Report on the Assessment of Quality of Care in Primary Health Care Facilities in the two Pilot Regions

Sabine Kiefer, Besnik Kadesha

Version 2, 29 September 2015

Financed by the Swiss Agency for Development and Cooperation

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

Contacts

Health for All Project (HAP)
Project implementation Unit
Rruga Faik Konika Vila
Tirana, Albania

Dr. Joao Costa
Project manager

Joao.costa@swisstph.org

Swiss Tropical and Public Health Institute
Socinstrasse 57
4002 Basel, Switzerland

Website: www.swisstph.ch

Prof. Dr. Kaspar Wyss
Senior Public Health Specialist
Head of Unit
Swiss Centre for International Health

Tel: +41 61 284 81 40

kaspar.wyss@unibas.ch

Terre des hommes
Avenue de Montchoisi 15
1006 Lausanne, Switzerland

Website : www.Tdh.ch

Mr. Thierry Agagliate
Program Manager

Tel : + 41 58 611 06 31
thierry.agagliate@Tdh.ch

Save the Children Schweiz
Sihlquai 253
8005 Zürich, Switzerland

www.savethechildren.ch

Ms Martina Frank
Senior Health Programme Officer

Tel: + 41 44 267 74 89
martina.frank@savethechildren.ch

Acknowledgements

We are very thankful to Dr Joao Costa and Prof. Dr. Kaspar Wyss for providing overall support to the study. We warmly thank Ehad Mersini for contributing to the questionnaire development, the translations and the training of interviewers. Our warmest thanks are expressed to Klodiana Tosuni (regional coordinator Fier) and Corbin Kappler (regional coordinator Diber) who did an excellent job in coordinating the data collection. Our data collectors (Arineda Aliaj, Juela Skarra, Gilda Kuka, Elizabeta Doci, Ilva Myzeqari, Marinela Naska, Edlira Saraci, Manjola Vrapi) have been very dedicated and did an very good job. Many, many thanks! We were also very satisfied with the logistics provided by the "Centre Coalition for Sustainable Democracy and Free and Honest Elections". We thank Daniel Cobos from Swiss TPH for providing clinical input for the questionnaire development and Fillipo Lechthaler and Martin Bratschi, Swiss TPH, for assistance and technical backstopping regarding STATA and data analysis. Lastly we would like to express our gratitude to all participants in our survey including facility managers, doctors and patients!

Table of Contents

Executive summary

Introduction

Quality of Care is a concern in Albania. Primary rural health facilities often struggle with low investment and lack trained health workers. Adequate systems to monitor quality of care are not in place. The Health for All project in Albania aims to improve access and quality of health services, specifically for vulnerable and poor. The project which is financed by the Swiss Agency for Development and Cooperation was launched in 2015 and is implemented in two pilot regions, namely Diber and Fier. To assess the project status and success we conducted baseline primary data collections, including a Quality of Care survey in health facilities.

Methods

We carried out a cross-sectional study at 38 primary health facilities in urban and rural locations in Diber and Fier. The survey measures structural, process and outcome attributes thereby following the framework as laid out by Donabedian (1988, 1990). We assessed the infrastructure of the different facilities (structural attributes), provider-patient interactions through clinical observation (process attributes) and patient satisfaction as a proxy for outcome attributes. During clinical observations special attention was given to diabetes and hypertensive patients.

Results

Infrastructural assessment

Variations in the facility infrastructure and overall cleanliness were common between the different facilities. Usually good results were achieved for the designation of the waiting areas, the assurance of privacy and the overall cleanliness. The availability of electricity and running water was given for more than 90% and 60% of facilities respectively. A main concern was the waste management, specifically the disposal and collection of infectious or sharp waste. The availability of disinfectants as well as a washing point close to the bathrooms were not always given. Basic information (e.g. opening hours, tariffs) were displayed at facilities but contact phone numbers or the green numbers to denounce corruption were much less common. Also logo/trademarks of pharmaceutical companies were often displayed on posters. Public emergency mechanisms were hardly in place. Guidelines and protocols are not very often available but IEC materials have a high coverage.

Among medical equipment we only found the very basic equipment to be widely available (e.g. stethoscope for adults). Hardly any facility had equipment to assess child development and growth. Gynaecologic service equipment was also hardly available. The medical products were also not fully available at facility level and we observed variations between the two regions.

Clinical observations

Variations between the facilities and regions were common. Generally doctors were polite and ensured the confidentiality of the patient. Applying measures of hygiene and infection prevention was a main concern during clinical consultations. Hand washing with soap, the application of decontamination procedures, the use of gloves or masks as

required were extremely low. For patients with diabetes, hypertension and other diseases we identified that the questioning and clinical history taking as well as giving advice and instructions were more common than conducting actual clinical examinations as required, even though improvements are needed on all three aspects. Interactions between the doctor and patient often focussed on the immediate clinical situation and habitual risk factors and behaviour (e.g. nutrition, smoking, drinking) were often not adequately covered in the interaction.

Exit interviews

Patient satisfaction was relatively high. We observed that (1) satisfaction in Diber is higher than in Fier; (2) satisfaction in rural facilities tends to be slightly higher than in urban facilities; (3) satisfaction varies depending on the reasons for the visits, whereby patients with chronic conditions showed also some dissatisfaction. Typically satisfaction with health services is difficult to measure as cultural beliefs and dependencies between the patient and provider influence the satisfaction as well as the general health literacy in the population and their understanding of what would be quality of services. Health spending was according to exit interviews very low and the coverage with health insurance cards very high.

Recommendations

Recommendations are:

- Reconstruct facilities according to the national standards
- Ensure minimum hygiene standards of facilities:
- Physical rehabilitation
- Functional washing points must be close to toilets
- Functional washing points must be in the consultation rooms
- Water and soap are constantly available at all washing points
- Ensure that chlorine solutions or other disinfectants for instruments are available
- Regular cleaning
- Specify which national standard diagnosis and treatment guidelines must be available at level of primary health care facilities
    - Review and revise relevant national standard diagnosis and treatment guidelines for the primary care context
    - Distribute relevant national standard diagnosis and treatment guidelines to the health facilities
- Identify critical aspects that hinder the inadequate availability of the equipment, material and drugs
- Provide basic equipment as outlined in the MoH list for Primary Care Facilities
- Discuss the procurement of drugs and procure drugs.
- Raise awareness and remind health staff on infection prevention measures
- Conduct qualitative assessments on why doctors do not perform the required physical checks
- Provide checklists for primary care physicians for the most common chronic conditions

1 Background

1.1 The "Health for All" project

The "Health for All Project" in Albania shall increase the health of the population, including those most vulnerable, by improving primary care services and increasing health promotion activities. The two main expected outcomes of the project are:

- Central government, donors and other relevant actors' engagement in the health system reform leads to better management and provision of services through qualified health professionals
- Citizens in target regions, especially the marginalized and vulnerable groups, have increased access to more decentralized, affordable, quality primary health services. More health conscious citizens contribute through increased participation towards an accountable and responsive health system

The project, which is financed by the Swiss Agency for Development and Cooperation, is implemented in two pilot regions/qarks in Albania. The region in the north-east is called Diber and is a mountainous, rural area with mainly agricultural production. The second region, Fier, is located in the south-west of the country with sea access, oil industry and agriculture but still remains rural.

To assess the success and impact of HAP over the implementation period, key indicators will be compared at the end of the project against indicator values at the beginning of the project. Hence it is necessary to collect this information at the beginning and at the end of the implementation phase. To obtain this baseline information for key indicators, secondary data from routine data collection (e.g. Health Insurance Fund) are utilized. For indicators that cannot be obtained through routine data collection three specific primary data collections are conducted; (1) a study on quality of care, (2) a household survey and (3) an assessment of access to care for vulnerable groups which will have to be repeated at the end of the project.

This report provides the baseline information for the quality of care study that was carried out at health facility level in April/May 2015.

1.2 Overview on Quality of Care

For this study we considered an operational definition of the quality of health services based on the design of the quality of care by Donabedian (1988, 1990), which was frequently used in similar studies (Boller, Wyss et al., 2003; Matthys, 2013). The quality of services and care is thereby characterized by three dimensions: structural attributes, the attributes associated with the process and attributes related to the outcomes. Thereby process attributes are often further sub-divided technical and inter-personal dimensions.
The basic idea of the approach to three parts is based on the assumption that the three dimensions are connected in terms of service quality: good structure increases the likelihood of good processes and good process increases the likelihood of good outcomes, though outcomes are a consequence rather than a component of the quality of services.

Structural attributes refer to the setting where health care is provided. These attributes mostly refer to the organizational structure, human- and financial resources, and material. It may also include technical performance of practitioners.

Process attributes refer to what is done in giving and receiving care. These attributes comprise provider-client interaction, conduct and technical aspects, and interpersonal relations/client satisfaction.

Outcome attributes look at the effects of care on health status of populations. Outcomes are thereby considered a consequence of the quality of care, as for example survival and recovery of a patient or more indirectly patient satisfaction.

1.3 Quality of Care in Albania

Quality of care is a concern in Albania. The health system remains highly specialized with an emphasis on curative and in-patient care, an oversupply of hospitals and a low quality of Primary Health Care (PHC). Quality of care in health facilities and the attached health posts is a major concern, which is owed to the lack of investment in health facilities and technologies, an insufficient supply of pharmaceuticals, poorly trained health care workers, and a lack of systems for quality improvement and monitoring. This is also reflected in several indicators (e.g. maternal mortality, malnutrition) which are linked to quality and accessibility of health services and where Albania does not perform well (Institute of Public Health, 2014).

There are two main studies in Albania investigating the quality of care of maternal care (Tamburlini et al., 2011) and a comprehensive facility assessment monitoring primary care centres in Albania (Coalition for Sustainable Democracy (2014).

In the study on the quality of maternal and neonatal care in Albania and selected other CIS countries the authors concluded that initiatives to develop guidelines and protocols were successful, though this had only limited impact on the ground. In their assessment, they outline the disregard principles of clinical history and physical examination (e.g. information, confidentiality), the lack of infrastructure and major weaknesses in the application of guidelines and protocols (Tamburlini et al., 2011).

A comprehensive monitoring of 550 primary care facilities (Coalition for Sustainable Democracy (2014)) collected general and administrative data on each primary health care facility, but also information on the health centres infrastructure, equipment, an inventory checklist, availability of documents, closing procedures and patient satisfaction. The data was compared to the suggested availability of services according to the Ministry of Health "Basic Package for Primary Health Care". The results showed some positive findings (e.g. facilities opened on time, availability of essential equipment and medication) but also identified major weaknesses. For instance that no doctor was available at the opening of the facility or that facilities were temporarily closed or not functional. The assessment also identified weaknesses in the infrastructure (e.g. lack of telecommunication equipment), aspects of accountability/transparency (e.g. consultation fees not visibly displayed), limitations for vulnerable groups accessing the facility (e.g. disabled) and a limited availability of services (e.g. pregnant women and family planning).

2 Objectives

The objective of the study was to measure the quality of care related to structural and procedural aspects as well as selected outcomes in health centres in the two pilot regions of project HAP in Albania.

The specific objectives of this study were to:

- Establish a baseline on the spectrum of the quality of health services in HC in both intervention regions addressing structural and procedural aspects
- Provide information to what degree health providers have infrastructure and consumables available as outlined in the MoH (December 2014) Basic Package of Services in Primary Health Care.
- Assess the quality of treatment provided by providers to patients with hypertension and diabetes.
- Compare aspects of health quality between urban vs. rural health facilities and the two regions (Fier vs. Diber).
- Establish a baseline on patient satisfaction in health facilities in both intervention districts and compare patient satisfaction between men and women and between those with to those without a valid health insurance card.
- Estimate selected indicators from the projects' logical framework to monitor the improvement of health care delivery over the course of HAP.

HAP intends to repeat the Quality of Care assessment at the end of the project in 2018 to monitor the indicators from the logical framework and to identify the impact of HAP activities on the Quality of Care.

3 Methodology

3.1 Questionnaires

The survey included three questionnaires to assess the different dimensions of quality of care: (1) at facility level (structural aspects), (2) provider level (process aspects) and (3) at the level of patients (outcomes).

The questionnaires were based on previous studies on Quality of Care in Tajikistan Matthys, B. (2013) and in Chad (Lechthaler, 2015). Both studies considered a mix of indicators from WHO Service Availability and Readiness Assessment (SARA) and the "Tool to Improve Quality of Health Care" within the "ACCESS" program supported by the Novartis Foundation for Sustainable Development (2014) as relevant. The questionnaires were adapted to the Albanian local context thereby taking into consideration the MoH (2014) "Basic Package of Services in Primary Health Care" and the guidelines for family doctors.

The survey tools were translated into Albanian and have been visually back-translated into English. The following table gives an overview on the different aspects covered in the survey tools.

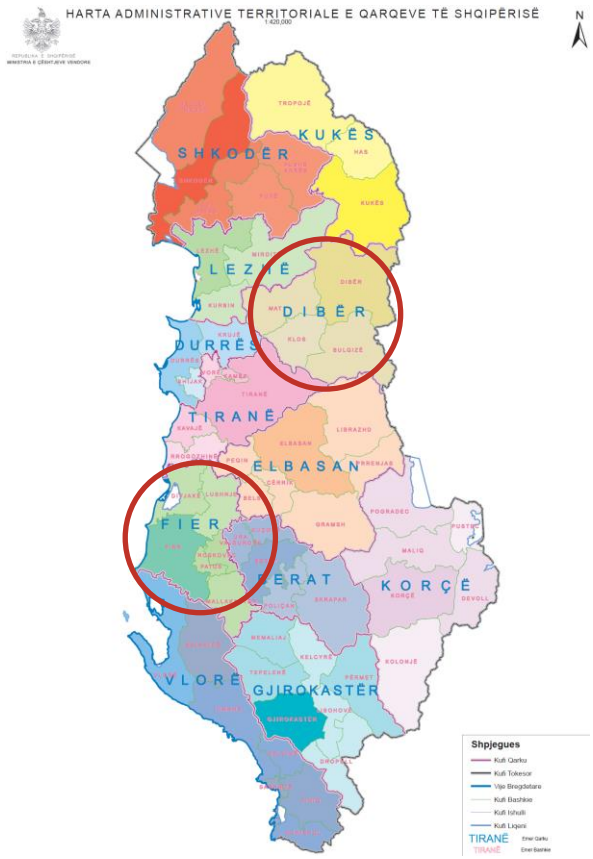
Dimension	Sub-dimension/ operationalisation	Level of data collection

Dimension	Sub-dimension/ operationalisation	Level of data collection
Structure: Infrastructure		
Facility infrastructure, overall cleanliness and maintenance	• Facility – overall cleanliness (facility, yard, waiting area) • Facility – maintenance of floors and walls (painted, cracks) • Water – general availability of water • Practice room – water and soap, privacy of examination • Availability of electricity, heating, telecommunications	Health facility
Hygiene and safety standards	• Toilets -- availability, water, soap, cleanliness	Health facility
Basic/essential medical equipment and supplies?	• Availability and functionality of medical equipment and supplies (according to Basic Service Package)	Health facility
Aspects of accountability/transparency	• Public display of key information (opening hours, tariffs, contact, complain box)	Health facility
Availability of guidelines and health promotion material	• Relevant guidelines and health promotion material is available at the facility and can be easily retrieved	Health facility
Availability of consumables	• Availability and quantity of consumables (according to Basic Service Package 2014)	Health facility
Processes: Provider – patient interaction		
General aspects on adherence on principles of clinical history and physical examination	• Makes a patient comfortable, e.g. seat offered • Interaction and welcoming • Privacy • Relevant explanations are given	Doctor
Application of infection prevention and control measures	• Hand-washing practices • Procedures for disinfection	Doctor
Observations on treatment of patients with arterial hypertension and diabetes.	Anamnesis • Asks relevant questions relevant for the illness Physical examination • Conducts relevant physical examinations correctly explanations • Gives relevant and comprehensive explanations	Doctor
Outcomes: Patient satisfaction (as proxy measure)		
Satisfaction with privacy	-	Patient*
Satisfaction with doctor-patient interactions	-	Patient*
Satisfaction with the quality of the facility	-	Patient*
Socio-demographic and economic aspects	• Socio-demographic aspects • Beneficiary from social program • Insurance situation	Patient*

*Excluding patients under 18 years without legal representative (e.g. mother/father/caretaker)

3.2 Study population and sampling

The study population were primary care facilities in the pilot regions of project HAP, namely Diber and Fier. The facilities included primary health care facilities in rural setting and urban setting, but excluded any attached health posts.



Targeted health providers and clients were:

- Facility heads of rural or urban health facilities providing primary care
- Medical doctors (general doctors, family doctor and medical specialists)
- Adults ≥ 18 years old or the Caretakers of infants or children

Sampling was done separately for each region. Within each region we sampled clusters proportional to size using the number of facility visits in November 2014 as a proxy for the size of the facility. In total, we selected 27 clusters in each region. A cluster referred thereby to one day of data collection at a health facility. Larger facilities were sampled several times. These facilities, typically in urban areas, have been visited on consecutive days but different doctors were observed for clinical consultations.

In total, the survey was conducted at 38 facilities, thereof 20 facilities in Diber and 18 in Fier region. Data was collected at 27 rural and 11 urban health facilities. An overview on the facilities is provided in Appendix D:.

Data collectors observed all clinical consultations following one doctor at the day of the visit within a facility. Before each observation oral consent was obtained from the doctor and the patient. Data collectors requested participation from all patients exiting the facility and once consent was obtained, conducted the interviews. The infrastructural assessment was conducted together with the head of the facility or his/her closest representative.

3.3 Training & pretest

Interviewers were competitively selected and a two day training took place. All interviewers were female medical or public health students. On the first training day interviewers were informed about (a) Health for All Project, (b) the aim and objectives of the survey, (c) the data collection process and procedures, (d) the structure of the questionnaires and (e) the use of the tablets. Each form and question was in detail presented and discussed with the data collectors. On the second training day we conducted a pretest with all interviewers at a health facility in Fier, supervised by the regional coordinator and two HAP staff. All interviewers gained experience in clinical observations and exit interviewers. To conduct the infrastructural assessment the

interviewer group followed a HAP supervisor who showed and explained the different medical instruments.

After the pretest HAP team collected the interviewer feedback and a few adjustments were made to the wording and translation of questions and answer possibilities. In a few instances we added additional clarifications and choices. An additional one day training was conducted prior to the start of data collection, which focused on procedures in the field, logistics and activity plan.

3.4 Data collection

Field work took place between the 23 April 2015 and 12 May 2015. In total eight interviewers, organised in teams of two, collected data (see also table below). The workload of data collection for one data collection team was fitted to one day per facility. The data collection schedule is outlined in Appendix C:.

Each day the team was brought by car to the respective facility[1]. Interviewers addressed then to the facility heads, explained the purpose of the visit and data collection and showed the letter of approval from the Ministry of Health (see Appendix).

Once interviewers received the general consent from the head of the facility they started working. Interviewers then split up the tasks and one person conducted the exit interviews and the other person conducted the clinical observations. The infrastructural assessment was done with the head of the facility after all clinical consultations had been conducted on that day.

Data collection was coordinated and supervised by regional supervisors. Each monitored approximately 80% of data collection activities. In addition did the national study coordinator monitor data collection activities during six days (visiting eight health facilities or 21% of assessed health facilities). The regular monitoring ensured a smooth data collection. Any questions were dealt with on the same day.

Data collection was done electronically using tablets. The questionnaire software used was Open Data Kit (ODK). The regional supervisors conducted a brief quality check on the different questionnaires after each day of data collection. Typically filled questionnaires were transferred to a server in Basel, Switzerland on the same day where an initial quality check was conducted.

3.5 Analysis

Data were analysed using Stata Statistical Software (Stata Corporation; College Station, TX, USA). Summary cross-tables were created for each variable and stratified according to the regions and the locations. Potential significant differences between regions and the location were identified using χ^2 test and Fisher's exact test. To calculate the total we weighted the score according to the number of clusters and observations by region.

For each topical area we further calculated additive indexes by calculating the number of achieved scores per topic and dividing it by the number of all possible scores that could have been achieved for the topic. We thereby considered only valid items, i.e. items that were not applicable were not included. Inverted items were reversed for the calculation.

[1] For logistics HAP had contracted an external provider.

We display the indexes as percentage scores. To illustrate the distribution of scores we use box plots. The lower end of the box marks Q25, the upper end of the box marks Q75 and the line in the box marks Q50 (median). The whiskers are calculated using 1.5 the interquartile range (Q75-Q25) or until the maximum. Outliers are displayed separately. For comparing averages we used T-tests and indicate the 95%-confidence interval.

3.6 Ethical considerations

This quality of care assessment is integrated in the Project HAP work plan. Project HAP submitted a request for approval of the study to the Ministry of Health so to ensure full collaboration and transparency with national and local authorities and health providers. An approval letter was received on the 23 April 2015 (Appendix B).

All study participants i.e. service providers and –users were provided with oral information on the study and oral consent was obtained (entirely voluntary participation and right to withdraw from the study at any point of time). The interview with patients exiting the facility was conducted in the yard to allow a maximum of privacy.

4 Results

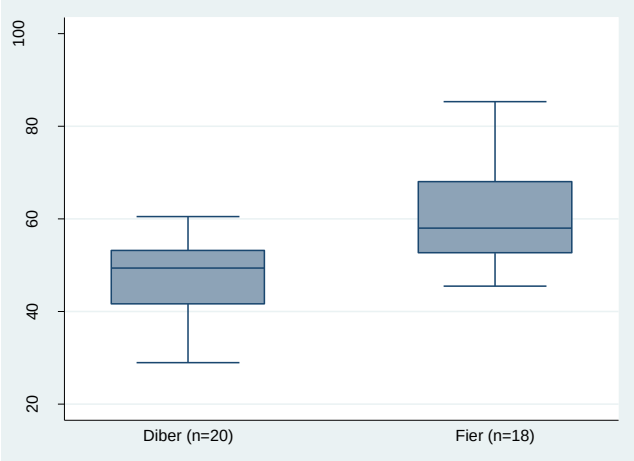
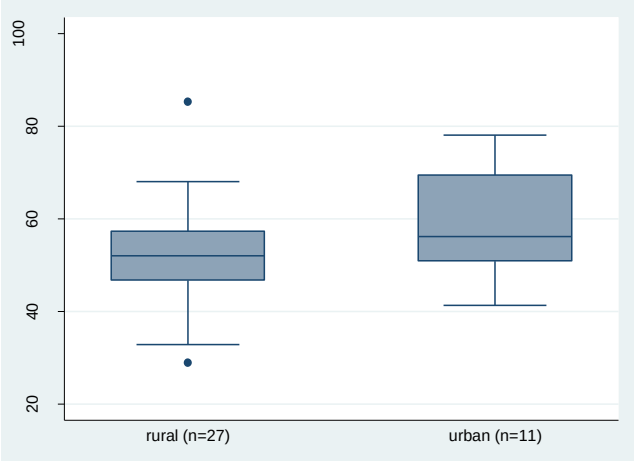
4.1 Infrastructural Assessment

The following section outlines the results of the infrastructural assessment, which included sections on the overall cleanliness and maintenance, hygiene aspects, public accountability/transparency, availability of guidelines and materials, general medical equipment and the availability of drugs and medical products. Specifically for medical equipment we assessed not only their availability but also that they are functional. The assessment was conducted at 38 facilities, thereof 20 facilities in Diber and 18 in Fier region. Data was collected at 27 rural and 11 urban health facilities.

The following sections outline the results of the infrastructural assessment. We therefore calculated an additive index including all items assessing the infrastructure and calculating how many scores out of all possibly infrastructure scores were achieved per facility. The results are presented as percentage scores using box plots.

The overall infrastructure scores are relatively low. The infrastructure appears better in Fier region compared to Diber and slightly better in urban compared to rural facilities although the differences are statistically not significant. In Diber most facilities do not achieve percentage scores higher than 50% and in Fier hardly any facility exceeds 70%.

Figure 1: Average infrastructure score – overall achievement (percent)

Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Fisher's exact: p-value= 0.964	Fisher's exact: p-value= 0.647

4.1.1 Facility infrastructure and overall cleanliness

We observed substantial variations in the facility infrastructure and overall cleanliness. Within each region we observed substantial variations although in both regions most facilities achieved more than 50% of scores. By tendency urban facilities score higher, but differences between rural and urban facilities are not statistically significant.

Overall facilities are clean (61%) and have designated rooms areas (76%) and waiting areas tend to be clean (87%) also privacy is well ensured in the consulting rooms (87%) and the consultancy rooms leave an overall tidy impression (95%) and are illuminated (89%). The shelves are in both regions filed and ordered (89%).

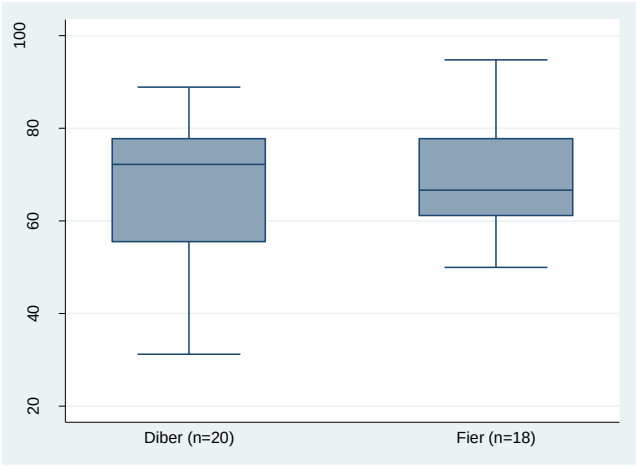
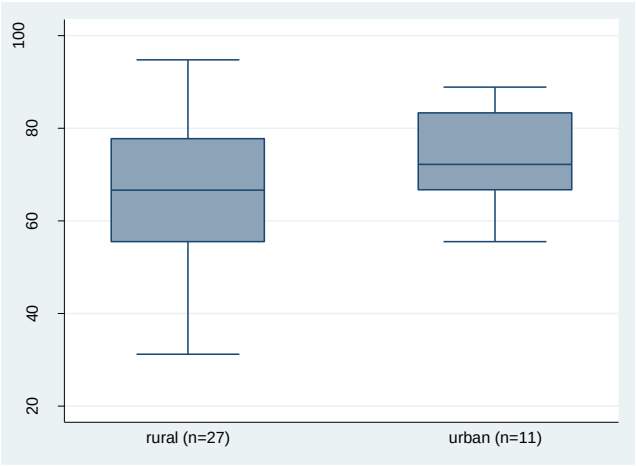
Almost all facilities have electricity (97%), in Fier even 100%. In the past seven days some experienced power cuts (19%) although these tend to be more frequent during specific times of the year (35%), specifically in winter or stormy days. Hence only one facility had a functional generator for which at the day of the visit fuel was also available.

Less positive observations were made regarding the rubbish bins, which are either overflowing or not properly used (37%). Less frequent are also separate consulting rooms for women (55%) and children (32%), although we identified that these were statistically significant more common in urban than rural areas (Fisher exact <0.05).

Statistically relevant differences between the regions can only be identified for functional heating system. This is available at all facilities in Diber but only for 39% of the facilities in Fier (Fisher exact <0.05). Most commonly used are halogen heaters but also wooden stoves. The situation is similar for functional communication equipment: 100% of facilities in Diber have this and only 44% in Fier (Fisher exact <0.05). Most commonly used are private cell phones as a facility based landline or cell phone is only available at six facilities. Computers and printers are more often available in Fier than

in Diber (Fisher exact <0.05). Detailed information for each item can be found in Annex E.1.

Figure 2: Average score for facility infrastructure and cleanliness (percent)

Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Fisher's exact: p-value= 0.950	Fisher's exact: p-value= 0.394

4.1.2 Hygiene

Regarding hygiene we identified statistically significant differences between the two regions with Fier achieving higher scores. Urban facilities also achieve better results though the difference to rural facilities was not statistically significant.

More than half of facilities (63%) have running water out of the tap although only few of those have also warm water out of the tab (in Diber only one facility, in Fier only 4 facilities). Water shortages are common in about half of the facilities during specific times of year, typically in winter when there are problems with the transmission system. For such instances facilities try to store some water in plastic containers/buckets or fetch it at the nearest neighbour.

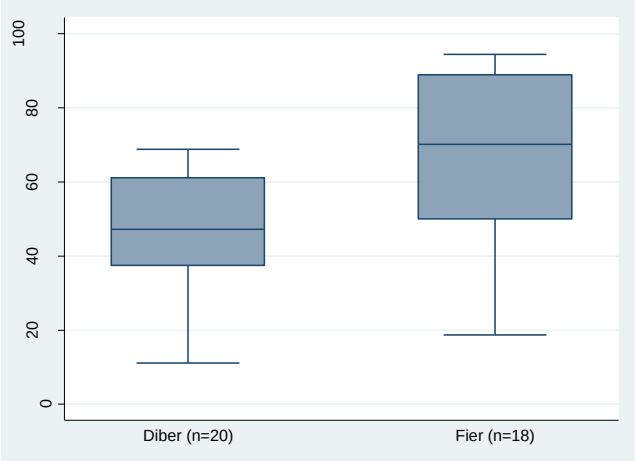
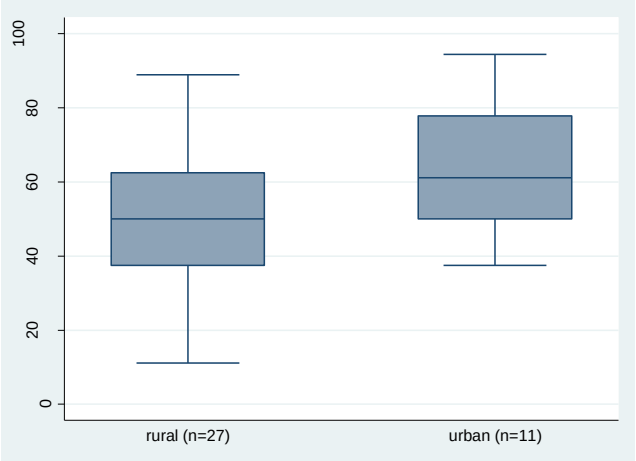
A general weakness is related to aspects on waste disposal; for instance labelled containers for medical waste disposals are hardly available (26%). Facilities are doing better regarding the safe storage of infectious or sharps waste (74% respectively) but face difficulties because there is no regular and appropriate collection of this waste (55% respectively).

Other aspects that received low scores in both regions are the availability of chlorine solutions or other disinfectants for instruments (42%) or the accessible and functional toilet separately for patients (34%). However, generally 92% of facilities had a functional toilet though less so in Fier. Room for improvement are the cleanliness of the toilets (79% considered clean) or the availability of a washing point (only 79%) close to the toilet with soap (66%) which are considered basic principles of hygiene.

We discovered substantial differences between the regions regarding the adequate and safe disposal of infectious waste or sharps (Diber: 15%; Fier: 83%; Fisher's exact: p-value <0.05) but also regarding the availability of disinfectants and antiseptics (Diber: 45%; Fier: 83%; Fisher's exact: p-value <0.05). Typically waste aspects were also statistically

significant differences ($p<0.05$) between rural and urban facilities with urban facilities achieving higher scores. For details see also Annex E.1.

Figure 3: Average score for hygiene (percent)

Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Fisher's exact: p-value= 0.037	Fisher's exact: p-value= 0.303

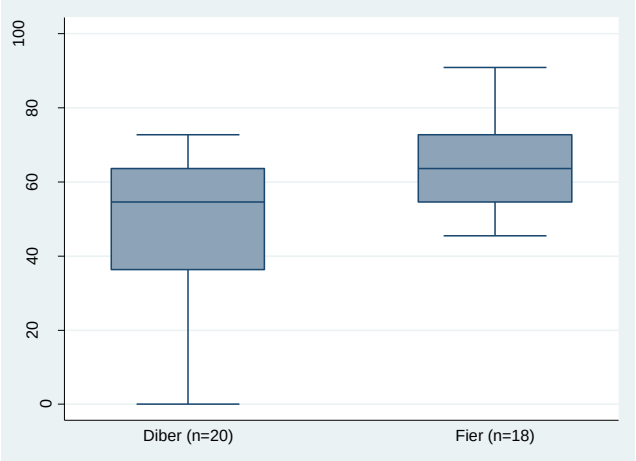
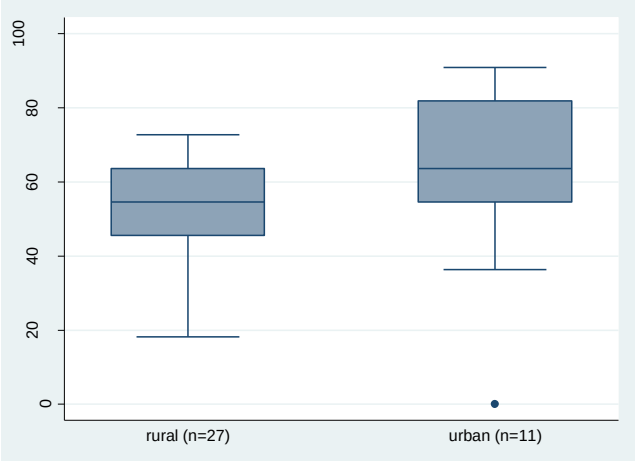
4.1.3 Public accountability / transparency

The graph below shows that higher scores on accountability/transparency are achieved in Fier and also in urban facilities, although the results are not statistically significant.

Facilities are easy to find as their location and working hours are well displayed to the outside (approximately 90%). Information on tariffs (84%) as well as information on tobacco control (92%) are in most facilities visible.

Nevertheless, we identified several shortcomings were facilities have not been transparent: contact phone numbers are not often displayed (only in 42%), facilities do not display the green numbers to denounce corruption (5%) and about half of facilities do not adhere to the requirement not to display logo/trademarks from pharmaceutical companies. Only in 37% of facilities do patients have the possibility to give feedback on opinions on services using a box/book. Explicit referral or emergency mechanisms, excluding the use of private cars, are only in 26% of facilities in place. Statistically significant is the difference between the regions regarding the display of information on the "basic check-up for the population 40-65 years old" (Diber: 30%; Fier: 100%; Fisher's exact: p-value <0.05) and the Albanian Charter of patients' rights (Diber: 30%; Fier: 72%; Fisher's exact: p-value <0.05). Between rural and urban facilities we did not identify any differences regarding public accountability/transparency. Detailed information for each item can be found in Annex E.1.

Figure 4: Average score on public accountability/transparency (percent)

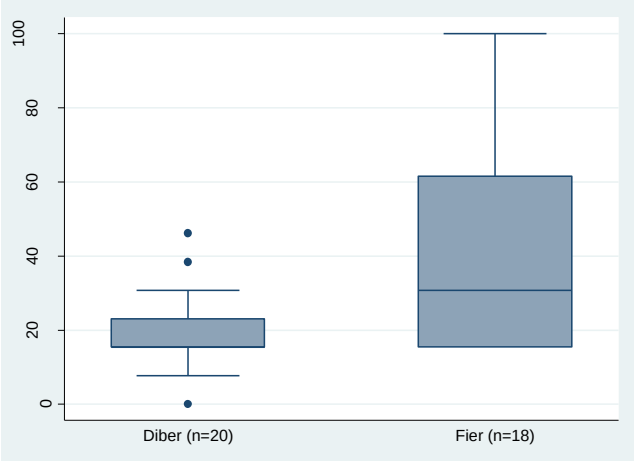
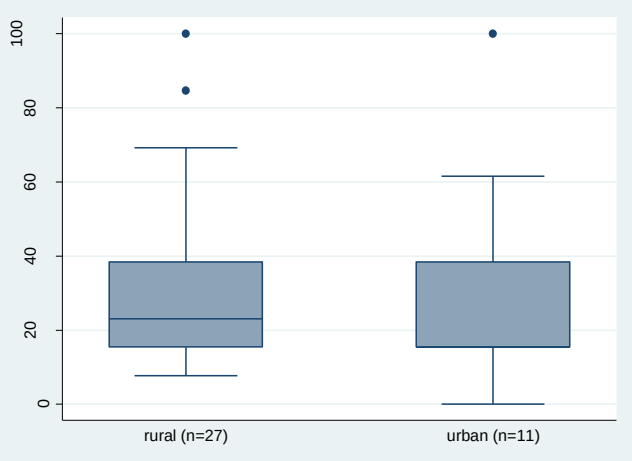
Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Fisher's exact: p-value= 0.230	Fisher's exact: p-value= 0.103

4.1.4 Guidelines and material

The availability of guidelines and protocols (for details see Annex E.1) in facilities is in both regions extremely low. Moreover we identified statistically significant differences between the two regions. In Diber hardly any facility had guidelines or material available. Selected examples are: the guideline and protocols of clinical practice on "antenatal care in primary care" (Diber: 0%; Fier: 22% or Diber: 5%; Fier: 38.89% respectively), the guideline of clinical practice for seniors (Diber: 5%; Fier: 33%) or the protocols of clinical practice of family medicine based on the guidelines for seniors (Diber: 5%; Fier: 28%). Differences between rural or urban facilities were again not observed.

The only exceptions to the remarkably low availability of guidelines and protocols are the IEC materials, specifically the calendar for vaccination/immunisation and awareness materials based on the standard package info (children, adults, women and reproductive health, seniors and mental health). These two materials were available in all facilities in Fier and about 80%-90% of facilities in Diber (see also Annex E.1).

Figure 5: Average score on guidelines and material (percent)

Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Fisher's exact: p-value= 0.143	Fisher's exact: p-value= 0.797

4.1.5 Basic/essential medical equipment and supplies

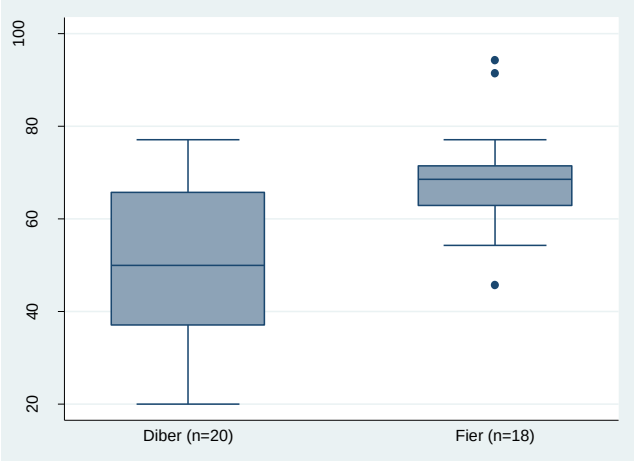
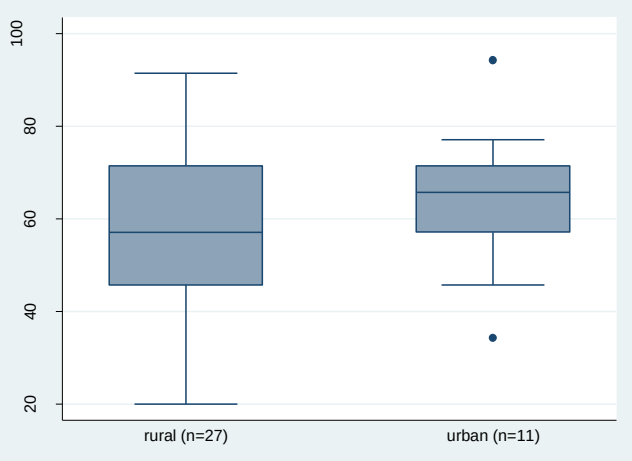
Below we outline the available and functional equipment at facility level. For the analysis, we counted equipment that was available but not functional as if not available. Dysfunctional equipment was not common but for each equipment item this was typically the case in one or two facilities.

General medical equipment (available and functional)

Overall we investigated 34 general medical equipment items. The results indicate that in Fier there are fewer differences between the facilities than between the facilities in Diber, where the results are more heterogonous. In Fier facilities the median was 69% (min 46%, max 94%) whilst in Diber the median was 50% (min: 20%, max: 77%). Only two equipment items were available at all facilities (stethoscope for adults and a thermometer).

In many instances some equipment items were available in only 20%-50% of facilities: nebulizers, light source, nasal speculum, opthalmoscope, stadiometer for grown up children, sphygmomanometer for children, height meter board for children up and over two years of age, ear syringe, child growth chart or fracture rods. Specifically low was the availability of peak-flow meters (5%). We also identified statistically significant differences between the regions for some of this equipment and a few more (e.g. pelvimeter or ambu mask) whereby in most instances Fier had more availabilities. Detailed information for each item is listed in Annex E.1. Statistically significant differences between rural and urban facilities were not observed.

Figure 6: Average score on general medical equipment (percent)

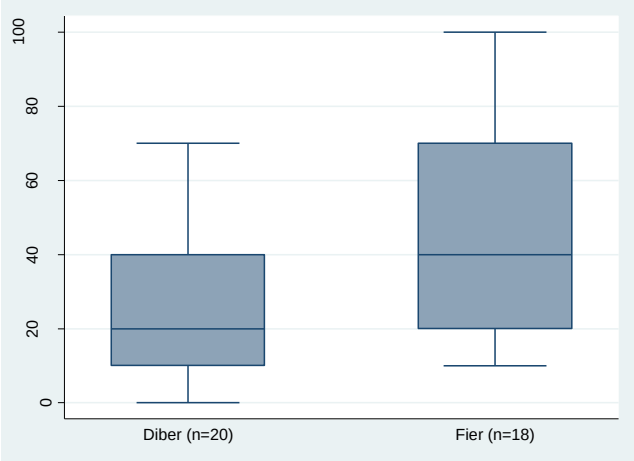
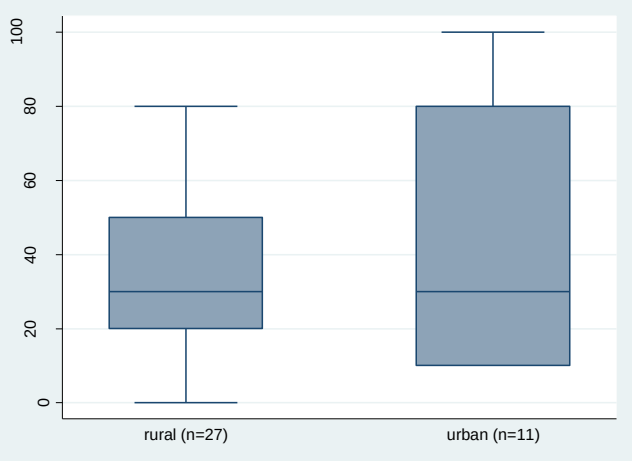
Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Fisher's exact: p-value= 0.583	Fisher's exact: p-value= 0.987

Gynaecological service equipment

Hardware, i.e. gynaecological bed, instruments or oxygen tank and inhalators are available at less than half of the visited facilities, typically only at 30% of visited facilities. Normally at least one other facility also has this equipment but can't use it as it is not functional. Differences between the regions for these items are also apparent (Fisher's exact <0.05). The gynaecological bed is more often available at urban facilities.

Different sizes of vaginal speculums or Pap smear materials can be rarely found (between 10%-23% of facilities). Latex gloves (84%) and masks for doctors (65%) are more common. Differences between the regions can be identified for Pap smear materials as in Diber none of the facilities had such available (see also Annex E.1).

Figure 7: Average score on gynaecological equipment (percent)

Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Fisher's exact: p-value= 0.070	Fisher's exact: p-value= 0.184

Delivery set and advanced equipment[2]

From all facilities only eight indicated to have a delivery set available, thereof two urban facilities both located in Fier. The other delivery sets were distributed equally among rural facilities in Diber and Fier. Delivery sets were all sterile, but when we checked the availability of 15 items in the delivery set we discovered that six items were not included in all facilities. The items were: sterile cat gut, surgical coat, oxytocin ampoule and metergine ampoule, plastic aspiration tubes for newborns, lydocain and oxytocin.

The advanced equipment (EKG, autoclave, photometer, centrifuge) was hardly available although we only checked this in urban facilities. The exception was an autoclave which was available at 3 sites. Detailed information for each item can be found in Annex E.1.

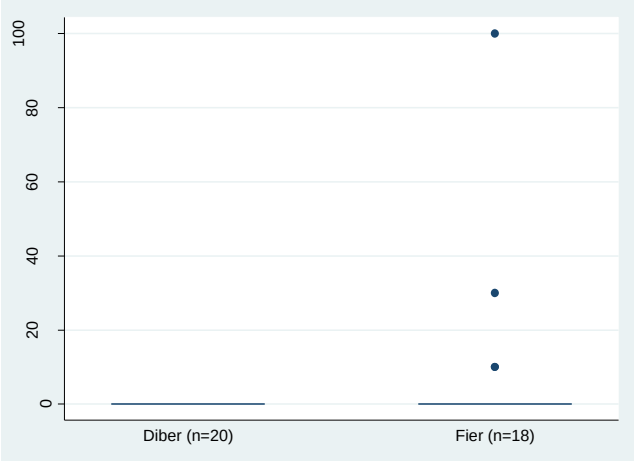
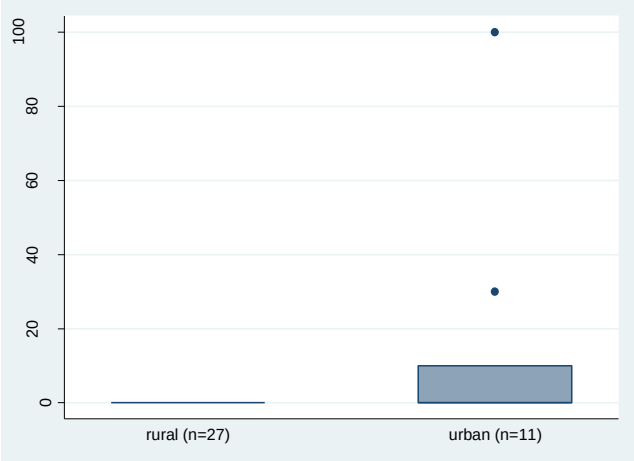
4.1.6 Equipment to assess and monitor child growth[3]

We observed an extremely low availability of 10 equipment items to assess and monitor child growth. In Diber literately none of the items was available at any facility. In Fier only three facilities had a doll. All other equipment was available in less than three facilities, but among them was one facility that had all 10 different items available. Facilities that had any of these items were all located in urban settings. For detailed information see Annex E.1.

Figure 8: Average score on equipment to assess and monitor child growth (percentage)

[2] Each health centre is responsible for taking the decision on the availability of a delivery set within the health centre based on the accessibility of the nearest obstetrical facility/hospital.

[3] APPENDIX 4: LIST OF NECESSARY TOOLS FOR DEVELOPMENT ASSESSMENT – under BASIC PACKAGE OF SERVICES IN PRIMARY HEALTH CARE 2014

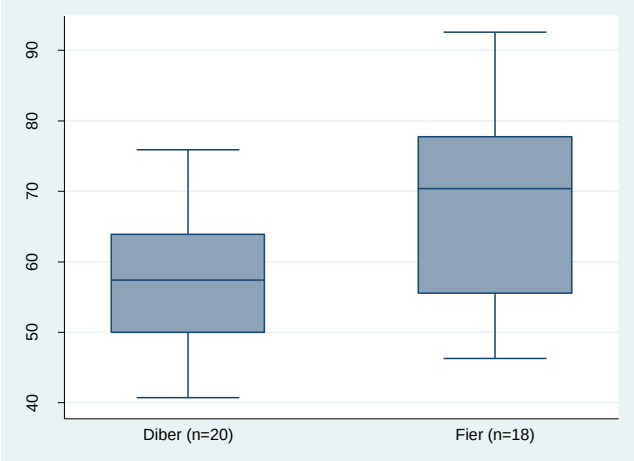
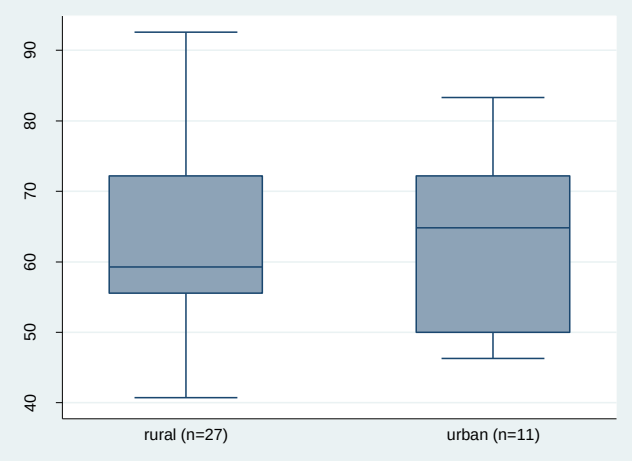
Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Fisher's exact: p-value=0.041	Fisher's exact: p-value= 0.004

4.1.7 Medication and medical products

Based on the list of essential medicines at the facility for basic services, we assessed the availability of 53 medical products. We observed variations between 41% and more than 92%, with slightly higher availabilities of items in Fier (median 70%, min. 46.3%, max. 92.6%) compared to Diber (median 50%, min. 40.7%, max. 75.9%). However differences were on the overall level not statistically significant.

Diazepam, Furosemid and hydrophilic cotton were available in all facilities. For the other items we observed substantial variations. Critical were 14 items which were available in less than 50% of facilities (dextrose, epinephrine, prochlorperasin, morphin sulphate, salbutamol, hydrocortisone, dihidroergotamin, nebulizer or volume pump, vitamin A and D, amoxicillin/erythromycin, chlorfeniramin, al hydroxide & mg hydroxide, glycerine, kalium (potassium) iodine) and for 13 items we identified statistically significant differences between the regions. Where differences were identified the availability was typically better in Fier region (see also: Annex E.1). Differences between rural and urban health facilities were not statistically significant.

Figure 9: Average score on medication and medical products (percent)

Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Fisher's exact: p-value=0.242	Fisher's exact: p-value= 0.110

4.2 Clinical Observations

The clinical observations questionnaire assessed doctors adherence with different standards and protocols related to (1) principles of clinical history and physical examinations, (2) hygiene and infection prevention and control, (3) clinical assessment of a diabetes mellitus patient, (4) clinical assessment of a patient with arterial hypertension and (3) clinical assessment of a patient with other condition than diabetes mellitus or hypertension.

4.3 Socio-economic profile of patients and doctors

Overall we conducted 625 clinical observations, thereof 175 in Diber and 450 in Fier. The average number of observations per facility was 16 (min: 1; max: 54) with a lower average in Diber than in Fier (9 vs. 25 respectively) but the range was similar. In both regions we conducted more than half of observations (Diber: 53%; Fier: 63%) in urban facilities. Mostly patients addressed to the facility for other reasons (64%) than hypertension (29%) or diabetes (7%). Diabetes and hypertension were though more prevalent among observations in urban facilities. Among patients, 56% were female and the average age was 49 years (Diber: 44 years; Fier: 52).

Observations were done with a total of 52 doctors thereof 48% (n=25) in Diber. On average we conducted 12 observations per doctor (min: 1; max: 29). Of the doctors, 36 (69%) were female. The average age was 41 years. The majority of doctors are general doctors (94%), 4% are family doctors and the remaining are specialists (2%).

Table 1: Socio-demographic attributes of patients and doctors of clinical consultations

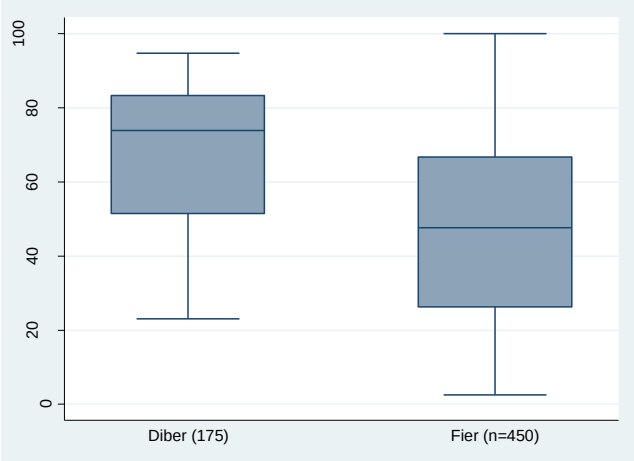
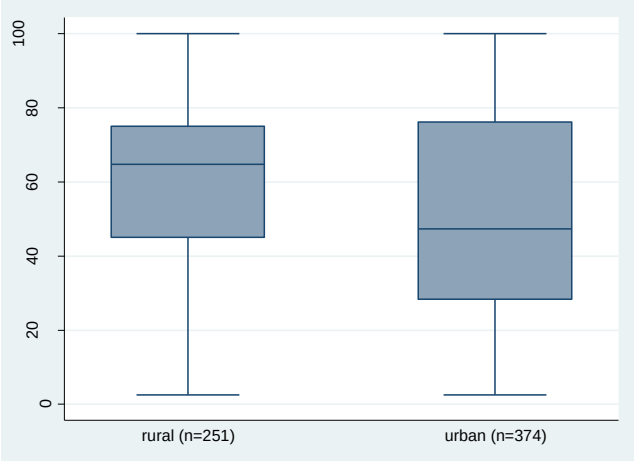
	Diber % (n)	Fier % (n)	Rural % (n)	Urban % (n)	Total % (n)
Number of observations (patients)	28% (175)	72% (450)	40.2% (251)	59.8% (374)	625
- thereof female	52.6% (92)	56.7% (255)	51.8% (130)	58% (217)	55.5% (347)
- Ages					
<5	16.6% (29)	8% (36)	17.9% (45)	5.3% (20)	10.4% (65)
5 – 18	11.4% (20)	7.1% (32)	13.1% (33)	5.1% (19)	8.3% (52)
19-49	25.7% (45)	17.3% (78)	22.3% (56)	17.9% (67)	19.7% (123)
50-65	26.3% (46)	25.6% (160)	24.7% (62)	38.5% (144)	33% (206)
>65	20% (35)	32% (144)	21.9% (55)	33.2% (124)	28.6% (179)
Reason for visit					
-Arterial hypertension	24.6% (43)	30.9% (139)	24.3% (61)	32.4% (121)	29.1% (182)
- Diabetes	2.3% (4)	8.7% (39)	2.4% (6)	9.9% (37)	6.9% (43)
-Other	73.1% (128)	60.4% (272)	73.3% (184)	57.8% (216)	64% (400)
	Diber % (n)	**Fier % (n)**	**Rural % (n)**	**Urban % (n)**	**Total % (n)**
Number of doctors that were observed	48.1% (25)	51.9% (27)	50% (26)	50% (26)	52
- thereof female	60% (15)	77.8% (21)	42.3% (11)	96.2% (25)	69.2% (36)
- average age	41	41	41	41	41
Type of doctors					
-family doctor	4.2% (1)	3.7% (1)	-	7.7% (2)	3.9% (2)
-general doctor	96% (24)	92.6% (25)	100% (26)	88.5% (23)	94.2% (49)
-specialist	0% (0)	3.7% (1)	-	3.9% (1)	1.9% (1)

The graphs display all overall achievements per consultations. This was done by calculating an additive index by dividing the achieved scores for adherence to good clinical practice, hygiene and adherence to treatment guidelines, specifically for diabetes and hypertension by the number of all possible scores. The results are presented as percentage scores using box plots.

Combining all different aspects of clinical treatment (adherence to good clinical practice, hygiene and adherence to treatment guidelines, specifically for diabetes and hypertension) we observe statistical significant differences between the regions and the location of facilities. 75% of observations in Diber scored on more than 50% of the expected activities. In Fier we observed more variation between the consultations with five consultations scoring 100% but also few which scored below 20%. The differences between the locations of the facilities give a similar picture: whilst in both locations the

variations are substantial (scores of 100% and some close to 0%), rural facilities seem to adhere better to the requested activities.

Figure 10: Clinical observation score – overall achievement (percent)

Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Chi Squared Test: p=0.000	Chi Squared Test: p=0.000

4.3.1 Principles of clinical history, physical examination and infection prevention

Adherence to principles of good clinical practice and physical examination achieved relatively good results. Confidentiality and making the client comfortable are two critical factors specifically in Fier were this was an issue. In general terms we observed statistically significant differences between the two regions whereby Diber was doing better. Differences between rural and urban facilities were not statistically significant, except for asking client about his/her concerns. Here rural facilities adhered more to principles of good clinical practice than urban facilities. The polite closing of the consultation was adhered to in most instances.

Table 2: Adherence to principles of history and physical examination

	Diber %	Fier %	p-value**	Rural %	Urban %	p-value**	Total* %	N
The medical doctor								
… greets the client.	98.3% (172)	96% (432)	0.154	95.6% (240)	97.3% (364)	0.245	96.3% (604)	625
… sees the client in privacy/confidentiality.	89.7% (157)	62.9% (283)	0.000	73.3% (184)	68.5% (256)	0.192	66.4% (440)	625
… makes the client comfortable (e.g. seat offered)	96.6% (169)	79.8% (359)	0.000	84.1% (211)	84.8% (317)	0.814	82% (528)	625
… asks the client about concerns, allows client to explain his/her health issue.	98.9% (173)	84.4% (380)	0.000	91.6% (230)	86.4% (323)	0.043	86.3% (553)	625
… closed politely the consultation.	95.2% (160)	96.4% (423)	0.527	96.7% (236)	95.5% (347)	0.484	96.2% (607)	607

* weighted total; ** chi-square test

Hardly an

infection prevention and control measures were taken during the clinical consultations. Hand washing with soap is a drastic example: whilst in most cases this would have been necessary, almost none of the doctors did so, with significant differences between Diber and Fier. The application of decontamination procedures, the use of gloves or masks as required are extremely low and not applied at all.

Table 3: Infection prevention and control

	Diber %	Fier %	p-value**	Rural %	Urban %	p-value**	Total* %	N
… washed hands before the procedure (including use of soap).	0.6% (1)	6.8% (29)	0.000	6% (15)	4.3% (15)	0.340	6% (30)	598
… applied proper decontamination procedures (e.g. soaking contaminated instruments into a bucket with chlorine or any other disinfectant)	0%	0%	n.s.	0%	0%	n.s.	0%	90
… put on gloves where required.	1.4% (1)	6.1% (2)	0.016	5.2% (3)	0% (0)	0.106	3.9% (3)	107
… put on a mask where required.	0% (0)	0% (0)	n.s.	0% (0)	0% (0)	n.s.	0% (0)	116

* weighted total; ** chi-square test

4.3.2 Patients with diabetes

Of the 625 clinical observation we observed 43 clinical consultations with diabetes patients. In Diber only four diabetes consultations were observed limiting our ability to generalise. Overall we observed that most diabetes patients addressed to urban facilities

(n=37), even though we could not observe statistical significant differences between rural and urban facilities in the way they actually treated diabetes patients, which might again relate to the very low numbers we observed in rural facilities (n=6).

Within the observed consultations we identified though that the adherence to general diabetes treatment guidelines was very low. In 75% of observed consultations less than 50% of expected questions, exams or advice was provided. The weighted average scores (percentages) for both regions were best for asking questions (24%) and for giving advice (25%) and extremely low for conducting exams (11%).

Looking at the different items (see also Annex E.2) we identified that the most frequent asked questions were about adherence with diabetes treatment (62% of 42 applicable cases), specific health complaints (53%), general weakness (44%), appetite (28%), using other medicine (26%) and urine discharge (26). Questions on smoking, alcohol, a sedentary way of life or eye-sight were hardly raised.

Whilst in 12 (28%) consultations the doctor explained about test and procedures hardly any physical examination was conducted. Only the check of blood pressure was carried out more often (40%). All other examinations (e.g. perfusion of legs, weight measurements, checks on eyes, chest auscultation of lungs) were carried out with less than 10% of patients.

Common advice, explanation or instructions were provided to patients for the situation and diagnosis (56%), the need for follow-up visit (47%) and prescribed medicines (47%) and the results of the examination(s) (42%). Less often were explanations given for the prognosis (40%), the importance of adherence to treatment (27.91), potential complications of the illness (23%), potential risk if illness is not treated (23%), nutrition (19%) or needed examinations (16%). Hardly any advice was given for physical exercise (9%), the right way of foot and inferior extremity (leg) care (7%) or on smoking (2%).

Figure 11: Score on diabetes treatment (percent)

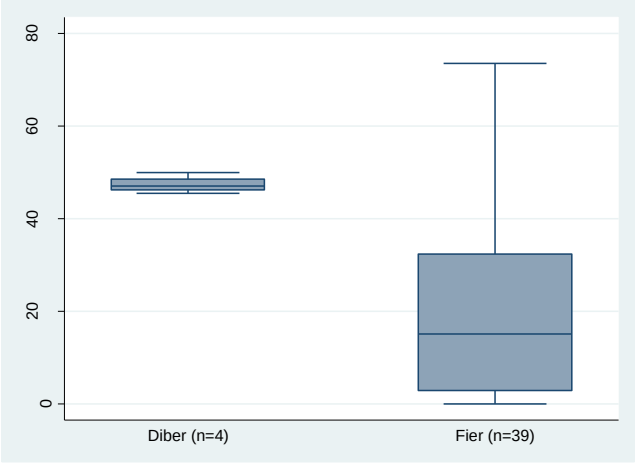
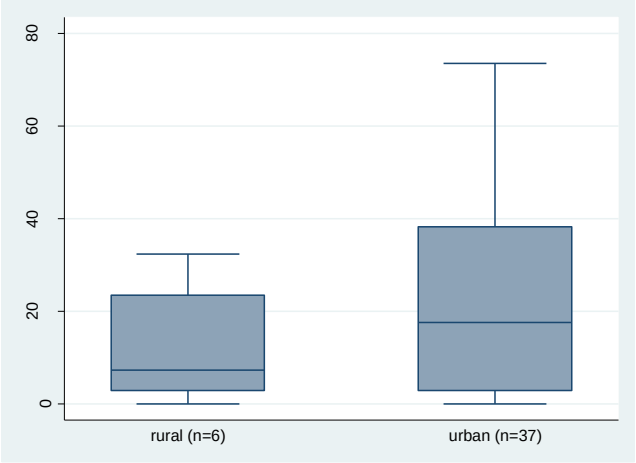
Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Fisher's exact: p-value= 0.032	Fisher's exact: p-value=0.290

Table 4: Average achieved percentage out of all diabetes items

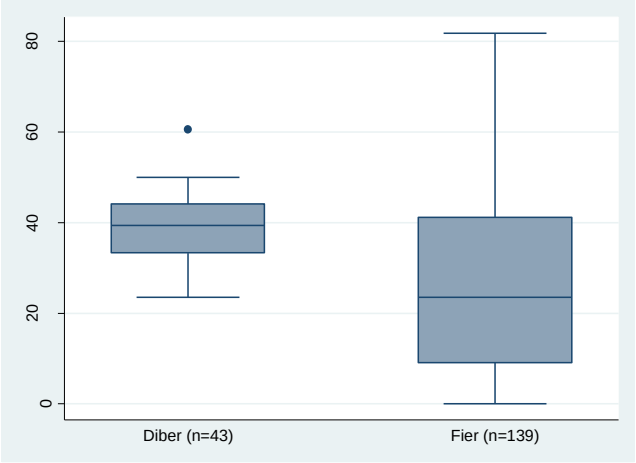
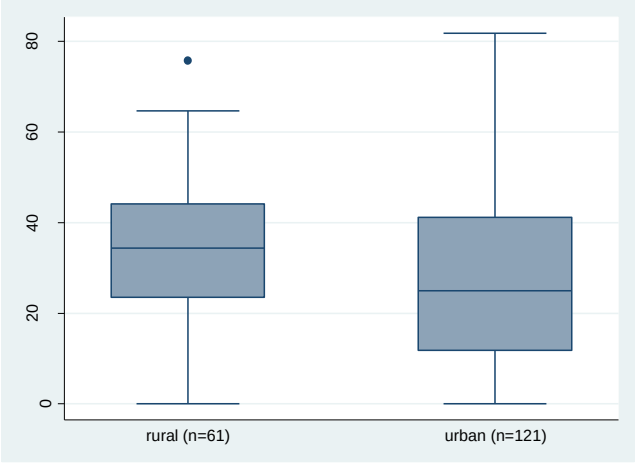
	Diber (95% CI)	Fier (95% CI)	T-test p-value	Rural (95% CI)	Urban (95% CI)	T-test p-value	Total* (95% CI)
Asks questions	45.5% (33.6%-57.3%)	22.7% (15.3% 30.1%)	0.057	18.2% (-5.2%-41.6%)	25.9% (18.2%-33.6%)	0.450	23.6% (13.5%-33.6%)
Conducts examination	19.4% (10.6%-28.3%)	10.5% (4.8-16.3)	0.326	1.9% (-2.9% 6.6%)	12.9 (7%-18.9%)	0.143	10.9% (4.8%-16.9%)
Advices, explains and instructs	68.2% (60.1%-76.3%)	23.4% (15.6%-31.2%)	0.001	14.3% (.9% 27.7%)	29.7 (20.6%-38.9%)	0.186	25.1% (17.3%-32.9%)

* weighted total

4.3.3 Patients with hypertension

Of the 625 clinical consultation we observed 182 clinical hypertension consultations, thereof 43 (24%) in Diber and 139 (76%) in Fier. Among our observations were 61 conducted in rural facilities (34%) and 121 in urban facilities 66%). Clinical observations with hypertensive patients in Diber were between 30%-50% with few exceptions to the top or bottom. In Fier we observed a much broader range of scores but a generally lower level. So did in Fier 75% score as low as 40% whilst in Diber only 50% scored that low. However, there are a few very positive exceptions in Fier were in consultations more than 80% of scores were achieved. Hence the differences between the two regions were statistically significant. Differences between rural and urban facilities were not that clear although still statistically significant. In both categories we observed big variations. Whilst the general level in rural facilities could be considered slightly better the highest scoring consultations took place in urban environments.

Figure 12: Average score on hypertension treatment (percent)

Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Chi Square test: p-value= 0.000	Chi Square test: p-value= 0.049

The weighted average scores (percentages) for both regions were best for giving advices (38%) and less so for asking questions (24%). For conducing examinations a weighted average score of 18% was achieved. It appears that on all three aspects Diber is slightly

doing better than Fier specifically on the conduct of examinations and advice as differences are statistical significant. Rural areas also seem to perform on average better than urban facilities specifically on asking questions and the conduct of examinations.

Among questions (see Annex E.2) most often was asked for adherence with treatments (75% of 178 relevant cases), high blood pressure (45% of 166 relevant cases) and any specific health complaints (68%). Less frequently was questioned whether patients had headache (28%), the use of medicine other than for hypertension (28%), using other medicine (18%), or a sedentary way of life (14%). Hardly ever was the patient asked on eye-sight (5%) or a visit to the ophthalmologist (1%), alcohol (4%), smoking (5%) or the use of contraception (where applicable).

Most commonly was the blood pressure checked (82%) and clear explanations concerning the purpose of the tests and procedures were given in 42%% instances. Very few other checks were conducted: chest or auscultation of the lungs (15%), auscultation of heart in 5 points (13%), check on skin (5%), check of abdomen, palpation of liver and signs of percussion (4%), perfusion of legs (3%) , eyes (1%) and only in one instance weight measurement (1%).

Advice and explanations were mostly given for the situation and diagnosis (76%), results of examinations (71%), the prognosis (60%), importance of treatment adherence (52%), about follow-up visit (58%), on prescribed medicines (63%% of 167 applicable cases) and about needed examinations (33%), complications of the illness (33%) risks (36%). Very little advice was given for nutrition (14%), physical exercise (8%), smoking (5%) and referrals (24% of 148 relevant cases).

Table 5: Average achieved percentage out of all hypertension items

	Diber (95% CI)	Fier (95% CI)	T-test p-value	Rural (95% CI)	Urban (95% CI)	T-test p-value	Total* (95% CI)
Asks questions	28.8% (25.7%-32%)	23.7% (20.2%-27.1%)	0.115	30.2% (25.3%-35.2)	22.2% (18.9%-25.4%)	0.006	24.2% (18.9%-29.5%)
Conducts examination	22.5% (19.6%-25.3%)	17.3% (14.6%-19.9%)	0.04	23.3% (18.9%-27.7%)	16.1% (13.8%-18.3%)	0.001	17.8% (14.1%-21.6%)
Advices, explains and instructs	59.4% (54.2%-64.5%)	35.4% (31%-39.9%)	0.000	46% (39.9%-52.1%)	38.6% (33.6%-43.6%)	0.078	38% (30.4%-45.6%)

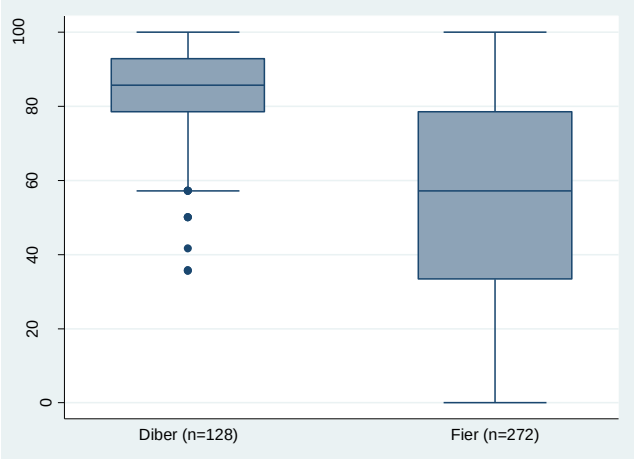
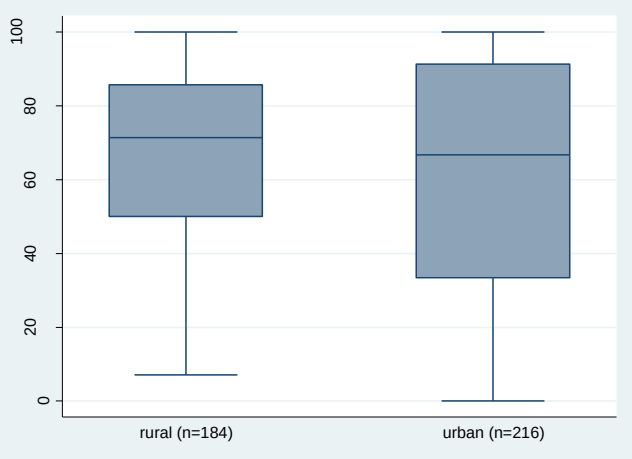
* weighted total

4.3.4 Patients with other diseases than diabetes or hypertension

400 consultations with patients were observed, that did not relate to diabetes or hypertension. Of these, 32% (n=128) were conducted in Diber and 68% (n=272) in Fier region. Among the consultations 184 (46%) took place in rural and 216 (54%) in urban facilities. In total 14 activities could be observed.

The results show that the consultations were carried out in Diber at a generally higher level: 75% of consultations achieved more than 80% of scores or higher (median 86%). The remaining 25% of facilities scored between 30% and 80%. The range of scores in Fier was less comprehensive, ranging from zero to 100% with a median of 57%.

Figure 13: Average score on other illnesses (percent)

Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Chi Square test: p-value= 0.000	Chi Square test: p-value= 0.001

The weighted average score for asking questions is 71%, for conducting examinations as required 60% and 52% for providing advice and instructions. The comparison of average scores on relevant questions, the conduct of examinations and the provision of advice differs between the regions ($p<0.05$). Differences between rural and urban facilities appear also statistically significant although the range of scores is large for both categories.

Doctors most commonly listened to client and responded to questions (91%). This was followed by taking the Patient's history (79%), asking open ended questions (76%) and asking about prescriptions (54%).

In 77% of cases, medical examinations and other examinations were carried out as required but in only 57% of cases was the patient given clear explanations regarding the purpose of these tests and procedures.

73% of patients were advised on the results of the examination, the situation and diagnosis (74%), about referral (55% of 306 relevant cases), the prognosis (54%), about needed examinations (50%), about a follow-up visit (48%), on prescribed medicines (48% of 301 relevant cases) and risk factors or aspects on health education (45% of 337 relevant cases). For detailed information on the different items please refer to Annex E.2.

Table 6: Average achieved percentage out of all other illnesses

	Diber (95% CI)	Fier (95% CI)	T-test p-value	Rural (95% CI)	Urban (95% CI)	T-test p-value	Total* (95% CI)
Asks questions	90.6% (87.8%-93.5%)	67.6% (63.4%-71.7%)	0.000	78.9% (75% 82.9%)	71.5% (66.8%-76.3%)	0.021	71.1% (64.6%-77.7%)
Conducts examination	95.3% (92.3%-98.3%)	53.1% (48.4%-57.9%)	0.000	73.4% (68.4%-78.3%)	60.9% (55.2%-66.6%)	0.002	59.7% (52.3% 67%)
Advices, explains and instructs	76.8% (73.7%-79.9%)	47% (43.6%-50.4%)	0.000	57.9% (54.2%-61.6%)	55.4% (51%-59.7%)	0.381	51.6% (45.1%-58.2%)

* weighted total

4.4 Exit Interviews

4.4.1 Respondents socio-economic profile

Overall 898 persons exiting the health facilities were asked to participate in the survey. 129 persons were not eligible for participation (e.g. family members accessing services on behalf of other family members) and another 63 individuals did not consent to participation, reflecting a response rate of 92%. Of the 706 completed exit interviews were 26% (183) conducted in Diber and 74% (523) in Fier. The sample consists of 397 (56%) women, an average age of 44 years (min. 0 years, max. 93 years) and most commonly having 8/9 years or 12 years of school education. 66.7% were questioned in an urban health facility. About 15% of participants benefit from economic or social aid and 3% belong to an ethnic or linguistic minority.

Table 7: Socio-demographic attributes among respondents of exit interviews

	Diber % (n)	Fier % (n)	Rural % (n)	Urban % (n)	Total % (n)
Number of interviews	25.9% (183)	74.1% (523)	33.3% (235)	66.7% (471)	100% (706)
Women	53.0% (97)	57.36% (300)	51.9% (122)	58.39 %(275)	56.2% (397)
Urban	52.4% (96)	71.7% (375)	-	-	66.7% (471)
Average age (SD)	42.3% (25.5)	45.1% (26.8)	39%(26.9)	47.3% (25.8)	44.4% (26.5)
Education					
-Never attended school	18.6% (34)	12.7% (66)	41 (17.45)	59 (12.58)	14.2% (100)
-Completed primary school (max. 5 years)	15.3% (28)	10.9 % (57)	15.7% (37)	10.2 % (48)	12.1% (85)
-Completed compulsory school (max. 8/9 years)	27.9% (51)	30.5% (159)	36.2% (85)	26.7% (125)	29.8% (210)
-Completed high school (12 years)	28.4% (52)	28.2% (147)	19.6% (46)	32.6% (153)	28.3% (199)
-Completed college	3.8% (7)	8.5% (44)	1.3 % (3)	10.2 % (48)	7.2% (51)
-Other	6 % (11)	9.2% (48)	9.8% (23)	7.7% (36)	8.4% (59)
Occupation					
-Farmer	2.7% (5)	3.8% (20)	8.5% (20)	1.1% (5)	3.6% (25)
-Employed	6.6% (12)	4.4% (23)	2.6% (6)	6.2% (29)	5% (35)
-Self-employed business	2.2% (4)	2.7% (14)	2.1% (5)	2.8% (13)	2.6% (18)
-Housewife	18.0% (33)	9.4% (49)	17% (40)	8.9% (42)	11.6% (82)
-Governmental employee, teacher	1.6% (3)	2.9% (15)	0.9% (2)	3.4% (16)	2.6%(18)
-Unemployed	14.8% (27)	11.5% (60)	10.2% (24)	13.4% (63)	12.3% (87)
-Pensioner	27.3% (50)	35.3% (184)	21.3% (50)	39.2% (184)	33.2%(234)
-Other	26.8% (49)	30.1% (157)	37.5% (55)	25.1% (118)	29.2% (206)
Economic or social aid	21.3% (39)	13.1% (68)	20.00 (47)	12.79 (60)	15.2% (107)
Ethnic or linguistic minority	1.7% (3)	3.5% (18)	2.6% (6)	3.2% (15)	3% (21)

4.4.2 Satisfaction with health services

Most of the patients had visited this health facility for more than once in the past three months (1-3 times: 56%; more than 3 times: 30%). This might also be due to the reasons visited which were most commonly chronic conditions (40%) followed by aspects related to child health (19%) and other conditions not further categorised (35%). Less often were the facilities visited for antenatal care (2%) or immunisation (4%). 76% (n=534) of patients report that examinations took place, 59% (419) received a prescription and 23% (n=164) received other services.

Table 8: Frequency and reason of visit of exit interviews

	Diber % (n= 183)	Fier % (n= 523)	Rural % (n=235)	Urban % (n= 471)	Total % (n=706)
Excluding today: How often did you over the past 3 month access this HC?					
did not access this HC in the past 3 months	26.8%	10.3%	21.3%	11.3%	14.6%
1-3 times	46.5%	58.7%	52.8%	56.9%	55.5%
more than 3 times	26.8%	31%	26%	31.9%	29.9%
What was the reason for your consultation today?					
Chronic condition	31.2%	42.6%	30.2%	44.4%	39.6%
Antenatal care	0.6%	2.1%	2.6%	1.3%	1.7%
Child health	19.7%	19.1%	23.4%	17.2%	19.3%
Immunisation	5.5%	3.6%	7.2%	2.6%	4.1%
Other	43.2%	32.5%	36.6%	34.6%	35.3%

We calculated the satisfaction as an additive index, i.e. calculating the number of services the patient was satisfied with out of the total number of services the patient could have been satisfied with. The achieved score per patient is displayed in box plots as percentage score. The general satisfaction in both regions and between rural and urban locations is high with a few exceptions. We identified several statistical differences: (1) satisfaction in Diber is higher than in Fier; (2) satisfaction in rural facilities tends to be slightly higher than in urban facilities; (3) satisfaction varies depending on the reasons for the visits. Whilst the pattern of variation depending on the reason remains similar, we observed that the level of satisfaction varied between the regions. The analysis did not show any relevant differences between men and women.

Figure 14: Average satisfaction score by region and location (percent)

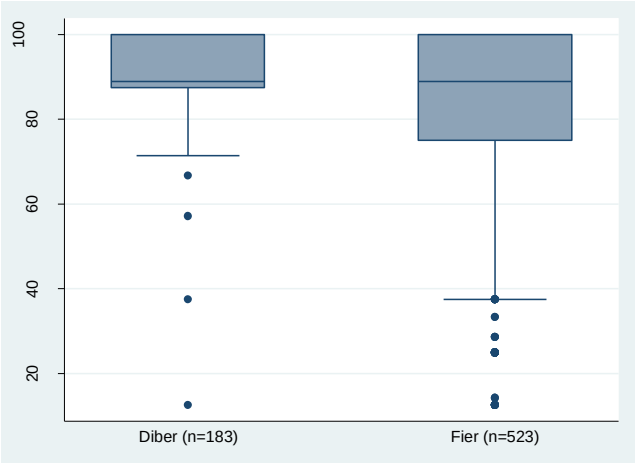
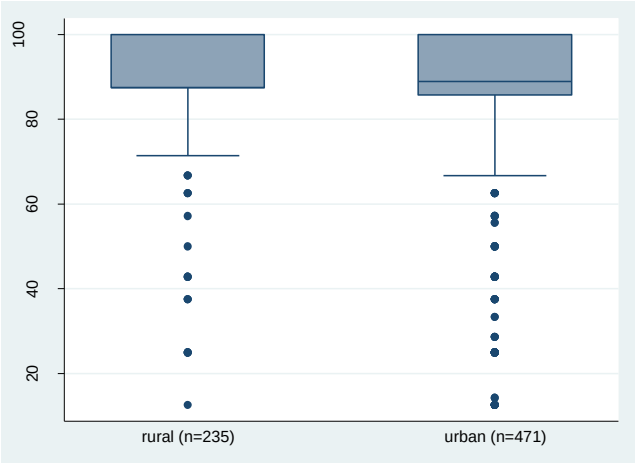
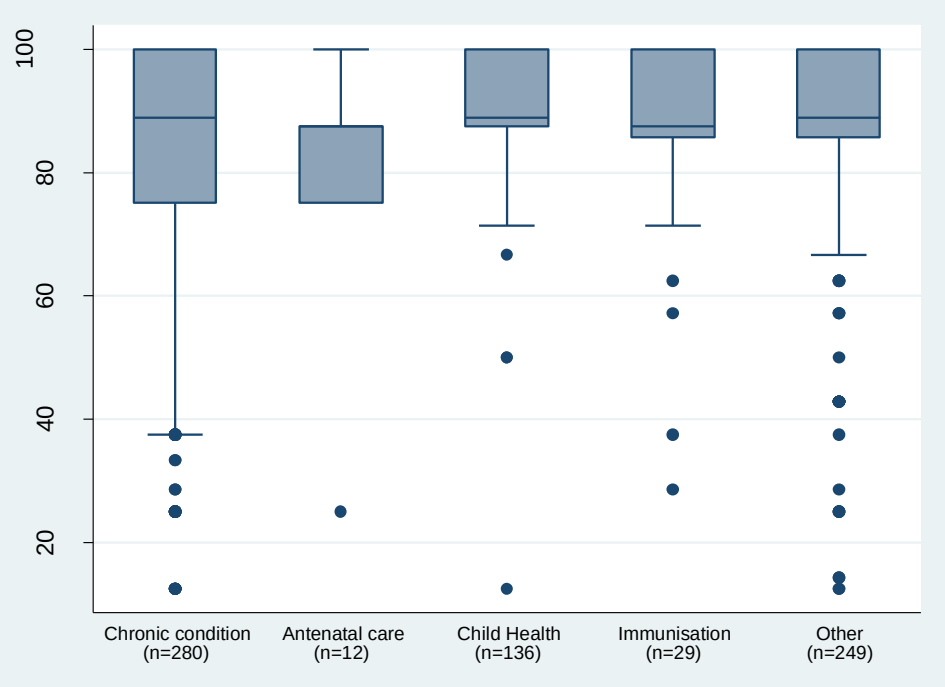
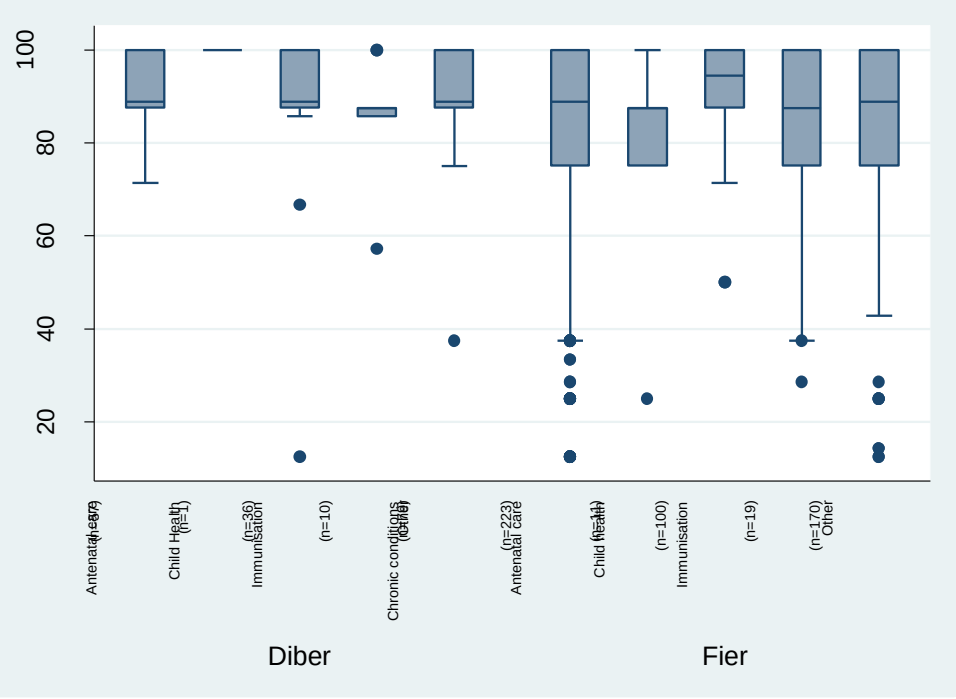
Comparison between the two regions: Diber and Fier	Comparison between rural and urban facilities
	
Chi Squared Test: 0.000	Chi Squared Test: 0.003

Figure 15: Average satisfaction score by reason of visit (percent)

Comparison between reasons for visits



Chi Squared Test: 0.000



Exploring the satisfaction patterns in more detail, we identified that generally the levels are very high ranging at 80%-90% or higher with one exception: only about 40%-50% were asked if they are taking any prescriptions.

For some items we found sgnificant differences between the regions with markedly lower agreement levels than in the comparative region, e.g. in Fier only 80% of patients were explained the intake of prescribed medicine compared to 98% in Diber. Or only 84% patients were given the chance to ask questions compared to 97% in Diber. Differences between rural and urban facilities were often not that big even though some appear statistically significant (e.g. patient was given the opportunity to explain the health problem: rural 96% vs. urban 91%).

Table 9: Satisfaction with different aspects of health service - exit interviews

	Diber % (n)	**Fier % (n)**	**p-value******	**Rural** % (n)	**Urban** % (n)	**p-value******	**Total* % (n)**
… patient was given the opportunity to explain the health problem	99.5% (182)	90.1% (471)	0.000	95.7% (225)	90.9% (428)	0.021	91.1% (653)
…patients privacy was ensured	96.2% (176)	88.9% (465)	0.003	88.9% (209)	91.7% (432)	0.228	89.7% (641)
…doctor explained the questioning and physical examinations and the health problem***	98% (144)	96.6% (374)	0.425	97% (192)	97% (326)	0.972	96.8% (518)
… doctor explained the intake of prescribed medicine**	98.9% (91)	80.4% (263)	0.000	89.2% (99)	82.8% (255)	0.110	82.1% (354)
…. doctor asked if patient currently takes prescriptions	36.1% (66)	49% (256)	0.003	40.9% (96)	48% (226)	0.073	47.5% (322)
… patient was given chance to ask questions about the investigation, health problem and treatment	97.3% (178)	84.1% (440)	0.000	91.5% (215)	85.6% (403)	0.025	85.6% (618)
… doctor listened carefully to patients concerns and questions and gave satisfactory answers	97.3% (178)	87.2% (456)	0.000	93.6% (220)	87.9% (414)	0.018	88.3% (634)
… patient got advice on health problem	96.2% (176)	77.1% (403)	0.000	84.3% (198)	80.9% (381)	0.273	79.2% (579)
… medical doctor was polite during consultation	99.5% (182)	99.6% (521)	0.769	99.6% (234)	99.6% (469)	0.999	99.6% (703)

* weighted total; ** of those being prescribed medicine (n=419); *** of those being examined (total n=534); **** chi-square test

4.4.3 Health insurance and health spending

The availability of valid health insurance among patients exiting the health facilities appears with approximately 90% high. We further observe that health insurance cards were more common in Diber and in urban facilities. Even though about 10% do not have a valid health insurance card very few respondents indicated to have paid the doctor (only 2%).

Table 10: Health insurance and health spending - exit interviews

	Diber % (n)	**Fier % (n)**	**p-value****	**Rural** % (n)	**Urban** % (n)	**p-value****	**Total*** % (n)
Did you pay for your health consultation today?	1.6 % (3)	1.9 % (10)	0.813	1.7 (4)	1.9 (9)	0.846	1% (13)
Do you have a valid health insurance card?	94.5% (173)	89.9% (470)	0.057	81.7% (192)	95.8% (451)	0.000	90% (643)

* weighted total; ** chi square test

The exit interviews show further that those with chronic conditions and children have most valid health insurance cards (96%), followed by children (91%) and other (87%). Only about 50% of pregnant women had a valid health insurance card. Payments were most common for other conditions and in two instances for chronic conditions. Payments for antenatal care, child health or immunisation were not reported among respondents.

Table 11: Health insurance and health spending depending on type of service - exit interviews

	Chronic condition % (n)	**Antenatal Care % (n)**	**Child Health % (n)**	**Immuni-sation % (n)**	**Other % (n)**
Did you pay for your health consultation today?	0.7% (2)	0%	0%	0%	4.4% (11)
Do you have a valid health insurance card?	96.4% (270)	50% (6)	91.2% (124)	89.6% (26)	87.2% (217)

4.4.4 Satisfaction with health services among people who receive social or economic aid

Among the exit interviews we analysed differences among people receiving social or economic aid and others as well as differences that might appear between the regions in how economically or socially disadvantaged people are feeling satisfied with different aspects of the consultations.

Overall we could not identify major differences between the general population and those receiving social or economic aid. We identified that there was a difference among the two groups in the assurance of privacy ($p<0.05$) with people receiving social or economic aid being worse off. Also the availability of valid health insurance cards differed (<0.05) as insurance cards were more common among those receiving social or economic aid.

Between the regions the differences from the general analysis are also represented in the sub-analysis of patients receiving social or economic aid: patients received less information on the intake of medicine in Fier compared to patient in Diber and patients also got less advice on their health problem in Fier compared to Diber.

Table 12: Satisfaction with different aspects of health service - exit interviews among persons receiving social or economic aid

	Receiving social or economic aid					
	Diber % (n=39)	Fier % (n=68)	p-value*	Not receiving social or economic aid % (n=597)	Receiving social or economic aid % (n=107)	p-value*
… patient was given the opportunity to explain the health problem	100.0%	91.4%	0.060	92.1%	94.4%	0.413
…patients privacy was ensured	89.7%	82.9%	0.330	91.8%	85.1%	0.026
…doctor explained the questioning and physical examinations and the health problem	97% (n=32 of 33)	92.5% (n=49 of 53)	0.405	97.5% (n=435 of 446)	94.2% (n=81 of 86)	0.096
… doctor explained the intake of prescribed medicine	100.0% (n=24 of 24)	75.0% (n=30 of 40)	0.009	84.5% (n=299 of 354)	84.4% (n=54 of 64)	0.986
…. doctor asked if patient currently takes prescriptions	43.6%	47.1%	0.721	45.6%	44.9%	0.893
… patient was given chance to ask questions about the investigation, health problem and treatment	94.9%	84.3%	0.102	87.4%	88.8%	0.696
… doctor listened carefully to patients concerns and questions and gave satisfactory answers	94.9%	90.0%	0.376	89.5%	91.6%	0.501
… patient got advice on health problem	97.4%	77.1%	0.005	81.6%	84.1%	0.530
… medical doctor was polite during consultation	100.0%	100.0%	-	99.5%	100.0%	0.462

* chi-square test

Table 13: Health insurance and health spending - exit interviews among persons receiving social or economic aid

	Receiving social or economic aid					
	Diber % (n=39)	Fier % (n=68)	p-value*	Not receiving social or economic aid % (n= 597)	Receiving social or economic aid % (n= 107)	p-value*
Did you pay for your health consultation today?	5.1%	0.0%	0.056	1.8%	1.9%	0.985
Do you have a valid health insurance card?	92.3%	98.6%	0.095	90.1%	96.3%	0.040

* chi-square test

4.5 Relations between the three quality dimensions

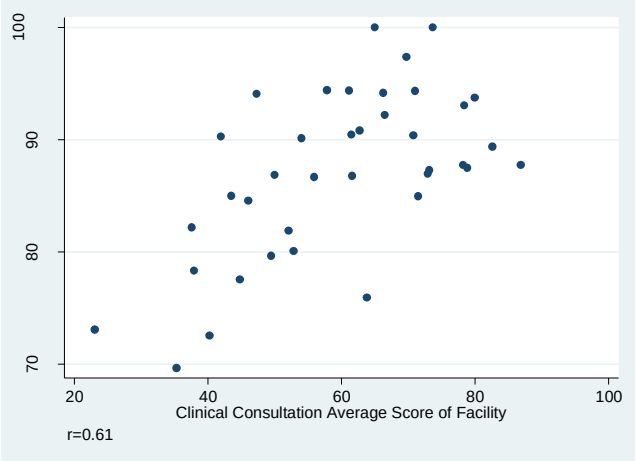
We also investigated if there is a relation between the three quality dimensions by correlating the average score for each quality dimension per facility. We assumed that better infrastructure would lead to better treatment options and that this would positively influence the patient satisfaction.

Over all 38 facilities and without differentiating the two regions or urban areas we identified that (1) infrastructure was unrelated to the clinical scores (r= -0.03) but that (2) clinical scores were related to patient satisfaction (r=0.61).

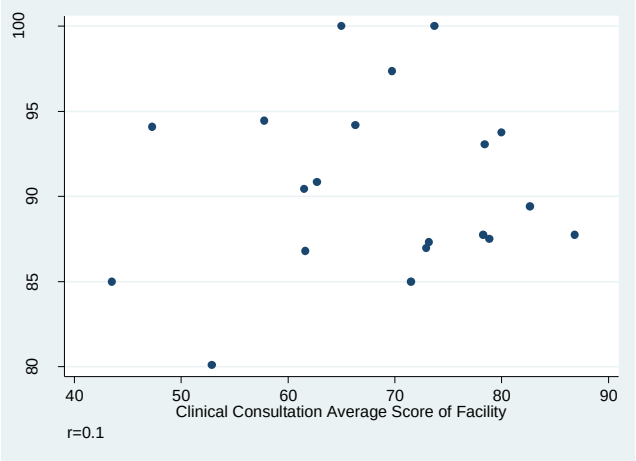
Stratifying the analysis by region we identified that these correlations were not generally true. In Diber we could find an association between the infrastructure of the facility and the clinical scores (r= 0.53), but not for the clinical scores with the patients satisfaction (r= 0.1). In Fier we identified relatively strong associations between all three dimensions with the Pearson correlation coefficient ranging between 0.49 for infrastructure and clinical scores and 0.7 for clinical scores with patients satisfaction. An illustration is given in the next graphs. Detailed results for each facility can be seen in Appendix A.

Figure 16: Scatterplot on association between clinical consultation and patient satisfaction

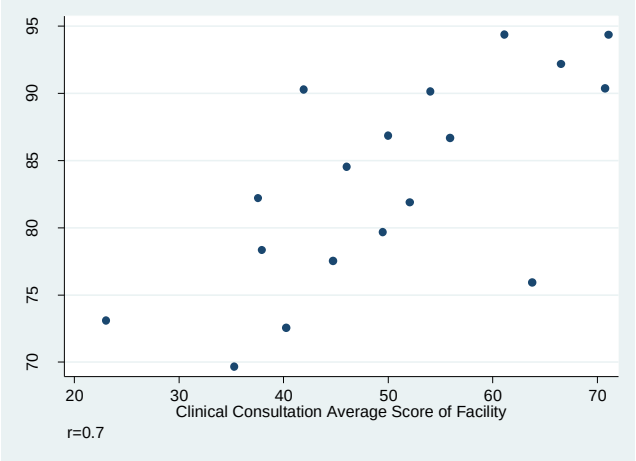
Relation: Clinical consultation and patient satisfaction



Relation: Clinical consultation and patient satisfaction - Diber



Relation: Clinical consultation and patient satisfaction - Fier



5 Limitations and related aspects not covered by the data collection

Our results are limited by the few number of observations for the facility assessment (n=38 facilities) and for diabetes patients (n=43). Our sample had few variations regarding the type of doctor (clinical consultation), health insurance status (exit interviews) and people receiving social or economic aid, thus limiting our ability to carry out all comparisons as originally intended.

Further data collectors made some observations during data collection that were not covered by the standardized questionnaires but that we consider important for Quality of Care.

We noticed a falling in the number of patients seen by doctors in the last week of data collection. The reason stated by medical staff was that the Health Insurance Fund issued guidelines to doctors to prescribe reimbursable medicine to patients with chronic diseases for a couple of months instead of prescribing it every month.

Other aspects observed were:

Infrastructure:

- Generally in rural areas though health facilities have functional toilets, the equipment (loo/sink/flushing equipment) was quite old, out-dated and leaking.

Consultations:

- It was quite common (looked quite normal) for the majority of doctors to leave the door open when consulting a patient, even in cases when conducting physical examinations.
- In some health facilities (mostly in rural Fier) due to lack of space/premises, consultation room/s were divided in half, to accommodate both doctors in the same room to conduct their consultations. Thus, consultation space is very small.
- In few cases, the doctors were conducting "group" visit/consultations. In other words, more than a patient was present in the room, when the doctor was seeing a respective patient. The other patients were just waiting inside the room.
- In some isolated cases, the doctor didn't conduct physical examinations to Roma/Egyptian patients but was confined to prescribing the medicine/issue referral to specialist. In one case the patient addressed this complaint to the doctor "*as not conducting physical examination and prescribing non-reimbursable drug*"
- Another doctor was holding a patient at arm's length during the conduct of physical examination.

We identified some common practices influencing quality aspects that could not be captured in the questionnaire:

- In some cases, the data collectors had noticed miscommunication or lack of interaction between the doctor and the nurse/s. This was also reflected in the presence of the patients.
- In some health facilities (specifically in rural areas), children showed up to the family doctor to take the prescription of reimbursable medicine for their grandparents or their parents. Similarly was the procedure of a family member collecting the prescription. The doctors registered these as consultation visits with the patients who received the medicine.
- In some rural areas (in both regions) the doctors did not come to work every day; but also in urban areas doctors arrived only after the opening hour (10.30-11.00) or left before the facility closed (i.e. 12.30). Interviewers received clear indications that some doctors hardly come to the health facility.

The presence of interviewers triggered at some points some rather unusual behaviour from health facility staff:

- In one rural health facility, the doctor refused to see patients when they didn't present their health card/booklet and didn't mention to them that if they had no health card/booklet, patients could pay the fee of 1000 ALL.
- In another scenario (rural area), when patients were coming to the health facility without the health insurance booklet (card), the doctor asked them to go and pick it up before performing the visit or consultation. Some of the patients came back after a couple of hours with their booklets.
- Data collectors have noticed that doctors do not turn down/refuse to take the gift (small cash) the patients were offering after the visit, as a sign of appreciation.

The fees and payments are a concern for many health staff and patients. As an example did one doctor expressed her concern as more than 50% of the residents were not insured (thus having no valid health card/booklet). She considered that the fee of 1000 ALL is too high for patients, resulting in lower number of patients visiting the health centre. She explained that when the fee used to be 200 ALL, all patients were willing to pay when visiting the health facility. She also added that patients are "economising" their spending, i.e. rather than paying 1000 ALL to see the general or family doctor they are willing to pay 1500 ALL (or less) to see directly the specialist.

6 Discussion & Recommendations

In our Quality of Care assessment we investigated three dimensions: structural attributes, process attributes and outcome attributes, approximated by patient satisfaction. We identified variations between and within the two pilot regions and between the locations.

Infrastructure

The infrastructure assessment revealed some major weaknesses and shows that there are substantial variations between the regions but also within each region. The infrastructure appears better in Fier region compared to Diber and slightly better in urban compared to rural facilities but the level is generally rather low.

In general, facilities have access to electricity or heating systems though these might not always be reliable and health facilities need to ensure alternatives. Within the possibilities of the facilities we observe that health staff is doing the very best to make the best use of the available infrastructure and to keep the facilities clean, but some limitations appeared inherent to the design of health facility buildings (e.g. no separate consulting rooms or waiting areas, no accessible and functional toilet separately for patients) and cannot be changed easily without larger investments. The state does rely substantially on the commitment of health staff, i.e. in the provision of private communication equipment. A common problem in many facilities is the waste disposal. Within facilities staff does often their best to ensure adequate disposal or storage but the infrequent or non-existent waste collection system from the facilities makes waste disposal a challenging task. This is more often the case in Diber where the mountainous region might pose some additional challenges. Another logistical challenge are the absence of explicit referral or emergency mechanisms which are hardly in place. Here heavy reliance is given on the use of private cars instead of providing the minimum emergency coverage.

Basic principles of hygiene are in about 30% of facilities not respected. Thus chlorine solutions or other disinfectants for instruments were mostly not available. Critical is also the cleanliness of the toilets or the availability of washing points close to the toilet with soap.

Regarding public accountability/transparency basic information is provided. More general aspects, e.g. neutral information without trademarks or any information that could also critically reflect the performance of the facility, e.g. green numbers to denounce corruption, are less respected.

The availability of guidelines and materials in facilities is in both regions extremely low and reflects the lack of comprehensive guidelines for primary care at national level. The only exceptions to the remarkably low availability of guidelines and material are the calendar for vaccination/immunisation and awareness materials based on the standard package info (children, adults, women and reproductive health, seniors and mental health), both areas where many international organisations and NGOs put heavy emphasis on.

The "Basic Package of Services in Primary Health Care" (MoH, 2014) outlines the minimum services but also the minimum equipment, material and drugs that should be available at any primary health care facility in Albania. In reality we identified that only the two most basic items were available at all facilities (stethoscope and thermometer) and that of the general medical equipment only 50%-60% was available and even less gynaecological service equipment. Extremely concerning is the lack of equipment to assess and monitor child growth. Whilst these would be not very costly investments, none of the rural and only very few urban facilities had any of the required items. Similar is the situation on essential medicines at the facility for basic services. Of the assessed 53 medical medicines we observed variations between 41% and more than 92%.

The results of the infrastructural assessments confirm the weaknesses from previous studies (e.g. Tamburlini et al., 2011; Coalition for Sustainable Democracy, 2014) and show that substantially more must be done to address the deficiencies in the health sector and to improve the quality of care.

Clinical Consultations

Adherence to principles of good clinical practice and physical examination were positive. Confidentiality and making the client comfortable are two critical factors specifically in Fier which might be due to some facility design factors (e.g. not enough consultation rooms).

Very critical are infection prevention and control measures during the clinical consultations. Hand washing with soap before the clinical examinations is a must, but hardly taking place. Also instruments are not decontaminated. Gloves and masks are not worn as required. Hence the low practice of preventing infections reflects the already low emphasis on these aspects in the infrastructural assessment.

The adherence to general diabetes treatment guidelines was low. In conducting the consultations, best was the asking of questions and providing advice but only the most basic checks were carried out (e.g. check of blood pressure). Specifically critical is that important checks (e.g. perfusion of legs, weight measurements, checks on eyes, chest auscultation of lungs) were almost never carried out. In providing advice, doctors focussed on the immediate clinical situation and clinical needs. Habitual factors or the wider scope of the illness were hardly discussed.

For hypertension the picture is similar. Better results were achieved for providing advice or asking questions but again very few physical examinations were carried out. Blood pressure checks were once more the most common exam but other recommended examinations did not take place. Advice focussed on the immediate situation and future treatment needs but less on the wider implications and risk factors of the condition. The scores for treatment of diseases other than diabetes or hypertension achieved higher scores.

We hypothesise that the substantial variations in treatment of diabetes or hypertension might be related to a lack of guidelines for general or family doctors as the guidelines often focus on health consultations provided by specialists and that most of the aspects are not applicable in a primary care setting. Further having guidelines is one thing but applying guidelines is often a very different thing, as many guidelines do not take account the real situation on-ground. Specifically for diabetes we observed that more patients attend urban facilities although we could not identify that these provided substantially better care. We also conclude that health promotion and education is not taking sufficient space in consultations. The few emphasis on habitual aspects, which are main risk factors for chronic conditions, is illustrative for the situation. Even if the doctor repeatedly sees the patient these risk factors cannot be eluded from the conversations.

Patient Satisfaction

The general satisfaction in both regions and between rural and urban locations is high with a few exceptions. For some items we found significant differences between the regions with markedly lower agreement levels than in the comparative regions. Our analysis could not identify any distinct patterns for people receiving social or economic aid.

The high satisfaction ratings among patients have to be carefully considered as they might not only reflect the "true" value of patients' satisfaction but also be determined by cultural beliefs (e.g. believe in authorities), the lack of knowledge and awareness on what actually would constitute good health services and the fear of negative consequences due to high dependencies (e.g. no alternative health provider). Thus decreasing values of satisfaction in the future might also represent an increased awareness among the population and increased expectations towards the health provider.

Our original hypothesis, that structure influences processes and this influences outcomes was partly supported as we found associations between the process indicators (clinical consultations) and the outcome indicators (satisfaction) in one region. The association with structural aspects was weak which might be due to the general low level of infrastructure. The general perception that urban facilities are better equipped and provide better care was not fully supported. In fact we identified that in several instances, rural health providers outperformed urban providers. Reasons might be that more people seek care at urban facilities and therefore doctors have less time to conduct the consultations comprehensively. Differences between the regions are apparent for many aspects but not always in the same direction. Hence activities need to be targeted to the specific needs of the regions.

From the results of this survey and for future activities within Project HAP we propose to consider the following recommendations:

Critical findings	Recommendation(s)	Implementation effort
Infrastructure		
Health facilities do not have the infrastructure to fulfil the requirements from MoH, e.g. separate waiting rooms	Reconstructions are needed that reflect the requirements	short-medium-long term
Waste disposal is a major problem in both regions	Discuss with national and regional stakeholders how infectious or sharp waste disposal can be implemented regularly and effectively.	medium term
Minimum hygiene requirements were not respected	Ensure minimum hygiene standards of facilities: • Physical rehabilitation • Functional washing points must be close to toilets • Functional washing points must be in the consultation rooms • Water and soap are constantly available at all washing points • Ensure that chlorine solutions or other disinfectants for instruments are available • Regular cleaning	short-medium term
Lack of transparency and public accountability	Provide guidance which information can and should be shown at the facility. Provide guidance where in the facility the information should be displayed	short term
Guidelines and materials are not available	Specify which national standard diagnosis and treatment guidelines must be available at level of primary health care facilities Review and revise relevant national standard diagnosis and treatment guidelines for the primary care context Distribute relevant national standard diagnosis and treatment guidelines to the health facilities Keep guidelines accessible to all concerned health staff	short term medium term short-medium term short term

"Basic Package of Services in Primary Health Care" (MoH, 2014) minimum equipment, material and drugs are often not available	Identify critical aspects that hinder the inadequate availability of the equipment, material and drugs Provide basic equipment as outlined in the list. Ensure health staff is aware how to use the equipment and in which situations Develop and discuss a plan with national stakeholders on replacement or repairs for equipment that is faulty Discuss the procurement of drugs and procure drugs.	short term short-medium term short-medium term short term short-medium-long term
Clinical consultations		
Privacy of clients was not always ensured	Privacy of clients should be ensured by reminding the health staff to carefully pay attention on privacy standards	short term
Infection prevention measures were not always applied	Raise awareness and remind health staff on infection prevention measures	short term
The clinical consultations reveal major weaknesses in the conduct of physical examinations	Conduct qualitative assessments on why doctors do not perform the required physical checks Retraining of doctors is essential Provision of checklists for primary care physicians for the most common chronic conditions	medium term medium-long term medium term
Little information is provided for habitual risk factors for chronic conditions	Develop health promotion activities Retraining of doctors is essential Provision of checklists for primary care physicians for key facts on chronic conditions	short-medium term medium-long term medium-long term
General observations		
There is a very low number of family doctors in the facilities	Increase the number of trained family doctors	long term
Very few persons from ethnic/language minorities visit health facilities and qualitative observations from data collectors showed that they might be discriminated against	Seek national and regional exchange on this issue Identify ways how to better integrate ethnic/language minorities within the public health system.	medium-long term medium-long term

7 Conclusions

In the future it will be essential to raise the quality of care that is provided to the population through public health facilities in Albania. There is a need to improve and strengthen primary care and withdraw from the prior curative, hospital-based, specialist system. To achieve this shift substantial investments are needed in infrastructure but also human resources training of primary care physicians. The status quo of infrastructure showed to be particularly poor and not achieving the minimum standards as set-out by the Ministry of Health in Albania. Hygiene is also a main concern. Doctors are committed and have well developed interpersonal skills but lack guidance on treatment procedures in primary care settings. The growing burden of non-communicable diseases in Albania shows the need to improve the treatment guidance and education of primary care doctors. Health promotion and education activities are needed that tackle habitual risk factors (e.g. smoking, diet, alcohol). Satisfaction with health services was generally high.

8 References

Boller, C., Wyss, K., et al. (2003). « Quality and comparison of antenatal care in public and private providers in the United Republic of Tanzania. » Bull World Health Organization 81(2) : 116-122.

Coalition for Sustainable Democracy (2014): Monitoring of the primary health care system in Albania. Tirana. URL: https://www.usaid.gov/sites/default/files/documents/1863/KZLN-FinalReport-%20EN%20-%20FINAL%20LES%20.pdf (Access: 28 September 2015)

Donabedian, A. (1988). "The quality of care. How can it be assessed?" JAMA 260(12): 1743-1748

Donabedian, A. (1990). "The seven pillars of quality." Archives of pathology & laboratory medicine 114 (November): 1115-1118

Institute of Public Health (2014): National Health Report - Health Status of the Albanian Population. Tirana.

Foundation for Sustainable Development (2014): Quality as the missing link between access to healthcare and improved patient outcomes. Express Newsletter 3/14, URL: http://www.novartisfoundation.org/_file/205/newsletter-3-14.pdf (Access: 11 February 2015).

Lechthaler, F. (2015): Study Protocol on the Quality of Care Study in Chad. Unpublished.

Matthys, B. (2013). Assessment of quality of care in primary health care facilities in two pilot rayons of project Sino. Study report. Basel : Swiss TPH.

Ministry of Health Albania/USAID (2014): Basic Package of Services in Primary Health Care. Tirana

Tamburlini G, Siupsinskas G, Bacci A, for the Maternal and Neonatal Care Quality Assessment Working Group. Quality of Maternal and Neonatal Care in Albania, Turkmenistan and Kazakhstan: A Systematic, Standard-Based, Participatory Assessment. Neu J, ed. PLoS ONE 2011;6(12):e28763. doi:10.1371/journal.pone.0028763.

World Health Organisation (2011). Service Availability and Readiness Assessment (SARA). Geneva.

Appendix A: Abbreviations

CME	Continuous Medical Education
HAP	Health for All Project
HC	Health Centre
IPH	Institute of Public Health
MoH	Ministry of Health
ODK	Open Data Kit
PH directorate	Public Health directorate
PHC	Primary Health Care
QoC	Quality of Care
SARA	Service Availability and Readiness Assessment (SARA)
SCIH	Swiss Centre for International Health
SDC	Swiss Development Cooperation
Swiss TPH	Swiss Tropical and Public Health Institute

Appendix B: Approval letter

REPUBLIKA E SHQIPËRISË
MINISTRIA E SHËNDETËSISË

Nr. 1559/2 Prot

Tiranë, më 23.4.2015

Drejtuar: Z. Kreshnik Ternova
Drejtor i Drejtorisë Rajonale të Shëndetit Publik Fier

Z.Perin Vogli
Drejtor i Drejtorisë së Shëndetit Publik Lushnjë

Z. Fitim Hoxha
Drejtor i Drejtorisë së Shëndetit Publik, Mallakastër

Z. Artan Murati
Drejtor i Drejtorisë Rajonale të Shëndetit Publik Peshkopi

Z. Kujtim Kola
Drejtor i Drejtorisë së Shëndetit Publik Mat

Z. Flamur Meta
Drejtor i Drejtorisë së Shëndetit Publik Bulqizë

Lënda : Mbështetje për realizimin e studimit lidhur me cilësinë e kujdesit shëndetësor parësor në qarkun e Fierit dhe Dibrës.

Të nderuar Drejtorë,

Siç jeni në dijeni, Projekti "Shëndet për të Gjithë" i financuar nga Agjencia Zviceriane për Zhvillim dhe Bashkëpunim i cili zbatohet ne qarqet Dibër dhe Fier do të kryejë një studim në lidhje me cilësinë e kujdesit shëndetësor parësor në 18 qendra shëndetësore në qarkun e Fierit dhe 20 qendra shëndetësore në qarkun Dibër. Ky studim eshtë pjesë e planit të aktiviteteve të Projektit per 2015 i cili është miratuar nga Ministria e Shëndetësisë.

Adresa: Bulevardi "Bajram Curri" Nr 1, Tirana, Albania. Tel: +355 4 23627 37 www.shendetesia.gov.al

Metodogjia dhe komponentët e studimit (infrastuktura, ndërveprimi mjek familje/pacient, dhe kënaqësia e pacientit) të miratuara nga Ministria e Shëndetësise që me 14 Prill 2015, pasqyrojnë komentet dhe propozimet e departamentit të Kujdesit Parësor Shëndetesor.

Me qëllim kryerjen me sukses të ketij studimi, Drejtoria e Shëndetit Publik në rrethin tuaj duhet të ndërveprojë dhe angazhohet për mbarëvajtjen e procesit të mbledhjes së të dhënave dhe gadishmërinë e qëndrave shëndetësore të përzgjedhura si kampionim për të mirëpritur stafin e projektit në kryerjen e studimit.

Bashkangjitur është plani dhe kalendari i vizitave në qendrat shëndetësore të përzgjedhura.

Falëminderit për bashkëpunimin.

ZËVENDËSMINISTËR

Milva EKONOMI

PHC Selected facilities for QoC assessment

#	District/ Rrethi	Name of Centre/ Emertimi I QSH	Adresa	Location/ Vendodhja	# I diteve ne QSH	Ekipi (T1/T2)	Data e vizites
1	Peshkopi	Peshkopi- Bashki (municipality)	Peshkopi	City Center	1	T2	27-Apr-15
	Peshkopi	*Peshkopi- Bashki (municipality)*	*Peshkopi*	*City Center*	1	T2	29-Apr-15
	Peshkopi	*Peshkopi- Bashki (municipality)*	*Peshkopi*	*City Center*	1	T2	2-May-15
2	Peshkopi	Arras	Peshkopi	Rural	1	T2	30-Apr-15
5	Peshkopi	Kastriot	Peshkopi	Rural	1	T2	5-May-15
6	Peshkopi	Lure	Peshkopi	Rural	1	T2	28-Apr-15
8	Peshkopi	Magellarë	Peshkopi	Rural	1	T2	9-May-15
9	Peshkopi	Melan	Peshkopi	Rural	1	T2	7-May-15
12	Peshkopi	Sllove	Peshkopi	Rural	1	T2	6-May-15
13	Peshkopi	Tomin (qender)	Peshkopi	Rural	1	T2	8-May-15
14	Peshkopi	Zall Dardhe/Zall Rec (combined)	Peshkopi	Rural	1	T2	4-May-15
16	Mat	Burrel- Bashki (municipality)	Mat	City Center	1	T1	23-Apr-15
	Mat	*Burrel- Bashki (municipality)*	*Mat*	*City Center*	1	T1	25-Apr-15
	Mat	*Burrel- Bashki (municipality)*	*Mat*	*City Center*	1	T1	28-Apr-15
	Mat	*Burrel- Bashki (municipality)*	*Mat*	*City Center*	1	T1	30-Apr-15
18	Mat	Derjan	Mat	Rural	1	T1	24-Apr-15
20	Mat	Klos- Bashki (Municipality)	Mat	City Center	1	T1	29-Apr-15
	Mat	*Klos- Bashki (Municipality)*	*Mat*	*City Center*	1	T1	4-May-15
	Mat	*Klos- Bashki (Municipality)*	*Mat*	*City Center*	1	T1	6-May-15
21	Mat	Komsi	Mat	Rural	1	T1	5-May-15
22	Mat	Lis	Mat	Rural	1	T1	7-May-15
25	Mat	Suç	Mat	Rural	1	T1	8-May-15

27	Mat	Xiber	Mat	Rural		1	T1		27-Apr-15
		Bulqize - Bashki	Bulqize	City Center					
28	Bulqize	(municipality)				1	T1	9-May-15	
29	Bulqize	Fushe Bulqize	Bulqize	Rural		1	T1	13-May-15	
32	Bulqize	Martanesh	Bulqize	Rural		1	T1	12-May-15	
35	Bulqize	Zergan	Bulqize	Rural		1	T1	11-May-15	
						27			

#	District	Name of Centre	Adress	Location	Nb of Days at Facility for data collection*			
1	FIER	Cakran	Cakran	Rural	1	T2	23-Apr-15	ok
3	FIER	Dërmenas	Dërmenas	Rural	1	T2	24-Apr-15	ok
5	FIER	Kurnan	Kurnan	Rural	1	T1	27-Apr-15	ok
8	FIER	Libofshë	Libofshë	Rural	1	T2	25-Apr-15	ok
10	FIER	Nr. 1 Fier	Lagja Lin	urban	1	T1	23-Apr-15	ok
	FIER	Nr. 1 Fier	Lagja Lin	Rural (peri-urban)	1	T1	24-Apr-15	
	FIER	Nr. 1 Fier	Lagja Lin	Rural (peri-urban)	1	T1	25-Apr-15	
11	FIER	Nr. 2 Fier	Lagja 1Maj	urban	1	T2	27-Apr-15	
	FIER	Nr. 2 Fier	Lagja 1Maj	urban	1	T2	28-Apr-15	
	FIER	Nr. 2 Fier	Lagja 1Maj	urban	1	T2	29-Apr-15	
12	FIER	Nr. 3 Fier	Lagja 15 Tetori	urban	1	T1	30-Apr-15	
	FIER	Nr. 3 Fier	Lagja 15 Tetori	urban	1	T1	4-May-15	
13	FIER	Patos	Patos	urban	1	T2	30-Apr-15	
	FIER	Patos	Patos	urban	1	T2	4-May-15	
16	FIER	Ruzhdie	Ruzhdie	Rural	1	T1	28-Apr-15	
19	FIER	Zharrëz	Zharrëz	Rural	1	T1	29-Apr-15	
23	LUSHNJE	Divjake	Divjake	urban	1	T1	5-May-15	
24	LUSHNJE	Dushk	Dushk	Rural	1	T1	8-May-15	
27	LUSHNJE	Grabian	Grabian	Rural	1	T2	8-May-15	
30	LUSHNJE	Karbunare	Karbunare	Rural	1	T1	11-May-15	
33	LUSHNJE	Nr. 1 Lushnje	Lagja Kongresi	Urban	1	T1	6-May-15	
	LUSHNJE	Nr. 1 Lushnje	Lagja Kongresi	Urban	1	T1	7-May-15	
	LUSHNJE	Nr. 1 Lushnje	Lagja Kongresi	Urban	1	T1	9-May-15	
34	LUSHNJE	Nr. 2 Lushnje	Lgj.Gafurr Muco	Urban	1	T2	6-May-15	
	LUSHNJE	Nr. 2 Lushnje	Lgj.Gafurr Muco	Urban	1	T2	7-May-15	
36	LUSHNJE	Terbuf	Terbuf	Rural	1	T2	11-May-15	

39	MALLAKSTER	Dukas	Ballsh (Qender - Mallakaster)	Rural	1	T2	5-May-15
					27		

* if more than 1 day/facility, different doctors MUST be observed

Note:

# I diteve ne cdo rreth		Total
Peshkopi	11	
Mat	12	
Bulqize	4	
		27
Fier	16	
Lushnje	10	
Mallakaster	1	27
		54

Ekipi	Team 1		Team 2	
Diber	Gilda Kuka Elizabeta Doci		Arineda Aliaj Juela Skarra	
Fier	Ilva Myzeqari Marinela Naska		Edlira Saraci Manjola Vrapi	

Appendix C: Data collection schedule

		Team Members	Total days	thereof days in urban facilities	thereof days in rural facilities
Diber	Peshkopi	Team 1	11	3	8
	Mat	Team 2	12	7	5
	Bulqize		4	1	3
	Total Diber		**27**	**11**	**16**
Fier	Fier	Team 3 & 4	16	5	11
	Lushnje		10	5	5
	Mallakaster		1		1
	Total Fier		**27**	**10**	**17**
	Total survey		**54**	**21**	**33**

Appendix D: Percentage scores for each facility

D.1 Diber

Facility	Infrastructure Score (%)	Clinical Consultation Score (%)	Exit Interview Score (%)
Peshkopi- Bashki (municipality)	43	66	94
Arras	50	74	100
Kastriot	42	47	94
Lure	47	53	80
Maqellarë	39	62	87
Melan	50	65	100
Sllove	47	63	91
Tomin (qender)	29	58	94
Zall Dardhe	33	44	85
Burrel- Bashki (municipality)	51	62	90
Derjan	55	70	97
Klos- Bashki (Municipality)	54	73	87
Komsi	52	78	88
Lis	57	83	89
Suç	54	72	85
Xiber	60	80	94
Bulqize- Bashki (municipality)	41	78	93
Fushë Bulqizë	38	87	88
Martanesh	53	79	88
Zerqan	49	73	87

D.2 Fier

Facility	Infrastructure Score (%)	Clinical Consultation Score (%)	Exit Interview Score (%)
Cakran	52	50	87

Dërmënas	60	67	92
Kuman	57	50	80
Libofshë	85	71	90
Nr. 1 Fier	59	38	78
Nr. 2 Fier	78	71	94
Nr. 3 Fier	53	35	70
Patos	75	61	94
Ruzhdie	51	45	78
Zharrëz	57	54	90
Divjakë	56	52	82
Dushk	51	56	87
Grabian	56	64	76
Karbunare	68	46	85
Nr. 1 Lushnje	59	23	73
Nr. 2 Lushnje	69	42	90
Tërbuf	63	38	82
Dukas	46	40	73

Appendix E: Detailed Analysis stratified by region

E.1 Infrastructural Assessment

Quality of Care Assessment - Infrastructure Assessment	Diber % (n=20)	Fier % (n=18)	p-value*	Total % (n=38)
Facility infrastructure and overall cleanliness and maintenance				
The facility and immediate surroundings (facility yard, waiting area outside) are free from long grass, paper debris and solid waste.	65.00	55.56	0.741	60.53
The facility has a rubbish bin which is properly used and not overflowing.	35.00	38.89	1.000	36.84
There is a designated waiting room for patients.	70.00	83.33	0.454	76.32
The current waiting area is mopped, free of dust, trash; dirt, spider webs, and generally tidy.	90.00	83.33	0.653	86.84
There is at least one designated consulting room for women.	55.00	55.56	1.000	55.26
There is at least one designated consulting room for children.	20.00	44.44	0.164	31.58
All examination room(s) ensure(s) privacy/confidentiality (door, window blind, curtain).	80.00	94.44	0.344	86.84
All examination rooms are mopped, free of dust, trash; dirt, spider webs, and the rooms are generally tidy.	95.00	94.44	1.000	94.74
All examination rooms are well illuminated.	95.00	83.33	0.328	89.47
The facility has electricity	95.00	100.00	1.000	97.37
Thereof: During the past 7 working days, did you have any power cuts of more than 1 hour during opening hours.**	26.32	11.11	0.405	18.92
Is there routinely a time of year when this facility has a severe shortage or lack of power?	26.32	44.44	0.313	35.14
If yes, SPECIFY:	text	text	text	text
The facility has a functional generator	0.00	5.56	0.474	2.63
Thereof: If the health facility has a functional generator: is fuel available today for the generator?***		100.0		

The facility has a functional heating system.	100.0	38.89	0.000	71.05
If yes, SPECIFY:	text	text	text	text
Has the facility a functional communication equipment (functional landline telephone or cell phone) available (either private phone or facility phone)?	100.0	44.4	0.000	73.68
Thereof: What type of phone do you have available?				
Private cell phone of staff	100.0	100.0		100.0
Cell phone of facility	5.00	0.00	0.520	3.57
Landline of facility	5.00	62.50	0.001	21.43
The facility has functional computer.	45.00	94.44	0.001	68.42
The facility has a functional printer.	25.0	88.89	0.000	55.26
The administration shelf is filed and in order.	85.0	94.44	0.606	89.47

* Fisher's exact; ** n=37; *** n=1

Hygiene	Diber % (n=20)	Fier % (n=18)	p-value*	Total % (n=38)
There is running water in the facility (out of the tap).	60.00	66.67	0.745	63.16
There is warm water available (out of the tap).	8.33	33.33	0.317	20.83
Is there routinely a time of year when this facility has a severe shortage or lack of water (out of the tap)?	75.00	41.67	0.214	58.33
If yes, SPECIFY when:	text	text	text	text
Thereof: If yes: In case there is a severe shortage or lack of water (out of the tap), where do you fetch water?	Multiple	Multiple	Multiple	Multiple
If other, please SPECIFY:	text	text	text	text
Functional washing points exist in examination rooms and/or entrance hall, and soap or hand disinfectants and water are available.	25.00	66.67	0.021	44.74
Labelled containers for medical waste disposal are available in all required areas (e.g. examination rooms).	15.00	38.89	0.144	26.32
The facility has adequate and safe disposal of sharps (sharps box/container).	15.00	83.33	0.000	47.37
The facility has adequate and safe disposal of infectious waste.	10.00	66.67	0.001	36.84
Infectious waste is temporary stored at a protected place.	65.00	83.33	0.278	73.68
Sharps waste is temporary stored at a protected place.	65.00	83.33	0.278	73.68
There is regular and appropriate collection for infectious waste.	50.00	61.11	0.532	55.26
There is regular and appropriate collection for sharps waste.	50.00	61.11	0.532	55.26
The facility has essential disinfectants and antiseptics.	45.00	83.33	0.020	63.16
The facility has chlorine solution or other disinfectants to disinfect contaminated instruments in all required areas (e.g. in examination rooms).	40.00	44.44	1.000	42.11

The facility has at least one accessible and functional toilet for patients.	30.00	38.89	0.734	34.21
The facility has at least one accessible and functional toilet for staff.	100.00	83.33	0.097	92.11
The toilet(s) or latrine is clean.	85.00	72.22	0.438	78.95
A washing point is available near the toilet or latrine.	65.00	77.78	0.485	71.05
Soap and water are available at the washing point near toilet or latrine.	65.00	66.67	1.000	65.79

* Fisher's exact

Public accountability/transparency	Diber % (n=20)	Fier % (n=18)	p-value*	Total % (n=38)
Is the facility location visible displayed in public?	80.00	94.44	0.344	86.84
Are the facility opening hours visibly displayed to the public?	80.00	100.00	0.107	89.47
Is a contact phone number visibly displayed to the public?	50.00	33.33	0.342	42.11
Are the tariffs visibly displayed to the public/patients?	80.00	88.89	0.663	84.21
Are the green numbers to denounce corruption visibly displayed to the public?	0.00	11.11	0.218	5.26
Is information on the violation of law against tobacco and/or the movement "Albania says no to tobacco" visibly displayed to the public?	90.00	94.44	1.000	92.11
Is information on the "Basic check up for the population for the population 40-65 years old" visibly displayed to the public?	30.00	100.00	0.000	63.16
Is the "Albanian Charter of Patient's Rights" visibly displayed to the public?	30.00	72.22	0.022	50.00
Do any of the leaflets/posters at the facility have a logo/trademark from a pharmaceutical company?	55.00	50.00	1.000	52.63
Does the facility have a box/book to get public opinion on the quality of services?	35.00	38.89	1.000	36.84
Does the facility have mechanisms to facilitate referral of emergency patients to the next level?	20.00	33.33	0.468	26.32
When was the last supervisory visit by the health insurance fund?	Date	Date	Date	Date

* Fisher's exact

Guidelines	Diber % (n=20)	Fier % (n=18)	p-value*	Total % (n=38)
Guideline of Clinical Practice "Antenatal Care in primary health care" (June 2014)	0	22.22	0.041	10.53
The Protocols of Clinical Practice "Antenatal Care in primary health care" (June 2014)	5.00	38.89	0.016	21.05
Guideline of Clinical Practice "Postnatal Care in primary health care – For mothers and newborns" (June 2014)	5.00	27.78	0.083	15.79
The Protocols of Clinical Practice on Postnatal Care in primary health care (June 2014)	20.00	50.00	0.087	34.21
Guideline of Clinical Practice "Growth & Development of Children 0-6 age in the primary health care" (June 2014)	0.00	22.22	0.041	10.53
The Protocols of Clinical Practice on the Growth and Development of Children 0-6 age in the primary health care "Following Child's Growth according to Growth Charts" (June 2014)	25.00	50.00	0.179	36.84
Guideline of Clinical Practice "Nutrition of Pregnant Woman, infant and little child in primary health care" (June 2014)	0.00	16.67	0.097	7.89
The Protocols of Clinical Practice on the Nutrition of of Pregnant Woman, infant and little child in primary health care" (June 2014)	5.00	16.67	0.328	10.53
Guideline of Clinical Practice for Seniors	5.00	33.33	0.038	18.42
The Protocols of Clinical Practice of family medicine based on the guidelines for Seniors	5.00	27.78	0.083	15.79
IEC Material	**Diber % (n=20)**	**Fier % (n=18)**	**p-value***	**Total % (n=38)**
The Calendar of health promotion developed by MOH or IPH	20.00	16.67	1.000	18.42
The Calendar of Vaccination/Immunization	85.00	100.00	0.232	92.11
Awareness materials (posters, leaflets) (when counseling) based on standard package info (children, adults, women and reproductive health, seniors, mental health)	90.00	100.00	0.488	94.74

* Fisher's exact

Does the facility have the following basic/essential medical equipment and supplies and are they functional?	Diber % (n=20)	Fier % (n=18)	p-value*	Total % (n=38)
General medical equipment				
Microsurgery	65.00	83.33	0.278	73.68
Nebulizer	25.00	61.11	0.047	42.11
Ambu mask	35.00	77.78	0.011	55.26
Strong source of light in good condition (portable)	15.00	44.44	0.074	28.95
Nasal speculum	30.00	16.67	0.454	23.68
Otoscope	60.00	61.11	1.000	60.53
Ophtalmoscope	25.00	27.78	1.000	26.32
Glucometer	60.00	83.33	0.160	71.05
Peak flow meter	5.00	5.56	1.000	5.26
Pen light	50.00	66.67	0.342	57.89
Neurological hammer	55.00	77.78	0.182	65.79
Weight scale for adults	85.00	77.78	0.687	81.58
Weight scale for children (over 2 years old)	40.00	66.67	0.119	52.63
Weight scale for infants and toddlers (up to 2 yers old)	85.00	94.44	0.606	89.47
Stadiometer for grown up children	35.00	66.67	0.103	50.00
Sphygmomanometer for children	5.00	55.56	0.001	28.95
Sphygmomanometer for adults	90.00	100.00	0.488	94.74
Stethoscope for children	55.00	94.44	0.009	73.68
Stethoscope for adults	100.00	100.00		100.00
Obstetrical stethoscope	60.00	83.33	0.160	71.05
Sterilization equipment and anti-septical protocol	40.00	66.67	0.119	52.63
Refrigerator	70.00	94.44	0.093	81.58
Vaccine refrigerator/portable	90.00	100.00	0.488	94.74
Hight meter board for children (up to two years old)	30.00	55.56	0.188	42.11
Meter for height measuring (children over two years of age)	45.00	50.00	1.000	47.37
Thermometer	100	100		100
Tuning fork	30.00	22.22	0.719	26.32

Table for vision testing	65.00	77.78	0.485	71.05
Ear syringe	10.00	33.33	0.117	21.05
Scissors	95.00	100.00	1.000	97.37
Timer	60.00	72.22	0.506	65.79
Pelvimeter	60.00	88.89	0.067	73.68
Children growth chart	25.00	44.44	0.307	34.21
Fracture rods	0.00	38.89	0.003	18.42
Tongue depressor	95.00	100.00	1.000	97.37

* Fisher's exact

Gynacological service equipment	**Diber % (n=20)**	**Fier % (n=18)**	**p-value***	**Total % (n=38)**
Gynecological bed	15.00	44.44	0.074	28.95
Gynecological instruments	10.00	50.00	0.011	28.95
Oxygen tank (tube)	15.00	50.00	0.035	31.58
Inhalator for salbutamol with the mask and the appropriate dosage instrument	25.00	61.11	0.047	42.11
Vaginal speculum, small size	10.00	22.22	0.395	15.79
Vaginal speculum, medium size	15.00	33.33	0.260	23.68
Vaginal speculum, large size	15.00	22.22	0.687	18.42
Pap smear materials: (brush, spatula, holder)	0.00	22.22	0.041	10.53
Gloves (latex)	85.00	83.33	1.000	84.21
Masks for doctors	55.00	77.78	0.182	65.79

* Fisher's exact

	Diber %	Fier %	p-value*	Total %
Delivery set: available?	60.00 (n=3 of 5)	71.43 (n=5 of 7)	0.679	66.67 (n=8 of 12)
Delivery set: sterile	100.00 (n=3)	100.00 (n=5)		100.00 (n=8
Does the delivery set contain…				
Haemostatic pincette	100.00	100.00		100.00
Obstetrical forceps	100.00	100.00		100.00
Scissors	100.00	100.00		100.00
Sterile cat gut	100.00	0.00	0.090	37.50
Sterile gauze	100.00	100.00		100.00
Umbilical cordon clip	100.00	100.00		100.00
Needles and needle bearer	100.00	100.00		100.00
Anatomic pincette	100.00	100.00		100.00
Sterile surgical gloves (two pairs)	100.00	100.00		100.00
Surgical coat	0.00	60.00	0.090	37.50
Oxytocin ampoule (one) + metergine ampoule (one)	33.33	80.00	0.187	62.50
Syringes (5 ml, 20 ml)	100.00	100.00		100.00
Plastic aspiration tubes for newborns	33.33	40.00	0.850	37.50
Lydocain (One vial)	100.00	80.00	0.408	87.50
Betadine solution (vials)	100.00	100.00		100.00
Oxytocin (vials)	33.33	40.00	0.850	37.50

* Fisher's exact

Advanced equipment				
Advanced equipment	15.00	44.44	0.074	28.95
EKG machine	10.00	50.00	0.011	28.95
Autoclave	15.00	50.00	0.035	31.58
Photometer	25.00	61.11	0.047	42.11
Centrifuge	10.00	22.22	0.395	15.79
Necessary tools/materials to assess and monitor child growth	15.00	33.33	0.260	23.68

* Fisher's exact

Assess and monitor child growth	Diber % (n=20)	Fier % (n=18)	p-value*	Total % (n=38)
Box of blocks in different colors	0.00	11.11	0.218	5.26
Rattle, small red ball hung in a piece of thread	0.00	11.11	0.218	5.26
Book with simple illustrations or some sheets of color paper with illustrations, i.e. a flower, a girl, a car, a cat, etc.	0.00	5.56	0.474	2.63
Large and thin pencils, sheets of paper for drawings	0.00	5.56	0.474	2.63
Doll	0.00	16.67	0.097	7.89
Hairbrush	0.00	5.56	0.474	2.63
Small plate and spoon	0.00	5.56	0.474	2.63
Cups	0.00	5.56	0.474	2.63
Simple puzzles with 2-3 pieces	0.00	11.11	0.218	5.26
Sheet with stripes and shapes	0.00	5.56	0.474	2.63

* Fisher's exact

Were the following products available the day of the visit?	Diber % (n=20)	Fier % (n=18)	p-value*	Total % (n=38)
Water for injections - 2 ml	45.00	88.89	0.006	65.79
Atropin sulphat 0.1% - (1 mg / 1ml)	85.00	77.78	0.687	81.58
Dextrose solution 5% - 500 ml	80.00	50.00	0.087	65.79
Dextrose 40% - 10 ml	45.00	33.33	0.522	39.47
Manitol solution 20% - 250 ml	70.00	72.22	1.000	71.05
Diazepam - 10 mg /2 ml	100.00	100.00		100.00
Epinephrine	10.00	66.67	0.001	36.84
Furosemid – 20 mg/2 ml	100.00	100.00		100.00
Natrium chloride 0.9% - 10 ml	40.00	77.78	0.025	57.89
Natrium chloride 0.9% - 500 ml	90.00	83.33	0.653	86.84
Nitroglycerin - 0.5 mg	70.00	55.56	0.503	63.16
Vitamin K 1% - 1ml	55.00	66.67	0.522	60.53
Dexamethason - 5 mg	75.00	88.89	0.410	81.58
Antitetanus serum - 1500 UI	80.00	83.33	1.000	81.58
Antivipera serum - 10 ml	80.00	55.56	0.164	68.42
Tresol (O.R.S) 27.9 gr	65.00	94.44	0.045	78.95
Bipenicillin 600, 000 UI	10.00	38.89	0.058	23.68
Methochopramid - 10 mg / 2 ml	75.00	72.22	1.000	73.68
Prochlorperasin - 12.5 mg / ml	25.00	44.44	0.307	34.21
Acetaminophen - 0.5 gr.	35.00	77.78	0.011	55.26
Morphin sulphate - 15 or 30 mg/mlL	10.00	11.11	1.000	10.53
Diclofenac - 50 mg	75.00	88.89	0.410	81.58
Salbutamol - 100 mkg/dose (volume pump) or 1-2 MG/ ML (nebulizer)	20.00	44.44	0.164	31.58
Hydrocortison - 100mg/2ml	30.00	16.67	0.454	23.68

Papaverin 4% - 1 ml	90.00	94.44	1.000	92.11
Contraceptives: oral (COC, POP), Injectables, DIU, Condoms	80.00	77.78	1.000	78.95
Dihidroergotamin - 1mg/ml	5.00	11.11	0.595	7.89
Plastic syringes + 2 needles 5 ml	85.00	100.00	0.232	92.11
Plastic syringes + 2 needles 10 ml	75.00	100.00	0.048	86.84
Iodine solution 2%	90.00	94.44	1.000	92.11
Nebulizer or volume pump	20.00	55.56	0.042	36.84
Surgical gloves	85.00	100.00	0.232	92.11
Vitamin A and D	5.00	22.22	0.170	13.16
Amoxicillin/erythromycin	5.00	38.89	0.016	21.05
Chlorfeniramin (oral antihistaminic)	0.00	22.22	0.041	10.53
Al Hydroxide + Mg Hydroxide 0.5 gr	20.00	33.33	0.468	26.32
Glycerin	10.00	61.11	0.002	34.21
Aspirin 0.5 gr	60.00	88.89	0.067	73.68
Atenolol/metoprolol	75.00	88.89	0.410	81.58
Sol.Glucose 500 ml	95.00	94.44	1.000	94.74
Buscopan - 10mg/2ml	95.00	77.78	0.170	86.84
Lanatosid C - 4%/2ml	40.00	83.33	0.009	60.53
Folic acid - 5mg	20.00	27.78	0.709	23.68
Oxygen	20.00	33.33	0.468	26.32
Bandages 5 x 5 cm	95.00	94.44	1.000	94.74
Gauze 1 m	65.00	77.78	0.485	71.05
Hydrogen peroxide 3 % 500 ml	90.00	72.22	0.222	81.58
Hydrophilic cotton 100 gr	100.00	100.00		100.00
Plastic perfusion system	85.00	94.44	0.606	89.47
Spiritus aethylicus 70% (alcohol)	100	94.44	0.474	97.37
Ranitidin 50 mg – 2 ml	70.00	83.33	0.454	76.32

Magnesium Sulphate – 10 ml	65.00	77.78	0.485	71.05
Thread for stitching wounds	60.00	88.89	0.067	73.68
Kalium (potassium) iodine	15.00	16.67	1.000	15.79

* Fisher's exact

E.2 Clinical Observations

For which illness is the patient seen?	**Diber % (n=175)**	**Fier % (n=450)**	**p-value***	**Total %** (n=625)**
Hypertension	24.57	30.89	0.002	30.06
Diabetes mellitus	2.29	8.67		07.83
Other	73.14	60.44		62.11

* chi-square test; ** weighted total

Assessment of an adult diabetes mellitus patient - Does the medical doctor follow the clinical assessment procedures, investigations and treatment guidelines?	Diber % (n=4)	Fier % (n=39)	p-value*	Total %** (n=43)
Asks questions on the illness about				
… any specific health complaints	100.00	51.28	0.118	53.15
... general weakness	100.00	38.46	0.031	40.82
... urine discharge	75.00	20.51	0.045	22.6
… appetite	50.00	25.64	0.308	26.58
... eye-sight	25.00	7.69	0.334	8.36
… visit to opthalmalogist	0.00	2.56	1.000	2.47
... alcohol	25.00	10.26	0.402	10.82
... smoking	0.00	5.13	1.000	04.93
... using other medicine	25.00	25.64	1.000	25.62
… sedentary way of life	0.00	5.13	1.000	04.93
… adherence with diabetes treatment	100.00	57.89	0.280	59.55
Conducts examination…				
… checks blood pressure	100.00	33.33	0.019	35.89
… weight measurement / calculation of body-mass index	0.00	5.13	1.000	04.93
… of skin, mucus membranes, nodes of lymph, ears, nose, thyroid glands	0.00	7.69	1.000	7.4
... of eyes	0.00	2.56	1.000	2.47
... of chest, auscultation of lungs	0.00	7.69	1.000	7.4
… auscultation of heart in 5 points	0.00	7.69	1.000	7.4
... of abdomen, palpation of liver and signs of percussion	0.00	5.13	1.000	4.93
... perfusion of legs (veines and feeling of legs)	0.00	2.56	1.000	2.47
… and gives clear explanations to the client concerning the purpose of tests and procedures.	75.00	23.08	0.059	25.07
Advices, explains, instructs				
… results of examinations	100.00	35.90	0.025	38.36

... the situation and diagnosis	100.00	51.28	0.118	53.15
... the prognosis	100.00	33.33	0.019	35.89
… about needed examinations	100.00	7.69	0.000	11.23
… nutrition, i.e. food intake	75.00	12.82	0.016	15.21
… about smoking	0.00	2.56	1.000	2.47
… about physical exercise	0.00	10.26	1.000	9.86
... right ways of care of legs	0.00	7.69	1.000	7.4
… potential complication of the illness	75.00	17.95	0.034	20.14
… potential risks if illness is not treated	75.00	17.95	0.034	20.14
… importance of adherence to treatment	100.00	20.51	0.004	23.56
... about follow-up visit	100.00	41.03	0.039	43.29
… about the referral	100.00	20.59	0.057	22.36
… on prescribed medicines/treatment	33.33	50.00	1.000	49.5

* Fisher's exact; ** weighted total

Assessment of an adult patient with arterial hypertension - Does the medical doctor follow the assessment procedures, investigations and treatment guidelines?	**Diber % (n=43)**	**Fier % (n=139)**	**p-value***	**Total %** (n=182)**
Asks questions on the illness about				
… any specific health complaints	95.35	58.99	0.000	62.9
… headache	32.56	26.62	0.449	27.26
… the use of medicine other than for hypertension	44.19	23.02	0.007	25.29
… the use of contraceptives	0	0		
… eye-sight	4.65	5.04	0.919	4.99
… visit to opthalmalogist	2.33	0.72	0.377	0.89
… alcohol	2.33	5.04	0.449	4.74
… smoking	0.00	6.47	0.087	5.78
… using other medicine	18.60	17.99	0.927	18.05
… sedentary way of life	11.63	14.39	0.646	14.09
… high blood pressure	29.41	49.24	0.038	47.44
… adherence with hypertension treatment	93.02	68.89	0.002	71.55
Conducts examination…				
… checks blood pressure	97.67	76.26	0.002	78.56
… weight measurement / calculation of body-mass index	0.00	0.72	0.577	0.64
… of skin, mucus membranes, nodes of lymph, ears, nose, thyroid glands	0.00	6.47	0.087	5.78
… of eyes	0.00	2.16	0.331	1.93
… of chest, auscultation of lungs	4.65	18.71	0.026	1.72
… auscultation of heart in 5 points	11.63	13.67	0.730	13.45
… of abdomen, palpation of liver and signs of percussion	2.33	5.04	0.449	4.74
… perfusion of legs (pulse and perfusion of legs)	9.30	1.44	0.012	2.28
… and gives clear explanations to the client concerning the purpose of tests and procedures.	76.74	30.94	0.000	35.85
Advices, explains, instructs				

… results of examinations	95.35	63.31	0.000	66.75
... the situation and diagnosis	95.35	70.50	0.001	73.17
... the prognosis	83.72	53.24	0.000	56.51
… about needed examinations	76.74	19.42	0.000	25.58
… nutrition, i.e. food intake	9.30	15.11	0.334	14.48
… about smoking	4.65	5.76	0.781	5.64
… about physical exercise	11.63	7.19	0.356	7.67
… potential complication of the illness	51.16	27.34	0.004	29.9
… potential risks if illness is not treated	62.79	28.06	0.000	31.79
… importance of adherence to treatment	93.02	38.85	0.000	44.67
... about follow-up visit	83.72	50.36	0.000	53.94
… about the referral	10.34	26.89	0.060	25.46
… on prescribed medicines/treatment	75.61	58.73	0.052	60.63

* chi-square test; ** weighted total

Assessment of a patient with other condition than diabetes or arterial hypertension.	Diber % (n=128)	Fier % (n=272)	p-value*	Total %** (n=400)
Asks questions on the illness about				
… takes patient history (general history, specific to disease)	96.09	70.96	0.000	74.84
… asks open ended questions during history taking	93.75	67.28	0.000	71.37
… asks about any prescriptions the client is currently taking.	75.00	44.12	0.000	48.9
… listens to the client and responds to client questions.	97.66	87.87	0.001	89.38
Conducts examination…				
… performs medical examinations and other investigations as individually required.	98.44	66.18	0.000	71.17
… gives clear explanations to the client concerning the purpose of tests and procedures.	92.19	40.07	0.000	48.14
Advices, explains, instructs				
… results of examinations	98.44	61.40	0.000	67.13
... the situation and diagnosis	95.31	64.34	0.000	69.13
... the prognosis	88.28	37.50	0.000	45.36
… about needed examinations	85.16	34.56	0.000	42.39
… about follow-up visit	83.59	31.62	0.000	39.66
… about the referral	26.58	54.95	0.000	51.51
… on prescribed medicines/treatment	63.06	50.77	0.038	53.00
… on risks factors/health education	48.74	42.66	0.283	43.73

* chi-square test; ** weighted total