



GEORGIAN MENTAL HEALTH COALITION

**DEVELOPMENT AND PILOTING OF THE COMMUNITY-
BASED MENTAL HEALTH OUTPATIENT SERVICE
MODEL IN GEORGIA**

Study Report

Diakonie 

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Georgian Mental Health Coalition was established in 2008 by the non-governmental organizations working in the mental health field. At present the Coalition consists of four mental health organizations: Georgian Association for Mental Health, Georgian Association for Psychosocial Aid NDOBA, Association for People in Need of Special Care, and Association Antistigma.

The goals of the Coalition are as follows:

- Contributing to the reforms being implemented in Georgian mental health field, namely, the reforms aimed at deinstitutionalization and improving community-based mental health services
- Ensuring access to the respective mental health services for persons with mental health problems.

For achieving its purposes, the Coalition:

- Works actively to facilitate the process of elaboration of mental health policy and respective strategic plan
- Acts jointly for ensuring close cooperation with the state agencies and full participation of stakeholders in the Coalition's activities
- Lobbies for effective legislative acts according to the Coalition's goals, participates in drafting these acts and introducing mechanisms for enforcing thereof
- Facilitates creating an environment conducive to the effective functioning of organizations, members of the Coalition
- Develops and implements joint projects according to the Coalition's goals.

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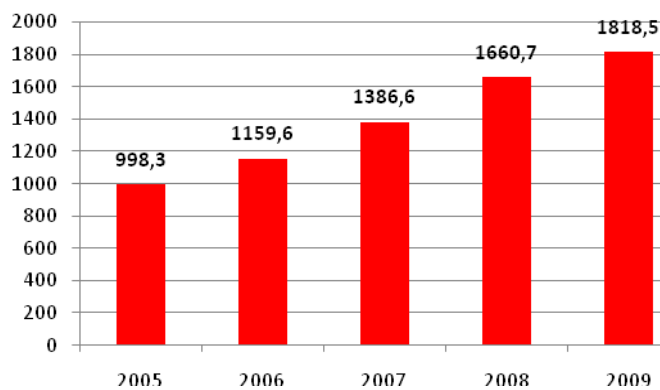
1. General Overview of the Mental Health Related Issues in Georgia

Background

For the past few decades Georgia has been implementing reform in healthcare and social services. For the last 5-6 years, ongoing reform has targeted almost all key spheres: primary healthcare system has been reformed, pension system has been significantly changed, pension rates have been increased several-fold, and social assistance programs were launched for vulnerable families and for the families below the poverty line. Within the framework of providing healthcare for socially vulnerable families, a state healthcare program for vulnerable families and a state program for the families below poverty line have also been initiated. Expenditures on healthcare have been increasing significantly for the last years (See Chart 1).

Chart 1

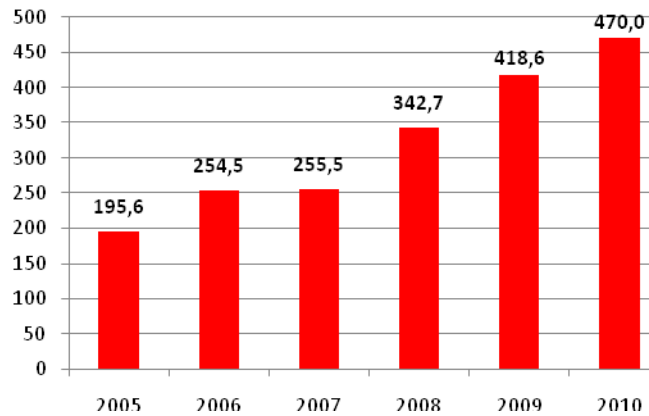
Expenditures on Healthcare in the Country
mln GEL



Source: GeoStat, National Accounts on Healthcare

Chart 2

Government Spending on Healthcare mIn GEL

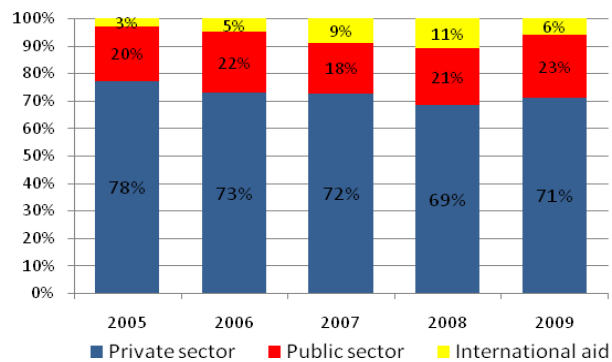


Source: GeoStat, National Accounts on Healthcare

Despite the increasing share of the government spending within the overall expenditures on healthcare, it is still rather low.

Chart 3

Structure of Expenditures on Healthcare



Source: National Accounts on Healthcare

For the last few years the share of healthcare expenditures as part of GDP, as well as the share of government spending on healthcare within overall government expenditures are increasing.

Chart 4

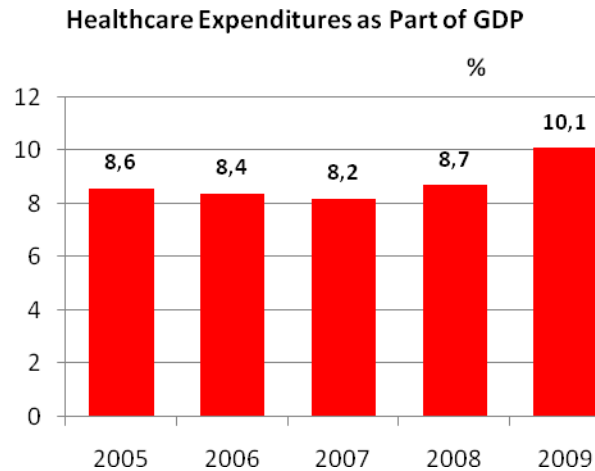
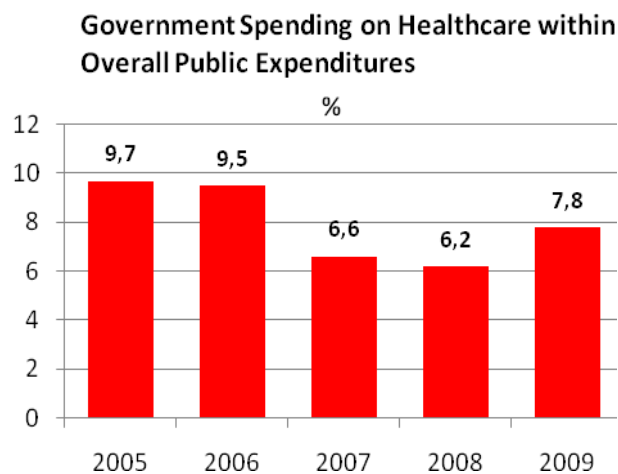


Chart 5



Source: GeoStat, Ministry of Labor, Health and Social Affairs

If we look at the structures of expenditures on healthcare in other countries, we will find that the share of Georgia's healthcare expenditures as a percentage of GDP is rather high; however it is mainly substantiated by the population's large out-of-pocket spending on healthcare. At the same time, in terms of government spending on healthcare within overall public expenditures Georgia falls behind, which is confirmed by the WHO statistical data.

Table 1

Government Spending on Healthcare			
	Percentage of Overall Spending on Healthcare	Percentage of Government Spending on Healthcare	Percentage of Government Spending on Healthcare

	as Part of GDP	within Overall Public Expenditures	within Overall Healthcare Expenditures
US	16.2	18.7	48.6
Australia	8.5	18.3	70.1
Germany	11.3	18.0	75.7
Croatia	7.8	17.6	84.9
Norway	9.7	16.7	78.6
France	11.7	16.0	76.6
Austria	11.0	15.8	74.5
Denmark	11.2	15.3	80.1
Bosnia and Herzegovina	10.9	15.1	61.3
Belgium	11.8	14.8	68.4
Republic of Moldova	11.9	14.1	53.7
Slovakia	8.5	14.0	67.3
Uruguay	7.4	13.8	63.1
Montenegro	9.3	13.6	72.5
Czech Republic	7.6	13.3	80.2
Slovenia	9.1	12.9	70.2
Turkey	6.7	12.8	75.2
Finland	9.7	12.6	72.1
Romania	5.4	11.8	78.9
Estonia	7.0	11.7	75.5
Kyrgyzstan	6.8	11.7	50.9
Kazakhstan	4.5	11.3	59.2
Bulgaria	7.4	11.2	59.0
Poland	7.1	10.9	68.2
Hungary	7.3	10.2	69.6
Latvia	6.5	10.2	60.5
Belarus	5.8	8.8	70.6
Ukraine	7.0	8.6	54.7
Russian Federation	5.4	8.5	64.4
Georgia	10.1	7.5	28.7
Turkmenistan	2.3	7.0	52.4
Armenia	4.7	6.6	43.5
Tajikistan	5.3	6.4	33.2
Azerbaijan	5.8	3.7	23.6

Source: World Health Organization

Parallel to increasing expenditures on healthcare the budgetary allocations on mental health are also increasing. For the past 5 years this figure has almost been doubled. Funding of in- and outpatient services is increasing as well. Despite the fact that the funds allotted for the inpatient services in 2011 exceeds the funding envisaged for the outpatient services by 2.5 times, it should be mentioned that as compared with 2010 data, the funds allotted for the outpatients services increased both in amount and in percentage.

Table 2

Data in thousand GEL

Budgetary Allocations for Mental Health						
Component	Service	2007	2008	2009	2010	2011
1. Outpatient Service	Outpatient Psychiatric Service		2,397.4	2,579.3	2,597.2	2,833.6
	Psychosocial Rehabilitation		70.1	70.1	70.1	70.1
	Children Mental Health					151.0
	Total		2,467.5	2,649.4	2,667.3	3,054.7
2. Inpatient Service	Adult Inpatient Psychiatric Service			6,933.8	6,933.8	7,170.2
	Children Inpatient Psychiatric Service			100.7	151.0	120.0
	Urgent Inpatient Service for Patients with Psychotic Disorders			45.0	45.0	45.0
	Inpatient Service for Patients with Mental and Behavioral Disorders Caused by Psychoactive Substances Abuse			48.0	144.0	144.0
	Total		5,882.6	7,127.5	7,273.8	7,479.2
3. Psychiatric Crisis Intervention	Total					236.1
Total Budget		4,900.0	8,350.1	9,776.9	9,941.1	10,770.0

Source: Ministry of Labor, Health and Social Affairs of Georgia

Despite such growth, mental health share in overall expenditures on healthcare is not very high and totals 2.11%.

Table 3

Mental Health Share in Overall Spending on Healthcare	
Australia	6.50 %
Chile	4.10 %
Fiji	1.70 %
France	5.00 %
Kenya	0.01 %
Korea	3.00 %
Romania	3.00 %
South Africa	2.70 %
US	6.00 %
Georgia	2.11 %

Source: World Health Organization

Under this financing, the healthcare system in Georgia represents the following:

Table 4

Main Characteristics of Healthcare							
	2004	2005	2006	2007	2008	2009	2010
Number of physicians in total, thousand	21,4	20,3	20,6	20,0	20,3	20,6	21,2
Number of paramedical personnel in total, thousand	21,6	21,1	20,2	19,3	19,6	18,6	19,3
Number of hospitals, unit	246	242	244	245	244	241	259
Number of hospital beds, thousand	17,8	17,1	16,5	14,6	14,1	13,6	12,1
Average length of stay in hospital per patient, day	8,6	7,7	7,4	7,3	6,8	6,2	6,4
Number of outpatient institutions, unit*	1 113	1 123	1 124	1 140	1 090	1 604	1 691
Capacity of outpatient institutions (number of patients' visits per shift), thousand	94,30	92,10	88,00	84,80	87,40	87,40	87,50
Number of patients' visits to outpatient institutions per year (including for prevention purposes), thousand	7 583,9	7 738,7	8 081,7	6 961,8	7 530,1	7 073,7	7 623,3

*Since 2009 includes village outpatient services

Source: Statistical Reference Book of Ministry of Labor, Health and Social Affairs of Georgia

As we can see, against the background of increasing financing of healthcare the number of physicians and medical institutions are also increasing. However, due to the emphasis made by state on small-scale medical institutions, the number of hospital beds continues decreasing. If in the last years the average length of stay of patients in hospitals was decreasing, in 2010 this tendency was changed for the opposite for the first time. A number of outpatient institutions as well as their capacity and number of referrals per year also increased in 2010.

Parallel to the increase of medical institutions in number, the number of physicians is also growing in the country, but at a relatively lower rate. The number of psychiatrists has been decreased though, against the backdrop of increasing quantity of physicians.

Table 5

Number of Physicians by Basic Specialties							
	2004	2005	2006	2007	2008	2009	2010
							person
Physicians in total	21,396	20,311	20,555	19,951	20,253	20,609	21,162
of them:							
Therapists	2,470	1,951	1,966	1,875	1,885	1,403	1,263
Surgeons	1,011	883	933	906	972	1,034	1,082
Obstetricians-gyneologists	1,450	1,418	1,406	1,370	1,417	1,444	1,505
Pediatricians	1,812	1,706	1,674	1,585	1,509	1,269	1,208

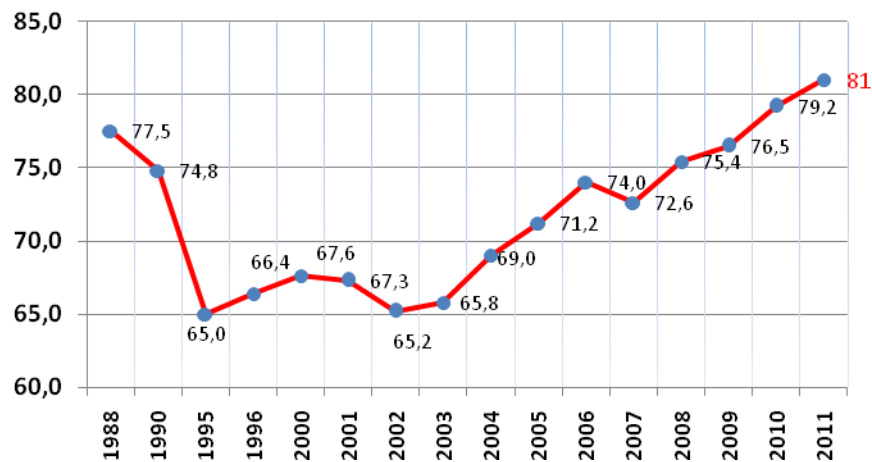
Ophthalmologists	362	347	353	354	350	364	366
Otolaryngologists	324	292	291	307	326	327	359
Neurologists	658	609	612	593	634	610	615
Psychiatrists and Narcologists	348	312	315	278	278	347	316
Phthysiologists	166	177	138	143	145	153	154
Dermatovenerologists	270	247	240	214	240	206	245
Roentgenologists and Radiologists	365	347	326	363	396	398	444
Sports and physical therapy specialists	67	50	58	45	52	51	44
Dentists	1,071	1,091	1,049	1,033	974	909	1,004
Other	11,022	10,881	11,194	10,885	11,075	12,094	12,557

Source: Ministry of Labor, Health and Social Affairs of Georgia

There has been a stable growth in registered cases of mental and behavioral disorders in Georgia for the past few years. 79,216 such cases were registered in 2010 (according to expert estimates, this number totals 81,000 in 2011) that exceeds the similar figure of the previous year by 3.6%.

Chart 6

**Dynamics of Mental and Behavioral Disorders
(1,000 persons)**

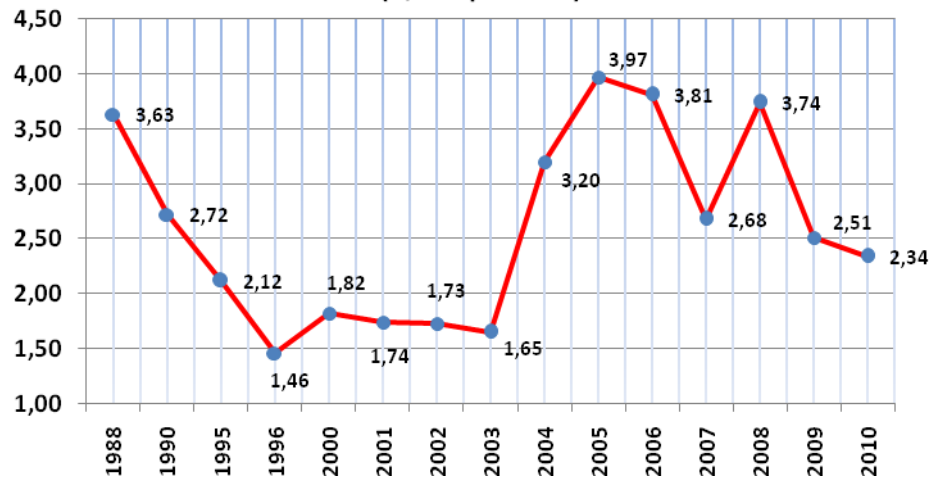


Source: National Center for Disease Control and Public Health

Against the backdrop of the annually increasing dynamics of mental and behavioral disorders, the number of new cases is decreasing. This number has decreased by 6.6% this year as compared to the previous year and totaled 2,34 thousand.

Chart 7

**Dynamics of New Cases of Mental and Behavioral Disorders
(1,000 persons)**



Source: National Center for Disease Control and Public Health

If we look at the structure of the patients with mental and behavioral disorders by specific groups of diseases it becomes clear that this structure remains practically unchanged, with schizophrenia, schizotypal and delusional disorders, and mental retardation constituting its main part (29.9% and 28.7% respectively).

Table 6

Number of Registered Patients with Mental and Behavioral Disorders

	2009		2010	
	Total Number of Registered Patients	New Cases	Total Number of Registered Patients	New Cases
Mental and behavioral disorders, total	76 457	2 505	79 216	2 339
Organic, including symptomatic, mental disorders	10 885	481	11 491	453
Mental and behavioral disorders caused by psychoactive substance abuse	2 147	47	2 161	22
Schizophrenia, schizotypal, and delusional disorders	22 832	699	23 686	724
Affective (mood) disorders	5 495	282	5 504	209
Neurotic, stress-related and somatoform disorders	8 552	147	8 712	77
Behavioral syndromes related with psychological disturbances and psychical factors	537	21	541	5
Adults personality disorders	2 840	96	2 630	60
Mental retardation	21 450	694	22 741	713
Impairment in mental development	1 304	33	1 323	29

Behavioral and emotional disorders developed in young age	415	50	427	47
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Based on data provided by the National Center for Disease Control and Public Health

2. Studying Mental Health Services in Georgia, Identifying Strengths and Weaknesses

Community-based mental health services were created in Western countries in the 1960s. Parallel to this, the number of psychiatric beds started decreasing, and during the last 30 years their number, constituting an average of 200-250 beds per 100,000 people, decreased to 50-150 beds. Reduction of beds was substantiated by the fact that development of the new type of services created the possibility of providing more dignified and efficient care and treatment without increasing expenditures. Since 1980 the number of psychiatric beds in Georgia per 100,000 people has decreased from 150 to 33, with the only difference that this process has not been accompanied with creating out-of-hospital psychiatric services. Hence the deficit in mental health services in Georgia is obvious.

The system of mental health existing in Georgia was studied according to the WHO-AIMS questionnaire, and its strengths and weaknesses were identified.

One of the prerequisites of timely diagnostics and treatment of mental health problems of population is adequate access to psychiatric services in the country. Capacity of these services, their distribution both geographically and according to population density, financial accessibility, professional qualification of personnel, level of stigma, etc. are important factors in this regard.

Mental health services in Georgia are presented by the following:

- Family medicine center
- Psycho neurological dispensary (outpatient clinic)
- Psychiatric cabinet
- Psychosocial rehabilitation center
- Social therapy workshop
- Psychiatric unit for acute patients
- Inpatient service for long-term stay
- Old-style psychiatric hospital

It is assumed that the family doctor is the first person who identifies the patient's problem, and solves it with his/her capabilities or makes a referral to the psycho neurological dispensary / psychiatric cabinet. In case the care and treatment of the mental disorder has timely been provided, patient usually does not have to address other extra services. However in certain cases an inpatient treatment is required in the psychiatric unit for short- or long-term stay. Usually when disease has a chronic character, it necessitates involving the psychosocial rehabilitation component to the treatment plan. The scope of this service is very limited in the country,

partially due to the lack of professional personnel as well as due to the problems with equipping and relevant funding.

After discharging from inpatient clinic, the patient continues treatment at outpatient service or addresses the private physician. Close cooperation between in- and outpatient institutions is the necessary condition for treatment to be consistent and successful.

In reality the situation is rather complicated due to a number of reasons. In particular, referrals between the family medicine center, outpatient service and psychiatric hospital are not carried out timely. In a number of cases the patient fails to address the specialist (psychiatrist) timely and the relevant diagnostics and treatment is delayed. There were cases when the patients suffering from depression or psychosis, which had not been diagnosed or treated properly, committed suicide. In some cases, the financially capable psychiatric patient fails “to reach” the psychiatrist.

An important factor hampering timely diagnostics is an uneven allocation of services in the country. For instance, in the autonomous republic of Adjara both the outpatient service (psycho neurological dispensary) and the psychiatric hospital are located in the capital Batumi. In order to reach psychiatrist, people from mountainous regions have to travel 50-100 kilometers, which is hardly realistic for village population. Racha-Lechkhumi and Kvemo Svaneti regions are served only by Kutaisi outpatient service. There is no psychiatrist or psychiatric nurse working full time in Ambrolauri. The similar situation with different specificity can be found in other regions. 100 out of 200 licensed psychiatrists are concentrated in Tbilisi; while there is an acute deficit of qualified personnel in regions. As it is known, availability of sufficient number of qualified personnel is very important for diagnostics of mental disorders. In this regard, a number of different and complex problems have been highlighted, to name a few:

- Training of primary healthcare doctors in mental health issues takes only 2-3 days;
- Specific qualification of psychiatric nurse does not exist;
- Resident psychiatrists work only with hospitalized patient and are almost completely unaware of a number of mental disorders common for outpatient services;
- The system of continuous medical education does not function.

Low level of coordination and cooperation between different components comprising the mental health service in Georgia is one of its weaknesses. There are no sufficient referrals between the primary healthcare system, outpatient psychiatric service, inpatient clinic and the services providing psychosocial interventions. Due to above-said, the patient leaves one service and fails to reach the other one, in number of cases. For instance, a patient discharged from the hospital does not go to the outpatient service or does so with delay. So the treatment is suspended that often becomes the reason for relapse.

Quite often the only incentive the patient addresses the outpatient service with is his/her wish to be granted a disability pension.

The outpatient component of the state psychiatric program envisages that in case of need the staff of the psycho neurological dispensary should carry out home visits. In reality, majority of the dispensaries do not have relevant technical and financial resources to do that. Monthly costs per patient in outpatient clinics (medication, personnel, communal charges) amounts to GEL10-15 average (maximum amount of GEL19 monthly). This budget is very limited for patients and mainly enables to provide an old generation medication that is inconsistent with the guidelines approved for the country. In some cases the patient is given the medication for only 10-15 days, for the rest he/she should pay out of pocket.

Apart from many problems, the mental health system in Georgia has certain strong aspects as well, such as:

- Financial accessibility (in case of certain nozologies)
- There is a network of services available, which can be reinforced and developed further
- There are methodological bases available (inpatient and outpatient clinics, rehabilitation center)
 - Intellectual resources are available
 - Within the framework of mental health reform psychiatry is integrated into the healthcare services of the general profile. A number of new inpatient clinics were opened. There is an opportunity for introducing a principally new type of services;
 - A number of non-governmental organizations have accumulated a very interesting yearlong experience. A great deal of projects implemented by these NGOs stand a real chance to become a part of the state psychiatric program;
 - There are medically and psychologically educated people available countrywide who might successfully fill the gap of the qualified personnel in mental health field, after receiving relevant qualification training. The population would be better served if these people have been retrained and included into the mental health personnel providing relevant care, and by increasing finances allocated for the mental health services.

Within the framework of the mental health reform, officially declared by the minister of labor, health and social affairs of Georgia on 5th October 2010, a number of changes have been implemented during one year. Intensive renovation works aimed at developing infrastructure have been carried out in different clinics countrywide. The clinics were rehabilitated and equipped according to the rule established by the Georgian legislation as well as in conformity with international requirements. Rehabilitation and reconstruction of the relevant units in Tbilisi have been completed at 3 multi profile and 4 specialized clinics (3 of them – in regions); namely:

1. Tbilisi - 21a Kavtaradze Str., JSC Mikhail Asatiani Scientific Research Institute's Clinic, which provides:

Inpatient service:

- Acute beds - 40
- Long-term (chronic) beds - 40

Outpatient service:

- Crisis intervention by providing home care
2. Tbilisi, Referral Hospital LLC, Kindzmarauli turn
 - Acute unit for 30 beds for adults
 3. Tbilisi, JSC Gudushauri National Medical Center, #2/6 Ljubljana St.
 - Acute unit for 30 beds for adults
 4. Tbilisi, Clinical Hospital #5 LLC, Temka settlement
 - Acute unit for 30 beds for adults
 - Acute unit for 10 beds for children
 5. Kutaisi, Mental Health Center LLC, 20 Chkhobadze St.
 - Long-term inpatient unit for 30 beds
 - Outpatient service
 6. Batumi, Republican Clinical Psycho Neurological Hospital, Adjara, Khelvachauri settlement
 - Shelter-type unit for patients with long-term disease for 30 beds
 - Outpatient service
 7. Rustavi, Rustavi Mental Health Center LLC, #5 St. Nino St.
 - Shelter-type unit for 22 beds
 - Outpatient service.

Shifting to the voucher system introduced into the new units turned out an important novelty. Namely, care GEL840 is allotted for care at the acute unit, and GEL450 – for care in long-term units.

Several months of experience showed that improvement of infrastructure is perceived positively by mental health professionals as well as by the patients and the family members. People, who refused treatment at the old-type psychiatric hospital due to inadequate conditions there, now agree to be placed at the new units. Improvement of working conditions positively affected staff's motivation and quality of care.

Against the backdrop of the changes taking place at the inpatient facilities, the future of outpatient service is unclear. In reality, development of outpatient services in terms of creating infrastructure costs relatively cheaper. Also, a proper performance of outpatient services (psycho neurological dispensaries) would reduce demand for inpatient service and the relevant expenses.

Accordingly, within the framework of the mental health reform the special emphasis should be made on the development of the outpatient service.

Public mental health outpatient service is underdeveloped in Georgia. The state program covers only a small part of mental health. The World Health Organization called for the creation of community-based mental health services worldwide back in 1995.

Results of the studies conducted in the number of European countries prove effectiveness and efficiency of the community-based mental health services. The present report shows results of the study carried out by the Georgian Mental Health Coalition, which assessed the efficiency of community-based mental health services. The report defines as well the amount of human and financial resources required for this service.

3. Development and Piloting of the Community-Based Mental Health Service Model

Creating community-based mental health service for the country with average resources is a recommendation made by the World Health Organization (Mental Health, Balancing Institutional and community care, David McDaid and Graham Thornicroft, WHO 2005). For the past 50 years the psychiatric service existing in Western states underwent significant reform. In result, people with mental health problems spend more time in society, within their native environment and stay less in the psychiatric hospital. This became possible due to development of community-based services. The accent from the biomedical model was shifted to the bio-psychosocial model; with inclusion of psychosocial interventions into the biological model.

A network of mental health outpatient services (psycho neurological dispensaries) has been functioning to date in Georgia, which are expected to ensure consulting and care of the patient at place and according to the place of his/her residence. However, due to scarce budget, inadequate material and technical base and lack of qualified personnel, the liabilities assumed by the state and worded in the state psychiatric program cannot be fulfilled completely. The budgetary allocation for the psychosocial rehabilitation component totals GEL70,000 per year. This financing is sufficient only for limited number of patients (100-150 persons per year) residing in Tbilisi, Kutaisi and Telavi.

The Western experience proves that the community-based services' practice is efficient. The present article describes a randomized 'blind' study carried out by the Georgian Mental Health Coalition, which explores the efficiency of the community-based mental health service in Georgia.

3.1 Objective of the Study

The main objective of the randomized controlled study designed by the Coalition was to assess the efficiency of the community-based mental health service recommended by the World Health Organization, as compared to the regular service (standard package) in order to study its clinical outcome for patients and the impact on their social functioning.

3.2 Hypothesis

A recommended specialized community-based mental health care (community-based care package) is more efficient than the care provided by the outpatient care (standard package) operating in the country today.

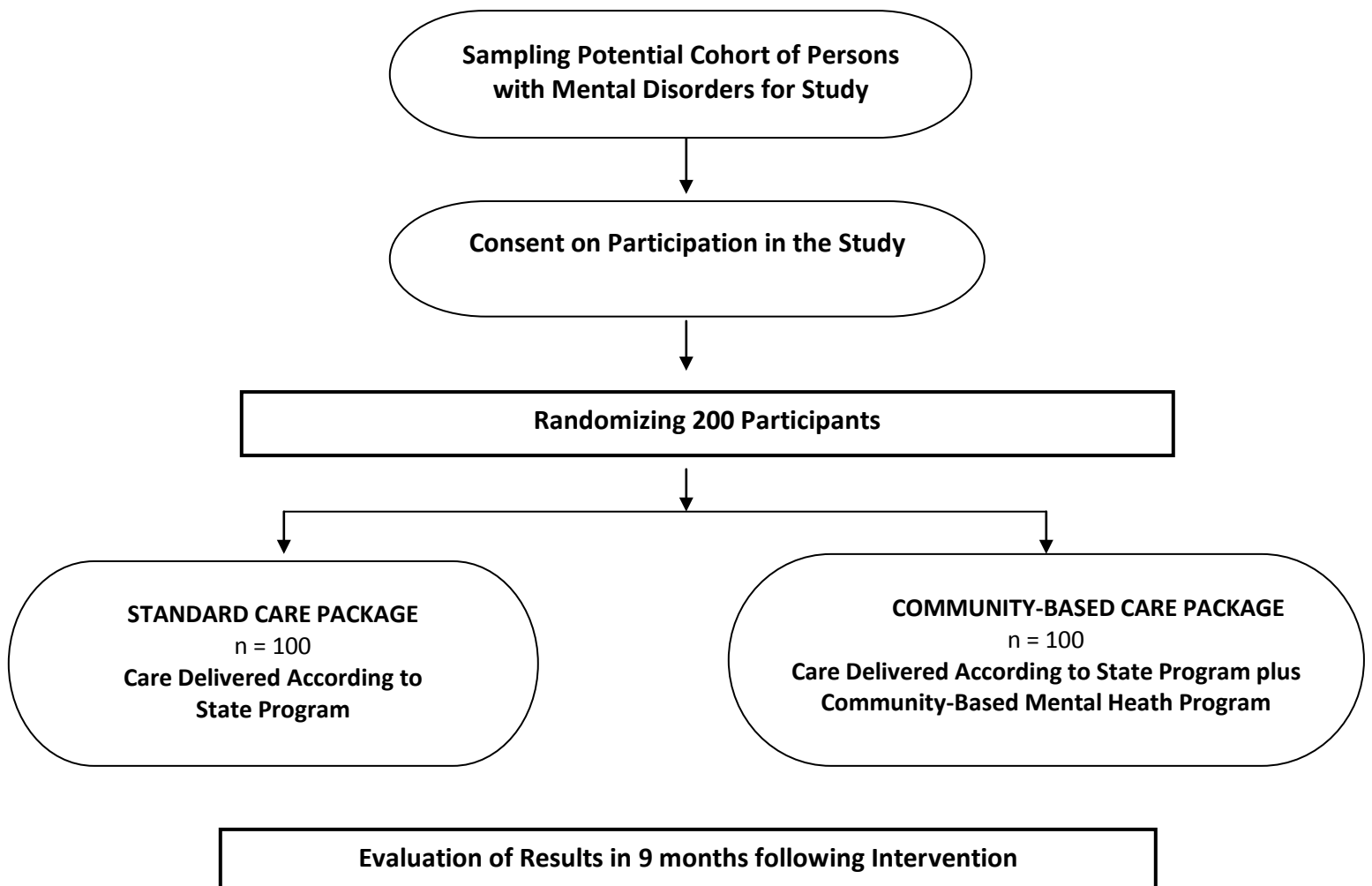
3.3 Study Design

A randomized controlled blind study was conducted for the purpose of making a comparative analysis of the efficiency of the community-based care and of the standard service envisaged by the state psychiatric program, both serving the patients with mental disorders.

Mental health patients were randomized into the following two groups:

- SC (standard care) group: patients who received a standard package of psychiatric care (existing package):
- CC (Community care) group: patients who, in addition to the standard care, received a new type of care.

Figure 1. Graphic Representation of the Study



3.4 Target Population

- a) Persons residing at the central districts of Tbilisi who were delivered care within the framework of the state program at the Asatiani Scientific Research Institute's clinic;
- b) Persons above 18 years old;
- c) Persons speaking Georgian and/or Russian languages.

3.5 Ethical Perceptions and Consent on Participation

Before involving in the study, the patient or his/her caregiver had been familiarized with the written form of consent. Signing this form was a precondition for participation in the study. The per cent of those willing to participate turned out rather high, which can be explained by the fact in the framework of the project the patients would be delivered additional specialized services free of charges, which were not routinely accessible for them.

3.6 Randomization in Groups

Patients participated in the study were randomized to the standard group named SC (standard care group, without intervention) and the intervention group named CC (community-based care group). Each project participant was given an identification number and a group number. Participants were randomized to the groups according to the computer-generated randomized list. All persons participating in the study were having mental disorder and all of them lived within the geographical area covered by the project.

3.7 Intervention

When filling up the written consent form, each participant had been explained that they would have been offered an additional treatment/rehabilitation care service upon randomized selection. Participants were informed as well that they would have been randomized to the trial and control groups.

Participants were explained that those of them randomized to the standard (existing) service group would not get any additional care service and they would have been delivered the standard (existing) care only; however they would have been additionally monitored in order to register follow-up visits and responsiveness to the measures of delivered care. The care covered medication, which would be freely distributed within the framework of the state psychiatric program. The patients were explained as well that those randomized to the intervention group would get a complementary care offered within the framework of the project.

3.8 Description of the Community (Complementary) Intervention

A multidisciplinary team had worked with the intervention group for 9 months, which was comprised of psychiatrists, nurses, psychosocial rehabilitation specialists, social therapists and a social worker. The multidisciplinary team was working by the case management method, which enables to adjust the service to the client's individual needs to the maximum extent. The team was using the following methods: the service envisaged by the state psychiatric program plus, in case of need: extra psychotropic medication, psychosocial rehabilitation (mobile team, ergo therapy, integrated psychological therapy, cognitive-behavioral therapy, socially independent living skills for independent living, social competence training), and social therapy.

3.9 The Psychosocial Rehabilitation Program Components

a) Ergo Therapy

The therapy aims at developing creative skills of socially restricted persons with long-term mental illness and improving their cognitive skills through work activities.

b) Socially Independent Living Skills (SILS)

The Socially Independent Living Skills program is composed of many different modules based on one principle and aiming at improving a specific social skill necessary for independent living. The following 2 modules are applied in Georgia:

- **Symptoms control module**

Helps the patients with long-term mental disorders learn about their illness, learn how to avoid relapse and manage resistant symptoms, and quit substance abuse.

- **Care management module**

Helps the patients with long-term mental disorders take their medication on their own and learn to identify its side effects.

c) Integrated Psychological Therapy Model (IPT)

The psychotherapy program includes steps which are focused on training and improving cognitive skills of patients with long-term mental disorders as well as learning independent social skills and interpersonal problem-solving.

d) Cognitive-Behavioral Therapy (CBT)

The cognitive-behavioral therapy is a psychotherapy approach which is a combination of cognitive and behavioral techniques and aims at solving problems associated with dysfunctional emotions and cognitions. CBT applies the purpose-oriented structured procedures with the emphasis made on 'here-and-now' principle.

e) Social Competence Training

A structured group therapy training program, which is based mainly on behavioral techniques and aims to learn to:

- improve relations with close persons

- establish good rapport with people generally
- defend one's own rights
- be able to talk about illness adequately

The above-listed therapeutic measures were carried out at the psychosocial rehabilitation center twice a week.

f) Social Therapy

Social therapy is based on the holistic understanding of a human being and is used for rehabilitation and social integration of persons with mild, moderate and severe mental retardation. The social therapy method aims at creating an environment for beneficiaries, where their skills will be optimally realized and developed, and their needs for integration into the society will be met.

The mentioned therapeutic intervention was implemented at the social therapy workshop functioning at the psychology unit of the Tbilisi Javakhishvili State University Department for Social and Political sciences. The beneficiaries spend their time at the workshop according to the well-planned structure: work, art and entertainment activities were smoothly replacing each other during the day. The workshop was working each week day except for weekends and official holidays.

The workshop beneficiaries learned the skills of making notebooks and working with copy machines.

The social therapy workshop had been chosen for the study purposes before the state standards on daycare centers were adopted. Consequently, the requirements set by those standards have not been fully met while implementing the study. In case of fulfilling the conditions set by the standards the expenditures for social therapy workshop will be doubled.

g) Mobile Team

The mobile team was composed of psychiatrist, nurse, social worker, psychologist-therapist and driver. The team was working preferably with the patients, who needed home visits in order to become active and get involved in the other therapies. The social worker was helping beneficiaries in solving social issues.

3.10 Specifying Results of the Study

Patients were observed on an individual basis during 9 months.

The following quantitative results were planned to be evaluated:

- Number of bed-days spent at psychiatric hospital during 9 months by the patients of the trial and control groups

- Number of bed-days spent at psychiatric hospital during 9 months before intervention by the patients of the trial and control groups

DSM-IV V axis - Global Assessment of Functioning (GAF) scale was used for study purposes. GAF scale is used to assess social, work and psychological functioning of patients with mental disorders, which are assessed within the range 0 to 100. This assessment does not however include the information about dysfunctions caused by physical and environmental factors. For the purpose of assessing the general level of functioning of individuals, the specific interview was conducted by two psychiatrists, in order to ensure objectivity, and each participant was assigned the relevant score in result of the consulting of specialists. Interviews were conducted by the blind method, interviewers were not aware of the purpose of the study and also, which respondent represented which group.

The global assessment of functioning of patients before and after intervention was made by the blind method. Interviewers were not aware of the initial parameters and treatment details of the patient (including which patient was from which group). For the purpose of ensure objectivity, GAF assessment was made on the basis of professional consulting.

3.11 Data Management and Statistical Analysis

The management and analysis of data was done with SPSS version 1.6 statistical program. The data on the study participants was analyzed according to the random groups. The frequency of patients' parameters (number of bed-days) was calculated and the comparative risk with 95% confidence interval was assessed. The two-sided probability value less than 0.05 was considered statistically significant. A chi-square test was used to compare **qualitative variables** or, as an alternative, Fisher's exact test was used in relevant cases (for small groups). Analysis of continuous variables was done by applying the student's t test. From non-parametric methods the Mann-Whitney test was used.

3.12 Sample Size

The data collected for the study was based on the statistical reference book issued by the Ministry of Labor, Health and Social Affairs (Disease Control and Medical Statistics), but on account of the lack of official data due to inadequate epidemiological supervision in the country, the information put into the official medical records of psychiatric institutions and staff's formal case records were also used. According to this data, the patient with mental disorder spends average 5 days in the specialized hospital in Georgia. For sampling we used 95% power of the study and 0.05% two-sided significance level alpha, and found that the study should cover 200 patients in total (100 in each group). The duration of the study was decided to be 9 months.

3.13 Duration of the Study

Timeframe of the Study: September 2010 – July 2011. The first two months were spent on making individual plans for patients of the intervention group; while the intervention took 9 months.

3.14 Study Results

The Study covered 216 persons, who were randomized to the following two groups:

Trial group – 109 persons receiving community-based care;

Control group – 107 persons receiving standard care.

At both stages, before and after intervention, 183 persons were assessed by scoring (84.7%).

Accordingly, the loss to follow-up amounted to 15.3%.

These 183 persons were divided into the following groups:

Trial group – 91 persons

Control group – 92 persons.

Table 7

Difference Between Trial and Control Groups by Age and Gender			
Factor	Trial Group (n=91)	Control Group (n=92)	Statistical Significance of Difference between Groups
Age group			
≤ 40 years	40 (44%)	32 (34.85)	$\chi^2 = 1.61$ $p = 0.2$
> 40 years	51 (56%)	60 (65.2%)	
Gender			
Male	43 (47.3%)	32 (34.85)	$\chi^2 = 0.27$ $p = 0.6$
Female	48 (52.7%)	60 (65.2%)	

Table 7 shows that no statistically significant difference was found between trial and control groups by age and gender.

Table 8

Test Score Improvement Rate				
Group	Average Improvement Rate	Average Standard Deviation	T Statistic	P Statistical Significance

Trial	6.58	1.45	2.13	0.035
Control	2.46	1.45		

As the Table 8 shows, the trial group has shown a statistically significant improvement rate as compared with the control group. Difference between scores totaled 4.12.

Table 9

Improved Test Score by Number of Patients			
Group	Tests Scores Improved	Test Scores not Improved	Total
Trial	70 (76.9 %)	21 (23.1 %)	91
Control	46 (50%)	46 (50%)	92
Total	116	67	183

An analysis was made in terms of the percentage of the trial group members, which showed improved tests scores and the difference between trial and control groups in this regard. It was found that the trial group showed much higher improvement (76, 9%) as compared with the control group (50%). This difference was statistically significant (χ^2 statistic=14.29, statistical significance $p < 0.001$).

Table 10

GAF Score at the Beginning of Study				
Group	GAF Score at the Beginning of Study	Average Standard Deviation	T Statistic	P Statistical Significance
Trial	40.62	1.61	2.43	0.016
Control	46.34	1.72		

The absolute values of the test scores were compared at the beginning of the intervention. The average absolute value of the difference between the trial and control groups was statistically significant meaning that despite randomization, the mental state and the level of functioning of the patients randomized to the trial group was worse than those randomized to the control group.

Table 11

GAF Score at the End of Study				
Group	GAF Score at the end of Study	Average Standard Deviation	T Statistic	P Statistical Significance
Trial	47.20	1.53	0.69	0.49
Control	48.79	1.73		

The difference found at the beginning of the intervention lost its statistical significance by the end of the study meaning that in result of 9-month intervention the mental state and the level of functioning of the patients of the trial group had improved and equaled that of the patients of the control group.

Table 12

Correlation of Effectiveness of the Intervention with Age and Gender				
Factor	Average Improvement Rate	Average Standard Deviation	T Statistic	P Statistical Significance
Age group				
≤ 40 years	5.18	1.36	0.55	0.58
> 40 years	4.07	1.35		
Gender				
Male	5.79	1.32	1.61	0.11
Female	3.27	1.44		

The test score improvement rate turned out higher in younger patients (40 years of age and below) and in persons of male gender; however this difference was not statistically significant which means that effectiveness of the study does not correlate with age and gender.

Table 13

Correlation of Frequency of Improvements with Age and Gender

Factor	Persons with Improved Test Scores (n=116)	Persons with Unchanged Test Scores (n=67)	Statistical Significance of Difference between Groups
Age group			
≤ 40 years	44 (61.1%)	28 (38.9%)	$\chi^2 = 0.27$ $p = 0.6$
> 40 years	72 (64.9%)	39 (35.1%)	
Gender			
Male	57 (63.3%)	33 (36.7%)	$\chi^2 = 0.00$ $p = 0.99$
Female	59 (63.4%)	34 (36.6%)	

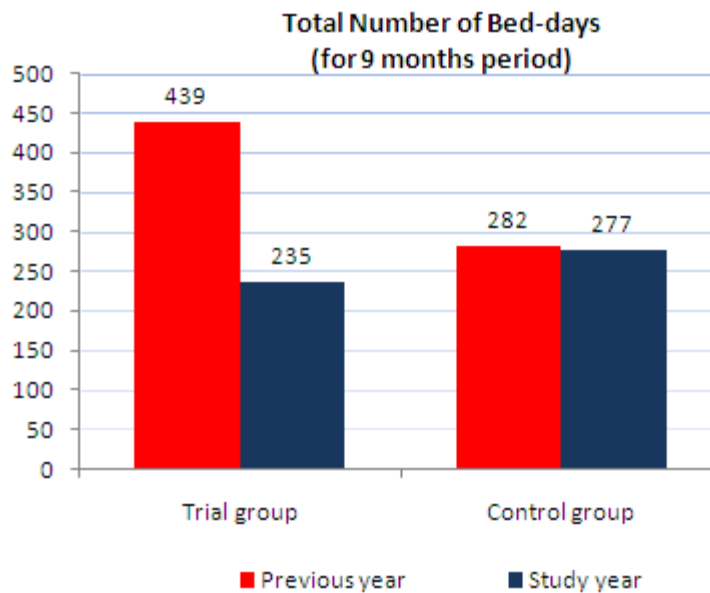
As the Table 13 shows, the frequency of improvements of the test scores was not statistically significant in terms of age and gender; accordingly, the frequency of improvements in mental state caused by the intervention does not correlate with age and gender.

Impact of the Intervention on Number of Bed-days

The number of bed-days in the trial group during 9 months totaled 235, while during the analogous period of the previous year it amounted to 439. The decrease totaled 2.24 bed-days per patient during 9 months of the study period.

The number of bed-days in the control group during 9 months totaled 235, while during the analogous period of the previous year it amounted to 282. The decrease totaled 0.05 bed-days per patient during 9 months of the study period.

Chart 8



The difference in bed-days during 9-month period between the trial and control groups totaled 2.19 bed-days per patient.

4. Qualitative Analysis of the Intervention Results

The analysis of the intervention results showed that parallel to improving the quantitative indicators, the qualitative changes also took place. Meetings with beneficiaries, their family members and professional service providers involved in the project helped us familiarize with the attitude of the above-mentioned actors towards the offered service and also, learn about the strengths and weaknesses of the community-based approach.

It was found that the patients involved in the rehabilitation programs were satisfied with the services provided. They were happy that they had been given the opportunity to get involved in certain activities instead of spending the whole day at home. Some of them even found regular job. In some cases the patients were asking for providing longer and more frequent procedures. For instance, the beneficiaries were quite often eager to stay longer at the ergo therapy sessions at the rehabilitation center. The same tendency was manifest at the social therapy workshop. The patients became upset to learn that the program was approaching its end since the 9-month period envisaged by the project had expired. In the next months the rumors were spread that the program would continue by all means so the patients became very excited and started visiting the specialists who were involved in the project in order to confirm their expectations. Some service users managed to continue receiving psychosocial rehabilitation through the program financed either by state or private donor funding.

The family members of the service users showed their satisfaction as well. According to them, the interpersonal relations within the family have improved. In some cases the family members

found that they had more free time since they did not have to spend the whole day caring for their family member. They started feeling that they were not alone with their family problem, and that somebody supports them.

Also, it was discovered that cooperation with families is very important, along with the psycho education and the agitated emotional state of family members. As it was discovered, the reason for frequent hospitalization might be the wrong attitude of family members towards mental illness as well as the perception that inpatient clinic is the only service to address the health issue of the mentally ill patient. The family members were also requesting continuation of the service.

Feedback of the specialists participating in the program was interesting as well. Professionals, who had worked independently at the outpatient clinics before, now, upon gaining experience of working in the multidisciplinary team context admit that they apparently lacked coordination. Within the framework of the project the specialists realized that they understood the patient and perceived his/her needs more comprehensively. The mental health professionals working at different institutions have changed the attitude towards each other as well: if they considered each other as competitors or as colleagues having necessarily with opposite opinion, working in multidisciplinary team helped them realize that they need each other and that their joint efforts might be more efficient. According to the staff of the clinic at the institute of psychiatry, the project changed both their attitude towards patients and the character of relations with them. The emotional involvement of the professional with the patient has increased; shifting the emphasis from illness towards complains and needs of a human being. Maybe this became the reason of the slight decrease of the GAF score and of the number of bed-days also in the control group.

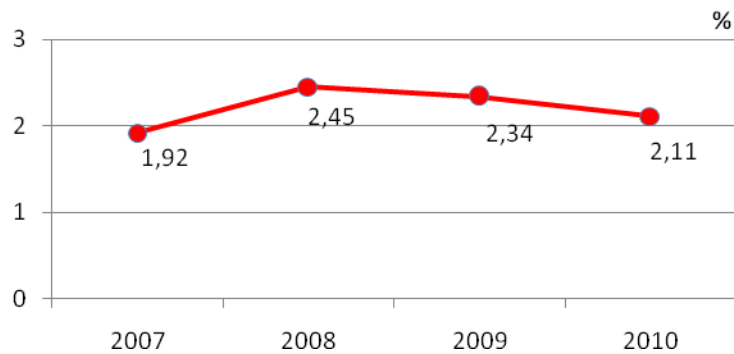
5. Financial Analysis of the Project

As we can see, there is an annual increase in healthcare expenditures in the country including the relevant government spending. It should be mentioned that despite the share of healthcare expenditures as of the part of country's GDP is considerably high, this is mainly explained by population's large out-of-pocket spending on healthcare; while the relevant public expenditures are still rather low.

Notwithstanding a gradually increasing government spending on healthcare, the mental health share within the overall expenditures on healthcare is rather low and has even decreased for the last years.

Chart 9

**Mental Health Share of Government Spending
within the Overall Public Expenditures on
Healthcare**



According to the recommendation of the World Health Organization, for the purpose of further reforming the psychiatric service in Georgia, shifting to the community-based mental health services is necessary. In order to fulfill the latter, the following should be defined:

- Who is a beneficiary of the outpatient service;
- What kind of service(s) should be provided to the patients;
- Who should provide the service;
- What resources are needed for expanding the model countrywide;
- What benefits will be gained from introducing the model.

5.1 Beneficiaries of Community-Based Mental Health Services

There is no comprehensive information available about the exact number of patients with mental and behavioral disorders in the country. Therefore it is very difficult to count potential beneficiaries of the mentioned service.

The state program for psychiatric care does not envisage free consulting and treatment for beneficiaries above 18 years old for all kinds of mental disorders. The service is considered to be provided in case of the following diagnoses only:

- Organic, including symptomatic mental disorders
- Schizophrenia, schizotypal, and delusional disorders
- Affective (mood) disorders
- Mental retardation.

Table 14

Number of Patients with Mental and Behavioral Disorders Covered by State Program

	2010
Mental and Behavioral Disorders – total	61,603
Organic, including symptomatic mental disorders	11,491
Schizophrenia, schizotypal, and delusional disorders	23,686
Affective (mood) disorders	5,504
Mental retardation (above 18 years)	20,922

Source: National Centre for Disease Control and Public Health

Consequently, according to the official statistics of 2010, the number of potential users of the outpatient service totals 61,603.

However, the actual figures of referrals to the outpatient clinics of Georgia in summer-fall 2010, which were studied within the framework of the project by applying the WHO-AIMS questionnaire, shape a much more realistic picture for identification of potential beneficiaries of the mentioned program. The Table 15 below shows the number of the patients-contacts in a month by regional outpatient clinics.

Table 15

Number of Contacts by Outpatient Clinics	
Ozurgeti	454
Batumi	1,100
Lanchkhuti	550
Kutiri	71
Kutaisi	1,200
Zugdidi	629
Senaki	1,400
Samtredia	400
Zestaponi	738

Mtskheta-Tianeti	200
Akhaltsikhe	360
Surami	268
Gori	700
Tbilisi (Gldani, Gotsiridze, Asatiani)	3,250
Rustavi	978
Sighnaghi	360
Telavi	600
Total	13,258

If we consider the data given above and the fact that the referrals to the outpatient service increased by 10% due to extra services and better quality treatment and rehabilitation offered to the patients, it can be assumed that the number of patients, who might be potential beneficiaries of the community-based services countrywide can total 14,600.

5.2 What Kind of Service the Patients Should be Provided with

As mentioned above, the analysis of the situation in the country and observation made on the trial group revealed **three different service program-packages**, which, depending on the funds available in the budget can be provided in full or in phased manner.

Service program-packages:

- I - Medication for patients with mental and behavioral disorders
- II - Psychosocial rehabilitation
- III - Mobile team

5.3 Who should be a service provider

The service should be provided on the basis of the outpatient services (psycho neurological dispensaries) existing in the country, by retraining their experienced personnel and training additional qualified staff.

If we take into account the number of general outpatient clinics (polyclinics) and mental health outpatient services in Georgia, the territorial principle of their location, planned capacity and

workload we can suggest that introducing community-based mental health service package in fact does not require considerable government funding.

Finding sufficient number of qualified psychosocial rehabilitation specialists, social therapists, doctors and nurses having necessary qualification is a more problematic issue.

The study carried out by the Coalition by applying the WHO-AIMS questionnaire showed the factual numbers of specialists, working in the mental health institutions and providing services under public financing by regions (summer 2010):

Table 16

	Psychiatrist	Psychologist	Nurse	Social Worker
Ozurgeti	3	1	4	0
Batumi	9	1	21	0
Lanchkhuti	3	1	3	0
Khoni	12	3	73	5
Kutaisi	10	1	28	0
Zugdidi	4	1	8	1
Senaki	7	1	8	0
Samtredia	3	1	5	0
Zestaponi	4	1	4	0
Mtskheta-Tianeti	4	1	4	0
Akhaltzikhe	3	1	3	0
Surami	7	2	16	1
Gori	2	1	4	0
Tbilisi	76	11	90	2
Rustavi	6	1	9	0
Sighnaghi	4	1	4	0

Telavi	7	1	3	0
Bediani	4	1	4	
Total	168	31	291	9

Of that, the following number of specialists is working in outpatient services:

Table 17

	Psychiatrist	Psychologist	Nurse	Social Worker
Ozurgeti	3	1	4	0
Batumi	3	1	4	0
Lanchkhuti	3	1	3	0
Khoni	1	1	1	0
Kutaisi	10	1	23	0
Zugdidi	4	1	8	1
Senaki	7	1	8	0
Samtredia	3	1	5	0
Zestaponi	4	1	4	0
Mtskheta-Tianeti	4	1	4	0
Akhaltzikhe	3	1	3	0
Surami	2	1	4	0
Gori	2	1	4	0
Tbilisi	18	6	18	2
Rustavi	6	1	9	0
Sighnaghi	4	1	4	0
Telavi	7	1	3	0
Total	90	21	115	3

Creating a system of training/retraining and certification of the personnel with similar qualification is necessary. This issue of the filling the deficit in qualified personnel can be addressed by the non-governmental organizations working in the field. Based on the program and the schedule agreed with the relevant authorities and with donor financing the NGOs will be able to train the qualified personnel for community-based mental health services.

5.4 Resources Needed for Expanding the Model Countrywide

Based on the findings of the pilot project implemented by the Georgian Mental Health Coalition it is possible to calculate the approximate costs needed for expanding the community-based service countrywide.

Direct costs spent on 100 patients within the framework of the project during 9 months totaled GEL79,612.

Table 18

Direct Costs Spent on Patients 1 November 2010 – 1 August 2011									
	2010		2011						Total
	November	December	January	February	March	April	May	June/July	
Psychosocial rehabilitation specialists (6)	3 205	2 406	2 978	2 730	2 760	2 760	2 760	2 758	22 357
Psychologist and social worker	1 404	1 404	1 404	1 404	1 404	1 404	1 404	1 404	11 232
Social therapist	702	702	702	702	702	702	702	1 404	6 318
Doctor/nurse (2)	3 736	1 840	1 920	1 872	1 872	1 872	1 872	1 872	16 856
Driver (1)	455	455	455	500	500	500	500	500	3 864
Meal	212	496	497	427	666	613	586	1 029	4 526
Fuel	412	376	230	304	392	783	734	1 061	4 293
Medication	1 566	343	584	1 063	136	790	2 168	-	6 651
Travel costs	25	55	70	85	70	102	244	228	879
Materials for ergo therapy									703

Materials for social therapy									1 933
Total	11 717	8 077	8 840	9 087	8 502	9 526	10970	10 256	79612

If we break down the given data by specific package of services, we will have the following figures: GEL36,717 was spent on psychosocial rehabilitation, GEL36,244 - on mobile team and GEL6,651 extra sum was spent on medication (for the patients of the trial group in addition to the amount allotted from state funding for medication).

Table 19

Costs for Patients by Specific Packages		
	Costs for 9 Months	Average Monthly Cost
Psychosocial Rehabilitation		
Psychosocial rehabilitation specialists (6)	22,357	2,484
Social therapist	6,318	702
Travel costs	879	98
Materials for social therapy	1,933	215
Materials for ergo therapy	703	78
Meal	4,526	503
Total	<u>36,716</u>	<u>4,080</u>
Mobile Team		
Psychologist / social worker	11,232	1,248
Doctor/nurse	16,856	1,873
Driver (1)	3,864	429
Fuel		

	4,293	477
Total	<u>36,244</u>	<u>4,027</u>
Medication		
Medication	<u>6,651</u>	<u>739</u>
Total	<u>79,612</u>	<u>8,846</u>

The given data makes possible to calculate costs per separate service package countrywide.

5.5 Psychosocial Rehabilitation

30 patients (30%) from 100 randomized patients appeared to be in need of psychosocial rehabilitation (23 patients needed the service of psychosocial rehabilitation centre, 7 patients needed social therapy workshop service). The number of hours needed for psychosocial rehabilitation of above-mentioned 23 patients totaled 36 hours average in a month; while the social therapy hours totaled to 100 hours in a month. Salary for 6 psychotherapists working part-time amounted to GEL22,357, which totals GEL414 average in a month, and GEL22.5 in an hour. The costs for social therapist's reimbursement totaled GEL6,318 (GEL702 in a month for full-time work), transportation costs for patients to attend psychosocial rehabilitation sessions (for the patients who did not have money for transport) amounted to GEL879 (GEL97.7 in a month). GEL4,526 was spent on the meal for patients (GEL502,9 in a month). Costs for materials for ergo therapy totaled GEL703, for social therapy – GEL1,933.

Table 20

PSYCHOSOCIAL REHABILITATION Main Data by the Project	
Total number of patients with mental and behavioral disorders randomized for the project	100
Number of patients who needed psychosocial rehabilitation:	30
of them, at the psychosocial rehabilitation center	23
at the social therapy workshop	7
Percentage of the patients who needed psychosocial rehabilitation:	30%
of them, at the psychosocial rehabilitation center	<u>23%</u>
at the social therapy workshop	<u>7%</u>

Hours per month per patient at the rehabilitation center	<u>36</u>
Number of psychotherapists working in the project full- or part-time	6
Costs for reimbursement of psychosocial rehabilitation staff	22,357
Average reimbursement of one staff member	414
of that, average reimbursement of one specialist per hour	<u>22.5</u>
Number of hours of social therapy, needed for the patients in the project (average in month)	<u>100</u>
Number of social therapists working in the project full- or part-time	2
Costs for reimbursement of social therapists	6,318
Average monthly fee for social therapist in the project	351
of that, monthly reimbursement of one full-time social therapist	<u>702</u>
Total costs for meal for whole project period	4,526
of that: monthly costs for meal, average	<u>502.9</u>
Costs for materials for social therapy for whole project period	1,933
of that: average monthly costs for materials for social therapy	<u>214.8</u>
Transport costs for whole project period	879
of that: average monthly transport costs	<u>97.7</u>
Ergo therapy costs for whole project period	703
of that: average monthly costs for materials for ergo therapy	<u>78.1</u>
Total Costs for Psychosocial Rehabilitation for 9 months according to the Project	<u>36,716</u>

If we calculate these figures with regard to the patients with mental and behavioral disorders in the program (14.600 persons in total) we will get the following picture: The number of patients, who need psychosocial rehabilitation, totals 4,380 (of that, 3,358 patients need the service of psychosocial rehabilitation center, 1,022 – the service of social therapy workshop). Accordingly,

they need 5,256 hours' service provided by psychosocial rehabilitation center and 256 hours' service of the social therapy workshop. 44 psychotherapists and 122 social therapists are needed for providing the psychosocial rehabilitation and costs for their reimbursement total GEL203,670 (GEL118,260 and GEL85,410 respectively). If we add the monthly costs for transport, meal and materials for social therapy and ergo therapy, the total costs for psychosocial rehabilitation per year will amount to GEL4,009,355.

Table 21

PSYCHOSOCIAL REHABILITATION Costs Expected to be Spent by State Program	
Total number of patients with mental and behavioral disorders in the program	14,600
Number of patients required psychosocial rehabilitation	4,380
of them, at the psychosocial rehabilitation center	3,358
at the social therapy center	1,022
Hours per month needed at the psychosocial rehabilitation center	5,256
Total working hours of psychosocial rehabilitation specialist in a month	120
Number of required specialists	44
Monthly costs for reimbursement of psychosocial rehabilitation staff	118,260
Hours of social therapy required in a month	14,600
Total working hours of social therapist in a month	120
Number of social therapists required	122
Costs for reimbursement of social therapists in a month	85,410
Monthly costs for meal	73,422
Monthly costs for materials for social therapy	31,358
Monthly costs for transport	14,259
Monthly costs for materials for ergo therapy	11,404
Total Annual Costs of State Program for Psychosocial Rehabilitation Program	<u>4,009,355</u>

5.6 Mobile Team

60 out of 100 persons randomized to the pilot project required assistance of a mobile team (60%). Only half of them required a regular home care. 50% of patients were visited at home 3-4 times during 9 months. The mobile team consisted of one psychologist, one social therapist, one doctor and a driver. The total costs for mobile team's reimbursement amounted to GEL31,950. The costs for the fuel consumed for transportation of the mobile team totaled GEL4,293. In result, the total sum spent on the mobile team within the framework of the pilot project amounted to GEL36,243.

Table 22

MOBILE TEAM Main Data by the Project	
Total number of patients with mental and behavioral disorders randomized for the project	100
of them, number of patients required mobile team assistance	60
Percentage of patients required mobile team assistance	<u>60%</u>
Costs for reimbursement of psychologist	6,318
Number of psychologists working in the project's mobile team	1
Monthly fees for psychologist working in the mobile team	702
Costs for reimbursement of social worker	6,318
Number of social workers working in the project's mobile team	1
Reimbursement of social worker working in the mobile team	702
Costs for reimbursement of doctors	8,496
Number of doctors working in the project's mobile team	1
Reimbursement of doctor working in the mobile team	944
Costs for reimbursement of nurses	6,318
Number of nurses working in the project's mobile team	1.0
Reimbursement of nurse working in the mobile team	702
Costs for reimbursement of driver	4,500
Number of drivers involved in the project's mobile team	1
Reimbursement of driver working in the mobile team	500
Costs for fuel	4,293
Total Costs for Mobile Team according to the Project	

If we calculate these figures with regard to the total number of patients with mental and behavioral disorders we will find that the number of patients needed psychosocial rehabilitation totals 8,760. In order to provide a mobile team service to these patients, 146 mobile teams are needed, each composed of a psychologist, social worker, doctor, nurse and a driver. Monthly reimbursement for the medical personnel is GEL518,300. If we add the costs for fuel required for transportation of the mobile team, the annual costs for the mobile team component will total GEL6,848,378.

Table 23

MOBILE TEAM Costs Expected to be Spent by State Program	
Total number of patients with mental and behavioral disorders in the program	14,600
Number of patients who might need mobile team assistance	<u>8,760</u>
Number of psychologists required in mobile team	<u>146</u>
Monthly reimbursement of psychologist working in mobile team	702
Monthly Costs required for reimbursement of psychologists countrywide	102,492
Number of social workers required for mobile team	<u>146</u>
Monthly reimbursement of social worker working in mobile team	702
Monthly costs required for reimbursement of social workers countrywide	102,492
Number of doctors required for mobile team	<u>146</u>
Monthly reimbursement of a doctor working in mobile team	944
Monthly costs required for reimbursement of doctors countrywide	137,824
Number of nurses required for mobile team	<u>146</u>
Monthly reimbursement of nurse working in mobile team	702
Monthly costs required for reimbursement of nurses countrywide	102,492
Number of drivers required for mobile team	<u>146</u>
Monthly reimbursement of driver working in mobile team	500
Monthly costs required for reimbursement of driver countrywide	73,000

Monthly costs for fuel	52,232
Total Costs of State Program for Mobile Teams Countrywide	<u>6,846,378</u>

5.7 Medication

GEL6,651 was spent additionally for medication needs of patients participating in the pilot project. This sum was spent for completely providing patients with good quality (instead of the cheapest) medication. If we calculate these figures with regard to the total number of patients with mental and behavioral disorders, we will find that the extra sum in amount of GEL1,294.728 is needed in addition annually for fully satisfying the needs of patients for medication.

5.8 All State Programs

In case of all four state programs have been implemented, the additional amount of government expenditure will total GEL12,15 million annually, and GEL8,7 million of this sum will be spent on reimbursement of work of 895 employed staff.

Table 24

STATE PROGRAMS

Psychosocial Rehabilitation	
Number of patients in the program	4,380
Number of employed staff	165
of them, at the psychosocial rehabilitation center	44
at the social therapy workshop	122
Costs for staff reimbursement	2,444,040.0
Other costs	1,565,314.7
Overall Annual Costs of the Program	4,009,354.7

Mobile Team	
Number of patients in the program	8,760
Number of employed staff	730
of them, psychologist	146
social worker	146
doctor	146
nurse	146
driver	146

Costs for staff reimbursement	6,219,600.0
Other costs	626,778.0
Overall Annual Costs of the Program	6,846,378.0

Medication	
Additional costs for medication	1,294,728

Overall Figures of the Program	
Number of patients in the program	14,600
Number of employed staff	895
Costs for staff reimbursement	8,663,640.0
Other costs	3,486,820.7
Overall Annual Costs of the Program	12,150,460.7

5.9 Benefits from Implementing the Model

Community-based mental health program should be included into the list of the state healthcare programs. It is obvious that all components of the program can not start simultaneously due to lack of funding and relevant qualified personnel in the country. Authors therefore believe that the program should be introduced in the phased manner, and the state should be the main source of funding.

As mentioned above, the special study was designed and implemented for the purpose of assessing the project results, in the framework of which the bed-days spent by the patients of both the trial and control groups at the inpatient clinic were compared. It was found that the patients of the trial group spent 235 bed-days at the inpatient clinic during the project period, while the number of the bed-days of the previous year was 439. As far as the control group is concerned, the number of bed-days has not changed significantly here: if in the project period the number of bed-days was 277, in the previous year this number amounted to 282.

Based on the above-mentioned data, if we take the average sum required per day of the state-funded inpatient care to be GEL40-60, we can calculate savings that can be made in case the community-based mental health services had been introduced in full package. If we extend the results of the 9-month period to one year and the 100-hundred trial group to the total number of patients (14.600), we can conclude that in case of full funding of the program the country will save approximately up to GEL2 million in a year.

Introducing community-based mental health services can result in significant benefits for state despite the great majority of these benefits are of non-financial nature. The principal benefit of the community-based mental health services is related to the improvement of health and the

quality of life of people with mental health problems. At the same time, providing care to the patient without taking him/her away from society and family is not only humane but also affects positively the social competence of the patient and prevents serious disability. This process contributes to development of the social skills of patients, making them less dependent on the family members. In certain cases patients can restore their labor abilities and find job, which in turn, will bring additional saving for the state. As a result, the family and the state will not carry the whole burden of mental illness alone. Family members will be released from the role of a care-giver but what's the most important, the state will maintain its human and social capital.¹

6. Conclusions

1. The study conducted by the Georgian Mental Health Coalition confirmed that the community-based mental health service is far more efficient in comparison with existing outpatient services. Particularly, it significantly reduces the number of bed-days spent by the patients at inpatient facilities, improves their mental state and the quality of social functioning, which, in turn, contributes to integration of persons with mental health disorders into society.
2. Based on the official statistics, the number of persons with mental health disorders who might be involved into the new service in Georgia totals 14.600 (for defining a more exact number a large-scale epidemiological study is needed). This number is increasing annually.
3. Acute lack of specialists needed for providing the service has become evident, with the necessity of retraining existing personnel and training new staff.

The calculations revealed as well the deficit in the budget of the outpatient component of the state program; namely, it is almost five times less than necessary and needs to be increased gradually in order to ensure proper functioning of the service.

7. Recommendations

Creating community-based mental health service is a necessity. For this purpose the following should be done:

- Directing resources towards development of outpatient mental health service
- Developing out-of-hospital service (outpatient service, mobile service, psychosocial rehabilitation) by the principle of geographical accessibility

¹ **Social capital** means connection between individuals, a social network. Social capital is created when similar groups of people are guided by the principles of social solidarity, responsibility, assistance and support, i.e. interrelation and cooperation for mutual benefit. Social capital affects the general health as well as the mental health. Kawachi I, Berkman LF (2000). Social cohesion, social capital, and health. In: Berkman LF, Kawachi I, eds. *Social epidemiology*. New York, Oxford University Press: 174–190.

- Creating mental health centers at the psycho neurological dispensaries existing at the big regional centers countrywide to provide outpatient, rehabilitation and mobile services
- Training human resources and retraining existing personnel for these services
- Gradual increasing of funding parallel to increasing of the service capacity. Gradual increase of the separate components of the service is also possible
- Providing sufficient medication for the patients receiving an outpatient care according to the guidelines recognized in the country.

In order to implement the above-mentioned measures in an organized way, the Ministry of Labor, Health and Social Affairs of Georgia, with cooperation of the NGO sector, should elaborate a detailed plan and corresponding timeline.

8. Outcomes of Development of Community-Based Mental Health Services

- The mental health and social functioning of one of the most socially vulnerable groups (14,600 persons with long-term mental disease) will improve, which is a prerequisite of their integration into society
- Burden on the patient's family members caused by the mental illness will be alleviated
- 895 additionally retrained mental health professionals will be employed with average salary
- One of the exemplary world mental health practices will be introduced.

