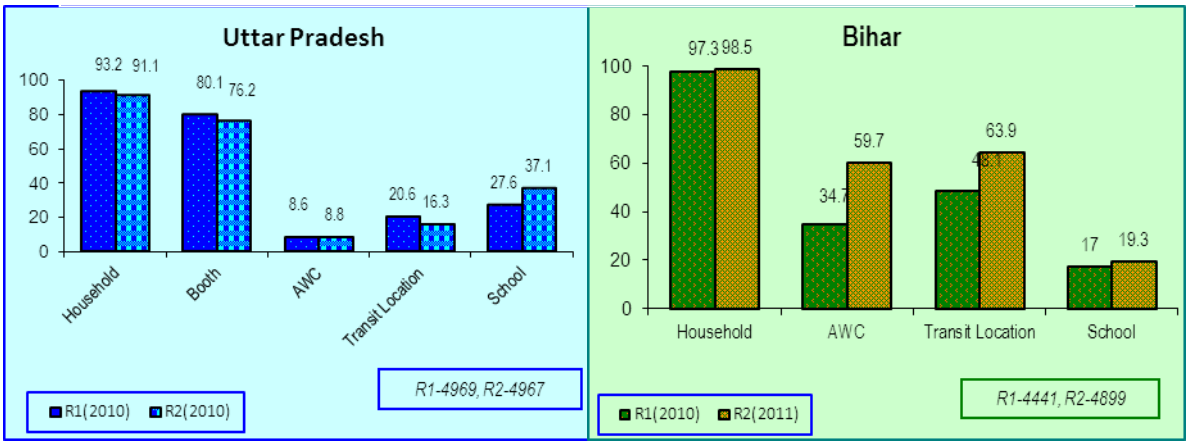
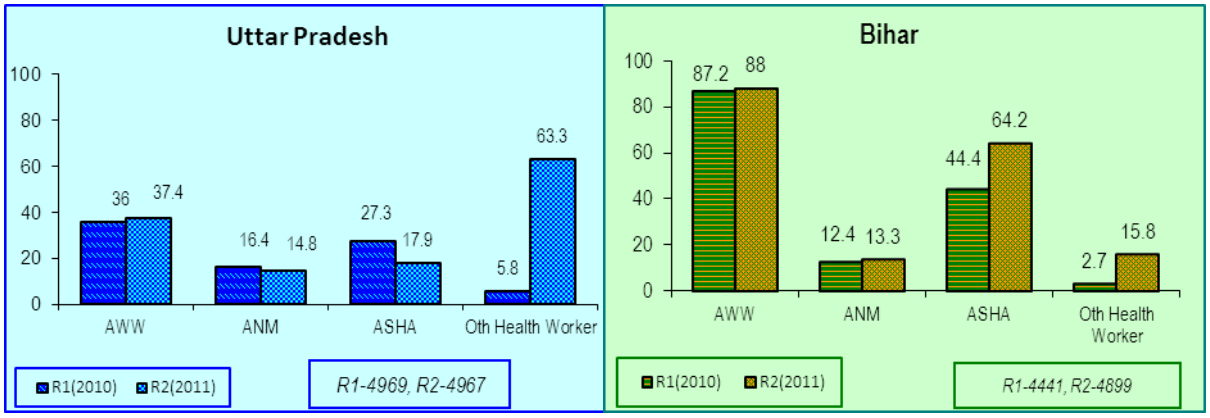


Figure 4.7 Awareness about Person for Polio Administration – R1 (2010) Vs R2 (2011)



There was substantial increase in the proportion of respondents identifying `other health workers' as those who administered polio drops in UP in KAP 2011; (Figure 4.7) whereas in Bihar, those identifying ASHA as the person administering polio drops had increased considerably when compared to the findings of KAP 2010.

4.4 Knowledge about Oral Polio Vaccine

Efforts were put in to gauge the level of knowledge of the respondents about Oral Polio Vaccine, their perceptions regarding its benefits and side effects along with other aspect

4.4.1 Awareness of the age until which a child should receive OPV

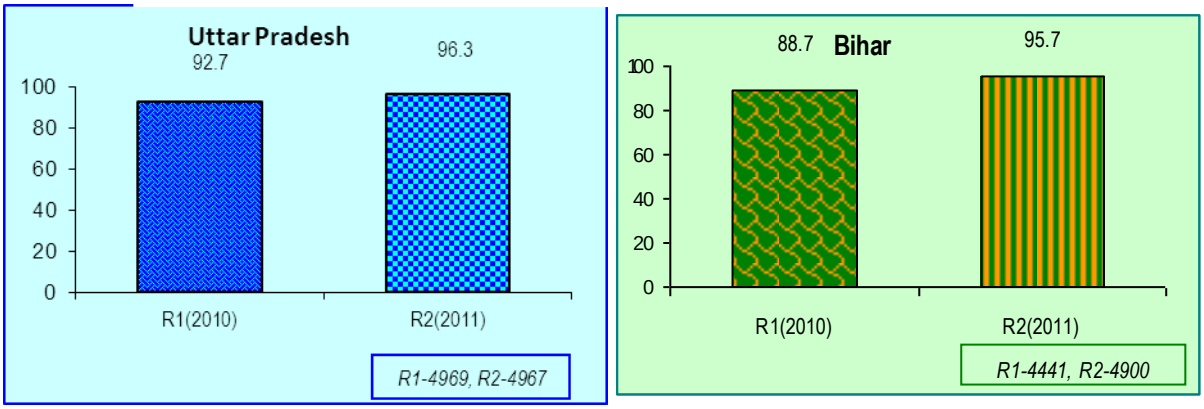
Most of the respondents in UP as well as Bihar (96% each) said that the child should be given polio drops up to 5 years (Table 4.8).

Table 4.8: Awareness of the age until which a child should receive OPV, (2011)

Response	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
1 through 4 years	0.7	0.7	0.7	2.6	1.5	2.2
Up to 5 years	96.4	96.1	96.3	95.3	96.2	95.7
5+ years	2.6	1.7	2.2	1.0	1.5	1.3
At any age	0.1	0.9	0.5	0.6	0.6	0.6
Don't now/Can't say	0.2	0.6	0.3	0.5	0.2	0.2
Base: Those Who Were Aware of Polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Indicator: % of Respondents reported that the child should be given OPV up to 5 years of age	**96.4**	**96.1**	**96.3**	**95.3**	**96.2**	**95.7**
Base: Those Who Were Aware of Polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

Figure 4.8 Age up to which Child should be given OPV – R1 (2010) Vs R2 (2011)

Respondents who said OPV should be given up to 5 years



The proportion of respondents mentioning that children should be administered OPV up to the age of 5 years had slightly increased from KAP 2010 to 2011. This increase was substantial (by 7 percent points) in Bihar.

4.4.2 Awareness about the need of repeated doses of OPV

Although most of the respondents in UP (97%) as well as Bihar (94%) knew about the necessity of repeated doses of OPV, they also felt that the Pulse Polio rounds were too frequent (UP: 98%; Bihar: 88%). Around 98 percent of the respondents in UP and Bihar opined that it was safe to give Polio drops every time it was offered (Table 4.9).

Table 4.9: Awareness about the need of repeated doses of OPV and perception of frequency of Pulse Polio rounds, (2011)

Response	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Whether respondents know that repeated dosage of OPV is needed						
Yes	95.7	98.6	97.1	95.5	93.0	94.3
No	2.7	0.3	1.5	3.8	6.1	4.9
Don't know/Can't say	1.7	1.1	1.4	0.7	0.9	0.8
Indicator: % of respondents who said that repeated dosage of OPV is needed	95.7	98.6	97.1	95.5	93.0	94.3
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

Table 4.9: Awareness about the need of repeated doses of OPV and perception of frequency of Pulse Polio rounds, (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Respondents feel that the Pulse Polio rounds are too frequent						
Yes	96.5	98.9	97.7	90.2	86.4	88.3
No	1.6	0.7	1.2	9.4	12.5	11.0
Don't know/Can't say	1.9	0.3	1.1	0.4	1.1	0.7
Indicator: % of respondents who feel that the Pulse Polio rounds are too frequent	**96.5**	**98.9**	**97.7**	**90.2**	**86.4**	**88.3**
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Do you think it is safe to give POLIO DROPS every time it is offered?						
Yes	97.5	98.6	98.1	99.2	98.2	98.7
No	1.0	0.8	0.9	0.5	1.2	0.9
Don't know/Can't say	1.4	0.5	1.0	0.3	0.6	0.4
Indicator: % of respondents who think it is safe to give POLIO DROPS every time it is offered.	**97.5**	**98.6**	**98.1**	**99.2**	**98.2**	**98.7**
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

The proportion of respondents feeling that polio rounds are frequent had undergone a steep increase from KAP 2010 to KAP 2011 in UP (from 59% to 98%) as well as Bihar (from 41% to 88%). As high as 96 to 99 percent of the respondents in both the states, in both the rounds of the study, felt that it was safe to give polio drops every time they were offered.

The percentage of respondents believing that OPV would have side effects was minimal in both the states (UP: 2%; Bihar: 1%) (Table 4.15). The side effects mentioned by those believing it to be so included fever, vomiting, sickness, and irritability. Misconceptions that administering OPV would have side effects have reduced considerably from KAP 2010 to KAP 2011 (4% to 2% in UP and 3% to 1% in Bihar).

When asked about the perceived benefits of administering OPV, more than 90 percent of respondents in both the states responded that "OPV prevents Polio". However, about one-fourth did have a wrong perception that it cures polio as well (Table 4.10). This question was not asked in KAP 2010.

Table 4.10: Side effects and benefits of OPV reported by the respondents, (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Whether respondents perceived that OPV has side effects						
Yes	2.1	1.4	1.7	1.2	0.8	1.0

No	97.5	98.1	97.8	98.8	99.0	98.9
Don't know	0.4	0.6	0.5	-	0.2	0.1
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Indicator: % of Respondents who perceive that OPV has side effects	**2.1**	**1.4**	**1.7**	**1.2**	**0.8**	**1.0**
Side effects reported*						
Irritability	4.9	5.4	5.1	11.1	32.4	19.9
Sickness	7.5	8.1	7.7	10.2	24.4	16.1
Vomiting	8.4	12.2	9.9	6.3	32.4	17.1
Fever	84.7	80.8	83.1	84.8	40.8	66.6
Causes sterility/infertility	2.6	7.3	4.5	2.4	2.3	2.4
Others (tiredness)	3.8	0.2	2.4	0.9	3.7	2.1
Base: Respondents who think that OPV has side effects	52	34	87	29	21	50
Perceived benefits of administering OPV to children *						
Prevents Polio	86.3	96.4	91.4	90.1	94.5	92.3
Cures Polio	25.0	23.7	24.3	47.8	44.4	46.1
Others	-	-	-	0.6	0.2	0.4
Don't know	6.5	1.1	3.8	1.4	2.1	1.7
Base: Those who were aware of polio	2481	2486	4967	2462	2437	4899
Indicator: % of respondents who reported one of the benefits of administering OPV as " It prevents Polio"	**86.3**	**96.4**	**91.4**	**90.1**	**94.5**	**92.3**

***Responses may exceed 100 percent due to multiple responses.**

4.4.3 Awareness about the harmful effects if the child misses Polio dose

In UP, 66 percent of the respondents which constituted major proportion (85 percent) of fathers believed that it would be harmful if the children miss any dose of Polio vaccine. In Bihar, this proportion was 73 percent which constituted almost equal proportion of fathers and mothers. There were still about 26 percent of the respondents in UP as well as Bihar who did not believe that it would be harmful if the children misses any dose of polio vaccine(Table 4.11)

Table 4.11: Awareness about harmful effects if the child misses Polio dose any time and steps to be taken in case child misses Polio dose, (2011)

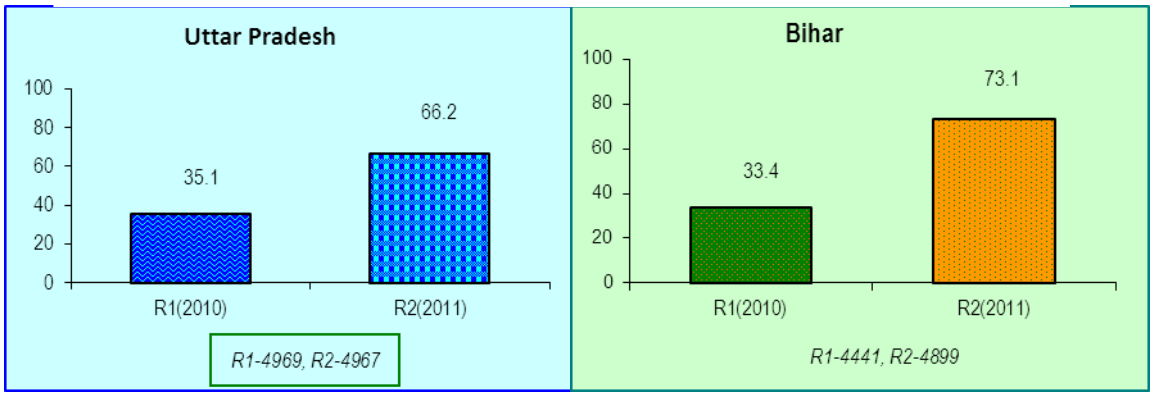
Response	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Whether respondents think it is harmful if the child misses polio dose any time						
Yes	47.6	84.9	66.2	70.3	76.0	73.1
No	40.1	11.6	25.8	28.6	22.5	25.6
Don't know/Can't say	12.3	3.5	7.9	1.1	1.5	1.3
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

Table 4.11: Awareness about harmful effects if the child misses Polio dose any time and steps to be taken in case child misses Polio dose, (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Indicator: % of respondents who know it is harmful if child misses Polio dose any time	**47.6**	**84.9**	**66.2**	**70.3**	**76.0**	**73.1**
Why don't you perceive this as harmful?						
Nothing will happen	13.1	38.9	18.9	15.1	38.0	25.3
Polio team keep coming we will get administered	25.6	8.8	21.8	55.8	43.4	50.3
Has been taking polio drop during previous round	54.9	47.2	53.2	28.5	17.8	23.8
Others	-	1.8	0.4	0.6	0.1	0.4
DK/CS	6.3	3.3	5.6	-	0.7	0.3
Base: Those who believe it is not harmful if the child misses Polio dose any time	**1300**	**376**	**1676**	**731**	**585**	**1316**
Actions to be taken if the child misses any Polio dose8						
Should not do anything	5.0	4.3	4.6	5.7	8.0	6.9
Should take from the Angan Wadi Center	11.1	18.1	15.6	62.3	68.7	65.6
Should take from private clinic	5.1	6.9	6.3	13.9	5.6	9.6
Should attend RI session	6.3	14.1	11.3	13.1	17.7	15.5
Wait for the next round	62.7	72.8	69.2	45.0	32.8	38.7
Should go to the hospital	29.4	22.0	24.7	8.6	20.5	14.8
Base: Those who knows it is harmful to miss any polio dose	**1181**	**2110**	**3291**	**1731**	**1853**	**3584**
Indicator: % of respondents reported that the child should take OPV from the Angan wadi Centre or private clinic or should attend RI session	**9.8**	**26.7**	**18.3**	**49.4**	**56.4**	**52.9**
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

*Responses may exceed 100 percent due to multiple responses.

The awareness regarding the importance of administering OPV had increased from KAP 2010 to KAP 2011 in UP (from 35% to 66%) as well as Bihar (from 33% to 73%)(Figure 4.9).

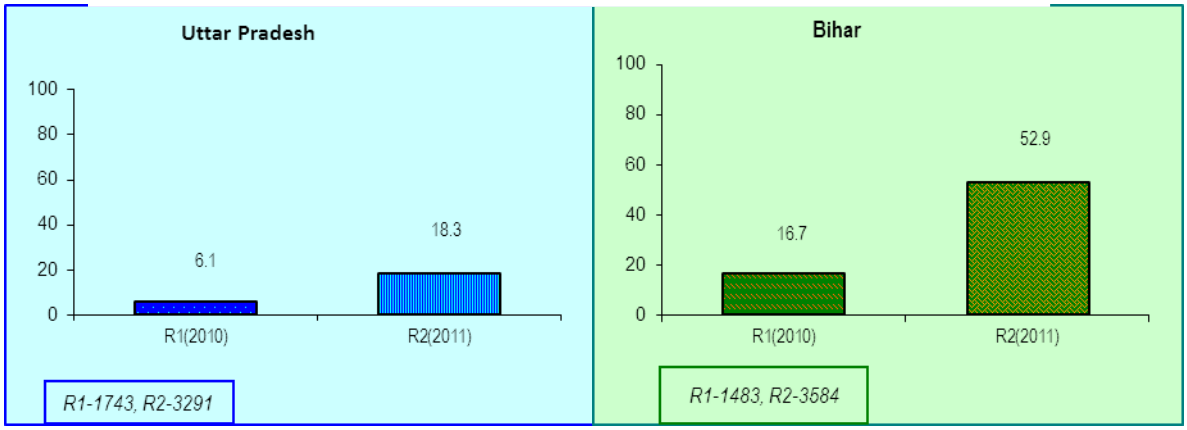
Figure 4.9 Percent of respondents who feel that it is harmful if the child misses OPV - R1 (2010) Vs R2 (2011)



4.4.4 Actions to be taken if the child misses any Polio dose

The respondents who said that it is harmful to miss a Polio round were further asked what they would do if their child misses a Polio round. In UP around 18 percent of these respondents said that they would get the Polio drops administered to their children from some other source like AWC, private clinic, RI session, or hospital in case they miss the drops during the Polio round whereas 69 percent said that they would wait for the next Round. (Table not presented). In Bihar, the proportion saying that they will take the child to other sources such as AWC, private clinic etc. was higher (53%) as compared to UP whereas 39 percent said that they would wait for the next Round.

Figure 4.10 Respondents who feel that OPV should be given at AWC /RI /Pvt. Clinic if the child misses Polio Round - R1 (2010) Vs R2 (2011)



As shown in Figure 4.10, higher proportion of respondents in KAP 2011 opined that the child should take OPV at an AWC or private clinic or go for routine immunization, as compared to KAP 2010 in both the states.

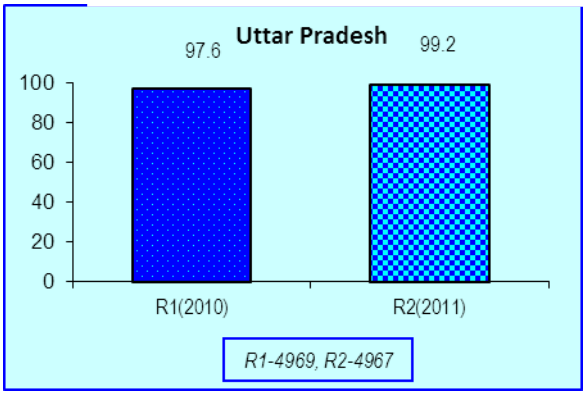
4.5 Attitude towards Polio and Pulse Polio Program

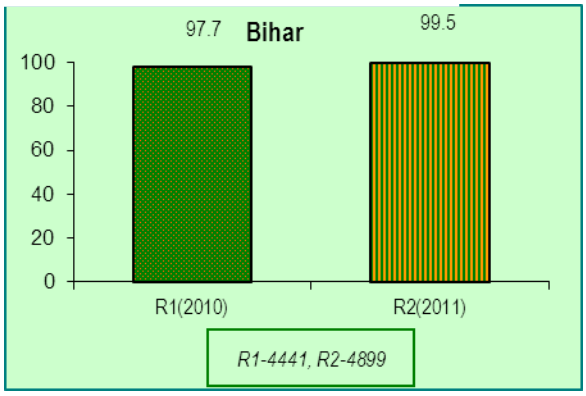
In order to assess the attitude of the care givers towards the pulse polio program, their opinions were sought on whether they believe that the OPV protects their child from polio and have they or anyone else in their community refused to administer OPV to the child any time and reasons for the refusal at family level as well as at community level.

4.5.1 Belief that OPV protects the children against Polio

Almost all the respondents in both the states believed that OPV protects their children against polio. This perception was high in both KAP 2010 as well as 2011 (Figure4.11a

Figure 4.11a Percent of Respondents who believe that OPV protects the child against Polio R1 (2010) Vs R2 (2011)



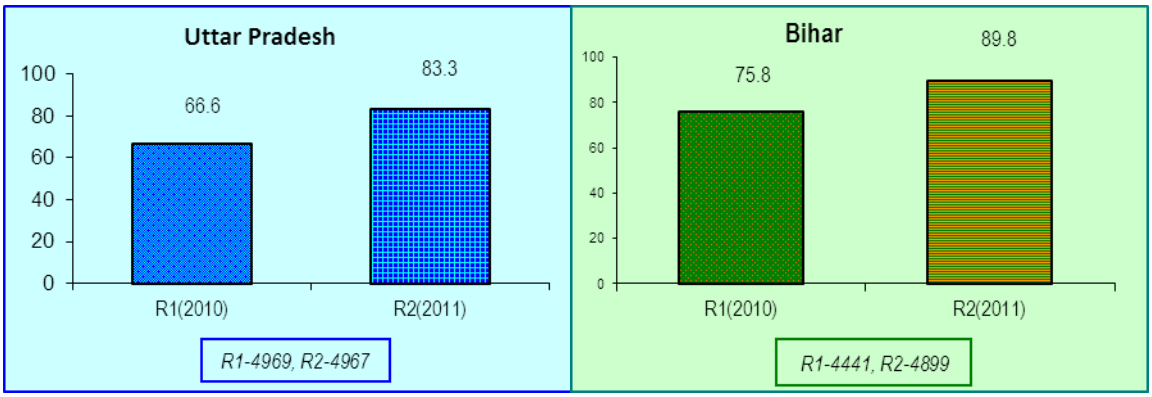


4.5.2 Administration of Polio drops even if the child is sick

Around 83 percent of the respondents in UP and 90 percent in Bihar agreed that they would give OPV to their children even during sickness (Table not presented). The awareness pertaining to administration of OPV even when the child is sick had increased in KAP 2011 compared to that in KAP 2010 (Figure 4.11b)

Figure 4.11b Percent of Respondents who agreed to give OPV even if the child is sick

R1 (2010) Vs R2 (2011)



4.5.3 Is it possible to eradicate Polio completely from India?

Around 80 percent of the respondents from both the states opined that polio could be eradicated completely from India (Table 4.12).

Table 4.12: Belief among respondents regarding protection of child against Polio by giving OPV and eradicate Polio from India, (2011)

Statements	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
I believe that OPV protects my child against polio	99.0	99.3	99.2	99.5	99.6	99.5

Table 4.12: Belief among respondents regarding protection of child against Polio by giving OPV and eradicate Polio from India, (2011)						
Statements	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
(% Agree)						
I will give my child Polio drops even when s/he is sick (% Agree)	78.6	88.0	83.3	90.0	89.7	89.8
It is possible to eradicate Polio completely from India (% Yes)	71.7	89.6	80.7	80.7	78.6	79.7
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

4.5.4 Refusal to administer OPV to the child in the past

As presented in the table 4.13, a minuscule percentage of respondents (3% and 1% of respondents in UP and Bihar, respectively) ever refused administering OPV to their child, owing to reasons like, "the child was sick", "OPV causes side effects" and "OPV is not safe for the child". Their viewpoint was more or less the same regarding refusal by people in community for administering OPV.

Table 4.13: Refusal for administering OPV to the child in past, (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Whether ever refused administering OPV to their child any time						
Yes	4.1	1.9	3.0	1.4	0.8	1.1
No	95.3	97.7	96.5	98.6	99.2	98.9
Don't know/Can't say	0.6	0.3	0.4	-	-	-
Base: Those Who Were Aware of Polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Indicator: % of respondents ever refused administering OPV any time to their child in past	4.1	1.9	3.0	1.4	0.8	1.1
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Indicator: Top 3 reasons for the refusal of OPV by respondents	My child was sick OPV causes side effects (Fever, etc.) I did not think it is safe to give Polio drop to my child					
Base: Mothers/fathers reported refusing administration of OPV to the child any time in past	**97**	**46**	**143**	**35**	**19**	**54**
Whether people in their community refused administering OPV to their child any time						
Yes	4.6	2.5	3.6	1.7	0.5	1.1
No	75.6	87.5	81.6	97.4	98.5	97.9
Don't know/Can't say	19.8	9.9	14.9	0.9	1.0	0.9
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Indicator: % of respondents reported people in their community refused administering OPV to their child in past	**4.6**	**2.5**	**3.6**	**1.7**	**0.5**	**1.1**

Table 4.13: Refusal for administering OPV to the child in past, (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Top 3 reasons for the refusal of OPV by people in their community by respondents	My child was sick I did not think it is safe to give Polio drop to my child OPV causes side effects (Fever, etc.)					
Base: Mothers/fathers reported community members refusing administration of OPV to their child	**115**	**63**	**178**	**43**	**12**	**55**

***Responses may exceed 100 percent due to multiple responses.**

An analysis of findings of the two rounds revealed that the proportion of refusals by the respondents as well as in their community has decreased substantially in UP (Individual refusal- R1=10%, R2=3%; Community refusal-R1=11%, R2=4%). In Bihar, as such, the refusals reported were miniscule in both the rounds.

4.6 Self Efficacy about Polio and Pulse Polio Program

Perceptions of the respondents were sought regarding the ease of administering OPV to the child during Pulse Polio Rounds, any discrimination felt at the Pulse Polio rounds, acquaintance with the BMC/ CMC/ AWW, receipt of incentives and importance of incentives in immunizing the child, etc. in order to assess the self-efficacy of the program.

A comparison between the findings of the two rounds of the study in UP reveal that there is no change in the attitude of the respondents as far as the incentives for OPV are concerned (Figure 4.12a)

4.6.1 Ease of immunizing the children during Pulse Polio Round

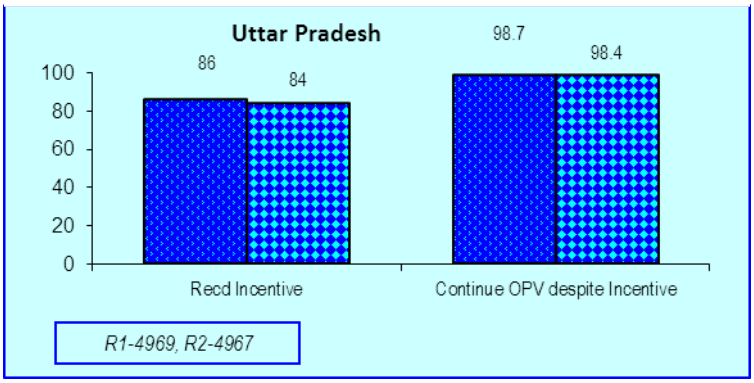
Around 73 percent of the respondents in UP and around 94 percent of the respondents in Bihar felt that it was easy to immunize children during the Pulse Polio rounds. (Table not presented)

4.6.2 Incentives received by the child for going for OPV at booth

Around 84 percent of the respondents in UP and only 2 percent in Bihar mentioned that their children received incentives when they went for OPV immunization at booth. Most of the respondents in UP (98%) and Bihar (91%) mentioned that they will continue taking children to the booth for OPV even if the incentives are discontinued. (Table not presented)

Figure 4.12a Attitude towards incentive received for OPV

R1 (2010) Vs R2 (2011)



4.6.3 Intention to immunize child during the next Polio round

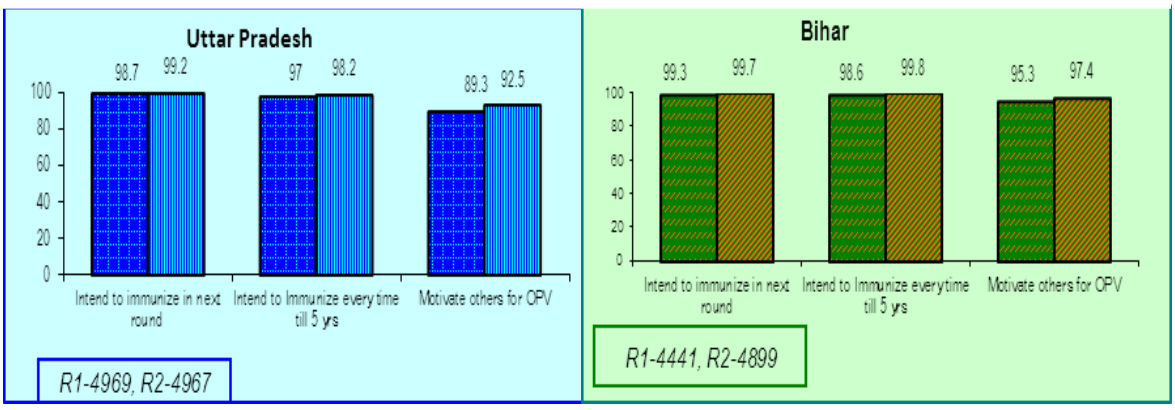
Almost all the respondents in UP and Bihar agreed to immunize their children during the next Polio round in both the rounds of the Study. (Table not presented)

4.6.4 Intention to immunize child every time until he/she completes 5 years of age

Around 97 to 98 percent of the respondents in UP and cent per cent in Bihar were willing to immunize their children till they complete 5 years of age, as expressed in both the rounds of the study. (Table not presented)

Figure 4.12b Attitude towards OPV and continuation of OPV

R1 (2010) Vs R2 (2011)



4.6.5

Willingness to motivate other parents to take their children for Polio immunization

Around 93 percent of the respondents in UP and 97 percent in Bihar were willing to motivate other parents to take their children for OPV immunization. (Table not presented). The percentages were 89 and 95 in UP and Bihar respectively in the KAP 2010 of the study. (Fig 4.12b)

4.7 Barriers to Self-Efficacy

This section analyses respondent's opinion on persistent myths and misconceptions regarding the efficacy of OPV.

4.7.1 Safe to give OPV every time it is offered

In order to understand the barriers to self-efficacy, respondents' perceptions on how safe they feel OPV is and their opinions about vaccinators and CMCs/AWWs were sought. Almost all the respondents in both the states expressed their willingness to administer OPV to their children every time it is offered.

4.7.2 Rumors/misconceptions about Polio vaccine in the community, sources and influence of such rumors on the respondents

Over one-fourth of the mothers and 13 percent of the fathers in UP had heard some negative rumors and misconceptions about the polio vaccine. In case of Bihar, the proportion of such respondents was lower with only 4 percent of fathers and mothers reporting that they heard negative rumors. (Table 4.14).

Table 4.14: Rumors/misconceptions about the Polio vaccine in community, sources of such rumors and influence of such rumors on respondents, (2011)

Response	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Whether heard any negative rumors about Polio drops in family/community						
Yes	25.4	12.7	19.1	4.1	3.8	3.9
No	73.5	86.9	80.2	95.9	96.2	96.0
Don't know/Can't say	1.1	0.4	0.7	-	-	-
Base: Those who were aware of polio	2481	2486	4967	2462	2437	4899
Indicator: % of respondents who have heard any negative rumors about Polio drops	25.4	12.7	19.1	4.1	3.8	3.9
Base: Those who were aware of polio	2481	2486	4967	2462	2437	4899
Various rumors about Polio drops heard by the respondents in family/community*						
Children may become sterile/ infertile	79.7	92.4	83.9	26.1	43.8	34.6
Children are too young to be given Polio so many times	10.2	0.8	7.1	1.1	10.1	5.4

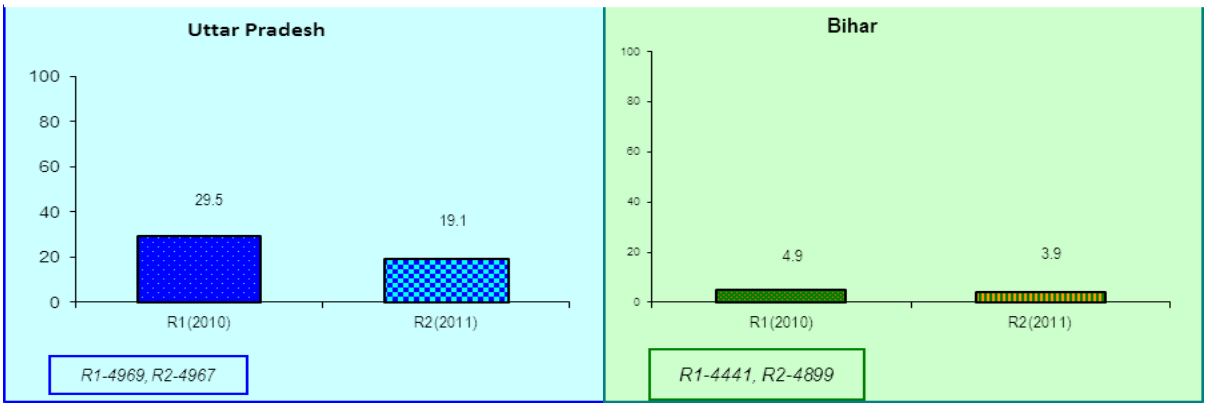
Table 4.14: Rumors/misconceptions about the Polio vaccine in community, sources of such rumors and influence of such rumors on respondents, (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Children should not be administered Polio drops when s/he is sick	28.3	12.6	23.0	61.8	31.2	47.1
Children will get the Polio disease	6.4	1.3	4.7	7.2	19.5	13.1
Children will die	11.2	2.2	8.2	13.6	12.7	13.2
Others	0.2	-	0.1	-	0.5	0.2
Sources from where the respondents have heard rumors about OPV*						
Friends/neighbours	84.9	87.8	85.9	66.5	71.6	69.0
Friends/neighbours with children < 5 years	23.9	5.1	17.7	9.6	17.4	13.4
Family member	15.9	3.5	11.8	23.9	12.6	18.5
Mother in law	3.6	-	2.4	3.9	1.2	2.6
Local leader/elder	9.5	8.8	9.3	5.1	3.2	4.2
Others#	0.6	1.1	0.8	7.9	7.7	7.8
Respondent believe in such rumors						
Yes	6.6	3.3	5.5	36.5	21.6	29.4
No	93.4	96.7	94.5	63.5	78.4	70.6
Whether such rumors influence the decision of giving OPV to the child						
Yes	6.7	3.6	5.7	30.1	19.7	25.1
No	93.3	96.4	94.3	69.9	80.3	74.9
Base: Respondents who have heard any rumours about Polio drops in family/community	630	316	946	100	93	193

*Responses may exceed 100 percent due to multiple responses. #Others include health workers, quacks and religious leaders

As is evident from figure 4.13a, the proportion of the respondents who had heard negative rumours had decreased from KAP 2010 to KAP 2011, especially in UP; indicating that awareness levels have increased and misconceptions about OPV are reducing.

Figure 4.13a Percent of Respondents who had heard Negative Rumors about OPV

R1 (2010) Vs R2 (2011)



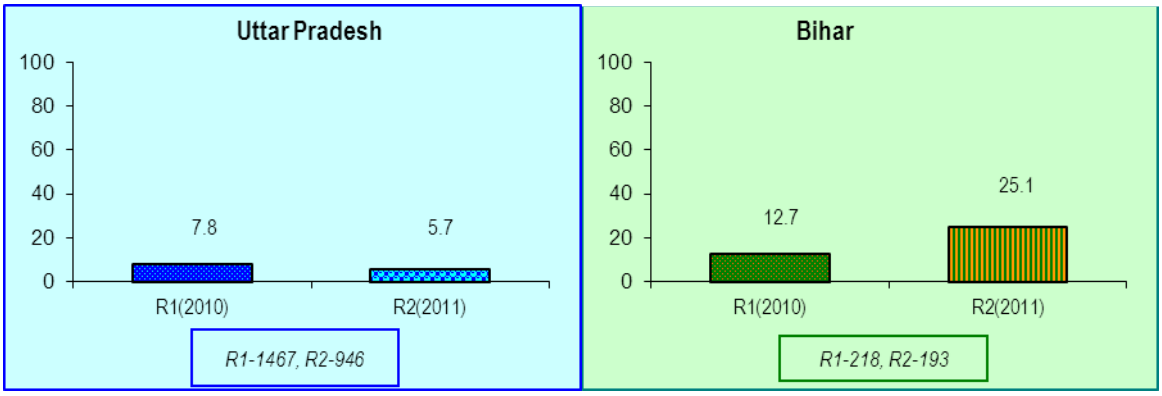
The negative rumours heard were, 'children who receive OPV might become sterile/ infertile'(UP: 84%; Bihar: 35%) and 'sick children should not be administered OPV'(UP:23%; Bihar: 47%). (Table 4.14). However, the respondents reporting such misconceptions has declined from 89 percent in KAP 2010 to 84 percent in KAP 2011 in UP and 79 percent in KAP 2010 to 35 percent in KAP 2011 in Bihar.

The only major source of rumours was said to be friends / neighbours by 86 percent respondents in UP and 69 percent respondents in Bihar (Table 4.14).

However, just 6 percent respondents in UP and 29 percent respondents in Bihar said that they believed such rumours and that such rumours would influence their decision to take their child for OPV. (Table 4.14). A comparison between the responses in the two rounds of the study indicate that the misconceptions influenced lesser proportion of respondents in KAP2011 in UP whereas the number of such respondents had increased in case of Bihar where negative rumours influenced their decision to take the child to Polio vaccination. (Figure 4.14).

Figure 4.13b

Percent of Respondents who said Negative Rumors would influence their decision to take the child for OPV - R1 (2010) Vs R2 (2011)



4.8 Sources of information

4.8.1 Sources of information regarding Polio:

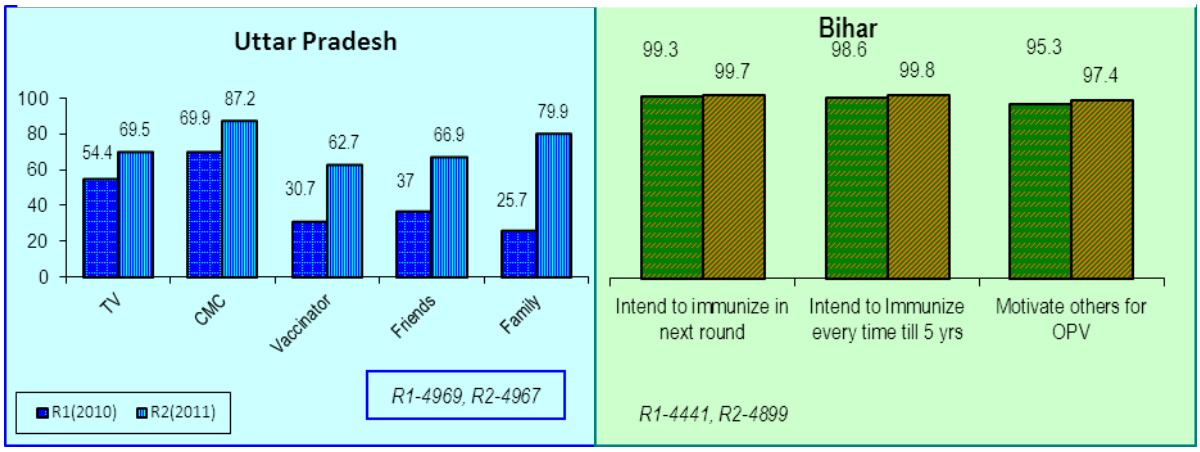
The major sources of information about Polio in UP were posters, CMC/BMC, TV, vaccinator and family members reported by more than 60 percent of the respondents(Table 4.15). In Bihar, these sources were family members, AWC workers, ASHA, posters, TV, radio and banners. (Table 4.15)

Table 4.15: Sources of information regarding Polio, (2011)						
Response	**Uttar Pradesh**			**BIHAR**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
The major source of information on Polio reported by the respondents *(spontaneous + Prompted)**						
Poster	59.1	86.9	73.0	67.5	76.3	71.9
Banners	27.7	63.6	45.7	56.3	74.1	65.1
TV	58.9	80.1	69.5	58.7	81.9	70.3
Radio	34.0	53.1	43.5	53.8	78.2	65.9
ASHA	26.8	33.8	30.3	77.5	68.2	72.9
ANM	35.4	38.4	36.9	65.3	42.8	54.1
Anganwadi worker	42.7	39.6	41.2	86.7	87.6	87.2
Government doctor	48.0	32.3	40.1	57.5	44.5	51.0
Private doctor	45.8	33.8	39.8	52.7	51.7	52.2
CMC/BMC	88.1	86.4	87.2	21.8	16.8	19.3
Vaccinator	65.1	60.3	62.7	53.9	52.5	53.2
Friends/Neighbors/relatives	70.1	63.7	66.9	76.3	78.3	77.3
Family members	82.6	77.1	79.9	88.0	87.1	87.6
Base: Those Who Were Aware of Polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

*Responses may exceed 100 percent due to multiple responses

Health workers were the major sources of information about Polio in both the KAP surveys followed by friends and family. TV emerged as a major source of information in both the states while Radio also disseminated messages regarding Polio to a substantial proportion of respondents in Bihar.

Figure 4.14: Source of Information about Polio R1 (2010) Vs R2 (2011)



4.8.2 Exposure to Public Service Announcement (PSA)

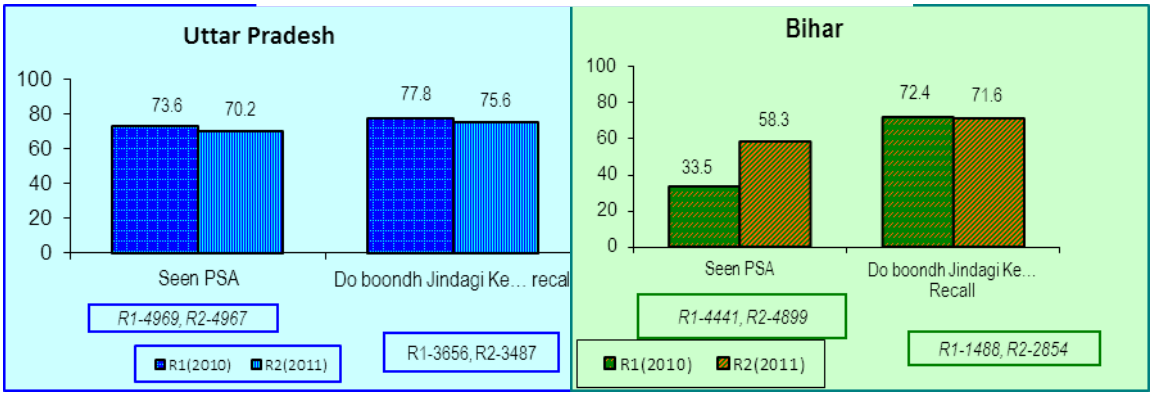
More than 70 percent of the respondents in UP and around 58 percent in Bihar had seen the Polio TV PSA with Amitabh Bachchan. Of those who had seen the PSA, a majority (UP: 76%; Bihar: 72%) recalled the slogan, "*Do boond Zindagi ke*" (Table 4.16).

Table 4.16: Respondents recalled having seen Polio TV PSA with Amitabh Bachchan, (2011)

Response	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Had seen Polio TV PSA with Amitabh Bachchan						
Yes	59.1	81.2	70.2	48.2	68.4	58.3
No	31.8	18.3	25.1	51.0	31.2	41.2
Don't know/Can't say	9.0	0.4	4.7	0.8	0.4	0.6
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
What does Amitabh Bachchan *say*						
Do boond jindagi ke….	71.9	78.2	75.6	72.8	70.7	71.6
Do boond jindagi ke.Har bachcha har baar	16.5	12.4	14.1	21.4	23.1	22.4
Har bachcha har baar	6.4	4.8	5.5	3.5	2.7	3.0
Others	0.5	0.7	0.6	0.5	1.2	0.9
Don't know	4.8	3.9	4.3	1.8	2.2	2.0
Base: Those who had seen PSA with Amitabh Bachchan	**1467**	**2020**	**3487**	**1187**	**1667**	**2854**

As is evident from the Figure 4.15, while the exposure to the PSA had remained more or less the same in UP, in Bihar, the exposure to the PSA had increased in KAP 2011 as compared to KAP 2010.

Figure 4.15: Exposure to Public Service Announcement R1 (2010) Vs R2 (2011)



4.9 Norms

4.9.1

Decision-making regarding administration of OPV to the child

A majority of the respondents in UP (78%) as well as Bihar (85%) reported that mothers made decisions regarding immunization of their children. (Table 4.17). This finding was consistent with the finding in KAP 2010.

Table 4.17: Decision making regarding administering OPV to the child, (2011)

Response	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Who mainly makes the decision of giving vaccine to the child in your household?						
Mother of Index Child	87.9	68.7	78.3	85.8	84.4	85.1
Father of Index Child	6.0	25.6	15.8	8.3	11.8	10.1
Grandmother of Index Child	4.7	3.4	4.0	5.2	2.6	3.9
Grandfather of Index Child	1.0	2.3	1.7	0.3	0.9	0.6
Community Elder/ Neighbours/ Friends	0.4	-	0.1	0.4	0.3	0.3
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Indicator: : % of respondents themselves taking decision regarding administering OPV to their child (mother)	**87.9**	**68.7**	**78.3**	**85.8**	**84.4**	**85.1**
Indicator: % of respondents themselves taking decision regarding administering OPV to their child (Father)	**6.0**	**25.6**	**15.8**	**8.3**	**11.8**	**10.1**
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

4.9.2 Support from spouse, family members, community and key influential leaders to Polio eradication

Almost all the respondents (99% in UP and 98%in Bihar) reported that they get support from their spouses, people in their community (94% in UP and 98% in Bihar) and key influential leaders (88% in UP and 93% in Bihar) regarding administration of OPV to their children. Around 27 percent in UP and 77 percent in Bihar stated that they get support from their mother-in-law/mother as well for getting their children immunized (Table 4.18).

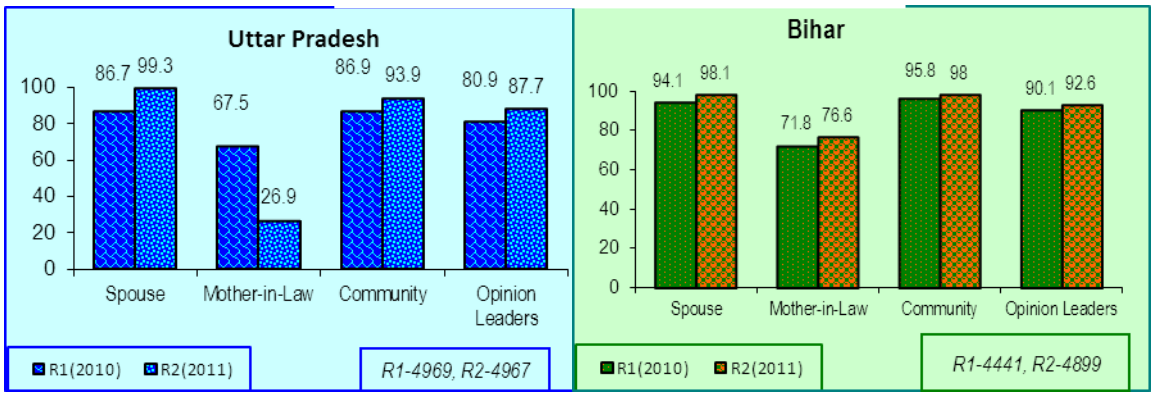
Table 4.18: Support from spouse, family members, community and key influential leaders to Polio eradication program, (2011)

Statements	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
"Your spouse does not have any problems in getting your kids administered Polio drops" (% Agree)	**99.1**	**99.6**	**99.3**	**98.7**	**97.6**	**98.1**
"Your mother-in-law/ mother does not have any problems in getting your kids administered Polio	**27.0**	**26.9**	**26.9**	**80.9**	**72.2**	**76.6**

Table 4.18: Support from spouse, family members, community and key influential leaders to Polio eradication program, (2011)						
Statements	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
drops" (% Agree)						
"People in our community support administering Polio drops to your kids" (% Agree)	**90.5**	**97.2**	**93.9**	**98.2**	**97.7**	**98.0**
"Key influential leaders support administering Polio drops in your village/community" (% Agree)	**81.0**	**94.5**	**87.7**	**93.5**	**91.8**	**92.6**
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

It can be inferred from the findings that the support from all the opinion makers, including key family members, community members and opinion leaders to administer OPV to the children had increased in KAP 2011 as compared to KAP 2011 (Figure 4.16).

Figure 4.16: Support for administering OPV to the child R1 (2010) Vs R2 (2011)



4.10 Practices / Behaviors

4.10.1 Immunization of child during the last pulse polio round

Keeping in line with the findings on the intentions to get the child vaccinated in the next round, most of the respondents in UP as well as Bihar (95% and 99% in UP and Bihar respectively) reported that they got their index child immunised during the last Polio round (Table 4.19).

Table 4.19: Immunization of child during the last Polio campaign, (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Did you administer Polio drops to your index child during the following rounds?						
April 2011	90.4	90.6	90.5	96.1	97.2	96.6
May 2011	92.2	92.3	92.2	97.3	97.7	97.5
June 2011	95.1	95.4	95.3	98.9	98.8	98.8
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

4.10.2 Place of immunization of child during the last Polio campaign

The places for immunization in the last Polio round as reported by the respondents in UP were, home (54% respondents) followed by booth (42% respondents). In Bihar, a majority (97 percent) of the respondents said that their children received immunization at home (Table 4.20). The same places of immunization were mentioned in KAP 2010 also, for both the states.

Who administered OPV to index child

AWW and ASHA were the persons administering OPV as reported by a majority of the respondents in UP and Bihar. Around 30 percent of respondents in UP did not know who administered OPV to their children (Table 4.20).

Table 4.20: Place of Immunization of child during the last Polio campaign , (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Place where the child received Polio immunization in last Polio round						
At booth (ONLY UP)	44.4	38.6	41.5			
At home	50.1	57.8	53.9	96.3	97.8	97.0
Other (AWC, private clinic, RI session, transit location, school)	5.5	3.6	4.0	3.6	2.2	3.0
Base: Those who administered polio drop to their child	**2363**	**2373**	**4736**	**2435**	**2410**	**4845**
Indicator: % respondents reported the place for Polio immunization as At booth or at home or AWC or Transit location or Private clinic or school	**99.6**	**99.3**	**99.5**	**99.9**	**99.9**	**99.9**
Base: Those who administered Polio drop to their child	**2363**	**2373**	**4736**	**2435**	**2410**	**4845**
Who administered Polio drop to index child						
AWW	26.6	35.7	31.2	68.4	75.4	71.9
ANM	6.0	9.5	7.8	3.7	1.7	2.7
ASHA	11.8	11.6	11.7	30.5	24.9	27.7

Table 4.20: Place of Immunization of child during the last Polio campaign , (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Doctor	1.6	3.5	2.6	-	0.1	0.1
Don't know	36.2	24.5	30.3	1.1	1.1	1.1
Others*	20.8	20.0	20.4	2.5	2.4	2.4
Base: Those who administered polio drop to their child	**2363**	**2373**	**4736**	**2435**	**2410**	**4845**

*Others include CMC, vaccinators, and other health worker in the village

4.10.3 Experienced any side effect of OPV when the child was immunized last time

Only around 3 percent of the respondents in UP and 6 percent in Bihar reported that their children experienced some side effects when they were immunized with Polio drops during the last round. There was marginal variation in the proportion of respondents reporting side effects in the two rounds (Table 4.21)

Table 4.21: Experienced any side effect of OPV when the child was immunized by Polio last time, (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Whether the child experienced any side effect of OPV when s/he was immunized by Polio last time						
Indicator: % of respondents who reported their child experienced any side effect of OPV last time	**2.6**	**2.4**	**2.5**	**4.7**	**8.0**	**6.3**
Base: Those who administered polio drop to their child	**2363**	**2373**	**4736**	**2435**	**2410**	**4845**

4.10.4 Satisfaction with the vaccinator who approached for administering Polio drops during last Pulse Polio round

Around 94 percent of the respondents were satisfied with the vaccinator who approached them for administering OPV during the last round in UP as well as Bihar. The reasons cited for their satisfaction with the vaccinators were their good behaviour and because they come and provide OPV to their children. Almost all the respondents in both UP and Bihar accepted that the vaccinator was trustworthy and knowledgeable. They said that the vaccinator talked to them in the right manner. Around 85 percent of the respondents in UP and 83 percent in Bihar agreed that the vaccinator explained the benefits of the polio drops (Table 4.22).

Table 4.22: Satisfaction with the vaccinator who approached for administering Polio drops during last Pulse Polio round and overall opinion about vaccinator, (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Whether satisfied with the vaccinator who approached them for administering Polio drops during Pulse Polio round last time						
Yes	92.5	94.7	93.6	95.9	93.7	94.8
No	2.7	3.7	3.2	3.8	5.2	4.5
Don't know/Can't say	4.8	1.6	3.2	0.3	1.1	0.7
Base: Those who administered Polio drop to their child	**2363**	**2373**	**4736**	**2435**	**2410**	**4845**
Indicator: % of respondents who were satisfied with the vaccinator who approached them for administering OPV during Pulse Polio round last time	**92.6**	**94.7**	**93.6**	**95.9**	**93.7**	**94.8**
Base: Those who administered Polio drop to their child	**2363**	**2373**	**4736**	**2435**	**2410**	**4845**
Reasons reported by the respondents for the satisfaction from vaccinator who approached them for administering OPV during last Polio round*						
His/her behaviour was good	31.3	37.5	34.4	53.1	60.9	56.9
S/He explained the benefits on his own	10.5	9.5	10.0	11.3	8.2	9.8
S/He answered the queries	7.1	8.6	7.9	3.7	2.1	2.9
S/he is from our community/we know him	15.3	14.3	14.7	6.6	11.5	9.0
She gives Polio drops to my child	40.3	47.9	44.2	35.6	26.8	31.2
Base: Those who were satisfied with the vaccinator approached for administrating Polio drop to their child	**2187**	**2248**	**4434**	**2336**	**2258**	**4594**
Statement: "The vaccinator in your village/area is trustworthy "						
% Agree	98.6	99.1	98.8	98.9	99.3	99.1
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Statement:"The vaccinator in your village/area is knowledgeable "						
% Agree	93.1	97.5	95.3	97.0	97.8	97.4
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Statement: "Vaccinator talks with you in right manner "						
% Agree	98.4	98.6	98.5	97.9	99.3	98.6
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Statement: "Vaccinator explains the benefits of Polio drops"						
% Agree	81.9	87.6	84.7	82.7	82.5	82.6
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**

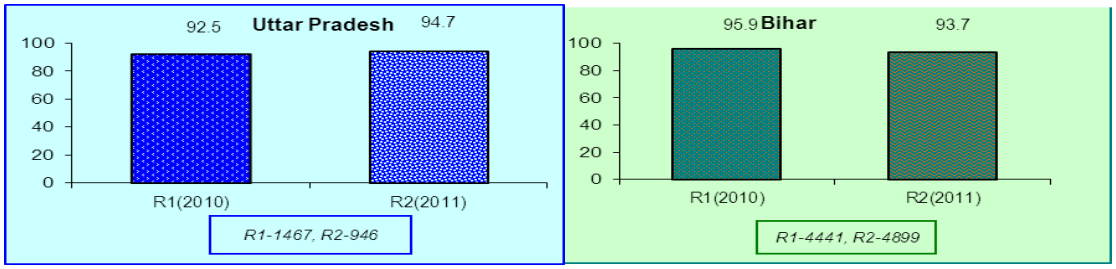
***Responses may exceed 100 percent due to multiple responses.**

Most of the respondents were found to be satisfied with the vaccinators work in KAP 2010 (UP: 93%; Bihar: 96%) as well as in KAP 2011 (UP: 95%; Bihar: 94%) (Figure 4.17).

4.10.5 Ever charged for immunization by Health workers during Pulse Polio Round

Very few respondents in both the States (2 percent in UP and less than 1 percent in Bihar)

Figure 4.17 Satisfaction with the Vaccinator's work - R1 (2010) Vs R2 (2011)



Complained that they were charged for immunization. (Table not presented).

4.10.6 Visit of CMC/AWW in last month

Around 96 percent of the respondents in UP and 98 percent in Bihar were aware of the BMC / CMC / AWW in their area and most of them reported that BMC/CMC/AWW visited their households last month. Information regarding the Pulse Polio day was given in advance in UP as confirmed by 83 percent of the respondents whereas only 38 percent in Bihar reported that they were informed about the Pulse Polio day in advance.

Most of the respondents in UP as well as Bihar reported that BMC/CMC/AWW in their village/area was trustworthy, knowledgeable, the way they talked and were well accepted in the community. More than 70 percent of the respondents in both the states also mentioned that they provide useful information on other health issues (Table 4.23).

Table 4.23: Visit of CMC/AWW- Respondents reported the CMC/AWW visited their household last month, (2011)

Response	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Do you know BMC/CMC/AWW in your area						
% Yes	96.9	95.4	96.1	98.2	98.0	98.1
Base: Those who were aware of polio	**2481**	**2486**	**4967**	**2462**	**2437**	**4899**
Whether BMC/CMC/AWW visited their household in last month						
% Yes	98.7	96.2	97.5	90.7	94.5	92.6
Base: Number of respondents who reported they know	**2404**	**2372**	**4776**	**2418**	**2388**	**4806**

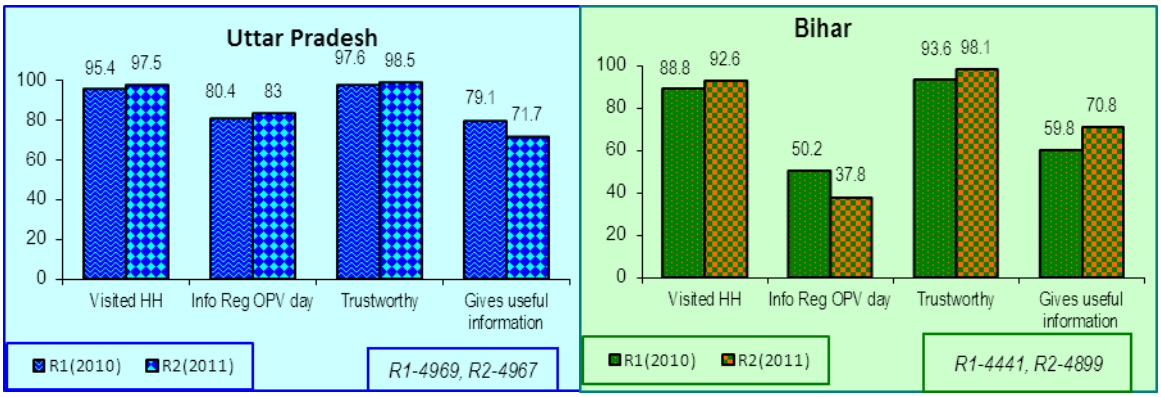
Table 4.23: Visit of CMC/AWW- Respondents reported the CMC/AWW visited their household last month, (2011)						
Response	**Uttar Pradesh**			**Bihar**		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
the CMC/AWW working in their area						
Any of them - BMC/CMC/AWW informed about Pulse Polio day in advance during last Pulse Polio round						
% Yes	88.9	76.9	83.0	34.2	41.4	37.8
Base: Number of respondents who reported CMC/AWW visited their area	**2373**	**2288**	**4655**	**2194**	**2256**	**4450**
Statement: "The CMC/BMC/AWW in your village/area is trustworthy"						
% Agree	98.4	98.5	98.5	97.9	98.2	98.1
Base: Those who knew any body working in their area for Pulse Polio	**2404**	**2372**	**4776**	**2418**	**2388**	**4806**
Statement: "The CMC/BMC/AWW in your village/area is knowledgeable"						
% Agree	92.6	97.4	95.0	96.7	97.0	96.9
Base: Base: Those who knew any body working in their area for Pulse Polio	**2404**	**2372**	**4776**	**2418**	**2388**	**4806**
Statement: "The CMC/BMC/AWW in our village/area talk to you in right manner"						
% Agree	97.4	97.7	97.6	98.3	98.7	98.5
Base: Base: Those who knew any body working in their area for Pulse Polio	**2404**	**2372**	**4776**	**2418**	**2388**	**4806**
Statement: "CMC/BMC/AWW is accepted in your community"						
% Agree	90.6	93.5	92.0	96.2	95.8	96.0
Base: Those who knew any body in their area	**2404**	**2372**	**4776**	**2418**	**2388**	**4806**
Statement: "CMC/BMC/AWW provides useful information on other health issues"						
% Agree	67.2	76.1	71.7	72.8	68.7	70.8
Base: Those who knew any body in their area	**2404**	**2372**	**4776**	**2418**	**2388**	**4806**

*** UP – CMC/BMC and Bihar - AWW**

The feedback regarding CMC/BMC/AWW on the above-discussed aspects was more or less the same in both the states during KAP 2010 and KAP 2011, except for an observation that lesser proportion of respondents in Bihar received prior information about the Pulse Polio day in KAP 2011 as compared to KAP 2010 (Figure 4.18).

Figure 4.18 Feedback regarding CMC / BMC / AWW

R1 (2010) Vs R2 (2011)

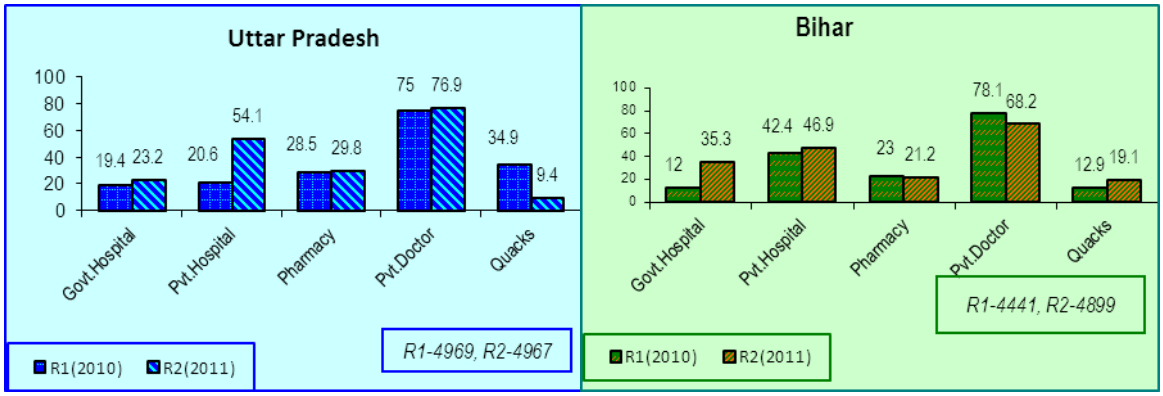


4.10.8 Treatment seeking behavior in case the child is sick

The respondents mostly preferred to take their children to a private clinic first (UP: 77%; Bihar: 68%), seek medical treatment from private hospitals (UP: 54%; Bihar: 47%), and seek treatment directly from pharmacy/drug store (UP: 30%; Bihar: 21%). Only 26 percent in UP and 35 percent in Bihar went to Government hospital/dispensary for treatment. (Table not presented). As regards the change in the treatment seeking pattern from KAP 2010 to KAP 2011, while the proportion of respondents seeking treatment at private hospitals had increased substantially in UP, in Bihar, the proportion seeking Government services had increased (Figure 4.19).

Figure 4.19 Treatment Seeking Behaviour in Case the Child is Sick

R1 (2010) Vs R2 (2011)



CONCLUSION

Knowledge about Polio: The programme has almost reached its milestone with regard to the target populations' awareness about Polio and a strong belief that it can be prevented and that too by getting children under 5 administered with OPV. Since a substantial number of respondents believed that Polio is curable, there is an urgent need to address this issue.

Threat Susceptibility and Severity of Polio: The threat susceptibility had decreased in the minds of respondents. Even the proportion of respondents who are aware of the consequences had decreased from KAP 2010 to KAP 2011. This calls for a communication campaign highlighting the consequences of the disease.

Knowledge about Oral Polio Vaccine: The knowledge of parents about administration of OPV was very good; as was their knowledge about the requirement of repeated doses. Most of them realised that administration of OPV would prevent Polio.

Knowledge about Pulse Polio Program: All the findings pertaining to knowledge of the parents regarding Polio programme indicated that the community as well as the caregivers are mostly convinced of the efforts of the programme personnel and have largely accepted the services. However, a feeling that the rounds are too frequent is still there. The necessity of frequent rounds needs to be emphasised to address such feelings.

Even the awareness regarding the harmful effects if the child misses an OPV dose had increased as compared to the previous round, but they did not know what action to be taken in case the child misses a dose. They relied on the Polio programme and the

monthly visits of the Polio teams to a great extent.

Attitude towards Polio and Pulse Polio Program: All the respondents believed that OPV would protect their children against Polio. Their perception was so favourable that a large proportion was inclined to get OPV administered even if their child was sick, and did not perceive it to have any side effects. Intent of getting the child immunised in the next round was very high, and high was the willingness to motivate others for Polio immunisation. They were quite optimistic that Polio can be completely eradicated from India.

Self-Efficacy about Polio and Pulse Polio Programme: The programme has successfully managed to create an environment where the target population has started trusting its grassroots personnel i.e. CMC/AWW. However, the CMCs/AWWs need to be armed with information on other health issues as well, so as to have increased acceptance. **Barriers to Self-Efficacy:** The barriers to self efficacy of the programme are almost non existent as most of the parents think that OPV is safe to give every time it is offered; the CMCs/AWWs and vaccinators are well accepted in the community. Some care givers in UP and a few in Bihar had heard negative rumours about it but very few of them believe such rumours and very few of them actually feel that there are any side effects of the vaccine. Nevertheless, the programme needs to continue addressing the few who get influenced by the rumours.

Source of Information: Major sources of information included CMC/BMCs, AWWs, posters, TV/Radio and vaccinators. The PSA with Amitabh Bachchan was more popular in UP than in Bihar.

Norms: Mothers were the main decision makers and they received good support from spouses and other influential people in the community. Mother-in-laws still need to be convinced of the benefits of Polio, and this attempt may further boost acceptability of the programme in the community and the household.

Practice/Behaviour: The behaviour of the respondents was in line with their knowledge and attitude towards Polio. Almost all of them got their index child immunized in the last round. The satisfaction with the services provided by CMCs/AWWs and vaccinators was also very high.

The respondents were more satisfied with the health workers because they come and provide OPV to their children.

5 KNOWLEDGE, ATTITUDE AND PRACTICES ABOUT ROUTINE IMMUNIZATION

This chapter deals with the findings of the study with respect to knowledge, attitude and practices about routine immunization among the respondents in the States of Uttar Pradesh and Bihar.

5.1 Knowledge and Awareness about RI

5.1.1 Awareness about RI

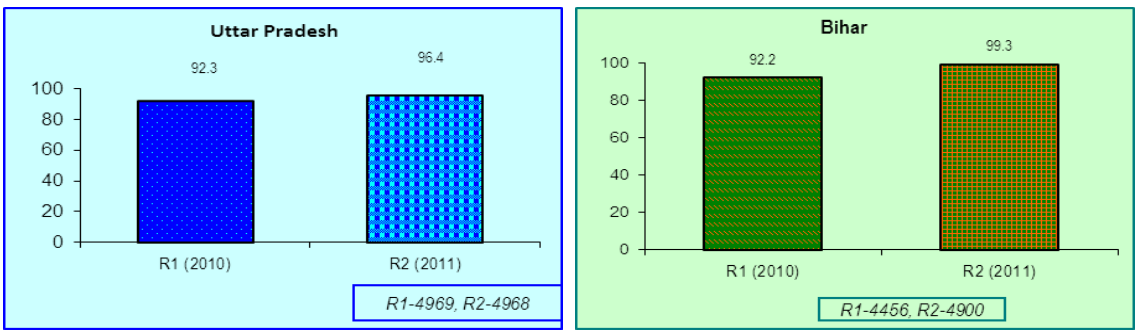
Table 5.1 presents information regarding the awareness of parents of children aged less than 5 years about the RI. Almost all the respondents in Bihar and 96 percent of in UP had ever heard about RI. In both the states, a relatively higher percentage of Mothers as compared to Fathers had ever heard about RI.

Table 5.1: Awareness of Routine Immunization - (2011)

Awareness of RI	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Ever heard of child RI						
Yes	98.2	94.7	96.4	99.9	98.7	99.3
No	1.2	4.9	3.1	0.1	1.1	0.6
Don't know/Can't say	0.6	0.4	0.5	-	0.2	0.1
Base: Number of Completed Interviews	**2481**	**2487**	**4968**	**2462**	**2438**	**4900**

As shown in figure 5.1, the awareness levels about the RI among the parents has gone up by 4 percentage points in Uttar Pradesh and 7 percentage points in Bihar since the R1 in 2010.

Figure 5.1 Percent of Respondents who are Aware of Routine Immunization



5.1.2 Knowledge about benefits of RI

All the respondents who had ever heard of RI were asked to mention the benefits of RI. As the Table 5.2 shows, 94 percent of the respondents in UP and 96 percent in Bihar could mention at least one benefit of RI. There was not much variation in this regard among the fathers and mothers covered in both the states. In both the states majority of the respondents (65% in UP and 63% in Bihar) mentioned that RI protects children from killer diseases. In both the states a higher percentage of Fathers than the Mothers said that RI protects children from killer diseases. A higher percentage of respondents in Bihar than those in Uttar Pradesh perceived that RI helps in preventing the spread of diseases (Bihar 58%, Uttar Pradesh 39%) and it keeps the child healthy (Bihar 39%, Uttar Pradesh 20%). The above findings were more or less similar among the fathers and mothers in both the states.

Table 5.2: Knowledge of Routine Immunization – (2011)

Benefits of RI	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Various benefits of RI*						
No benefit	7.1	4.2	5.7	3.7	3.4	3.5
It protects children from killer diseases	62.0	68.2	65.0	60.7	65.7	63.2
It helps in preventing the spread of diseases	33.3	45.3	39.2	56.6	58.9	57.7
It keeps child healthy	19.8	19.4	19.6	40.5	36.9	38.7
Others**	0.6	0.5	0.6	0.1	0.2	0.1
Indicator: % of respondents who could tell at least one benefit of RI#	92.3	95.3	93.8	96.2	96.6	96.4
Base: Number of respondents who have ever heard	**2436**	**2354**	**4791**	**2460**	**2407**	**4867**

***Percentages exceed 100 due to multiple responses.**
****DK/CS, Prevents from polio**
#The indicator value is calculated by using mentioned any of "it protects children…", "It helps in preventing….", "It keeps child healthy…."by the respondent.

5.1.3 Knowledge about diseases that can be prevented by RI

The respondents who had heard about RI were further probed about the names of diseases that can be prevented by RI (Table 5.3). In Uttar Pradesh, 46 and 42 percent of the respondents were aware that RI could prevent Tuberculosis and Measles respectively. Only 34 percent of the respondents in Uttar Pradesh knew that RI could prevent Polio and 32 percent were aware that it could prevent Whooping Cough. In Bihar nearly three-fourth of the respondents had the knowledge that RI could prevent Polio and 56, 36 and 31 percent were aware that it could prevent Tuberculosis, Tetanus and Measles respectively.

Thirty eight percent of the respondents in Bihar and 31 percent in Uttar Pradesh could mention the names of 3-4 diseases that could be prevented through RI. The proportion of respondents who were aware about all the 7 diseases that could be prevented through RI was almost negligible.

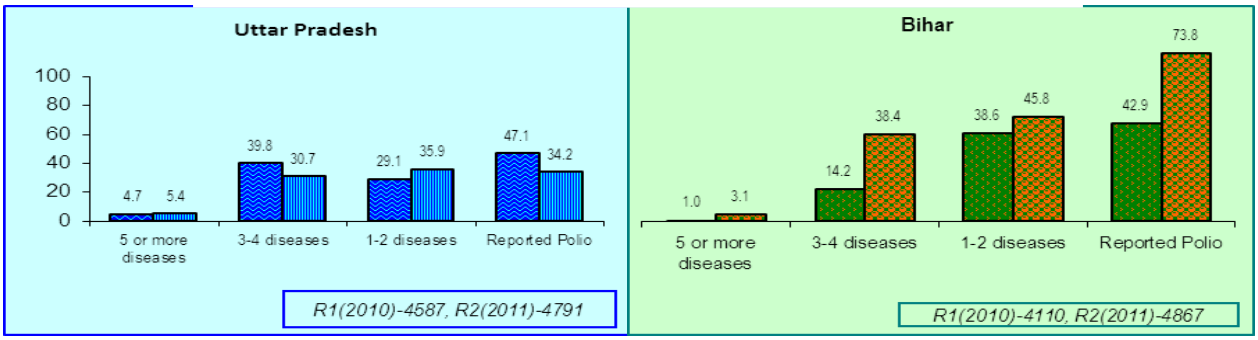
The percentage of parents who knew that Polio could be prevented by RI was considerably higher in Bihar (74%) than Uttar Pradesh (34%). This could perhaps be attributed to the wide publicity given to pulse polio vaccination in Bihar.

Table 5.3: Knowledge of Routine Immunization – (2011)

Benefits of RI	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
The diseases which can be prevented by Routine Immunization						
Tuberculosis	50.3	40.5	45.5	53.7	57.6	55.6
Diptheria	17.5	9.1	13.4	4.7	5.0	4.9
Whooping Cough	34.1	29.9	32.0	11.1	7.4	9.3
Tetanus	19.0	19.5	19.2	33.9	41.1	37.5
Polio	32.9	35.7	34.2	74.9	72.7	73.8
Hepatitis	3.2	2.4	2.8	5.7	8.1	6.9
Measles	46.8	37.8	42.4	32.6	29.6	31.1
Others	0.3	0.4	0.3	0.6	0.4	0.5
Don't know	28.0	27.9	27.9	11.0	13.9	12.4
Base: Number of respondents who have ever heard about RI	**2436**	**2354**	**4791**	**2460**	**2407**	**4867**

A comparative analysis between the findings of the two rounds of the study with respect to the diseases that can be prevented by RI revealed that only 34 percent respondents mentioned Polio in the second round (2011) as against 47 percent who mentioned Polio as a disease that could be prevented through RI (R1 (2010)-43%, R2 (2011)-74%). Further, those mentioning more than 3 diseases had decreased in UP from the first round (2010) to the second round (2011) while it increased substantially in Bihar, as shown in figure5.2

Figure 5.2 Percent of Respondents who could tell diseases that can be prevented by of RI- R1 (2010) Vs R2 (2011)



in the first round in UP (2011). On the other hand, in Bihar, there was a substantial increase in the proportion of respondents

5.1.4 Knowledge about the Vaccines given in RI

The respondents were asked about the name of the vaccines the child should get before 12 months of age. They were first asked to state the names of the vaccines spontaneously. The vaccines which could not be recalled spontaneously were prompted (Table not presented).

In Bihar, a majority of the respondents (61%) spontaneously mentioned the BCG followed by OPV (57%), DPT (38%) and Measles (31%). In Uttar Pradesh only 17 percent could spontaneously mention the OPV vaccine and 24 to 33 percent spontaneously mentioned DPT, Measles and BCG vaccines. The spontaneous recall of the vaccines was comparatively higher among mothers than fathers in both the states. With prompting, the percentage of respondents who could recall the vaccines increased in both the states with over 90 percent in Bihar and 79 to 92 percent in Uttar Pradesh recalling BCG, DPT and OPV. The corresponding percentage for measles was 78 percent in Bihar and 80 percent in Uttar Pradesh. The recall of Vitamin A (both spontaneous and prompting) was substantially higher in Bihar (76%) than in Uttar Pradesh (48%). Even after prompting the percentage of respondents recalling Hepatitis B was low (Bihar 36%, Uttar Pradesh 20%).

A comparison of the findings on recall of vaccines among the respondents in both the rounds reveals that the proportion of respondents recalling each vaccine has increased in both the States, except for OPV in Uttar Pradesh. (Fig.5.3)

Figure 5.3 Recall of Vaccines R1 (2010) Vs R2 (2011)

Spontaneous + Prompted

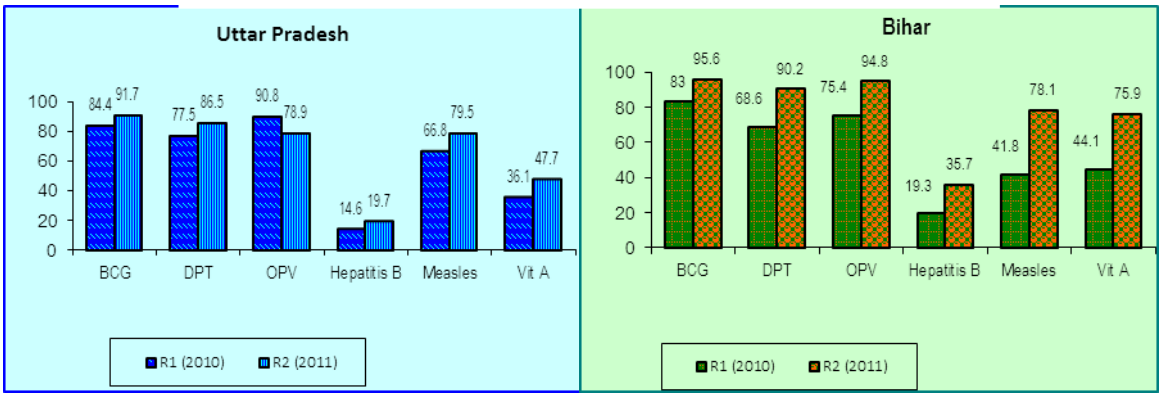
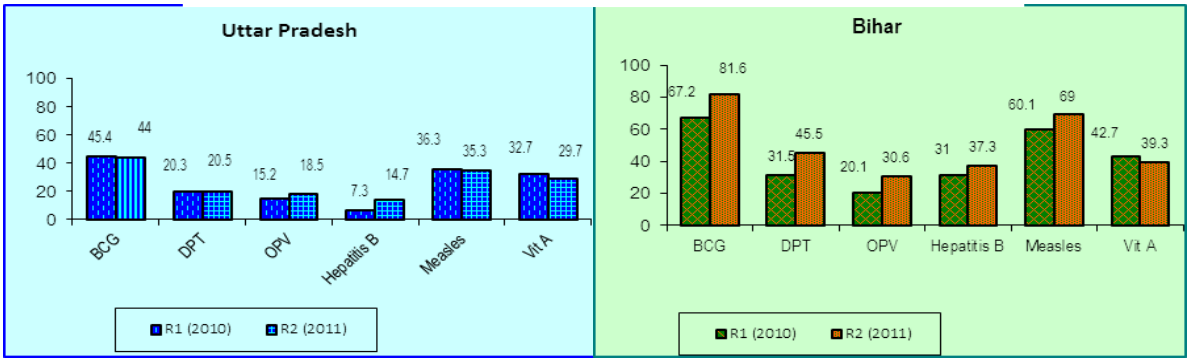


Figure 5.4 shows the comparison of the findings on knowledge of correct doses of different vaccines among the respondents in Bihar and Uttar Pradesh. In Bihar, since the R1 in 2010, there has been an improvement in the knowledge on correct doses of the vaccine by 6 to 14 percentage points for each vaccine excepting Vitamin A. However, in Uttar Pradesh there has not been much of an improvement in the proportion of respondents knowing the correct dose of different vaccines (excepting Vitamin A) since the R1 in 2010.

Figure 5.4 Knowledge about correct dose of Vaccines

R1 (2010) Vs R2 (2011)



5.2 Attitude towards RI

Eighty seven percent of the respondents in UP and 96 percent in Bihar believed immunization to be safe (Table not presented). Nearly 83 percent in UP and 94 percent in Bihar agreed with the fact that "it is easy to immunize the children". Against 91 percent of the respondents in Bihar, 78 percent in Uttar Pradesh perceived that the risk of getting the disease is higher for the children who are not immunized. Similarly, 84 percent of the respondents in Bihar compared to 71 percent in Uttar Pradesh expressed agreement with the fact that the child might get sick and die if they are not immunized. Most of the respondents in both the states (96% Bihar and 83% in Uttar Pradesh) expressed their willingness to get their child fully immunized.

5.3 Availability of RI Card

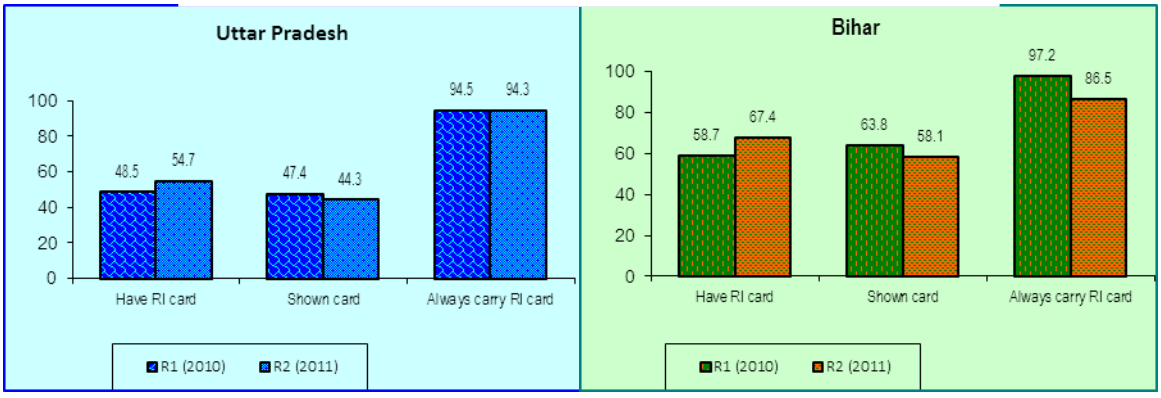
The respondents who had ever heard of RI were asked whether they had an Immunization card for the index child. The immunization cards were available with only 55 percent of respondents in Uttar Pradesh and 67 percent in Bihar (Table 5.4). Of those who had RI cards, only 44 percent. In UP and 58 percent of the respondents in Bihar could show the cards

Table 5.4: Availability of immunization card with the respondents (2011)						
Particulars	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Mothers/ fathers reported having immunization card/ any other document for recording immunization for the						
Yes	62.8	46.4	54.7	67.2	67.6	67.4
No	32.2	46.5	39.2	32.2	30.1	31.1
Don't know	5.0	7.2	6.1	0.6	2.3	1.4
Base: Number of respondents who have ever	**2436**	**2354**	**4791**	**2460**	**2407**	**4867**
Whether shown the immunization card						
Card shown	43.9	44.7	44.3	68.2	47.7	58.1
Card not shown	53.0	48.1	50.9	26.3	47.9	37.0
Card shown but no entry in the card	1.4	2.4	1.8	1.5	2.3	1.9
No card available	1.7	4.8	3.0	3.9	2.1	3.0
Base: Number of respondents who have RI card	**1529**	**1092**	**2621**	**1653**	**1628**	**3281**

When the data in both the rounds was compared, it was observed that, in both the states the proportion of respondents reporting possession of immunization card was higher in R2 in 2011 than R1 in 2010. However, the proportion of respondents who could show the card has declined since the R1 in 2010 in both the states. The proportion of respondents reportedly carrying the card during each visit remained the same in UP but declined in Bihar

Figure 5.6 Availability of Immunization Card

R1 (2010) Vs R2 (2011)



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5.4 Current immunization status of the Index child as per RI card

The field teams were instructed to record the current immunization status of the index child from the RI card shown by the respondents. Almost all the respondents in both the states reported immunization of the index child against BCG (Table 5.5). With respect to Polio, while immediate vaccination after birth and the second

vaccination were done in 82 percent and 89 percent cases respectively in UP, the third and fourth doses were given in lesser number of cases. A similar trend was observed in Bihar also. As regards DPT, while the first dose was given to 95 percent of children in Bihar and 91 percent of children in Uttar Pradesh, the second (Bihar 88%, Uttar Pradesh 80 %) and third doses (Bihar 82%, Uttar Pradesh 69 %) were administered to lower percentage of children in both the states. Measles vaccination was given to only 55 and 65 percent of children in UP and Bihar respectively. Similarly, Vitamin A was administered to 48 percent and 57 percent of children in UP and Bihar respectively.

In case of 50 percent and 63 percent of respondents in UP and Bihar respectively, the index child had received 1 BCG, 3 polio drop and 3 DPT and one dose of measles i.e. fully immunized

Table 5.5: Practice of immunizing the child (From RI card) (2011)-The child is fully immunized

Status of child	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Whether the child has received the following vaccines (As per the RI card)						
BCG	98.4	97.5	98.0	99.6	99.7	99.6
Polio 0	83.8	79.8	82.1	98.2	96.9	97.7
Polio 1	88.7	88.8	88.8	93.8	94.3	94.0
Polio 2	77.3	80.3	78.5	86.8	90.5	88.3
Polio 3	66.2	68.4	67.2	80.3	82.1	81.1
DPT 1	90.9	91.6	91.2	94.6	96.1	95.2
DPT 2	78.6	81.7	79.9	86.8	90.2	88.2
DPT 3	67.8	71.2	69.3	81.4	82.5	81.8
Measles	55.1	54.6	54.9	63.4	68.7	65.5
Vitamin A	47.8	47.4	47.6	56.3	58.4	57.2
Base: Number of respondents who have	**672**	**488**	**1160**	**1128**	**777**	**1904**
Indicator: % of respondents whose child has received 1 BCG, 3 polio drops, 3 DPT injections and one	**49.9**	**50.1**	**50.0**	**61.5**	**66.4**	**63.5**
Base: Number of	**672**	**488**	**1160**	**1128**	**777**	**1904**

The comparison of data in the two rounds shows that in both the states, the proportion of respondents reporting administration of each vaccine has improved to some extent since R1 in 2010

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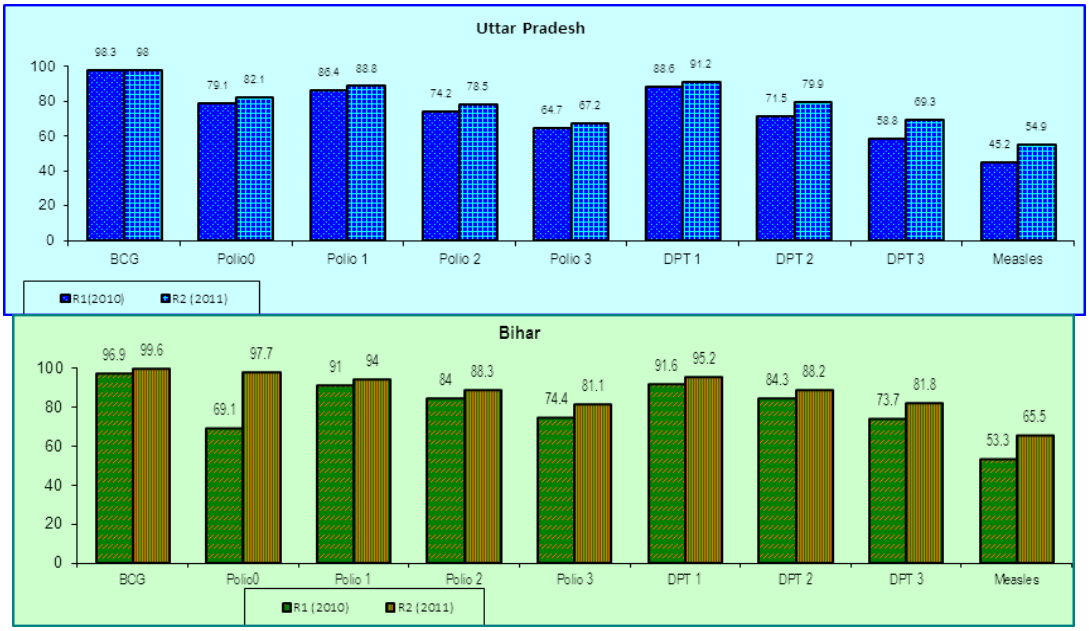
Figure 5.7 Practice of Immunizing the Index Child
R1 (2010) Vs R2 (2011)



5.5 Side effects after immunization

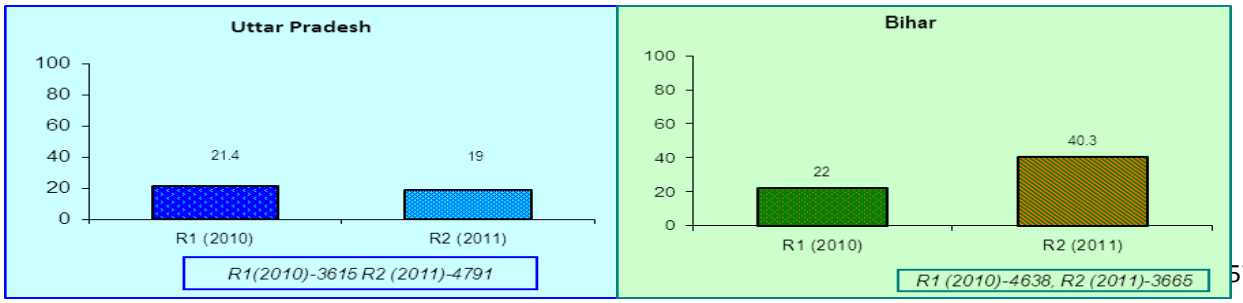
Respondents were asked whether their child experienced any side effects after immunization. Around 19 percent of the respondents in UP and 40 percent in Bihar reported having suffered side effects after immunization (Table 5.6).

Table 5.6: Respondents whose child experienced any side effects after immunization-(2011)

Response	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Whether ever experienced any side effects after immunization						
Yes	17.7	20.5	19.0	41.9	38.7	40.3
No	82.3	79.5	81.0	58.1	61.3	59.7
Base: Number of respondents who have immunized	**1986**	**1938**	**3924**	**2356**	**2282**	**4638**

The comparison of data in the first (2010) and second round (2011) showed that while the percentage of respondents reporting side effects has decreased in UP, it has increased substantially in Bihar (Fig 5.8).

Figure 5.8 Experienced Side effects after Immunization



5.6 Messages/Advice received in the RI session

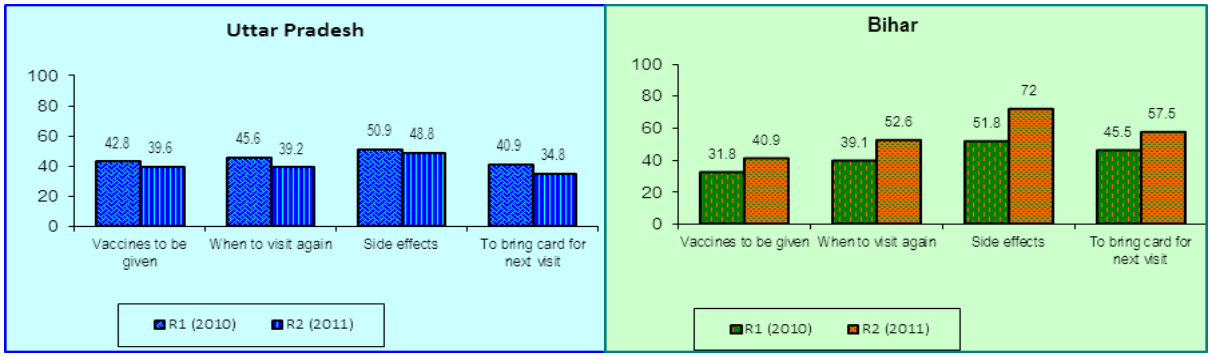
An attempt was made to get feedback from the respondents regarding the RI sessions. Around one-fourth of the respondents in both the states reportedly received all the four messages/advice viz. “Vaccines to be given”, “when to come back for immunization”, “side effects of the vaccine” and to “bring RI card during next visit”, at the RI session.

Around 35 - 50 percent of the respondents in UP and 40 to 72 percent in Bihar confirmed that they received information and advice on different aspects of RI sessions like the schedule of vaccines to be given, their side effects, when to come back again and to bring the immunization card each time etc (Table not presented).

In Uttar Pradesh, as compared to the first round (2010), the percentage of respondents who confirmed receiving different messages related to RI has declined in the second round (2011). However, in the State of Bihar, the percentage of respondents who reportedly received different messages has increased considerably since the R1 in 2010 (Fig 5.9).

Figure 5.9 Received Messages / Advice at RI Session

R1 (2010) Vs R2 (2011)



5.7 Current Information Channels for RI

The major sources of information on RI in UP were CMC/BMC, TV, ANM, Pvt. Doctor, and Govt. Doctor. The respondents in Bihar mentioned Anganwadi worker, ASHA, ANM, TV and Radio as the major sources of information on RI (Table 5.7).

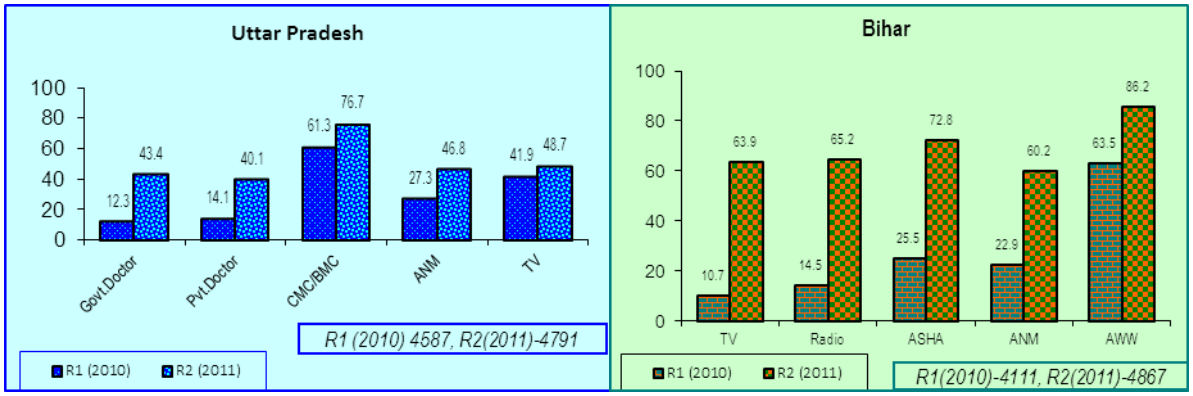
Table 5.7: Main sources of information where people learn about Routine Immunization, (2011)						
Sources	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Newspaper	7.0	25.5	16.1	14.4	33.0	23.6
Hoardings	7.0	18.8	12.8	13.4	21.0	17.2
Poster	18.0	36.9	27.3	44.6	64.0	54.2
Banners	10.6	27.2	18.8	38.8	60.0	49.3
Pamphlets	3.5	7.1	5.3	12.2	46.4	29.1
Wall Writings	12.6	34.2	23.2	17.0	49.0	32.8
TV	39.8	58.0	48.7	54.1	73.9	63.9
Radio	26.2	46.8	36.3	53.9	76.7	65.2
ASHA	27.2	30.8	29.0	76.5	69.0	72.8
ANM	48.4	45.2	46.8	72.5	47.5	60.2
Anganwadi worker	39.0	32.8	35.9	88.6	83.8	86.2
Government doctor	51.1	35.4	43.4	62.6	44.1	53.4
Private doctor	45.7	34.3	40.1	58.8	53.7	56.3
CMC/BMC	75.9	77.5	76.7	18.5	15.1	16.8
Vaccinator	31.7	38.1	34.9	40.2	38.5	39.4
Friends/ Neighbors/ relatives	68.6	61.4	65.1	86.8	81.4	84.1
Family members	75.4	74.7	75.1	89.1	86.2	87.7
At religious places like Mosque, Madare	11.5	20.1	15.7	4.0	3.5	3.8
Base: Number of respondents who have ever	**2436**	**2354**	**4791**	**2460**	**2407**	**4867**

***Responses may exceed 100 percent as it is multiple response questions**

Compared to the first round (2010), a substantial increase in the proportion of respondents reportedly getting information from different health functionaries is noticed in the current round (2011) in both the states. The proportion of those getting information through electronic media has also increased substantially by the second round (2011). It is encouraging to note that the percentage of vaccinators as a source of information in both States has increased by a good margin in the second round (201

Figure 5.10 Source of Information on RI

R1 (2010) Vs R2 (2011)



Conclusion

The awareness regarding RI was quite good among the respondents in both the States. They could also state the benefits of RI, names of the vaccines and the diseases against which the vaccines provide protection. Among all the vaccines, BCG, DPT and Polio were better known than Hepatitis B, Measles and Vitamin A. Overall, the knowledge regarding RI was better among the respondents in Bihar than those in UP. Overall, the attitude of the respondents towards RI was positive and most of them were aware of the repercussions of not getting the child immunized. In fact, there is an increase in the respondents with positive attitude towards RI in the second round (2011) as compared to that of the first round (2010). This was more so in the state of Bihar as compared to Uttar Pradesh. When it came to putting the knowledge into practice, the percent of respondents who immunized their children with BCG, DPT and OPV were higher than Hepatitis B, Measles and Vitamin A in both the States. Government Hospital, PHC/CHC, AWC and "some other places in the village" were the places where children were immunized. There was a strong inclination to get children vaccinated among the respondents from both the states. CMC/BMCs, Govt./Private doctors, AWWs, ASHA, ANMs TV and Family/friends/relatives were the major sources of information on RI.

6 KNOWLEDGE, ATTITUDE AND PRACTICES ABOUT BREASTFEEDING AMONG MOTHERS

Ensuring exclusive breast-feeding for six months has the potential to reduce deaths of new borns; and also the under five mortality rate. To achieve maximum benefits, the breast feeding must be initiated within half an hour after birth and continued through the first six months of life. According to national and international guidelines, all the children should be breast fed exclusively for the first six months of life. Breast feeding may be continued for another 2 years or more, with the addition of appropriate foods.

6.1 Knowledge about Breastfeeding and Exclusive Breastfeeding and its Benefits

As shown in the table 6.1a, almost all the mothers in both the states could tell at least one benefit of breastfeeding. The benefits most commonly reported by the mothers in both the states were, "Baby becomes healthy" (70% in UP, 68% in Bihar) and "Mother's milk is the best food for the baby" (52% in UP and 60% in Bihar). Around 35 percent of the mothers in UP and 24 percent in Bihar mentioned that breast milk would increase the immunity of the baby and offer protection against infections. Over one-thirds of the mothers in Bihar perceived that "with exclusive breast feeding the baby's heart becomes strong".

Table 6.1a: Knowledge and awareness about Breastfeeding, (2011)

	Uttar Pradesh	Bihar
	Mothers	Mothers
Various benefits of breastfeeding reported by respondents		
Mother's milk is the best food for the baby	51.6	59.8
Increases immunity in the baby	20.2	14.2
Protects babies against infections	15.4	8.9
It is free of cost	2.9	13.7
Exclusive breast feeding delays return of menstruation	1.6	1.9
Baby becomes healthy	70.2	68.4
Baby's heart becomes strong	10.2	33.5
No benefits	0.2	-
Others	0.1	1.1
Indicator: % mothers who could tell at least one benefit of breastfeeding#	**99.7**	**99.9**
Base: All mothers (Excluding female caretakers)	**2480**	**2454**

In order to determine the knowledge and awareness levels, all the mothers were asked about the meaning of "Exclusive Breastfeeding", the duration for which exclusive breastfeeding was done and benefits of breastfeeding.

Knowledge and awareness about exclusive breast feeding

The findings presented in Table 6.1 suggest that the awareness about the correct meaning of exclusive breast feeding was very low in both the states , as only 7 percent of the respondents in UP and 10 percent in Bihar could tell the correct meaning of exclusive breast feeding (breast feeding without additional food, drink or even water till 6 months).

The mothers of UP were further probed about the benefits of exclusive breast feeding. It can be seen from the table that the benefits of exclusive breast feeding mentioned by mothers were quite similar to the benefits of breast feeding.

Although mothers were aware of the benefits of breastfeeding, their knowledge regarding the recommended duration of exclusively breastfeeding was low. 63 percent of the mothers in UP compared to 96 percent in Bihar knew that a child should be exclusively breastfed until 6 months (Table not presented).

6.2 Practice towards breastfeeding, colostrums and exclusive breastfeeding

Breastfeeding Practices:

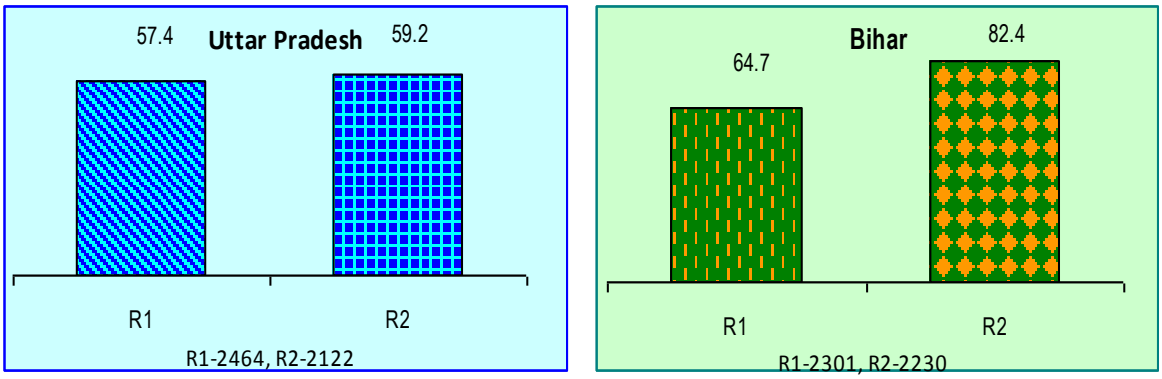
Sixty four percent of the mothers in Bihar and 60 percent in Uttar Pradesh reported currently breast feeding the index child. The reasons for not breast feeding the child were ascertained from all the mothers who were not currently breastfeeding the child. The major reasons cited for not breast feeding the child were reported as “child was grown up” (75% in UP and 81% in Bihar) and mothers had no breast milk to feed the child (17% in UP and 11 % in Bihar). (Table not presented).The proportion of mothers exclusively breastfeeding the child has been only 8 percent in UP and 33 percent in Bihar respectively (Table not presented).

Colostrums feeding Practices

In UP only 26 percent of the respondents said that they had initiated breast feeding for the index child immediately or within one hour after birth, whereas 37 percent of them said they initiated breast feeding within 24 hours. (Table not presented).More than 59 percent of mothers in UP and 82 percent in Bihar reported that colostrums was fed to the newborn child. The mothers who mentioned that something else (other than colostrum) was give to the newborn child (Index child) immediately after birth, were asked about giving colostrum to the Index child. The mothers who reported not giving colostrum to the Index child were further probed about the reasons for the same. The main reason stated for not feeding the

colostrums was that it was considered dirty (45% in UP and 33% in Bihar) and it was perceived to be harmful to the child (36% in UP and 23% in Bihar). Almost one fourth of the mothers in UP (25%) and 15 percent of the mothers in Bihar also mentioned that their relatives were against giving colostrum to the child. As shown in Figure 6.3b, the practice of feeding colostrums soon after the birth has improved since the first round (2010) in both the states.

Figure 6.3b Colostrums feeding Practices
R1 (2010) Vs R2 (2011)
Mothers who fed Colostrums to the child immediately after birth



6.3 Knowledge and awareness about complementary feeding

Only 59 percent of the mothers in UP and only 10 percent in Bihar had a proper understanding about complementary feeding; that at after six months of age, the child should be given liquid food/semi liquid or mashed food along with mother's milk (Table not presented). However, around 28 percent in UP and 36 percent in Bihar knew that the child should be given liquid food/semi liquid or mashed food along with mother's milk though they could not tell the age of the child when the complementary food should be started.

PatliKhichdi (60% in UP and 67% in Bihar) and *Dal kapani* (55% in UP and 69% in Bihar) were the two major food items mentioned by the mothers who were aware of the complementary foods to be given. Over 63 percent mothers in UP mentioned *daliya* while 43 percent mothers in Bihar mentioned rice as complementary food. Of the mothers who were aware of complementary foods, 59 percent in UP and 30 percent in Bihar stated that complementary food should be given to the child after the age of 6 months. Seventy percent of the mothers in Bihar and 40 percent in UP carried the wrong perception that complementary foods should be

given at the age of 4-6 months. Around 70 percent of the mothers in UP and more than 80 percent in Bihar felt that complementary foods should be given along with breast feeding. (Table not presented)

Type of salt being used by the household (Only for UP):

Around 62 percent of the mothers reported using iodized salt. In UP, the tests done during field work reported that only 32 percent of the households were using iodized salt while 37 percent of the households were using salt of less than 15 PPM; 29 percent households were using loose salt.

Conclusion

Almost all the mothers in both UP and Bihar were aware of the benefits of breast feeding but it appears that they have not realized the importance of exclusively breastfeeding the child. Though a major proportion of mothers were aware of the fact that colostrums were essential for the new born, quite a considerable proportion were under the impression that colostrums were dirty and harmful to the child. The role played by relatives, religion and tradition may be responsible for the relatively poor practice of colostrums feeding in UP when compared with Bihar. Nevertheless, colostrum feeding has improved since the first round of the Study.

Diarrhea is often associated with increasing risk of polio. Hence it was considered essential to assess the knowledge, attitude and practice of the respondents regarding diarrhea management.

7 KNOWLEDGE, ATTITUDE AND PRACTICESON DIARRHEA MANAGEMENT

7.1 Knowledge about Causes and Prevention of Diarrhea

Over one-thirds of the respondents, mostly fathers, both in UP and in Bihar could tell the meaning of diarrhea as "watery stools/motions more than 3 times a day". A majority (more than 70%) were also aware of the causes of diarrhea. Various causes of diarrhea enumerated by the respondents included contaminated water, contaminated food and unhygienic conditions. (Table not presented).

With regard to their perception about prevention, around 71 percent of the course of action to be taken when the child is suffering from diarrhea, majority of them said that they would take the child to the doctor (81% in UP and 53% in Bihar). Around 33 percent in UP and 59 percent in Bihar said that they would give ORS solution to the child; and the proportion of mothers who thought spontaneously of ORS as a good remedy for diarrhea was higher in both UP (37%) and Bihar (62%). Considerable proportion of the respondents (25% in UP and 55% in Bihar) answered that they would give sugar and salt solution (Table 7.1).

respondents in UP and most (92%) in Bihar felt that diarrhea could be prevented (Table 7.1). Among these, around 55 and 79 percent in UP and Bihar respectively were aware of at least two ways to prevent diarrhea; the reported ways of prevention being improved sanitation facilities (59% in UP and 72 % in Bihar) and "Consumption of safe water" (33% in UP and 55% in Bihar). As regards the

Table 7.1: Awareness about Diarrhea prevention and treatment - (2011)

	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Do you think Diarrhea can be prevented?						
Yes	59.5	82.2	70.9	92.1	91.1	91.6
No	3.2	3.4	3.3	2.7	3.4	3.1
Don't Know	37.3	14.4	25.8	5.2	5.4	5.3
Base : Number of completed Interviews	2481	2487	4968	2462	2438	4900
Indicator: % mothers/fathers who think diarrhea can be prevented	**59.5**	**82.2**	**70.9**	**92.1**	**91.1**	**91.6**
Can you tell us the ways of preventing Diarrhea?*						
Consuming safe drinking water	33.3	33.1	33.2	54.1	55.0	54.6
Improved sanitation facilities	54.6	61.4	58.5	67.9	76.8	72.3
Good personal hygiene	19.1	35.6	28.7	18.1	18.8	18.4
Maintaining hygiene while cooking food	20.0	24.0	22.3	29.6	18.6	24.1
Washing hands before eating	16.5	7.0	10.9	28.8	21.5	25.2
Washing hands after defecation	15.8	2.8	8.2	17.4	16.0	16.7

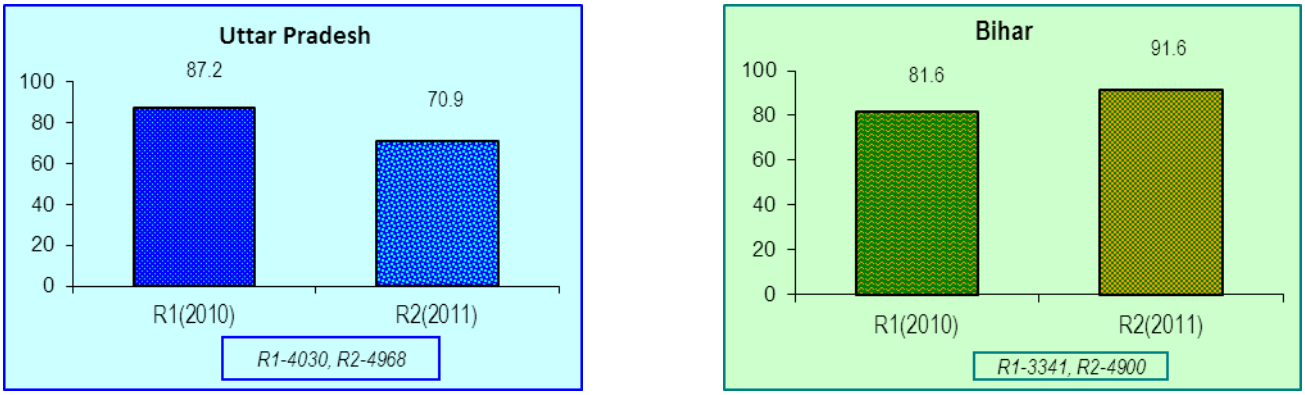
Table 7.1: Awareness about Diarrhea prevention and treatment - (2011)						
	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Others	11.2	2.4	6.1	6.8	3.4	5.1
Indicator: % mothers/ fathers who know at least two ways to prevent diarrhea#	51.3	57.8	55.0	79.4	77.6	78.5
Base: Those Who are aware about the ways diarrhea prevention	1476	2045	3520	2267	2222	4489
Do you know what to do if a child gets Diarrhea *						
Give ORS Solution	36.9	28.5	32.7	62.1	55.4	58.8
Salt and Sugar Solution	24.8	24.8	24.8	48.0	62.3	55.1
Give more fluids	4.3	3.8	4.0	4.0	2.8	3.4
Continue breast feeding	3.0	1.7	2.4	4.0	0.5	2.3
Take the child to the doctor	84.2	77.0	80.6	61.6	43.5	52.6
Home remedy	6.6	5.7	6.1	19.7	15.9	17.8
Others/ Don't know	2.4	4.3	3.3	3.0	1.6	2.3
Base : Number of completed Interviews	2481	2487	4968	2462	2438	4900

***Responses may exceed 100 percent due to multiple responses.**

$Indicator value is derived from any two responses out of "Consuming safe drinking water", "Improved sanitation facilities", "Good personal hygiene", "Maintaining hygiene while cooking food" , "Washing hands before eating", "Washing hands after defecation"

Figure 7.1 reveals that the proportion of respondents having knowledge regarding prevention of diarrhea has come down in UP during the 2nd round (2011) whereas it has increased substantially in Bihar (82% to 92%), when compared with the round 1 (2010) findings.

Figure 7.1 Percent of Respondents who think Diarrhea can be prevented R1 (2010) Vs R2 (2011)



7.2 Knowledge, Attitude and Practice about ORS

A majority of respondents in both UP (87%) and Bihar **(**91%) stated that they had heard about ORS. Most of the respondents in both the states knew how to prepare ORS and felt that it could be acquired easily. Similarly, a majority in UP (82%) and Bihar (65%) said that they would get it from chemists where as 30 percent in UP and 52 percent in Bihar said that they would get it from private clinic/ hospitals (Table 7.2).

Table 7.2: Awareness about ORS, its preparation and source of availability - (2011)

	Uttar Pradesh			Bihar		
	Mothers	**Fathers**	**Total**	**Mothers**	**Fathers**	**Total**
Have you heard of ORS?						
Yes	86.8	86.7	86.7	92.4	89.4	90.9
No	13.2	13.3	13.3	7.6	10.6	9.1
Base : All Respondents	2481	2487	4968	2462	2438	4900
Please tell us how you prepare ORS?						
ORS packet +water	96.1	92.7	94.4	96.7	95.8	96.3
Salt-Sugar Solution	2.8	6.6	4.8	2.8	3.3	3.0
Others (Electrol)		0.1	0.1	-	-	-
Don't know	1.0	0.7	0.8	0.4	0.9	0.7
Indicator: % of mothers/fathers who know how to prepare ORS(ORS packet+water)+Others	**96.1**	**92.8**	**94.5**	**96.7**	**95.8**	**96.3**
Base: Respondents Aware of ORS	2153	2155	4308	2275	2180	4455
Can you easily get ORS?						
Yes	98.6	98.9	98.8	97.8	90.0	93.9
No	0.7	0.6	0.7	1.6	9.3	5.4
Don't Know	0.6	0.5	0.6	0.6	0.7	0.7
Indicator: % of mothers/fathers who have access to ORS (Yes %)	**98.6**	**98.9**	**98.8**	**97.8**	**90.0**	**93.9**
Base: Respondents Aware of ORS	2153	2155	4308	2275	2180	4455
Do you know where to get ORS sachet from? (Major responses)						
Angan Wadi Worker	2.4	2.0	2.2	26.3	25.6	25.9
ASHA	1.0	1.1	1.0	12.3	8.9	10.6
PHC	7.0	5.8	6.4	11.4	11.0	11.2
Private clinic/Hospital	32.6	26.8	29.7	64.6	38.3	51.8
Chemist	74.2	90.5	82.4	51.3	79.1	64.9
Base: Respondents Aware of ORS	**2153**	**2155**	**4308**	**2275**	**2180**	**4455**

***Responses may exceed 100 percent due to multiple responses.**

A comparative analysis of the findings of KAP 2010 and KAP 2011 revealed that the awareness level of the respondents regarding ORS was more or less the same. There was a marked increase (93 to 99% in UP ad 87 to 94% in Bihar) in the proportion of respondents reporting easy access to ORS in both the States from KAP 2010to KAP 2011.

7.3 Knowledge, Attitude and Practices about Zinc

A negligible proportion of respondents (2% in UP and 5% in Bihar) reported that they had heard about Zinc. Among those who had heard of zinc, a majority mentioned that zinc was given as a part of treatment for diarrhea (64% in UP and 72% in Bihar). Similarly, majority of them said that they can get zinc easily (74% in UP and 83% in Bihar); a major source of zinc being chemists- in UP (67%) as well as in Bihar (53%). In Bihar, a considerable proportion also mentioned private clinic/hospital (37%), AWW (24%) and PHC (24%). (Table 7.3)

Table 7. 3: Awareness about Zinc and source of availability - (2011)

	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Have you heard of Zinc?						
% heard about Zinc	1.5	1.5	1.5	3.4	7.2	5.3
Base : No. of completed interview	**2481**	**2487**	**4968**	**2462**	**2438**	**4900**
Give Zinc to index child as a treatment of diarrhea						
% give zinc to index child as a treatment of dirrhea	75.4	53.1	64.1	65.9	75.2	72.2
Base: Respondents Aware of Zinc	**36**	**37**	**74**	**84**	**176**	**260**
Can you easily get Zinc						
% easily get zinc	88.0	60.8	74.3	75.9	85.8	82.6
Base: Respondents Aware of Zinc	**36**	**37**	**74**	**84**	**176**	**260**
Do you know where to get Zinc from?						
ANM/Sub Center	5.6	15.0	10.4	1.1	11.4	8.0
Angan Wadi Worker	5.5	1.5	3.5	25.5	23.5	24.1
ASHA	-	-	-	10.6	16.2	14.4
PHC	9.6	5.7	7.7	17.2	26.8	23.7
CHC	13.5	9.5	11.5	3.9	7.9	6.6
District Hospital	20.0	4.5	12.2	4.8	1.3	2.5
Private clinic/Hospital	12.3	16.3	14.3	65.6	23.2	37.0
Chemist	62.5	71.1	66.8	19.1	69.5	53.2
NGO/ Trust hospital/clinic	-	0.1	0.1	2.2	4.8	3.9
Others	-	7.8	3.9	0.8	-	0.3
Base: Respondents Aware of Zinc	**36**	**37**	**74**	**84**	**176**	**260**

***Responses may exceed 100 percent due to multiple responses.**

A comparison of the data in 2010 and 2011 showed that awareness about Zinc has been more or less the same across the two states.

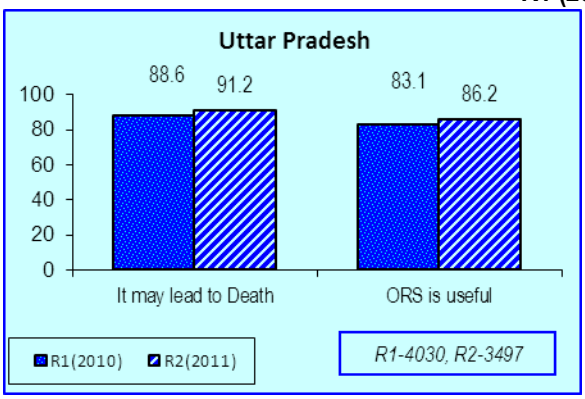
7.4 Attitude and Belief towards Diarrhea

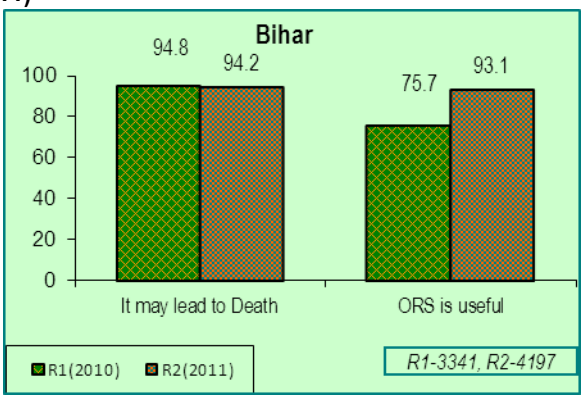
Most of the respondents in UP (91%) as well as Bihar (94%), especially fathers, knew the severity of diarrhea and agreed that children could die because of diarrhea; and that ORS was useful in the treatment of diarrhea (Table not presented). The attitude of the respondents towards diarrhea remained more or less the same in UP, whereas a higher proportion of respondents in KAP 2011 in Bihar realized

the importance of giving ORS during diarrhea, as compared to KAP 2010.

Figure 7.2 Attitude towards Diarrhea

R1 (2010) Vs R2 (2011)





7.5 Practices regarding Diarrhea Management

Around two-fifths of the respondents in UP and more than half in Bihar believed that their children were at high risk of getting diarrhea frequently (Table 7.4). As regards the actual incidence in last 2 weeks, around 15 percent of the respondents in UP and 9 percent in Bihar mentioned that their index children suffered from diarrhea in the last 2 weeks.

An assessment of the treatment seeking behavior revealed that the respondents whose index children had suffered from diarrhea in the last 2 weeks revealed that a majority in UP (88%) as well as Bihar (93%) had sought medical advice for the treatment. Of those who sought medical advice, 56 percent in UP and 78 percent in Bihar gave ORS to the child during diarrhea.

Table 7.4: Practice on Diarrhea Management among fathers and mothers - (2011)

	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Do you believe that your Index child has a risk of getting Diarrhea frequently?						
Yes	33.6	45.3	39.6	60.6	47.1	54.2
No	30.9	50.4	40.9	38.3	43.1	40.6
Don't Know	35.5	4.4	19.5	1.1	9.7	5.2
Base: Respondents who know what causes diarrhea	1700	1797	3497	2207	1990	4197
Has Index child had Diarrhea (watery stools more than 3 times per day) in the last two weeks?						
Yes	13.2	15.7	14.5	12.8	4.8	9.0
No	86.8	84.3	85.5	87.2	95.2	91.0
Base: Respondents who know what causes diarrhea	1700	1797	3497	2207	1990	4197
During the last episode of Diarrhea to the [Index child], did you seek advice for treatment?						
Yes	93.4	83.3	87.8	93.2	93.3	93.2
No	6.6	16.7	12.2	6.8	6.7	6.8
Base: Number of respondents reported Diarrhea during last 2 weeks	224	282	506	283	95	378

Table 7.4: Practice on Diarrhea Management among fathers and mothers - (2011)						
	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
During the last episode (mentioned above) of Diarrhea what did you do or give to the [Index child?						
ORS	53.1	59.4	56.4	80.1	71.4	77.9
Zinc	-	0.3	0.2	3.7	17.0	7.1
Plain Water	2.1	1.9	2.0	5.9	3.0	5.2
Salt and Sugar Solution	25.7	14.2	19.6	44.9	47.0	45.4
Fruit juice	1.1	1.9	1.5	0.2	9.0	2.4
Lime water	3.7	9.2	6.6	9.1	23.1	12.6
Gruel made from rice or other local grain	5.0	2.9	3.9	4.0	-	3.0
Home remedy	7.9	10.0	9.0	26.5	15.8	23.8
Child on breast milk	7.8	.7	4.1	9.1	0.9	7.1
Decrease liquids	0.3	1.6	1.0	2.5	-	1.9
Withhold foods	4.4	1.4	2.8	2.3	1.2	2.0
Given only solids	1.1	-	0.5	0.9	-	0.7
Others	37.9	29.8	33.6	25.5	20.2	24.1
Base: Number of respondents reported taking advice for Diarrhea treatment	209	235	444	264	89	353

Family, friends/neighbors and private practitioners were the major sources of information on Diarrhea in both the states, as reported by more than 60 percent of the respondents. CMCs were also reported to be a source by more than 50 percent of the respondents in UP. In case of Bihar, health workers like AWW (70%), ASHA (59%) and ANM (46%) and posters (45%) and banners (39%) were considered to be the sources of information on diarrhea.

Conclusion:

The awareness about causes of diarrhea was higher among the respondents of Bihar than UP and a majority of them in both the states believed that diarrhea could be prevented by maintaining cleanliness and taking some precautions regarding hygiene. Almost all the respondents believed that diarrhea could be fatal, indicating the understanding of the severity of the disease. Majority of them preferred taking their children to the doctor for treatment; however, around half of them also used ORS. Knowledge about zinc was extremely low. Family members and friends were the major sources of information about diarrhea. A considerable proportion was also benefited through electronic media. CMCs in UP and health functionaries such as AWW, ASHA and ANM in Bihar were reported as sources of information on diarrhea by a considerable proportion.

8 WATER, SANITATION AND HYGIENE

UNICEF's Polio communication strategy focuses on convergence of different programs including water, sanitation and hygiene practices. Therefore, the knowledge, attitude and practice on water, sanitation and hygiene were captured in the present study.

8.1 Availability of Water and Sanitation facilities at Household level

All the respondents were asked about the source of cooking and drinking water at the household level. In addition to this, they were asked about the availability and usage of toilets at the household. The major sources of water for drinking and cooking in both the states was personal hand pumps (UP 68%, Bihar 60%) followed by Public tap/standpipe/Handpump (UP 18%, Bihar 34%) (Table not presented).

As regards availability of sanitation facilities at the household level, more than two-fifths of the respondents in UP (62%) had flush toilets, especially the ones connected to septic tank, whereas only 19 percent reported such facilities in Bihar. The proportion of respondents reporting no facility was 29 percent in UP and as high as 80 percent in Bihar. (Table 8.1)

Table 8.1: Availability and Usage of Toilet facility at Households - (2011)

	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
What kind of toilet facility does your household have?						
Flush or pour flush to						
Flush to septic tank	47.0	46.1	46.6	15.7	13.9	14.8
Flush to pit latrine	10.4	13.5	12.0	3.3	2.8	3.1
Flush, to piped sewer system/somewhere else	5.6	1.1	3.3	0.9	0.4	0.7
Pit latrine						
Pit (Vip)Biogas latrine/with slab/open pit/twin	1.7	4.1	3	1.2	0.8	0.9
Dry toilet	8	4.8	6.4	-	0.7	0.3
No facilities (Bush or field)	27.3	30.1	28.7	78.9	81.4	80.2
Base : Number of completed Interviews	**2481**	**2487**	**4968**	**2462**	**2438**	**4900**

8.2 Knowledge and Attitude and Practice about Safe Water

A majority of the respondents in UP (85%) as well as in Bihar (90%) were confident that the water they use is safe for drinking. The reasons attributed by a good proportion included that it is ground water (UP: 46%; Bihar: 59%); they filter the water with cloth (UP: 46%; Bihar: 49%); they directly take it from hand pump and drink after boiling (>20% each in both states). (Table not presented)

8.3 Knowledge, Attitude and Practice regarding personal hygiene at household level

8.3.1: Knowledge and awareness about hand washing

Most of the respondents in UP (99%) as well as Bihar (98%) mentioned that it is necessary to wash hands with soap and water as it kills germs and disease-causing microbes and helps in cleaning dirt off the hands (nearly three-fifths and more than 50% in both the states, respectively). A majority of the respondents in UP as well as Bihar perceived that improper washing of hands may lead to diarrhea and 'loose motions'. Interestingly, a small percentage in UP (7%) and around one-fourths in Bihar also perceived that improper washing of hands causes polio (Table 8.2).

Table 8.2: Source of Water at Household and hand washing practices, (2011)

	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Is it necessary to wash hands with soap after certain activities?						
Yes	99.1	99.4	99.2	97.5	97.4	97.5
No	0.8	0.2	0.5	1.7	1.1	1.4
Don't Know	0.2	0.4	0.3	0.8	1.5	1.1
Base : Number of completed Interviews	2481	2487	4968	2462	2438	4900
Why do you think one should wash hands with soap? *						
It kills all germs and disease causing	52.6	62.3	57.4	56.7	67.7	62.2
It cleans the dirt from the skin	54.7	50.3	52.5	53.7	53.0	53.4
It removes odour	34.1	46.0	40.1	34.7	43.7	39.1
It removes irritation caused by dirt	15.3	17.7	16.5	28.7	12.1	20.4
It softens the skin	6.6	3.7	5.2	7.6	9.6	8.6
Base: Those who said it is important to wash hands with soap after certain activities	2458	2473	4930	2401	2375	4776
In your knowledge, what all diseases are caused due to improper washing of hands with soap? *						
Diarrhea	36.6	53.5	45.0	69.0	64.3	66.7
Loose motions	14.7	30.3	22.5	32.5	42.0	37.2
Typhoid	3.6	11.4	7.5	6.0	11.6	8.8
Hepatitis – A/E	0.4	1.6	1.0	2.0	2.3	2.1
Polio	9.6	3.8	6.7	32.2	14.4	23.4
Don't know/Can't say	53.0	35.7	44.3	18.5	25.2	21.8
Others	2.7	0.6	1.6	0.4	0.4	0.4
Base : Number of completed Interviews	2481	2487	4968	2462	2438	4900

*Responses may exceed 100 due to multiple responses.

When asked when they should wash their hands with soap and water, most of the respondents said that they should do so 'after defecation' (UP: 97%, Bihar: 92%), followed by 'cleaning their children's bottoms' (UP: 50%, Bihar: 43%) and also 'after clearing child's feces' (UP: 33%, Bihar: 38%). As high as 89 percent of fathers in UP and Bihar said that they should wash hands with soap before eating. The corresponding

percentage in case of the mothers was 46 percent in UP and 40 percent in Bihar (Table 8.3)

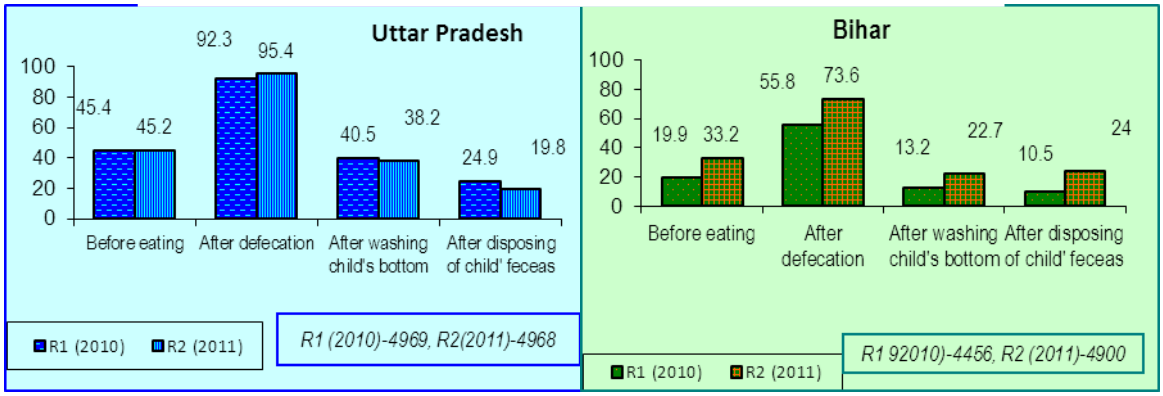
Table 8.3: Practice on hand washing among fathers and mothers - (2011)						
	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
When do you think one should wash hands with soap?						
Before cooking/preparing food	36.3	15.4	25.8	36.1	19.8	28.0
Before feeding children	18.2	3.3	10.8	17.8	18.1	17.9
Before Eating	46.0	89.0	67.5	39.8	89.0	64.3
After cleaning the utensils	47.9	6.7	27.3	68.6	18.3	43.6
After sweeping / mopping / dusting	51.6	29.4	40.5	38.3	29.4	33.9
After Defecation	98.8	95.5	97.2	88.5	96.2	92.3
After washing child's bottom	83.5	17.1	50.3	61.6	23.6	42.7
After disposing of child's feces	53.6	11.6	32.6	64.1	12.5	38.4
Others	1.0	0.7	0.8	1.2	0.9	1.1
Base : Number of completed Interviews	2481	2487	4968	2462	2438	4900

The practice of washing hands conformed with the awareness- with most of the respondents reporting washing their hands with soap and water 'after defecation' (UP: 95%, Bihar: 74%), 'after cleaning their children bottoms' (Mother UP: 71%, Bihar: 40%), and 'after disposing off the children's feces' (Mother UP: 38%, Bihar: 45%) (Table 8.4).

Table 8.4: Practice on hand washing among fathers and mothers - (2011)						
	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
When all do you wash hands with soap always?						
Before cooking/preparing food	15.8	0.3	8.0	13.9	3.2	8.6
Before feeding children	4.4	0.4	2.4	7.4	0.9	4.2
Before Eating	25.4	64.9	45.2	14.8	51.8	33.2
After cleaning the utensils	29.3	1.7	15.5	33.6	1.4	17.6
After sweeping / mopping / dusting	34.3	8.4	21.4	17.4	6.7	12.1
After Defecation	97.0	93.8	95.4	69.9	77.3	73.6
After washing child's bottom	71.2	5.2	38.2	40.1	5.1	22.7
After disposing of child's feces	37.6	2.1	19.8	45.3	2.5	24.0
Others	0.8	0.9	0.9	11.3	20.0	15.6
Base : Number of completed Interviews	2481	2487	4968	2462	2438	4900

A comparison of the findings of KAP 2010 and 2011 revealed an increase in the proportion of respondents in both the States reporting the practice of washing hands with soap after defecation. The percentage of respondents who reportedly washed hands after cleaning the bottoms of the children and clearing their feces has declined in UP although it has increased in Bihar (Figure 8.1).

Figure 8.1 Practice of Hand washing - R1 (2010) Vs R2 (2011)



8.3.2: Practice of maintaining hygiene

Practice of disposing garbage: Around 62 percent of the respondents in UP mentioned that there was an organized way of dumping garbage in their community (community garbage dump, collection bins, compost pits etc.), whereas such practices were reported by only 17 percent in Bihar. Rest of the respondents resorted to dumping garbage in the backyard, in front of the house or in the fields. The excreta of children less than 3 years were reported as being dumped in front of the house, in the backyard or in the fields. Some respondents also mentioned dumping the same in community garbage bins. A majority of the respondents in UP (63%) and most (95%) in Bihar reported that no sweeper comes to clean their roads, drains and the nearby surroundings (Table not presented)

8.3.3: Practice of maintaining proper sanitation and hygiene (Observation)

Sanitation and hygiene conditions near the households were observed and noted. A considerable proportion of the households were observed to have garbage dumps (UP: 35%; Bihar: 48%) and water stagnation (UP: 32%; Bihar: 47%) outside the house. Of the households having a toilet facility, only 30 percent in UP and 68 percent in Bihar had water available for use in latrines. Around one-third of the households in UP and about 69 percent in Bihar had soap and water for hand washing. Evidence of feces was found in 10 percent of the households in UP and in 16 percent of households in Bihar. Food was kept covered in about 53 percent of households in UP and 89 percent households in Bihar, while only 31 percent in UP and 47 percent households in Bihar had drinking water storage covered (Table not presented)

8.4: Link between diarrhea and water, sanitation and hygiene

About 57 percent of mothers and 76 percent fathers in UP mentioned that that there is a linkage of diarrhea with water, sanitation and hygiene. A higher percentage of respondents in Bihar (88 % mothers and 74% fathers) carried the same perception (Table 8.4).

Table 8. 5: Awareness about link between diseases and water sanitation and hygiene - (2011)						
	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Do you think there is any link between diarrhea with water, sanitation (reduction of outside defecation) and						
Yes	57.2	76.3	66.7	88.0	73.7	80.9
No	2.9	5.2	4.1	3.6	10.1	6.8
Don't Know	39.9	18.5	29.2	8.4	16.1	12.2
Base : Number of completed Interviews	2481	2487	4968	2462	2438	4900

8.5: Link between Polio and Water, Sanitation and Hygiene

About 39 percent respondents in UP and 69 percent in Bihar agreed that there is a link between polio and sanitation and hygiene (Table 8.6).

Table 8.6: Awareness about link between polio and water sanitation and hygiene - (2011)						
	Uttar Pradesh			Bihar		
	Mothers	Fathers	Total	Mothers	Fathers	Total
Do you think there is any link between polio with water, sanitation (reduction of outside defecation) and						
Yes	36.0	42.8	39.4	78.8	58.5	68.7
No	3.2	12.9	8.1	7.6	15.5	11.6
Don't Know	60.8	44.3	52.5	13.6	26.0	19.7
Base : Number of completed Interviews	2481	2487	4968	2462	2438	4900

8.6: Current information channels about water, sanitation and hygiene

Family members and friends/neighbors appeared to be the major sources of information on water, sanitation and hygiene for a majority of the respondents in UP and Bihar, followed by electronic media and Private/Government doctor in both the states. CMC/BMCs were also considered to be an important source by around half of the respondents in UP. In case of Bihar, other health workers like AWW, ASHA and ANM and posters/banners were considered to be reliable sources of information on water, sanitation and hygiene (Table not presented)

CONCLUSION

Major sources of water for drinking and cooking at the household level was hand pump in UP as well as Bihar. Availability of flush toilets in the houses was low in both the states; but UP was better off in this aspect.

Majority of the respondents believed that the water they drink is safe because it is from hand pump, which draws water from under the ground and also has a filter in it. Most of the households do not purify the water before drinking it.

While almost all the respondents agreed that washing hands is important to avoid diseases, an anomaly was seen in the actual practice; especially so in Bihar. The practice of dumping garbage just outside the house or in the backyard was rampant in Bihar. So was the practice of dumping the excreta of the child. However, food and water were kept covered in a higher proportion of the households in Bihar in the second round.

While a majority of the respondents in both the States felt that there is a link between diarrhea, water and sanitation and personal hygiene, only some respondents in UP felt that there is any link between polio and water and sanitation. However, the awareness regarding the link between polio and water, sanitation and hygiene appeared to be high in Bihar.