

European Commission Delegation in Georgia



**DEVELOPMENT OF A REGIONAL MASTER PLAN
FOR THE PRIMARY HEALTH CARE SYSTEM
IN KAKHETI REGION**

Final Report

July 2003 - January 2004

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1. Project Synopsis

Project Title: Development of a regional Master plan for the Primary Health Care system in Kakheti Region

Contract Number: Framework-Contract AMS/451 – Lot No 8

Country: Georgia

Project Objective: The main objective of this project is to assist the MoLHSA in developing and implementing a more effective system for allocation of resources in Primary Health Care in Kakheti region specifically and Georgia as a whole.

**Project Partner/
Beneficiary:** Ministry of Labour, Health and Social Affairs

Project Duration: Foreseen : 5 months starting in July 2003.
Actual duration: 6.5 months starting half of July 2003

Project Specific Objectives:

- To support the MoLHSA in developing a Regional Master Plan for Kakheti Region as a first phase of co-ordinated effort of the EU/DFID/WB projects to assist the Government in development of the National Master Plan for the Primary Health Care sector in Georgia.
- To assist MoLHSA to define a modern, effective and reliable Primary Health Care model that will provide the entire population of Georgia with high quality, cost effective, accessible and affordable medical services.
- To provide a reliable instrument in form of a Regional Master Plan to enable MoLHSA to prioritise effectively facility restructuring and workforce development with a view to support PHC development in Kakheti region.
- To evaluate the current situation in Kakheti region by means of inventory of facilities and equipment, the number and type of workforce employed and services provided.
- To depict the current situation using geographical information system (GIS) to facilitate the Regional Master Planning by better linking (mapping) prioritised needs with resources available.
- To use the exercise of data collection and mapping using GIS system in Kakheti region, as a pilot to customise and test the current software and methodology for the National Master Plan exercise.

Expected Results:

- Inventory of the current PHC network, infrastructure, capacity and geographical distribution of PHC facilities in Kakheti region;
- Inventory of the current PHC work-force by size and structure in Kakheti region;
- A documented methodology to determine PHC human as well as infrastructure needs;
- Definition of functional linkages to in-patient care, to diagnostic services, to specialty outpatient care, and to public health institutions and administration;
- Selection of criteria for optimisation and refurbishment of PHC facilities and rationalization of health workforce;
- Recommendations for optimal methods of locating, refurbishing and staffing PHC facilities in Kakheti region;

- A facility and health workforce implementation plan (e.g. restructuring/building of new PHC facilities including reference laboratories, diagnostic services and outpatient care) that will support PHC development in Kakheti region taking into account the existing situation and evidence based alternatives.

2. Background

The government of Georgia has been actively involved in reforming and restructuring health care system since 1996. Following transition from planned to market economy and turbulent first years of independency in the beginning of the 1990s, health care system in Georgia underwent drastic changes. The sources of public finance decreased almost tenfold and a number of services including preventive ones that were provided for free were cut dramatically. After this period social health insurance system was introduced as a source of financing health system and Basic Benefit Package (BBP) was designed to serve reimbursement purposes as well as a guarantee mechanism for universal delivery of essential services.

In the same time it was recognized that health system had to be reoriented from curative, hospital and specialist based towards preventive services delivered in the community setting by family physicians. In short, a need for restructuring health care system and a shift towards modern, dependable and effective Primary Care services was set as an explicit policy priority. In addition, other priority areas that have been defined in Georgian National Health Policy 2002 that address issues such as improvement of maternal and child health, reduction of morbidity and mortality caused by cardiovascular diseases, improvement of prevention, detection and treatment of oncological diseases, reduction of traumatisation, reduction of communicable and socially dangerous diseases, mental health, health promotion and establishment of healthy lifestyle and environmental health, are dependent upon well functioning system of primary care services.

Despite some efforts to establish modern Primary Care services that government has undertaken during the last years in the framework of donor assistance programmes such as setting up model practices predominantly in Tbilisi area, training of some General Practitioners in health management and establishment of basic Information and technology system in selected facilities, essential problems that impede development of PHC remain unresolved. First, is the issue of over-manned and underpaid workforce with out-of date skills that has to be addressed. Introduction of incentives and providing means and tools for high quality service provision is a necessary precondition for rationalisation of the existing workforce. Second, is the issue of rehabilitation of existing facilities using cost-effectiveness criteria and provision of necessary equipment to the facilities. Third, is a shift from curative frequently non-evidence based service provision to preventive, proven and cost-effectives delivery of services in primary care settings.

To sum it up, Primary Care development in Georgia should address the following issues:

- Advancement of the family medicine concept
- Human resource/staff upgrading
- Introduction of incentives and/or payment methods that will promote efficiency and quality of care delivery
- Infrastructure provision and rehabilitation of suitable facilities
- Health service development towards evidence based care

In addition, any concept or model of primary care should at least include the following, uniformly recognised structural elements of the PHC system:

- Equity and universality of access to care
- Affordable and quality services
- First contact/gate keeping function
- Continuity of care – appropriate referral system
- Comprehensiveness of care
- Co-ordination with other PHC services
- Community oriented care
- Family centred care

2.1 Project context

The EU supports the Primary Health Care reform with a total of 7.5 million Euro of which 5 million Euro will be invested in Kakheti region in terms of facility refurbishment, related water and energy supplies, provision of equipment and medical supplies, human resource development, training of medical workforce and health awareness and education. The works will be implemented through community mobilisation projects. Before refurbishing, constructing and equipping of primary health care facilities in Kakheti region can start, an inventory should be made of the existing health infrastructure and resources in Kakheti region and need/demand determined. Subsequently, a criteria based approach will be applied to prioritize the allocation of funds for refurbishment, construction, equipment and staffing.

More specifically, the EU will support the MoLHSA in developing a Regional Master Plan for Kakheti Region. This is the first phase of the EU/DFID/WB efforts to assist the Government in development of the National Master Plan for the PHC sector in Georgia. The National Master Plan objective is to help define a health care model that effectively and reliably providing the entire population of Georgia with high quality yet cost effective medical services and is physically available and affordable. It is envisioned that the national planning process, considering the Kakheti exercise as pilot, will start in Imereti region and include an inventory and evaluation of the current resources. This will lead to a similar assessment in all regions of Georgia and eventually define the number of PHC facilities, health personnel, resources and activities required countrywide.

The Regional Master Plan comprises of two components: facility infrastructure and workforce development. The first one is focusing on prioritised construction / reconstruction / development / rationalisation of PHC facilities. The second on workforce development and rationalisation. The plan will evaluate the current situation in Kakheti region and inventory and forecast the number, type, location and sequencing of health facilities and equipment and the number, type, location and sequencing of direct and indirect health personnel needed to support the PHC system.

A geographical information system (GIS) initially financed by DFID will facilitate the EU Regional Master Planning to better link (map) what is needed with what resources are available to meet the prioritised needs. Following the data collection exercise in Kakheti region, data processing and mapping with GIS is expected to take about one month after data collection to complete. Kakheti region will serve as a pilot to customise and test the current software and methodology for the National Master Plan exercise. This project is a preparatory assignment that aims to define explicit and evidence based criteria for investment in the field of Primary Health Care in Kakheti region that will follow in the framework of 7.5 Million € EU support to PHC

reform projects. It is also intended to provide links to other donor efforts (i.e. World Bank, DFID) in the area of PHC development in the same region that can be later extended for the whole country. The project has defined two priority areas that will be the object of investment in Primary Health Care development conducted in the next three years 2004-2006. The first component of this prioritization will be focusing on construction / reconstruction / development / rationalisation of PHC facilities. The second component will focus on workforce development and rationalisation.

This project attempts to provide a decision making tool to the regional and national government assisting in Primary Health Care development and more specifically in allocation of resources for restructuring health care facilities and rationalising manpower structure. The means for attaining this overall objective will be development of regional Master Plan to be used for prioritising these structural changes when they are introduced in the Kakheti region. The project specific objectives are to collect and analyse information on the existing structure of PHC system in Kakheti to reform it according to the envisaged national PHC policy. Further objective extending beyond the lifespan of this project will be to use the experience of the Kakheti Master Plan development to replicate it on a national level or in other regions of the country.

2.2 Approach

The instrument that this assignment aims to develop is a Regional Master Plan that will serve as an inventory of the existing facilities and manpower structure, which will be mapped using GIS system. Thus developed Geographical Information System will be used as a basis to forecast the number, type, location and links between health facilities, equipment and the number, type of health personnel necessary to support the shift to modern, reliable and effective Primary Care Services in Kakheti region. This experience and lessons learned from implementation of the regional Master Plan in Kakheti will be used as to further replicate and implement this Master Plan throughout the country.

Tools and methods used for development of the regional Master Plan are the following:

1. Indicator list
The Indicator list serves as the basis of primary and secondary data collection and facility assessment questionnaire design. See Annex II.
2. Questionnaires for the facilities assessments
Thorough inventory of existing facilities, the condition of buildings, quantity and quality of furniture/equipment, manpower structure and services provided in 8 Kakheti districts using structured questionnaires. See Annex III-VI.
3. Focus Groups discussions and in-depth interviews with key persons
Use of quantitative (structured and semi-structured questionnaires) and qualitative social science methods (in dept interviews, focus groups) to investigate issues and collect information that is not provided in the statistics such as for example the number of informal providers of care, informal payments for services, private provision of care, users' expectations. See Annex X.
4. Geographic Information System (GIS)
Mapping of the existing structure using GIS with internationally accepted standards as well as norms that apply in Georgia to identify the needs for prioritising investment in PHC in Kakheti region. See Annex maps.

The envisaged **outputs** that this methodology delivers are:

1. An inventory of the existing PHC system (manpower, facilities, equipment and services) in Kakheti
2. Master Plan for Kakheti region matching existing structure with needs envisioned in PHC policy
3. A tested framework for co-ordination of activities leading to development of national PHC

3. Project Activities

3.1 Phase one- Inception phase

The project has started on 12th of July. The first weeks were spent on assessment of the situation in terms of other projects completed in the field of Primary Care. The consultants reviewed a large list of documents, policy papers and technical reports related to the achievements of project completed on the field of Primary Health Care in Georgia (for details see Annex XXII).

Contacts with donor organizations were made during two workshops that the project managed to organize during the first and third week of its operations and in separate meetings. The workshops were respectively devoted to the attainment of agreement on goals and criteria to be used in our approach and the elaboration of methodology (for details see Annexes XIII-XVI).

Meanwhile, a series of meetings were conducted with one of the other key project collaborators the Geographic Company, funded through DFID to translate the information on PHC inventory of facilities and manpower structure in Kakheti region in form of a geographical mapping.

Model Family Medicine Training facilities in Tbilisi region, established within the PHC development project of DFID, in Tbilisi region were visited.

The consultants had also working meetings with the Primary Health Care Management Committee and several institutions (i.e. State Department of Statistics and Centre for Statistics and Medical Information of the MoLHSA) in order to identify the secondary sources of information that could be used in data collection processes. During the inception phase two Local Experts were recruited through open advertisement procedures and interviews as it was stipulated in the Terms of Reference.

In this period, time was also devoted to fostering relationships with the regional Department of Kakheti Health Administration in Telavi and representatives of regional health providers such as polyclinics and ambulatories, our indirect beneficiaries.

3.2 Phase two - Data collection

I. Quantitative method – Survey of facilities

A. Organisation

Sequence of activities:

- Development of methodology with national and regional actors during stake-holders workshops in Tbilisi 5/08/03 and Telavi 7/08/03
- Development of the questionnaires August-September in Tbilisi and Telavi
- Piloting of the questionnaire, recruitment of data collectors - September in Telavi
- Fieldwork: October

Main tools have been a structured MEDICAL questionnaire of 31 questions/app. 1500 variables and ENGINEER questionnaire of 66 questions/app. 800 variables. The head engineer of the MoLHSA's Department of Technique and Technology has given a valuable contribution to the development of the engineering questionnaire. For both questionnaires see Annex III and V.

The main issues covered were:

- PHC Network
- Inventory of facilities
- Health Services / Performance
- Workforce
- Building conditions
- Facility utilities
- Investment estimates for rehabilitation

The assessment covered 159 PHC facilities spread over Kakheti Region in 8 Rayons. The survey was supervised by the fieldwork EU local expert and co-ordinated by the Regional Department team of the MoLHSA. Selection criteria for the data collectors were made in co-operation with the Regional Health Department. The candidates submitted their CVs prior to the interviews with EU experts.

In total there were 8 teams with three persons each. Each of the teams was composed of one coordinator (Head of Rayon PHC), one medical person (Head of Rayon Public Health) and one engineer, selected from the Rayon. The Head of the Regional Department of MoLHSA, deputy head of the Regional Department and the Head of Regional Public Health were involved as regional co-ordinators.

DURATATION OF SURVEY STAGES

Activity	duration in weeks	no of persons involved
1. Data collection/fieldwork	3	28
2. Data entry	3	2
3. Data base transport to SPSS	1,5	2
4. Data processing and analysis	3	4

B. Problems

Questionnaire problems:

- A few answer codes did not cover all options
- Some questions needed more explanation
- Data collectors might have benefited from written detailed instructions on questionnaire

Fieldwork and data entry problems:

- Influence of an interviewer on the answer choice
- Attempts to follow official regulations and reports
- Some health facilities were not open for entire day
- Answer option -others- were not coded
- Due to the fact that this was a pilot project, it took some time to make the data entry software functional

There are different views whether the data collectors should be the health employees of the Region or non-employed data collectors with some medical background. The choice depends on which priority, either the reliability of data or the involvement of Regional Health Staff, to set.

Reliability of data

In order to achieve higher reliability of collected data and to avoid partiality the interviewers should be persons experienced in such surveys, desirably with some medical background, but not involved in neither employed by governmental health services.

Involvement of Regional Health Staff

The advantage of involving employees of the governmental health services is that they got more involved in the assessment. They also were involved in the discussion about the Master Planning in their own Region and therefore more motivated to participate in the discussion. The Rayon health staff/coordinators gained experience in this kind of data collection, besides visiting all facilities and staff in their own rayon which fact does not occur often. They also gained more insight about the reality and daily situation in facilities. Staff working in those facilities appreciated the visits of their supervisors and their interest in their daily work and problems.

For detailed report see Annex IX.

Usage of information:

Developed Indicator List and questionnaires during this project revealed a comprehensive overview of current situation of the PHC Network in Kakheti Region, but all gathered information was not needed for the design of the Master Plan.

1. Main indicators used for Master Planning Maps in Kakheti
 - Population data per settlement (Census data from 2002, SDS)
 - PHC Network (address, type and size from facility assessment)
 - Hospital Network (from Regional Health Department)
2. From GIS
 - Geographic location and distance in km and travel time
3. Additional information needed from facility assessment for overall needs planning
 - Workforce (total numbers, specialisation, age, year of experience) to justify reduction of present over-capacity and to calculate future need
 - Workload of staff from population data and current provided health services (in terms of annual patient visits and no of consultations per facility and staff member) to justify reduction of present over-capacity
 - Information needed of selected buildings: Ownership, estimated repair costs, water and electricity supply problems, size.
 - Available equipment and furniture (according to standard list) for selected facilities and re-allocation of those items from non-selected facilities. (But time consuming!)
 - If necessary take into consideration any specific local situation and local development plans which would have impact on population development.

Recommendation for future facilities assessments:

Conduct two-step survey. On the first stage questionnaires with more narrow objectives and smaller variety of questions could be used. After selecting target facilities (or facilities of interest), detailed questionnaires should be used.

After selection of facilities carry out a more throughout assessment regarding:

- Repair costs according to predefined standards for buildings (including accessibility for disabled and utilities like supply of water, electricity, heating, sewage, waste disposal, sanitation etc)
- Communication means
- Transport means
- Available and usable equipment, furniture and computers/printers according to predefined standard list and according to the size of the facility

See Annex IV and VI for recommended questionnaires.

Recommendation to the MoLHSA:

In order to facilitate the assessments of all facilities throughout the country and for future rehabilitation or reconstruction the following standards should be developed by the MoLHSA:

- Buildings standards for repair and new construction (material, walls, roof, accessibility for disabled, sanitation, water-, electricity-, heating supply, sewage, waste disposal)
- Standard furniture and equipment list for PHC
- Communication means (radio, telephone land line, mobile phone network)
- Transport means (re-imbursment of usage of private vehicles for home visits, usage of ambulances)

II. Qualitative method – Focus groups and in-depth interviews

A. Organisation

Purpose of the study was to find out population's needs and expectations regarding primary health care system in rural areas of Kakheti region.

The Focus Group Discussions were conducted in 8 Rayons of Kakheti region with groups of rural population according to pre-defined criteria and methodology. Sixteen Focus group discussions (2 focus groups of maximum 9 participants in each Rayon) were conducted, with a total of 132 participants. One focus group was conducted in the village with health facility and another one in the village without health facility. Each session was scheduled to last maximum 2 hours. All sessions were recorded but full anonymity of each participant has been assured. A small fee was provided for each of them.

The in-depth interviews were held with 2-3 community leaders (elected representative/mayor/head of the Sakrebulo, head teacher), with a total of 32 participants. Each interview should not last more than 1 hour.

DURATION OF THE FOCUS GROUPS AND IN-DEPTH INTERVIEWS

Activity	duration in weeks	no of persons involved
1. Interviews/fieldwork	4	2
2. Reporting	2	1

B. Problems

- In half of the cases the Rayon co-ordinators did not select participants according to the pre-defined criteria. Therefore the Local Experts had to take over the selection procedure.
- Survey coincided with pre-election period. Village administration (Sakrebulo) representatives could not be contacted and therefore in some cases the villages had to be visited twice.
- In most cases rural population (FG participants) was misinformed by village administration about purpose of the survey. The participants tried to hide the real problems in order to defend their physicians, being highly depended on them in case of urgent medical need.

For a full report see Annex X.

III. Community Projects

On the 25th of September the EU experts organised a meeting with NGOs involved in community mobilisation and participation projects in Kakheti Region, as the involvement of NGOs working with communities in the future facility rehabilitation process is essential. The main objectives were to inform international and local NGOs about the Master Plan project in Kakheti Region and to share information about active community groups, types of activity, methods of working with community groups, experiences and funding. The main stakeholders with community projects in

Kakheti Region attended this meeting. The majority of the local NGOs were members of the Social Policy Group, who supports social development and vulnerable groups. The community projects are implemented according to the priorities of those communities, which were in most cases infrastructure rehabilitation of water- and electricity supply, roads and schools. Mercy Corps International had only supported the rehabilitation of two health facilities until date in Kakheti Region. (See also the minutes of this meeting in Annex XI.)

An overview of all community projects in Kakheti Region is provided in Annex XII and in the maps

IV. Data from secondary source

Besides the data from the facility assessment, data were also gathered from:

- 1. State Department of Statistics*

Mainly the population data per settlement was used for the Master Plan. Other demographic data received will be useful for the planning of future health services.

- 2. Centre for Statistics and Medical Information*

These data provided information on morbidity and mortality pattern, the staffing of all care providers, patient's visits, hospital bed occupancy rate and statistical formats.

- 3. Department of Standardisation and Licensing*

The information provided by this department was relevant in order to understand the forms and procedures necessary to obtain a licence and to formulate appropriate questions for the questionnaires.

- 4. Kakheti Regional Department of the MoLHSA and Regional Public Health Department*

The Regional Department provided information about PHC Facilities and Hospital Network, staffing, former furniture and equipment standard list, performed diagnostic tests in the Region, Public Health system and Health Information system and formats.

3.3 Phase three - Data processing

The data processing took much more time than foreseen. However not their duty the Geographic Company kindly designed the data entry format. Due to the fact that this was a pilot project it took some time before it became usable. The data base was put in several Access files, but because two EU experts preferred to analyse the data with SPSS software it appeared rather difficult and time consuming to transport this data base into SPSS and to rename all indicators. The data entry process suffered from time constraints with as consequence that the data base had to be corrected several times.

Due to unclear definition of responsibility of partners concerning the design of the data base and analysis of the data, it took several meetings to clarify each other's role and expectation, resulting in a final agreement. Apart from above mentioned starting problems the co-operation with Geographic Company has been excellent and resulted in a combined approach in Master Planning.

4. Results

4.1 Existing situation of PHC Network in Kakheti Region

Two workshops have been organised to present and discuss the preliminary results of the survey on the 12th December in Tbilisi for national stakeholders and on the 15th December in Kakheti Region. For agenda see Annex XVII-XVIII.

The full report about the existing situation and the mapping is attached to this report. In this part only the main conclusion will be mentioned.

Demographics

The total population in Kakheti Region is 407,182. Of these inhabitants 52 % are female and 48 % are male. 21 % are living in urban areas and 79 % in rural areas. According to the latest census data, the urban population decreased with 15.3% and the rural with 5.4% since 1989. 5.5 % of the population are children under 5 years and 20.8 % are children below 15 years. 21.7 % of the population are fertile women between 15 and 45 years. Kakheti has an ageing population, especially in Signagi Rayon were 22.3 % of the population are pensioners and with an average age of the population of 40.7.

Current PHC system

Primary Health Care in Georgia is the legacy of Siemashko model that was universally applied in the former Soviet Union and still has many of its characteristics. The notion of primary care being the backbone of health system with strong focus on prevention of communicable diseases and general practitioners serving the role of gatekeepers existed during the first decades of model's implementation. However, lack of incentives and under-investment in health care facilities that predates Georgian independence by at least one decade has resulted in ineffective and poor quality of care undermining the gains that might have been formerly produced. Nevertheless, the financial crisis of the 1990s has resulted in an unparalleled worsening of the situation in health care system and health status of the population.

Today's Primary Health provision in Georgia and more specifically in Kakheti region is a remnant of the former system's structure adjusted to the reality of scarcity of

financial resources and perennial lack of investment in infrastructure. Most of facilities suffer from prolonged neglect and under-financing and health personnel that is generally very poorly paid receives its wages in arrears in the last months. Patients self-refer themselves to hospitals (each rayon has one in addition to Regional hospital in Telavi) routinely as there seems to be low trust in primary care facilities to deliver appropriate level of care.

PHC Network

In total 159 facilities were assessed during October 2003 in all 8 Rayons in Kakheti Region. According to information provided by the Kakheti Regional department of the Ministry of Labour, Health and Social Affairs these facilities belong to the Primary Health Care Network. For a distribution of the PHC network see also the maps in the annex.

Thirteen different types of primary health care providers exist in Kakheti Region. The smallest types with one to three rooms are the 14 medical points and 2 FAPs (feldcher-midwife points) which provide general care with paediatricians, therapists (generalists), nurses and occasionally a midwife and dentist. The most common type is the ambulatory. The 111 ambulatories have on average 8 rooms, with a maximum found of one ambulatory with 31 rooms. Health services in the ambulatories are provided mainly by paediatricians, obstetricians/gynaecologists, therapists, dentists, nurses and a few midwives. A few (26%) of them have laboratory and/or diagnostic facilities.

The second level of PHC providers consist of 17 Rayon/Adult/Children Polyclinics, large health centres with 6 to 31 rooms with a maximum of 123 rooms in Gurjaani Rayon Polyclinic. They are staffed by a variety of specialist doctors. Laboratory and diagnostic procedures meant to be performed in these facilities. Other types existing in Kakheti are the six dispensaries of which five in Telavi, four women's consultations, one railway ambulatory and one treatment/diagnostics centre in Gurjaani and a Mother&Child centre in Kvareli. The dispensaries provide specialist care in narcology, psycho-neurology, endocrinology, oncology and skin and connective tissues specialities. They also have laboratory and diagnostic facilities.

Provided health services

The facilities provide a numerous range of health services, specifically asked for were services such as adult curative consultations and home visits in case of illness, preventive and curative care for children, reproductive health, health promotion activities, dentist care, outpatient mental care, emergency services, treatment of minor injuries and physiotherapy.

In total 569.708 consultations/activities were reported in all Kakheti facilities in 2002, of which 35 % for preventive care activities (reproductive health -, child preventive care and health promotion activities). 50% of all health services consisted of curative consultations in the facility for adults and children and an additional 4% for home visits. These data however might not include "unofficial" non-recorded consultations.

Each person would visit a health facility on average 0.7 times a year for a curative consultation in Kakheti Region in 2002. Children until 15 years pay more visits, an average of 1.1 times for curative consultation. If including all activities (preventive care, dentist, emergency services, home visits etc.) the average number of visits per year increases to 1.4 for all and 2.9 for children. Dedoplistkaro appeared to have the highest number of all care visits with 4.5.

The annual number of visits per person in Kakheti is very low compared with other countries. In e.g. the Netherlands the number of visits increases with age. For children the average is around 4 per year, for elderly up to 17 visits to a GP (General

Practitioner) per year, the latter even excluding dentist and preventive care for children.

Diagnostics

Tests which are supposed to be performed in PHC are clinical-, biochemical-, bacteriology- and serology laboratory tests, ECG, Ultrasound and X-Rays.

In total 94,158 laboratory or diagnostics tests were performed in Kakheti Region in 2002. Medical points and FAPs have no laboratory facilities. The majority of tests are performed in the Rayon Polyclinics with an annual of 5184 on average per Rayon Polyclinic compared to 133 tests per ambulatory.

General Workforce Rates

Kakheti has an overall rate of 752 staff members per 100,000 habitants working in the health care sector (PHC, hospitals and other), 606/100,000 is medical staff and 301/100,000 of those are doctors. 56% of all medical staff is working in PHC in Kakheti Region.

In PHC the ratio for the Region are 144 specialist doctors per 100,000, 131 nurses-, 8 midwives- and 28 dentists- and 23 administration and finance personnel per 100,000. Kvareli Rayon appeared to have the highest PHC medical staff ratio per population size.

PHC staff

Total numbers and rates

There were in total 1.612 persons working in PHC for Kakheti 2003.

In total there were 584.5 physicians providing health care in PHC. These categories of specialist doctors in the survey included doctors which have solely a therapeutic/curative purpose, such as GPs, paediatricians, gynaecologists/obstetricians, General Internists (therapists), allergiologists, infectionists/epidemiologists, immunologists, cardiologists, endocrinologists, oncologists, lung (TB) specialists, general surgeons, traumatologists, orthopaedics, neurologists, psychiatrists, dermatologists, ENT, ophthalmologists. In terms of specialisation, paediatricians and general therapist are the most numerous; the majority of them are working as village doctors in ambulatories. Rayon Polyclinics, according their referral status, offer the complete specialization mix.

The medical staff includes besides above mentioned specialists, 119.5 diagnostics staff such as lab physicians/ technicians, radiologists, ultrasound specialists and 2.5 pharmacists, 113 dentists, 31 midwives and 532 nurses.

The 229.5 other staff includes administration and finance staff (98), staff for equipment maintenance, building maintenance, cleaning staff, guards, drivers and others.

On average the specialist doctors represent 36% of the total staff of PHC facilities (45% for the Hospital/Polyclinic and 25% for the Children/Adult Polyclinic) and 42% of the medical staff. The medical staff represent 86% of the total staff (100% for Medical Points and FAP, 62% for Railway Ambulatory); Nurses represent 38% of the medical staff, though midwives 2%. The administration/finance represent 6% of the total staff (25% for Diagnostic/Treatment Centre and 0% for Medical Points and FAP); Other staff represent 8% of the total staff (33% for Railway Ambulatory and 0% for Medical Point and FAP).

Gender, age and years of experience

On average 83% of the specialist doctors are women. 94% of the other medical staff is female, mainly due to the importance of the nurses.

The majority of all staff is between 35 and 55 years old with 90 % of the specialist doctors having less than 55 years.

68% of the specialists have more than 10 years experience and 85% have more than 5 years experience. 72% of other medical staff has more than 10 years of experience and 90 % more than 5 years.

Workload

On average 75% of the specialists would spend between 30 and 40 hours per week in the facility. 58% of the specialist doctors (of those information was provided) spend between 5 and 10 hours per week on home visits. The majority of them being Therapists and Paediatricians.

In Kakheti Region each facility recorded on average 6.8 curative consultations ¹ per day. **The average number of curative consultations per doctor is as low as 1.9 per day.** Although not all consultations might be recorded. The Rayons of Akhmeta (16.2 per facility and 4.5 per doctor per day) and Dedoplistkaro (13.1 per facility and 4.8 per doctor per day) have the highest production. Lagodekhi Rayon has the lowest number of one consultation per doctor per day. Likewise Kvareli with 1.2 per doctor per day, which Rayon also has the highest staff per population ratio.

The average number of curative consultations is the highest in the Rayon Polyclinics, but because of larger staff numbers, the average number of curative consultation per doctor is still only 2.3 per day.

Building conditions and utilities

Of the 159, 151 (95%) were state facilities and 8 were private. This does not imply that there are no more private facilities and/or private practices in Kakheti Region. Those facilities which were assessed in this survey were the ones proposed by the Regional Health Department. The by the EU supported Livelihood/Household survey in Kakheti Region implemented by SDS might reveal more information about private practices.

Of the 159 facilities, 137 are fully or partly owned by the facility. Of these 128 are in need of repair, 2 are in good condition and 7 need to be reconstructed.

A large majority of the facilities have been constructed before 1989 with the highest percentage between 1980 and 1989. The last decade only 5 facilities were constructed. Maintenance and repair took on average 33 years between the year of construction and first repair. The majority of the buildings (67.9%) need major repairs. Nearly 4% is beyond repair. Nearly half of the facilities needs roof repair, with as second priority the repair of the interior (39.6%). Only 12 out of all 159 facilities (7.5%) declared that the facility has an entrance for disabled and in 9 of them (6%) all rooms are accessible for disabled.

The total repair costs for the 128 in ownership and in need of repair facilities are estimated to be 2,955,196 Lari. This has been calculated according to rehabilitating the facility in original state/former condition

¹ Both adult and children curative consultations. Calculations are based on 5 days per week and 260 working days per year.

85% of all facilities receive their electricity from a public company. 30 to 34% has no electricity supply during summer and winter time and more than half irregularly. Vast majority of 94% of all Kakheti PHC facilities declared that the water supply is good for drinking. 40% of all facilities have no problems with the water supply and a quarter has supply difficulties. The water supply situation seems to be much better than the electricity supply.

4.2 Main findings from Focus Groups and in-depth interviews

People usually visit the doctor in the following situations:

- emergency cases (trauma, acute diseases)
- laboratory investigations/analysis
- If self-treatment is not effective

Lack of money is the main constraint preventing community members from seeking medical care timely. People very often refer to the pharmacist instead of visiting a doctor. This is one way of saving money. Rural population can get drugs in local pharmacies and pay for them afterwards (only if pharmacist is a friend or relative). High prices of medicines are the major reason for incomplete treatment

Emergency services are not available in rural areas (only in the rayon centres). Private cars (own or neighbours) are used.

Emergency services in the rayon centre are not reliable due to:

- Communication problems between village and rayon
- Ambulance takes more time than private car
- Ambulance is more expensive, than the “neighbour’s car”
- Ambulance is not properly equipped in order to provide first aid if needed

Almost all medical personnel (doctors/nurses) who work in the official medical facilities work also privately after official working hours.

In general, attitude towards the village doctors is entirely positive and rural people see the doctor as one of them. Home visits are widely used as they are seen to be more convenient and easy in terms of payment (patient usually pays considering his/her own financial capacity).

For a full report see Annex X.

5. Proposed PHC Master Plan for Kakheti Region

This Master Plan serves as a model to illustrate the possibilities for restructuring PHC. The proposed criteria and local adaptations for the Region have yet to be discussed in detail at national and regional level. Therefore this proposed Master Plan provides a tool to demonstrate the usefulness of the facility assessments and usage of GIS. The Geographic Company has developed software in which criteria and local adaptations can be changed.

5.1 Health policy

This Master Plan has been developed in accordance with the national health policy of the Government of Georgia and the Strategic Health Plan for the years 2000 to 2009. A brief outline of the Strategic Health Plan is presented below:

1 The health system

1.1 Health policy

With independence, Georgia simply did not have resources to maintain the delivery of free health care. The country had far too many hospital beds and the health system was overstaffed by physicians and other health care workers, whose government salaries were increasingly inadequate and who imposed substantial formal and informal requirements on users. In the devastated economy, sick people became less and less able to afford out-of-pocket payments and were increasingly simply turned away from the health care system. As a result, health facilities are experiencing a low volume of activity as well as patients dissatisfied with the limited services and supplies, including pharmaceuticals.

To stop the deterioration of the health of the people, the Government of Georgia initiated a thorough reform of the health system in 1995. Its goal is to develop and implement a model of organization and management of the health system under the transition conditions that will establish new economic relations, protect human rights and make use of democratic mechanisms in state management and regulation.

The following are the present aims of the health care system:

- to be in accordance with the strategic direction of economic development of the country;
- to balance the volume of work with the required material and human resources; and
- to achieve a controllable system aimed at utilizing resources rationally.

The major directions of the resulting system are as follows:

- creating the legal basis for a new health system;
- decentralizing health system management;
- promoting innovation of the financial and economic foundations of the health system, including a transition to programme-based financing;
- **giving priority to primary care;**
- reforming the sanitary–epidemiological service;

- converting to the principles of health insurance;
- ensuring the social security of health care employers;
- reforming the pharmaceutical policy;
- **supporting the privatization process;**
- accrediting and licensing health institutions and personnel;
- reforming medical education;
- reforming medical science; and
- reforming the health information service.

Briefly, the Government of Georgia aims to increase private-sector participation in the health system and limit the state's role to such areas as health promotion, immunization, establishing a regulatory framework, accreditation and licensing, research and education. It will also ensure access to basic services for the most vulnerable groups.

1.2 Health care delivery system

1.2.1. Primary health care

The national health policy emphasizes the priority of developing in Georgia. Primary health care facilities include 859 independent outpatient facilities, 114 outpatient hospital departments, 53 medical posts and 512 midwife posts in 1998. The activities are based on the following principles:

- provision of health care for each registered patient;
- accessible and high-quality health care;
- correlation between treatment and prevention;
- interrelationship between outpatient and inpatient hospital care;
- supporting the employed population by establishing a specific ambulatory-admission schedule.

Primary health care units provide the population with:

- health education;
- maternal and child health care
- immunization;
- prevention programmes for endemic diseases;
- treatment for prevailing diseases and injuries;
- essential drugs.

The material basis of these facilities does not usually correspond to the current sanitary requirements concerning buildings, regular water supply, sewerage, electricity supply, telephone and other factors. They have insufficient equipment and inventory. The personnel's salaries are low and there are insufficient incentives for improving care and relations with the population.

The emphasis will be on improving primary and preventive services rather than curative care. This will be achieved by shifting considerable resources to primary health care from hospital services. Preventive services will continue to be financed from government revenues. **Primary health care will be further strengthened with the introduction of family physicians and nursing care at home.** Thus, most health services will be provided out of hospitals, which will result in increased

potential for early diagnosis, prevention and treatment of diseases and reducing national health expenditure.

Greater attention will be paid to promoting healthy lifestyles. Every citizen (even those living in the most inaccessible and poorest regions) will have easy access to quality services related to maternal and child health, **family health** and the treatment and prevention of the most prevalent diseases. Improved immunization coverage will be provided as a cost-effective preventive intervention.

1.3. Human resources for health

There is a considerable oversupply of physicians in Georgia. In 1998 the number of physicians per 10 000 population (40.3) was much higher than that in the United States (1.9 times more), Germany (1.8 times more), Canada (2.2 times more) and the United Kingdom (4.8 times more). This ratio is even higher if the health services of other ministries (Transport, Defence, Internal Affairs and Security) are included. Nevertheless, the productivity of physicians in Georgia is low because they often perform tasks that would be performed by nurses or other paramedical personnel in more affluent countries. Georgia has fewer supporting staff than do Western Europe and other industrialized countries. For example, the ratio of physicians to nurses in Georgia was 1.4, which was about one third that in Canada (4.4) or other countries in Europe.

2. Health care reform

2.1. Strategic vision

Considering the existing social requirements and economic conditions, the health care system will be based on the achievements of science, **a strong network of primary health care services**, insurance principles and differentiation of health institutions according to their level and efficiency. The provision of health care should take into account the severity of diseases and structure of morbidity and focus on early diagnostics, preventing diseases and comprehensive and high-quality treatment and rehabilitation.

2.2. Sustainable development of human resources

Human resources for health care will be subject to reform with regard to the quality and quantity of health care personnel. **The Ministry of Health has chosen not to undertake detailed workforce plans but gradually to reduce the excess medical staff based on regulated market forces.** Through the already established system of accreditation of health facilities and licensing of medical staff, those who cannot attain an acceptable professional quality or for whom there is insufficient work will be leaving the functioning health care system.

An alternative is available: **reorientation training of unemployed physicians, both those with inadequate qualifications and others who are excessively specialized to become general practitioners or health managers. Additional training is envisaged for the physicians working in the polyclinics who are willing to become family physicians.**

Redistribution of staff is another aspect to be considered in rationalizing human resources. Deployment strategies involve establishing incentives (financial and non-financial, such as targeted training) to promote work in areas suffering from a lack of

staff, especially in rural areas. The principle of competition will be officially implemented for all kinds of health professionals applying for vacant posts. The thorough recruitment process will require analysis of the need for the job, new job descriptions, assessment of candidates and a selection interview. Reimbursement mechanisms will be based on the performance assessment, including new criteria and norms concerning quality of care, severity of cases, permanent improvement of professional qualifications and others. Thus, the rational use of human resources will be achieved through better management.

High-quality training is fundamental to delivering quality health care. The aim is to implement advanced forms of and methods for undergraduate and postgraduate professional training, bringing training programmes into compliance with international standards. State standards for professional training of graduates, training programmes in different medical specialties and standards for appropriate ways of professional training will be defined. The content of training for all health personnel will reflect the needs of society.

One of the basic mechanisms of the health reform should be the increasing leadership role of nurses in primary health care facilities, public health centres and self-supporting hospitals. Training nurses about modern principles of health management, epidemiology and the role of nurses will empower them to make independent decisions and become experts in mental health, community nursing and public health.

2.3. Physical infrastructure

The quality of health services will be improved by providing appropriate medical and diagnostic equipment and improved infrastructure. The task is to bring the existing network of health facilities in compliance with the real demands of the country through comprehensive renewal programmes. **Health facilities' design and construction norms will be adapted according to the corresponding conditions (climatic, seismic and geological) and international standards of medical and technical supplies and medical technologies.** Normative regulation regarding their use will be prepared. A special database about medical and technical information and a coding system will improve the priority use of the basic equipment and medical supplies. Development of a national medical equipment industry is envisaged to promote this process. National and foreign investment will be solicited to finance the rehabilitation of health facilities and the supply of appropriate equipment.

Thus the main conclusion is that the priority and orientation of the future health care system will be Primary Health Care, based on Family Health principle. In order to achieve this objective a re-training and re-distribution of health staff is necessary. Health facility design and construction norms have to be adapted to local conditions and international standards.

5.2 PHC Concept

1. *The primary health care concept should at least include the following:*

- Equity and universality of access to care
- Affordable and quality services
- First contact/gate keeping function
- Continuity of care – appropriate referral system
- Comprehensiveness of care (BBP)
- Co-ordination with other PHC services
- Community oriented care
- Family centred care

2. *Primary Health Care Services*

Family Health Centres should include the following services:

- Basic Curative Care
- Reproductive health, including ANC, family planning and referral of high risk pregnancies
- Child health, including EPI and growth monitoring
- Health advice and health promotion
- Home visits to seriously ill patients
- Home (nursing) care
- Treatment of minor injuries
- Simple laboratory services and/or establishing diagnostic centre serving several facilities
- 24 hours Emergency services in the facility and/or emergency unit serving defined population in an accessible location
- Referral of complex cases to secondary level

4. *Primary Health Care Workforce standards*

- 1 Family doctor for 2000 people
- 1 Family nurse for 1000 people
- Others to include such as midwives, community nurses, mental health doctors/nurses depending on local population size and conditions

In most health systems pharmacies and dentists are private services, but these should remain accessible and affordable for the population.

5.3 Criteria for restructuring PHC

General criteria used for this model have been:

- ✦ Geographic accessibility in terms of travel time from settlements to nearest health facility
- ✦ Population catchment area of those selected health facilities within pre-defined travel time
- ✦ Most suitable facility in terms of appropriate size for catchment area

There is a need to establish criteria for national level. After having selected national criteria applicable throughout the country, local adaptations remain necessary. The re-structuring of the PHC has to be based on the existing situation, with existing facilities of a certain size in fixed locations. Accessibility also depends on current conditions of the roads.

In this model the following criteria have been chosen in order to achieve maximum coverage and accessibility with present (financial) means

Proposed criteria for national level

- 15 minutes travel time ² from settlements to nearest health facility
- Filtering out any overlap in population catchment areas of those selected facilities
- Population catchment areas between 2.000 and 15.000 people depending on urban or rural location and within this 15 min travel time

Because of existing PHC facilities in fixed locations some regional adaptations are necessary.

Criteria used in this model for regional adaptations are:

1. Areas outside 15 minutes travel time
 - Select nearest facility
 - Determine travel time to this nearest facility. Acceptable? (20-30 min). If not acceptable take population size into consideration.
 - If population size is below i.e. < 1000 organise mobile health services and/or Family Health Physician going on home visits on a regular basis to these villages.
2. Areas within 15 minutes but with small population size.
 - If the population is i.e. < 1000 persons, organise mobile health services and/or Family Health Physician going on home visit

² Travel time is defined as the time needed to reach the facility by vehicle, but taking the type of road into consideration. So will a tarmac road do 80 km/h and a mountain road 5 km/h.

3. Selected health facilities too small or too large for corresponding catchment area.
 - Select nearest larger or smaller health facility (but travel time and population catchment area might change)
 - Enlarge selected existing in case it is too small, close down a part if selected facility appeared too large or construct new facility
4. Gradually close down facilities, but the ones which still serve small populations and/or of those populations which accessibility decreased being the last ones

With this model the number of facilities serving the population within 15 minutes travel time decreased from 159 to 50.

For a clearer picture of above mentioned criteria an explanation of attached maps is necessary.

-Map 1 (9.4) shows all 50 facilities which cover the population within 15 minutes travel time in the blue zones. Green dots are those settlements outside the 15 minutes zone. Yellow crosses represent those facilities which were taken out of the selection after optimisation and which were overlapping the same population. The developed software was directed towards selecting the most appropriate facilities size wise.

-Map 2 (9.5) shows same 50 facilities marked in blue and their catchment areas. The settlements are linked to the nearest facility. With blue lines to the ones within 15 minutes, the green lines outside 15 minutes. The actual travel time of those outside 15 minutes zone and population size is also shown. With this map decisions have to be taken as to which travel time is acceptable for those settlements outside 15 minutes zones, also taking the population size into consideration. The decision could be either to reconstruct a small fixed clinic or to organise mobile services. Running costs of either service could serve as a decision tool.

-Map 4, 5, 6, and 7 (9.6-9.9) show the so called problems areas of those settlements which are situated outside the 15 minutes travel zone. For each of these settlements health services has to be planned either by reconstructing a small clinic or by organising mobile services.

- Map 9.6. North Eastern part of Akhmeta Rayon. Most settlements are outside the 15 minutes zone of the only serving clinic Omalo, although it concerns very small populations. Mobile services might in some of those not be the optimal solution as travel time by vehicle in this mountainous area can be as much as 5 hours. Helicopter services in case of emergency might the only solution.
- Map 9.7. Western part of Akhmeta Rayon. Most of the people do not loose accessibility by reducing the number of facilities, which they did not have in the first place. The maximum travel time is 27 minutes to the nearest facility. If this is not acceptable mobile- and/or emergency ambulance services should be organised.
- Map 9.8. Sagarejo Rayon. Because of keeping accessibility within the 15 minutes travel time, 2 remaining clinics serve very small populations between 700 and 1400 people. One could consider changing to mobile services, although these clinics could also be used for starting point of mobile services to surrounding villages of which one is located at nearly 2 hours distance, though only has 30 people registered.
- Map 9.9. Dedoplistskaro Rayon. Taribano is the most distant village with 45 minutes travel time to the nearest facility, although only having 144 people. It might be more cost effective to organise mobile- and/or emergency ambulance services.

5.4 Acceptance of 15 minutes travel time

Although in this proposed model the starting point is 15 minutes travel time by vehicle, many will debate that this is not acceptable, considering that most people having no own transportation means and the lack or proper public transport. Indeed a lot of people are depending on the vehicle of a friend or neighbour in case of emergency, but according to a SCF household survey ³ the lack of transport means is not one of the main problems of not seeking medical care when being ill.

SCF household survey 2002

	Georgia 96	Georgia 2002	Kakheti 96	Kakheti 2002
% of ill who did not go to doctor	65,2	59,9	82,5	56,4

Reasons	Georgia 96	Georgia 2002	Kakheti 96	Kakheti 2002
Could not afford treatment	22,3	49,6	17,9	51,3
Illness was not serious	60,5	27,6	74,8	27,5
Self-treatment	15,2	19	6,0	16,2
Advice from pharmacist		0,9		2,6
No confidence in doctors	0,3	0,5	0	1,9
Other	1,6	2,1	1,3	0,4
Could not communicate	0,1	0,2	0	0
Could not get transportation	0,1	0,1	0	0
TOTAL	100	100	100	100

This Master Plan is a plan for the future, although based on a blueprint of the existing situation. One should also consider that the road conditions and (public) transport means might improve in the future.

³ Save the Children Report: The status of households in Georgia in 2002. Sample size 5,500 households.

5.5 Population coverage

	Before re-organisation	After re-organisation	Reduction in %	Int. Standard
Facilities	159	50	69	
Village coverage	315	260	17	
Population coverage	100%	99%	1	
No of people not covered within 15 min travel time		3.816		
Population per doctor	701	1.322		2.000
Population per nurse	513	934		1.000

The 50 facilities which were selected with above mentioned criteria cover 99% of the population within 15 minutes travel time. This is a reduction of 69% of the previous number of facilities. 83% of all villages are covered, but the remaining population outside this 15 minutes zone consists of only 3.816 people.

Although the ratio for doctors per population size still remains a bit high, the fact that a facility will close down, should not imply that all those staff will lose their job, but will be more related to re-allocation of staff according to predefined criteria such as specialisation, age, years of experience, performance and willingness to re-train.

Catchment area facilities in %	No	%
>15.000 pop.	9	18%
5.000 - 15.000 pop.	18	36%
2.000 - 5.000 pop.	10	20%
< 2.000 pop.	13	26%
1.000 - 2.000 pop.	4	8%
<1.000 pop.	9	18%

The ideal size of a Family Health Centre is said to serve 10,000 people. Having to deal with existing fixed facilities it was not possible to optimise to a catchment area of 10,000. Therefore most catchment areas range between 2000 and 15,000 people depending on rural or urban location, because the principal criteria were geographical accessibility and not catchment area.

At least one Polyclinic in the Rayon capitals has been included in these 50 selected facilities in order to be re-installed as the Rayon referral for emergencies and diagnostic services. The ones which serve large populations, in most cases those facilities in the Rayon capitals could be divided into two separate facilities. The ones which serve small populations below 1000 could be closed and replaced by mobile services.

5.6 Information regarding the 50 priority facilities ⁴

Distribution of facilities by building ownership

	Number of facilities	%
Located in own building	25	51,0
Located in shared building	20	40,8
Located in non- -PHC owned building	4	8,2
Total	49	

Of the selected facilities with GIS, one appeared to be a private facility. Further investigation is needed, if this facility should be in the repair programme or another facility has to be selected. To repair the PHC facility in a shared building might have consequences for the costs if the whole building actually needs repair.

Distribution of facilities by need of repair

	Number of facilities	%
The building has to be repaired	42	93,3
The repair does not make sense, new building required	3	6,7

Near all selected facilities need to be repaired either replaced.

Distribution of total cost by groups of items

	Costs in Lari	% from total cost
Buildings	1.420.180	84,1
Water Supply and Sewage Systems	197.037	11,7
Electricity system	61.742	3,7
Natural Gas System	9.687	0,6
Total	1.688.646	100,0

The real costs of repair might be higher as above stated if rehabilitated to international standards and if having to include other parts of a shared building. Also those facilities in villages lacking a proper electricity or water supply will have higher investment costs to ensure a supply to the whole village.

⁴ For more details see also the report about the 50 selected and the 109 non selected facilities in the maps attachment.

Electric supply periodicity

	In summer		In Winter	
	Number of facilities	%	Number of facilities	%
Uninterruptedly during 24 hours	4	8,2	3	6,1
According to a schedule	2	4,1	3	6,1
Haphazardly	31	63,3	27	55,1
Not supplied at all	12	24,5	16	32,7

Water supply periodicity

	In summer		In Winter	
	Number of facilities	%	Number of facilities	%
Uninterrupted supply	19	38,8	19	38,8
Supply only during appointed hours of day or appointed days of month	13	26,5	12	24,5
Supply difficulties	17	34,7	18	36,7

The majority needs a solution for the water and electricity supply problems.

Due to the fact that accessibility remained the main criteria for selection, it does have consequences on ownership and repair costs (private and/or more expensive etc.), unless another nearest facility is chosen.

5.7 Planning of emergency and diagnostic services

1. Emergency services

Ideally a patient should be able to reach the nearest emergency services within 30 minutes travel time, preferably by ambulance service. The Kakheti survey revealed that there were only 2 functioning ambulance vehicles in the Region.

Proper equipped ambulance services should be organised from the nearest hospital and therefore the installation of call systems for ambulances is essential by either a radio system or functioning telephones (landline or mobile).

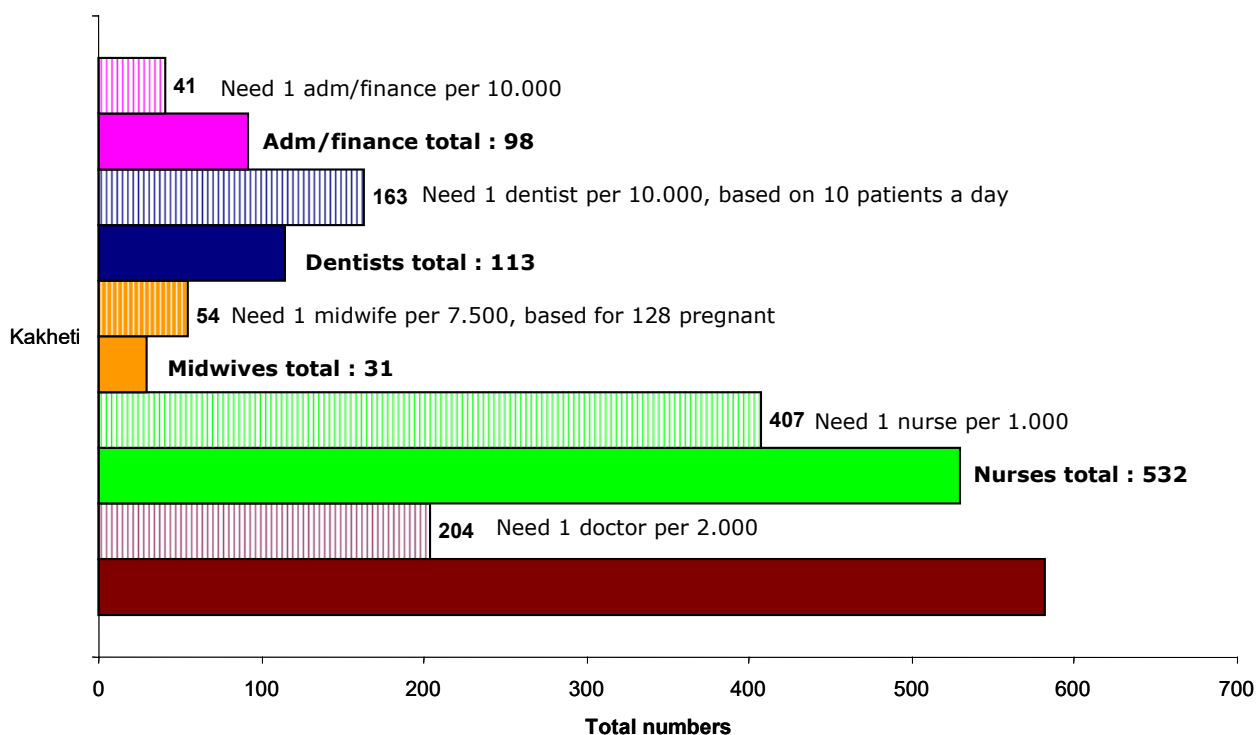
In map 9.91 15 minutes (in red) and 30 minutes (in green) travel time coverage zones are shown from the existing hospital network in Kakheti Region. For those settlements which cannot reach a hospital within 30 minutes, an emergency post should be established in the nearest large PHC.

The consequence will be to upgrade emergency posts to international standards in both hospitals and selected PHC facilities and to establish well equipped and staffed ambulance services.

2. Diagnostic services

In most facilities simple laboratory tests performed by the family physicians can be sufficient. In that case a group of Family Health Centres could share a joint diagnostic centre, which should perform all laboratory tests and diagnostics such as ECG, X-ray and ultrasound. However in those towns with a hospital one could also choose to refer patients to the hospital if well equipped and the feedback is to the family physician. Another option is to have referral diagnostic services in the Rayon Polyclinics, but then it might not be cost effective to have two diagnostic facilities in the same location. The choice where to install a well equipped PHC diagnostic centre depends on the location and population size.

5.8 Workforce planning



The need for the PHC workforce in Kakheta Region for the future has been calculated according to international standards mentioned in page 22. In the whole region there is a need for 202 Family Physicians, 407 nurses trained in Family Health, 54 midwives (or nurses retrained in midwife profession) and 41 Family Health practice managers (to be recruited from current administration and finance personnel). Dentists could be employed in dental preventive services for children, but otherwise remain in the private sector.

5.8.1 Recommendations for staff retraining plan

At national level:

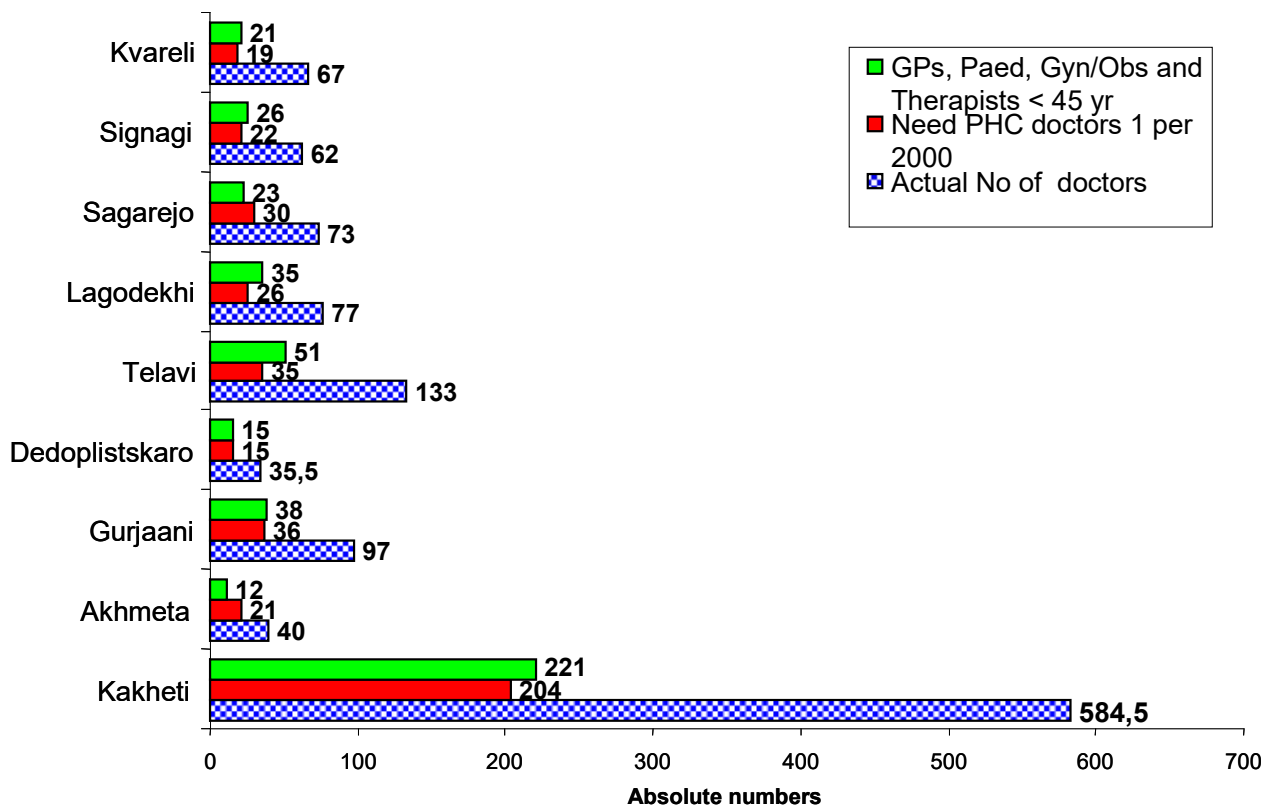
- Development of National Human Resources policy;
- Ensure that Family Medicine (retraining) curriculum of the PHC training centre is nationally recognised and approved. Investigate possibility for international accreditation;
- Increase present re-training curriculum to a minimum of one year in accordance with international standards.
- Analyse current Family Health curricula at State Medical University and Medical Faculties for pre-graduates;
- Establish 11 regional Family Medicine training centres for doctors and nurses (including Kakheti Region);
- Analyse and if necessary establish Family Health education in nursing schools (in collaboration with PHC training centre);
- Investigate if the capacity of the present PHC training centre is sufficient for national training of trainers and supervision of 11 regional training centres;
- Investigate current capacity of the Post Graduate Training in Family Health of the Academy and potential involvement in future Family Health (re-) training programmes;

At regional level (Kakheti)

- Start a training of trainers (TOT) course, with a minimum of 5 trainers for doctors and 10 for nurses (if possible by PHC training centre)
- Annual training of a cohort of 50 doctors and 100 nurses
- Assign newly trained doctors and nurses as a group to reconstructed Family Health Centres (not mixing with non-trained staff)

Selection of staff for retraining:

1. Organise information meetings for all medical staff in the region
2. Determine selection criteria for retraining
 - According to specialisation
 - For doctors i.e. GPs, paediatricians, Obstetricians/Gynaecologists, therapist
 - Below 45 years
 - Years of experience, i.e. above > 5 years
 - Willingness to be re-trained
 - If not enough medical persons are selected of above mentioned groups, consider other interested



From the current staff enough doctors could be recruited for retraining from the preferred specialities such as General Practitioners, Paediatricians, Therapists and Gynaecologists/Obstetricians. The eligible doctors for retraining also have enough years of experience in order to be selected for re-training. Except for the only four GPs, of whom two have less than one year and two have between one and five years of working experience. Of the Paediatricians 74% have more than 10 years of experience. Of the Gynaecologists/Obstetricians 82% have more than 5 years experience and 43% more than 10 years. Of the Therapists 74% have more than 10 years experience

After re-training there is a need for re-allocation of newly trained staff, first of all because in Sagarejo and Akhmeta there are not enough doctors to recruit from. Re-allocation is also necessary as preferably newly trained Family Health physicians and nurses should start as a group in a reconstructed Family Health Centre and not mix with other staff, restraining them from practicing Family Health.

5.8.2 Recommendations for surplus staff

1. Prepare retirements schemes and/or offer early retirement. Especially for doctors there is a surplus of staff. Eighty of them are between 55 and 65 years or older, who are to retire within the next ten years.
2. Re-allocation of staff to other functions
3. Prepare redundancy plan
4. Offer option to start private practice under the condition of licensing
 - Consequence will be the need for continuous education by regulation and if working as private Family Health physician retraining is needed
5. Non-selected facilities could be used for private practice purposes or serve as base for community nursing/home care for the elderly. SME programs could be established for private physicians.

KAKHETI REGIONAL PHC MASTER PLANNING

Activity		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1.1	Human Resource policy development and continuous planning							
1.2	National Family Health curriculum approved for retraining							
1.3	Introduction of Family Health to pre-graduate doctors, nurses and midwives (curriculum development?)							
1.4	Establishment of Regional FH training centre in Kakheti (construction)							
2.1	Training of trainers for Kakheti Region							
2.2	Re-training of cohort of 50 doctors/100 nurses for Kakh.							
2.3	Start working of first cohort							
2.4	Completion training of 4 cohorts of FH doctors + nurses in Kakheti							
3.	Start Rehabilitation of first series of health facilities into FH centers							
4.	Completion of first series rehabilitated and staffed FH Centers							
Activity		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7

6. Glossary and Abbreviations

ANC	Antenatal Care
BBP	Basic Benefit Package
CMSI	Centre for Medical Statistics and Information
DFID	Department for International Development
EPI	Extended Programme Immunisation
EU	European Union
FG	Focus Groups
GIS	Geographic Information System
MoLHSA	Ministry of Labour, Health and Social Affairs
NGOs	Non-Governmental Organisations
PHC	Primary Health Care
Rayon	District in Georgia
Sakrebulo	Administrative unit in Georgia (Municipality), consisting of one or more villages
SDS	State Department for Statistics
SME	Small/Medium Enterprises
WB	World Bank