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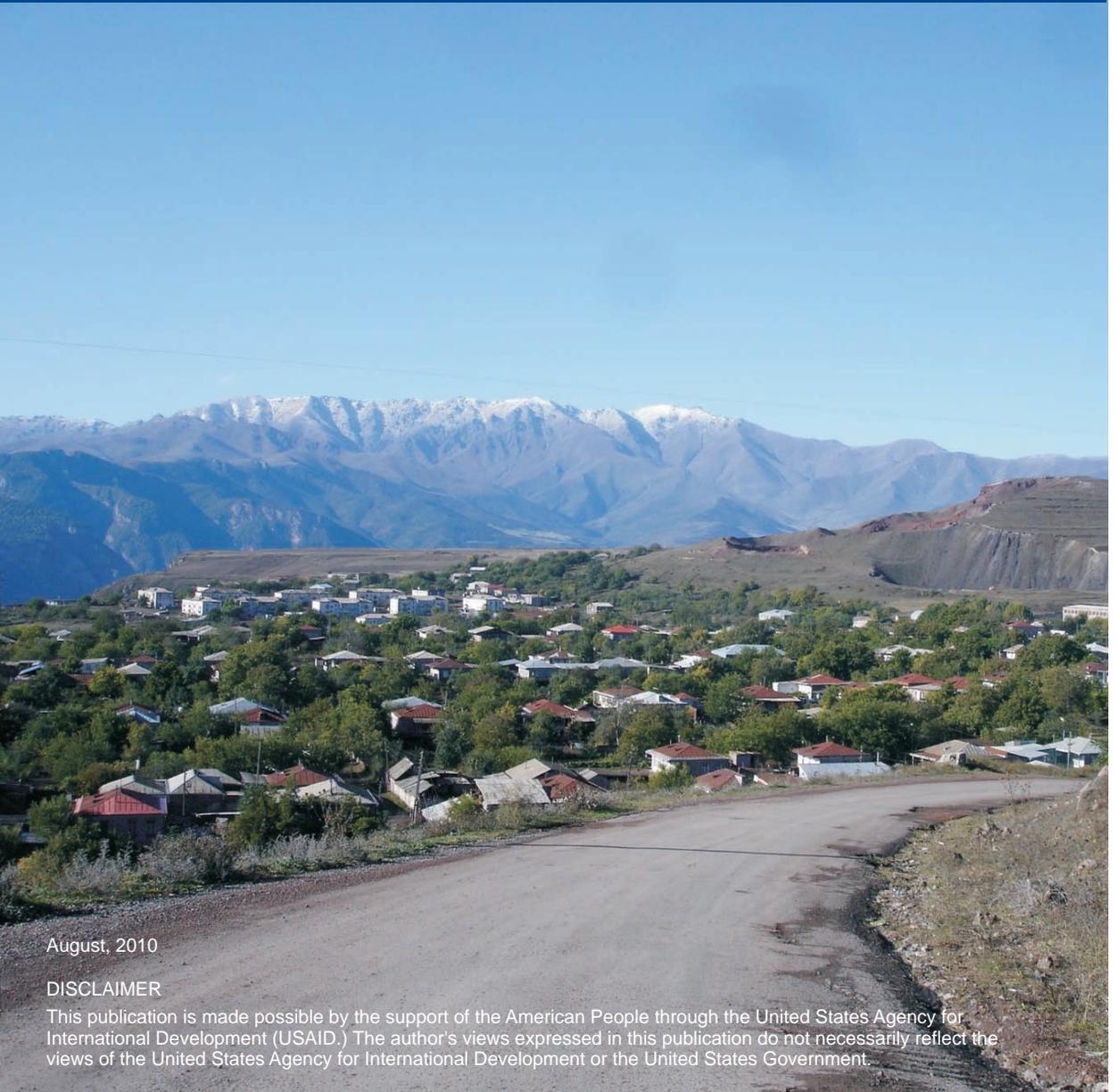
**PHCR**

Primary Healthcare Reform Project

# PATIENT SATISFACTION WITH HEALTH SERVICES

## A FOLLOW-UP EVALUATION IN KOTAYK, TAVUSH, AND GEGHARKUNIK MARZES

2009



August, 2010

### DISCLAIMER

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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 Cardno Emerging Markets USA, Ltd. (Cardno), formerly 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 rural health posts 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 patient satisfaction in 2009 in facilities targeted by the PHCR Project in Kotayk, Tavush, and Gegharkunik marzes (Zone 2) and compare these findings with those of the baseline survey conducted in 2007.

The Center for Health Services Research and Development of the American University of Armenia, one of the sub-contractors to Cardno, has primary responsibility for PHCR monitoring and evaluation. Dr. Anahit Demirchyan, Dr. Yelena Amirkhanyan, 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 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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## Table of contents

Preface.....	ii
Acronyms.....	iv
Executive Summary.....	v
1. Introduction.....	1
2. Methods.....	2
2.1 Sampling.....	2
2.2 Instrument.....	4
2.3 Training/pre-testing/data collection & entry.....	4
3. Results.....	5
3.1 Administrative/General.....	5
3.2 Client perceptions of primary health care provider qualities.....	6
3.3 Client perceptions of non-provider aspects of care.....	8
3.4 Client suggestions for improvement of care.....	11
3.5 Client satisfaction in target and comparison facilities.....	12
3.6 Client satisfaction in relation to demographic characteristics.....	13
4. Conclusions and Recommendations.....	17
5. Appendices.....	20
Appendix 1. Client Satisfaction Survey.....	20
Appendix 2: Journal Form.....	23

## Acronyms

FAP	Rural Health Post (from Russian abbreviation)
HC	Health Center
M&E	Monitoring and Evaluation
MoH	Ministry of Health
PHC	Primary Health Care
PHCR	Primary Health Care Reform
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 2009 in facilities targeted by the PHCR Project in Tavush, Gegharkunik, and Kotayk marzes (Zone 2) and compare these findings with those of the baseline survey conducted in 2007. The survey tracked changes in patients' satisfaction with health care services (a key project Performance Management Plan 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 provider qualities and non-provider aspects of care such as availability of care, its confidentiality, 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 multi-stage stratified cluster sampling design. Self-administered interviews were conducted with 364 clients of selected primary health care facilities in Zone 2 marzes in June-July 2009.

The data show that patient satisfaction levels increased in both the target and comparison groups across all measures. Respondents from both sites were more likely to report improved satisfaction with their care and to rate it as excellent or good at follow-up (83.6% vs. 77.8% in the target group and 81.7% vs. 69.4% in the comparison group). The proportion of patients satisfied with primary care provider qualities increased statistically significantly in both groups (97.8% vs. 87.0% in target group and 97.4% vs. 85.3% in comparison group). The increase of satisfaction with non-provider aspects of care was also statistically significant in both groups (81.2% vs. 59.6% in the target group and 68.3% vs. 59.9% in the comparison group), but this change was much more extensive in the target group, which resulted in a statistically significant difference between the two groups. Thus, the groups were different from each other at follow-up only with respect to satisfaction with non-provider aspects of care. This summative measure reflecting PHCR project-related target-specific activities like renovation, furnishing, equipping, and some management-related functions, was significantly higher in the target group. Presumably, the observed improvements in the comparison facilities were due to their involvement in PHC-related programs with other international organizations during the reported period. Another possible explanation is that this assessment took place during the fourth year of the PHCR project, many activities of which were countrywide rather than target-specific. Thus, the comparison sites were probably covered with these activities.

At follow-up, almost one-third of target group respondents were not sure that the information they shared with providers would be kept confidential and almost one-fifth stated that the privacy of their visit was violated. Suggestions by respondents for improving health services at the clinic most often included improving free drug supply; increasing salaries, professional level and regular availability of providers; and providing PHC facilities with necessary equipment.

Statistically significant positive association was found between perceived living standards and satisfaction with non-provider aspects of care. Younger respondents also tended to be more satisfied with non-provider aspects of care than older ones, while women were more satisfied with provider qualities and overall care than men.

About 80% of respondents stated an illness as the reason for their last visit. Only one-fifth of them applied to clinic for somewhat preventive reasons, and vaccination need constituted 36% of the latter. Thus, measures to shift the focus of PHC services from mainly curative to mainly preventive care remain one of the most important future undertakings.

## **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 Cardno Emerging Markets USA, Ltd. (Cardno), formerly 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 link 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 selected 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.

The project utilized a regional scale-up approach, which allowed for the zonal expansion of reforms throughout the country over the life of the project. Kotayk, Tavush, and Gegharkunik marzes (Zone 2) were targeted by the Project for the second and third years of implementation. With recognition of the importance of patient point of view in monitoring the quality of medical care, patient satisfaction with primary healthcare (PHC) services in target communities was set as one of the key indicators (included in the Project's Performance Management Plan) for measuring the impact of the PHCR project. In 2007, Monitoring and Evaluation (M&E) team of the Project conducted the first assessment of patient<sup>1</sup> satisfaction with PHC services in selected communities of Zone 2 to establish its

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

baseline value (1). The current report summarizes the results of the second (follow-up) assessment conducted in the same communities in 2009 after completion of the Project activities.

Clients' perceptions of healthcare quality in the assessed settings, however, should be approached with caution, because previous assessments of patient satisfaction with the quality of PHC services in Armenia failed to provide sufficient and compelling information that would reflect the true state of services (1-5). Despite the lack of necessary equipment and supplies, inadequate communication between health care providers and clients, and extremely poor physical conditions of facilities (6-8), the levels of patient satisfaction with care remained 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 (9), 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 (10).

The current study used several measurements to explore the opinions of patients about provider qualities and non-provider aspects of care in target facilities upon completion of project activities and compared them to the baseline values. Additional analyses investigated the links between satisfaction and demographic characteristics of respondents.

## **2. Methods**

### **2.1 Sampling**

The M&E team used a quasi-experimental pre-post non-equivalent comparison group design for this survey with a multi-stage stratified cluster sampling method. This design provided a sample representative of the areas targeted by the project and facilitated the differentiation of project-specific changes from those that could possibly have arisen due to historical or other factors unrelated to the project (11).

For baseline and follow-up surveys the sample size was calculated with 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 zone. 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 zone. The sample was collected in clusters of 14 respondents, selected from the list of the most recent clients of the randomly 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

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<sup>2</sup> *Alpha error* is 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* is a 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.

based on a series of sequential visitors to the clinic, design effect was considered to be negligible in calculating the sample size.

For comparability purposes, the same sites selected for the baseline patient satisfaction survey in Zone 2 were included in the follow-up survey sample. In 2007, 14 target facilities were selected through stratified random sampling from 56 health facilities targeted by the PHCR Project in Kotayk, Tavush, and Gegharkunik marzes (32 FAPs, 17 ambulatories, 3 health centers and 4 polyclinics). Since polyclinics and health centers served as referral facilities and not the primary targets of the Project, the selection was conducted among rural ambulatories and FAPs and the target sample included four ambulatories and ten FAPs (proportionate to their distribution in the pool of targeted facilities). The number of facilities selected from each marz also was proportionate to the number of facilities in the general pool of all targeted facilities. Three ambulatories and seven FAPs were selected for the comparison group<sup>4</sup>. By the time of follow-up survey, two target facilities in Gegharkunik marz (an ambulatory and a FAP) initially included in the baseline assessment were excluded from the list of project target sites and were considered as comparison facilities. To compensate for the loss in the sample size of the target group, the M&E team randomly selected two new target sites in Gegharkunik marz. Thus, the follow-up assessment sample consisted of 14 target and 12 comparison sites (Table 1), while the baseline sample consisted of 12 target and 12 comparison sites.

**Table 1. PHC facilities (target and comparison groups), Zone 2 follow-up**

Marz	Facility	
	Target site	Comparison site
<b>Kotayk</b>	1. Zar ambulatory	1. Akunq FAP
	2. Kaputan ambulatory	2. Hatsavan FAP
	3. Katnaghbyur FAP	3. Voghjaberd FAP
	4. Jraber FAP	4. Mrgashen ambulatory
	5. Saralanj FAP	
	6. Teghenik FAP	
<b>Tavush</b>	7. Tovuz FAP	5. Aygehovit ambulatory
	8. Tsaghkavan FAP	6. Khachardzan FAP
	9. Haghartsin ambulatory	7. Teghut FAP
	10. Hovq FAP	
<b>Gegharkunik</b>	11. Gagarin FAP	8. Ltchashen ambulatory
	12. Chkalovka FAP*	9. Torfavan FAP
	13. Akhpradzor FAP*	10. Aghberq FAP**
	14. Tsovak ambulatory	11. Shorja ambulatory**
		12. Aygut FAP

\*Included in the sample at follow-up – no baseline data

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

Two local interviewers completed 10 clusters (6 for target facilities and 4 for comparisons) in Kotayk marz, two – 9 clusters (4 target and 5 comparison) in Gegharkunik marz, and one – 7 clusters (4 target and 3 comparison) in Tavush 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-

<sup>4</sup> M&E team had to include in the frame of comparison facilities those targeted by other health-related projects, because these projects often had almost universal coverage (e.g. Project NOVA trained almost all rural nurses in Zone 2 marzes) and there was not enough number of rural health facilities uninvolved with other projects to make a selection from.

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.

## **2.2 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 qualities: communication skills and patient-provider relationship)
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.

## **2.3 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. Two interviewers in Kotayk marz, two in Gegharkunik, and one in Tavush 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 June-July 2009. 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

#### 3.1 Administrative/General

Overall, 364 respondents participated in the patient satisfaction follow-up survey. It took 519 attempts to complete 364 interviews (70.1% response rate). The primary reasons for non-response were absence of the respondent (13.7%) or absence of all household members (11.8%). The next frequent reason was incorrect information/address given by PHC facility (3.3%). Respondent's denial or inability to answer were the least common reasons for non-response (0.8% and 0.4%, respectively). Of 364 respondents, 196 were from target facilities and 168 from comparison facilities. Table 2 summarizes socio-demographic characteristics of participants at baseline and follow-up surveys by target and comparison sites.

**Table 2. Socio-demographic characteristics of participants by target and comparison facilities**

	Target		Comparison	
	2007 (n=168)	2009 (n=196)	2007 (n=168)	2009 (n=168)
<b>Mean age in years (n)</b>	44.4 (153)	45.1 (196)	43.1 (163)	46.1 (167)
<b>Level of education, % (n)</b>				
1. School (< 10 years)	22.7 (35)	14.4 (28)	20.2 (33)	16.1 (27)
2. School (10 years)	42.2 (65)	48.7 (95)	46.0 (75)	42.9 (72)
3. Professional/technical (10-13 years)	29.9 (46)	26.2 (51)	28.2 (46)	28.0 (47)
4. Institute /university or postgraduate	5.2 (8)	10.8 (21)	5.5 (9)	13.1 (22)
<b>Gender, % (n)</b>				
Male	22.5 (34)	29.1 (57)	25.9 (42)	22.9 (38)
Female	77.5 (117)	70.9 (139)	74.1 (120)	77.1 (128)
<b>Family's general standard of living, % (n)*</b>				
1. Substantially below average	12.7 (20)	10.7 (21)	21.2 (35)	14.3 (24)
2. Little below average	12.7 (20)	17.3 (34)	16.4 (27)	31.5 (53)
3. Average	54.8 (86)	54.6 (107)	47.9 (79)	44.0 (74)
4. Little above average	15.9 (25)	15.3 (30)	10.9 (18)	8.3 (14)
5. Substantially above average	3.8 (6)	2.0 (4)	3.6 (6)	1.8 (3)

\* Statistically significant difference between target and comparison respondents at follow-up,  $p^5 < 0.05$

At follow-up, the mean age of respondents in the target group was 45.1 (ranging from 17 to 85). Over three-fourth of respondents were females; majority had school or professional/technical education. More than one-third of respondents perceived their family's general standard of living as below average, while only one-tenth as above average; over 60.0% reported 25,000-100,000 drams (\$65-\$260) of average monthly household income. The mean number of people living in a household was 5.0.

Target and comparison groups at both baseline and follow-up were not statistically different from each other in terms of respondents' demographic characteristics (mean age, gender, and educational level). The only statistically significant difference between these groups at

<sup>5</sup> *P-value* is a measure of statistical significance. The p-value represents the probability that a difference between groups happened by chance. An example would be a difference 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 0.01 ( $p = 0.01$ ) means there is a 1 in 100 chance that the result occurred by chance. For most social science research, a p-value of 0.05 or less is considered acceptable.

follow-up was that respondents in the comparison group demonstrated lower perception of their family’s general standard of living than those in the target group. However, these groups reported similar average monthly household income.

### 3.2 Client perceptions of primary health care provider qualities

The respondents were asked a set of 15 questions investigating their opinion about the performance of health care provider (provider qualities) they contacted during their last visit to a primary health care facility. Of these, responses to only two items differed statistically significantly between the target and comparison groups both at baseline and at follow-up. At follow-up, about 14% more respondents from the target sites than from the comparison sites stated that providers seemed “fully” or “to some extent” impatient and about 9% more mentioned that providers gave complete explanations. Almost the same differences were detected at baseline survey (1). Table 3 depicts the responses to this set of questions at the follow-up assessment.

**Table 3. Clients’ perceptions of provider qualities at follow-up, 2009**

Attitude and qualities of a physician/nurse % (n)	Target (n=196)			Comparison (n=168)		
	Yes	To some extent	No	Yes	To some extent	No
Was really attentive to patient	97.4 (189)	2.6 (5)	-	97.6 (164)	2.4 (4)	-
Appeared to enjoy caring for patient	98.0 (192)	2.0 (4)	-	98.2 (164)	1.8 (3)	-
Seemed impatient*	36.3 (70)	16.1 (31)	47.7 (92)	31.9 (53)	6.6 (11)	61.4 (102)
Gave complete explanations*	86.5 (166)	9.9 (19)	3.6 (7)	77.2 (129)	12.0 (20)	10.8 (18)
Talked down to patient	8.8 (17)	6.2 (12)	85.1 (165)	6.0 (10)	3.6 (6)	90.4 (150)
Was not thorough enough	8.2 (16)	13.9 (27)	77.8 (151)	16.0 (26)	6.8 (11)	77.2 (125)
Considered patient’s preferences regarding care	82.5 (160)	13.4 (26)	4.1 (8)	82.2 (134)	14.7 (24)	3.1 (5)
Understood patient when he/she shared his/her problems	94.3 (182)	5.7 (11)	-	92.8 (155)	6.6 (11)	0.6 (1)
Seemed disorganized and flustered	3.6 (7)	3.6 (7)	92.8 (181)	5.5 (9)	1.2 (2)	93.3 (153)
Appeared to be skillful	94.9 (185)	4.6 (9)	0.5 (1)	92.1 (152)	7.3 (12)	0.6 (1)
Treated patient with respect	99.0 (191)	1.0 (2)	-	100.0 (167)	-	-
Explained things in an understandable manner	94.4 (184)	5.6 (11)	-	97.0 (162)	3.0 (5)	-
Made patient to feel free to ask questions	83.5 (162)	12.4 (24)	4.1 (8)	77.8 (130)	15.0 (25)	7.2 (12)
Helped patient to understand his/her illness	94.9 (185)	5.1 (10)	-	94.6 (159)	4.8 (8)	0.6 (1)
Discussed treatment options with patient	88.2 (172)	9.2 (18)	2.6 (5)	87.5 (147)	10.7 (18)	1.8 (3)

\* Statistically significant difference,  $p \leq 0.05$

Table 4 summarizes differences in target and comparison patients’ perceptions from baseline to follow-up. Table 4 demonstrates that more statistically significant improvements were detected in the target group than in the comparison.

**Table 4. Change (%) in clients' perception of provider qualities, from 2007 to 2009**

% change in clients' perception of provider qualities	Target (n=364)	Comparison (n=336)
	Desired reply	Desired reply
1. Was really attentive to patient*,**	7.0	4.8
2. Appeared to enjoy caring for patient*,**	5.9	7.2
3. Seemed impatient (change in the % of "no" reply)	4.2	2.3
4. Gave complete explanations*	7.5	0.7
5. Talked down to patient (change in the % of "no" reply)	4.7	3.3
6. Was not thorough enough (change in the % of "no" reply) *,**	15.5	10.5
7. Considered patient's preferences regarding his/her care	-5.2	-0.5
8. Understood patient when he/she shared his/her problems*	7.3	5.0
9. Seemed disorganized and flustered (change in the % of "no" reply)*,**	6.4	7.9
10. Appeared to be skillful	3.2	4.1
11. Treated patient with respect*,**	3.9	6.6
12. Explained things in an understandable manner**	1.7	12.5
13. Made patient to feel free to ask questions*	9.9	0.6
14. Helped patient to understand his/her illness**	2.3	9.1
15. Discussed treatment options with patient	6.0	7.4

\* Statistically significant difference in target respondents,  $p \leq 0.05$

\*\* Statistically significant difference in comparison respondents,  $p \leq 0.05$

A summative score, which included all 15 variables, was computed. A score of "2" was given to each positive (desired) reply, "1" to "to some extent" reply, and "0" to negative (undesired) reply. The summative score was divided by the number of items in the scale resulting in a maximum possible score of 2.0. As shown in Table 5, the mean score was statistically significantly higher at follow-up compared to baseline in both target and comparison groups (1.83 vs. 1.75,  $p=0.001$  in the target group and 1.83 vs. 1.76,  $p=0.01$  in the comparison group).

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 in both groups, statistically significantly more respondents were satisfied with their provider's qualities at follow-up compared to baseline (97.8% vs. 87.0% in the target group,  $p=0.000$  and 97.4% vs. 85.3% in the comparison group,  $p=0.000$ ).

The observed improvements in the comparison facilities could be explained by the fact that two-thirds of these sites were targeted by other projects (Project NOVA, World Vision and United Methodist Committee of Relief) during the same period. Another possible explanation is that some comparison sites (especially ambulatories) were influenced with PHCR project activities, many of which are country-wide rather than target-specific.

**Table 5. Clients' satisfaction with provider qualities**

Satisfaction with provider qualities	Target		Comparison	
	2007	2009	2007	2009
Score, mean (SD)*, **	1.75 (0.26)	1.83 (0.12)	1.76 (0.28)	1.83 (0.14)
Proportion satisfied, % (n)*, **	87.0 (114)	97.8 (182)	85.3 (122)	97.4 (149)

\* Statistically significant difference between baseline and follow-up for target group,  $p < 0.05$

\*\* Statistically significant difference between baseline and follow-up for comparison group,  $p < 0.05$

### 3.3 Client perceptions of non-provider aspects of care

A set of questions exploring clients' perceptions regarding non-provider aspects of care received at the last visit was asked (Table 6). At baseline, target and comparison patients' responses to these items were statistically comparable to each other. Since baseline, the percentage of those who reported paying the provider for received care decreased statistically significantly in both target and comparison groups (from 11.0% to 3.6% in the target group and from 16.6% to 6.5% in the comparison group,  $p < 0.01$  for both).

A lower percentage of the target group respondents mentioned at follow-up that people unrelated to them were present during their visit (29.4% vs. 18.1%,  $p = 0.01$ ). In the comparison group no positive change took place in this respect.

For both groups, no statistically significant changes were observed for aspects of care such as "waiting too long before receiving care", "confidentiality of care", or "receiving free of charge or discounted medicine during last visit"<sup>6</sup>. Fewer comparison group respondents mentioned difficulties to make an appointment with provider at follow-up compared to baseline (10.4% vs. 4.2%,  $p < 0.05$ ), while for the target respondents no statistically significant difference was documented for this aspect of care.

The percentage of target respondents who received health education materials to read during the last visit decreased statistically significantly (from 70.8% to 59.0%,  $p = 0.015$ )<sup>7</sup>. This percentage slightly (insignificantly) decreased among comparison group respondents as well.

Much fewer respondents in the target group assessed clinic conditions (renovation, equipment, and supplies) as unsatisfactory at follow-up compared to baseline (42.1% vs. 3.1%,  $p = 0.000$ ). For the comparison group respondents, the observed decrease was less extensive but still significant (35.3% at baseline vs. 21.6% at follow-up,  $p < 0.05$ ). In both groups, the proportion of those assessing cleanliness of the clinic at the time of the last visit as unsatisfactory decreased statistically significantly (from 10.9% to 2.6% in the target group and from 7.8% to 1.2% in the comparison group,  $p < 0.01$  for both).

<sup>6</sup> This question has a limitation: it was asked to all respondents rather than to those eligible for receiving free or discounted medicine. Thus, the responses to this item are difficult to interpret.

<sup>7</sup> Zone 2 facilities received the set of PHCR Project-developed public education brochures in 2008 and were instructed to actively/quickly distribute it among served households, so that by the time of this assessment in summer 2009, all these brochures were possibly already distributed.

**Table 6. Clients' perceptions of non-provider aspects of care**

	2007		2009	
	Target (n=168)	Comparison (n=168)	Target (n=196)	Comparison (n=168)
	Yes (%)	Yes (%)	Yes (%)	Yes (%)
You had to wait too long before receiving care	11.5	10.3	8.7	8.4
It was difficult for you to make an appointment with the provider**	6.5	10.4	6.2	4.2
People unrelated to you were present during your visit*	29.4	28.8	18.1	24.4
You received health education materials for reading*	70.8	60.0	59.0	55.1
You paid the provider for the care you received*,**	11.0	16.6	3.6	6.5
Do you think information you shared about yourself with the provider will be kept confidential?	69.9	62.8	67.3	67.3
Could you get all the medicines prescribed during your last visit?*	56.5	62.0	67.9	62.5
Did you receive free of charge or discounted medicine during your last visit?	41.4	47.3	46.4	43.1
	<b>Unsatisfactory (%)</b>	<b>Unsatisfactory (%)</b>	<b>Unsatisfactory (%)</b>	<b>Unsatisfactory (%)</b>
How would you assess the cleanliness of the clinic at the time of your last visit?*,**	10.9	7.8	2.6	1.2
How would you assess the clinic conditions (renovation, equipment) at the time of your last visit?*,**,†	42.1	35.3	3.1	21.6

\* Statistically significant difference between baseline and follow-up for target group,  $p < 0.05$

\*\* Statistically significant difference between baseline and follow-up for comparison group,  $p < 0.05$

† Statistically significant difference between target and comparison groups at follow-up,  $p < 0.05$

At follow-up, the only statistically significant difference between the target and comparison groups was their perception of clinic conditions (renovation, equipment, supplies): considerably fewer respondents in the target group than in the comparison group perceived it as unsatisfactory (3.1% vs. 21.6%,  $p=0.000$ ).

Table 7 summarizes the change in proportion of desirable responses regarding non-provider aspects of care among the target and comparison respondents from baseline to follow-up. For the target respondents, significant positive changes were observed for 5 items (of 10) and for the comparison respondents – for 3. The highest desired significant change in the target group was detected for assessment of physical conditions of the clinic at the time of respondent's last visit: about 44% more respondents considered clinic conditions as satisfactory at follow-up compared to baseline.

**Table 7. Change (%) in clients' perceptions of non-provider aspects of care, from 2007 to 2009**

Non-provider aspects of care at the clinic, % change	Target (n=358)	Comparison (n=307)
	Desirable	Desirable
You had to wait too long before receiving the care	2.8	1.9
It was difficult for you to make an appointment with the provider**	0.3	6.2
People unrelated to you were present during your visit*	11.3	4.4
You received health educational materials for reading*	-11.8	-4.9
You paid provider for received care*,**	7.4	10.1
Do you think the information you shared about yourself with the provider will be kept confidential	-2.6	4.5
Could you get all the medicines prescribed during your last visit*	11.4	0.5
Did you receive free of charge or discounted medicine during your last visit	5.0	-4.2
	Satisfactory	Satisfactory
How would you assess the cleanness of the clinic at the time of your last visit*,**	13.7	7.3
How would you assess the clinic conditions (renovation, equipment, supplies) at the time of your last visit*	44.4	7.2

\*Statistically significant difference in target respondents,  $p < 0.05$

\*\*Statistically significant difference in comparison respondents,  $p < 0.05$

Based on the set of variables mentioned above, the M&E team calculated a summative score similar to the score calculated for the perceptions of provider qualities. The mean score for the target group statistically significantly increased from 1.50 (SD<sup>8</sup> 0.33) at baseline to 1.69 (SD 0.28) at follow-up,  $p=0.000$ . The mean score statistically significantly increased in the comparison group as well: from 1.52 (SD 0.41) to 1.61 (SD 0.33). The extent of improvement of this score, however, was significantly higher in the target group, resulting in a statistically significant difference between the groups at follow-up (1.69 in the target group vs. 1.61 in the comparison,  $p=0.018$ ), while at baseline the groups were identical. This suggests effectiveness of the project activities in the target sites. The summative score was recoded into an ordinal variable, which grouped respondents scoring  $\geq 1.5$  into "satisfied" category and respondents scoring less than 1.5 into "not satisfied." The same differences were highlighted through this indicator: the proportion of satisfied with non-provider aspects of care increased significantly in both groups, but this improvement was bigger in the target group, and the latter statistically significantly differed from the former (81.2% vs. 68.3%,  $p=0.007$ ). Table 8 summarizes respondents' satisfaction with non-provider aspects of care.

**Table 8. Clients' satisfaction with non-provider aspects of care**

Satisfaction with non-provider aspects of care*,**, †	Target		Comparison	
	2007	2009	2007	2009
Mean score (SD)	1.50 (0.33)	1.69 (0.28)	1.52 (0.41)	1.61 (0.33)
Proportion satisfied, % (n)	56.9 (78)	81.2 (155)	59.9 (91)	68.3 (112)

\* Statistically significant difference between baseline and follow-up for target group,  $p < 0.05$

\*\* Statistically significant difference between baseline and follow-up for comparison group,  $p < 0.05$

† Statistically significant difference between target and comparison groups at follow up,  $p < 0.05$

<sup>8</sup> Standard deviation - a statistic that shows 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-shaped curve is relatively flat, that means there is a relatively large standard deviation.

In both groups, the proportion of those who intended referring to the same provider with similar problem increased statistically significantly (from 89.3% to 94.9% for the target respondents and from 84.4% to 94.0% for the comparison respondents),  $p < 0.05$  for both. At follow-up, the groups were not different in terms of proportion of those who would either refer to the same provider again or who would recommend the same provider to friends/relatives. The overall assessment of care received at the last visit was also identical in both groups. No significant changes were observed in the target group with regard to recommending the provider to friends/relatives or overall assessment of care. The proportion of those who positively responded to these items was very high in both groups (Table 9).

**Table 9. Overall perception of provider and care**

	2007		2009	
	Target (n=168)	Comparison (n=168)	Target (n=196)	Comparison (n=168)
<b><i>Would you again refer to the same provider if you had a similar problem?*,**</i></b>				
Yes	89.3 (142)	84.4 (141)	94.9 (186)	94.0 (158)
No	5.7 (9)	5.4 (9)	1.0 (2)	1.2 (2)
Don't know	5.0 (8)	10.2 (17)	4.1 (8)	4.8 (8)
<b><i>Would you recommend the same provider to your friends and relatives?**,†</i></b>				
Yes	88.1 (141)	79.8 (134)	90.3 (177)	91.1 (153)
No	5.0 (8)	7.1 (12)	0.5 (1)	1.8 (3)
Don't know	6.9 (11)	13.1 (22)	9.2 (18)	7.1 (12)
<b><i>Overall, how would you assess the care you received in the clinic during your last visit?**,**</i></b>				
Excellent	34.8 (55)	34.1 (57)	30.8 (60)	29.9 (49)
Good	43.0 (68)	35.3 (59)	52.8 (103)	51.8 (85)
Fair	19.0 (30)	28.7 (48)	15.9 (31)	18.3 (30)
Poor	3.2 (5)	1.8 (3)	0.5 (1)	-

\* Statistically significant difference between baseline and follow-up for target group,  $p < 0.05$

\*\* Statistically significant difference between baseline and follow-up for comparison group,  $p < 0.05$

### 3.4 Client suggestions for improvement of care

Table 10 shows the distribution of responses to the question about the three measures that a patient would consider the most important to improve services at PHC facilities. Several response options were added in the follow-up instrument. The most frequently mentioned suggestion in both groups at baseline and follow-up was improving free of charge drug supplies (77.8% in the target group at follow-up), followed by increasing the salary of providers (48.5% in the target group at follow-up). The next frequent suggestion at follow-up was increasing the professional level of providers (35.6% in the target group). Other common responses in the target group were “to buy necessary equipment” (29.5%), “to increase space” (21.8%), and “to increase the frequency of home visits” (20.7%). The distribution of responses in the comparison group was quite similar.

Several statistically significant changes have occurred in respondents' suggestions since baseline. In the target group, they mentioned significantly less frequently the response options “to increase space”, “to make doctor regularly available”, “to improve hygiene/cleanliness”, “to increase working hours”, and “to supervise providers”. Comparison respondents also noted less frequently the necessity of making doctors regularly available and

improving hygiene/cleanliness of the facility. These could serve as indirect evidences of improved services in the areas where statistically significant changes took place.

**Table 10. Client suggestions to improve care**

Three most important measures to improve the services % (n)	Target		Comparison	
	2007 (n=168)	2009 (n=196)	2007 (n=168)	2009 (n=168)
Improve free of charge drug supplies	69.6 (110)	77.8 (151)	77.8 (130)	71.7 (119)
Increase salary of providers	51.3 (81)	48.5 (94)	49.7 (83)	44.6 (74)
Increase professional level of providers	29.1 (46)	35.6 (69)	31.1 (52)	25.3 (42)
Buy necessary equipment	29.1 (46)	29.5 (57)	32.9 (55)	32.5 (54)
Increase space*	42.4 (67)	21.8 (42)	37.7 (63)	32.5 (54)
Increase the frequency of home visits <sup>†</sup>		20.7 (40)		18.6 (31)
Make doctor regularly available*,**	25.3 (40)	16.1 (31)	33.5 (56)	18.1 (30)
Provide a telephone to the facility <sup>†</sup>		14.4 (28)		17.3 (29)
Improve hygiene/cleanness*,**	32.3 (51)	11.4 (22)	25.7 (43)	11.4 (19)
Eliminate informal payments <sup>†</sup>		10.9 (21)		7.2 (12)
Involve community in supervision	9.5 (15)	7.3 (14)	10.8 (18)	10.8 (18)
Increase working hours of the clinic*	13.3 (21)	5.7 (11)	7.2 (12)	6.0 (10)
Supervise providers*	13.9 (22)	0.5 (1)	10.2 (17)	6.6 (11)

\* Statistically significant difference between baseline and follow-up for target group,  $p < 0.05$

\*\* Statistically significant difference between baseline and follow-up for comparison group,  $p < 0.05$

<sup>†</sup> The question was changed/added at follow-up

### 3.5 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 the overall care received both at baseline and at follow-up. As to the non-provider aspects of care, the target respondents were statistically significantly more satisfied with this at follow-up than the comparison respondents (Table 11). The satisfaction levels with provider qualities 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. The same tendency was detected in Zone 1 communities (12).

**Table 11. Baseline and follow-up satisfaction with care by target and comparison facilities**

	Target		Comparison	
	2007	2009	2007	2009
<b>Satisfaction with provider qualities*</b>				
Satisfied (%)	87.0	97.8	85.3	97.4
Score: mean (SD)	1.75 (0.3)	1.83 (0.1)	1.76 (0.3)	1.83 (0.1)
<b>Satisfaction with non-provider aspects of care **,**</b>				
Satisfied (%)	56.9	81.2	59.9	68.3
Score: mean (SD)	1.50 (0.3)	1.69 (0.3)	1.52 (0.4)	1.61 (0.3)
<b>Overall assessment of care received (%)<sup>†</sup></b>				
Excellent/Good	77.8	83.6	69.4	81.7
Fair/Poor	22.2	16.4	30.5	18.3

\*Statistically significant difference between 2007 and 2009 for both groups,  $p < 0.05$

\*\*Statistically significant difference between target and comparison groups in 2009,  $p < 0.05$

<sup>†</sup> Statistically significant difference in comparison respondents between 2007 and 2009,  $p < 0.05$

Although approximately 95% of clients in the target group and 94% in the comparison group stated that they would visit the same provider again in case of having a similar problem, when asked a similar question focusing on facilities, 27.5% of the respondents (50 people) in the target group and 27.7% (44 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 correlated but were far from being parallel. A similar picture was observed in Shirak and Lori marzes (12), meaning that other factors beyond the patient-provider interaction or provider qualities (such as non-provider aspects of care) could influence a patient's decision to visit a facility.

The mean waiting time at PHC facilities for seeing the provider was 6.3 minute (SD 8.1) in the target group and 13.3 minute (SD 60.1) in the comparison group. The difference was not statistically significant because of big standard deviation in the comparison group due to three outliers mentioning too long waiting times (180, 240, and 720 minutes). These three people were among those who also reported waiting too long before receiving care at the last visit to a PHC facility.

The respondents were asked about reasons for their last visit. The vast majority of the respondents (357 or 98.1%) answered this question. The main reason mentioned by about 80% of them was illness. Among them, one-fifth did not specify their illness and the others mentioned the following conditions (in a descending frequency): hypertension, joint and back pain, headache, child diseases, cardiac problems, diabetes, allergy, eye conditions, and tonsillitis. One-fifth of all respondents mentioned reasons for their last visit somewhat related to prevention: need for a check-up/consultation/test or vaccination, with the latter constituting over 36% of all these visits.

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

The M&E team tabulated client satisfaction indicators (satisfaction with provider qualities, satisfaction with non-provider aspects of care, and overall assessment of care received at the last visit) by demographic characteristics of respondents at baseline and follow-up. No association was found between satisfaction and the age of target group respondents at follow-up (Table 12). At baseline, younger respondents were more satisfied with non-provider aspects of care than older ones both in the target group and in the whole sample. No statistically significant associations were found between age groups with respect to satisfaction with provider qualities and overall assessment of care. Increase in satisfaction with care among younger age in target group was statistically significant across all measures and among older age – with respect to provider qualities and non-provider aspects of care, whereas in the comparison group in both age categories statistically significant increase was detected only in satisfaction with provider qualities.

Female respondents were more satisfied with provider qualities and overall care received than male respondents both at baseline and at follow-up (Table 13). No significant between-gender differences were identified with regard to non-provider aspects of care in both 2007 and 2009. For women in the target group statistically significant improvements were observed across all measures and for men - for non-provider aspects of care. In the comparison group, both men and women were more satisfied with provider qualities at follow-up compared to baseline, which was not the case for non-provider aspects of care.

**Table 12. Satisfaction with care by age category**

	2007		2009	
	Younger ( $< 45$ years) (n=83)	Older ( $\geq 45$ years) (n=70)	Younger ( $< 45$ years) (n=93)	Older ( $\geq 45$ years) (n=103)
<b>Target group</b>				
Satisfied with provider qualities (%) <sup>†,‡</sup>	86.3	88.9	97.2	97.9
Satisfied with non-provider aspects of care (%) <sup>*,†,‡</sup>	66.7	43.1	84.3	78.4
Satisfied with overall care at the last visit (%) <sup>†</sup>	73.2	82.1	86.0	81.4
<b>Comparison group</b>	(n=94)	(n=69)	(n=83)	(n=84)
Satisfied with provider qualities (%) <sup>†,‡</sup>	84.3	89.5	97.4	97.4
Satisfied with non-provider aspects of care (%)	64.4	55.6	70.4	65.9
Satisfied with overall care at the last visit (%)	71.3	69.1	81.3	81.9
<b>Whole sample</b>	(n=177)	(n=139)	(n=176)	(n=187)
Satisfied with provider qualities (%) <sup>†,‡</sup>	85.3	89.2	97.6	97.7
Satisfied with non-provider aspects of care (%) <sup>*,†,‡</sup>	65.4	49.6	77.6	72.8
Satisfied with overall care at the last visit (%) <sup>†</sup>	72.2	75.6	83.8	81.6

\*Statistically significant difference between age groups at baseline,  $p < 0.05$

† Statistically significant difference between baseline and follow-up for younger group,  $p < 0.05$

‡ Statistically significant difference between baseline and follow-up for older group,  $p < 0.05$

**Table 13. Satisfaction with care by gender**

	2007		2009	
	Male (n=34)	Female (n=117)	Male (n=57)	Female (n=139)
<b>Target group</b>				
Satisfied with provider qualities (%) <sup>**,†,‡</sup>	86.2	87.9	94.4	99.2
Satisfied with non-provider aspects of care (%) <sup>†,‡</sup>	67.9	52.9	85.5	79.4
Satisfied with overall care at the last visit (%) <sup>*,†,‡</sup>	91.2	72.2	80.7	84.8
<b>Comparison group</b>	(n=42)	(n=120)	(n=38)	(n=128)
Satisfied with provider qualities (%) <sup>*,†,‡</sup>	75.0	91.2	94.6	98.3
Satisfied with non-provider aspects of care (%)	50.0	65.7	68.4	68.5
Satisfied with overall care at the last visit (%) <sup>*,†</sup>	54.8	75.8	86.5	80.8
<b>Whole sample</b>	(n=76)	(n=237)	(n=95)	(n=267)
Satisfied with provider qualities (%) <sup>**,*,†,‡</sup>	80.0	89.6	94.5	98.8
Satisfied with non-provider aspects of care (%) <sup>†,‡</sup>	57.4	59.4	78.5	74.2
Satisfied with overall care at the last visit (%) <sup>*</sup>	71.1	83.0	74.0	82.9

\*Statistically significant difference between genders at baseline,  $p < 0.05$

\*\*Statistically significant difference between genders at follow-up,  $p < 0.05$

† Statistically significant difference between baseline and follow-up among men,  $p < 0.05$

‡ Statistically significant difference between baseline and follow-up among women,  $p < 0.05$

At baseline, educational level of target respondents was negatively associated with assessment of overall care received at the last visit: those with higher education were less satisfied (Table 14). This association was not statistically significant at follow-up. Among comparison group respondents, satisfaction with non-provider aspects of care was not associated with level of education neither at baseline, nor at follow-up.

There was statistically significant positive association between satisfaction with non-provider aspects of care and perceived living standards among both target and comparison group respondents at both baseline and follow-up, with those rating their living standards above average being more satisfied (Table 15). No significant associations were found between reported average household income and all three measures of satisfaction (Table 16).

**Table 14. Satisfaction with care by education category**

	2007				2009			
	School (< 10 years)	School (10 years)	Professional technical (10-13 years)	Institute/ University or post-graduate	School (< 10 years)	School (10 years)	Professional technical (10-13 years)	Institute/ University or post-graduate
<b>Target group</b>	<b>(n=35)</b>	<b>(n=65)</b>	<b>(n=46)</b>	<b>(n=8)</b>	<b>(n=28)</b>	<b>(n=95)</b>	<b>(n=51)</b>	<b>(n=21)</b>
Satisfied with provider qualities (%)	87.1	89.6	85.4	83.3	100.0	97.8	95.7	100.0
Satisfied with non-provider aspects of care (%)	40.6	63.2	56.4	85.7	77.8	85.1	77.1	76.2
Satisfied with overall care at the last visit (%)*	88.2	77.8	69.6	62.5	78.6	86.2	88.2	66.7
<b>Comparison group</b>	<b>(n=33)</b>	<b>(n=75)</b>	<b>(n=46)</b>	<b>(n=9)</b>	<b>(n=27)</b>	<b>(n=72)</b>	<b>(n=47)</b>	<b>(n=22)</b>
Satisfied with provider qualities (%)	85.2	89.4	78.9	100.0	92.3	98.5	97.4	100.0
Satisfied with non-provider aspects of care (%)	56.3	61.8	63.4	71.4	77.8	64.3	66.7	72.7
Satisfied with overall care at the last visit (%)	75.8	66.2	67.4	88.9	85.2	79.4	80.9	86.4
<b>Whole sample</b>	<b>(n=68)</b>	<b>(n=140)</b>	<b>(n=92)</b>	<b>(n=17)</b>	<b>(n=55)</b>	<b>(n=167)</b>	<b>(n=98)</b>	<b>(n=43)</b>
Satisfied with provider qualities (%)	86.2	89.5	82.3	93.3	96.2	98.1	96.5	100.0
Satisfied with non-provider aspects of care (%)	48.4	62.4	60.0	78.6	77.8	76.2	72.0	74.4
Satisfied with overall care at the last visit (%)	82.1	71.5	68.5	76.5	81.8	83.3	84.7	76.7

\* Statistically significant association between educational category and satisfaction at baseline,  $p < 0.05$

**Table 15. Satisfaction with care by perceived living standards**

	2007			2009		
	Below average	Average	Above average	Below average	Average	Above average
<b>Target group</b>	<b>(n=40)</b>	<b>(n=86)</b>	<b>(n=31)</b>	<b>(n=55)</b>	<b>(n=107)</b>	<b>(n=34)</b>
Satisfied with provider qualities (%)	83.9	85.5	96.3	96.0	98.1	100.0
Satisfied with non-provider aspects of care (%)*,**	39.4	54.7	85.2	66.7	88.3	82.4
Satisfied with overall care at the last visit (%)	73.0	76.7	83.9	76.4	85.8	88.2
<b>Comparison group</b>	<b>(n=62)</b>	<b>(n=79)</b>	<b>(n=24)</b>	<b>(n=77)</b>	<b>(n=74)</b>	<b>(n=17)</b>
Satisfied with provider qualities (%)	82.7	91.2	81.0	97.1	98.5	93.8
Satisfied with non-provider aspects of care (%)*,**	44.6	68.5	76.2	58.7	79.2	64.7
Satisfied with overall care at the last visit (%)	63.9	72.2	75.0	76.7	86.5	82.4
<b>Whole sample</b>	<b>(n=102)</b>	<b>(n=165)</b>	<b>(n=55)</b>	<b>(n=132)</b>	<b>(n=181)</b>	<b>(n=51)</b>
Satisfied with provider qualities (%)	83.1	88.3	89.6	96.7	98.2	97.9
Satisfied with non-provider aspects of care (%)*,**	42.7	61.5	81.3	62.0	84.6	76.5
Satisfied with overall care at the last visit (%)	67.3	74.5	80.0	76.6	86.1	86.3

\* Statistically significant association between living standards and satisfaction at baseline,  $p < 0.05$

\*\* Statistically significant association between living standards and satisfaction at follow-up,  $p < 0.05$

**Table 16. Satisfaction with care by household income at follow-up, 2009**

	Average household income			
	< 25,000 drams	25,000-50,000 drams	51,000-100,000 drams	≥ 101,000 drams
<b>Target group</b>	<b>(n=39)</b>	<b>(n=72)</b>	<b>(n=50)</b>	<b>(n=21)</b>
Satisfied with provider qualities (%)	94.4	98.6	98.0	100.0
Satisfied with non-provider aspects of care (%)	65.8	88.9	89.4	71.4
Satisfied with overall care at the last visit (%)	84.6	85.9	80.0	76.2
<b>Comparison group</b>	<b>(n=47)</b>	<b>(n=57)</b>	<b>(n=39)</b>	<b>(n=8)</b>
Satisfied with provider qualities (%)	95.1	98.1	97.1	100.0
Satisfied with non-provider aspects of care (%)	66.7	64.3	68.4	62.5
Satisfied with overall care at the last visit (%)	84.1	80.4	71.8	100.0
<b>Whole sample</b>	<b>(n=86)</b>	<b>(n=129)</b>	<b>(n=89)</b>	<b>(n=29)</b>
Satisfied with provider qualities (%)	94.8	98.4	97.6	100.0
Satisfied with non-provider aspects of care (%)	66.3	78.1	80.0	69.0
Satisfied with overall care at the last visit (%)	84.3	83.5	76.4	82.8

**Table 17. Satisfaction with care by marz**

	2007			2009		
	Gegharkunik	Kotayk	Tavush	Gegharkunik	Kotayk	Tavush
<b>Target group</b>	<b>(n=28)</b>	<b>(n=84)</b>	<b>(n=56)</b>	<b>(n=56)</b>	<b>(n=84)</b>	<b>(n=56)</b>
Satisfied with provider qualities (%)	73.7	90.9	87.0	92.8	96.2	100.0
Satisfied with non-provider aspects of care (%)*,**	63.6	77.9	23.4	82.1	72.0	94.3
Satisfied with overall care at the last visit (%)	70.4	84.0	73.2	78.6	85.7	85.5
<b>Comparison group</b>	<b>(n=70)</b>	<b>(n=56)</b>	<b>(n=42)</b>	<b>(n=70)</b>	<b>(n=56)</b>	<b>(n=42)</b>
Satisfied with provider qualities (%)	83.3	85.1	88.9	97.1	100.0	93.8
Satisfied with non-provider aspects of care (%)	53.2	63.5	65.8	71.4	60.0	74.4
Satisfied with overall care at the last visit (%)	62.9	72.7	76.2	87.1	78.6	76.3
<b>Whole sample</b>	<b>(n=98)</b>	<b>(n=140)</b>	<b>(n=98)</b>	<b>(n=126)</b>	<b>(n=140)</b>	<b>(n=98)</b>
Satisfied with provider qualities (%)	81.0	88.5	87.8	97.6	97.7	97.6
Satisfied with non-provider aspects of care (%)*,**	56.0	71.7	42.4	76.2	67.2	85.9
Satisfied with overall care at the last visit (%)	64.9	79.2	74.5	83.3	82.9	81.7

\* Statistically significant difference between marzes at baseline,  $p < 0.05$

\*\* Statistically significant difference between marzes at follow-up,  $p < 0.05$

The tabulation of variables by marz revealed statistically significant difference between marzes only with regard to non-provider aspects of care. Compared to Gegharkunik and Kotayk, Tavush had significantly lower proportion of respondents satisfied with non-provider aspects of care at baseline, and significantly higher proportion of those at follow-up (Table 17).

## **4. Conclusions and Recommendations**

Several significant findings with implications for guiding further development of PHC-related health projects and evaluating the impact of PHCR Project emerged from this assessment.

### **1. Patient satisfaction levels increased in both target and comparison groups across all measures.**

**Patients from both target and comparison sites are now more satisfied with health care they receive.** Respondents from both sites were more likely to report improved satisfaction with their care and to rate it as excellent or good at follow-up (83.6% vs. 77.8% in the target group and 81.7% vs. 69.4% in the comparison group). With this respect, the groups were not statistically significantly different at follow-up.

**Patients from both target and comparison sites are more satisfied with primary care provider qualities.** The proportion of patients satisfied with primary care provider qualities increased statistically significantly in both target and comparison groups (97.8% vs. 87.0% in the target group and 97.4% vs. 85.3% in the comparison group). The groups were not statistically significantly different in terms of this score both at baseline and at follow-up.

**Patients from both target and comparison sites are now more satisfied with non-provider aspects of care. This improvement is significantly bigger in the target group.** Statistically significant difference was detected between baseline and follow-up level of satisfaction with non-provider aspects of care in both target and comparison respondents (81.2% vs. 59.6% in the target group and 68.3% vs. 59.9% in the comparison group). While this increase was significant in both groups, it was much more extensive in the target group, which resulted in a statistically significant difference between the two groups at follow-up (81.2% in target group vs. 68.3% in comparison). Among the constituents of non-provider aspects of care, the most impressive improvement (44% increase) was observed in proportion of those target respondents being satisfied with clinic conditions (renovation, equipment, and supplies).

### **2. Some areas of PHC provision need further improvement**

**Patients refer to PHC facilities for curative rather than preventive purposes.** About 80% of the respondents stated illness as the reason for their last visit. Only one-fifth of the respondents applied to clinics for somewhat preventive reasons, and vaccination need constituted 36% of the latter.

**Consistently, patients are more satisfied with patient-provider interactions or provider qualities than with non-provider aspects of care.** This tendency is evident across all studied marzes. If satisfaction with providers is getting close to universal, almost one-fifth of target respondents are still unsatisfied with non-provider aspects of care. Therefore, while providers are a key target, the whole system needs to be continuously addressed to reinforce balanced improvements.

**Issues of privacy and confidentiality of health-related information remain problematic.** At follow-up, almost one-third of the target group respondents were not sure that the information they shared with providers will be kept confidential and almost one-fifth stated

that the privacy of their visit was violated. While the latter improved statistically significantly since baseline, the former remained unchanged.

**Patients suggest increasing salaries and the professional level of providers.** Increasing free drug supplies, increasing salaries and the professional level of providers, and buying necessary equipment were the most frequent suggestions that the respondents made for improving care in PHC facilities at follow-up assessment. Meanwhile, suggestions for increasing space and improving hygiene/cleanliness of the facilities were made significantly less frequently by the target group respondents at follow-up, which could serve as an indirect evidence of improved facility conditions.

**Some differences exist across marzes.** Compared to target respondents from Kotayk and Gegharkunik, Tavush respondents were statistically significantly less satisfied with non-provider aspects of care at baseline and statistically significantly more satisfied with it at follow-up. This immense change detected in Tavush marz indicates the particular importance of project's interventions in the most disadvantaged areas.

**Satisfaction levels and some demographic features are related.** Statistically significant positive association was found between perceived living standards and satisfaction with non-provider aspects of care, with those rating their living standards above average being more satisfied. Younger respondents also tended to be more satisfied with non-provider aspects of care than older ones. Female respondents were more satisfied with provider qualities and overall care than male respondents (it should be noted that the vast majority of providers at the assessed facilities are women).

An interesting finding of this study is that at the follow-up assessment, the target and comparison groups demonstrated almost equal progress in satisfaction measures. They were different from each other only with respect to satisfaction with non-provider aspects of care. This summative measure reflecting PHCR project-related target-specific activities such as renovation, furnishing, equipping, and some management-related functions, was significantly higher in the target group. The other two measures (overall assessment of care and satisfaction with provider qualities) were similar in both groups. Nevertheless, the follow-up study in Zone 1 (Shirak and Lori) communities revealed significant increase across all three satisfaction measures only among the target group respondents, while no statistically significant changes were documented in the comparison group (12). Presumably, the observed improvements in the comparison facilities are due to the fact that Zone 2 communities were heavily and almost universally involved in PHC-related programs with different international organizations and it was not possible to select intact comparison sites. As a result, two-thirds of the comparison sites in Zone 2 were targeted by other projects (Project NOVA, World Vision and United Methodist Committee of Relief). Another possible explanation is that this assessment took place during the fourth year of the PHCR project, many activities of which were countrywide rather than target-specific. Thus, the comparison sites were probably covered with these activities by the time of the follow-up assessment.

For future actions, it is important to consider clients' suggestions for improving care listed during baseline and follow-up assessments. Suggestions mentioned most often were improving free drug supply; increasing salaries, professional level, and regular availability of providers; and providing PHC facilities with necessary equipment.

Measures to shift the focus of PHC services from mainly curative to mainly preventive care remain one of the most important areas to concentrate on in future undertakings.

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## 5. Appendices

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

