



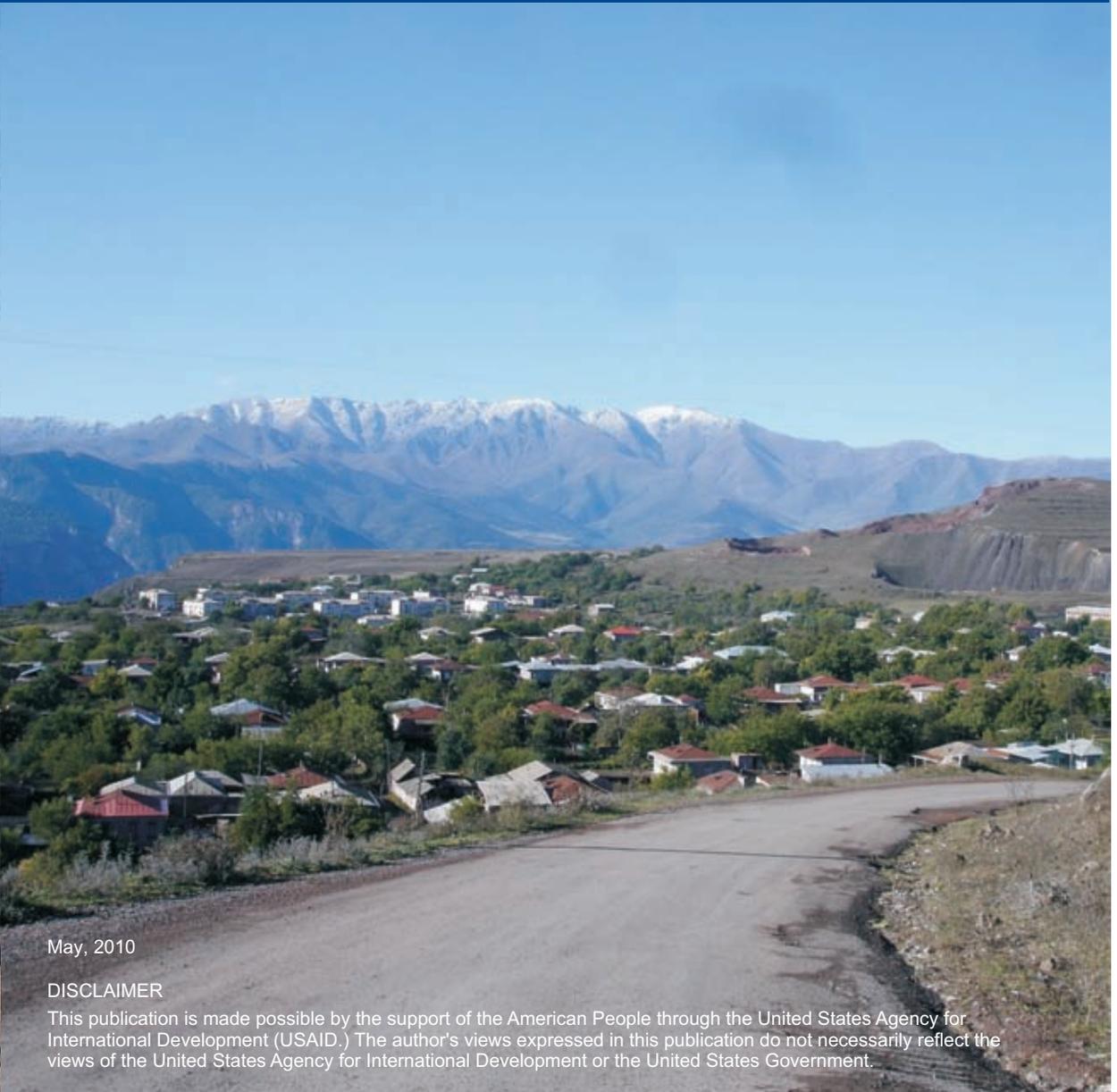
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Primary Healthcare Reform Project

# PATIENT SATISFACTION WITH HEALTH SERVICES

A FOLLOW-UP EVALUATION IN LORI AND SHIRAK MARZES  
2008



May, 2010

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## **Preface**

The Primary Healthcare Reform (PHCR) project is a nationwide five-year (2005-2010) program funded by the United States Agency for International Development (USAID) under a contract awarded to [Emerging Markets Group, Ltd.](#) in September 2005. The project's primary objective is the increased utilization of sustainable, high-quality primary healthcare services leading to the improved health of Armenian families. This objective is operationalized by supporting the Ministry of Health (MoH) to implement a package of six interventions that links policy reform with service delivery so that each informs the other generating synergistic effects. These six interventions address healthcare reforms and policy support (including renovation and equipping of facilities); open enrollment; family medicine; quality of care; healthcare finance; and public education, health promotion and disease prevention.

“What impact are these interventions having?” is a question frequently asked but less frequently funded. Fortunately, provision was made in the PHCR project to address the “impact” question. PHCR developed a set of six tools to monitor progress and evaluate results. Three of these tools are facility-based and are designed to assess changes through a pre-test and post-test methodology at 164 primary healthcare facilities and their referral facilities. Three other tools are population-based and are designed to assess changes for the whole of Armenia's population, using the same pre-test and post-test methodology.

The purpose of this follow-up study is to assess client satisfaction in facilities targeted by the PHCR project in Lori and Shirak marzes (Zone 1) in 2008 and compare these findings with those of the baseline survey conducted in 2006.

The Center for Health Services Research and Development of the American University of Armenia, one of the sub-contractors to EMG, has primary responsibility for PHCR monitoring and evaluation. Dr. Yelena Amirkhanyan, Dr. Anahit Demirchyan, Ms. Tsovinar Harutyunyan, Dr. Varduhi Petrosyan, and Dr. Michael Thompson are the primary authors of this study. Dr. Hripsime Martirosyan and Ms. Nune Truzyan are acknowledged for their valuable contribution in all stages of the study. We would also like to thank our interviewers (primary healthcare physicians in the target marzes) for their data collection efforts, as well as the patients who participated in the interviews. We are also grateful for the excellent support received from the Ministry of Health and marz officials and the opportunity to collaborate in strengthening health services in Armenia

We trust that the findings of this study will be of value in improving health outcomes through more informed decision-making. The report can be found on the PHCR website at [www.phcr.am](http://www.phcr.am). Comments or questions on this study are welcome and should be sent to [info@phcr.am](mailto:info@phcr.am).

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## **Acronyms**

FAP	Rural Health Post (from Russian abbreviation)
HC	Health Center
M&E	Monitoring and Evaluation
PHC	Primary Health Care
PHCR	Primary Health Care Reform
PMP	Performance Management Plan
SD	Standard Deviation
USAID	United States Agency for International Development

## **Executive Summary**

The purpose of this follow-up study is to assess client satisfaction in facilities targeted by the PHCR project in Lori and Shirak marzes (Zone 1) in 2008 and compare these findings with those of the baseline survey conducted in 2006. The survey tracked changes in patients' satisfaction with health care services (a key project performance management plan (PMP) indicator). Besides assessing the general level of client satisfaction with care, this study also investigated client perspectives on specific aspects of health care provision, including patient-provider interactions, availability and confidentiality of care, and facility conditions, thus lending insight into the areas where the project put more efforts to bring in higher quality of care. Similar to the baseline assessment, the follow-up survey utilized stratified random sampling design. Self-administered interviews were conducted with 669 clients of selected primary health care facilities in Lori (333) and Shirak (336) marzes in July 2008.

The data show that patients from target sites were more satisfied with the care received (both provider and non-provider aspects of that care) than patients from comparison sites. Approximately 85% of respondents from the target group were satisfied with care received, rating it as excellent or good at follow-up, compared to 77% at baseline. At follow-up, target group respondents were significantly more satisfied with providers (93.9% vs. 87.1%,  $p < .05$ ). Statistically significant difference was also found between baseline and follow-up assessment of satisfaction with non-provider aspects of care (other than provider qualities) among target group respondents (75.5% vs. 62.2%). Significant positive association was observed between target group respondents' educational level and perceived standard of living and their assessment of care at follow-up. No association was observed between satisfaction with care and average monthly household income. Lori respondents were generally more satisfied with care than those from Shirak. Access issues remain important for respondents. Increasing free drug supplies, increasing salaries of providers, and buying necessary equipment were the most frequent suggestions made by respondents for improving care in PHC facilities both at baseline and follow-up.

Analysis and comparison of the baseline and follow-up data demonstrate that the project is working as intended. Despite higher satisfaction with care and provider in the target group compared to the comparison group respondents, still about 20% of respondents in target group mentioned that they did not receive complete explanations from their physicians, suggesting need for further improvement of physicians' counseling skills.

Access to free or discounted medicines is one of the most commonly mentioned concerns by patients. About one-third of target group and comparison respondents could not get all medicines prescribed during the last visits, as well as more than half of respondents did not report receiving free of charge or discounted medicines at the time of the last visit. Addressing this concern would decrease financial burden for patients and lead to better treatment outcomes and higher satisfaction in future.

Though slight differences in satisfaction exist across marzes, target group respondents are more satisfied with care in both marzes than the comparison group respondents. For future actions it is important to consider clients' suggestions for improving care listed by patients during baseline and follow-up assessments. Among most often mentioned suggestions were improving free drug supply and provision of PHC facilities with equipment. Exploring reasons for difference in patient satisfaction between marzes would facilitate building more specific and targeted patient satisfaction projects in future.

## 1. Introduction

The Primary Healthcare Reform (PHCR) project is a nationwide five-year (2005-2010) program funded by the United States Agency for International Development (USAID) under a contract awarded to [Emerging Markets Group, Ltd.](#) in September 2005. The project's primary objective is the increased utilization of sustainable, high-quality primary healthcare services leading to the improved health of Armenian families. This objective is operationalized by supporting the Ministry of Health (MoH) to implement a package of six interventions that links policy reform with service delivery so that each informs the other generating synergistic effects. These six interventions address healthcare reforms and policy support (including renovation and equipping of facilities); open enrollment; family medicine; quality of care; healthcare finance; and public education, health promotion and disease prevention.

The six main components of PHCR project are run in partnership with IntraHealth International Inc., American University of Armenia, and Overseas Strategic Consulting, Ltd. and include the following activities:

- **Expansion of Reforms:** assisting the Government in establishing a supportive regulatory environment for the advancement of reforms; renovating and equipping PHC facilities nationwide; designing and delivering training to facility management
- **Family Medicine:** developing up-to-date curricula and training materials for continuous medical education; supporting independent family medicine group practices; providing training to family physicians and nurses
- **Open Enrollment:** introducing the open enrollment model, where every resident registers with a PHC physician, in the Armenian healthcare sector to promote customer-oriented services by fostering competition among providers
- **Quality of Care:** improving the quality of care by introducing state-of-the-art quality standards and quality assurance procedures; introducing provider licensing and accreditation regulations
- **Healthcare Finance:** increasing the transparency and efficiency of the distribution of healthcare funds through improved service costing and performance-based contracting practices; enhancing accountability at the facility level; facilitating the use of National Health Accounts
- **Public Education:** enhancing awareness about PHC services offered; improving understanding of open enrollment and acceptance of family medicine providers; promoting healthy lifestyle and health-seeking behavior.

Like many of the former Soviet Republics, Armenia's entire health care system deteriorated following independence in 1991. Access to health care, its affordability, and its quality have declined, negatively impacting the health status of the population (1).

Although these negative changes in the health care system were universal and well-known throughout the country, several recent assessments of patient perspectives on the quality of primary health care services failed to provide sufficient and compelling information that reflected the true state of services (2, 3). Despite the lack of necessary equipment and supplies, the inadequate communication between health care providers and clients, and the extremely poor physical conditions of facilities, the levels of patient<sup>1</sup> satisfaction with care

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<sup>1</sup> The terms "patient" and "client" are used interchangeably in this report

remain high, even in most underprivileged populations living in remote rural areas. While patient satisfaction has long been considered an important component when measuring health outcomes and quality of care (4), the role of patient expectations, demographic characteristics, and other factors specific to the country/setting where the satisfaction studies are conducted should not be underestimated. Taking this into consideration, the current study used several measurements which would explore the opinions of patients about non-provider aspects of care in target facilities upon completion of project activities and compared them to the baseline values. Additional analyses investigated the link between satisfaction and demographic characteristics.

## **2. Methods**

### **Sampling**

Client satisfaction is a key indicator included in Primary Health Care Reform (PHCR) project's Performance Management Plan. This study design facilitated annual measuring and reporting of the indicator by providing a sample representative of the areas targeted by the project. The study design also facilitated the differentiation of project-specific changes from those that could possibly have arisen due to historical or other factors unrelated to the project. Taking into account these factors and the issues of feasibility, the Monitoring and Evaluation (M&E) team used a quasi-experimental pre-post non-equivalent comparison design using a cluster sampling method (5).

For baseline and follow-up surveys the sample size was calculated using STATA software using the formula for two sample comparison of proportions, so as to detect a 10% pre-post difference in satisfaction level within the target group, with alpha error<sup>2</sup> of 0.05, and power<sup>3</sup> of 0.75. The resulting sample size was 196 per marz. The sample size for the comparison group was limited by feasibility and budgetary constraints, but was sufficient to detect practically significant differences between target and comparison groups at baseline and at follow-up. The same formula for two sample comparison of proportions was used, but with power set to 0.65 and the size of the target group as reported above. The calculated sample size for the comparison group was 140 per marz. The sample was collected in clusters of 14 respondents, selected from the list of the most recent clients of the selected facility. The cluster size of 14 ensures a satisfactory level of diversity within the sample while maximizing efficiency of the data collection process. Given that cluster membership was based on a series of sequential visitors to the clinic, design effect was considered to be negligible in calculating the sample size.

Of the 30 health facilities targeted by the PHCR project in Lori marz (consisting of three polyclinics, four health centers, five ambulatories, and 18 village health posts), 14 were selected through stratified random sampling to ensure that all the types of targeted facilities were represented in the sample proportionate to their distribution in the pool of targeted facilities. Two polyclinics, four ambulatories, and eight village health posts constituted the sample for Lori (one cluster of 14 people per facility, 14 clusters in total). Ten comparison

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<sup>2</sup> *Alpha error*- the statistical error made in testing a hypothesis when it is concluded that a result is positive when it really is not.

<sup>3</sup> *Power* - number or percentage that indicates the probability a study will detect a statistically significant effect when there is a true effect. For example, a power of 75 percent (or 0.75) means that a survey or study (when conducted repeatedly over time) is likely to produce a statistically significant result 75 times out of 100.

facilities (one polyclinic, three ambulatories, and six village health posts) constituted the comparison group in Lori marz. The same selection technique was applied to draw the 14 clusters from the 31 targeted facilities that comprise the Shirak sample for the baseline survey. By the time of follow-up survey two target facilities initially included in the baseline assessment in Shirak marz were excluded from the list of project target sites and were considered as comparison facilities. Thus, 12 clusters (two health centers, two ambulatories, and eight village health posts) were selected as target sites in Shirak marz. Similarly, 12 clusters (two polyclinics, one ambulatory, one health center, and eight village health posts) were drawn from the non-intervention facilities from Shirak marz to constitute the comparison group (Table 1).

Three interviewers completed 24 clusters (14 for target facilities and ten for comparisons in Lori marz and twelve target and comparison facilities in Shirak marz). For each cluster, the names and addresses of the 25 most recent clients of the selected facility were taken from the facility's journal of visits. The interviewers visited the selected addresses and provided a self-administered questionnaires to an eligible respondent until 14 questionnaires were distributed. The completed questionnaires were collected in envelopes (distributed along with the questionnaires) sealed by the respondents to ensure the confidentiality of the data.

**Table 1. PHC facilities (target and comparison groups), Zone 1 follow-up**

Marz	Facility	
	Target site	Comparison site
<b>Lori</b>	<ol style="list-style-type: none"> <li>1. Haghpat FAP</li> <li>2. Dsegh MC (ambulatory)</li> <li>3. Shamut FAP</li> <li>4. Shnogh ambulatory</li> <li>5. Teghut FAP</li> <li>6. Tashir polyclinic</li> <li>7. Lernahovit FAP</li> <li>8. Lernapat ambulatory</li> <li>9. Lermontov FAP</li> <li>10. Spitak polyclinic</li> <li>11. Lernantsk FAP</li> <li>12. Lusaghbyur FAP</li> <li>13. Sarahart FAP</li> <li>14. Jrashen ambulatory</li> </ol>	<ol style="list-style-type: none"> <li>1. Karinj FAP</li> <li>2. Bovadzor FAP</li> <li>3. Gyulagarak FAP</li> <li>4. Kurtan ambulatory</li> <li>5. Pambak FAP</li> <li>6. Arjut FAP</li> <li>7. Vanadzor #1 polyclinic</li> <li>8. Shahumyan ambulatory</li> <li>9. Bazum FAP</li> <li>10. Shenavan ambulatory</li> </ol>
<b>Shirak</b>	<ol style="list-style-type: none"> <li>15. Kamo FAP</li> <li>16. Hovit FAP*</li> <li>17. Karnut FAP*</li> <li>18. Maisyan ambulatory</li> <li>19. Hovuni FAP*</li> <li>20. Akhurik ambulatory</li> <li>21. Arapi FAP*</li> <li>22. Voskehask FAP*</li> <li>23. Panik HC</li> <li>24. Isahakyan FAP</li> <li>25. Shirakavan FAP</li> <li>26. Amasia HC</li> </ol>	<ol style="list-style-type: none"> <li>11. Polyclinic #2**</li> <li>12. "Enrique Matie" polyclinic</li> <li>13. Shirak FAP**</li> <li>14. Azatani ambulatory</li> <li>15. Mets Sarian FAP</li> <li>16. Gharibjanyan FAP</li> <li>17. Hayrenyats FAP</li> <li>18. Sarnaghbyur HC</li> <li>19. Gusanagyugh FAP</li> <li>20. Hoghmik FAP</li> <li>21. Torosgyugh FAP</li> <li>22. Goghovit FAP</li> </ol>

\*CHC established

\*\*Excluded as a target site after the baseline survey

## **Instrument**

The survey instrument (Appendix 1) used for the baseline assessment, with some modifications, was used for the follow-up survey. It included the following domains:

1. Respondent's perception of the quality of care provided by a doctor or a nurse during his/her last visit to the primary health care facility (mainly focused on provider's communication skills and patient-provider interaction)
2. Accessibility of care
3. Confidentiality of care
4. Respondent's ability to get prescribed medicines
5. Facility conditions
6. Willingness to visit the same provider/recommend provider to friends/relatives
7. Overall assessment of the care received
8. Respondents' suggestions to improve services at the clinic
9. Brief demographic characteristics

The instrument contained questions to collect socio-demographic information, including average monthly household income and perceived standard of living. In addition to distributing the self-administered questionnaires, the interviewers completed journal forms (Appendix 2) where they recorded information regarding the interview and selection processes to document compliance with the sampling protocol and response patterns.

## **Training/pre-testing/data collection & entry**

Interviewer training and pre-testing lasted one day in each marz. The PHCR M&E Team developed and delivered to interviewers a training guide containing important information regarding the research objectives, methods, sampling/interview administration, and timeline. Three interviewers in Lori marz and three interviewers in Shirak marz participated in this assessment. The interviewers received all the items necessary to conduct the fieldwork, including facility code lists, journal forms, maps, instruments in Armenian and Russian, envelopes, folders, and pencils. Data collection took place in July 2008. The staff of the Center for Health Services Research and Development of the American University of Armenia, trained by the Project's M&E Team, entered the collected data into SPSS 11 statistical package. Double entry and subsequent cleaning ensured the precision of the entered information.

## **3. Results**

### **Administrative/General**

A total of 669 respondents participated in the patient satisfaction follow-up survey. Overall, it took 889 attempts to complete 669 interviews (75.3% response rate). The primary reason for non-response was absence of all household members (8.4%) or absence of the eligible respondent (4.6%), or absence of respondents meeting study requirements at the moment of interview (4.4%). Of 669 respondents, 362 were from target facilities (194 from Lori and 168 from Shirak) and 307 from comparison facilities (139 from Lori and 168 from Shirak). Tables 2 and 3 summarize socio-demographic characteristics of participants.

**Table 2. Socio-demographic characteristics of participants by marz**

	Lori		Shirak	
	2006 (n=336)	2008 (n=333)	2006 (n=348)	2008 (n=336)
<b>Mean age (years) mean (n)*,**</b>	46.6 (316)	42.3 (321)	39.4 (326)	43.2 (315)
<b>Level of education % (n)*</b>			**	**
1. School (< 10 years)	17.4 (55)	11.0 (36)	5.5 (18)	11.3 (37)
2. School (10 years)	42.9 (136)	44.6 (146)	38.5 (126)	41.4 (135)
3. Professional/technical (10-13 years)	22.1 (70)	26.3 (86)	32.4 (106)	27.9 (91)
4. Institute / University or Postgraduate	17.7 (56)	18.0 (59)	23.5 (77)	19.3 (63)
<b>Gender % (n)</b>				
Male	15.9 (51)	18.8 (62)	15.3 (50)	14.5 (47)
Female	84.1 (270)	81.2 (267)	84.7 (277)	85.5 (277)

\*statistically significant difference between marzes at baseline,  $p \leq .05$

\*\*statistically significant difference between baseline and follow-up,  $p \leq 0.05$

The mean age of respondents in the target sites was 42.7 (spanning from 16 to 87) and 43.4 in the comparison sites (spanning from 16 to 90); the mean age of respondents in Lori was 42.3 (ranging from 16 to 90) and in Shirak 43.2 (ranging from 16 to 84). Fewer respondents from Shirak had higher level of education compared to baseline ( $p^4 < .05$ ). Majority of respondents were females; the percentage was slightly higher at follow-up in Shirak than in Lori, but the difference was not statistically significant. The target group contained significantly more female respondents than the comparison group at follow-up (87.2% vs.78.7%).

**Table 3. Socio-demographic characteristics of participants by target/comparison facilities**

	Target		Comparison	
	2006 (n=377)	2008 (n=362)	2006 (n=307)	2008 (n=307)
<b>Mean age (years) mean (n)</b>	43.7 (348)	42.3 (348)	42.0 (294)	43.1 (295)
<b>Level of education % (n) *</b>				
1. School (< 10 years)	15.4 (54)	11.1 (39)	6.5 (19)	11.2 (34)
2. School (10 years)	44.3 (155)	40.6 (142)	36.4 (107)	45.9 (139)
3. Professional/technical (10-13 years)	20.9 (73)	28.9 (101)	35.0 (103)	25.1 (79)
4. Institute / University or Postgraduate	19.4 (68)	19.4 (68)	22.1 (65)	17.8 (54)
<b>Gender % (n)**</b>				
Male	14.7 (52)	12.8 (45)	16.6 (49)	21.3 (44)
Female	85.3 (301)	87.2 (307)	83.4 (246)	78.7 (237)

\*statistically significant difference between target and comparison respondents at baseline,  $p \leq .05$

\*\*statistically significant difference between target and comparison respondents at follow-up,  $p \leq 0.05$

### Client perceptions of quality of primary health care providers

The respondents were asked a set of questions investigating their opinion about the health care provider they contacted during their last visit to a primary health care facility. Several statistically significant differences were found between the comparison and target groups (Table 4). More respondents from target sites agreed that providers were attentive, caring, thorough enough, skillful, and respectful. About 10% more respondents from target sites

<sup>4</sup> *P-value* is a measure of statistical significance and shows the probability that a difference between groups happened by chance. An example would be differences in the average birth weight of newborns in two different income groups. A lower P value for any difference in outcomes indicates a lower probability that the difference was a result of chance. Results with a low P value are considered statistically significant. For example, a p-value of .01 ( $p = .01$ ) means there is a 1 in 100 chance the result occurred by chance. For most social science research, a p-value of .05 or less is considered acceptable.

mentioned that providers gave complete explanations and about 6% more respondents from target sites agreed that providers helped them to understand their illness. Table 5 summarizes differences in patients' perceptions from baseline to follow-up.

A summative score, which included all 15 variables, was computed. A score of "2" was given to each positive ("yes") reply, "1" to "to some extent" reply, and "0" to negative replies. The summative score was divided by the number of items in the scale resulting in a maximum possible score of 2.0. The mean score in the target group was significantly higher at follow-up (1.83 vs. 1.75), while the mean score did not change significantly in the comparison group (1.75 vs. 1.78), which suggests the effectiveness of project activities in target sites. The summative score was recoded into a dichotomous variable, which grouped respondents scoring  $\geq 1.5$  into "satisfied" category, and respondents scoring less than 1.5 into "not satisfied". The analysis showed that more respondents in the target group were satisfied with their provider's attitude at follow-up compared to baseline (93.9% vs. 87.1%, the difference is statistically significant). The proportion of patients satisfied with provider increased from 86.6% to 88.6% among comparison respondents, however, this difference was not statistically significant.

**Table 4. Clients' perceptions of provider qualities at the follow-up**

Attitude and qualities of a physician/nurse % (n)	Target (n=358)			Comparison (n=307)		
	Yes	To some extent	No	Yes	To some extent	No
Was really attentive to you*	96.9 (347)	2.2 (8)	0.8 (3)	92.6 (275)	5.7 (17)	1.7 (5)
Appeared to enjoy caring for you*	95.5 (399)	3.4 (12)	1.1 (4)	90.3 (269)	8.4 (25)	1.3 (4)
Seemed impatient	30.3 (105)	10.1 (35)	59.5 (206)	30.1 (83)	15.9 (44)	54.0 (149)
Gave complete explanations*	78.1 (274)	9.7 (34)	12.3 (43)	69.3 (190)	17.2 (47)	13.5 (37)
Talked down to you	6.4 (22)	4.6 (16)	89.0 (307)	5.8 (16)	6.5 (18)	87.7 (243)
Was not thorough enough*	10.9 (36)	9.4 (31)	79.8 (264)	16.5 (45)	14.0 (38)	69.5 (189)
Considered your preferences regarding your care	82.1 (285)	14.4 (50)	3.5 (12)	74.3 (208)	13.2 (37)	12.5 (35)
Understood you when you shared your problems	94.1 (334)	4.5 (16)	1.4 (5)	84.2 (250)	10.8 (32)	5.1 (15)
Seemed disorganized and flustered*	6.7 (23)	1.4 (5)	91.9 (317)	7.5 (21)	5.7 (16)	86.7 (242)
Appeared to be skillful*	93.4 (326)	5.2 (18)	1.4 (5)	86.5 (244)	11.7 (33)	1.8 (5)
Treated you with respect*	97.7 (344)	1.7 (6)	0.6 (2)	93.0 (264)	5.6 (16)	1.4 (4)
Explained things in an understandable manner†	93.8 (334)	5.1 (18)	1.1 (4)	90.2 (257)	9.5 (27)	0.4 (1)
Made you to feel free to ask questions	85.2 (294)	9.3 (32)	5.5 (19)	82.9 (233)	11.0 (31)	6.0 (17)
Helped you to understand your illness*	92.9 (329)	6.5 (23)	0.6 (2)	87.4 (249)	10.5 (30)	2.1 (6)
Discussed treatment options with you	85.9 (305)	11.8 (42)	2.3 (8)	88.3 (249)	9.9 (28)	1.8 (5)

\*statistically significant difference,  $p \leq .05$

†marginally statistically significant difference,  $p=0.054$

**Table 5. Change (%) in clients' perceptions of provider aspects of quality of care, 2006 to 2008**

Aspects of care at the clinic % change	Target (n=358)	Comparison (n=307)
	Yes	Yes
Was really attentive to you	3.6	1.8
Appeared to enjoy caring for you	3.0	1.3
Seemed impatient	-5.7	3.3
Gave complete explanations	3.5	-3.4
Talked down to you	-4.8	-0.6
Was not thorough enough*	-5.3	3.7
Considered your preferences regarding your care	1.9	4.3
Understood you when you shared your problems*	5.1	4.9
Seemed disorganized and flustered	1.0	2.9
Appeared to be skillful*	5.8	1.6
Treated you with respect	2.3	-1.0
Explained things in an understandable manner	1.7	-0.7
Made you to feel free to ask questions*,**	7.1	8.2
Helped you to understand your illness	3.3	2.2
Discussed treatment options with you *,**	3.7	9.6

\*statistically significant difference in target respondents,  $p \leq .05$

\*\*statistically significant difference in comparison respondents,  $p \leq .05$

### **Clients' perceptions of non-provider aspects of care**

A set of questions exploring clients' perceptions regarding general aspects of care received at the last visit was asked (Table 6). Fewer target group respondents mentioned that they had to wait too long to get care at follow-up compared to baseline (7.4% vs. 11.5%,  $p < .05$ ). For comparison respondents no statistically significant difference was documented for this aspect of care.

No significant changes were observed for aspects of care such as "difficulty with making appointment" or "confidentiality of care" for both groups. Compared to baseline, a higher percentage of target group respondents reported receiving health education materials to read during their last visit (73.0% at follow-up versus 64.7% at baseline). For the comparison group, this figure remained virtually unchanged (59.9% at baseline and 60.7% at follow-up). The analysis showed that the overwhelming majority of respondents of both the target and comparison groups (91.7% and 90.8%, respectively), did not pay health providers (doctors or nurses) for their care.

More target group respondents assessed clinic conditions (renovation, equipment, and supplies) as satisfactory at follow-up (82.5% versus 58.6% at baseline); while 10% less comparison group respondents rated clinic conditions as satisfactory at follow-up (18.9% versus 28.7% at baseline). More comparison group respondents at follow-up (6%) compared to baseline (2%) rated the cleanliness of the clinic at the time of the visit as unsatisfactory while no change was documented for target group respondents. The analysis showed that about 93.0% of target group respondents would return to the same provider (89.2% at baseline, the difference is statistically significant). At follow-up, about 85.0% of target respondents assessed the care they received in the clinic during their last visit as either "good" or "excellent" compared to 77.1% at baseline. The same indicator decreased from 78.4% at baseline to 70.3% at follow-up in the comparison group.

Tables 6 and 7 summarize the change in proportion of desired responses regarding non-provider aspects of care among target group and comparison respondents from baseline to follow-up. For most aspects of care, no significant changes were observed. The highest desired significant change was detected for assessment of physical conditions of the clinic at the time of respondent's last visit: about 25% more target group respondents considered clinic conditions as satisfactory at the follow-up assessment compared to baseline. The level of satisfaction among comparison respondents decreased by about 4% at follow-up compared to baseline.

**Table 6. Change (%) in clients' perceptions of non-provider aspects of quality of care, 2006 to 2008**

Aspects of care at the clinic % change	Target (n=358)	Comparison (n=307)
	Yes	Yes
You had to wait too long before receiving the care*	-4.1	1.1
It was difficult for you to make an appointment with the provider	-2.2	-2.7
People unrelated to you were present during your visit*	10.5	-3.1
You received health educational materials for reading*	8.3	0.8
Do you think the information you shared about yourself with the provider will be kept confidential	5.4	-2.9
Could you get all the medicines prescribed during your last visit <sup>5</sup>	-1.4	4.4
Did you receive free of charge or discounted medicine during your last visit*	-1.9	-1.9
	Satisfactory	Satisfactory
How would you assess the cleanness of the clinic at the time of your last visit**	1.7	-1.4
How would you assess the clinic conditions (renovation, equipment, supplies) at the time of your last visit*,**	23.9	-3.9

\*statistically significant difference in intervention respondents,  $p \leq .05$

\*\*statistically significant difference in comparison respondents,  $p \leq .05$

**Table 7. Difference (%) in target and comparison respondents' perceptions of non-provider aspects of quality of care, 2006 to 2008**

Aspects of care at the clinic % change	2006 (n=358)		2008 (n=307)	
	Target	Comparison	Target	Comparison
	Yes	Yes	Yes	Yes
You had to wait too long before receiving the care*	11.5	10.9	7.4	12.0
It was difficult for you to make an appointment with the provider	7.9	8.4	5.7	5.7
People unrelated to you were present during your visit	25.0	19.6	14.5	16.5
You received health educational materials for reading*	64.7	59.9	73.0	60.7
Do you think the information you shared about yourself with the provider will be kept confidential	67.7	71.7	73.1	68.8
Could you get all the medicines prescribed	67.7	61.0	66.3	65.4

<sup>5</sup> This and the following question on discounted or free medicine (Tables 6 and 7) have certain limitations. It was asked to all respondents rather than to respondents eligible for receiving free or discounted medicine.

	2006 (n=358)		2008 (n=307)	
	Target	Comparison	Target	Comparison
during your last visit*				
Did you receive free of charge or discounted medicine during your last visit*	47.1	45.7	45.2	43.8
	<b>Satisfactory</b>	<b>Satisfactory</b>	<b>Satisfactory</b>	<b>Satisfactory</b>
How would you assess the cleanness of the clinic at the time of your last visit	91.9	90.4	93.6	89.0
How would you assess the clinic conditions (renovation, equipment, supplies) at the time of your last visit*,**	58.6	67.4	82.5	63.5

\*statistically significant difference between target and comparison respondents at follow-up,  $p \leq .05$

\*\*statistically significant difference between target and comparison respondents at baseline,  $p \leq .05$

Based on the set of variables mentioned above, a summative score was calculated similar to the score calculated for the perceptions of the provider's quality. Compared to the baseline, the mean score for the target group significantly increased from 1.54 to 1.67, whereas in the comparison group it remained almost unchanged (1.55 at baseline versus 1.53 at follow-up), which suggests effectiveness of project activities in target sites. The summative score was recoded into an ordinal variable, which grouped respondents scoring  $\geq 1.5$  into the "satisfied" category and respondents scoring less than 1.5 into "not satisfied." Respondents' satisfaction with provider and care received is summarized in Table 8.

**Table 8. Clients' satisfaction with provider and care**

	Target		Comparison	
	2006	2008	2006	2008
Satisfied with provider, % (n)	87.1 (264)*	93.9 (276)*	86.6 (200)	88.6 (210)
Satisfied with care, % (n)	62.2 (202)*	75.5 (249)*	63.7 (170)	61.5 (161)

\*statistically significant difference,  $p \leq .05$

Proportion of patients satisfied with the non-provider aspect of care received during the last visit at baseline was virtually equal for target and comparison respondents (62.2% and 63.7%). At follow-up, the proportion of target respondents satisfied with care during the last visit increased to 75.5%, whereas for comparison respondents this indicator even slightly decreased compared to baseline (61.5% vs. 63.7%).

### **Client suggestions for the improvement of care**

Table 9 shows the distribution of responses to the question about the three measures that a patient would consider the most important to improve clinic services. Several response options in the follow-up instrument were added/modified. As seen from the table, the most frequently mentioned suggestion in the target group was to improve free of charge drug supplies (74.7%), followed by increasing the salary of providers (49.4%), and increased professionalism of the providers (28.7%). Other common responses were "to buy necessary equipment" (24.4%), "to make a doctor regularly available" (18.8%), and "to increase space" (17.4%). The distribution of responses in the comparison group was similar.

**Table 9. Client suggestions to improve care\***

	Target		Comparison	
	2006 (n=377)	2008 (n=362)	2006 (n=307)	2008 (n=307)
<b>Three most important measures to improve the services % (n)</b>				
Improve drug supplies	82.2 (309)		78.4 (204)	
Improve free of charge drug supplies†		74.7 (266)		63.6 (192)
Increase salary of providers	44.9 (169)	49.4 (176)	44.4 (136)	45.4 (137)
Buy necessary equipment	36.4 (137)	24.4 (87)	35.3 (108)	33.1 (100)
Increase professional level of providers	32.7 (123)	28.7 (102)	36.6 (112)	28.1 (85)
Increase space	39.6 (149)	17.4 (62)	30.1 (92)	20.9 (63)
Make doctor regularly available	23.4 (88)	18.8 (67)	23.2 (71)	21.9 (66)
Provide a telephone to the facility†		22.8 (81)		16.6 (50)
Increase the frequency of home visits†		19.1 (68)		17.9 (54)
Improve hygiene/cleanness	15.2 (57)	16.3 (58)	16.3 (50)	17.9 (54)
Eliminate informal payments†		15.2 (54)		15.2 (46)
Increase working hours of the clinic	10.9 (41)	6.5 (23)	12.4 (38)	7.9 (24)
Involve community in supervision	11.2 (42)	5.1 (18)	10.1 (31)	5.0 (15)
Supervise providers	8.5 (32)	2.8 (10)	10.5 (32)	5.6 (17)

\*multiple responses were obtained for the question

†question was changed/added at follow-up

### **Client satisfaction in target and comparison facilities**

Using the summative measures, the target and comparison respondents were generally similar in their satisfaction with their provider and non-provider aspects of the care at their last visit at baseline. Analysis of patient satisfaction with provider and non-provider aspects of care at follow-up revealed that respondents from the target group were significantly more satisfied with providers and more likely to assess the care they received as excellent or good than those in the comparison group (Table 10). The satisfaction levels with provider characteristics were much higher than with non-provider aspects of care; this was observed at baseline and follow-up and in both target and comparison groups.

**Table 10. Baseline and follow-up satisfaction with care by target and comparison facilities**

	Target		Comparison	
	2006	2008*,**	2006	2008*
<b><i>Satisfaction with provider</i></b>				
Satisfied (%)	87.1	93.9	86.6	88.6
Score: mean (SD) <sup>6</sup>	1.75 (0.3)	1.83 (0.2)	1.75 (0.3)	1.78 (0.3)
<b><i>Satisfaction with non-provider aspects of care</i></b>				
Satisfied (%)	62.2	75.5	63.7	61.5
Score: mean (SD)	1.54 (0.38)	1.67 (0.28)	1.55 (0.35)	1.53 (0.4)
<b><i>Overall assessment of care received (%)†</i></b>				
Excellent	39.9	40.8	38.5	33.4
Good	37.2	44.0	39.9	36.9
Fair	20.7	15.9	19.6	29.0
Poor	2.2	-	2.0	0.7

\*statistically significant difference across all measures between target and comparison respondents at follow-up,  $p < .05$

\*\*statistically significant difference across all measures in target respondents between baseline and follow-up,  $p < .05$

†statistically significant difference in comparison respondents between baseline and follow-up,  $p < .05$

Approximately 91% of clients in the target group and 87% in the comparison group stated that they would visit the same provider again in case of having a similar problem. The proportions of those who would recommend the same provider to their friends and relatives were again impressively high in both groups (88.1% and 83.9%, respectively). However, when asked a similar question focusing on facilities, 17.8% of the respondents (56 people) in the target group and 19.3% (52 people) in the comparison group stated that they had visited or planned to visit another facility for the same problem due to dissatisfaction with the services received during the last visit. The answers to these questions were highly correlated but not similar; other factors beyond the patient-provider interaction (such as non-provider aspects of care) could influence a patient's decision to visit a facility.

The respondents were asked about the reason for their last visit. About forty percent of respondents did not answer this question. Among those answering this item, illness was most often cited (about 30%), followed by need for an examination/consultation (almost 14%), child care (almost 10%), followed by treatment (5.5), and need for a test/measurement, mainly, blood pressure (2.9%). Several people mentioned injection, pregnancy care, drug prescription, and dental care.

### **Client satisfaction in relation to demographic characteristics**

The M&E team tabulated client satisfaction with non-provider aspects of care by the demographic characteristics of respondents at baseline and follow-up. The mean age of respondents at baseline was 42.9 and at follow-up 42.7 years. No association was found between satisfaction and the age of target group respondents at follow-up (Table 11). As shown in Table 12, few significant associations were found between the level of satisfaction and the gender of target group respondents (both at baseline and at follow-up). At follow-up 72.1% of males were satisfied with care versus 48.9% at baseline, and more females were

<sup>6</sup> The *standard deviation* is a statistic that says how tightly all the various examples are clustered around the mean in a set of data. When the examples are tightly bunched together and the bell-shaped curve is steep, the standard deviation is small. When the examples are spread apart and the bell curve is relatively flat, that says there is a relatively large standard deviation

satisfied at follow-up compared to baseline (76.6% versus 64.4%). Increase in satisfaction with care among women in target group was statistically significant across all measures, whereas for men statistically significant difference was observed for non-provider aspects of care only. Respondents' satisfaction in the comparison group was not associated with age or gender neither at baseline, nor at follow-up (Table 13, 14). At follow-up target group had more females than the comparison group and higher satisfaction in this group could potentially be due to more female respondents. However, no significant associations between gender and the level of satisfaction were found in the comparison group suggesting that higher satisfaction in the target group was mainly due to project activities rather than due to different gender distribution in the target and comparison groups.

**Table 11. Satisfaction with care by age category in the target group**

	Younger		Older	
	2006 (n=319)	2008 (n=306)	2006 (n=323)	2008 (n=337)
<b>Satisfaction with provider % (n)</b>				
Satisfied	87.9 (124)	95.8 (136)	88.6 (124)	91.8 (134)
Not satisfied	12.1 (17)	4.2 (6)	11.4 (16)	8.2 (12)
<b>Satisfaction with provider: mean score mean (n)</b>	1.75 (141)	1.83 (142)	1.75 (140)	1.82 (146)
<b>Satisfaction with non-provider aspects of care % (n)</b>				
Satisfied	61.9 (91)	74.1 (120)	63.0 (97)	77.8 (123)
Not satisfied	38.1 (56)	25.9 (42)	37.0 (57)	22.2 (53)
<b>Satisfaction with non-provider aspects of care: mean score mean (n)</b>	1.53 (147)	1.66 (162)	1.55 (154)	1.68 (158)
<b>Overall assessment of the care received during the last visit % (n)</b>				
Excellent	37.3 (63)	39.2 (65)	43.6 (75)	42.4 (74)
Good	41.4 (70)	44.6 (74)	32.0 (55)	44.8 (77)
Fair	20.1 (34)	16.3 (27)	21.5 (37)	13.8 (22)
Poor	1.2 (2)	-	2.9 (5)	-

**Table 12. Satisfaction with care by gender in the target group**

	Male		Female*	
	2006 (n=45)	2008 (n=43)	2006 (n=261)	2008 (n=283)
<b>Satisfaction with provider % (n)</b>				
Satisfied	82.2 (37)	89.5 (34)	89.2 (215)	95.2 (237)
Not satisfied	17.8 (8)	10.5 (4)	10.8 (26)	4.8 (12)
<b>Satisfaction with provider: mean score mean (n)</b>	1.71 (45)	1.81 (38)	1.76 (241)	1.83 (249)
<b>Satisfaction with non-provider aspects of care % (n)**</b>				
Satisfied	48.9 (22)	72.1 (31)	64.4 (168)	76.7 (217)
Not satisfied	51.1 (23)	27.9 (12)	35.6 (93)	23.3 (66)
<b>Satisfaction with non-provider aspects of care: mean score mean (n)</b>	1.52 (45)	1.67(43)	1.54 (261)	1.67 (283)
<b>Overall assessment of the care received during the last visit % (n)</b>				
Excellent	34.7 (17)	44.2 (19)	41.4 (123)	39.6 (118)
Good	28.6 (14)	28.6 (14)	38.0 (113)	38.0 (113)
Fair	34.7 (17)	34.7 (17)	18.2 (54)	18.2 (54)
Poor	2.0 (1)	2.0 (1)	2.4 (7)	2.4 (7)

\*statistically significant difference across all measures at baseline and follow-up,  $p \leq 0.05$

\*\*statistically significant difference at baseline between male and female,  $p \leq 0.05$

**Table 13. Satisfaction with care by age in the comparison group**

	Younger		Older	
	2006 (n=148)	2008 (n=160)	2006 (n=146)	2008 (n=135)
<b>Satisfaction with provider % (n)</b>				
Satisfied	87.4 (97)	90.9 (100)	86.5 (96)	85.8 (103)
Not satisfied	12.6 (14)	9.1 (10)	13.5 (15)	14.2 (17)
<b>Satisfaction with provider: mean score mean (SD)</b>	1.75 (0.3)	1.8 (0.2)	1.76 (0.3)	1.76 (0.3)
<b>Satisfaction with non-provider aspects of care % (n)</b>				
Satisfied	62.4 (78)	61.9 (73)	65.2 (86)	58.8 (80)
Not satisfied	37.6 (47)	38.1 (45)	34.8 (46)	41.2 (56)
<b>Satisfaction with non-provider aspects of care: mean score mean (SD)</b>	1.55 (0.3)	1.58 (0.4)*	1.56 (0.4)	1.47 (0.4)*
<b>Overall assessment of the care received during the last visit % (n)</b>				
Excellent	41.0 (59)	37.9 (50)	35.2 (51)	29.1 (44)
Good	43.1 (62)	35.6 (47)	38.6 (56)	39.1 (59)
Fair	13.9 (20)	25.0 (33)	24.8 (36)	31.8 (48)
Poor	2.1 (3)	1.5 (2)	1.4 (2)	-

\*statistically significant difference,  $p \leq .05$

**Table 14. Satisfaction with care by gender in the comparison group**

	Male		Female	
	2006 (n=49)	2008 (n=64)	2006 (n=246)	2008 (n=237)
<b>Satisfaction with provider % (n)</b>				
Satisfied	85.7 (36)	82.7(43)	87.8 (159)	90.1 (164)
Not satisfied	14.3 (6)	17.3 (9)	12.2 (22)	9.9 (18)
<b>Satisfaction with provider: mean score mean (SD)</b>	1.72 (0.3)	1.73 (0.3)	1.76 (0.3)	1.8 (0.2)
<b>Satisfaction with non-provider aspects of care % (n)</b>				
Satisfied	73.2 (30)	57.1 (32)	61.8 (134)	62.2 (125)
Not satisfied	26.8 (11)	42.9 (24)	38.2 (83)	37.8 (76)
<b>Satisfaction with non-provider aspects of care: mean score mean (SD)</b>	1.54 (0.4)	1.4 (0.5)*	1.54 (0.4)	1.56 (0.4)*
<b>Overall assessment of the care received during the last visit % (n)</b>				
Excellent	42.9 (21)	23.3 (14)	36.5 (88)	36.7 (83)
Good	36.7 (18)	35.0 (21)	41.5 (100)	37.2 (84)
Fair	14.3 (7)	41.7 (25)	20.7 (50)	25.2 (57)
Poor	6.1 (3)	-	1.2 (3)	0.9 (2)

\*statistically significant difference,  $p \leq .05$

At follow-up, target group respondents with higher education positively assessed their care: 92.4% of institute/university graduates rated care received during the last visit as excellent or good versus 76.1% of institute/university graduates at baseline, the difference was statistically significant (Table 15). However, the association between satisfaction with the quality of a provider and educational level of target group respondents was significant at baseline, with more educated clients being less happy with their provider's care at the last visit. The same trend was found for the overall assessment of care received during the last visit at baseline. Generally the same trend was found for target respondents at the follow-up, though not significant. Among comparison group respondents satisfaction with care was not associated with level of education neither at baseline, nor at follow-up.

The association between satisfaction and perceived living standards of target group respondents at follow-up was not significant (Table 16). No significant associations were found between reported average household income and all measures of satisfaction among target respondents at follow-up (Table 17). Analysis revealed negative association between average monthly income and level of satisfaction among comparison respondents at follow-up with less affluent respondents being more satisfied with care received; significant association was observed between living standards and satisfaction with non-provider qualities among comparison respondents at follow-up.

Table 15. Satisfaction with care by education category in target group

	School (< 10 years)		School (10 years)		Professional technical (10-13 years)		Institute/ University or Postgraduate	
	2006 (n=48)	2008 (n=35)	2006 (n=135)	2008 (n=129)	2006 (n=64)	2008 (n=64)	2006 (n=59)	2008 (n=66)
<b>Satisfaction with provider % (n)*</b>								
Satisfied	97.8 (44)*	91.2 (31)	91.1 (113)*	93.6 (102)	82.3 (51)*	95.2 (79)	81.1 (43)*	93.7 (59)
Not satisfied	2.2 (1)	8.8 (3)	8.9 (11)	6.4 (7)	17.7 (11)	4.8 (4)	18.9 (10)	6.3 (4)
<b>Satisfaction with provider: mean score mean (n)</b>	1.80 (45)	1.83 (34)	1.77 (124)	1.81 (109)	1.72 (62)	1.82 (83)	1.68 (53)	1.84 (63)
<b>Satisfaction with non-provider aspects of care % (n)</b>								
Satisfied	66.7 (32)	71.4 (25)	58.5 (79)	76.0 (98)	71.9 (46)	77.7 (73)	54.2 (32)	72.7 (48)
Not satisfied	33.3 (16)	28.6 (10)	41.5 (56)	24.0 (31)	28.1 (18)	22.3 (21)	45.8 (27)	27.3 (18)
<b>Satisfaction with non-provider aspects of care: mean score mean (n)</b>	1.56 (48)	1.62 (35)	1.53 (135)	1.67 (129)	1.60 (54)	1.65 (94)	1.45 (59)	1.69 (66)
<b>Overall assessment of care received during the last visit % (n)*, **</b>								
Excellent	54.7 (29)*	44.7 (17)	43.3 (65)	47.1 (65)	30.1 (22)*	29.6 (29)**	32.8 (22)*	39.4 (26)**
Good	26.4 (14)	42.1 (16)	36.0 (54)	39.9 (55)	39.7 (29)	45.9 (45)	43.3 (29)	53.0 (35)
Fair	18.9 (10)	13.2 (5)	19.3 (29)	13.0 (18)	28.8 (21)	24.5 (24)	16.4 (11)	7.6 (5)
Poor	-	-	1.3 (2)	-	1.4 (1)	-	7.5 (5)	-

\*statistically significant difference at baseline, p ≤ .05

\*\*statistically significant difference at follow-up, p ≤ 0.05

**Table 16. Satisfaction with care by living standards and household income at follow-up in target group respondents**

	Standard of living			Average household income			
	Below average	Average	Above average	<25,000 drams	25,000-50,000 drams	51,000-100,000 drams	≥ 101,000 drams
<b>Satisfaction with provider</b>							
Satisfied (%)	93.2	95.4	88.9	92.7	96.2	94.5	87.5
Summative score, mean (SD)	1.83 (0.22)	1.84 (0.17)	1.78 (0.27)	1.82 (0.22)	1.83 (0.19)	1.85 (0.16)	1.80 (0.19)
<b>Satisfaction with aspects of care</b>							
Satisfied (%)*	63.2*	78.5*	83.7*	78.0	75.3	76.5	77.0
Summative score, mean (SD)	1.62 (0.30)	1.69 (0.27)	1.67 (0.29)	1.68 (0.30)	1.65 (0.28)	1.68 (0.27)	1.69 (0.25)
<b>Overall assessment of the care received (%)*</b>							
Excellent	53.8*	35.0*	37.3*	39.1	46.2	37.8	30.0
Good	31.2*	49.0*	49.0*	45.2	41.8	42.7	60.0
Fair	15.1*	16.0*	13.7*	18.7	12.1	19.5	10.0
Poor	-	-	-	1.1	0.0	0.0	3.6

\*statistically significant difference,  $p \leq .05$

**Table 17. Satisfaction with care by living standards and household income at follow-up in comparison group respondents**

	Standard of living			Average household income			
	Below average	Average	Above average	<25,000 drams	25,000-50,000 drams	51,000-100,000 drams	≥ 101,000 drams
<b>Satisfaction with provider</b>							
Satisfied (%)	85.2	88.8	93.3	94.7*	83.6*	76.9*	91.7*
Summative score, mean (SD)	1.75(0.26)	1.78 (0.27)	1.83 (0.16)	1.84 (0.19)*	1.72 (0.25)*	1.7 (0.36)*	1.76 (0.20)
<b>Satisfaction with aspects of care</b>							
Satisfied (%)	56.5	58.5	76.0	67.7	55.1	51.2	71.4
Summative score, mean (SD)	1.48 (0.39)*	1.50 (0.42)*	1.68 (0.34)*	1.62 (0.34)*	1.44 (0.39)*	1.38 (0.54)*	1.63 (0.35)
<b>Overall assessment of the care received (%)</b>							
Excellent	29.8	29.5	49.2	39.8	15.1	34.0	44.4
Good	36.2	38.6	32.2	34.3	49.3	36.2	22.2
Fair	33.0	31.1	18.6	25.9	34.2	27.7	33.3
Poor	1.1	0.8	-	-	1.4	2.1	-

\*statistically significant difference,  $p \leq .05$

In analyzing the whole sample (both target and comparison groups), respondents' satisfaction with care at follow-up revealed no significant association with age, gender, or educational status (Table 18, 19). Satisfaction was negatively associated with household average monthly income: less affluent respondents were more satisfied with provider and non-provider aspects of care (Table 20, 21).

**Table 18. Satisfaction with care by gender at follow-up (whole sample)**

	Male		Female	
	2006 (n=101)	2008 (n=109)	2006 (n=547)	2008 (n=544)
<b>Satisfaction with provider % (n)*, **</b>				
Satisfied	83.9(73)	85.6 (77)	88.6 (374)	93.0(401)
Not satisfied	16.1 (14)	14.4 (13)	11.4 (48)	7.0 (30)
<b>Satisfaction with provider: mean score mean (SD)</b>	1.71 (0.3)	1.76 (0.3)	1.76 (0.3)	1.82 (0.2)
<b>Satisfaction with non-provider aspects of care % (n)**</b>				
Satisfied	60.5 (52)	63.6 (63)	63.2 (301)	70.7 (342)
Not satisfied	39.5 (34)	36.4 (36)	36.8 (176)	29.3 (142)
<b>Satisfaction with non-provider aspects of care: mean score mean (n)</b>	1.56 (0.4)	1.53 (0.4)	1.54 (0.4)	1.63 (0.3)
<b>Overall assessment of the care received during the last visit % (n)</b>				
Excellent	38.8 (38)	32.0 (33)	39.2 (211)	38.4 (201)
Good	32.7 (32)	37.9 (39)	39.6 (213)	41.4 (217)
Fair	24.5 (24)	30.1 (31)	19.3 (104)	19.8 (104)
Poor	4.1 (4)	-	1.9 (10)	0.4 (2)

\*statistically significant difference between male and female at follow-up,  $p \leq .05$

\*\*statistically significant difference in females between baseline and follow-up,  $p \leq .05$

**Table 19. Satisfaction with care by age at follow-up (whole sample)**

	Younger (<42)		Older (>42)	
	2006 (n=319)	2008 (n=306)	2006 (n=323)	2008 (n=337)
<b>Satisfaction with provider % (n)*</b>				
Satisfied	87.7 (221)	93.7 (236)	87.6 (220)	89.1 (237)
Not satisfied	12.3 (31)	6.3 (16)	12.4 (31)	10.9 (29)
<b>Satisfaction with provider: mean score mean (n)</b>	1.75 (0.3)	1.82 (0.2)	1.75 (0.3)	1.79 (0.2)
<b>Satisfaction with non-provider aspects of care % (n)</b>				
Satisfied	62.1 (169)	68.9 (193)	64.0 (183)	69.0 (203)
Not satisfied	37.9 (103)	31.3 (87)	36.0 (103)	31.0 (91)
<b>Satisfaction with non-provider aspects of care: mean score mean (n)</b>	1.54 (0.4)	1.63 (0.3)	1.55 (0.4)	1.59 (0.4)
<b>Overall assessment of the care received during the last visit % (n)**</b>				
Excellent	39.0 (122)	38.6 (115)	39.7 (126)	36.2 (117)
Good	42.2 (132)	40.6 (121)	35.0 (111)	42.1 (136)
Fair	17.3 (54)	20.1 (60)	23.0 (73)	21.7 (70)
Poor	1.6 (5)	0.7 (2)	2.2 (7)	-

\*statistically significant difference for younger respondents between baseline and follow-up,  $p \leq .05$

\*\*statistically significant difference for older respondents between baseline and follow-up,  $p \leq .05$

**Table 20. Satisfaction with care, by respondent age, gender, and education at follow-up (whole sample)**

	Age			Gender		Education			
	Younger (<42)	Older (≥ 42)	Female	Male	School (<10 years)	School (10 years)	Professional technical (10-13 years)	Institute/ University or Postgraduate	
<b>Satisfaction with provider</b>									
Satisfied (%)	93.7	89.1	93.0*	85.6*	87.5	91.6	91.5	93.3	
Summative score, mean (SD)	1.81 (0.2)	1.79 (0.2)	1.8 (0.2)	1.8 (0.3)	1.77 (0.3)	1.80 (0.2)	1.80 (0.2)	1.83 (0.3)	
<b>Satisfaction with non-provider aspects of care</b>									
Satisfied (%)	68.9	69.0	70.7	63.6	66.2	70.7	69.1	67.3	
Summative score, mean (SD)	1.62 (0.3)	1.58 (0.4)	1.62 (0.3)	1.52 (0.4)	1.55 (0.4)	1.62 (0.3)	1.59 (0.4)	1.61 (0.3)	
<b>Overall assessment of care (%)</b>									
Excellent	38.6	36.2	38.4	32.0	38.6	42.5	29.8	35.3	
Good	40.6	42.1	41.4	37.9	35.7	37.7	43.3	47.9	
Fair	20.1	21.7	19.8	30.1	25.7	19.8	26.3	16.0	
Poor	0.7	0.0	0.4	0.0	0.0	0.0	0.6	0.8	

\*statistically significant difference, p ≤ .05

**Table 21. Satisfaction with care by living standards and household income at follow-up (whole sample)**

	Standard of living			Average household income			
	Below average	Average	Above average	< 25,000 drams	25,000-50,000 drams	51,000-100,000 drams	≥ 101,000 drams
<b>Satisfaction with provider</b>							
Satisfied (%)	89.0	92.9	91.1	93.7	90.7	88.4	90.0
Summative score, mean (SD)	1.79 (0.2)	1.81(0.2)	0.80 (0.2)	1.83 (0.2)*	1.78 (0.2)*	1.80 (0.2)	1.77 (0.2)
<b>Satisfaction with non-provider aspects of care</b>							
Satisfied (%)	59.9	70.7	79.8	73.1	66.2	68.0	73.9
Summative score, mean (SD)	1.55 (0.4)*	1.61 (0.3)	1.67 (0.3)*	1.65 (0.3)*	1.56 (0.4)*	1.58 (0.4)	1.65 (0.3)
<b>Overall assessment of the care received (%)</b>							
Excellent	41.7	32.8	43.6	39.5	32.2	36.4	39.3
Good	33.7	44.9	40.0	39.9	45.1	40.3	35.7
Fair	24.1	22.0	16.4	20.6	22.0	22.5	25.0
Poor	0.5	0.3	0.0	0.0	0.6	0.8	0.0

\*statistically significant difference, p ≤ .05

The tabulation of variables by marz revealed statistically significant difference between the marzes with Lori respondents being less satisfied with non-provider aspects of care than respondents from Shirak at baseline (Table 22). Conversely, at follow-up Lori respondents were more satisfied with non-provider aspects of care than Shirak respondents. However, more respondents from Shirak than from Lori marz rated care as good or excellent at follow-up (88.9% vs.81.1%), reversing the pattern at baseline (74.0% in Shirak vs.80.1% in Lori). No difference was documented for comparison respondents (Table 23).

**Table 22. Satisfaction with care by marz in the target group**

	Lori		Shirak	
	2006 (n=168)	2008 (n=177)	2006 (n=157)	2008 (n=153)
<b>Satisfaction with provider % (n)</b>				
Satisfied	88.7 (134)	94.8 (146)	85.5 (130)	92.9 (130)
Not satisfied	11.3 (17)	5.2 (8)	14.5 (22)	7.1 (10)
<b>Satisfaction with provider: mean score (SD)</b>	1.77 (0.29)	1.84 (0.17)	1.73 (0.30)	1.82 (0.23)
<b>Satisfaction with non-provider aspects of care % (n)*</b>				
Satisfied	56.5 (95)	78.5 (139)	68.2 (107)	71.9 (110)
Not satisfied	43.5 (73)	21.5 (38)	31.8 (50)	28.1 (43)
<b>Satisfaction with non-provider aspects of care: mean score (sd)**</b>	1.52 (0.35)	1.70 (0.26)	1.57 (0.41)	1.63 (0.30)
<b>Overall assessment of the care received during the last visit % (n)**</b>				
Excellent	40.8 (78)	30.8 (57)	39.0 (69)	52.1 (85)
Good	39.3 (75)	50.3 (93)	35.0 (62)	36.8 (60)
Fair	18.3 (35)	18.9 (35)	23.2 (41)	11.0 (18)
Poor	1.6 (3)	-	2.8 (5)	-

\*statistically significant difference at baseline,  $p \leq 0.05$

\*\*statistically significant difference at follow-up,  $p \leq 0.05$

**Table 23. Satisfaction with care by marz in the comparison group**

	Lori		Shirak	
	2006 (n=140)	2008 (n=139)	2006 (n=167)	2008 (n=168)
<b>Satisfaction with provider % (n)</b>				
Satisfied	88.0(88)	89.9 (98)	85.5 (112)	87.5 (112)
Not satisfied	12.0 (12)	10.1 (11)	14.5 (19)	12.5 (16)
<b>Satisfaction with provider: mean score (SD)</b>	1.74 (0.29)	1.79 (0.20)	1.76 (0.28)	1.77 (0.28)
<b>Satisfaction with non-provider aspects of care % (n)*</b>				
Satisfied	55.8 (67)	62.9 (73)	70.1 (103)	60.3 (88)
Not satisfied	44.2 (53)	37.1 (43)	29.9 (44)	39.7 (58)
<b>Satisfaction with non-provider aspects of care: mean score (SD)</b>	1.53 (0.35)	1.58 (0.32)	1.58 (0.36)	1.50 (0.46)
<b>Overall assessment of the care received during the last visit % (n)</b>				
Excellent	36.5 (50)	30.7 (42)	40.2 (66)	35.9 (55)
Good	39.4 (54)	43.1 (59)	40.2 (66)	31.4 (48)
Fair	21.2 (29)	26.3 (36)	18.3 (30)	31.4 (48)
Poor	2.9 (4)	-	1.2 (2)	1.3 (2)

\*statistically significant difference at baseline,  $p \leq 0.05$

#### 4. Conclusions and Recommendations

Several significant findings with implications for guiding further development of the PHCR Project and its evaluation emerged from this assessment.

##### 1. The program is working as intended.

- **Patients from target sites are now more satisfied with the health care they receive.** Respondents from the target group were statistically significantly more likely to report improved satisfaction with their care and to rate it as excellent or good at follow-up (84.8% vs. 77.1%) while comparison respondents reported statistically significantly decreased satisfaction at follow-up (70.3% vs. 78.4%).
- **Patients from target sites are more satisfied with primary care providers.** A summative score describing patients' satisfaction with primary care providers statistically significantly increased at follow-up (1.83 vs. 1.75) whereas in the comparison group it did not statistically significantly increase (1.78 vs. 1.75).
- **Patients from target sites are more satisfied with provider interactions.** More respondents from target sites were satisfied with provider aspects of care compared to the baseline assessment (93.9% vs. 87.1%), while for comparison group respondents' this value did not statistically significantly increase (88.6% vs. 86.6%).
- **Patients from target sites are more satisfied with non-provider aspects of care.** Statistically significant difference was found between baseline and follow-up assessment of satisfaction with non-provider aspects of care (other than provider qualities) among target site respondents (75.5% vs. 62.2%), while for comparison site respondents slight decrease was documented at follow-up (61.5% vs. 63.7%).

##### 2. Gaps in coverage and differences in outcomes remain

- **Differences exist across marzes.** Lori respondents were generally less satisfied with care than those from Shirak.
- **Access issues remain important.** Increasing free drug supplies, increasing salaries of providers, and buying necessary equipment were the most frequent suggestions that the respondents made for improving care in PHC facilities both at baseline and follow-up assessments.
- **Patients are more satisfied with patient-provider interactions than with non-provider aspects of care.** More patients were satisfied with provider interaction than with non-provider aspects of care from target sites at follow-up. Therefore, while providers are a key target, the whole system needs to be addressed to reinforce a consistent message and experience.

Analysis and comparison of the baseline and follow-up data demonstrate that the project is working as intended. Despite higher satisfaction with care and provider in the target group compared to the comparison group respondents, still about 20% of respondents in target group mentioned that they did not receive complete explanations from their physicians, suggesting need for further improvement of physicians' counseling skills.

Access to free or discounted medicines is one of the most commonly mentioned concerns by patients. Addressing this concern would decrease financial burden for patients and lead to better treatment outcomes and higher satisfaction in future.

Though slight differences in satisfaction exist across marzes, target group respondents are more satisfied with care in both marzes than the comparison group respondents. For future actions it is important to consider clients' suggestions for improving care listed by patients during baseline and follow-up assessments. Suggestions mentioned most often were improving free drug supply and provision of PHC facilities with equipment. Exploring reasons for difference in patient satisfaction between marzes would facilitate building more specific and targeted patient satisfaction projects in future.

## **5. References**

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4. Donabedian A. Evaluating the quality of medical care. *Milbank Mem Fund Q* 1966; 44 (suppl.): 166–206
5. Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasiexperimental designs for research*. Hopewell, NJ: Houghton Mifflin Company.

## 6. Appendices

### Appendix 1

Client Survey

Facility Code \_\_\_\_\_

Date: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Day Month Year

Dear client,

*Primary Health Care Reform Project conducts this survey together with the Ministry of Health with the aim to assess the quality of primary health care (PHC) services in your residency area. We need your help to understand how to improve the primary health care for your community. Your address was selected randomly from the list of people who visited your primary health care facility recently. The healthcare providers of that facility know about this survey and support it. However, your participation in this study is voluntary and the information you give us will be confidential, which means that your name will not be mentioned anywhere and the information provided by you will be presented only in a summarized form. It is very important that you respond honestly. Please, carefully read each question and the possible responses. Choose and mark (✓) the response option that best represents your opinion about the last visit to the polyclinic (ambulatory, FAP) made during the last month by you, your child or a household member whom you accompanied. Please, note, if you accompanied a household member, the questions concerning care refer to the care provided to that person.*

*Please, respond to the questions starting from the next page.*

1. Do you think that during your last visit to the clinic, the provider (doctor or nurse):

- |   |                                |   |                               |
|---|--------------------------------|---|-------------------------------|
| 1. Was really attentive to you?                     | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 2. Appeared to enjoy caring for you?                | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 3. Seemed impatient?                                | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 4. Gave complete explanations?                      | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 5. Talked down to you?                              | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 6. Was not enough thorough?                         | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 7. Considered your preferences regarding your care? | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 8. Understood you when you shared your problems?    | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 9. Seemed disorganized and flustered?               | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 10. Appeared to be skillful?                        | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 11. Treated you with respect?                       | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 12. Explained things in an understandable manner?   | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 13. Made you to feel free to ask questions?         | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |
| 14. Helped you to understand your illness?          | <input type="checkbox"/> 1.Yes | <input type="checkbox"/> 2.To some extent | <input type="checkbox"/> 3.No |

15. Discussed with you the treatment options?     1.Yes     2.To some extent     3.No

2. Was the following true for your last visit to the clinic?

1. You had to wait too long before receiving care.     1. Yes     2. No

2. It was difficult for you to make an appointment with the provider.  1. Yes     2. No

3. People unrelated to you were present during your visit.     1. Yes     2. No

4. You received health educational materials for reading.     1. Yes     2. No

5. You paid the doctor (or nurse) for the care you received.     1. Yes     2. No

3. Do you think the information you shared about yourself with the provider will be kept confidential?     1. Yes     2. No     99.Don't know

4. Could you get all the medicines prescribed during your last visit?

1. Yes     2. No     3.No medicine was prescribed

5. Did you receive free of charge or discounted medicine during your last visit?

1. Yes     2. No     3.There was no need

6. How would you assess the cleanness of the clinic at the time of your last visit?

1. Satisfactory     2. Unsatisfactory     99. Don't know

7. How would you assess the clinic conditions (renovation, equipment, supplies) at the time of your last visit?  1. Satisfactory     2. Unsatisfactory     99. Don't know

8. Would you again refer to the same provider if you had a similar problem?

1. Yes     2. No     99.Don't know

9. Would you recommend the same provider to your friends and relatives?

1. Yes     2. No     99.Don't know

10. Overall, how would you assess the care you received in the clinic during your last visit?

1. Excellent     2. Good     3. Fair     4. Poor

11. Out of the following, what three measures would you consider the most important to make the services at the clinic better? (*please, mention no more than three options*)

1. Increase facility space

8. Supervise providers

2. Improve hygiene/cleanliness

9. Increase working hours of the clinic

3. Increase free of charge drug supplies

10. Involve community in supervision

4. Buy necessary equipment

11. Increase the frequency of home visits

5. Make doctor regularly available

12. Provide a telephone to the facility

6. Increase salary of providers

13. Eliminate informal payments

7. Increase professional level of providers

14. Other (*specify*) \_\_\_\_\_

12. How long did you wait at your PHC facility to see the provider at your last visit?

\_\_\_\_\_ minutes

13. What was the reason for your last visit to the primary healthcare facility?

(Please describe) \_\_\_\_\_

14. Have you visited or do you plan to visit another facility for the same problem, because you were unsatisfied with the services you received during your last visit?

1. Yes                       2. No

15. Please, indicate your: **a. Age:** \_\_\_\_\_

**b. Gender:**     1. Female     2. Male

**c. The highest level of education you completed:**

1. School (less than 10 years)  
 2. School (10 years)  
 3. Professional technical education (10-13 years)  
 4. Institute/University or Postgraduate

**d. Your family's general standard of living:**

1. Substantially below average  
 2. Little below average  
 3. Average  
 4. Little above average  
 5. Substantially above average

**e. Average monthly income of your household:**

1. Less than 25,000 drams  
 2. 25,000 – 50,000 drams  
 3. 51,000-100,000 drams  
 4. 101,000-250,000 drams  
 5. More than 250,000 drams  
 99. Don't know

**f. How many people live in your household (including children)? \_\_\_\_\_ people**

## Appendix 2:

### Journal Form

*(One form for each cluster of 14 respondents served by a health care facility)*

Date: \_\_\_\_\_

City/Village \_\_\_\_\_

Interviewer's name \_\_\_\_\_

Facility type:  Polyclinic  
 SVA  
 Health Center  
 FAP

Facility code \_\_\_\_\_

<i>Visit/ attempt number</i>	<b>01</b>	<b>02</b>	<b>03</b>	<b>04</b>	<b>05</b>	<b>06</b>	<b>07</b>	<b>08</b>	<b>09</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>
<i>Result code</i>														

<i>Visit/ attempt number</i>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>
<i>Result code</i>														

<i>Visit/ attempt number</i>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>	<b>41</b>	<b>42</b>
<i>Result code</i>														

#### **RESULT CODES**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. Completed interview</li> <li>2. Nobody at home</li> <li>3. No eligible respondent</li> <li>4. Selected respondent not at home</li> </ol> | <ol style="list-style-type: none"> <li>5. Refusal</li> <li>6. Refusal by selected respondent</li> <li>7. Respondent unable to participate _____</li> <li>8. Other _____</li> <li>9. Incomplete interview</li> </ol> |
|--|---|