Project Final Evaluation Report, 2012

"Strengthening Primary Health Care Project", 2008-2012

Norwegian Lutheran Mission in Mongolia

CONTENT

NAMES OF TABLES AND GRAPHS

LIST OF ABBREVIATIONS AND ACRONYMS

Epi-Info 6.0	Epidemiological software package
ESG	Electrosonography
FHC	Family health center
GO	Governor's Office
HC	Health center
HSUM	Health Sciences University of Mongolia
MC	Medical College
MCC	Information, education and communication
MDGs	Millenium Development Goals
MCHNC	Maternal and Child National Center
MNS	Mongolian national standard
MOGA	Mongolian Obstetrics and Gynecological Association
MOH	Ministry of Health
NLM	Norwegian Lutheran Mission
NLM-M	Norwegian Lutheran Mission-Mongolia
NORAD	Norwegian International Development Agency
PH	Public health
PHCS	Primary health care strengthening
RH	Reproductive health
SHC	Soum health center
SPSS-15.0	Statistical Package for Social Sciences
TV	Television

FOREWORD

Norwegian Lutheran Mission (NLM) is an international NGO, which implements development activities in 13 different countries of the world. NLM- Mongolia, (NLM-M) was officially registered in Mongolia in 1994 and has since been implementing activities in the health field as well as other areas. NLM-M decided to implement Strengthening Primary Heath Care Project, (SPH), based on an initiative from the Ministry of Health and financed by NLM. The project was based on NLM-M's previous experiences from the successful implementation of "Health Development Project" in Darkhan and Selenge aimags from 1998-2008.

In order to implement the project, NLM-M has established a "Memorandum of Understanding" with MOH and Governor's Offices of Khovd, Gobi-Altai and Bayan-Ulgii aimags during 2008-2012. The NORAD foundation (Norwegian International Development Agency) by the Government of Norway is providing 90% of the funding and this is allocated by Norwegian Development support Agency (BN/Digni). The rest is financed by NLM and individual people's support.

The project has supported over 2800 doctors and specialists to attend in continuous postgraduate medical training during 2008-2011 in collaboration with "Ach" Medical University, HSUM and its branch institutions School of Health Technology and Medical College of Gobi-Altai aimag and has been providing assistances in distance learning of medical professionals by supporting the establishment of "Information, Education and Communication" centers in Khovd and Gobi-Altai aimags.

This evaluation has aimed to evaluate the final achievements of the project activities since 2008 and to introduce these to the public. It is pleasant to know that the accessibility and quality of primary health care, the client satisfaction has been improved and that there has been established client friendly service environment for citizens of the remote western area of Mongolia.

I would like to thank to the evaluation team composed of the following professionals:

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CHAPTER ONE.
EVALUATION METHODOLOGY

Norwegian Lutheran Mission has been implementing the "Strengthening Primary Health Care" project from 2008-2012 in Khovd, Gobi Altai and Bayan-Ulgii aimags of the remote western area of Mongolia. The baseline study was done in December 2006 in order to establish a basic tool for rational planning and evaluation of the project and to serve as source of information to the local administration. In accordance with project documents, the midterm evaluation was conducted in October 2010 as a comprehensive assessment of the project implementation; its results and changes in the quality of care.
The project period is now ending and there is a need to conduct a final evaluation. Hence, the final evaluation of the "Strengthening Primary Health Care" project has been performed according to the below listed goals and objectives with technical and financial supports of the NLM.

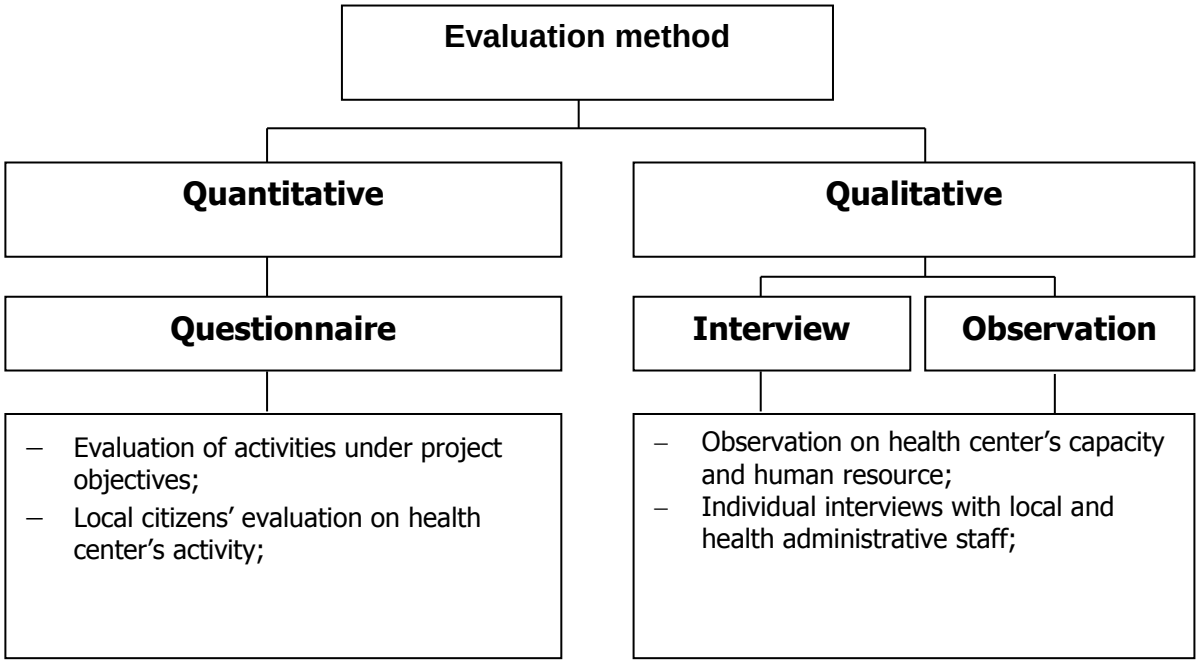
Goal of the evaluation: To evaluate the achievements compared to the project objectives and seek for successes and lessons learned of the "Strengthening Primary Health Care" project. The below objectives were presented to achieve this goal. These are:

1. Assess the structure and level of function of primary health care organizations;
2. Conduct document analysis on project activities and its quarterly reports and policy and legal documents related with strengthening the primary health care;
3. Define the level of participation of the different project stakeholders; local administration, health organizations, volunteer workers and community;
4. State the relations between project outputs, outcomes and effectiveness;
5. Develop recommendations for further actions based on evaluation results and conclusions.

The evaluation scope was family and soum health centers of Khovd, Gobi-Altai and Bayan-Ulgii aimags where the project has been implemented.

The qualitative (individual interviews, observations), documentary (project documents, reports, standards) and quantitative study methods used in the evaluation were based on project goal, objectives and indicators.

Matrix 1 Evaluation tools, 2012



Document review

Analysis were done reviewing "Strengthening Primary Health Care" project documents, local health statistics, planning documents and reports on project activities and monitoring and evaluation documents and other relevant documents. At the beginning of the analysis, issues that needed to be studied by qualitative or quantitative methods were identified.

Quantitative evaluation

Questionnaire survey was conducted among doctors and staff, who working in the project area primary health care organizations to evaluate accessibility and quality of activities that have been implemented by the project.

The knowledge of the local population on health education and project outcomes was also assessed.

Qualitative evaluation

Qualitative methods were used to identify project successes, problems, causes of them, the participation level of project stakeholders (local administration, health professionals, volunteer workers and community), further issues that need to be addressed and sustainability.

Qualitative data were collected using individual interviews with local administrative staff and observation check lists used for doctors and medical professionals' activity.

The following people were covered in the qualitative evaluation. These are:

1. Local governor, officers in charge of health

2. Head of health department, officers in charge
3. Project local coordinator
4. Head and doctors and other staff of family and soum health centers

The following tools and methods used. (Annexes 1-4).

- Observation check list: to define health facility capacity (14 family and soum health centers)
- Individual interview guideline (local and health sector administrative staff)
- Quantitative evaluation (1. Assessment of doctors and medical of the project activities 2. Assessment of local citizens of the family and soum health centers)

Table 1. Justification for evaluation checklist development, 2012

Evaluation method and tool	Used materials
Qualitative evaluation	
Health organization capacity and human resource	Questionnaire developed based on family health center structure and functions standard (MNS 5292:2001).
Local project implementing unit	Observation check list developed based on project planning matrix.
Individual interview	
Quantitative evaluation	
Assessment of doctors and medical of the project activities	Questionnaire developed based on activities under each objective of the project.
Local population	Developed based on project goal, objectives and targets.

Sampling

In the qualitative evaluation 52 people of local project units were involved; administrative staff of governor's office and health organization.

In the quantitative evaluation 340 people from health organization and community were involved (Table 2).

Table 2. Sampling of participants of evaluation, 2012 он

Evaluation methodology	Bayan-Ulgii	Khovd	Gobi-Altai	Total
1. Qualitative evaluation (n=52)				
Health organization capacity and human resource	4	5	5	**14**
Local project implementing unit	1	1	1	**3**
Individual interview	11	19	5	**35**
2. Quantitative evaluation (n=340)				
Assessment of doctors and medical staff to the project activities	30	39	34	**103**
Local population	42	105	91	**238**
3. Document review (project documents and reports)				

Doctors and health organizations staff were assessed project activities by giving scores 1-5 (bad-excellent).

The following questions used to evaluate project outputs, outcomes and effectiveness (Table 3).

Table 3. Evaluation of effectiveness and impacts of the project and main questions, 2012

Indicators	Key information	Main questions
Effectiveness	Information indicating relations between project activities implemented	– Achievements of goal and objectives – Positive and negative factors influenced achievements of project goal and objectives
Efficiency	Quality and quantitative information indicating relations between project goal and outputs	– Were the project activities efficient in terms of cost – Achievements of objectives timely
Impact	Information about positive and negative impacts of project activities	– What actual impacts of project activities to the project beneficiaries – What and how many people have benefited from the project

		– What positive and negative results due to implementation of the project
Relevance	Information indicating relevance and contributions of project goal, objectives and activities with government implementing development policy, strategy and MDGs	– Are the project objectives relevant – Do project activities relate with program goal and objectives
Sustainability	Information about project success	– Is there a capacity of the government to sustainably continue the project activities after project end – Main factors influencing to the sustainability of the project

Above 5 indicators are discussed and included in the report.

Data analysis

Quantitative data entry was used Epi-Info 6.0 and comparative frequencies and statistical significance levels were computed using SPSS-15.0 software and outputs tabulated accordingly.

Qualitative data were analyzed using a classification method. All interviews were coded in accordance with group codes were preliminary developed based due to guidelines. Analysis was done using an explanatory approach based on common and distinctive factors identified through coding. Qualitative data used in the report in a form of citation and explanation.

Limitations of the evaluation

1. Time was limited to collect data, processing and writing a report.
2. Some indicators were difficult to measure the achievements. For instance, output 4 indicators supposed to measure multiple collaborations, but there was not clear how many that would be considered as multiple. Also some of the indicators for measuring organization of seminars and meetings were not clear, i.e. is it enough to have only one meeting or seminar? Therefore, the project needs to consider in future that how quantitative and qualitative indicators could be used precisely to measure what.

CHAPTER TWO.
THE EVALUATION RESULTS

The Evaluation's results are introduced through the following sub-chapters;

2.1. General status of family and soum health centers evaluated
2.2. The family and soum health centers' doctors and medical staff's assessment of the project activities
2.3. The local citizens' assessment of the project activities
2.4. Project effectiveness, efficiency, impact and relevance status.

2.1. General status of family and soum health centers evaluated

Total 14 family and soum health centers of Khovd, Gobi-altai and Bayan-Ulgii aimags were covered in the evaluation. From Khovd and Gobi-Altai there were 5 health centers from each.

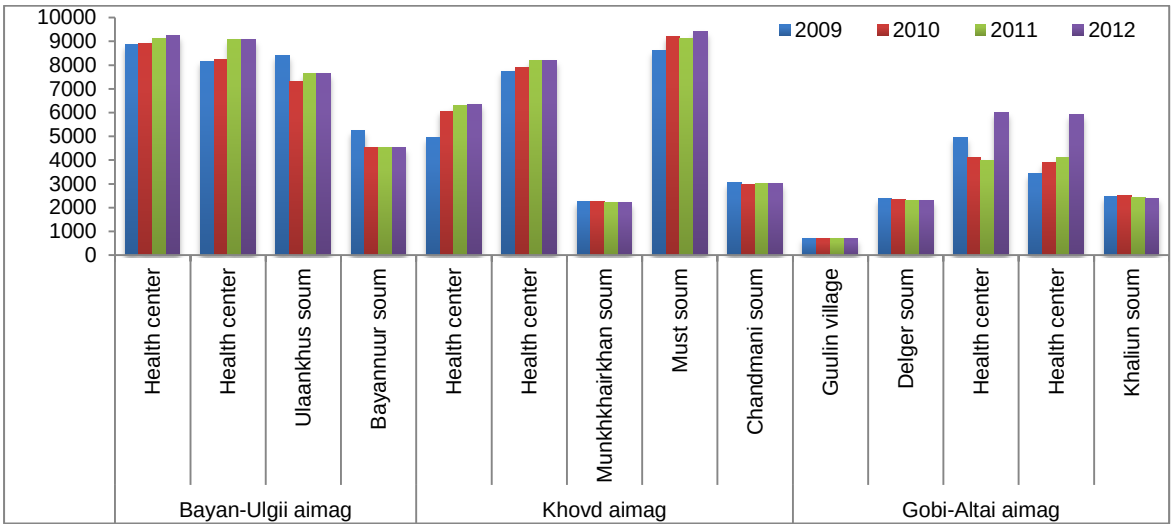
Table 4. Family and soum health centers evaluated by selected indicators, hospital general status, 2012

#	Aimag and soums evaluated	Communication				Rooms have addresses
		Land line telephone	Mobile	Internet	Computer	
	Bayan-Ulgii					
1.	Jansaya FHC	Yes	Yes	Yes	Yes	Yes
2.	Shinager FHC	Yes	Yes	No	Yes	Yes
3.	Ulaanhus SHC	Yes	Yes	Yes	Yes	Yes
4.	Bayannuur SHC	No	Yes	Yes	Yes	Yes
	Khovd					
5.	Rashaant FHC	Yes	Yes	No	Yes	Yes
6.	Baatarkhairkhan FHC	Yes	Yes	Yes	Yes	Yes
7.	Munkhkhairkhan SHC	Yes	No	No	Yes	Yes
8.	Must SHC	No	Yes	No	Yes	Yes
9.	Chandmani SHC	No	Yes	No	Yes	Yes
	Gobi-Altai				Yes	Yes
10.	Enkh-Altai FHC	Yes	Yes	Yes	Yes	Yes
11.	Maral-Altai FHC	Yes	Yes	Yes	Yes	Yes
12.	Guulin Village HC	No	Yes	Yes	Yes	Yes
13.	Delger SHC	No	Yes	No	Yes	Yes
14.	Khaliun SHC	No	Yes	No	Yes	Yes
	All "no"	6 (42.8%)	1 (7.1%)	7(50.0%)	0	0

The standard says that family health center should use all necessary communication types for the services. Thus an availability of communication utilities was assessed. Although 42.8 % (n=6) of health centers did not have land line telephone but majority of them had mobile phones. All of them had computers but 50.0% (n=7) did not have internet access.

Family health centers in the aimag center have regular internet access, whereas the most of soum health centers use a modem for internet access. But family and soum health centers of Khovd aimag don't have internet access. (Table 4).

Graph 1 shows the number of catchment population of health centers during 2009-2012.

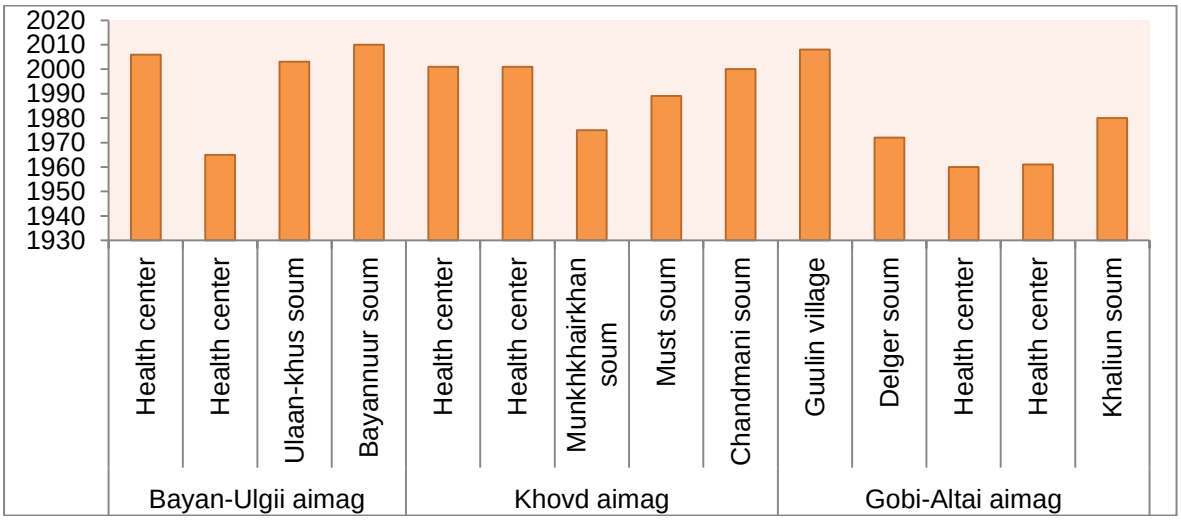


Graph 1. Catchment population numbers of family and soum health centers, 2009-2012

The catchment population of the health centers is increasing year by year. Among aimags evaluated, Bayan-Ulgii has the largest and Gobi-Altai has the smallest catchment population (Graph 1).

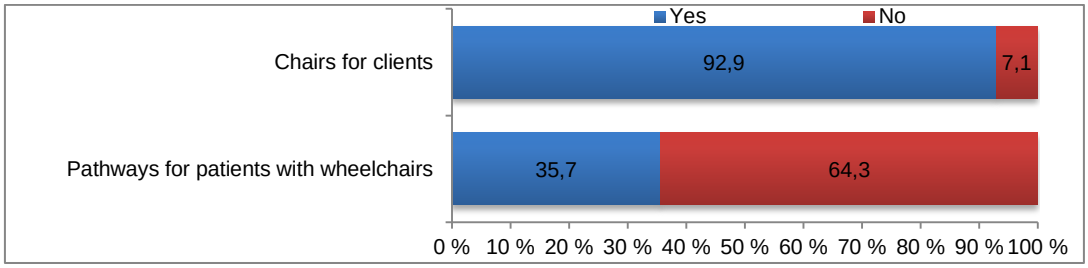
The Mongolian standard for FHC structure and functions (MNS 5292:2001) indicates the FHC should establish client friendly environment. The below will present the evaluation of some indicators of the standard.

FHCs are accommodated in own buildings and work independently. Fifty percent of those (n=7) were quite new buildings since 2000. In Bayan-Ulgii and Khovd aimag's FHCs are in relatively new buildings while buildings of FHCs in Govi-Altai aimag are relatively old or built before 1980 (Graph 2).



Graph 2. Health centers buildings by onset of operation, by aimags, 2012

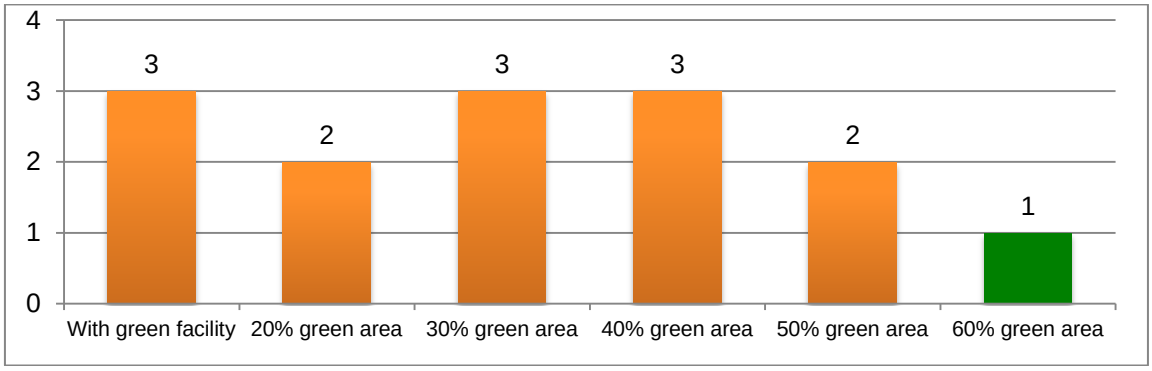
The standards also indicate that waiting area shall be confortable and should have chairs for clients. Among HCs, 92.9 % had chairs for clients. (Graph 3).



Graph 3. Existence of ways for wheelchairs and chairs for clients in the health centers evaluated, 2012

It needs to be emphasized that 64.3 % (9) of HCs don't have special pathways for passengers, wheelchairs and strollers.

Standard indicates that HC should have green or grass area in the 60% of total area. Among evaluated HCs, 21.4 % (3) don't have any green area which are all of Gobi-Altai aimag.



Graph 4. Percentage of green areas in the landscape of health centers, 2012

Although 11 HCs had a green area among evaluated, the only one had a green area as indicated in the standard (60%) and grasses and trees were planted.

The catchment population of the aimag centers lives in average 1-6 km from family health center, whereas people live in soum live far away from health center.

The FHC standard, indicates 1 medical doctor per 1800-2000 population. In Khovd aimag, the population per medical doctor is twice as big as it should be according to the standard.

Table 5. Accessibility of health centers services by selected indicators, 2012

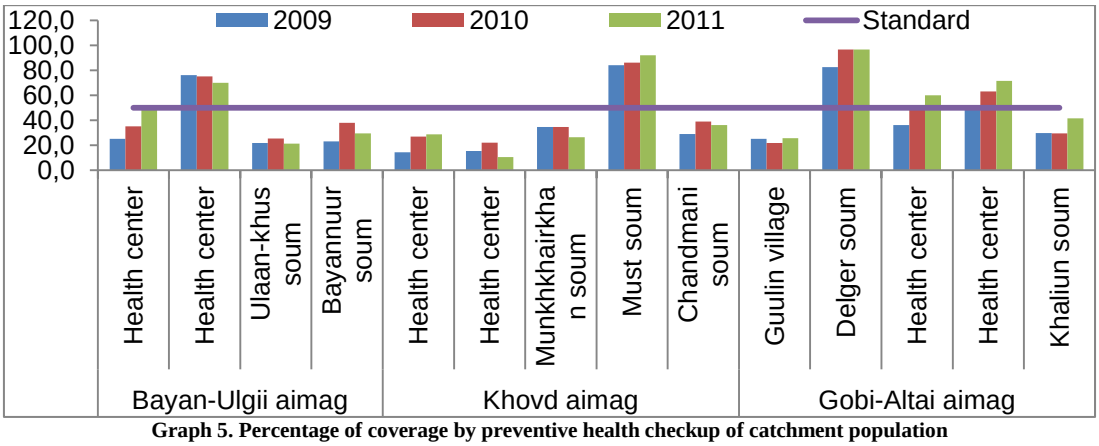
#	Aimag and soums	Catchment area[1]			Number of people per 1 medical doctor[2]	Population health index
		Close	Distant	Average		
	Bayan-Ulgii aimag					
1.	Jansaya FHC	1	6	6	2000	-
2.	Shinager FHC	0.2	5	1	1600	50.0%
3.	Ulaanhus SHC	25	150	75	2547	-
4.	Bayannuur SHC	0.5	110	8	1140	-
	Khovd aimag					
5.	Rashaant FHC	0.5	8	3	3150	42.5%
6.	Baatarkhairkhan FHC	2	3	1.5	4000	-
7.	Munkhkhairkhan SHC	23	58	30	1112	-
8.	Must SHC	10	320	90	821	-

9.	Chandmani SHC	5	140	25	1501	69.0%
	Gobi-Altai aimag					
10.	Enkh-Altai FHC	0.5	8	4	2200	36.0%
11.	Maral-Altai FHC	0.1	10	3	1977	-
12.	Guulin Village HC	5	100	35	703	-
13.	Delger SHC	20	120	55	2300	-
14.	Khaliun SHC	11	125	65	1202	88.4%

[1] Family health center should locate in distance within 30 minutes of walking and by vehicles (MNS: 5292:2011.6.3.2).
[2] 1 medical doctor per 1800-2000 population (MNS: 5292:2011. 5.5.6)

The population health index shall be defined on annual basis but most of the FHCs (9, 64.3%) did not define.

The standard also indicated that preventive health checkup shall cover not less than 50 % of population.



Graph 5. Percentage of coverage by preventive health checkup of catchment population

FHC of Bayan-Ulgii aimag, SHC of Must soum of Khovd aimag and SCH of Delger soum of Gobi-Altai aimag covered their population regarding preventive health checkup above the standard.

The evaluation studied the sufficiency of funding for family and soum health centers to provide services for the population. Budget allocated from top to down and aimag allocating funds to soums considering different criteria including per capita by catchment population, distance, road condition, medicines cost and morbidity pattern as well. The below graph introduces the analysis of 14 health centers budgets.

Table 6. Budget and expenditure of family and soum health centers for 2011

#	**Aimag and soums**	**Total budget** *(thousands tugrugs)*	Salary and incentives	Goods and Materials	Trips	Training	Benefits	Operating cost
	Bayan-Ulgii							
1.	Jansaya FHC	56776247	93.7	0.5	0.4	-	0.3	1.0
2.	Shinager FHC		89.0	1.0	1.0	-	0.3	1.0
3.	Ulaanhus SHC	340968100	59.3	40.5	0.1	-	0.02	-
4.	Bayannuur SHC	212774500	63.3	35.2	0.3	1.1	6.4	-
	Khovd							
5.	Rashaant FHC	44332848	74.7	2.9	1.3	0.4	-	20.1

6.	Baatarkhairkhan FHC	54883080	77.6	2.1	4.4	0.5	-	13.9
7.	Munkhkhairkhan SHC	133695400	63.0	0.9	0.4	1.8	0.1	0.2
8.	Must SHC	178852800	63.7	33.2	0.5	2.5	0.1	-
9.	Chandmani SHC	146449700	50.5	24.9	0.3	2.4	0.1	21.8
	Gobi-Altai							
10.	Enkh-Altai FHC	31118000	92.0	5.4	0.9	1.0	-	0.7
11.	Maral-Altai FHC	27289000	88.4	6.0	1.3	1.3	-	3.1
12.	Guulin Village HC	132176400	47.9	0.2	0.6	-	0.1	1.2
13.	Delger SHC	151091700	63.7	29.1	0.6	2.2	0.3	-
14.	Khaliun SHC	152225300	64.6	28.4	0.6	-	-	0.1

In 2011, in average 47.9-93.7 % of total budget of health centers spent for salary and social insurance premium. Budget for trips and training were relatively less allocated (0.3-2.5%).

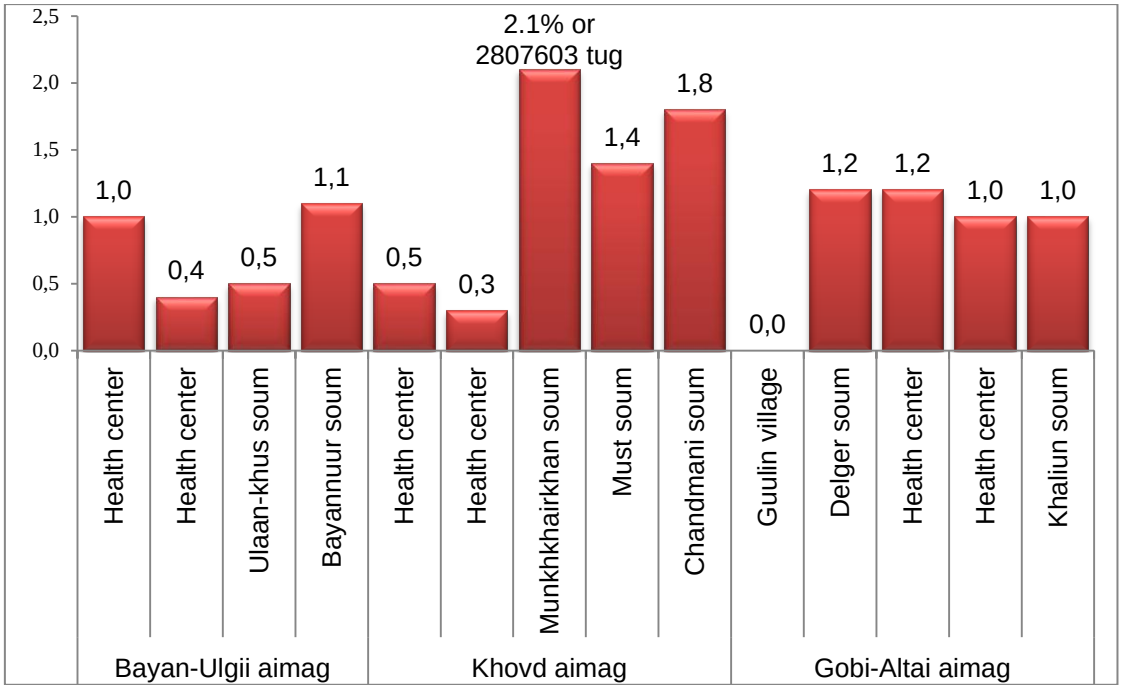
Most of the heads of health centers that were interviewed mentioned that the budget for health center is too less and most of the money is spent for salary and maintenance.

Budget is too low. Last year we spent only 347000 tugrugs for all public health activities, IEC and trainings and we don't have sufficient budget for organizing events and trainings. We receive some equipment from projects and programs implementing in aimag.

Managerial staff, Health center, Gobi-Altai aimag

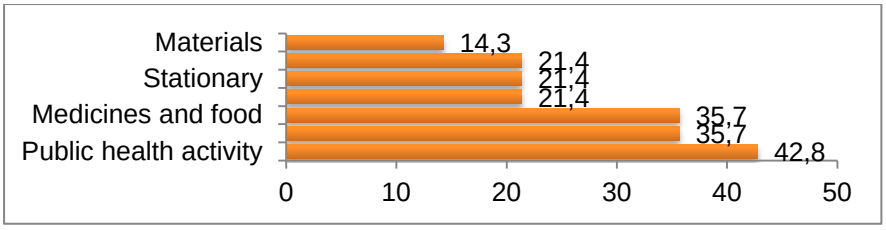
The below graph shows public health expenditure of health centers in 2011.

FHCs and SHCs spent 0.3-2.1 % of budget for training and IEC (Graph 6).



Graph 6. Percentage of health center's budget spent for training and IEC activities in 2011

For the question for required budget, 42.8% (6) answered for public health activities and 35.7 % (5) for petrol (Graph 7).



Graph 7. Percentage of responses of family and soum health centers on required activities need a funding, 2012

Even though most of the funding is spend for salary and incentives, many from the health centers administrations mentioned that they need additional funding for salaries.

Chapter conclusion: Among 14 family and soum health centers that were evaluated, there were insufficient results compare to Mongolian standard for structure and functions of FHCs (MNS 5292:2001).

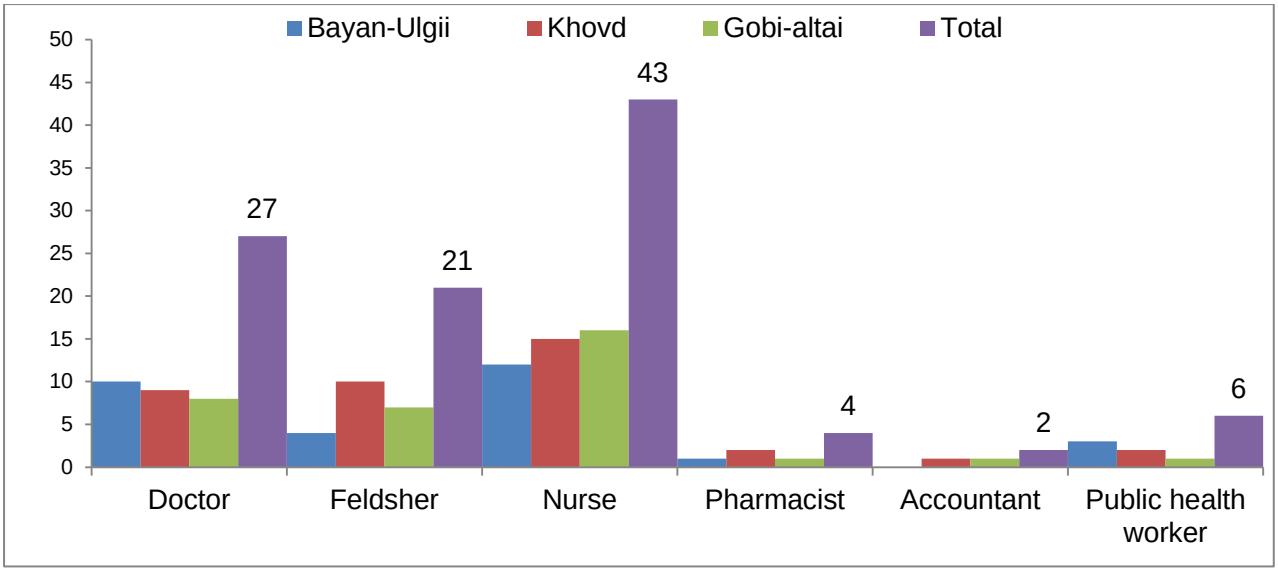
1. Although most family and soum health centers are provided with computers and land line or mobile telephones, the internet use was at an insufficient level.
2. Even though the family and soum health centers have sufficient chairs for clients, there were no special pathways for trolleys and wheelchairs in most of them.
3. Out of all family and soum health centers in the evaluation, 11 of them had green areas but only of them had a green area in accordance with standard (60 % of total area).
4. Each year, the catchment population in the aimags has increased and the number of population per medical doctor was in some health centers of Khovd aimag double compared to the standard.
5. Even though the standard says that family and soum health centers have to estimate population health index in annual basis, 9 family and soum health centers covered in the evaluation did not have this.
6. According to the standard family and soum health centers have to cover not less than 50% of population in the preventive health checkup, this indicator was around 30% in the evaluated family and soum health centers.

2.2. The family and soum health centers' doctors and medical staff's assessment of the project activities

This chapter introduces assessment of local doctors and staff on activities organized by the project during the implementation period.

Average working year of doctors and staff (n=103) covered in the evaluation was 16±10.3 years (min 1 month, max 35 years).

Most of doctors and staff were nurses (43, 41.7%), doctors (27, 26.2%) and feldshers (21, 20.4%) and ratio of doctor per nurse was 2:1 which is in line with standard.

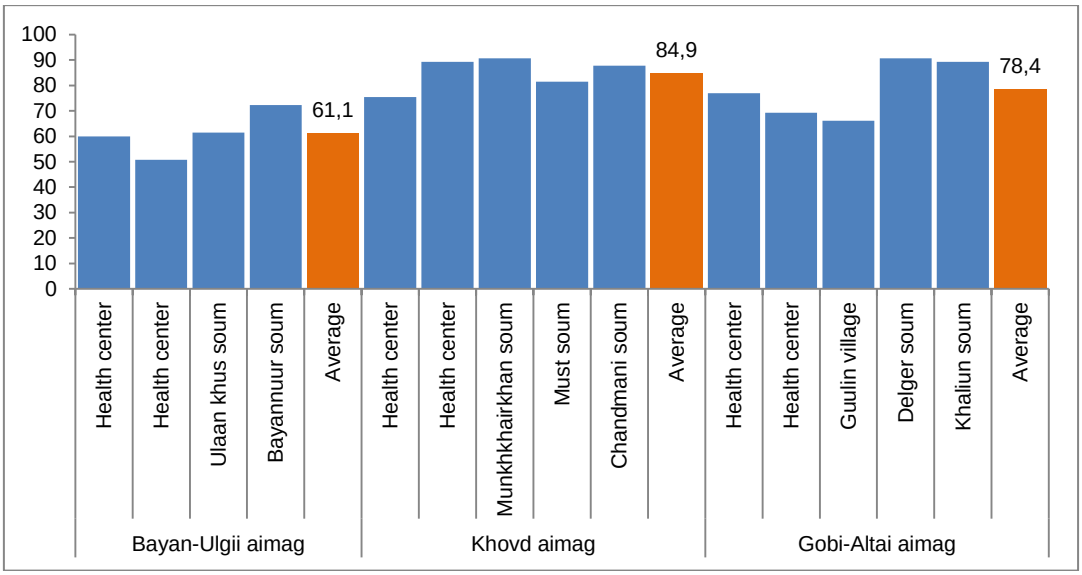


Graph 8. Number of doctors and staff covered in the evaluation by professions

Doctors and staff assessed the project activities under each objective with scores 1-5 (bad-excellent).

Objective 1. The project has implemented activities in 11 areas to improve the accessibility of primary health care under this objective. Major areas were to provide essential equipment; provide all necessary data and information to health workers and train them within ethical issues; to establish a model bag feldsher's post and nurse center; and to improve satisfaction of clients.

The supply of essential equipments of health centers in accordance with MNS5292:2011, there were 61.1% in Bayan-Ulgii, 84.9% in Khovd and 78.4% in Gobi-Altai aimags in average. Supply of these essential equipments were relatively equal in Khovd aimag (81.5-90.7%) whereas in Gobi-Altai were quite different (66.1-90.7%) (Graph 9).



Graph 9. Supply status of equipments and devices of health centers stated in the standard by aimags, 2012

The evaluation found that some health centers lacked some equipment and instruments like camerton, head mirror, nasal speculum, ophthalmoscope, tourniquet, IV drip stand, ultra high

frequency apparatus, Iskra (electro massage by high frequency voltage, low amperage), medical cupping, oxygen concentration, ultrasound scanner.
The supply of equipments and devices has been increasing year by year in project aimags compare to medium term evaluation results (2010 он).

Table 7. Percentage of supply of equipments and devices by MNS5292:2011 standard in comparison to medium term evaluation results, 2012

Project aimags	2008	2009	2010	2012	Increased %, 2010-2012
Bayan-Ulgii	21.5	23.6	22.3	61.1	+38.8%
Khovd	60.5	66.5	66.4	84.9	+18.5%
Gobi-altai	41.4	50.2	54.2	78.4	+24.2%

Source: *Project medium term evaluation report, 2010*

It is clear that the supply of equipments and devices has increased during the project implementation period.

Also during the project family health centers have been fully equipped with laboratory and IEC equipments

Table 8. Qualitative evaluation, comparison to 2010 medium term evaluation results

Medium term evaluation, 2010	Final evaluation, 2012
Lack of facility and equipments badly affect to the IEC activities for population. Visual aids and demonstration materials are more effective for training. *Khovd, Bulgan soum*	Equipments for IEC activities have been fully provided. Training or intellectual invest help them to work more effectively. Visual aids for dental care is more effective for population. *Khovd, specialist*
Need to improve soum laboratory. People of remote place can not go to aimag center, so it is better to improve diagnostic capacity of soum. *Gobi-Altai, specialist*	We have been provided with laboratory equipments and instruments by the project and now able to perform tests for glucose, hemoglobin and otorhinolaringoscope in the soum. *Gobi-Altai, specialist*

From the document review it can be seen that all planned equipments have been provided.

Under objective 1, all health workers have been participating in ethical training and have been provided with all necessary data and information during the project period.

Moreover, there were established model bagh feldsher's posts and nurse centers whereby the objective was achieved. The "Bayanzurkh" bagh of the Must soum of Khovd aimag was the model and was provided with necessary equipments and utilities including electric generator, mechanical weight measure, medicines box, injection pad container, shelf for IEC materials, cooking shelf and tables.

Bayanzurkh bagh center serving for 182 households and 750 citizens.

During the evaluation, it was reported that the bagh feldsher have organized more than 10 trainings for citizens and bagh activities are being stabilized.

Chandmani soum of Khovd aimag has been working to become a model soum hospital since 2010 in collaboration with Department of Health of Khovd aimag, SPH project and Nursing school of HSUM. Now this soum hospital has become a model hospital and has been provided with all necessary equipments and devices.

There was a number of activities being organized under the objective to increase the number of citizens visiting and to provide services by the health training and information center. To assess this objective, annual reports of the health training and information center during 2009-2011were studied; these are introduced below showing the number of IEC activities that have been organized.

Table 9. Number of IEC activities for catchment population during 2009-2011 by family and soum health centers, 2012

#	Aimag and soums evaluated	The number of IEC activities have been organized among catchment population			
		2009	2010	2011	Results
	Bayan-Ulgii				
1.	Jansaya FHC	1250	2100	3117	Increased
2.	Shinager FHC	31	33	53	Increased
3.	Ulaanhus SHC	21	27	54	Increased
4.	Bayannuur SHC	12	18	24	Increased
	Khovd				
5.	Rashaant FHC	18	32	56	Increased
6.	Baatarkhairkhan FHC	4805	4731	6743	Increased
7.	Munkhkhairkhan SHC	21	23	25	Increased
8.	Must SHC	1405	1603	1906	Increased
9.	Chandmani SHC	94	96	141	Increased
	Gobi-Altai				
10.	Enkh-Altai FHC	124	209	352	Increased
11.	Maral-Altai FHC	14	19	26	Increased
12.	Guulin Village HC	10	18	24	Increased
13.	Delger SHC	28	39	42	Increased
14.	Khaliun SHC	504	406	455	Increased

Source: *Family and soum health centers statistics, 2012*

The evaluation found that the number of IEC activities has increased during 2009-2011 among population by FHCs and SHCs.

The results presented below have been assessed by doctors and staff of family and soum health centers for the all activities implemented under objective 1.

Generally more than 90% of doctors and staff assessed most of the activities that have been implemented by the project as "sufficient". (Table 10).

Table 10. Number and percentage of doctors and medical staff who have assessed as "sufficient" (4, 5) for activities implemented under Objective 1 of the project, 2012

#	Implemented activities	Aimags			Total
		Bayan-Ulgii	Khovd	Gobi-Altai	
1.	Provision of essential equipments	80.0% 24	97.4% 38	94.1% 32	91.3% 94
2.	Plan to supply laboratory and diagnostics equipments	53.3% 16	87.2% 34	81.8% 27	75.5% 77
3.	Utilization instructions for equipments	80.0% 24	94.7% 36	97.1% 33	91.2% 93
4.	Ordering and procurement of equipments	76.7% 23	94.8% 36	93.8% 30	89.0% 89
5.	Provision of necessary data and information to the health workers	100.0% 30	94.9% 37	100.0% 34	98.0% 101

6.	Coverage by trainings on ethics and communication skills for health workers	90.0% 27	89.7% 35	94.1% 32	93.3% 94
7.	Establishment of model bagh center	26.7% 8	46.2% 18	73.5% 25	49.5% 51
8.	Nursing model center	39.3% 11	72.3% 26	67.8% 21	61.1% 58
9.	Support of client friendly and effective services	96.7% 29	94.9% 37	97.1% 33	96.1% 99
10.	Increased number of citizens served by Health training and information center	93.3% 28	94.8% 37	97.0% 33	95.1% 98
11.	Increased client satisfaction since project implementation	100.0% 29	94.9% 37	97.0% 33	97.0% 99
	Number of participants	**30**	**39**	**34**	**103**

For the "Plan to supply laboratory and diagnostics equipments", 75.5 % (77) of participants answered "sufficient", 24.5 % (26) "insufficient". Since the activities have been implemented later in Bayan-Ulgii aimag, (since 2011), than in the other aimags, the participants there gave these activities a lower score, (47.7%, 14).
Most of the doctors and staff that participated in the quality assessment were satisfied with the activities that were implemented under objective 1.

SHC of Delger soum and village HC of Guulin turned into model health center. Streets 7 and 8 of Bayankhairkhan bagh of Esunbulag soum became a public health model center. In there, 39 hashaa, 66 households and 170 citizens live. There also formed a volunteer group and there is no weakness of this project.

Manegerial staff, Gobi-Altai aimag

The above statistics and quantitative and qualitative evaluation results indicate a successful implementation of activities under objective 1.

Objective 2. Under the objective "To improve knowledge and skills of doctors and professionals on primary health care" there were 11 activities implemented. Main areas under this objective were training of health workers, study tours and meetings, training of volunteer health workers and promoting community initiatives on creating healthy environment.
During the midterm evaluation, there was discovered a need for conducting assessment of the training for doctors and staff. Based on these identified needs, there were organized trainings on child care, first medical aid, oral health, visual pathology, common neurological diseases, common dermatology diseases, renal and urine tract diseases diagnosis, palliative care, prevention from use of tobacco and alcohol, prevention from cancer, RH, cardiac diseases and trauma.
Although the project has initiated, provided trainers and chosen institutions to recruit participants from, the final evaluation found that there were some issues regarding people coming too late, being too inactive and the getting insufficient scores or marks.

One of the innovative things was that the project has included bagh feldshers in the training. They have not been trained for a long time, but now 100% have been covered in regional trainings. The majority of doctors and professionals who involved in the interviews were thankful to the project for being included in the trainings.

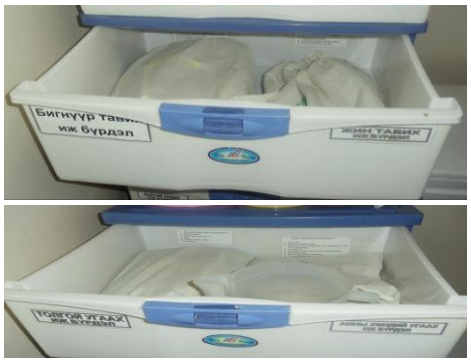
I have participated in all trainings provided by project. There were surgeons from National Center for Maternal and Child Health to teach us on urinary tract diseases. They have conducted child examination and revealed cases of femosis. I also learnt how to make differential diagnosis for dermatology diseases. After all these trainings I understood that prevention is more important than treatment.

Medical doctor, ...aimag

The financial support given to trainings for doctors and medical professionals has had a positive impact on capacity development. The following support has been given: Buyant FHC of Khovd aimag 1,530,000 tugrugs, Bayanzurkh bagh center 5,000,000 tugrugs, Chandmani soum on model nursing center 1,673,000 tugrugs, Khovd Health training and information center 6,645,000 tugrugs and Gobi-Altai Health training and information center 5,000,000 tugrugs.

After trainings, doctors have been motivated to initiate a number of activities like;

1. Establish and equip an emergency care room
2. Organize a solution transfusion area
3. Prepare a child examination set
4. Primary data collection forms in accordance with the instruction were completed
5. Morphine and tramedol have been given to patients with cancer in accordance with prescription
6. Inhalation apparatus was purchased and used
7. IEC information board on prevention from trauma and protection eyes was created
8. Nursing post is operational
9. Non medicine treatment room established etc.



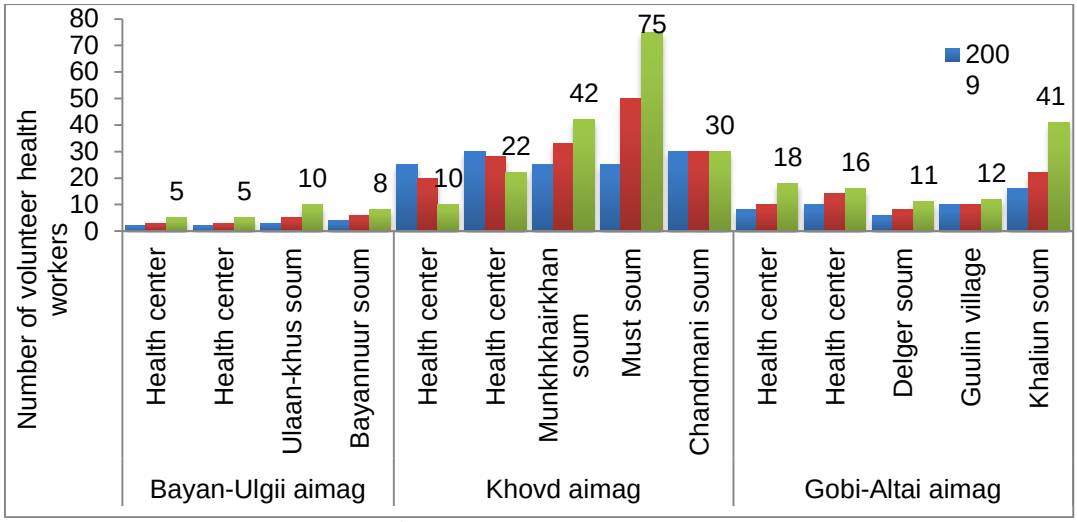
1. Oral health corner **2. Set of nursing care**

Training for doctors and professionals of health centers has had an impact on their practice and this was shown in their activities on diagnosis, treatment and communication to the citizens. These are:

- Diagnosis with ESG
- Rapid tests for glucose definition in blood
- Skin allergy diagnostics
- Eye diseases diagnostics
- Child femosis and criptorkism diagnostics
- Care for patients with cancer and hemorrhage
- Psychiatric diseases diagnostics etc.

Under this objective there was an activity to train volunteer health workers and develop a plan of action. The statistics below shows how many volunteer health workers that were trained during 2009-2011 in family and soum health centers.

Khovd aimag has the highest number of volunteer health workers compared to the other two aimags. There is a general pattern that the number of volunteer health workers is increasing year by year in the aimag health centers. By 2011, there are minimum 5 and maximum 75 volunteer health workers in the health center. (Graph 10).



Graph 10. Number of volunteer health workers and assistants, 2009-2011

Under objective 2, activities were organized in order to create a healthy environment and streets 7 and 8 of Bayankhairkhan bagh, and in Esunbulag soum of Gobi-Altai aimag, public health supporting streets became a good example for other aimags and soums.

Public health supporting street of Esunbulag soum of Gobi-Altai aimag

Most of doctors and staff assessed the activities under objective 2 as "sufficient".

Table 11. Number and percentage of doctors and medical staff who have assessed as "sufficient" (4, 5) for activities implemented under Objective 1 of the project, 2012

#	Implemented activities	Aimags			Total
		Bayan-Ulgii	Khovd	Gobi-Altai	
1.	Training of health workers	93.3	94.9	97.0	95.1% 97
2.	Training grants	93.3	89.8	97.0	79.6% 96
3.	Group discussions of soum and inter-soum general doctors and bagh feldshers	76.7	87.0	85.1	83.5% 86
4.	Plan of action of Health department and its implementation	90.0	92.3	94.1	92.3% 95
5.	Peer training of doctors	93.3	94.7	93.1	94.1% 96
6.	Supportive trainings for skillful doctors	94.1	94.9	97.1	95.1% 97
7.	Training of volunteer health workers	96.7	94.9	94.1	95.1% 97
8.	Promoting and incentives for community initiatives on healthy environment	86.6	84.6	91.2	87.3% 90
9.	Community based trainings	100.0	92.3	100.0	96.9% 96
10.	Program of action of volunteers	93.3	87.2	90.9	90.2%

					92
11.	Experience sharing meetings of project aimags	90.0	86.8	88.2	88.3%
					90
	Number of participants	**30**	**39**	**34**	**103**

The evaluation team has concluded that although activities under objective 2 have been implemented successfully, doctors and staff of some health centers should be more active and responsible.

Objective 3. Regarding improvement of the general population's health knowledge, there were implemented 7 activities. NLM-M's SPH project has developed and distributed handbooks called "Childhood illnesses", "Oral health", "Mother and infant health", "Chronic cholecystitis", "Prevention from hepatitis A", "Skin diseases", "Handbook for patient caregivers", "Asthma and free breathing". There were also a number of activities in collaboration with local TV and radio stations.

From document review we found that family and soum health centers organized community based events or campaigns in average 2-3 times per year such as competitions and 10 to 1 month activities with titles like "Alcohol and health", "Exercise and health", "Prevention from trauma", "Let's play checkers", "Prevention from skin infection", "Protect eyes", "Oral health", "Hand washing", "RH", "Prevention from renal and urinary tract infections" and "Prevention from respiratory diseases".

IEC activities on health have been implemented on monthly basis in accordance with MOH calendar plan. Most of the family and soum health centers have equipped and renovated room for IEC with project assistance. They have been implementing a variety of activities like IEC activities with 10^{th} and 20^{th} systems, keep safe drinking water, prevention from infectious diseases, work place exercises, organizing trips and journeys, keep living environment comfortable and clean etc.

The number of IEC activities has increased over the last years and now there is one major campaign every quarter of a year.

Table 12. Number of community based activities of health centers in comparison to medium term evaluation results (2010)

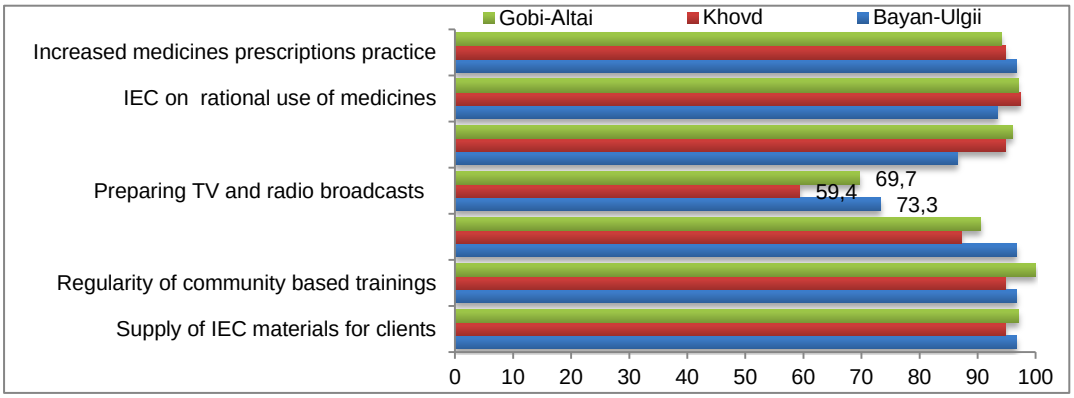
Project aimags	2008*	2009*	2010*	2012	Increased amount in number
Bayan-Ulgii	0	1	3	4	1
Khovd	1	2-3	3	4	1
Gobi-Altai	1	2-3	3	4	1

Source: *Medium term evaluation report, 2010

The midterm evaluation (2010) advised the project to focus more on prevention from dental caries and rational use of medicines in information and education activities. Accordingly the aimags in the target area have been successfully implementing IEC activities on "oral health" and "stop the use of antibiotics".

The project has supported the initiative of Khovd aimag Governor's office and department of Health's slogan; "An oral disease free aimag". During the interviews, local administrative and medical staff mentioned that there had been successful implementations of activities for school children like "oral health", "hand washing" trainings. The evaluation team has concluded that these kind of initiatives need to be expanded to other aimags.

Most of the staff of family and soum health centers assessed the activities under objective 3 as “sufficient”.



Graph 11. Assessments on activities implemented to improve the health knowledge of the population, 2012

Family and soum health centers have been implementing activities like study of people allergic to antibiotics, a corner/exhibition for rational medicine use, non- medical treatment room, prevention from respiratory diseases and medicines allergic symptoms etc. It has been observed that IEC materials on medicines were available in the family and soum health centers. Moreover there were reported a number of activities including consultation on medicines use among pharmacist and doctors, dispensing medicines with prescriptions, which indicated that an enormous job has been done on rational medicine use for the community and pharmacy workers.

There were multiple IEC activities that have been implemented by the initiative of local doctors and staff in order to enhance the health education of the general population. It was clear from document reviews and interviews with doctors and professional, that this objective has been reached successfully.

Objective 4. To improve relations between health organizations of target regions

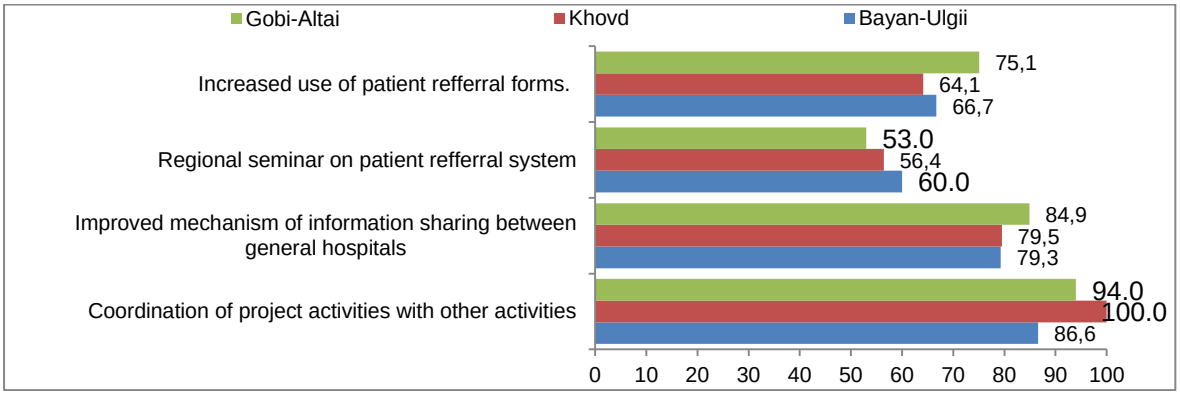
- Coordinate project activities with other activities;
- Improve mechanism of information sharing between general hospitals;
- Organize trainings and seminars on patient referral system;
- Increase the use of patient referral forms.

From the project documents including the action plan and indicators, it can be seen that goals, objectives and activities of the project are in line and supportive to Government health policy. The establishment of “Memorandum of Understanding” between the project, MOH, local administration and health organizations is a clear example of this.

Interviewees including local administration, health organizations, members of public health sub-committees mentioned that project programs and action plans are consistent with “Health sector master plan”, “General directions and plans for aimag social and economic development” and “soum development program” activities.

Organization of meetings, trainings and consultations to discuss issues and share opinions in order to effectively implement the project has been a routine in the project.

More than half of the doctors and staff have assessed the activities under this objective as "sufficient" (Graph 12).



Graph 12. Percentage of doctors and staff, who assessed project activities positively, 2012

From the assessments of doctors and staff, most of them concluded that the coordination of project activities with other activities was better (Graph 12).
All though document review shows that there were fewer meetings and consultations organized between project implementing aimags and soums, these were effective and discussed multiple issues.

Chapter conclusions

1. Most doctors and staff of family and soum health centers have assessed activities under objectives as successful.
2. The first objective; to improve accessibility of primary health care been successfully achieved as planned.
3. The second objective; to increase knowledge and skills of doctors and professionals has fully involved doctors and staff of family and soum health centers, but there is a need to consider participants' active and responsible participation.
4. The third objective; to improve the health knowledge of the population has been successfully implemented. This can be seen from the organization of multiple campaigns, development and distribution of IEC materials, local TV health programs and consultations and meetings of doctors and staff.
5. Activities targeting kindergarten and school children to educate them on oral health, washing hands and teeth are effective measurements to establish right practice and skills.
6. More than half of the doctors and staff have assessed activities to improve relations between target regions health organizations as sufficient. This indicates that not all the activities under objective 4 have been successfully implemented.
7. Many activities of the project can be sustainable also in the future. These are:
   - IEC activities for communities through trainings of health workers
   - Laboratory tests, glucose and hemoglobin tests
   - ESG diagnostics, checkups of ear, nose and throat, checkups of eyes and vision
8. Some project activities of Bayan-Ulgii aimag including ordering and procurement of equipments are lower than the other two project aimags. This could have been caused by factors like the short period of the project (1,5 years), absence of project implementation unit and project staff also working for the health department meaning having twice the workload.

2.3. The local citizens' assessment of the project activities

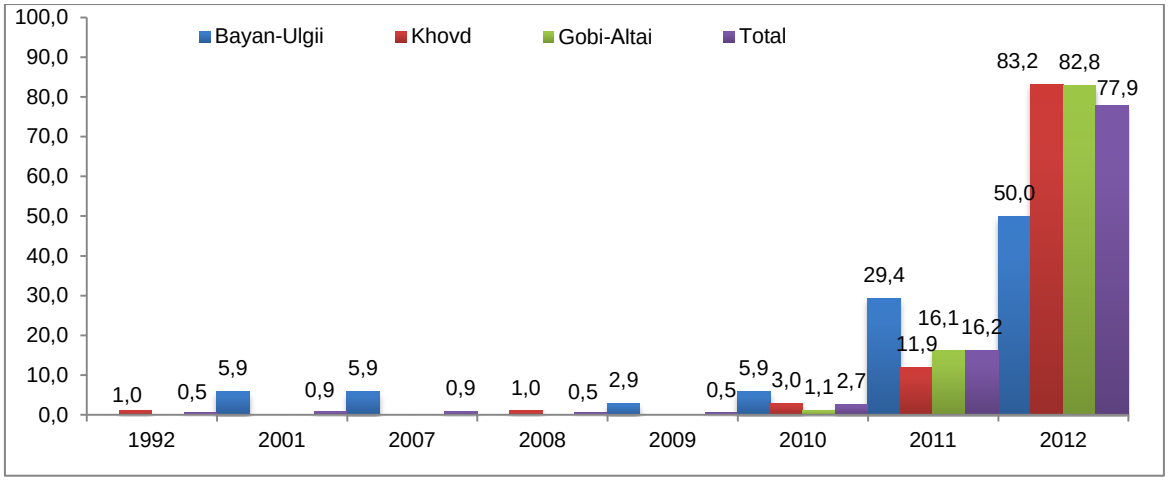
The evaluation involved local citizens in assessing the health center's activity since they belong to one of the beneficiary groups of project results and impact. Totally 242 citizens were involved in the evaluation as from Bayan-Ulgii (42, 17.3%), Khovd (107, 44.3%) and Gobi-Altai (93, 38.4%) aimags. The average age of the citizens was 31.3±15.2 (min 12, max 87 years), the majority was women (149, 62.1%), with secondary education (84, 36.4%), pupils (80, 35.7%), with a family size of 4-6 members (146, 60.3%) (Table 13).

Table 13. General information about citizens covered in the evaluation, 2012

#	General information	Aimags			Total
		Bayan-Ulgii	Khovd	Gobi-Altai	
1.	**Gender**				
	Male	38.1	31.4	45.2	91 (37.9%)
	Female	61.9	68.6	54.8	149 (62.1%)
2.	**Education level**				
	No education	4.9	1.9	2.4	6 (2.6%)
	Low	31.7	10.4	13.1	35 (15.2%)
	Incomplete secondary	24.4	42.5	34.5	84 (36.4%)
	Secondary	12.2	25.5	29.8	57 (24.7%)
	Vocational	9.8	5.7	4.8	14 (6.1%)
	High	17.1	14.2	15.5	35 (15.2%)
3.	**Employment**				
	Pupil	26.8	42.6	31.7	80 (35.7%)
	Student	0.0	11.9	7.3	18 (8.0%)
	Private business	36.6	12.9	34.1	56 (25.0%)
	Herder	17.1	21.8	7.3	35 (15.6%)
	House work	7.3	2.0	1.2	6 (2.7%)
	Unemployed	9.8	7.9	12.2	22 (9.8%)
	Disabled	2.4	1.0	6.1	7 (3.1%)
4.	**Family size**				
	1-3 members	23.8	15.0	21.6	46 (19.0%)
	4-6 members	40.5	59.0	70.9	146 (60.3%)
	More than 7 members	35.7	26.0	7.5	50 (20.7%)
	All participants	**42 (17.3%)**	**107 (44.3%)**	**93 (38.4%)**	**242 (100.0%)**

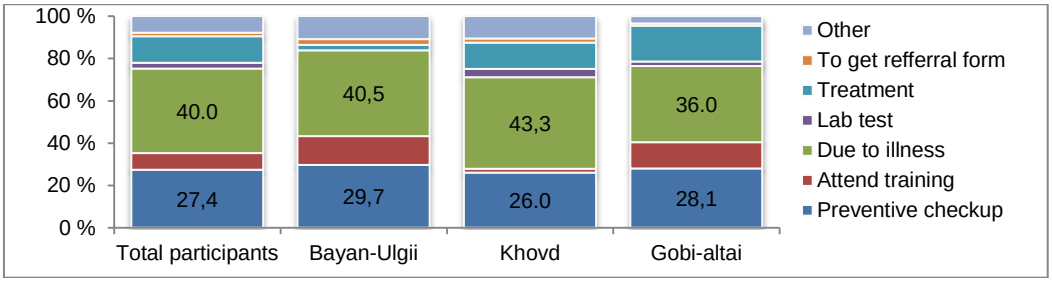
The local citizens were equally represented as can be seen from patterns of gender, age group, employment and educational background.

91.7 % (222) of the citizens had been served by the family and soum health centers earlier. Citizens of Khovd (94.4%, 101) and Gobi-Altai (95.7%, 89) had been served more than citizens of Bayan-Ulgii 76.2% (32). Most of the citizens, who were served by family and soum health centers, were served in 2011-2012. This indicates a reasonable size of population covered in the evaluation in order to assess family and soum health centers' activity.



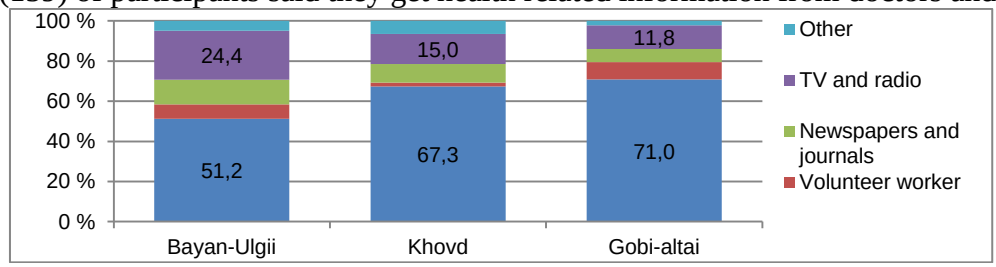
Graph 13. Percentage of citizens served by health centers by time, 2012

The reasons for the local citizens' approaches to the health centers were due to illness (40.0%, 92) and due preventive checkups (27.4%, 63).



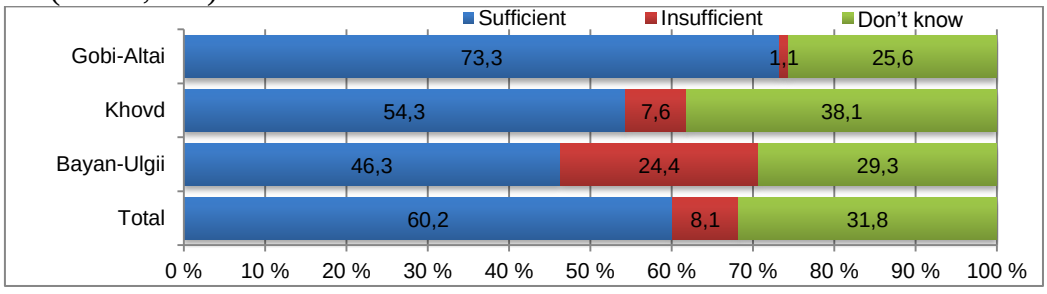
Graph 14. Types and percentage of reasons of citizens served by family and soum health centers

66.0 % (159) of participants said they get health related information from doctors and staff.



Graph 15. Sources of information citizens received health information, 2012

For question on availability of IEC materials for citizens, most of participants answered sufficient (60.2%, 142).



Graph 16. Supply of IEC materials in the family and soum health centers by responses of citizens, 2012

One of three participants of the evaluation answered that they don't know there is any IEC material in family and soum health centers.

The majority of the participants assessed the health information on local TV (29.8%, 70) and IEC activities organized by family and soum health centers (40.8%, 97) as sufficient.

Table 14. Citizens assessment on IEC activities organized by family and soum health centers by aimags evaluated

#	Aimags	Answers			
		Sufficient	Average	Insufficient	None
1.	**How is the health information on local TV**				
	Bayan-Ulgii	23.8	2.4	14.3	59.5
	Khovd	37.3	28.4	9.8	24.5
	Gobi-Altai	24.2	28.6	8.8	38.5
	Total	29.8	23.8	10.2	36.2
2.	**How is the IEC activities organized by family and soum health centers**				
	Bayan-Ulgii	20.0	35.0	15.0	27.5
	Khovd	36.8	30.2	13.2	17.0
	Gobi-Altai	54.3	30.4	1.1	14.1
	Total	40.8	31.1	8.8	17.6

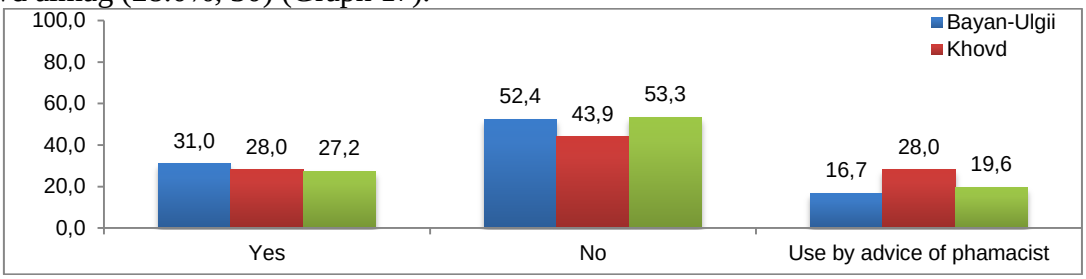
70.8 % (167) of the participants mentioned that they were involved in IEC activities organized by family and soum health centers. This rate was higher in Khovd (68.6%, 72) and Gobi-Altai aimags (83.5%, 76), compared to Bayan-Ulgii aimag where it was 47.5 % (19).

Table 15. Percentage of citizens involved in the IEC activities organized by family and soum health centers, 2012

#	Aimags	Answers		
		Involved	Not involved	No activity
1.	Bayan-Ulgii	47.5% [19]	47.5% [19]	5.0% [2]
2.	Khovd	68.6% [72]	24.8% [26]	6.7% [7]
3.	Gobi-Altai	83.5% [76]	15.4% [14]	1.1% [1]
	Total	70.8% [167]	25.0% [59]	4.2% [10]

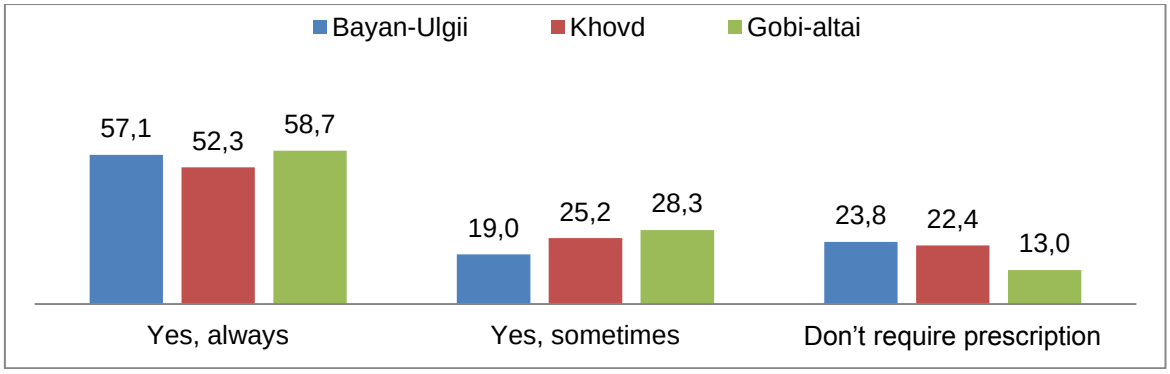
During the project implementation there were a lot of IEC activities on reducing antibiotics use and the figure below presents the result of these activities.

Self treatment by antibiotics without approaching to doctor is more or less the same in all the three project aimags, whereas use of antibiotics with advices from a pharmacist was higher in Khovd aimag (28.0%, 30) (Graph 17).



Graph 17. Self treatment by antibiotics when being sick, by percentage of citizens responses, 2012

During the project there were organized trainings for pharmacists on dispensing medicines by prescriptions. The figures below shows the citizens' answers regarding the need for a pharmacist to dispense the medicine by prescriptions.



Graph 18. Dispense of medicines by prescriptions in the pharmacies, by percentage of citizens answers, 2012

About half of participants answered that the pharmacies should dispense medicines by prescriptions. Use of prescriptions was high in Gobi-Altai aimag.

43.2 % of participants assessed their health as "good".

Table 16. Self assessment status of participants of the evaluation on their knowledge on health by aimags, 2012

№	Selected indicators	Evaluation participants			Total
		Bayanulgii	Khovd	Govi-Altai	
1.	Excellent	12.2%	11.2%	14.0%	12.4% [30]
2.	Good	43.9%	37.4%	49.5%	43.2% [104]
3.	Satisfactory	26.8%	43.9%	33.3%	36.9% [89]
4.	Unsatisfactory	9.8%	7.5%	3.2%	6.2% [15]
5.	Bad	7.3%	0.0%	0.0%	1.2% [3]
	Number of total participants	**41**	**107**	**93**	**241**

The clients are faced with many challenges when approaching the FHCs such as lack of equipments (22.2%, 46), they have to wait long (18.8%, 39), the time table is not followed (12.1%, 25) etc. The respondents, who answered that the biggest challenge of the AHDs' is the lack of equipment, got the highest score. (Table 17).

Table17. Problems and satisfaction of citizens for services provided by family and soum health centers by aimags evaluated, 2012

№	Selected indicators	Evaluation participants			Total
		Bayan-Ulgii	Khovd	Govi-Altai	
	Difficulties to get FHC service				
1.	Doctors and other medical staff's bad communication	11.1	3.4	4.8	11 [5.3%]
2.	Absence of the doctor	8.3	14.9	9.5	24 [11.6%]
3.	Wait long time	2.8	**26.4**	**17.9**	39 [18.8%]
4.	Don't work by time table	**30.6**	5.7	10.7	25 [12.1%]
5.	Many referrals	2.8	2.3	2.4	5 [2.4%]
6.	Lack of equipments	**22.2**	**23.0**	**21.4**	46 [22.2%]
7.	Others	22.2	24.1	33.3	57 [27.5%]
	Number of total participants	36	87	84	207 [100.0%]
	How satisfied with FHC service?				
8.	Full	11.9	14.0	19.4	38 [15.7%]
9.	Satisfied	**40.5**	**57.9**	**62.4**	**137 [56.6%]**
10.	Middle	23.8	17.8	8.6	37 [15.3%]
11.	Unsatisfied	4.8	2.8	1.1	6 [2.5%]
12.	Don't know	19.0	7.5	8.6	24 [9.9%]
	Number of total participants	42	107	93	242 [100.0%]

Regarding the FHCs' service, 56.6 percent (137) of the respondents answered that they were satisfied. The respondents from Gobi-Altai and Khovd were more satisfied than the

respondents from Bayan-Ulgii, where one out of four answered that they were unsatisfied with the service.

The following graph shows the score for health staffs' time utilization. During the midterm evaluation 40 percent of the participants stated it as "insufficient" while it has now changed for the better.

Table 18. Percentage of participants given "insufficient" assessment for time utilization of health facilities in comparison to midterm evaluation

Covered aimags	2010	2012	Reduced percentage
Bayan-Ulgii	48.8%	30.6%	18.2
Khovd	47.2%	5.7%	41.5
Govi-Altai	46.8%	10.7%	36.1

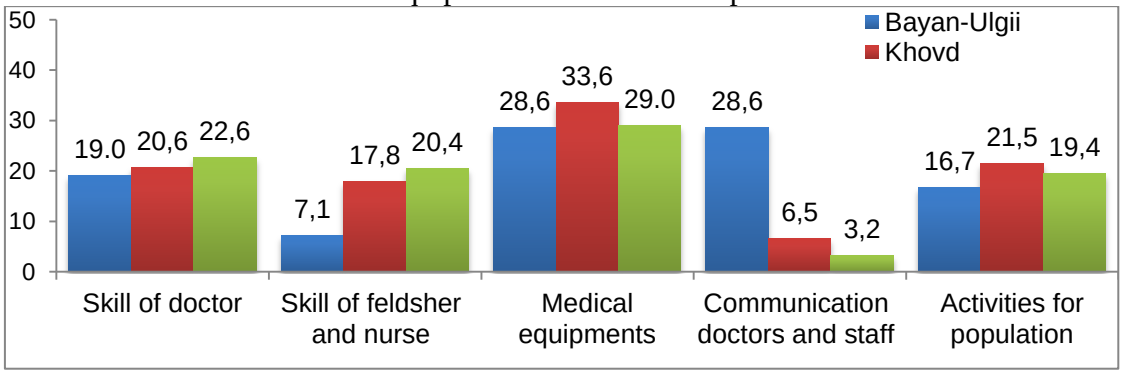
67.5 percent (160) of the evaluation participants gave "permanent nice communication" score for FHCs' doctors and other medical staffs' communication. The percentage of score was highest (72.0%) in Gobi-Altai aimag.

Table 19. Evaluation of participants on behavior and communication of doctors and medical staff of health centers by aimags, 2012

№	Selected indicators	Evaluation participants			Total
		Bayan-Ulgii	Khovd	Govi-Altai	
How is behavior and communication of doctors and medical staff of health centers?					
1.	Permanent nice communication	**61.5**	**65.7**	**72.0**	**160 [67.5%]**
2.	Sometimes nice	15.4	18.1	17.2	41 [17.3%]
3.	Permanent nervous	15.4	1.9	1.1	9 [3.8%]
4.	Sometimes nervous	7.7	14.3	9.7	27 [11.4%]
	Number of total participants	39	105	93	237 [100.0%]
Do you think your health center's doctors and other medical staff's attitudes changed\improved?					
1.	Yes	**40.5**	**60.7**	**72.0**	**149 [61.6%]**
2.	No	19.0	9.3	4.3	22 [9.1%]
3.	Don't know	40.5	29.9	23.7	71 [29.3%]
	Number of total participants	42	107	93	242 [100.0]

The project conducted ethical trainings in addition to the other professional skill trainings for doctors and medical staff. Thus, the question related to the improvement of attitudes asked from local communities, more than half (149, 61.6%) of the participants answered Yes. Most of the participants from Khovd and Gobi-Altai aimags answered that the attitudes and communication of the doctors and medical staff had improved. While in Bayan-Ulgii, the percentage that answered "improved" and "don't know" were the same, (17, and 40.5%). (Table19).

Most of the participants (31.0%, 75) answering the question "what should be do to improve health centers function" said that equipments needs to be improved.



Graph 19. Issues need to be addressed to improve family and soum health centers services by participants' comments, 2012

28.6 % of Bayan-Ulgii aimag answered that there is a need to improve the communication skills of doctors and medical staff. Also there was quite the same rate for answers saying that there is a need to increase community based activities and improve doctor's skills in the project aimags.

Chapter conclusion: The participants of the evaluation were citizens having experience with the services of family and soum health centers from before, so they were able to give an assessment on family and soum health centers.

1. It can be seen that family and soum health centers provide sufficient amount of IEC activities for citizens as the majority of them answered that they receive health information through TV, available IEC materials and being able to participate in organized activities.
2. As citizens answered that they get medicines with prescriptions from pharmacies, this could indicate that the medicine prescription practice is in place.
3. Citizens face a number of challenges when turn to the family and soum health centers for help, such as unavailability of some equipment, long waiting time and the centers not following the timetable etc, but compared to results of the midterm evaluation, there is an improvement regarding centers following the timetable.
4. About half of the citizens were satisfied with the function level of family and soum health centers. The majority of them assessed the communication of doctors and staff as good and there have been positive changes over the last few years.

2.4. The project effectiveness, efficiency, impact, relevance and sustainability

This chapter discusses the effectiveness, efficiency, impact, relevance and sustainability of project activities.

Project effectiveness: This was identified by e achievements of the project goal and objectives and positive and negative factors influencing them.

The project has stated a goal that the health of the general population of the project aimags will be improved. To achieve this goal the project defined 4 objectives: improve primary health care accessibility; enhance knowledge and skills of doctors and professional at primary health care level; increase health knowledge of population and improve relations between health organizations of target regions.

Achievements of the indicators of each objective are illustrated in the below table.

Table 20. Achievements of indicators to assess project results

# Indicator	Medium term evaluation, 2010	Final evaluation, 2012
Output 1. Improved accessibility of primary health care in target aimags.		
Increased supply of equipments of family and soum health centers.	Khovd 66.4% Gobi-Altai 54.2% Bayan-Ulgii 22.3%	Khovd 84.9% Gobi-Altai 78.4% Bayan-Ulgii 61.1%
Increased satisfaction of clients.	62.2%	
Output 2. Enhanced knowledge and skills of doctors and professionals at primary health care level.		
Increased number of diagnostics checkups of soum doctors.		Number of diagnostics checkups increased annually.
Output 3. Improved health knowledge of population.		
Decreased number infectious diseases caused by dirty water.		Reduced cases.

Community initiative based trainings		Increased annually.
Output 4. Improved relations between health organizations of target regions.		
Local decision makers initiate to support primary health care.	100.0%	100.0%
Group discussions will be organized.	65.0%	70%
Increased number of referral forms to transfer patients to aimag hospital.	100.0%	100.0%

Document review of project documents indicated that there were defined outputs and indicators for each objective, which made it easier for implementers to implement activities and monitor implementation.

Some objectives were difficult to measure within this evaluation, so they were compared with midterm evaluation results. The 3rd objective; to improve the population's knowledge, needs a continuous and separate evaluation, so this final evaluation might not show specific results in connection to this objective.

The result of the qualitative and the quantitative evaluation shows that every objective of the project has been successfully implemented.

Project efficiency: This will be measured by cost effectiveness of project activities and timely implementation of objectives.

The activities could not get sufficient funding from the Government, so the project supported those. For instance, financial analysis of family and soum health centers, indicate that they could only spend maximum 2'600' 000 tugtugs per year for public health activities. Also due to lack of funding they cannot train their doctors and professionals. Hence, the project's technical and financial support for implementing these activities was effective.

From the project's monthly and quarterly plans and action plan it can be seen that all activities were being implemented on time. However community based and professionals' trainings were being organized a little late.

Impact: The impact evaluation stated what the realistic impact was for the project beneficiaries, how many people benefited from project and which positive and negative influences could be found.

By project support, all doctors and professional have been included in professional postgraduate trainings. Therefore health education activities for population were implemented successfully. The establishing of laboratory and health information and training rooms, providing equipment and furniture will have positive impacts in future.
The following positive and negative impact were identified by doctors, staff and administrative staff who participated in the evaluation (Table 21).

Table 21. Positive and negative impact of the project, frequency of responses of family and soum doctors and staff by individual interviews, 2012

POSITIVE IMPACT		**NEGATIVE IMPACT**	
Respondents answers	**Frequency**	**Respondents answers**	**Frequency**
Post graduate professionals trainings	+++++	Budget and funding is low	+++
Improved access of IEC materials	+++++	Limited coverage of population in trainings and IEC	+++
Supply laboratory and IEC equipments	++++	Trainings were organized by organizations with payment basis.	+++
Team work approach built	++++		
Soum public health committee	++++	Committee function is not regular	+++
Study tours	+++	Limited to reach children and unemployed citizens	++
Model "Bagh health post" in Mongolia	+++	Lack of visits of project teams in local area	+
Active health education activities for population	+++	Not all doctors and staff covered in the trainings	+

"Public health promoting model street"	++
Evaluation: +++++ (85-100%) ++++ (70-84%) +++ (55-69%) ++ (35-54%) + (below 34%)	
Source: *Project final evaluation, 2012*	

Some of the participants addressed through interviews a number of issues like; public health committee's function is not regular; trainings had to be organized by local institution-only receiving financial support from the project and lack of visits from the project teams in the local area. Therefore the project team should have regular monitoring of the activities.

Relevance: The relevance of the project activities was evaluated according to the goals and objectives of national programs.

The objectives of the project; improving primary health care accessibility; enhancing knowledge and skills of doctors and professional at primary health care level; increasing health knowledge of population and improving relations between health organizations are still relevant. A clear example of this is that the project objectives are in line with health policy statements of the Government of Mongolia. These are:

1. Individuals and families have healthy living habits
2. Establish a public health care system
3. Bring the quality of diagnostics and treatment to an international level and provide medical care that is equally accessible.

This indicates that the project goal and objectives are supporting the Mongolian Government's health policies.
The administrative staff involved in the interviews, were also mentioning that project program and plans are fully in line with the aimags' economic and social development directions and soum development program.

Moreover document review reveals that project activities are consistent with the project's goal and objectives.

Sustainability: Evaluating the sustainability of the project, the team took into account whether the Government of Mongolia has the capacity to continue the project activities after the project is phased out or not in addition to other factors that might influence the sustainability.

Project staff has regularly been organizing local management board meetings, trainings and seminars to define obstacles and decisions to resolve and exchanges ideas to improve. This has played an important role in order to improve the project results. Local teams used to plan activities based on needs, the local situation and discusses with management board and submit the plans to the central office in UB and get approval before starting the activities. Moreover, they have been producing monthly and quarterly reports submitted to the funding agency and also spent the whole annual budget which has positively affected the sustainability of the project.

The project also supported establishing IEC room, stabilizing laboratory tests
(to define of glucose and hemoglobin in the blood and rapid test for kidney functions etc) and organizing trainings for health workers based on needs. Equipped training rooms and laboratories can continue running activities. The knowledge of the trained doctors and professionals used for performing diagnostic work, giving treatment and doing public health activities, will also remain. The activities started during the project period like public health

committees, nursing forums and other trainings have been included in the local plan of action There is also material published which will be available also in the future.
Even though some of the approaches implemented by the project was not included in the project document, including planning exercise and team work, this has already become a part of the work and can therefore sustain.

The evaluation has concluded that the success factors influencing the sustainability are;

1. Professionals being proactive and initiative;
2. Proper management, right financial policy and facilitative supervision;
    a. Continuous attention to improve the knowledge and skills of doctors and professionals;
    b. Financial incentive for certain activities;
    c. Regular monitoring of activities of project and inclusion in the plan of action;
3. Provision of IEC materials for public awareness building;

Most of the administrative staff involved in the evaluation mentioned that there is a need to focus on improving environmental health and strengthening laboratory capacity in the future if the project continues (Table 22).

Table 22. Comments of interviewed local management staff, 2012

Opinions and recommendations of management staff involved in the interview	**Frequency n=35**
Improving environmental health – Protection of drinking water – Rational disposal of waste – To have standardized lavatory and latrine – Create green environment	+++++
Strengthen laboratory capacity to perform blood and urine tests;	+++++
Connect family and soum health centers to centralized clean water and sewage system	+++
To have a dentist in the soum	+++
Improve methodology of community based training	++
Ta have equipments and human resource to prepare treatment food	+
Evaluation: +++++ (85-100%) ++++ (70-84%) +++ (55-69%) ++ (35-54%) + (below 34%)	

GENERAL CONCLUSION

1. The project “Strengthening Primary Health Care” project of Norwegian Lutheran Mission in Mongolia has been successfully implemented based on interviews with local management staff, doctors and professionals, comparative analysis with midterm evaluation results from 2010, and evaluation of effectiveness, efficiency, impact, relevance and sustainability.

2. The project has been a good experience of multilateral collaboration as it has involved local health and non-health people and has implemented activities through Public health committees.

3. The analysis of the project’s effectiveness, efficiency, impact, relevance and sustainability, shows that the project has met all activities and indicators under its goal and objectives.

4. The model nursing hospital, the bagh feldsher's post and healthy streets were positive opportunities to promote sharing of experience, motivating staff and improving accessibility and quality of care.

RECOMMENDATIONS

1. Continue the project in order to sustain positive results and to fully achieve project's goal to improve the general population's health status of the project aimags;

2. Need to further build capacity of specialists of aimag Health Department and involve them as supervisors from the beginning of project;

3. To continue to focus on strengthening capacity of doctors and professionals of family and soum health centers to provide primary health care;

4. Monitor activities of the Public health committee on quarterly basis in order to maintain their regular functions;

5. Conduct advocacy activities targeting local health and governor's office administrative staff to increase their support, funding and supervision;

6. Share experiences and introduce new initiatives to other aimags and soums including "Model bagh feldsher's post" of Must soum of Khovd aimag, "Model nursing center" of Chandmani soum of Khovd aimag and Khaliun soum of Gobi-altai aimag, "Healthy street" and "Model public health center" of Delger soum and Guulin village of Gobi-Altai aimag.

USED REFERENCES

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Annual report, 2011, Primary health care strengthening project, NLM-M
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Annex 1

EVALUATION of PROJECT ACTIVITIES
(For doctors and hospital staff)

We are performing a final evaluation of the “”Strengthening Primary Health Care Project” of Norwegian Lutheran Mission in Mongolia. Could you please give us appropriate and true information about the project activities that have been implemented in order to further improvement and refinement of the project in future. The information will be used for evaluation only and this will be anonymous.

Name of aimag/soum.....

Name of organization.....

Profession /code.....

Number of working years.....

Please mark every question scores of 0-5. **0-**not done, **99**-don’t know, **1** – bad, **5** – excellent.

Question	Scores (0-5)	If you give 3 and above scores please provide explanation?
Objective 1. Improve accessibility of primary health care		
Supply of essential equipments		
Plan to supply of laboratory and diagnostics equipments		
Instruction to use equipments		
Ordering and supply of equipments		
Provision of data and materials of health workers		
Coverage of trainings of health workers on ethics and communication skills		
Establishment of model bagh feldsher’s post		
Model nursing center		
Promoted effective and client friendly services		
Increased number of clients served in Health training and information center		
Increased level of client satisfaction since the project start		
Objective 2. Enhance knowledge and skills of primary care doctors and professionals		
Coverage of health workers in training		
Grant has given to teaching and training staff		
Group discussions of soum and inter soum health centers’ doctors and bag feldshers		
Plan and implementation of Department of health and local		

action plans		
Peer training of skilled doctors to other doctors		
Supportive training for skilled doctors		
Training for volunteer health workers		
Promoting and creating community initiatives		
Community based trainings		
Action program for volunteer workers		
Experience changing between project aimags		
Objective 3. Improve population health knowledge		
Supply of IEC materials for health education for clients		
Continuity of community based trainings		
Developed and reprinted IEC materials		
Preparation of TV and radio translations		
Community based trainings on medicine rational use		
IEC on medicine rational use		
Increased level of administration of prescribed medicines		
Objective 4. Improve relations between target regions health organizations		
Linkage of project activities with other activities		
Improved mechanism of information sharing between general hospitals		
Regional trainings and seminars on patient referral		
Increased use of referral forms to receive patients		
General evaluation for project implementation		
Please name best activity of the project?		
Please name of worst activity of the project?		
What activity do you think will continue after the project?		

Comments and recommendations:

……

……

……

……

Annex 2

EVALUATION OF STRENGTHENING PRIMARY HEALTH CARE PROJECT

(for community)

Aimag/Soum.....

Date of data obtained.....

Name of data collector/code.....

#	Question	Answers	Code	Step
	One. General questions			
1.	Age	Age		
2.	Gender	Male..... Female.....	1 2	
3.	Level of education	No education..... Lower..... Incomplete middle..... Middle..... Vocational..... Higher.....	1 2 3 4 5 6	
4.	Employment	Pupil..... Student..... Worker/private business..... Herder..... Home work..... Unemployed..... Disabled.....	1 2 3 4 5 6 7	
5.	Number of family members	Number.....		
	Two. Family and soum health centers care			
6.	Have you been served by family/soum health center?	Yes..... No.....	1 2	
7.	If Yes, what is the date of last time?	.....оны .....cap		
8.	If Yes, what were reasons?	Preventive health checkup..... Attend training..... Due to illness..... To get test results..... To get treatment..... To get referral form..... Other.....	1 2 3 4 5 6 7	
9.	Have you been participated in trainings and IEC activities organized by family and soum health centers?	Yes..... No..... There were no such activities.....	1 2 3	
10.	Is it right that citizens approach to family and soum health centers when they sick?	Right..... Not necessary ..... Have to go next referral hospital..... Other..... Don't know.....	1 2 3 4 5	
11.	Is there schedule of preventive health checkup in your family and soum health centers?	Yes..... No..... Don't know.....	1 2 3	

12.	Have you been voluntarily visited yourself to family and soum health centers?	Yes..... No.....	1 2	
13.	How often there were IEC activities on local TV?	Enough..... Average..... Not enough..... No local TV.....	1 2 3 4	
14.	Do pharmacies dispense medicines with prescriptions?	Yes, always..... Yes, sometimes..... Don't require.....	1 2 3	
15.	Do you use antibiotics when you sick without doctor's prescriptions?	Yes..... No..... Get advice from pharmacist.....	1 2 3	
16.	Did you serve by aimag general hospital in last year?	Yes..... No.....	1 2	
17.	If yes, any difficulties?	Yes..... No..... Don't remember.....	1 2 3	
18.	What is communication of doctors and medical staff of family and soum health centers with clients?	Always nice..... Sometimes nice..... Always nervous..... Sometimes nervous.....	1 2 3 4	
19.	Where do you get health information?	From doctors and medical staff..... From volunteer ..... From newspapers..... From TV and radio..... Other.....	1 2 3 4 5	
20.	How family and soum health centers do organize IEC activities for community?	Enough..... Average..... Not enough..... Don't know..... Don't organize.....	1 2 3 4 5	
21.	What was the most liked IEC activity (please write)	.....		
	Three. Evaluation for family and soum health center			
22.	How do you evaluate equipments of family and soum health centers?	Sufficient..... Average..... Insufficient.....	1 2 3	
23.	How available IEC materials for citizens?	Available..... Not available ..... Don't know.....	1 2 3	
24.	Do you think communication of your family and soum health centers doctors and medical staff improved?	Yes..... No..... Don't know.....	1 2 3	
25.	How do you assess your knowledge about your health?	Very well..... Good ..... Average..... Not enough..... Very bad.....	1 2 3 4 5	
26.	What is the main barrier for getting services from family and soum health centers?	Bad communication of doctors and staff..... Doctor is absent..... Long waiting time..... No strict follow up time schedule..... Multiple levels.....	1 2 3 4 5	

		Equipment is not enough..... Other	6 7	
27.	How are you satisfied with services of family and soum health centers?	Very much..... Satisfied..... Not very well..... Not satisfied..... Don't know.....	1 2 3 4 5	
28.	What needs to be done in order to improve services of family and soum health centers? Please write for other	Improve skills of doctors..... Improve skills of feldshers and nurses Improve equipments.. Improve communication skills of doctors and staff Increase community based activities..... Other.....	1 2 3 4 5 6	

THANK YOU FOR YOUR TIME.

Annex 3

IMPLEMENTED PROJECT ACTIVITIES
(For local project unit)

Researcher shall write
Aimag/soum
Date of observation
Name and job of informant

Result of project	**Indicator**	**Implemented activities**
Project result. Community health status will be improved in target aimags.		
Output 1. Improved primary health care accessibility	Increased numbers of procurement of the medical equipments	
	Increased client's satisfaction	
Output 2. Improved technical skills and knowledge of the primary health care providers	Increased number of first visit of clients in primary health care.	
	Increased number of confirmed diagnosis of the doctors in secondary level.	
	Increased early detection of the cancer.	
Output 3. Increased health prevention knowledge of the population	Reduced number of water borned infectious disease	
	Increased community initiated campaign and trainings in soum level.	
	Reduced number of home injuries.	
Output 4. Improved relations between target regions health organizations	Improved local decision maker's initiatives to support primary health care	
	Organized group discussions and meetings	
	Increased number of available referral forms.	

Annex 4

Individual interview questionnaire
(for health administrative staff)

Facilitator please clarify name of aimag, soum, health center and position and working years of interviewee's.

1. About project

- What do you know about a project is being implemented by support of Norwegian Lutheran Mission in your place? Please tell us?
- What activities have been implemented in your family and soum health center within this project?
- Please tell us what was your participation in this project?
- What are strengths and weaknesses of this project?
- What changes has been made in your family and soum health center? How effective?

2. Joint decision and participation

- Who participate to develop project documents, action plan and plan for essential laboratory equipments? How reflected your opinions?
- How transparent and open were project activities?
- Have you been involved in the monitoring of project activities? Or how you have been participated?
- How primary level organizations report to you about the project implementation?

3. Results of project

- Have been involved in trainings organized by project? What you have been acknowledged and how productive were these activities.
- If you have been involved in any training, were there any changes in your working approach?
- In your opinion, were there any changes in the knowledge, skills and attitude of local population result of this project? Why?

4. Opportunities and ways of resolving issues

- In your opinion, what are reforms occurred due to this project?
- In your opinion, what project activities can sustain after the project end?
- What are concerns if project will continue on?
- If any things you can tell us additionally?

THANK YOU FOR YOUR TIME.