

**Transitional Islamic State
of Afghanistan
Ministry of Health**



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Afghanistan National Hospital Survey

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List of acronyms

Hospital Units

BB	Blood Bank
BFH	Baby Friendly Hospital
DEN	Dental Unit
ENT	Ear-nose-throat Unit
EOC	Emergency Obstetric Care / Delivery Unit
ER	Emergency / Trauma Department
ICU	Intensive Care Unit
LAB	Laboratory
MED	Medical Ward
OPD	Out-Patient Department
OT	Operating Theatre
PED	Paediatrics Unit
PHA	Pharmacy
RADIO	Radiology

Functional Indicators

EQ	Equipment
DRUGS	Drugs and Consumables
INF	Infrastructure
HR	Human Resources
WATER/ELEC	Water / Electricity

Others

API	Avicenne Pharmaceutical Institute
BPHS	Basic Package of Health Services
DOTS	Directly Observed Therapy Short-course
EKG	Electrocardiogram
GIS	Geographic Information System
GPS	Global Positioning System
JICA	Japan International Cooperation Agency
MOH	Ministry of Health
MSH	Management Sciences for Health
NGO	Non Governmental Organization
NHA	National Hospital Assessment
NHRA	National Health Resources Assessment
REACH	Rural Expansion of Afghanistan's Community-based Healthcare
SY	Solar Year
TB	Tuberculosis
UN	United Nations
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
WHO	World Health Organization

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FOREWORD

A survey of 117 hospitals was undertaken at the request of the Ministry of Health in October and November 2003 to provide a detailed description of the public sector of hospital care and provide elements of information for the ongoing process of hospital reform. Originally, the survey was to concentrate on provincial hospitals alone, but government experts in charge of planning and hospital management indicated they wished the survey to be extended to all public sector civilian hospitals, and the list of 117 facilities was supplied by the Ministry of Health

A survey tool was created during summer 2003, and tested in September 2003. Surveyors and supervisors, all government employees, were trained and sent to survey the facilities by teams of three. Each team included one doctor, one nurse and one civil works experts (architect, engineer), so that information could be gathered in the most comprehensive and reliable way. Information was obtained through interviews and direct observation. Data entry took place early in 2004 and analysis was conducted in the following months.

The main lessons learnt from the survey are developed in detail in the document. They can be summed up as follows:

- Afghanistan has a relatively low number of hospitals and hospital beds compared with other countries with a comparable level of income. The ratio of 1 bed for 1,000 people, recommended by WHO, is not reached in any province
- The distribution of hospital facilities and services is uneven with large parts of the population unable to access referral facilities
- The physical condition of facilities is acceptable, but they often lack adequate supply of water and electricity.
- Hospitals are under-equipped and their equipment is not adequately maintained. Access to technical units (medical imaging, laboratory, surgery) is limited to few facilities.
- Facilities are under-used, with average occupancy rates below 50%. Emergencies and outpatient units are more used by the population than inpatient units.
- Hospitals are generally over-staffed, particularly in the large urban areas, but too few facilities have an adequate number of female staff to provide acceptable services to the whole population they are supposed to serve.
- Among services proposed to patients, delivery care and emergency obstetric care are particularly poor. Very few facilities can supply C-sections in safe conditions.
- Some provinces have little or no access to a hospital in good condition. In spite of the heavy investment efforts supported by the international community, discrepancies between provinces tend to grow.

1) Facilities surveyed

117 government facilities were visited by groups of government surveyors. Not all of them could be described as “hospitals”.

The 117 surveyed facilities can be broken down as follows:

Facilities without beds, health centers and clinics with beds	10 (8.5%)
Specialized hospitals	10 (8.5%), 7 in Kabul
District hospitals	76 (65%)
Provincial hospitals (or equivalent)	21 (18%)

Many facilities were found to be too small to be described as hospitals and in the analysis of survey results a distinction was made between various sizes and bed counts. Some facilities had no beds (Khan Abad Hospital and Imam Sahib Hospital in *Kunduz* Province and Shahjoi Hospital in *Zabul* Province), and others had such a small number of beds that they could not be described as hospitals, although they are often called “district hospitals”.

On average, Afghan hospitals were found to be relatively small and 58% of them had less than 50 beds, and only 5% of the surveyed facilities had more than 300 beds.

2) Distribution of beds, occupancy of hospitals

Hospitals are unevenly distributed among the various parts of the country. The figures of population per hospital bed showed these discrepancies. Kabul province had the largest concentration of hospital beds (although they were unevenly distributed among districts within the province) with 1 bed for 1,100 population. The provinces of Utuzgan, Nuristan, Ghor and Sari Pul had the lowest quantity of hospital beds per population in the country (1 bed for 10,000 inhabitants or more).

According to the Basic Package, district hospitals (and provincial hospitals) should be able to provide at least medicine, surgery and maternity services. However, the assessment showed that this was seldom the case, and many districts did not have access to a facility able to provide such services. Three provinces did not have even one single such facility in any district (Uruzgan, Zabul, Nuristan).

Most hospitals did not know their average bed occupancy rate and length of stay. Only 16% of the 117 facilities surveyed had both indicators available. In these cases, the average length of stay varied between 4 and 10 days, with a median at **7 days** and the bed occupancy rate varied between 10% and 85% with a median at **50%**. The bed occupancy rates declared by the hospital directors corresponded to the observations made by the surveyors.

On the day of the survey only 3,843 of the 8,237 total beds were occupied. The corresponding bed occupancy is below 50%. About half of the beds were occupied by female patients, showing that access to hospital care was equivalent, on average, for males and females. Nearly 20% of the hospitals with beds did not have a single in-patient hospitalized. These empty hospitals wards were mostly seen in small size facilities with 10 to 30 beds.

This result was surprising given that the ratio of beds per population is rather low, and it could have been expected to find that the relatively low number of beds would have been full. When analyzing the performance of hospitals, it was found that Afghans mostly attend hospitals as primary facilities and do not use inpatient services much. Emergencies and outpatients clinics were discovered to attract much more attendance from patients.

Only 7 hospitals had an occupancy rate above 80% on the day of the survey.

3) Physical condition and staffing

Contrary to what was feared before the survey, the physical condition of hospitals was found to be relatively good, and particularly so given the amount of destruction generated by more of 20 years of war situation. However, these buildings were not properly serviced: 53 facilities had less than 12 hours of electricity per day on average, 32 had access to water less than 12 hours per day and 61 did not have functional communication systems.

By all standards, Afghan hospitals had too much staff compared to the required level, especially in the light of the needs of primary care facilities. The average number of staff per bed for the country was **1.57**, which would correspond to a level of specialization that Afghan hospitals do not have on the whole. The ratio of the total number of personnel present at the time of the survey over the number of occupied beds was found at the high level of **2.7**. There were important variations in the ratio from one province to another, and Kabul province had the largest number of staff (41% of all the hospital personnel of the country).

Less than ¼ of all personnel was identified as women. In spite of large staff numbers, hospitals often suffered from staff shortages at times and were shown not to manage their personnel adequately. In addition, salaries were not paid by the government regularly enough, whereas payments by NGOs were more reliable.

4) Activity of hospitals

Specific emphasis was placed on emergency services, including emergency obstetric care, intensive care and blood banks, which were thoroughly analyzed.

Emergency units were found to be well staffed, but poorly equipped. They tended to be used by patients as outpatient departments, and only few cases required hospitalization.

Intensive care units were concentrated in the larger facilities, and were poorly equipped as well (about only half had oxygen and ventilation capability). Intensive care units were mostly available in large cities.

Blood transfusion was performed in few hospitals, and more than 85% of transfusions were with blood from a relative. Blood collection, donor registration, fractioning, etc require more investment for blood transfusion to develop adequately in Afghanistan. Current statistics show a “transfusion incidence rate” about 20 times lower than it should be in a well operating transfusion system.

Emergency obstetric care was limited to few facilities. Statistics showed that less than 500 C-sections were performed per month in Afghanistan, corresponding to less than 1/100 of what would be required to adequately take care of complicated deliveries. In addition, several provinces did not have the capacity to perform normal deliveries in any of their facilities.

After describing the situation of hospitals in each province, the report analyzes the various features of Afghan hospitals, with special emphasis on their physical condition, their functions, staffing, financing and management.

1 Background and methodology

1.1 Scope

The hospital assessment was conducted as a follow up to the National Health Resources Assessment (NHRA) conducted at the end of 2002. It was important for the Ministry of Health to have a picture of the functional abilities of Afghan hospitals, and not only their location and major services, as listed in the NHRA. One important aspect of the national hospital assessment (NHA) was to provide a detailed analysis of some functions of major concern for the Ministry of Health: emergencies, maternities and emergency obstetric care, blood banks, etc.

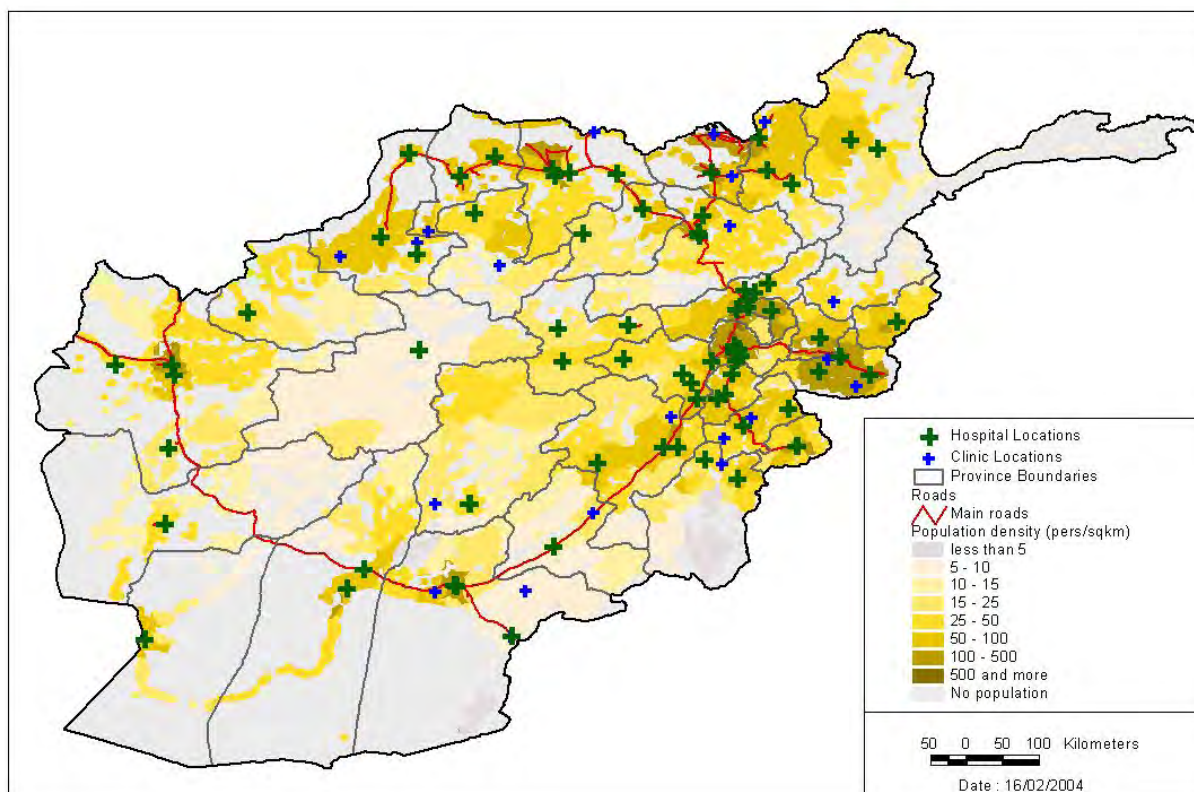
The study provides the Ministry of Health with an assessment tool on the condition of hospitals in the country, and gives indications regarding investment priorities using standard indicators. The indicators and graphic tools designed by MSH Europe have been prepared to help determine rehabilitation needs.

One of the important aspects was to determine if hospitals were able to perform their referral obligations, as defined in the Basic Package of Health Services, and to assess their current strengths and weaknesses for the preparation of a hospital reform.

At first, it was proposed that only provincial hospitals be taken in consideration, but the Ministry of Health considered that the survey, to be comprehensive, had to cover all public sector hospitals, and a list of 117 facilities was finalized by the Ministry during the preparation of the survey instruments. This list was based on the NHRA, and the two surveys, conducted back to back, proved highly complementary of one another.

Analyzing hospital performance required the definition of the functions of a hospital, and surveyed Afghan facilities ranged from health centers without beds to specialized facilities with several hundred beds. Several facilities were called “hospitals” but had no beds. Several others were called “district hospitals” but could not provide the elements of the basic package of hospital services, as defined by the Ministry of Health in 2003. A district hospital is supposed to supply medicine, surgery, paediatrics and maternity services, and be supported by technical services for laboratory and medical imaging. This was often not the case, and the data analysis had to be conducted with functional standards in mind.

Location of the 117 facilities surveyed during the NHA



1.2 Assessment Tools

A detailed questionnaire has been developed for the survey. It has been translated in Dari (see Annex 8) and pre-tested in the provincial hospital of Parwan, and the regional referral hospital in Mazar. The quality of translation into Dari was also tested by performing a back-translation into English (see annexe 7).

To facilitate data collection and entry, the questionnaire was designed as checklists (with mainly Yes/No questions), allowing additional input where more extensive information was required (counts of beds, staff, budget figures, etc.).

After taking into consideration all remarks and observations, the final version (42 pages in English) was divided in three parts:

1. General information
 - Identification of the hospital
 - Administrative Information



- General services: staff, budget, management
- Presence of in and out-patient services and levels of activity

This information was gathered directly from the hospital director and department heads.

2. Information on equipments

For each medical, paramedical and support service, the surveyors completed checklists determining what equipment was available, in what quantity and in what condition. Surveyors gathered data only when directly observed on the grounds of the respective units.



3. Information on infrastructures and technical capabilities

- Civil works
- Water and Power supply
- Wastewater and waste management
- Communication means
- Transportation means
- In each unit: type and condition of floors, roof, walls, ceilings, availability of water, power and heating

All data was gathered directly on the grounds of each unit and directly observed by the surveyors.



1.3 Implementation

The schedule of the major activities related to the survey from June 2003 to March 2004 is as follows:

June	Hospital list finalized
June-July	Questionnaire design; field testing
July – August	Questionnaire finalization; Dari translation; data clerk training
August - September	Survey team training
October - November	Survey conducted in 32 provinces; database development
November	Data entry and cleaning
December-February	Preliminary data analysis
February-March	Outside Evaluation, presentation of preliminary results in Kabul

1.4 Data collection and processing

Ten teams of surveyors conducted the survey in 117 hospitals located in the 32 provinces from October to November 2003. Surveyors worked in teams of 3, each comprised of a doctor, a health specialist and a civil works specialist. 10 regional supervisors working in teams of 2 assisted survey teams and reported their progress to the central office in Kabul. In the province of Kabul, which has the highest concentration of female medical wards, EOC units and maternities, the surveyor team was composed of female surveyors only, a prerequisite for direct access to those specialized units.

The following quality controls were performed:

- Spot-checks by supervisors to evaluate the performance of the surveyor team;
- Continuous control of completed questionnaires for coherency, completeness by the supervisors while the survey was being undertaken;
- Controls of coherence and completeness at the central level before data entry.

In addition to the data collected during the survey, the GPS coordinates of hospitals, which had been collected for the 117 hospitals during February 2002 – June 2003 Afghanistan National Health Resource Assessment were added to the database. All maps presented in this report have been produced with Arc View GIS®. GIS layers have also been created for use in WHO's Healthmapper©.

1.5 Data Validation

In order to minimize the risk of errors at the data entry stage, the 21 data clerks worked in teams of two alternating roles: one reading the answer, the other entering the data under the control of the first clerk. In addition, once data entry was completed, the central supervisor and the database designer performed a comprehensive comparison between entered data and the answers on the questionnaires. Entry errors were minimal and all were corrected.

Furthermore, a series of automated verification queries allowed identification of data inconsistencies across the sections of the questionnaires. These originated from the fact that the respondents were not the same persons (director and department heads for the first part of the questionnaire, unit heads for the second and third parts). Corrections were made after the central supervisor checked with the field supervisors and the surveyors which answer to keep.

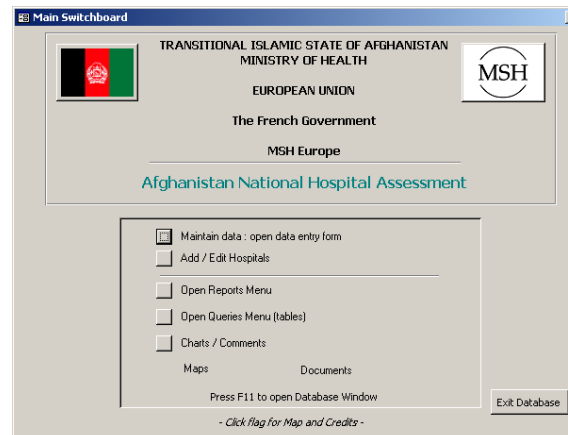
The database was considered complete and error free at the end of January 2003.

1.6 Description of the database and embedded functionalities

The database was designed to serve as a unique interface to manage both inputs and outputs on an ongoing basis after the survey has been completed. The software includes the following functionalities:

1. entry point to enter data updates
2. automated re-calculation of indicators
3. generation of template reports

The detailed description of the database and the procedures to update data and to produce reports are annexed to this report.



1.7 Methodology

The objectives of the methodology are to:

- Provide an accurate picture of the situation of hospitals in Afghanistan
- Provide a detailed analysis of each hospital unit, and in particular the units for which the Ministry of Health (MoH) has set a high level of priority

The results of the analysis allow to:

- Position hospitals according to their level of functionality using common comparison criteria
- Compare the functionality levels of hospital units
- Help the MoH defining where the priorities lie in terms of infrastructure rehabilitation, equipment and human resources.

The methodology uses a varied set of analytical tools:

- Maps for geographical representations
- Functional indicators presented in detailed analytical tables. These indicators allow for the determination of the capacity of hospital units to fulfil their role, to compare them across hospitals and to provide a classification.
- Synthesis graphs presenting the various functional indicators to present overviews of the situations of hospital units
- Dashboards presenting detailed information for each hospitals.

The functionality of hospitals has been measured by collecting a large variety of information, which can be categorized as follows:

- infrastructure (buildings and civil work)
- access to water and power
- equipment
- human resources
- consumables and pharmaceuticals
- sanitation
- waste disposal

- Communication
- Transportation

The proposed methodology uses a drill-down approach, starting from descriptive and quantitative information at the national level and goes down to detailed results on the level of functionality of hospital units. The methodology includes a specific section on priority units: Emergency / Trauma departments (ER), Emergency Obstetric Care (EOC), Intensive Care Units (ICU), Operating Theatres (OT) and Blood banks.

The methodology and calculation details are presented in Annex 6.

2 General Findings

2.1 General Comments

The survey was used as a tool to get a better knowledge about the capacity of hospitals to serve the population and find their potential for improvement through the determination of investment priorities. One of the most important elements to determine was the capacity of all surveyed facilities to deliver the hospital basic package of services. The basic package was in particular used to determine the quality of services provided at the district level, where a general district hospital must be able to provide medicine, surgery, maternity and paediatrics services.

In addition, it had been requested by the Ministry of Health that particular attention be brought to emergency services, including emergency obstetric care, and blood banks.

Finally, the quality of hospital infrastructure was evaluated on the basis of “structural indicators”, with general findings given here below.

Infrastructures (based on averaged infrastructure indicator values obtained in each service)

	Number of hospitals	% of hospitals	Number of beds	% of beds
0.75 – 1	56	48%	4 467	52%
0.50 – 0.75	35	30%	2 843	33%
0.25 – 0.50	18	15%	1 071	13%
0 - 0.25	8	7%	157	2%

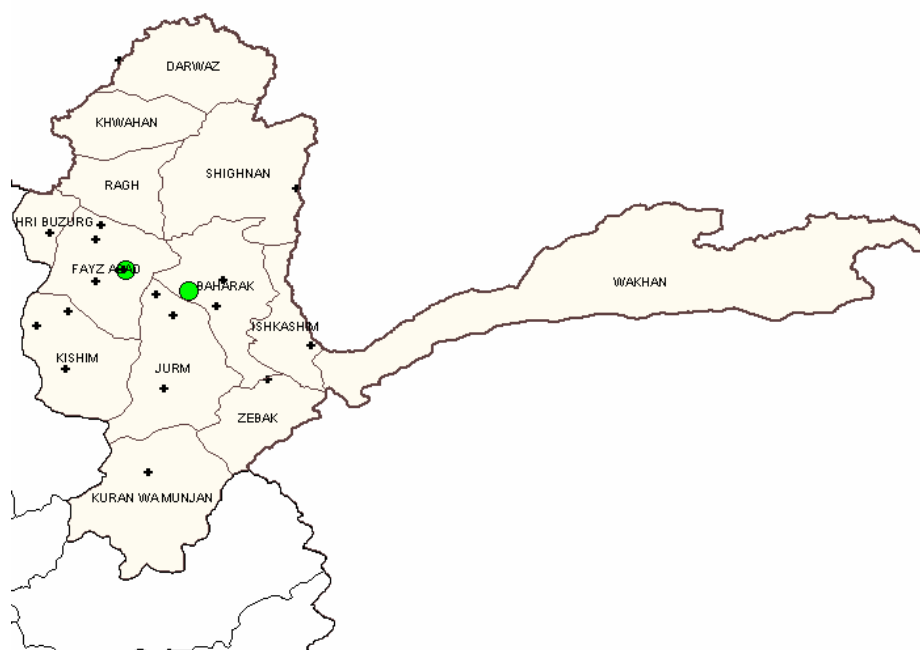
Building-related services

	Number of hospitals	% of hospitals	Number of beds	% of beds	Criteria
Access to water	83	71%	7 548	88%	Water available 12hrs /day or more
Access to power	65	56%	7 224	85%	Electricity available 12hrs /day or more
Sanitation	56	48%	4 122	48%	Sanitation system in place functional
Communication	56	48%	6 423	75%	Presence of a functional radio or phone
Transportation	70	60%	7 490	88%	Presence of a functional ambulance or 4-wheel drive car

The present chapter provides an overview of the hospital situation in each province of the country, with a brief description of the capabilities of each facility in terms of main technical units.

2.2 Overview of Provinces

2.2.1 Province of Badakhshan



District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
BAHARAK	Baharak Hospital	31	Yes	Yes	Yes				Yes	
FAYZ ABAD	Faizabad Hospital	100	Yes	Yes	Yes		Yes	Yes	Yes	Yes

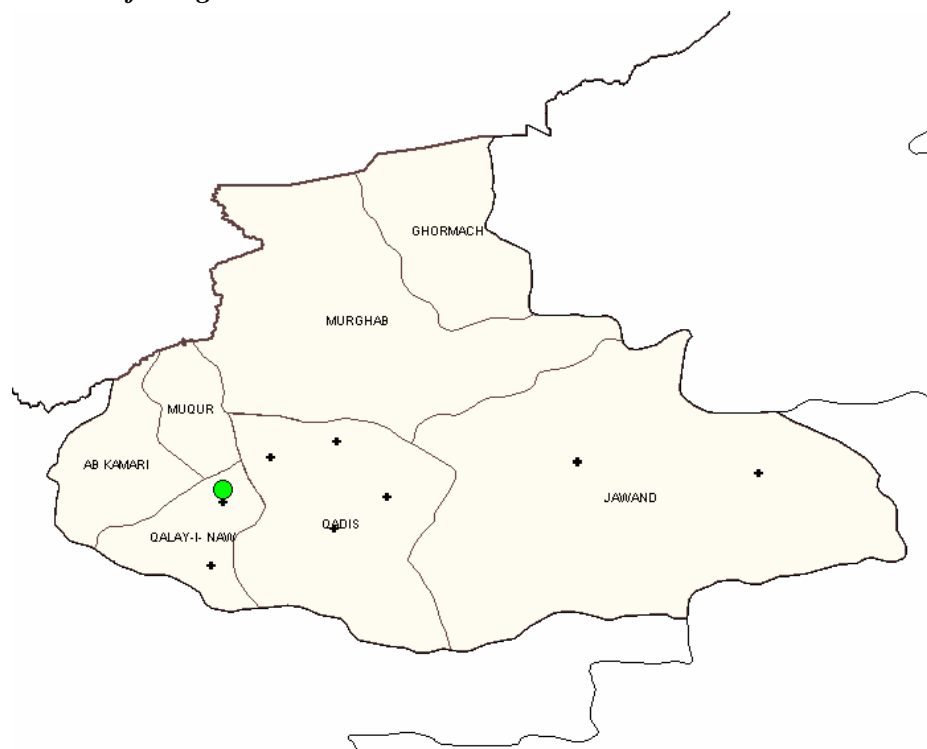
The two hospitals of the province are located in the districts of Faizabad and Baharak:

- Faizabad Hospital (100 beds) provides the four main services of a general hospital (medicine, surgery, maternity and paediatrics). It also offers the four priority services (emergency obstetric, intensive care, emergency trauma and blood bank). In addition it offers hospitalization services in ophthalmology and has a TB care unit. Its technical indicators are higher than the national average except for electricity.
- Baharak hospital is much smaller (31 beds) however it provides three of the main services (paediatric ward is missing). It can provide hospitalization services for children in adult wards. Except for infrastructure and sanitation its technical indicators are under the national average.

With 131 hospital beds available, the province of Badakhshan has an average ratio of one bed for 4,500 inhabitants.

Less than half of the population of the province (43 %) live in a district where hospitals are located.

2.2.2 Province of Badghis



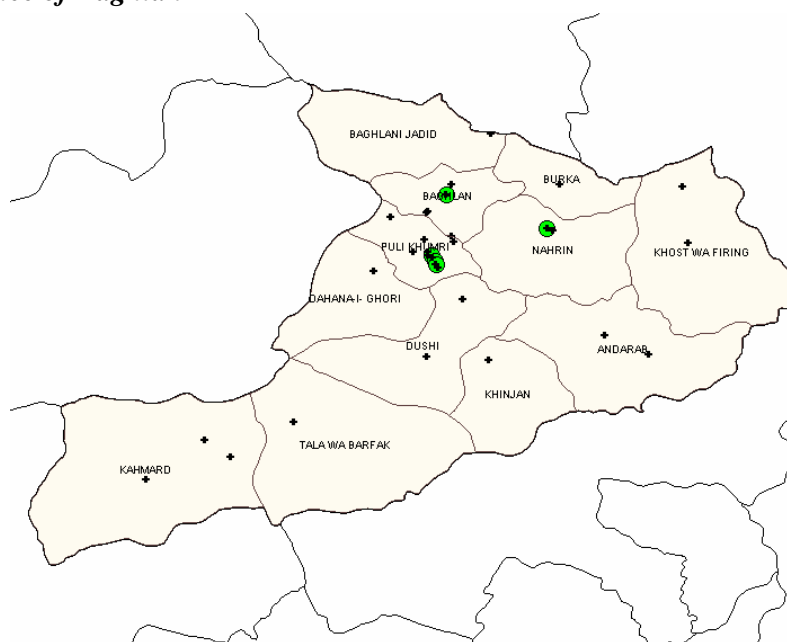
District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
QALAY-I-NAW	Qala-i-Naw District Hospital	86	Yes	Yes	Yes	Yes	Yes		Yes	

One single hospital was identified in the province of Badghis. This hospital provides the four main services of a general hospital plus TB care.

The Qala-i-Naw hospital is considered to be a district hospital, although it serves as the referral facility for the province. Located in the district of Qala-i-Naw, it is in the South-Western part of the province, and only 5% of the population of the province live within 10 km of that facility. Given the scarcity of hospitals around the province of Badghis, in particular in the South-West of Faryab province, the North West of Ghor province and the North of Hirat province, it can be considered that a population estimated at 301,000 does not have any access to referral hospital services.

However, the province of Badghis is little populated, and with 86 beds available has an average ratio of one bed for 3,500 inhabitants, as opposed to the national average of 2,500.

2.2.3 Province of Baghlan



District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
BAGHLAN	Baghlan District Hospital	32	Yes	Yes	Yes				Yes	
NAHRIN	Nahreem District Hospital	10	Yes	Yes	Yes	Yes	Yes			
PULI KHUMRI	Ministry of Mines Hospital (Maadan)	16	Yes							
PULI KHUMRI	Pul-i-Khumri Civil Hospital	84	Yes	Yes	Yes	Yes	Yes		Yes	
PULI KHUMRI	Nasagee Hospital	95	Yes	Yes	Yes	Yes	Yes		Yes	Yes

Five facilities were surveyed in the province of Baghlan. However, only the three first of the above list can be considered as “hospitals”. The Nahreed District Hospital is in fact a health centers with 10 beds that cannot be considered as a true hospital, although it claims to provide the main functions of a general hospital. The Ministry of Mines hospital, located in Pul-i-Kumri, is a specialized facility only providing medical care for male employees of the Ministry.

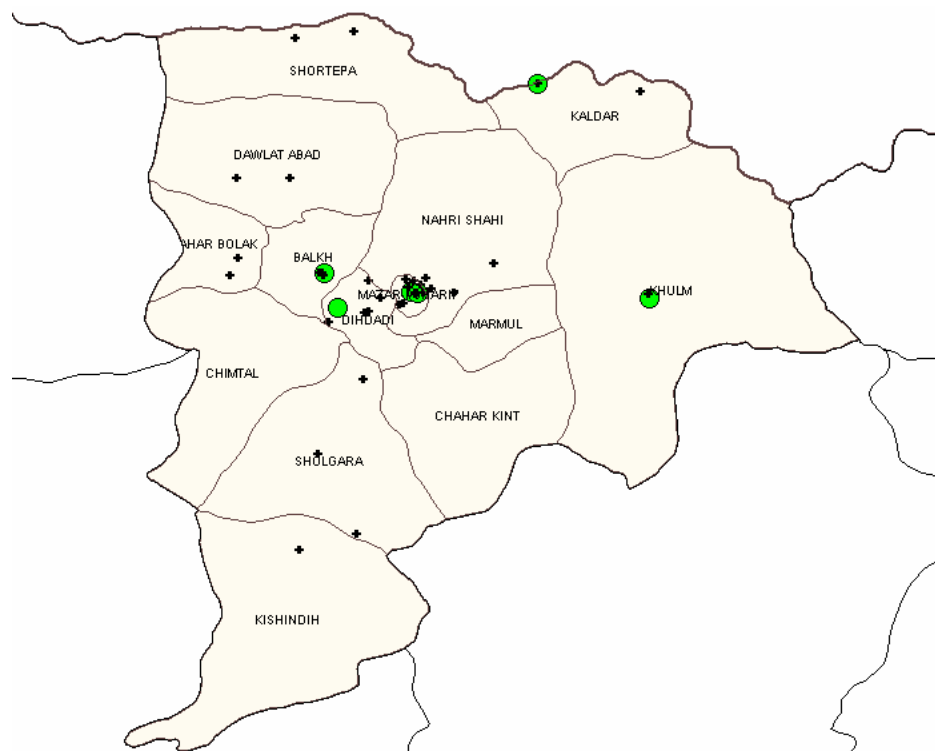
Nasagee Hospital and Pul-i-Khumri Civil Hospital are organized as general hospitals, providing medicine, surgery, maternity and paediatrics. The Baghlan District Hospital, located in the district of Baghlan, did not declare having a pediatric ward, but children can be hospitalized in adult wards.

Baghlan province has 12 districts, and the hospitals are located in 3 districts. Using the 10 km radius around hospitals, approximately 85% of the population of the province does not have easy access to hospital care. However, Baghlan has relatively good road access to other

provinces, especially Parwan, Samangan and Kunduz, and this situation can be considered to significantly improve access to hospital referral.

With a total of 237 beds, the province of Baghlan as an average population per hospital bed of 3,830.

2.2.4 Province of Balkh



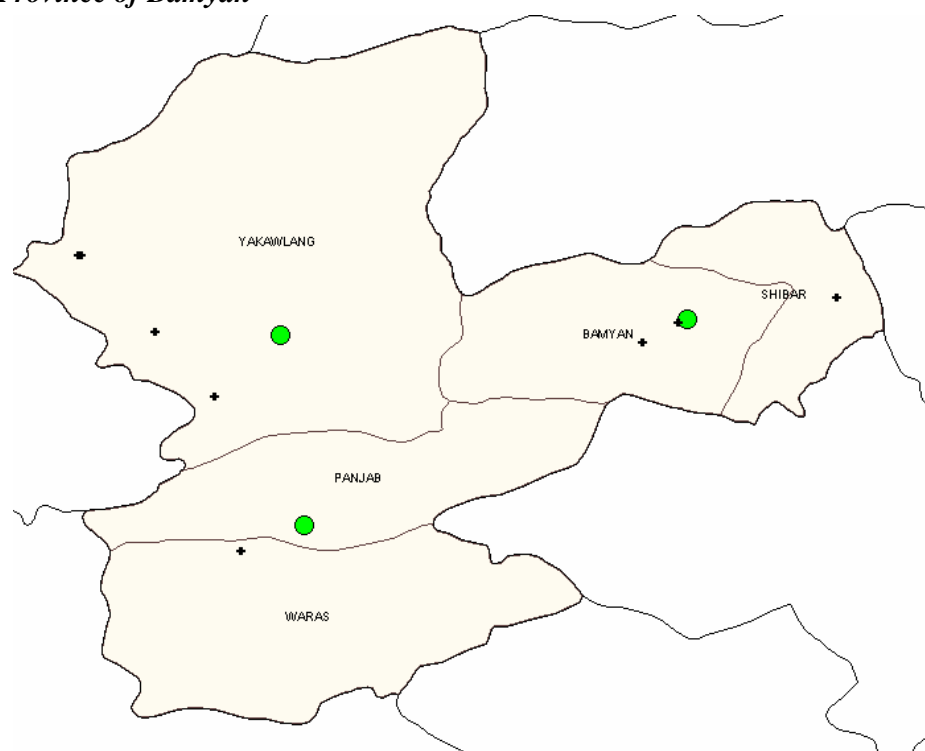
District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
BALKH	Hairatan Hospital	4	Yes		Yes	Yes			Yes	
BALKH	Balkh Hospital	24	Yes	Yes	Yes	Yes	Yes		Yes	
DIHDADI	Kod Barq Hospital	54	Yes	Yes	Yes	Yes	Yes		Yes	
KHULM	Khulm District Hospital	33	Yes	Yes	Yes	Yes	Yes		Yes	
MAZARI SHARIF	Tafahosat Hospital	3	Yes		Yes	Yes			Yes	
MAZARI SHARIF	Mazar-i-Sharif General Civil Hospital	237	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

The province of Balkh has a relatively good hospital coverage compared with the rest of Afghanistan. The average population per hospital bed is 2,660.

Six facilities were surveyed, of which two cannot be considered “real hospitals”: Hairatan Hospital and Tafahosat Hospital respectively have 4 and 3 beds, and operate as basic health centers.

The other four hospitals provide the four main services of general hospitals and are used as referral facilities in the province. All facilities are located on functional roads, and are concentrated in the North Eastern part of the province (districts of Hairatan, Dehdadi, Khulm, Balkh and I Mazar-i-Sharif). Given the distribution of population in Balkh province, it can be considered that up to 35% of the population has acceptable access to hospital care.

2.2.5 Province of Bamyan



District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
BAMYAN	Bamyan Central Hospital	53	Yes	Yes	Yes		Yes	Yes	Yes	
PANJAB	Panjab Eye Hospital	27	Yes						Yes	
YAKAWLANG	Yakawlang Hospital	36	Yes	Yes	Yes		Yes	Yes		

Three facilities have been surveyed in the province of Bamyan. They are all small size hospitals, and one of them, Panjab Eye Hospital, is specialized in ophthalmology.

None of the surveyed facilities had pediatric beds labeled as such, and children are hospitalized in adult wards.

Bamyan central hospital provides medicine, surgery and maternity services, and also makes TB care available. It also has a leprosy unit. Yakawlang hospital, which is a very small facility, also provides general hospital services. The two general hospital facilities are located in the districts of Bamyan and Panjab respectively.

Given the difficulties of road communication in the province, it can be estimated that 90% of the population has poor access to hospital services, although it is possible that people living in the South-East of the province may access referral care in neighboring Wardak province.

When the beds of the specialized eye hospital are taken in consideration, the average number

of population per hospital bed amounts to 3,470. If Panjab Eye Hospital is not taken in consideration, this average number becomes 4,780.

2.2.6 Farah Province



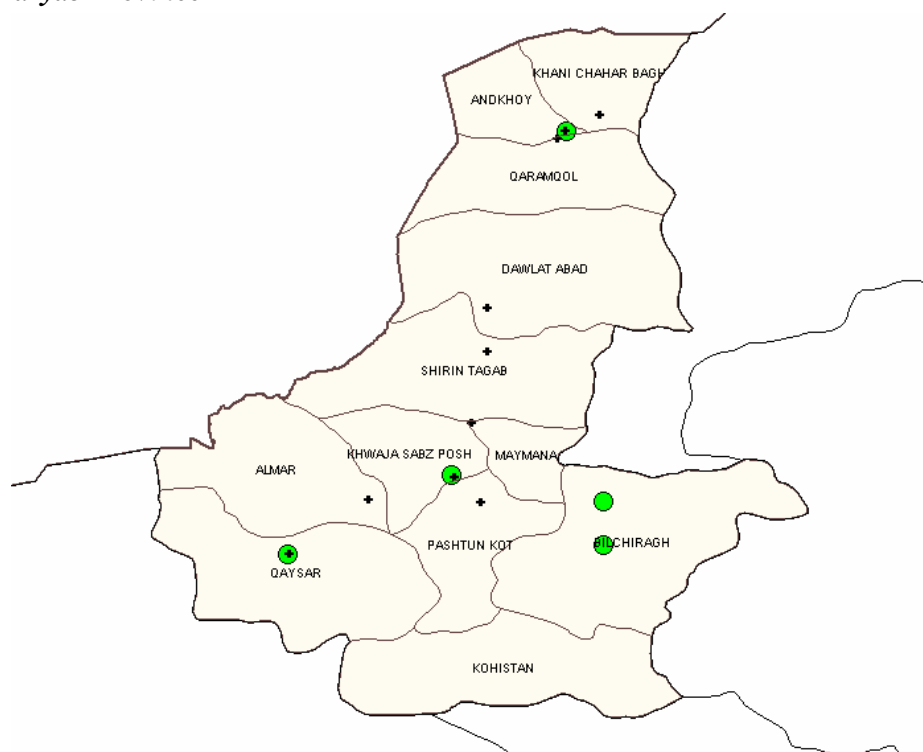
District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
FARAH	Farah Provincial Hospital	92	Yes	Yes	Yes	Yes	Yes		Yes	Yes

Only one facility was surveyed in that province. The Farah Provincial Hospital, located in the district of Farah, provides the four functions of a general hospital plus TB care.

Farah province is particularly large and road communication is not very easy. However, the population density is very low in desert areas and it can be considered that about 15% of the population has adequate access to hospital care. Populations living in the South-West of the Province and North-East of the “Kandahar-Hirat” road have about no access to referral services.

The average number of population per hospital bed in Farah province is about 3,680.

2.2.7 Faryab Province



District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
ANDKHOY	Andkhoy Hospital	35	Yes	Yes	Yes	Yes		Yes	Yes	Yes
BILCHIRAGH	Bilchiragh Hospital	6	Yes		Yes				Yes	
BILCHIRAGH	Garziwal Hospital	20	Yes			Yes			Yes	
MAYMANA	Faryab Central Hospital	45	Yes	Yes	Yes	Yes	Yes		Yes	Yes
QAYSAR	Qaisar Hospital	6	Yes		Yes				Yes	

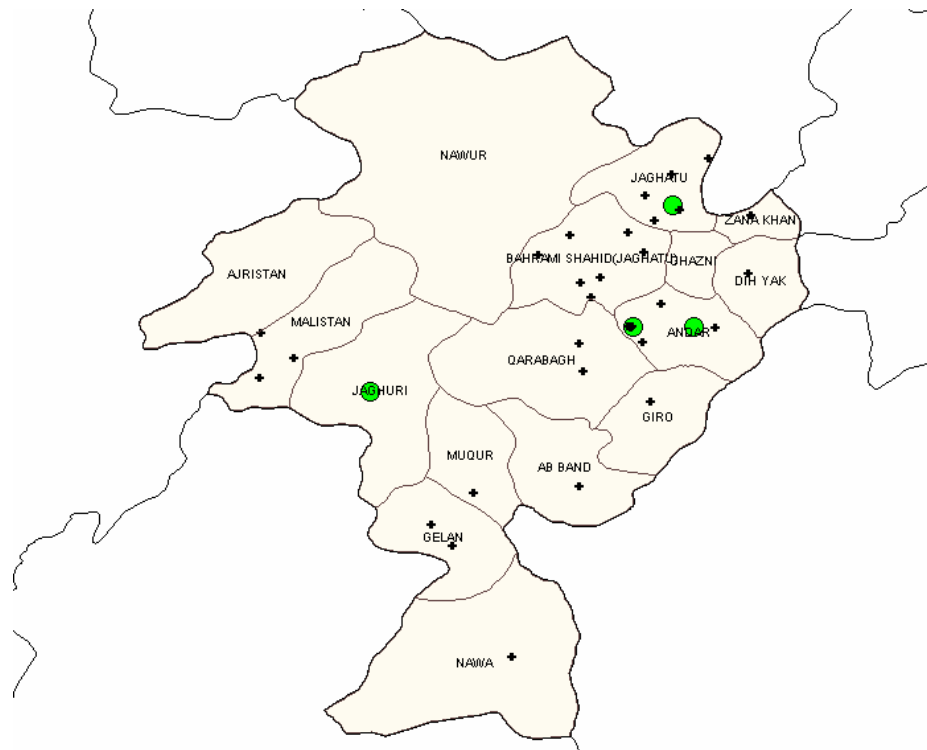
Five facilities were surveyed in Faryab province. However, Bilchiragh Hospital and Qaisar Hospital, both with 6 beds, should be considered health centers, and even Garziwal Hospital, with 20 beds seems closer to a large health center with beds than to a hospital.

Faryab Central Hospital and Andkhoy hospital provide medicine, surgery, maternity and paediatrics services. In addition Faryab Central Hospital supplies ENT and ophthalmology services, whereas Andkhoy hospital has a specialized unit in infectious diseases.

The five facilities are located in the districts of Maimana, Andkhoy, Bilchiragh (2 facilities) and Qaisar respectively. Because road communications are not bad in the province, and facilities are evenly distributed, it can be estimated that 15% of the provincial population has access hospital referral care, especially in the North and the center of the province.

The average population per bed is high: 7,240.

2.2.8 Ghazni Province



District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
ANDAR	Maulawi Abdul Tahir Hospital	25	Yes	Yes	Yes	Yes	Yes			
GHAZNI	Ghazni Civil Provincial Hospital	156	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
JAGHATU	Jaghātu District Hospital	10	Yes							
JAGHURI	Jaghori Hospital	40	Yes	Yes	Yes	Yes	Yes			

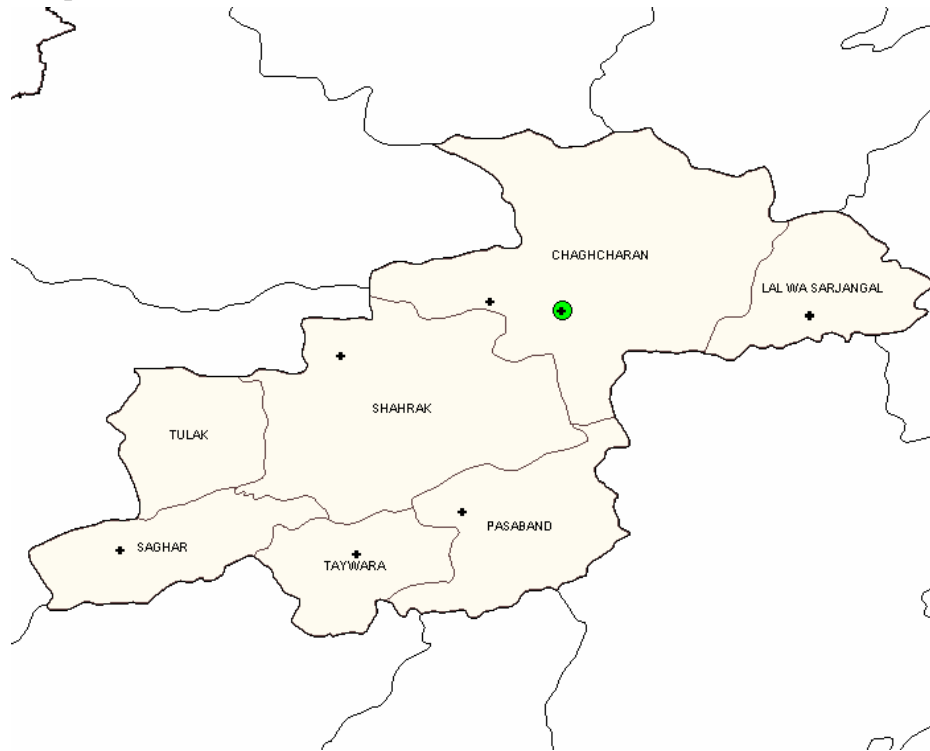
Four facilities were surveyed in the province. The Jaghatu District Hospital, located in the district of Jaghatu in the North East of the province is closer to a health center with beds than to a hospital.

Ghazni Civil Provincial Hospital (district of Ghazni), Jaghori Hospital (district of Jaghori) and Maulawi hospital (district of Andar) provide medicine, surgery, maternity and paediatrics hospitalization services.

Populations in the relatively populated areas north of the Kabul – Kandahar road have access difficulties for hospital care. It can be estimated that over 3 quarters of the population of the province has poor access to hospital referral services.

With a total of 231 hospital beds in the Ghazni province, the average population per bed amounts to 4,030.

2.2.9 Ghor province



District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
CHAGHCHARAN	Ghor Provincial Hospital	36	Yes	Yes	Yes	Yes	Yes		Yes	

One single facility was surveyed in Ghor province. The Ghor provincial hospital (district of Chaghcharan) is particularly small for a provincial referral facility, with only 36 beds (only Sar-i-Pul provincial hospital has a lower number of beds).

Ghor provincial hospital provides the four main services of a general hospital and also provides TB care.

Ghor province has one of the lowest hospital bed availability in the country. The average population per bed is 13,070.

Because of the difficult geography of the province, access to hospital services is particularly problematic. The provincial hospital is not easy to access, and although the population is scattered and living in arduous conditions, relatively denser zones (South and North East of the province) have little or no access to hospital referral.

2.2.10 Hilmand Province



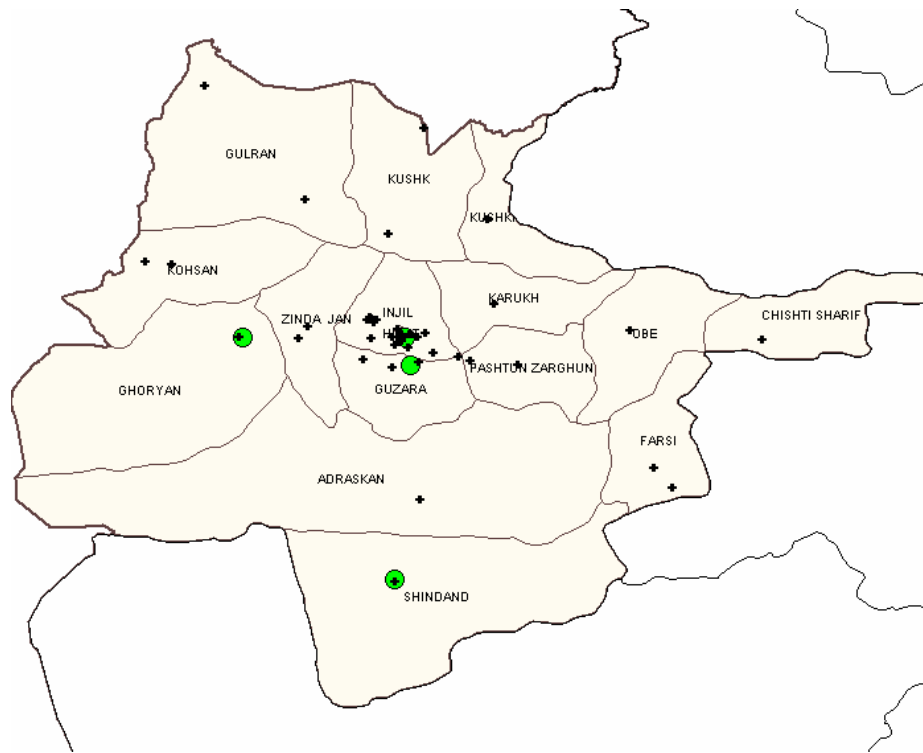
District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
KAJAKI	Naserage Central Health Center	10	Yes	Yes	Yes				Yes	
LASHKAR GAH	Lashkar Gah General Hospital	162	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Two facilities were surveyed in Hilmand province, and one of them is a health center with 10 beds (Naserage central health center, district of Nahri Sarraj). The Lashkar Gah General Hospital, located in the district of Lashkar Gah, serves as the provincial referral facility, and provides the four main services of a general hospital. In addition, it provides specialized services in ophthalmology and TB care.

In spite of the large size of the province, population tends to be concentrated in the non desert areas and it can be assessed that at least 10% to 20% of the population has proper access to referral hospital care. However, populations living South of the General hospital, and North of the Kandahar – Hirat road have little access to hospital care. It is possible that populations living in the North East of Hilmand province access facilities in the South West of Uruzgan.

The average population per hospital bed is 4,330.

2.2.11 Hirat Province



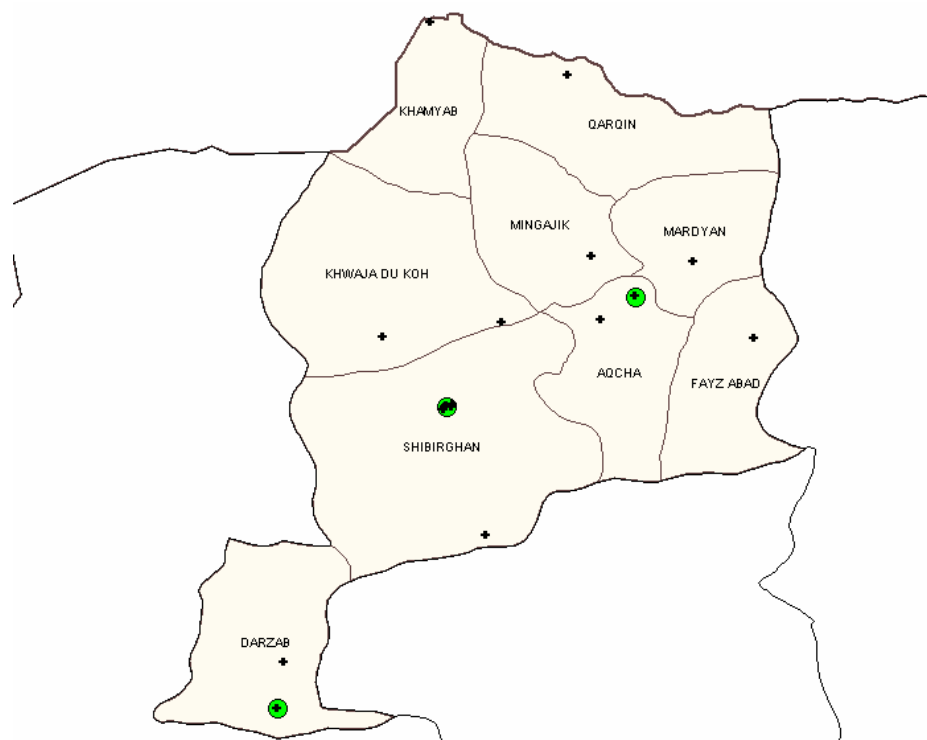
District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
GHORYAN	Ghoryan Hospital	10			Yes				Yes	
GUZARA	Guzara District Hospital	56	Yes	Yes	Yes	Yes			Yes	Yes
HIRAT	Hirat Regional Hospital	491	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SHINDAND	Shindand Hospital	13	Yes		Yes				Yes	

Four facilities were surveyed in Hirat province. The two last facilities, Shindand Hospital and Ghoryan Hospital have a small number of beds and correspond better to the definition of a health center with beds than that of a hospital. The latter seems to mainly provide maternity services.

Hirat province has the largest of all hospitals surveyed: Hirat regional hospital, which provides a wide range of services besides the four main functions of a general hospital. Both Hirat Regional Hospital and Guzara District Hospital provide TB care services.

Because of the large number of beds of the Hirat Regional Hospital, the ratio of population per bed in the province is relatively low, at 1,950. However, sizeable portions of the provincial population have little access to hospital services, especially in the Eastern part of the province.

2.2.12 Jawzjan Province

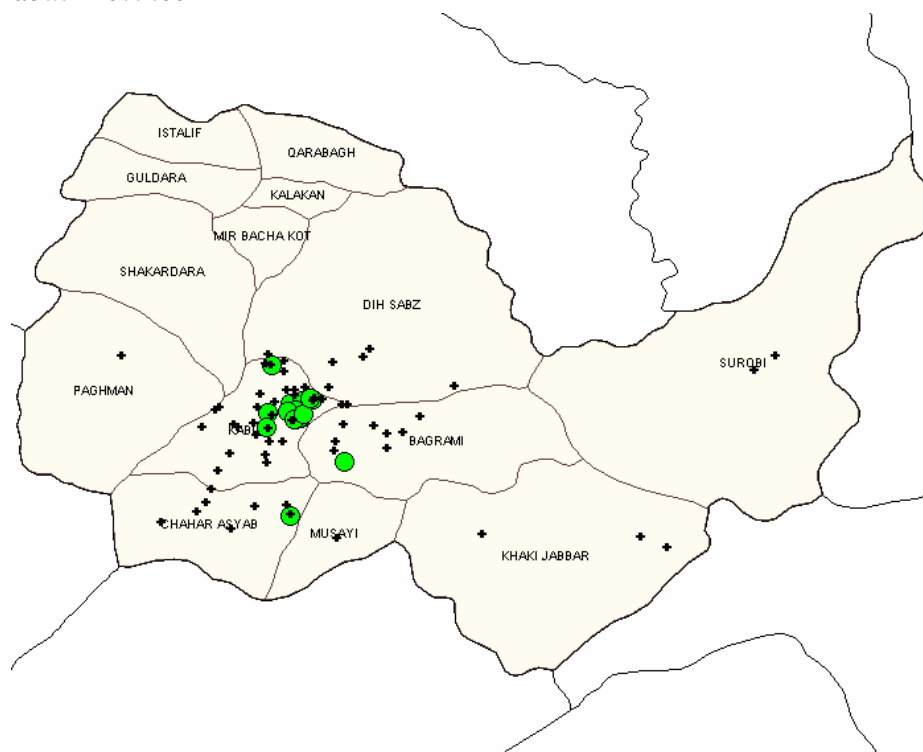


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
AQCHA	Aqcha Hospital	27	Yes	Yes	Yes	Yes		Yes	Yes	Yes
DARZAB	Darzab Basic Health Center	4	Yes		Yes					
SHIBIRGHAN	Provincial Hospital Jawzjan	212	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Three facilities have been surveyed, including the Darzab basic health center, which only has four beds. This health center cannot qualify as a hospital. Aqcha hospital is also a relatively small facility, although it provides most of the services of a district hospital.

The provincial hospital is a large facility, and as the province is little populated, the ratio of population per bed is one of the best in the country, with a figure of 1,670. Indeed, access to the two hospitals of the province is not bad, because of the population pattern, and it can be estimated that about 40% of the provincial population has an acceptable access to hospital services.

2.2.13 Kabul Province



District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
BAGRAMI	Shaiwaky District Hospital	18	Yes			Yes				
CHAHAR ASYAB	Char Asyab Hospital	20	Yes			Yes			Yes	
KABUL	Ahmad Shah Baba Mina	18	Yes		Yes			Yes	Yes	
KABUL	Stomatology Hospital	30		Yes				Yes		
KABUL	Noor Hospital (1)	41		Yes						
KABUL	Kabul Mental Health Hospital	60								
KABUL	Noor Hospital (2)	75	Yes	Yes						
KABUL	Police Hospital	77	Yes	Yes				Yes	Yes	Yes
KABUL	Sadre Abn Seena Hospital	90	Yes	Yes				Yes	Yes	
KABUL	Emergency Surgical Center for War Victims	102		Yes		Yes		Yes	Yes	
KABUL	Khair Khana Hospital	110	Yes	Yes	Yes	Yes	Yes		Yes	Yes
KABUL	Kabul Infectious Diseases Hospital	120	Yes					Yes		
KABUL	Ata Turk Hospital	138				Yes		Yes		
KABUL	IbnSina Emergency Hospital	138	Yes	Yes				Yes	Yes	Yes
KABUL	Indira Ghandi Child Health Hospital	149				Yes		Yes	Yes	

KABUL	Ali Abad Hospital	188	Yes	Yes			Yes	Yes	Yes
KABUL	Wazir Akbar Khan Hospital	240	Yes	Yes			Yes	Yes	Yes
KABUL	Rabia-i-Balkhi Hospital	250	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KABUL	Karte 3 Surgical Hospital	451	Yes	Yes	Yes	Yes	Yes	Yes	
KABUL	Maiwand Hospital Kabul	468		Yes		Yes	Yes		
KABUL	Malalay Maternity Hospital	517		Yes	Yes	Yes	Yes	Yes	Yes

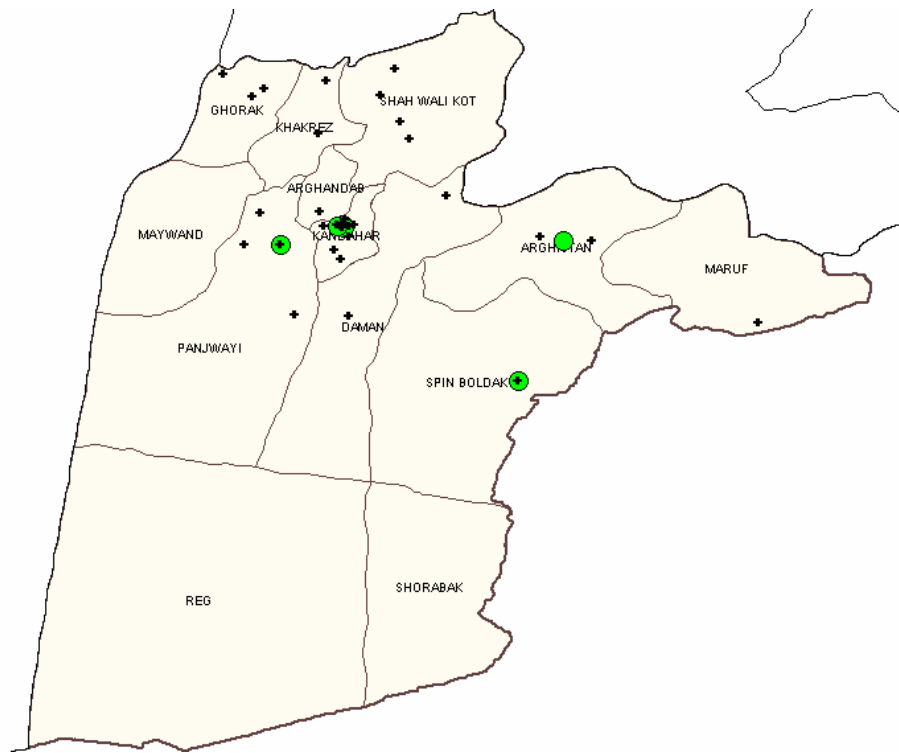
Kabul province both has the largest number of hospitals and the largest number of beds per population of the country. 21 hospitals were surveyed, with a total of over 3,030 beds. Even given the large population of Kabul province, the density of hospital beds is higher in this province than in any other in Afghanistan. The bed density is 1,093 population per bed.

Two aspects have to be taken in consideration when analyzing this figure:

- The ratio in the province with the largest density of beds remains small in comparison with other developing countries and WHO-recommended norms of one hospital bed for 1,000 population.
- In spite of a large density in Kabul province, access to hospital care is not optimal and several districts, notably in the East of the province, have little or no access. It can be estimated that only 60% of the population of the province has access to hospitals.

Several districts have nearly no access to referral, and do not benefit from the presence of many hospital facilities in the province.

2.2.14 Kandahar Province



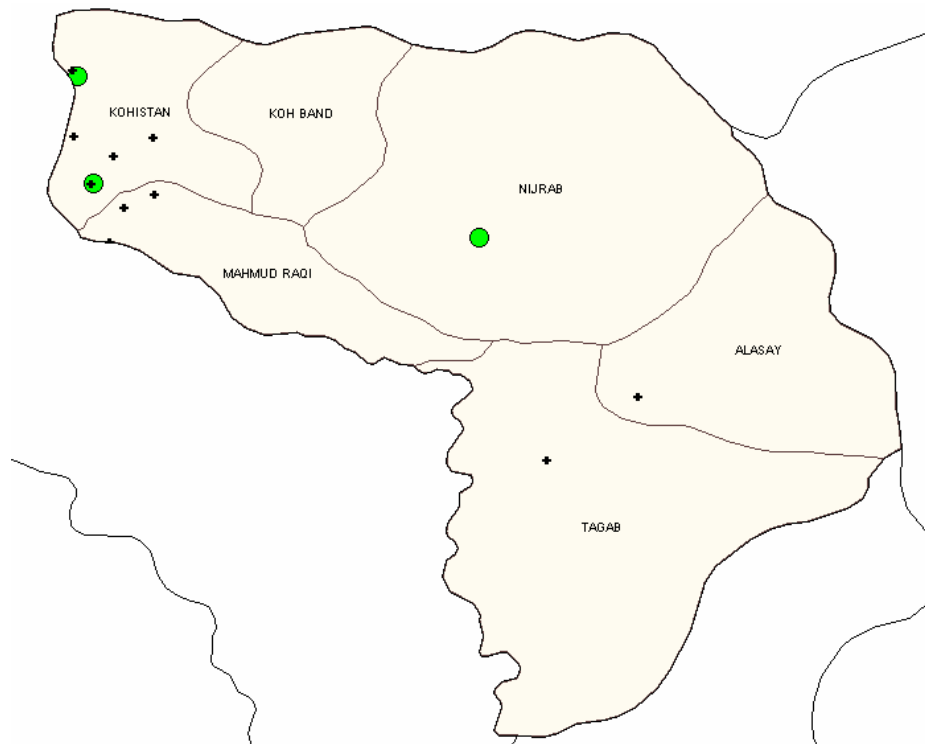
District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
ARGHISTAN	Arghistan District Hospital	8	Yes							
KANDAHAR	Abdul Hakim Hospital	10			Yes					Yes
KANDAHAR	Al Khidmat-Al Hajeri Hospital	14		Yes	Yes				Yes	
KANDAHAR	Kandahar TB Center	18	Yes							
KANDAHAR	Mirwais Hospital	306	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PANJWAYI	Panjwayi District Hospital	6	Yes							
SPIN BOLDAK	Al Ahsan Clinic	0								
SPIN BOLDAK	Spin Boldak Hospital	17	Yes	Yes	Yes	Yes			Yes	

8 facilities were surveyed in Kandahar province, including Al Ahsan clinic, in the South East of the province, which has no beds and does not qualify as a hospital. In addition, two small district hospitals of 6 and 8 beds respectively, hardly qualify for real hospitals and are not in a position to perform the services expected from district hospitals by the BPHS.

Four hospitals are located in the district of Kandahar, with 346 beds, and the rest of the population of the province does not have as good access to hospital care. Several districts in the North West of the province have little of no access to hospital care, and this is also true for the far Eastern districts. It can be estimated that about 35% of the provincial population has adequate access to hospitals, leaving about 580,000 persons without good access.

The bed density in the province was one hospital bed for 2,310 population.

2.2.15 Kapisa Province

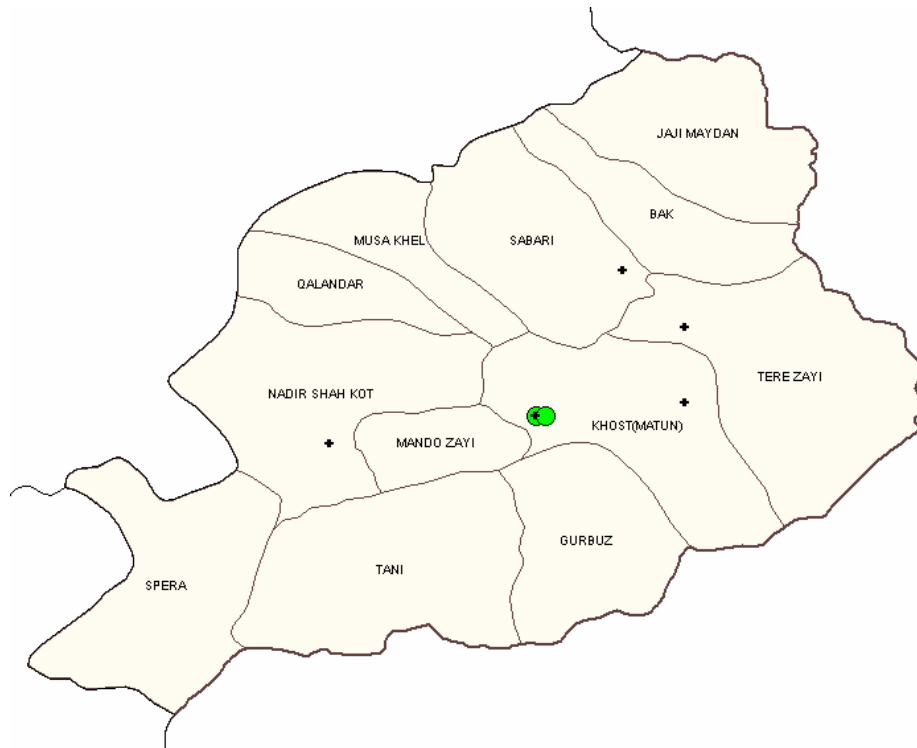


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
KOHISTAN	Nesaji Gulbahar Hospital	68	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MAHMUD RAQI	Kapisa Provincial Hospital	48	Yes			Yes		Yes	Yes	
NIJRAB	Nijrab District Hospital	21	Yes			Yes			Yes	

Three hospitals were surveyed in the province, two of them in the same Western district of Kohistan. Kapisa is a province where inequities of access distribution are particularly clear. The overall density is one bed for 2,550 population.

However, this ratio much higher (one bed for 830 inhabitants) in the district of Kohistan, whereas districts such as Alasay, Koh Band and Tagab, with a total population of more than 110,000 inhabitants, have no hospital access at all. Overall, less than 40% of the population has appropriate access to hospital care.

2.2.16 Khost Province



District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
KHOST(MATUN)	Matun Baba Hospital	20	Yes	Yes					Yes	
KHOST(MATUN)	Khost Hospital	83	Yes	Yes	Yes	Yes	Yes		Yes	

The survey covered two hospitals in the province, for a total of 101 beds. The two facilities were both located in the Khost Matun district, and the other districts of the province had little or no access to hospital care. It can be estimated that about 10% of the population of the province has access to hospital care.

However, given the low level of population (about 300,000 inhabitants), the overall ratio of the province amounted to one bed for 2,970 population.

2.2.17 Kunar Province

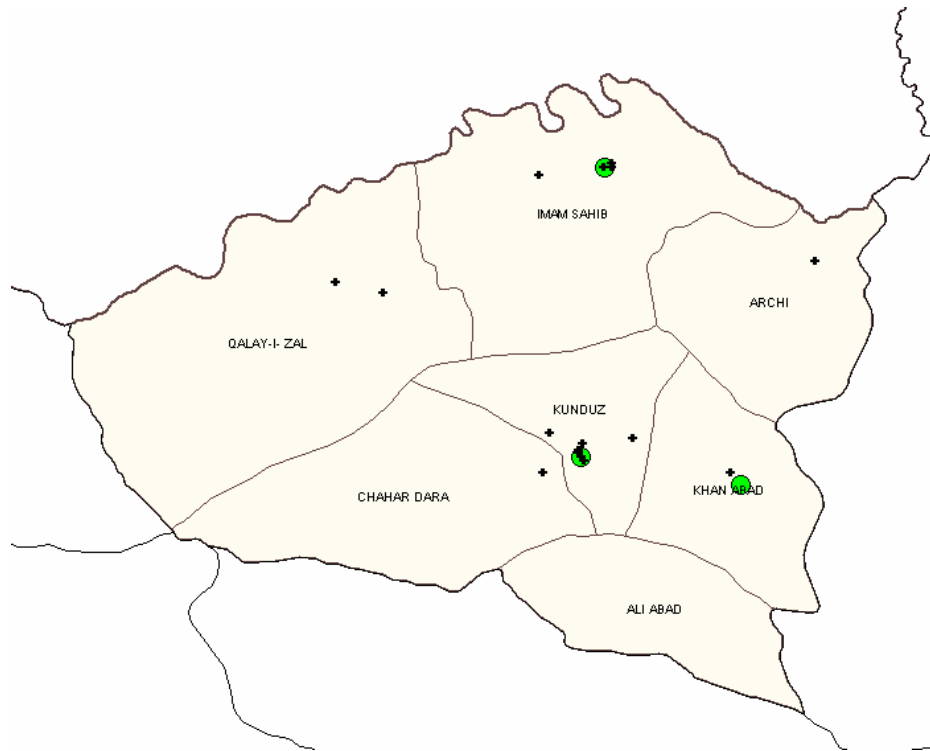


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
ASAD ABAD	Asad Abad Hospital	66	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Only one facility was surveyed in Kunar province. Asad Abad hospital is not located in the most populated area of the province, but can be reached by an acceptable road network from many places. However, it can be estimated that only about 12% of the provincial population has adequate access, as some populated districts such as Chawkay and Nurgal are too far away from the hospital for the population to be considered having appropriate access.

The overall bed density amounted to one bed for 4,640 population.

2.2.18 Kunduz Province

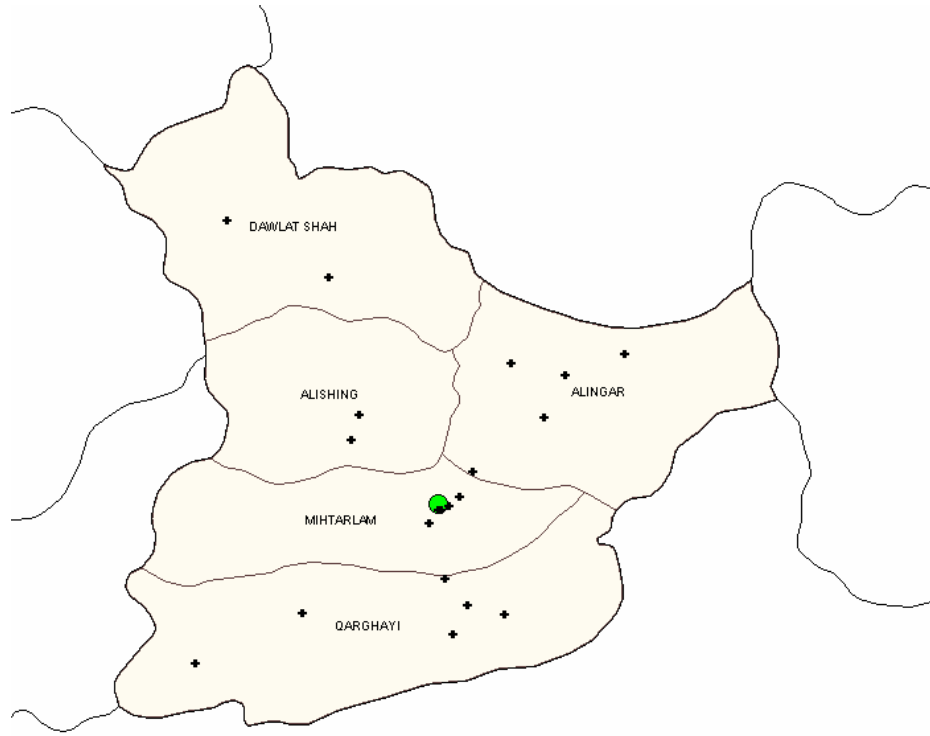


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
IMAM SAHIB	Imam Sahib Hospital	0								
KHAN ABAD	Khan Abad Hospital	0			Yes					
KUNDUZ	Kunduz Regional Hospital	87	Yes	Yes	Yes			Yes	Yes	Yes

The survey identified three facilities, but two of them had no hospital bed, although they are called “hospitals”. As a result, the bed density in that populated province was one bed for 10,000 inhabitants, one of the worst in the country.

Only part of the Kunduz district could be considered having acceptable access to hospital care and populated districts such as Khan Abad, Imam Sahib and Archi had no access to hospital care. As a result, the overall proportion of the population with acceptable access could be calculated at 12% with about 100,000 of the 820,000 inhabitants of the province having adequate access.

2.2.19 Laghman Province

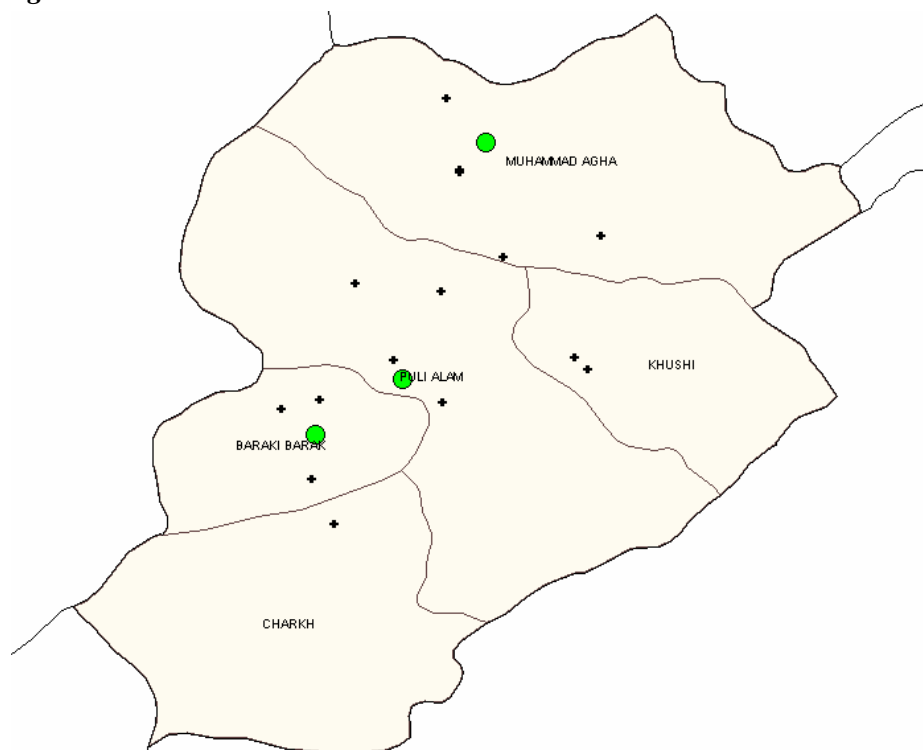


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
MIHTARLAM	Mehtar Laam Baba Regional Hospital	77	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Only one facility was surveyed in the province. It is a relatively small facility in a rather populated province, and the average ratio was one bed for 5,820 population.

There are several relatively densely populated districts in the province, and although they sometimes can access the Mehtar Laam Baba Regional hospital by road, the distances are not small, and the population access remains low. It can be estimated at 18%.

2.2.20 Logar Province

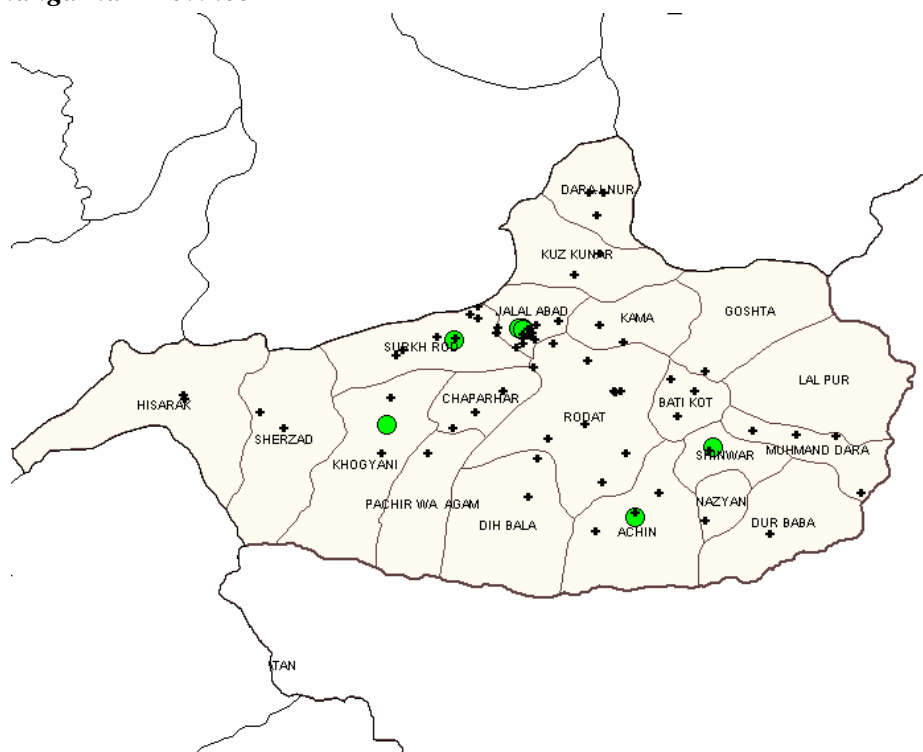


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
BARAKI BARAK	Baraki Rojan Hospital	56	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
MUHAMMAD AGHA	Mohammad Agha District Hospital	12	Yes	Yes	Yes					
PULI ALAM	Nayab Aminullah Khan Logar Hospital	50	Yes		Yes				Yes	

Three facilities were surveyed in the Logar province. They are located in three different districts, providing a better access than in many other provinces. The bed/population ratio amounted to one bed for 2,470 inhabitants. The facilities are relatively small, especially in Muhammad Agha district.

Populations in the south and east of the province were poorly served by the existing hospitals, and the share of the overall population with appropriate access to hospital care can be estimated at 28%.

2.2.21 Nangarhar Province



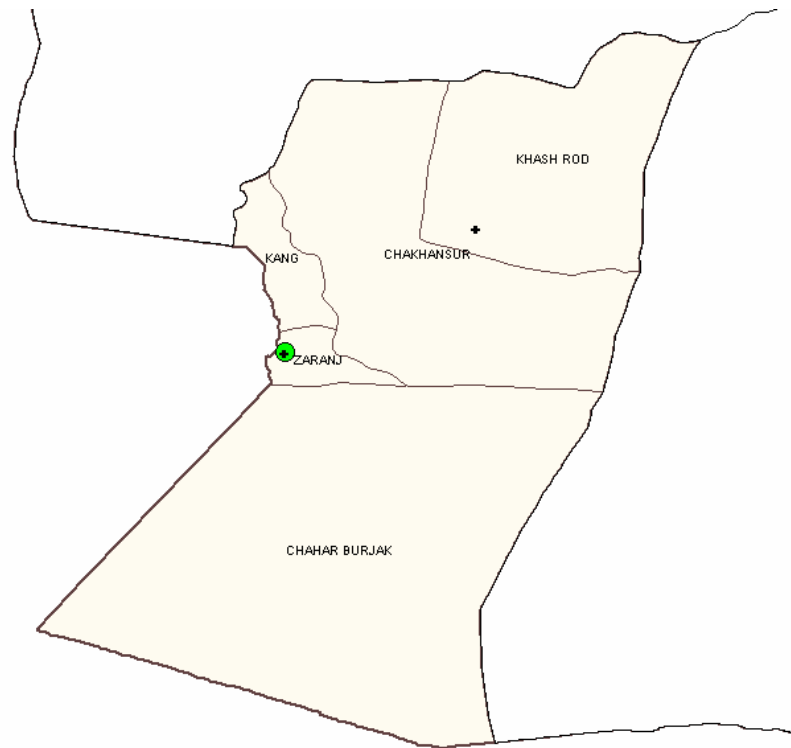
District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
ACHIN	Achin Basic Health Clinic	0			Yes					
JALAL ABAD	Fatumatu Zahra	50	Yes	Yes		Yes		Yes	Yes	Yes
JALAL ABAD	Medical Hospital of Nangarhar	288		Yes	Yes	Yes	Yes	Yes		Yes
JALAL ABAD	General Hospital of Public Health	410	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KHOGYANI	Khugyani Hospital	20	Yes		Yes	Yes			Yes	
SHINWAR	Shenwar Ghani Khail Hospital	52	Yes	Yes	Yes	Yes	Yes		Yes	
SURKH ROD	Sultan Pur Clinic	0								

Nangarhar province has a large number of facilities, and the survey covered 7 hospitals. Actually, two facilities proved to be health centers without beds, and could not be considered as hospitals. Jalalabad has three hospitals for a total of 768 beds, and the General Hospital of Public Health is one of the largest in the country.

In terms of total number of beds, Nangarhar province is the second best served in the country, with a ratio of one bed for 1,300 population. However, the beds are not evenly distributed in the province, and some densely populated districts do not have access to hospital care (Sukh Rod, Muhmand Dara, Bati Kot), whereas in the Jalalabad district, the bed density is 1 for 240 inhabitants.

Overall, it can be estimated that 27% of the population of the province has appropriate access to hospital care.

2.2.22 Nimroz Province

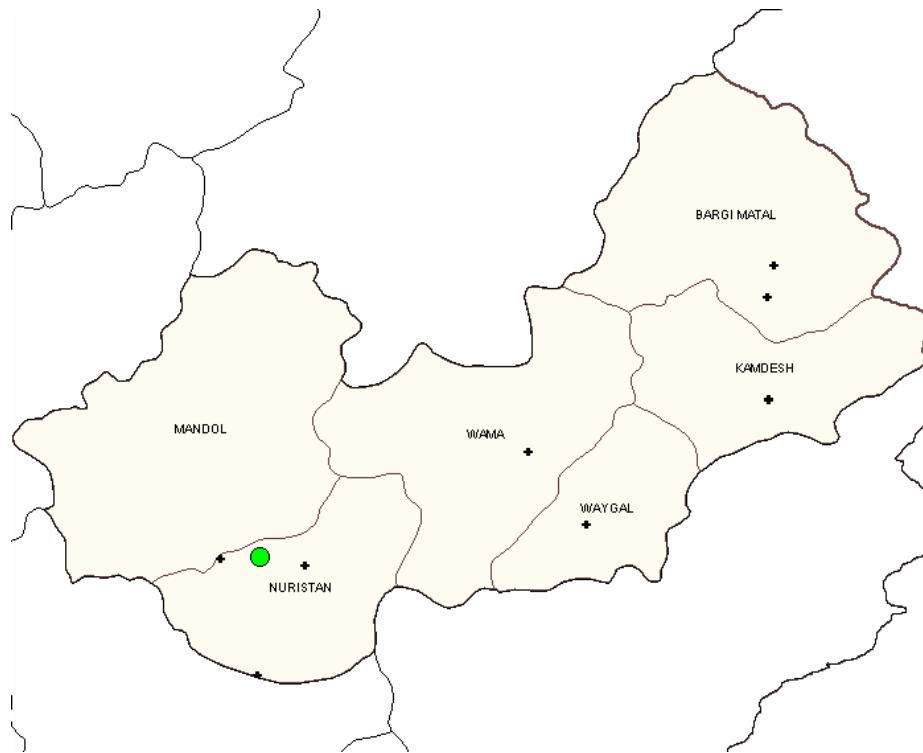


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
ZARANJ	Nimroz Hospital	32	Yes	Yes	Yes	Yes		Yes	Yes	

Nimroz is one of the least populated provinces in the country, and only one small hospital was surveyed, in Zaranj. The ratio in the province is one bed for 4,980 inhabitants. Because of the desert nature of the province, the population is concentrated in Zaranj and along the roads leading to Zaranj.

This population pattern provides a better than expected access to hospital care, but only 10% of the population can be considered with appropriate access. For the remaining 90%, distances are large for reach the only facility in the province, with no possibilities of reaching another hospital in a neighboring province for most of the population.

2.2.23 Nuristan Province

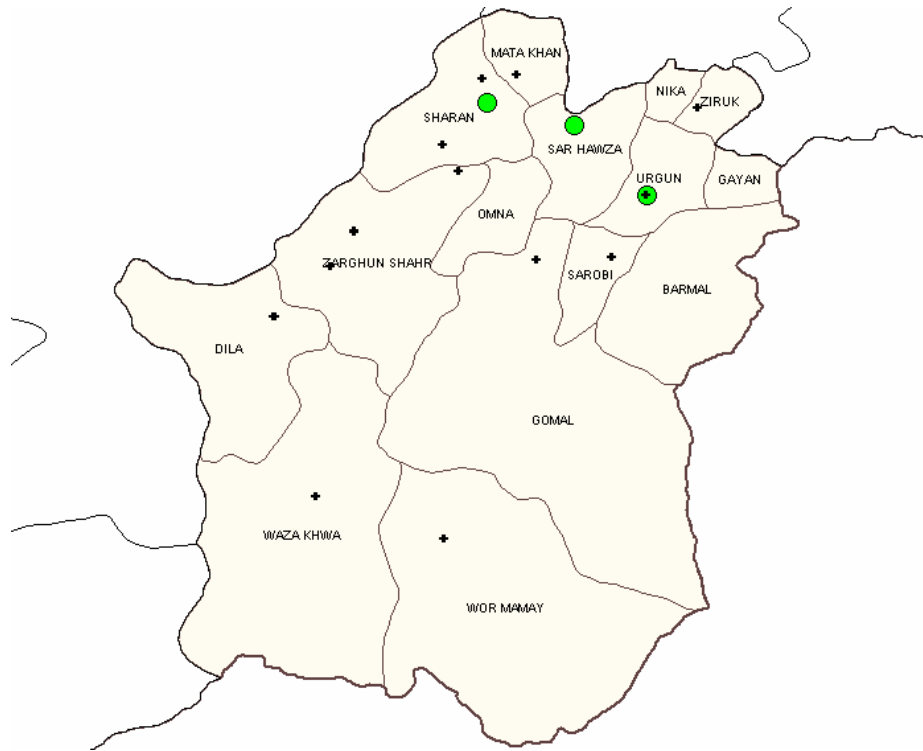


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
NURISTAN	Waant Hospital	10	Yes			Yes			Yes	

Nuristan has the smallest population of the country, and the poorest access to care as well. The only facility surveyed was a small 10 bed facility that could not be considered as a real hospital because of its small size and poor equipment.

The bed/population ratio of Nuristan province was not significant, but it amounted to one bed for 11,170 inhabitants. In addition, because of the location of the facility and the difficult terrain of the province, it can be estimated that less than 5% of the provincial population had adequate access to hospital care.

2.2.24 Paktika Province

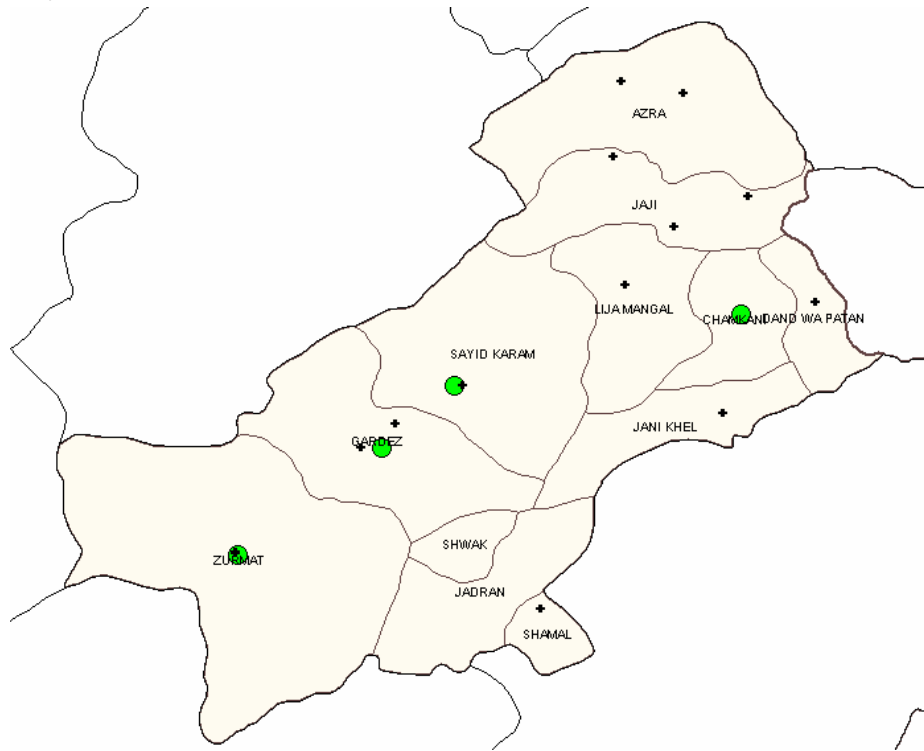


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
SAR HAWZA	Sar Hawza Clinic	11	Yes						Yes	
SHARAN	Sharan Hospital	74	Yes	Yes	Yes	Yes	Yes		Yes	
URGUN	Urgun Hospital	20	Yes			Yes			Yes	

In Paktika province, three facilities were surveyed. Only Sharan hospital has a size and number of beds corresponding to a real hospital. The two other surveyed facilities were small and did not provide the services required by the BPHS from a district hospital. All the facilities are located in the North of the province.

Because of the relatively low level of population of the province, the ratio was one bed for 3,350 inhabitants. It can be estimated that less than 15% of the population has adequate access to hospital services.

2.2.25 Paktya Province

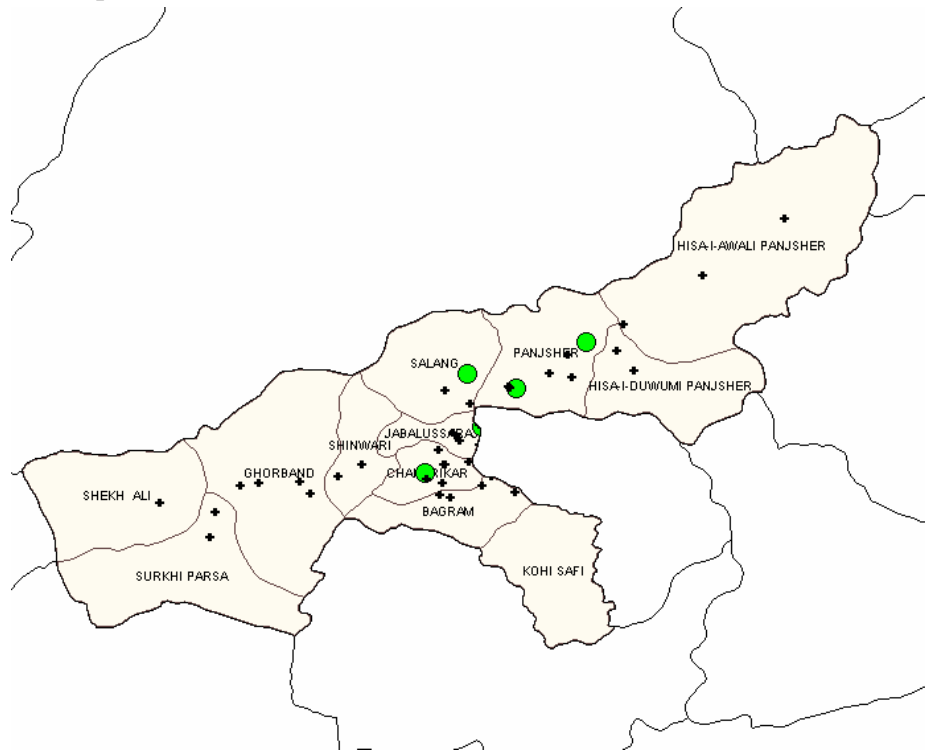


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
CHAMKANI	Wamy Hospital	60	Yes	Yes	Yes	Yes	Yes		Yes	
GARDEZ	Gardez Civil Hospital	58	Yes	Yes	Yes	Yes	Yes		Yes	
SAYID KARAM	Said Karam Hospital	6			Yes				Yes	
ZURMAT	Tamir Hospital	2			Yes				Yes	

The province of Paktya had two of the smallest facilities called “hospital” in the survey, with respectively 1 and 2 beds. These facilities are clearly health centers, and their name is misleading. Two real hospitals were surveyed in addition to those small facilities.

The bed/population ratio was calculated at one bed for 3,430 inhabitants. As only two “real” hospitals can be taken in consideration when measuring access of the population, it was estimated at 8%.

2.2.26 Parwan province

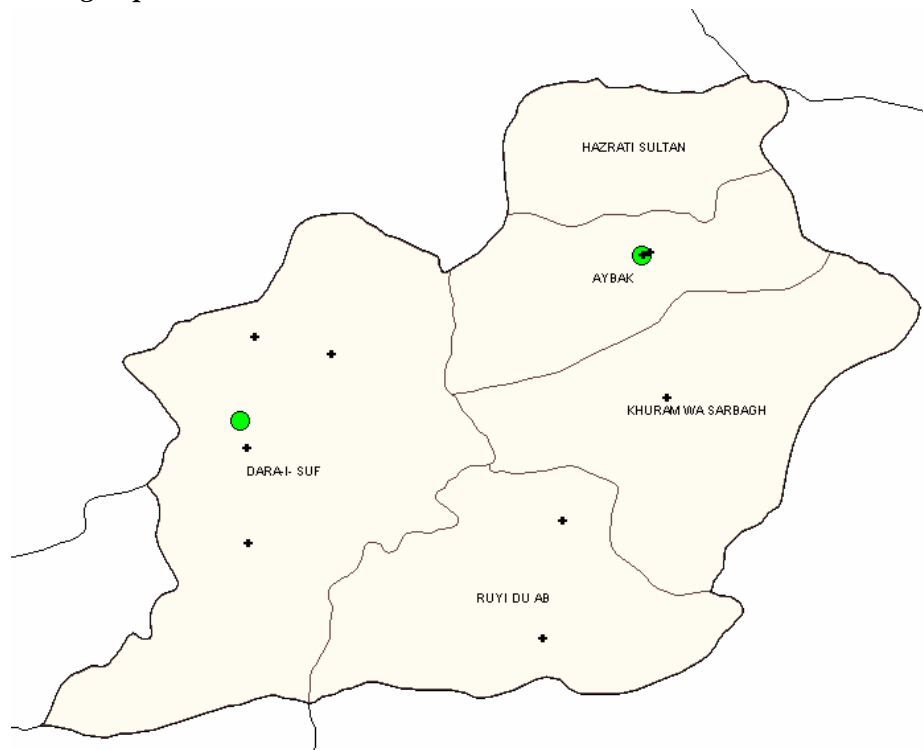


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
CHAHARIKAR	Parwan Provincial Hospital	60	Yes	Yes	Yes	Yes	Yes		Yes	Yes
PANJSHER(3)	Changaram Hospital	28	Yes						Yes	
PANJSHER(3)	Rukha Hospital	28	Yes		Yes				Yes	
PANJSHER(3)	Panjshir Emergency Surgical Centre	85		Yes	Yes	Yes	Yes	Yes	Yes	

Four hospitals were concerned by the survey, and the Parwan Emergency Surgical Centre proved to have more functional beds than the 49 theoretical ones. Charikar provincial hospital is located in the most populated district, and provides all the services of a district hospital. The three other facilities are located in the same district of Panshjeer. The ratio of population per bed, calculated on the official bed count, amounted to 4,630.

The rate of access was found to be better than in many provinces, at 30%. However, the western and southern parts of the province are poorly served, and have no access to hospital facilities.

2.2.27 Samangan province

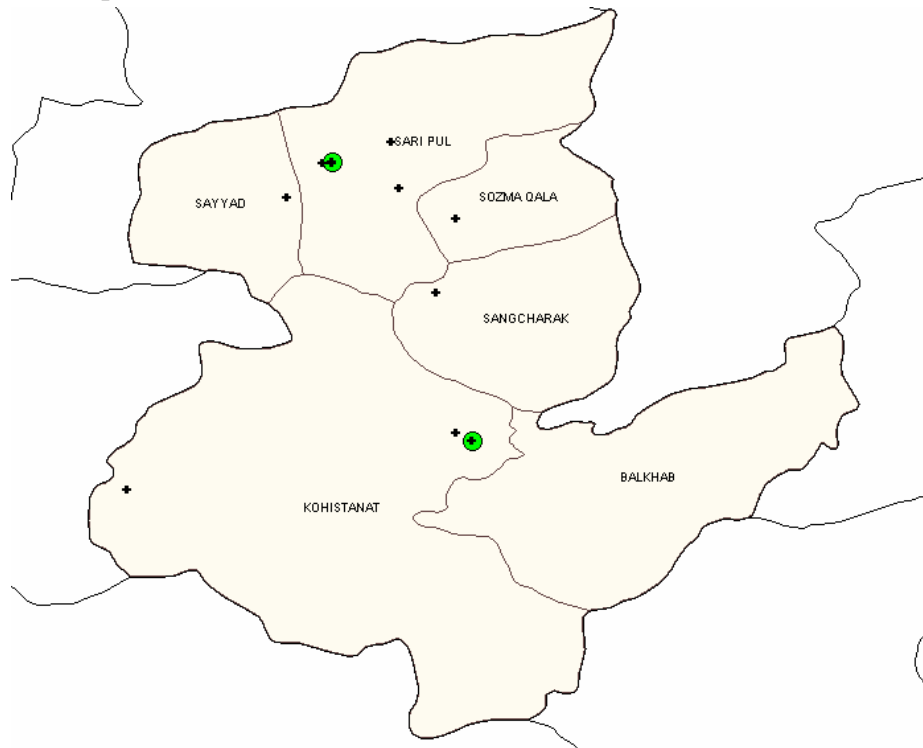


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
AYBAK	ARCS Health Clinic	41	Yes	Yes	Yes	Yes	Yes		Yes	Yes
DARA-I- SUF	Deh-i-Village Clinic	23	Yes						Yes	

The survey covered two small facilities in Samangan province, and none bore the name “hospital”. They were found to provide some district hospital services to the population, nevertheless. Because of the small size of the population of the province, the population to bed ratio was not very small, in spite of the small size of hospital facilities, and was found to amount to 4,750.

Accessibility to hospital services was one of the poorest in the country, with less than 10% of the population served. Long distances and difficult communications in the province reduced access to hospitals.

2.2.28 Sari Pul province



District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
SANGCHARAK	Tokzar Hospital	10		Yes						
SARI PUL	Sar-i-Pul Provincial Hospital	34	Yes	Yes	Yes			Yes	Yes	

Two small facilities were surveyed in Sari Pul province. The small Tokzar hospital, with 10 beds, does not perform at the level of a district hospital. This province has one of the worst population to bed ratio, with 11,690.

Access has been calculated to amount to less than 15%

2.2.29 Takhar province

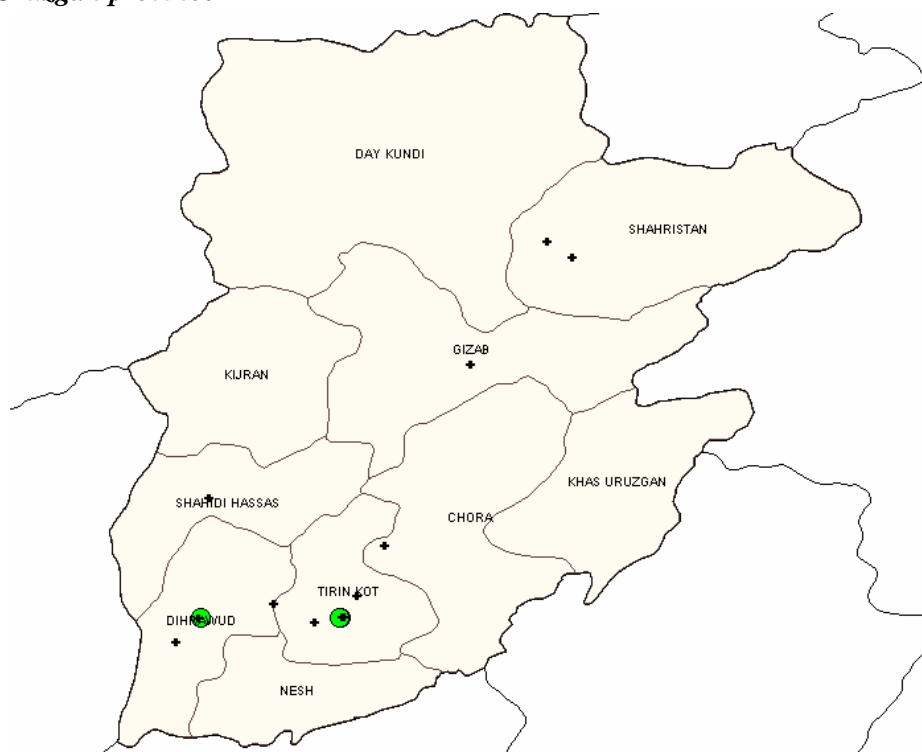


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
FARKHAR	Farkhar Hospital	20	Yes		Yes				Yes	
RUSTAQ	Rustaq Hospital	9	Yes						Yes	
TALUQAN	Taloqan Central Hospital	61	Yes	Yes	Yes		Yes	Yes	Yes	Yes
YANGI QALA	Dasht-i-Qala Hospital	70	Yes	Yes	Yes			Yes	Yes	

Four facilities were surveyed in Takhar province, and one of them, Rustaq hospital with 9 beds, did not correspond to the level of a district hospital. Takhar is a populated province, with about 690,000 inhabitants, and the population to bed ratio of the province amounted to 4,170.

The four facilities are located in four different districts, and this increases access, although the Northern districts are not served. The hospital access rate was estimated at 20%.

2.2.30 Uruzgan province

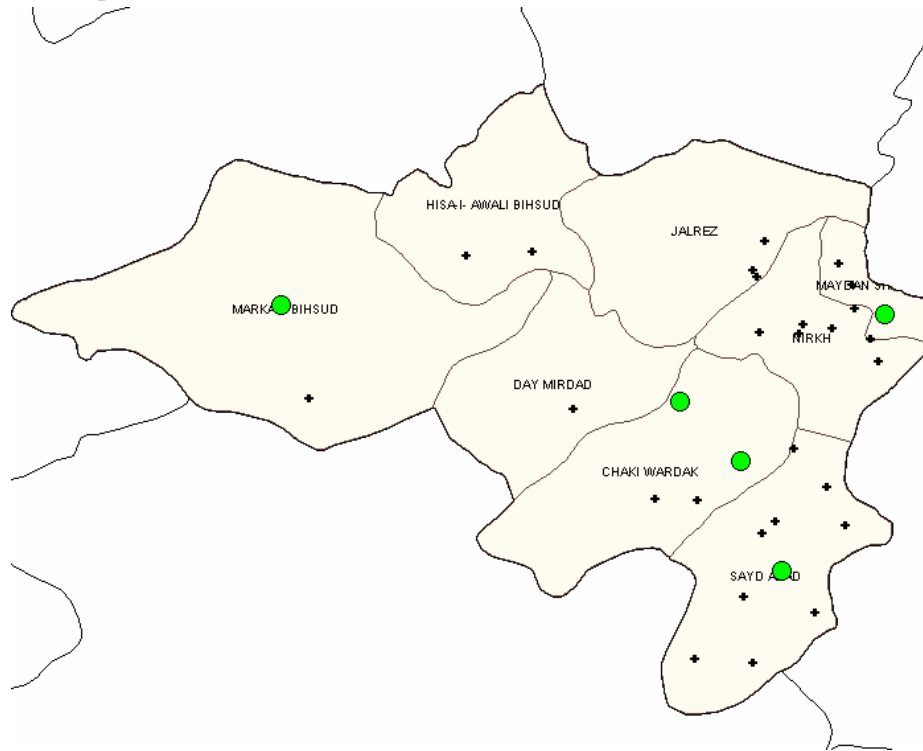


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
DIHRAWUD	Dehrawood Hospital	8	Yes							
TIRIN KOT	Tirinkot CHC	10	Yes							
TIRIN KOT	Uruzgan Hospital	21	Yes			Yes				

Only three hospitals were identified and surveyed in Uruzgan province. They are of too small a size to perform a provincial referral role, and do not even fill the functions of district hospitals. For instance, there is no maternity service in Uruzgan. In addition, they are all located in the Southern part of the province.

The availability of hospital beds is the lowest in the whole country, with a population per bed ratio of 15,950. Because of the concentration of facilities in one part of this large province, and the scattered population, it can be estimated that less than 5% of the provincial population has appropriate access to hospital care.

2.2.31 Wardak province

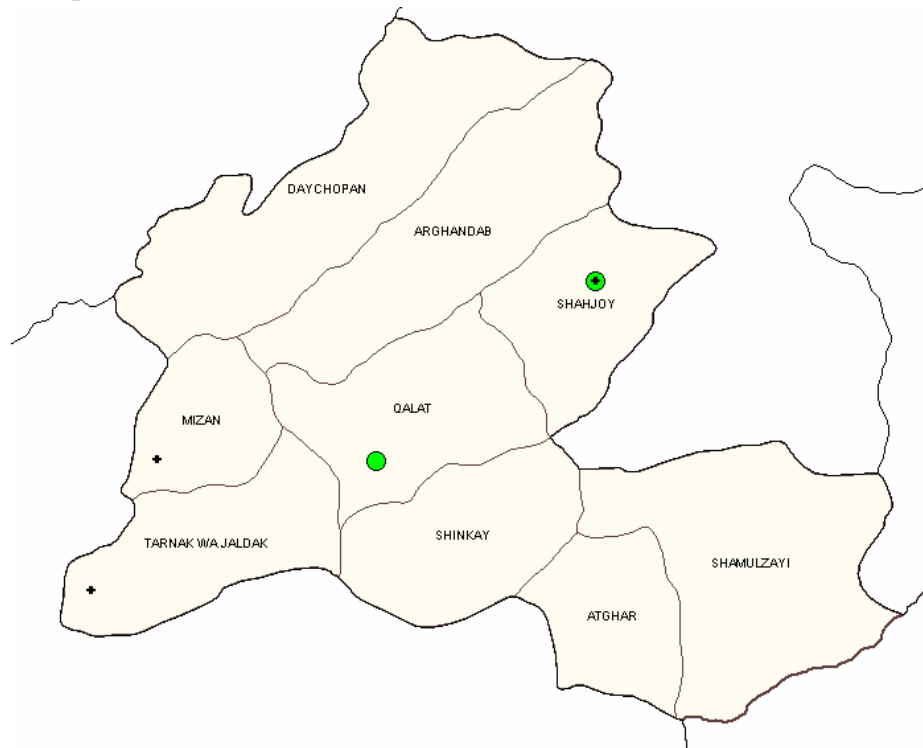


District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
CHAKI WARDAK	Chak Wardak Hospital	67	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
DAY MIRDAD	Inferally Hospital	29	Yes		Yes				Yes	
MARKAZI BIHSUD	Shuhada Tagab, Behsud Hospital	18	Yes	Yes	Yes	Yes	Yes			
MAYDAN SHAHR	Maidan Wardak Hospital	38	Yes		Yes	Yes			Yes	
SAYD ABAD	Quiat Al Khair Hospital	35	Yes	Yes	Yes		Yes		Yes	

Wardak province presents a sharp contrast with Uruzgan. With a population 1/3 lower, it has four times as many hospital beds, and they are distributed all around the province. The five surveyed facilities belonged to five different districts, thus increasing access capacity.

The population per bed ratio is about 2,210 and it can be estimated that nearly 20% of the population has appropriate access to referral facilities.

2.2.32 Zabul province



District	Hospital Name	Beds	MED	SUR	MAT	PED	EOC	ICU	ER	BB
QALAT	Qalat Hospital	104	Yes	Yes		Yes		Yes	Yes	
SHAHJOY	Shahjoi Hospital	0								

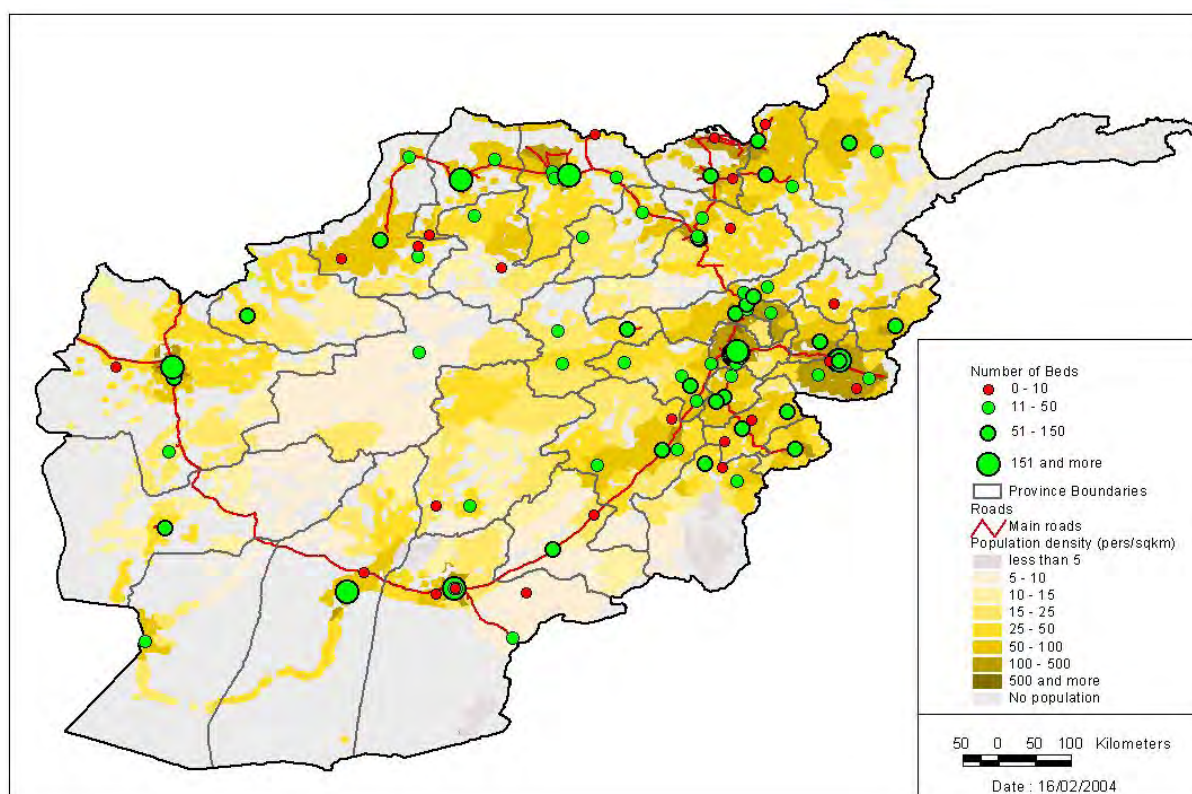
Two facilities were surveyed in Zabul province. One of them, Shahjoi hospital had no bed, and corresponded to a small health center. On the other hand, Qalat hospital plays the role of a provincial referral facility for the whole province. It is however a large province and the referral hospital only serves a small portion of the population, which is scattered along the valleys.

The population per bed ratio is “favorable”, with a value of 2,330, but the access rate is poor, and can be estimated at less than 5%.

2.3 Bed count

The number of beds of surveyed Afghan hospitals was comprised between 0 and 527.

The survey covered most hospitals in the public sector: Ministry of Health, Ministry of Interior, Ministry of Mines. The 117 hospitals which were visited during the assessment are displayed in the map hereunder.



It was found that several facilities surveyed were not real hospitals. 8 of the facilities had less than 3 beds, although 3 facilities were called “hospital”.

Facilities with 0 beds

Province	Hospital name
KANDAHAR	Al Ahsan Clinic
KUNDUZ	Imam Sahib Hospital
KUNDUZ	Khan Abad Hospital
NANGARHAR	Achin Basic Health Clinic
NANGARHAR	Sultan Pur Clinic
PAKTYA	Said Karam Hospital
PAKTYA	Tamir Hospital
ZABUL	Shahjoi Hospital

In 48 of 117 hospitals (41%), there was a discrepancy between two figures provided to the surveyors by the same administrative interlocutor: the “official number of beds” of the hospital, and the sum of the beds, ward by ward. In 16 cases (one third), this discrepancy was minor and the variation was less than 5% of the beds. In 13 additional cases, the discrepancy remained between 5% and 10%. However, in the 19 remaining hospitals, there was a major discrepancy, sometimes as high as 60%.

Some specific cases provide an interesting analysis of these discrepancies.

- in Qala-i-Naw District Hospital (*Badghis province*), the official number of beds is 60: 25 female and 35 male. However, on a ward by ward count, the administrative interlocutor of the surveyors indicated that the hospital actually had 86 beds, and the visual check made by surveyors confirmed the latter figure. The discrepancy was 43%.
- In Faryab Central hospital (*Faryab province*), the difference was in the other direction. The official number of beds is 100: 60 female and 40 male. However, the ward by ward count resulted in a total of 43 beds, and the visual check came up with the final figure of 45 beds. The overestimation of beds was 57%.
- In the Emergency Surgical Center for War Victims (*Kabul province*), the official number of beds is 102. However, the ward by ward addition by the administrator led to a figure of 81. Finally, the visual check by the supervisors confirmed that there really were 102 beds in this facility. The same problem occurred in the Panjshir Emergency Surgery hospital (*Parwan province*) where the visual count confirmed the initial figure of 85 beds whereas the administrator only found 49 in a ward by ward count.
- Finally, in Qalat hospital (*Zabul province*), the official number of beds is 80: 30 female and 50 male. However, the ward by ward count led to a total of 102 beds (30% discrepancy), and the visual check yielded a count of 104 beds.

In other cases, major discrepancies were registered between the number of beds announced by the administrator, and the number of beds found by the surveyors. Although some of these discrepancies may sometimes be explained by different definitions of a “hospital bed” and rehabilitation and expansion activities, they can be very large.

- In Malalay Maternity hospital (*Kabul province*), the official number of beds is 300 but the surveyors identified 517 beds.
- In Maiwand Hospital (*Kabul province*), the surveyors saw 468 beds instead of the 340 officially present.

These discrepancies show that there may be a significant difference between the official number of beds of a hospital, on which budgets and personnel allocations may be based, and the reality. Correcting these discrepancies will be needed for planners and administrators alike.

2.4 Physical condition of hospitals

Overall, Afghan hospitals are not very old. Dates of construction indicated by hospital directors during the interviews ranged from 1312 (1933) (Maiwand Hospital in Kabul) to 1382 (2002) Sharan District hospital in *Paktika province*).

The physical condition of most facilities was acceptable, and there was a general trend to take good care of hospital sites.

At present 43 facilities (37%) undergo repairs or reconstruction. This is creating heavy constraints of organization and management.

53 hospitals (45.3%) harbor an extension project, sometimes in combination with some form of rehabilitation.

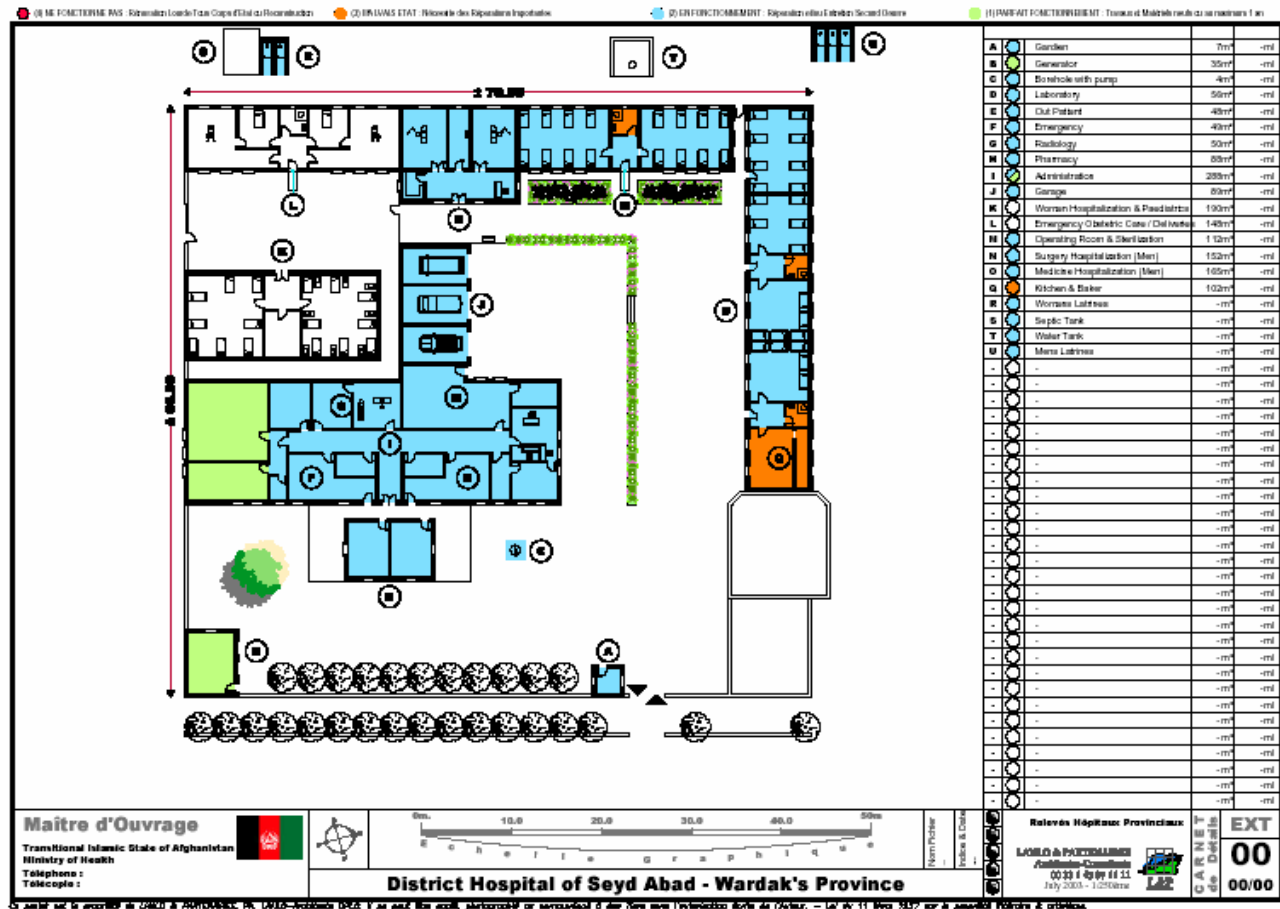
47 of the 117 hospitals that were surveyed (40%) had suffered some damage from acts of war.

The dates of war damage ranged from 1358 (1979) for the oldest, to 1380 (2001). The peak of war damage took place during year 1371 (1992).

In addition to damage created by acts of war, other destructions took place: two hospitals of Wardak province were damaged by an earthquake in 1379 (2000). However, site cleaning was generally appropriately done, and very few facilities had wrecked buildings or ruins remaining on the site.

Access to electricity, water and sanitation, and other building related facilities are addressed in the chapters presenting the functional analysis of support services and medical units.

The survey was an opportunity to try to establish maps of the hospital facilities. A detailed map was prepared for one hospital, as an example, and is copied here below. Based on the survey, it would be easy for Ministry of Health services to have similar maps prepared for other hospital facilities.



3 Building-associated facilities and services

During the survey, particular attention was paid to the situation of hospitals regarding access to electrical power, safe water, sanitation, waste disposal, capacity to communicate by phone and vehicles to transport patients.

Summary and recommendations

19 hospitals had no access to power at all (16%), but a much larger number, 34, had a haphazard supply of electricity with the result that they had power less than 12 hours per day. On the whole more than 45% of all hospitals surveyed had poor or no access to electrical power. Improving access to electricity, mainly through the rehabilitation of generators is one of the top investment priorities in Afghanistan. Laboratories, diagnostic services, appropriate cold chain management, computerized management, etc. depend on regular access to electrical power, which was found inadequate in nearly half of all hospitals.

The situation was comparable regarding access to safe water. 20 hospitals had no access to water at all (17%) and an additional 12 had access less than 12 hours per day. As a result, 28% of all Afghan hospitals had poor or no access to water. The public supply of water through city networks is so problematic that, of the 14 hospitals that declared being connected to a local water distribution network (12%), 12 also had a water tower to keep water supply going in case of network failure. Improvement of access to water is another top priority for Afghan hospitals, and should be envisaged in an overall improvement of water distribution networks in the towns where hospitals are established.

Sanitation was found to be better than is often the case in developing countries, and improvements should concentrate on large facilities where the sanitation system has broken down or does not perform adequately. On the other hand, solid waste disposal was found insufficient in most facilities, and medical waste management require improvement in nearly all facilities.

3.1 Survey approach

Instead of only looking at the presence of access to facilities, the survey tried to establish how functional this access really was in all the surveyed hospitals. It is clear, for instance, that several facilities that have a “theoretical access” to electricity actually only have power supply part of the time, and sometimes very seldom. The same applies to water. It was important to gather this qualitative information so that investment priorities appear clearly.

The same approach was applied to vehicles. Access to transportation could not be limited to the presence of one or several vehicles among the hospital’s assets, but had to include the level of functionality of these vehicles. In many cases it was found that vehicles existed, but were in such condition that the transportation service which they were supposed to provide was actually not available.

This combination of “quantitative and qualitative” data was used to build cluster indicators of functionality for these building-associated services. The indicators allow to determine easily where the investment priorities are in each facility and to make cross-comparisons.

3.2 Access to electrical power

Less than half of Afghan hospitals are connected to an electrical network. Only 48 facilities (41%) had access to a city electrical connection, and 15 of them were in Kabul. However, the larger hospitals, located in big cities, have access to the general electrical network, representing 67% of the beds of the country. The other 69 facilities had to rely on their own production of electricity for their power needs.

Hospitals with access to city electrical network

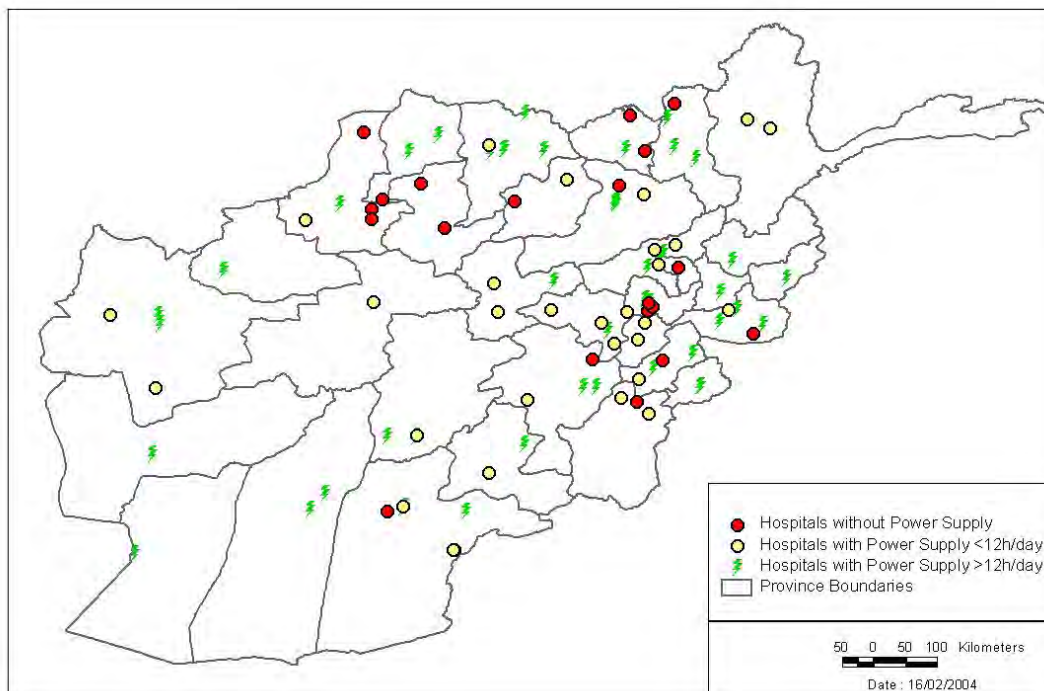
Province	Hospital Name	Beds	Province	Hospital Name	Beds
BADGHIS	Qala-i-Naw District Hospital	86	KABUL	Ali Abad Hospital	206
BAGHLAN	Ministry of Mines Hospital (Maadan)	16	KABUL	Ata Turk Hospital	138
BAGHLAN	Nasagee Hospital	95	KABUL	Emergency Surgical Center for War Victims	81
BAGHLAN	Pul-i-Khumri Civil Hospital	84	KABUL	IbnSina Emergency Hospital	137
BALKH	Balkh Hospital	24	KABUL	Indira Ghandi Child Health Hospital	213
BALKH	Hairatan Hospital	4	KABUL	Kabul Infectious Diseases Hospital	120
BALKH	Kod Barq Hospital	54	KABUL	Khair Khana Hospital	109
BALKH	Mazar-i-Sharif General Civil Hospital	237	KABUL	Maiwand Hospital Kabul	351
BALKH	Tafahosat Hospital	3	KABUL	Malalay Maternity Hospital	310
FARYAB	Andkhoy Hospital	33	KABUL	Noor Hospital (2)	75
FARYAB	Faryab Central Hospital	43	KABUL	Police Hospital	71
HILMAND	Lashkar Gah General Hospital	162	KABUL	Rabia-i-Balkhi Hospital	250
HILMAND	Naserage Central Health Center	10	KABUL	Sadre Abn Seena Hospital	97
HIRAT	Hirat Regional Hospital	527	KABUL	Stomatology Hospital	30
HIRAT	Shindand Hospital	13	KABUL	Wazir Akbar Khan Hospital	230
JAWZJAN	Aqcha Hospital	28	KANDAHAR	Abdul Hakim Hospital	10
JAWZJAN	Provincial Hospital Jawzjan	240	KANDAHAR	Al Ahsan Clinic	0
KUNAR	Asad Abad Hospital	66	KANDAHAR	Al Khidmat-Al Hajeri Hospital	14
KUNDUZ	Kunduz Regional Hospital	82	KANDAHAR	Kandahar TB Center	18
NIMROZ	Nimroz Hospital	30	KANDAHAR	Mirwais Hospital	304
PARWAN	Parwan Provincial Hospital	50	NANGARHAR	Fatumat Zahra	70
PARWAN	Rukha Hospital	28	NANGARHAR	General Hospital of Public Health	410
URUZGAN	Dehrawood Hospital	9	NANGARHAR	Medical Hospital of Nangarhar	288
URUZGAN	Tirinkot CHC	10			
WARDAK	Chak Wardak Hospital	63		Total beds with access to network electricity	5,529

However, connection to a network does not mean that the hospital has appropriate access to power. Because of cuts and distribution failures, eight of the above facilities declared they had less than 12 hours of electricity per day on average:

BALKH	Balkh Hospital
FARYAB	Andkhoy Hospital
HIRAT	Shindand Hospital
KABUL	Stomatology Hospital
KANDAHAR	Kandahar TB Center
KANDAHAR	Al Ahsan Clinic
PARWAN	Rukha Hospital
URUZGAN	Tirinkot CHC

Most hospitals have to generate their own power, and are generally well equipped for this. 85 hospitals (73%) have a functional generator to supply electrical power to the facility. Actually, 36 of the 48 hospitals with a network connection also have a generator because of the relative unreliability of general power supply.

Some hospitals were equipped with devices to create power from renewable sources. Four hospitals have access to solar energy: Rukha hospital (*Parwan province*), Mehtar Laam Baba Regional hospital (*Laghman province*), Noor hospital (*Kabul province*) and Dasht-i-Qala hospital (*Takhar province*). In addition, Mehtar Laam Baba Regional hospital (*Laghman province*) also has access to wind power.

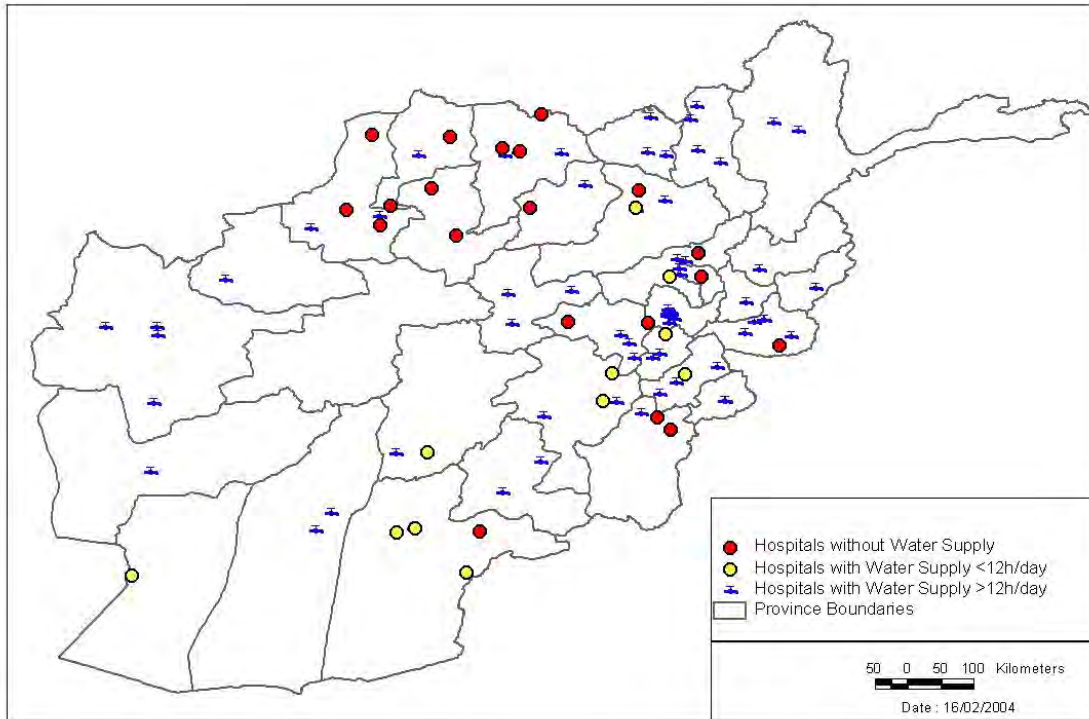


A synthetic view of access to electrical power in Afghan hospitals is provided in the table here below.

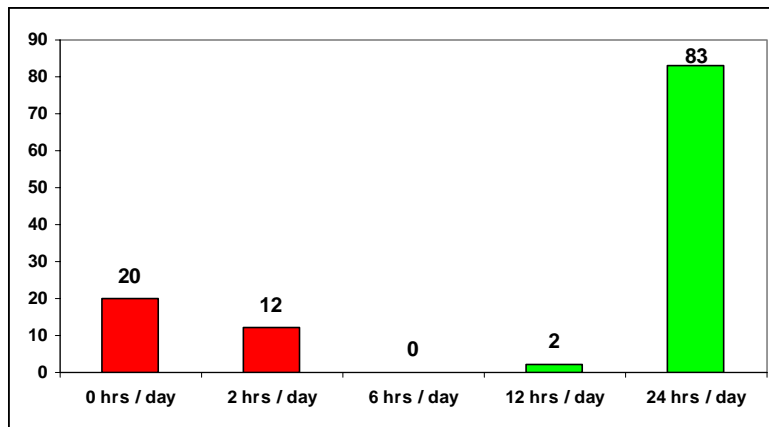
Hospitals with electricity 24 hours a day				
	City network only	Generator only	Network plus generator	Together
Number	23	8	13	44
% of total hospitals	20%	7%	11%	38%
Hopitals with electricity about 12 hours a day				
	City network only	Generator only	Network plus generator	Together
Number	3	14	1	18
% of total hospitals	3%	12%	1%	15%
Hospitals with electricity less than 12 hours a day				
	City network only	Generator only	Network plus generator	Together
Number	3	22	2	27
% of total hospitals	3%	19%	2%	23%

3.3 Access to drinking water

The situation of access to water is a highly contrasted: hospitals have water either readily available (83 hospitals - 71% - declared having access to drinking water 24 hours per day) or scarcely : 32 have water 2 hours per day or less, of which 20 have no water at all. Expressed in terms of beds, 10% (845 of 8,266 beds) have an inadequate access to water. 400 beds have no water at all. The map here below shows the hospitals with water supply more than 1 hours per day, less than 12 hours per day and with no water supply.

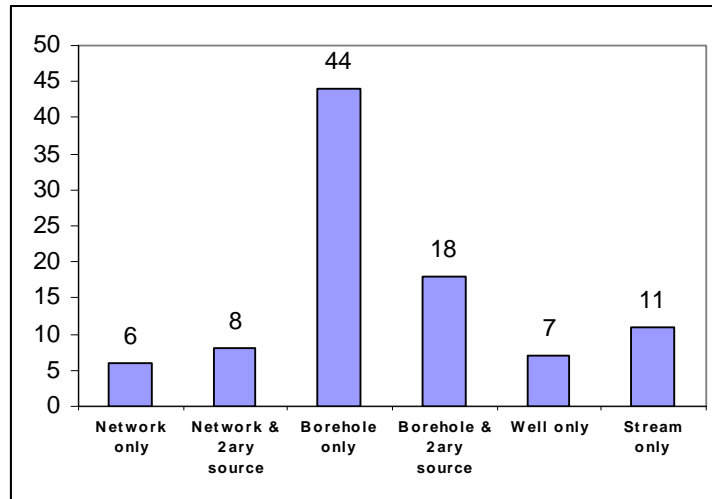


Frequency of Water Supply (Number of hospitals)



Hospitals having access to a city distribution network (14 out of 117) account for 12% of the beds of the country. Only 2 hospitals with water 24 hours per day have a city distribution network as sole source of water and do not have a tower. These are the Police Hospital (*Kabul Province*) and Waant Hospital (*Nuristan Province*). 42% of hospitals have 2 or more supply sources: 8 of the 14 hospitals connected to a network indicate a borehole with a pump and / or a well and or a stream/karez as secondary sources; out of the 62 hospitals for which the primary source is a borehole, 18 have in addition a well and or a stream/karez.

Sources of Water (Number of hospitals)



In most cases, hospitals report the condition of water adduction systems and water tower as either operating normally or not available at all, indicating a need for construction rather than renovation. The following table provides for each adduction system and water towers the number of hospitals having indicated a condition score:

Sources of water and operational levels

	Operates normally	Could operate well	Damaged	Out of order	Not available
City Network	12	2	3	-	100
Borehole	63	2	8	4	40
Well	21	1	5	5	85
Stream	22	6	-	1	88 ²
Water tower	76	11	3	3	24

The situation of access to water in Afghan hospitals can be synthesized in the table here below.

Hospitals with water 24 hours a day				
	City network only	Other type of supply	City network plus other	Together
Number	4	60	4	68
% of total hospitals	3%	51%	3%	58%
Whospitals with water about 12 hours a day				
	City network only	Other type of supply	City network plus other supply	Together
Number	0	2	0	2
% of total hospitals	0%	2%	0%	2%
Hospitals with water less than 6 hours a day				
	City network only	Other type of supply	City network plus other supply	Together
Number	3	19	0	22
% of total hospitals	3%	16%	0%	19%

3.4 Sanitation systems and operational levels

Hospitals were asked the type of waste water management system(s) in place and the overall operational level of the system. 88 out of 117 hospitals could provide an assessment of the operational level of the system and 96 indicated what system was used.

In the majority, waste water is managed with a combination 2 or more systems:

- 7 of the 10 hospitals connected to a city sewage system also have a septic tank and use a pit before spreading
- 67 of the 69 hospitals with a septic tank but no connection to a city sewage system use in addition a pit before spreading and/or have pits below latrines.
- 17 hospitals have neither a connection to a city sewage system nor a septic tank but have pits before spreading and/or below latrines.

In 64 of the 88 responding hospitals, the system is either operational (56) or could operate well with minor repairs (8). The 7 hospitals needing minor repairs are:

Province	Hospital Name	Total Beds	System in use
BAGHLAN	Nasagee Hospital	95	Septic tank
BAGHLAN	Pul-i-Khumri Civil Hospital	84	Septic tank
BALKH	Hairatan Hospital	4	Septic tank
KABUL	Ali Abad Hospital	206	Septic tank
KUNDUZ	Imam Sahib Hospital	0	Pit below latrine
NANGARHAR	Fatumatu Zahra	70	Septic tank
PARWAN	Rukha Hospital	28	Septic tank

24 hospitals declared the waste management system was in bad condition or out of order:

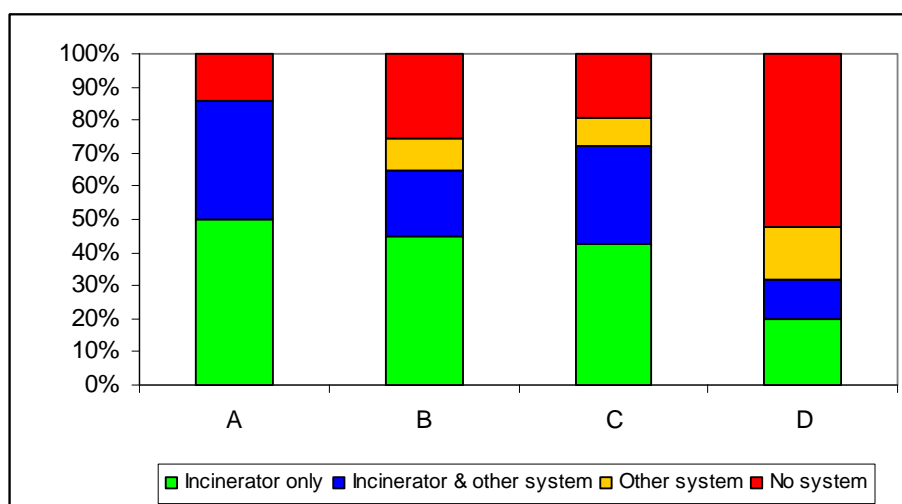
Province	Hospital name	Total Beds	City Sewage	Septic tank	Pit before spreading	Pit below latrine spreading	Sanitation systems
BAGHLAN	Baghlan District Hospital	32	-	Yes	Yes	-	Damaged
BAGHLAN	Ministry of Mines Hospital (Maadan)	16	-	Yes	Yes	-	Damaged
BALKH	Tafahosat Hospital	3	-	-	-	-	Damaged
FARYAB	Garziwal Hospital	20	-	-	-	-	Out of order
FARYAB	Qaisar Hospital	6	-	-	-	-	Out of order
GHAZNI	Ghazni Civil Provincial Hospital	146	-	Yes	Yes	-	Damaged
JAWZJAN	Darzab Basic Health Center	4	-	-	-	-	Out of order
KABUL	Sadre Abn Seena Hospital	97	-	Yes	Yes	-	Damaged
KABUL	Police Hospital	71	-	Yes	Yes	-	Damaged
KABUL	Stomatology Hospital	30	-	-	Yes	Yes	Out of order
KABUL	Rabia-i-Balkhi Hospital	250	-	Yes	-	Yes	Out of order
KABUL	Malalay Maternity Hospital	310	-	-	-	Yes	Out of order
KABUL	Karte 3 Surgical Hospital	454	-	Yes	Yes	Yes	Out of order
KABUL	Indira Ghandi Child Health Hospital	213	-	-	Yes	-	Out of order
KABUL	IbnSina Emergency Hospital	137	-	-	-	-	Out of order
KANDAHAR	Abdul Hakim Hospital	10	Yes	-	-	-	Out of order
KAPISA	Kapisa Provincial Hospital	48	-	Yes	Yes	-	Damaged
KHOST	Khost Hospital	81	-	Yes	Yes	Yes	Damaged
KUNDUZ	Khan Abad Hospital	0	-	-	Yes	Yes	Damaged
SAMANGAN	Deh-i-Village Clinic	23	-	Yes	Yes	-	Damaged
SARI PUL	Sar-i-Pul Provincial Hospital	30	-	-	-	-	Out of order
URUZGAN	Tirinkot CHC	10	-	-	-	Yes	Damaged
URUZGAN	Uruzgan Hospital	21	-	-	Yes	Yes	Out of order
ZABUL	Qalat Hospital	102	-	Yes	Yes	-	Damaged

3.5 Solid waste management systems

The section of the survey relative to the management of medical and other solid waste consisted in identifying whether hospitals had an incinerator, in which condition it was and whether hospitals had other systems to manage waste.

74 hospitals have an incinerator, 53 of which declare it is in perfect condition or working adequately (45% of all surveyed facilities). However, 24 have an additional system for medical waste or other solid waste to compensate for the relatively poor condition of their incinerators (in 21 cases, the incinerator is either in bad condition, not available locally or out of order). Alternate systems include containers and/or plastic or metal recipients (18 hospitals). Wells for burying or burning waste are used in 9 cases.

More than half of the smaller structures (10 beds or less) have no system at all¹:



3.6 Communication

A majority of Afghan hospitals cannot communicate by radio or telephone, and are not adequately equipped for basic communications. Only 49 of the surveyed hospitals (42%) had a functional phone or radio. The survey did not try to find if there was a functional internal phone system inside the hospitals, and was limited to outside communications of the surveyed facilities. Larger hospitals located in large cities were generally better equipped than smaller ones.

However, in spite of their location, 16 large facilities with more than 50 beds declared that they had no communication equipment. Surprisingly, 5 of them were located in the city of Kabul. It should be easy to improve the communication situation for these facilities that declared they had access neither to telephone nor to radio.

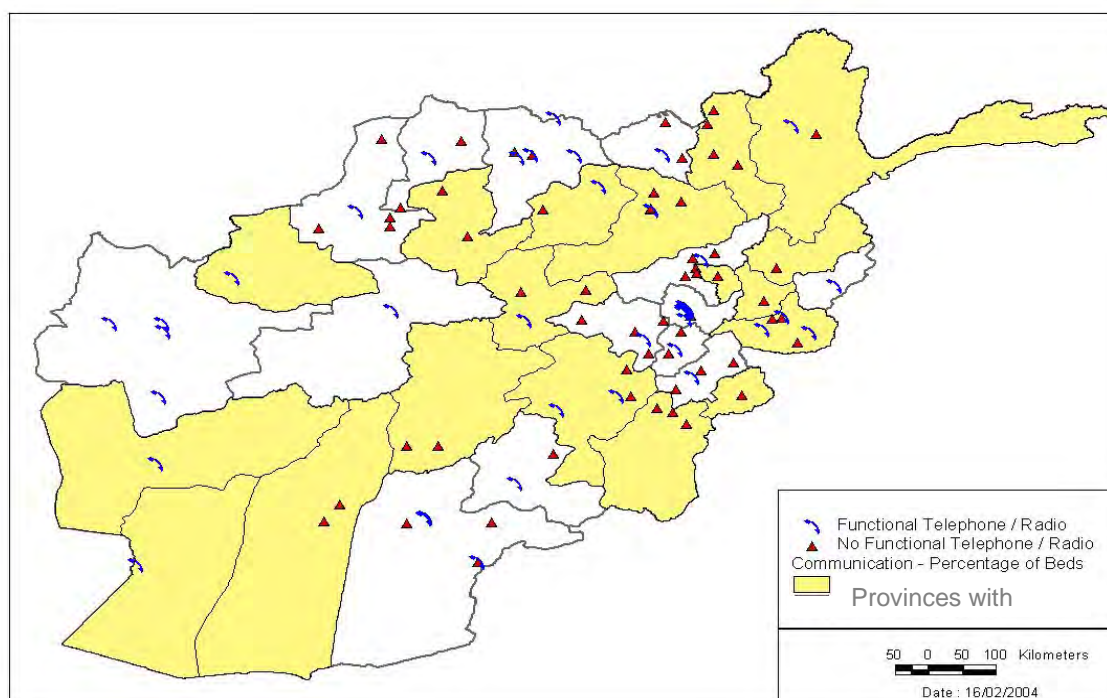
Hospitals without means of communication

Hospital name	Province
Qala-i-Naw District Hospital	BADGHIS
Pul-i-Khumri Civil Hospital	BAGHLAN
Nasagee Hospital	BAGHLAN
Farah Provincial Hospital	FARAH
Ghazni Civil Provincial Hospital	GHAZNI
Provincial Hospital Jawzjan	JAWZJAN
Wazir Akbar Khan Hospital	KABUL
Police Hospital	KABUL
Noor Hospital (2)	KABUL
IbnSina Emergency Hospital	KABUL
Sadre Abn Seena Hospital	KABUL
Nesaji Gulbahar Hospital	KAPISA

¹ A: hospitals with 151 beds and more; B: hospitals with 51 beds and more; C: hospitals with 11 beds and more; D: hospitals with 10 beds or less

Hospital name	Province
General Hospital of Public Health	NANGARHAR
Sharan Hospital	PAKTIKA
Taloqan Central Hospital	TAKHAR
Qalat Hospital	ZABUL

The map here below shows the hospitals with and without communication equipment:

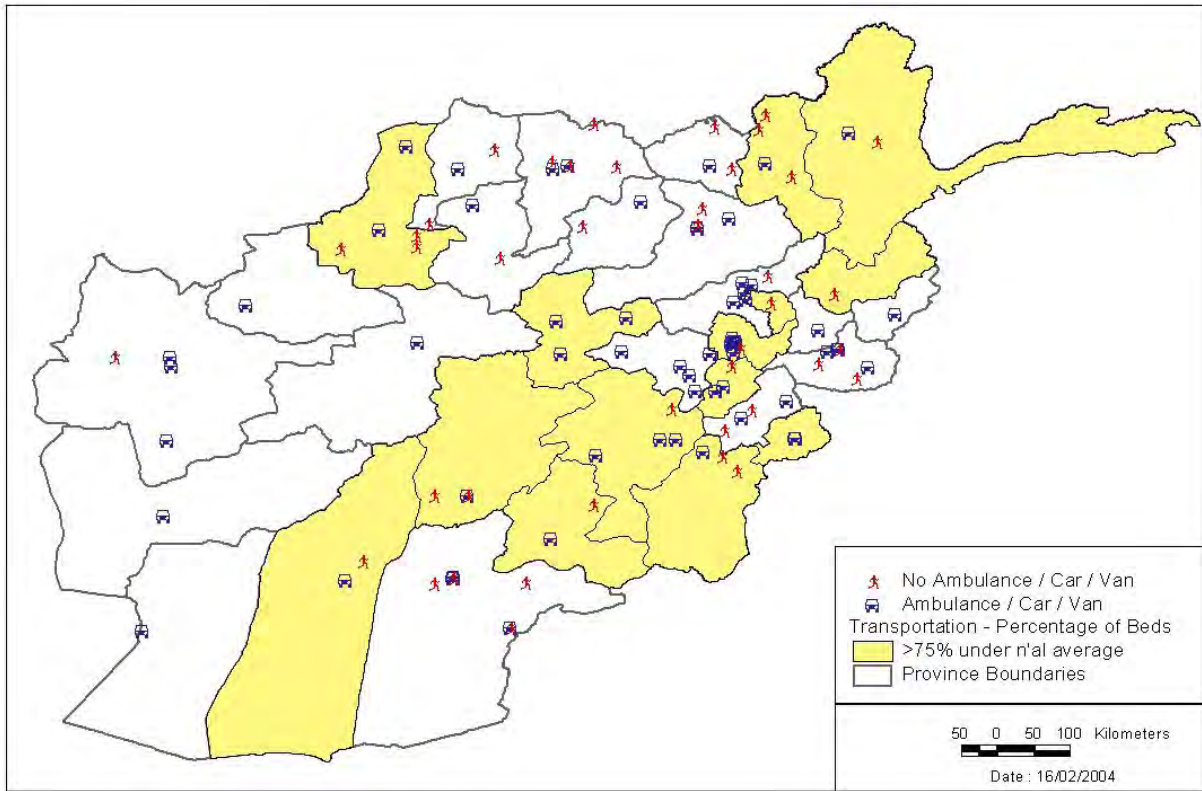


3.7 Transportation

41 of the surveyed hospitals (35%) had no means of transportation, or only one bicycle. Apart from two facilities (Kabul mental health hospital and Medical Hospital of Nangarhar), all hospitals without transportation capabilities had less than 50 beds.

38 facilities (32%) had at least one ambulance. Others had a combination of ambulances, two-wheel drive cars, four-wheel drive cars, motorcycles and vans. In some cases, the number of vehicles was rather high, and some hospitals were probably “over-equipped” in transportation means. For instance, Karte 3 hospital (*Kabul province*) declared to have two 4-wheel and five 2-wheel cars; the Emergency Surgical Center for War Victims (*Kabul province*) had two ambulances, four 4-wheel car, four 2-wheel car and two vans; the General Hospital for Public Health in Jalalabad (*Nangarhar province*) had four ambulances, five 4-wheel cars, one 2-wheel car, one van, thirteen motorbikes and six bicycles.

On the whole, transportation was adequate, and several hospitals have been awarded new vehicles through international cooperation projects recently. Only three hospitals were found to have an ambulance but no fuel available on the day of the survey: Ata Turk hospital (*Kabul province*), Andkhoy hospital (*Faryab province*) and Wamy hospital (*Paktya province*).



4 Administration, budget and management

Recommendations

Management is relatively weak in Afghan hospitals, and seems to reflect a style corresponding to the communist era. Emphasis is placed on staffing, but the productivity of staff is low, especially in small facilities. Financial management is weak and modern hospital management techniques are not in wide use. Improvement of management capacity of hospital administrators would be an important priority for the Ministry of Health, and a progressive replacement of senior doctors by professional managers at the head of hospitals would then become possible.

Management equipment and techniques remain too rare: many facilities do not have access to information technology and communication equipment. There is also a dearth of professionals in key management areas, such as accounting and human resources. The weakness of accounting procedures is an issue because several hospitals recover costs of various services and procedures.

Finally, the survey showed that numerous projects of expansion and rehabilitation of hospital facilities are taking place at present in Afghanistan. In any other country, following up such a number of projects would be considered a daunting task for the Ministry of Health. Given the lack of resources to plan, supervise and coordinate such efforts, it is feared that many interventions take place with uncoordinated international support. Expansion of hospitals seems to be taking place in the context of a low occupancy rate of the current facilities, without a comprehensive review of the role of hospitals and the organization of referral services. A slower and more carefully planned approach would be easier to manage.

Survey context

The survey encompassed the study of administration services, budget and managerial aspects. Questions were asked about the presence of specialized personnel, office equipment, funding and budget, existence of rehabilitation and expansion projects and existence of procedures.

For analysis purposes, facilities have been broken down into four categories:

1. facilities with more than 150 beds
2. facilities with 51 to 150 beds
3. facilities with 11 to 50 beds
4. facilities with 10 beds or less

4.1 Administration Management Staff

The survey looked at the different administrative functions in the country's hospitals and collected data on administrative personnel.

The majority of health facilities (89%) had an administrator. The 13 facilities with no administrative head all had less than 50 beds.

Finance and accounting officers were only present in 53 hospitals (45%), and 12 of the hospitals with more than 50 beds did not have an accountant or a finance manager. A similar problem was found with human resources managers, who existed in 64 facilities (55%), and 12 of the hospitals with more than 50 beds did not have a human resources manager. Nine of the large hospitals had neither accounting nor human resource personnel:

Hospital with more than 50 beds without accounting or human resource staff

Nasagee Hospital	BAGHLAN
Guzara District Hospital	HIRAT
Emergency Surgical Center for War Victims	KABUL
Baraki Rojan Hospital	LOGAR
Medical Hospital of Nangarhar	NANGARHAR
Sharan Hospital	PAKTIKA
Wamy Hospital	PAKTYA
Dasht-i-Qala Hospital	TAKHAR
Qalat Hospital	ZABUL

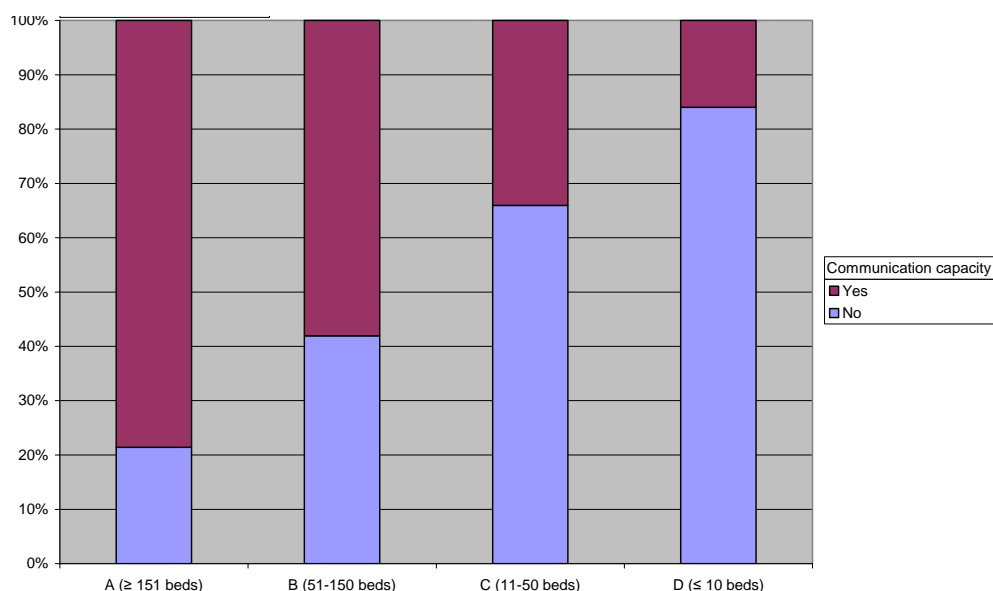
4.2 Administration Equipment

4.2.1 Communication

Communication capacity was assessed based on the presence of a functional radio or telephone. The results are:

Nb of facilities with:	No radio, no telephone	Radio or telephone
≥ 151 beds	3	11
51-150 beds	13	18
11-50 beds	31	16
≤ 10 beds	21	4
Total	68	49

Hospitals with the largest number of beds have better access to communication equipment. This can easily be understood as they are generally located in the largest cities with access to the telephone network.



In spite of their location, 16 large facilities with more than 50 beds had no communication equipment. Surprisingly, 5 of them were located in the city of Kabul. It should be easy to improve the communication situation for these facilities that declared they had access neither to telephone nor radio.

Hospitals without means of communication

Hospital name	Province
Qala-i-Naw District Hospital	BADGHIS
Pul-i-Khumri Civil Hospital	BAGHLAN
Nasagee Hospital	BAGHLAN
Farah Provincial Hospital	FARAH
Ghazni Civil Provincial Hospital	GHAZNI
Provincial Hospital Jawzjan	JAWZJAN
Wazir Akbar Khan Hospital	KABUL
Police Hospital	KABUL
Noor Hospital (2)	KABUL
IbnSina Emergency Hospital	KABUL
Sadre Abn Seena Hospital	KABUL
Nesaji Gulbahar Hospital	KAPISA
General Hospital of Public Health	NANGARHAR
Sharan Hospital	PAKTIKA
Taloqan Central Hospital	TAKHAR
Qalat Hospital	ZABUL

4.2.2 Information technology

53 facilities (45%) had at least one computer in the administration unit. Of these, 34 had 50 beds or more. On the other hand, 11 facilities with 50 beds or more had no information technology, although they had access to electrical power.

The 5 facilities hereunder declared that they had the lowest level of equipment (no radio, no telephone and no computer in the administration department), although they were large size facilities (over 50 beds):

Hospitals with over 50 beds without information or communication technology

Province	Hospital Name
BADGHIS	Qala-i-Naw District Hospital
BAGHLAN	Nasagee Hospital
KABUL	Police Hospital
KABUL	Sadre Abn Seena Hospital
PAKTIKA	Sharan Hospital

4.3 Housing

Facilities were asked whether they had housing facilities and what categories of personnel have access to them. 84% of the 117 surveyed facilities did not provide any housing for staff.

Of the 19 hospitals having a housing capacity, 90% provided housing for physicians and 74% to physicians and nurses or midwives. The larger facilities (more than 150 beds), which are located in urban areas, did not have housing facilities, except for Lashkar Gah General Hospital in Hilmand province which housed the director, physicians and nurses/midwives.

4.4 Rehabilitation and expansion projects

A significant proportion of the facilities indicated having rehabilitation and/or expansion projects. More than 1 out of 5 facilities have both rehabilitation and expansion projects.

Expansion and rehabilitation of Afghan hospitals

Nb of facilities with:	Rehabilitation Project	Expansion Project	Both
≥ 151 beds	64% (9/14)	64% (9/14)	43% (6/14)
51-150 beds	26% (8/31)	52% (16/31)	20% (6/31)
11-50 beds	45% (21/47)	36% (17/47)	21% (10/47)
≤ 10 beds	20% (5/25)	40% (10/25)	16% (4/25)
Total	37% (43/117)	44% (52/117)	22% (26/117)

Leading donors in rehabilitation projects include :

- Foreign Cooperation: France, Germany, Italy, Japan, Norway, Qatar, South Korea and Turkey
- Other organizations: ACDG, Agha Khan Organization, AHDC, Alkhidmat-al Hajeri, AMI, CHA, DHHS, GRCS, GTZ, IF HOPE, HNI, HUMAR FORM, ICRC, Hope, KFW, MDM, MSF Spain, NAC, OPS, Polish Medical Mission , UNDP.
- The Ministry of Health (3 projects) and the Governor of Hirat (1 project)

The Ministry of Health is much more involved in expansion projects (23 out of 52). But foreign donors also participate in such projects:

- Agha Khan Organization, AMI, Capanamur, CHA, CWS, DAC, GRCS, HNI, IAHC, IAM, Ibn Sina, International Committee of the Red Cross (ICRC), IMC, Japan International Cooperation Agency (JICA), MCH, MSF Spain, NAC, UNICEF,
- Foreign cooperation: Germany, India, Italy, Japan, South Korea

It is important to notice that a majority of Afghan hospitals are undergoing some major works, either for rehabilitation or expansion, and in no other country could as many facilities be worked on at the same time. This creates major disruptions in the availability and quality of care for patients, and generates severe planning and follow-up constraints. The relatively low resources of the Ministry of Health and the Provincial Health Directorates to manage and supervise such projects may cause some concern given their number and magnitude.

4.5 Budget and finance

In the survey, budget and finance questions addressed the following areas:

- Budget preparation, availability of figures
- Services subject to charges
- Use of retained earnings
- Staff: breakdown of origin of payrolls, salary payment delays

4.5.1 Budget

78% (91/117) of the surveyed facilities are owned by, staffed and managed by the MoH. The 24 declaring to operate independently from the ministry of health are:

Province	Hospital Name
BAGHLAN	Nasagee Hospital
BAGHLAN	Ministry of Mines Hospital (Maadan)
BALKH	Kod Barq Hospital
BALKH	Tafahosat Hospital
FARYAB	Garziwal Hospital
GHAZNI	Jaghori Hospital
GHAZNI	Jaghatu District Hospital
JAWZJAN	Provincial Hospital Jawzjan
KABUL	Emergency Surgical Center for War Victims
KABUL	Police Hospital
KABUL	Noor Hospital (1)
KANDAHAR	Al Khidmat-Al Hajeri Hospital
KANDAHAR	Abdul Hakim Hospital
KHOST	Matun Baba Hospital
NANGARHAR	Medical Hospital of Nangarhar
NANGARHAR	Fatumatu Zahra
NANGARHAR	Shenwar Ghani Khail Hospital
PAKTIKA	Sharan Hospital
PARWAN	Panjshir Emergency Surgical Centre
SARI PUL	Sar-i-Pul Provincial Hospital
TAKHAR	Dasht-i-Qala Hospital
WARDAK	Chak Wardak Hospital
WARDAK	Inferally Hospital
WARDAK	Quiat Al Khair Hospital

Less than 1 out of 5 facilities (28/117) could indicate the budget value for SY 1382 on the day of the survey. Budgets are prepared in a large majority by the Ministry of Health.

Knowledge of the budget and participation to its preparation

	Budget known	Budget prepared by MoH
≥ 151 beds	50% (7/14)	93% (13/14)
51-150 beds	39% (12/31)	68% (21/31)
11-50 beds	19% (9/47)	68% (32/47)
≤ 10 beds	0% (0/25)	72% (18/25)
Total	24% (28/117)	72% (84/117)

Of the 89 facilities for which the question on SY1382 budget could not be answered, 32 have a finance manager or an accountant and 17 of them have 51 beds or more. In the province of Kabul, 15 of the 22 facilities did not or could not answer the question.

It is clear that hospitals have little budget autonomy, and that they are generally not familiar with budget planning and negotiation.

For the hospitals declaring that they know their budget, the figures are not easy to analyze. Yearly budgets were described as varying between \$63,000 and \$1.4 million per year. Trying to establish a ratio per bed does not improve the understanding much: the budget per bed varied between \$500 and \$24,000. Such large discrepancies probably indicate a poor level of recollection of the budgets. It is also possible that hospitals with a low budget per bed receive higher levels of funding from NGO sources.

Hospitals of 100 beds and more had a more coherent set of figures, and the average budget per bed for these hospitals was \$1,850. In these facilities, the budget allocated for personnel was between 16% and 25% of the total budget, in a rather consistent manner.

However, facilities with less than 100 beds had less understandable figures for personnel: their share of the total budget was comprised between 10% and 65%.

4.5.2 Services subject to charges

The table hereunder shows the number of facilities collecting fees for services. There are large variations from one hospital to another and it is not possible to discern a coherent cost recovery policy from the table. A majority of hospitals charged for outpatient and X-Ray services. Over 78% of hospitals with a radiology unit declared charging for X-Ray services and over 43% charged for outpatient consultations. Charging for other services was less common, and in some cases corresponded to certain geographic areas (see chapter on maternity services).

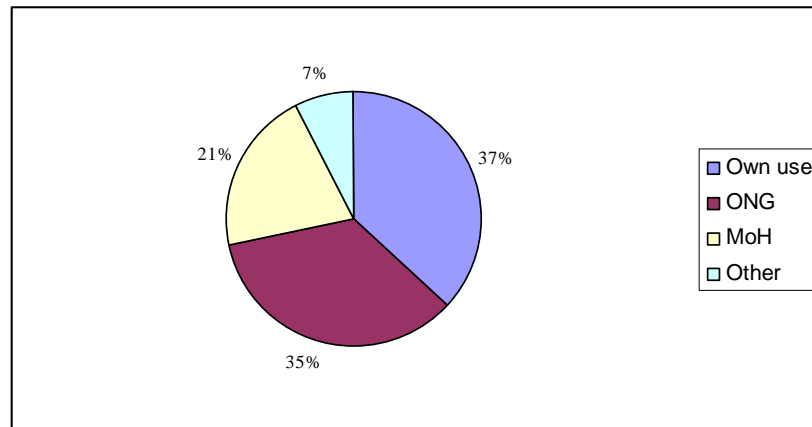
Services subject to some cost recovery

Nb of facilities with:	No Charge	Charge
X-ray / lab	57	57
OPD Visits	67	50
Drugs	91	26
Deliveries	52	21
Hospitalization	93	18
Surgery	91	17

In total, 81 facilities collected fees and several charged for more than one service. 5 hospitals declared charging for all of the above services: Khulm District Hospital (Balkh), Khugyani Hospital (Nangarhar), Shenwar Ghani Khail Hospital (Nangarhar), Sharan Hospital (Paktika) and Wamy Hospital (Paktika). Khulm District hospital had the highest fees for service of all the hospital practicing cost recovery.

4.5.3 Used of retained earnings

The destination of collected fees was broken down as follows:



More than one third of the funds recovered were kept by the hospital, and for hospitals operated by NGOs, another third was returned to the NGOs. The Ministry of Health did not benefit much from cost recovery practices (which can be understood in the constitutional context of free care in the public sector). Interestingly, 18 of the 28 hospitals returning part of their fees to an NGO were owned by the Ministry of Health.

4.5.4 Staff breakdown

Staff per facility and staff per bed ratios are the following:

Personnel per bed ratio

	Nb of facilities	Total Staff / facility	Total Staff / bed	Medical Staff / bed ²
≥ 151 beds	14	402	1.38	0.82
51-150 beds	31	140	1.68	0.93
11-50 beds	47	57	2.00	1.11
≤ 10 beds	25	22	4.03	2.06
Total	117	113	1.60	0.92

As outlined earlier, Afghan hospitals are generally overstaffed. This fact is particularly true for the smaller facilities. Hospitals with less than 10 beds have too large a concentration of doctors and nurses, who could be better employed in primary care facilities. On average, all hospitals have a concentration of staff per bed that corresponds to very specialized facilities, which only a handful of them are.

The large quantity of staff does not represent a financial burden on the Ministry of Health only. In fact, less than a third of the personnel only received a salary from the MOH. Many employees have been hired by NGOs or by UN organizations, and draw their salary from that source only. These employees are mostly located in smaller facilities, at the peripheral level, whereas people depending on MOH salary are in higher proportion in the large hospitals.

It is not possible to draw conclusions from the fact that NGOs and UN organizations provide additional staff in facilities that are often too small to be functional and for which the staff/bed ratio is very high. Problems of performance and job descriptions would have to be taken in consideration for such an analysis.

60% of the staff of hospitals draws their salaries from several sources, generally through a combination of civil servant pay and NGO provided incentive.

Proportion of staff exclusively paid by MOH and other sources.

	Total staff	% staff on MoH payroll only	% staff on NGO/UN payroll only
≥ 151 beds	5,634	31%	4%
51-150 beds	4,342	33%	12%
11-50 beds	2,715	27%	16%
≤ 10 beds	556	25%	23%
Total	13,247	30%	10%

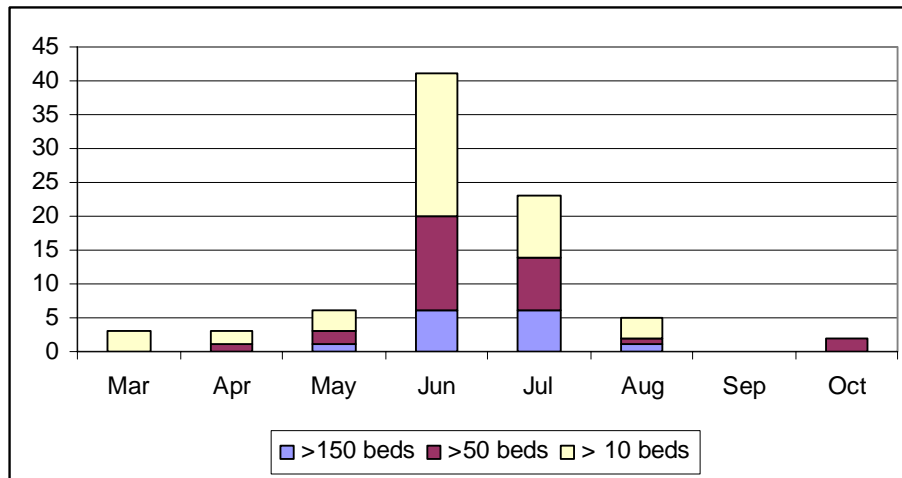
Each of the 32 provinces has at least one facility where some employees are on a UN or NGO payroll.

Hospital employees are more satisfied with NGO pay for two reasons:

² Medical staff: includes doctors, nurses, midwives and paramedical services staff (laboratory, radiology, pharmacy).

- the salary progression throughout a career in the MOH is very slow, and follows a rather flat pattern
- the MOH is often late in paying salaries.

The following graph shows the last months of 2003 in which all civil servants have received their full MoH/Government salary and the corresponding number of facilities. The survey took place in November 2003.



In more than 64% of surveyed cases, full salaries have not been received for 4 months or more, and only 7% of facilities had received full civil servant salaries in the last 3 months.

In addition to assessing the delays in paying salaries to civil servants, the survey addressed the issue of staff shortages. These have been measured by a single but effective indicator: how many facilities had to cancel annual leave or holidays due to personnel shortages. 100 out of 117 facilities answered that question and 24 (21%) mentioned that some of their staff members were unable to take leave in 2002 because this would have disrupted services. These were:

Province	Hospital Name
BAMYAN	Yakawlang Hospital
BAMYAN	Bamyan Central Hospital
FARYAB	Faryab Central Hospital
FARYAB	Bilchiragh Hospital
FARYAB	Qaisar Hospital
GHAZNI	Ghazni Civil Provincial Hospital
GHAZNI	Jaghatu District Hospital
GHOR	Ghor Provincial Hospital
JAWZJAN	Aqcha Hospital
KABUL	Ata Turk Hospital
KABUL	Ahmad Shah Baba Mina
KANDAHAR	Kandahar TB Center
KHOST	Khost Hospital
KUNAR	Asad Abad Hospital
KUNDUZ	Kunduz Regional Hospital
LAGHMAN	Mehtar Laam Baba Regional Hospital
LOGAR	Baraki Rojan Hospital
NANGARHAR	Shenwar Ghani Khail Hospital
NANGARHAR	Achin Basic Health Clinic

Province	Hospital Name
NIMROZ	Nimroz Hospital
PAKTYA	Gardez Civil Hospital
SARI PUL	Sar-i-Pul Provincial Hospital
WARDAK	Chak Wardak Hospital
WARDAK	Inferally Hospital

This list represents an indication that personnel management is not optimal, as these facilities have “staff per bed ratio” which is average, and therefore cannot be considered under-staffed.

4.6 Management

The management capacity of the facilities was assessed through the existence of the following documents:

- Organogram
- Written job descriptions for key staff (hospital director, director of administration and department directors)
- Availability of payroll records
- Availability of financial records
- Written logistics procurement and inventory system for supplies and equipment
- Annual performance review
- Inventory for medical equipment and other assets
- Written disaster plan
- In addition, it was asked if the facility had a lockable safe.

Surveyors were requested to check the existence of all the documents with their own eyes (a declaration was not enough). The table hereunder displays the percentage of facilities with the verified presence of each item:

Presence of management documents

Number of facilities	≥ 151 beds (total: 14)	51-150 beds (total: 31)	11-50 beds (total: 47)	≤ 10 beds (total: 25)
Organogram	43%	29%	17%	12%
Job descriptions	64%	32%	28%	28%
Payroll records	86%	81%	77%	68%
Finance records	93%	61%	34%	16%
Written procurement & inventory system	71%	71%	45%	28%
Inventory of medical equipment & assets	86%	81%	74%	44%
Annual Performance review	14%	26%	21%	16%
Lockable Safe	79%	39%	23%	4%
Written disaster plan	29%	13%	15%	20%

Payroll and finance records are available to a large extent and inventories are conducted in the majority of facilities. There is however a significant lack in key documents (organograms, job descriptions, written procurement and inventory systems, annual performance reviews and written disaster plan), suggesting administrations under perform in implementing managerial procedures.

Generally, larger hospitals performed better in terms of administration than the smaller ones. The presence of a lockable safe did not correspond to that of cost recovery and handling of cash. One positive element was the fact that inventories of equipment and inventory procedures were available in more than half of the facilities.

5 Personnel of Afghan hospitals

5.1 General findings

Hospitals are generally over-staffed, particularly in the large urban areas, and the survey confirmed these conclusions, already outlined by several other studies.

Too few facilities have an adequate number of female staff to provide acceptable services to the whole population they are supposed to serve. Female staff represented 24.5% of the total staff of the surveyed hospitals, and the proportion was far less in several provinces.

The 117 surveyed facilities declared that they had a total of 13,247 employees, of which 7,635 support staff (57.6%). The number of staff per facility varied from 5 in Panjwayi District hospital (*Kandahar*) to 584 in Indira Gandhi Child Health hospital (*Kabul*).

Hospitals in Kabul district employed 41% of the total hospital staff of the country.

By all standards, Afghan hospitals have too much staff compared to the required level, especially in the light of the needs of primary care facilities.

The average number of staff per bed for the country was **1.57**, which corresponds to a level of specialization that Afghan hospitals do not have on the whole. This figure takes in consideration the actual number of beds. The ratio of the total number of personnel present on the day of the survey over the number of occupied beds was as high as **2.7**. There are important variations in the ratio from one province to another.

Hospital personnel are poorly paid and the salary scale is too narrow. However, even these payments are not made regularly and personnel often have to work outside the facility in the private sector. In more than 64% of surveyed cases, full salaries had not been received from the state in 4 months or more. Only 7% of facilities had received full civil servant salaries in the last 3 months.

5.2 Total staff

The total number of personnel declared by the administrators in the 117 surveyed hospitals amounted to 13,247. The surveyors counted 10,395 employees present on the day of the survey, and this figure can be considered a little high because it could be expected that a higher proportion of staff would normally be either on leave, or allotted to night duty.

In 24 (20%) hospitals, the number of staff present on the day of the survey corresponded exactly to the total number of staff declared by the administrator, and this coincidence may correspond to a bad understanding of the question. In 4 hospitals, there were slightly more employees present than the official number of staff. In all other facilities (77%), the number was logically smaller. However, in several large facilities, more than 100 employees were not present. In these facilities the proportion of staff present over total staff was rather low:

Hospital with a low proportion of staff present on the day of the survey

Province	Hospital name	Staff present at survey / total staff
GHAZNI	Ghazni Civil Provincial Hospital	35,8%
KABUL	Emergency Surgical Center for War Victims	41,0%
PARWAN	Panjshir Emergency Surgical Centre	49,2%
KABUL	Karte 3 Surgical Hospital	49,8%
HIRAT	Hirat Regional Hospital	54,0%
FARAH	Farah Provincial Hospital	56,2%

As many of these facilities are overstaffed, it is possible that some employees escape control and do not show up as regularly as they should.

Support staff (all personnel without a direct role for care: doctors, nurses, midwives, technicians, nurse assistants, community health workers) represented the majority of the total staff: 7,635 (57.6%).

5.2.1 Geographic distribution of staff

Hospital personnel are not distributed evenly among the various provinces. Kabul province had a large majority of the hospital staff of the country (41%).

Hospital staff per province

Province	Total staff	Province	Total staff
KABUL	5,691	FARAH	203
NANGARHAR	671	TAKHAR	195
HIRAT	667	BADAKHSHAN	151
BALKH	664	KHOST	144
KANDAHAR	601	BAMYAN	138
PARWAN	505	LAGHMAN	132
JAWZJAN	457	BADGHIS	106
GHAZNI	364	KUNAR	98
BAGHLAN	333	SARI PUL	81
KUNDUZ	291	SAMANGAN	80
WARDAK	246	PAKTIKA	72
HILMAND	244	URUZGAN	60
FARYAB	238	ZABUL	55
PAKTYA	229	NIMROZ	54
KAPISA	224	GHOR	51
LOGAR	207	NURISTAN	28

However, when the total number of personnel is related to the number of hospital beds in a province, the staff concentration of Kabul province does not appear as clearly, because of the large number of facilities in the province.

Hospital staff per bed

Province	Staff/bed	Province	Staff/bed
ZABUL	0,5	GHAZNI	1,6
PAKTIKA	0,7	KAPISA	1,6
NANGARHAR	0,8	KANDAHAR	1,6
HIRAT	1,1	JAWZJAN	1,7
BADAKHSHAN	1,2	LOGAR	1,8
TAKHAR	1,2	NIMROZ	1,8
BADGHIS	1,2	BALKH	1,9
SAMANGAN	1,3	KABUL	1,9
BAGHLAN	1,3	PAKTYA	1,9
WARDAK	1,3	SARI PUL	2,0
BAMYAN	1,4	LAGHMAN	2,1
GHOR	1,4	FARYAB	2,2
HILMAND	1,4	FARAH	2,2
KHOST	1,4	NURISTAN	2,8
KUNAR	1,5	PARWAN	3,2
URUZGAN	1,5	KUNDUZ	3,5

In provinces with very few beds (Nuristan, Farah), a high figure is not significant.

It is important to notice that 29 of the 32 provinces had a provincial ratio over 1 staff per bed, which is considered normal for a general hospital facility. A slightly higher ratio could be considered for specialized hospitals, but with an average number of staff per bed for the whole country at 1.5, the level of staffing of Afghan hospitals is definitely high.

Differences between provinces are important and reflect an inadequate distribution of personnel within the country's hospital facilities.

The overstaffing that is noticed in the provinces is also reflected at the level of individual facilities. Although some hospitals manage to operate with a ratio of 1 personnel per bed or below, several facilities have a much higher ratio without justifying it by a level of specialization or sophistication that would require more staff.

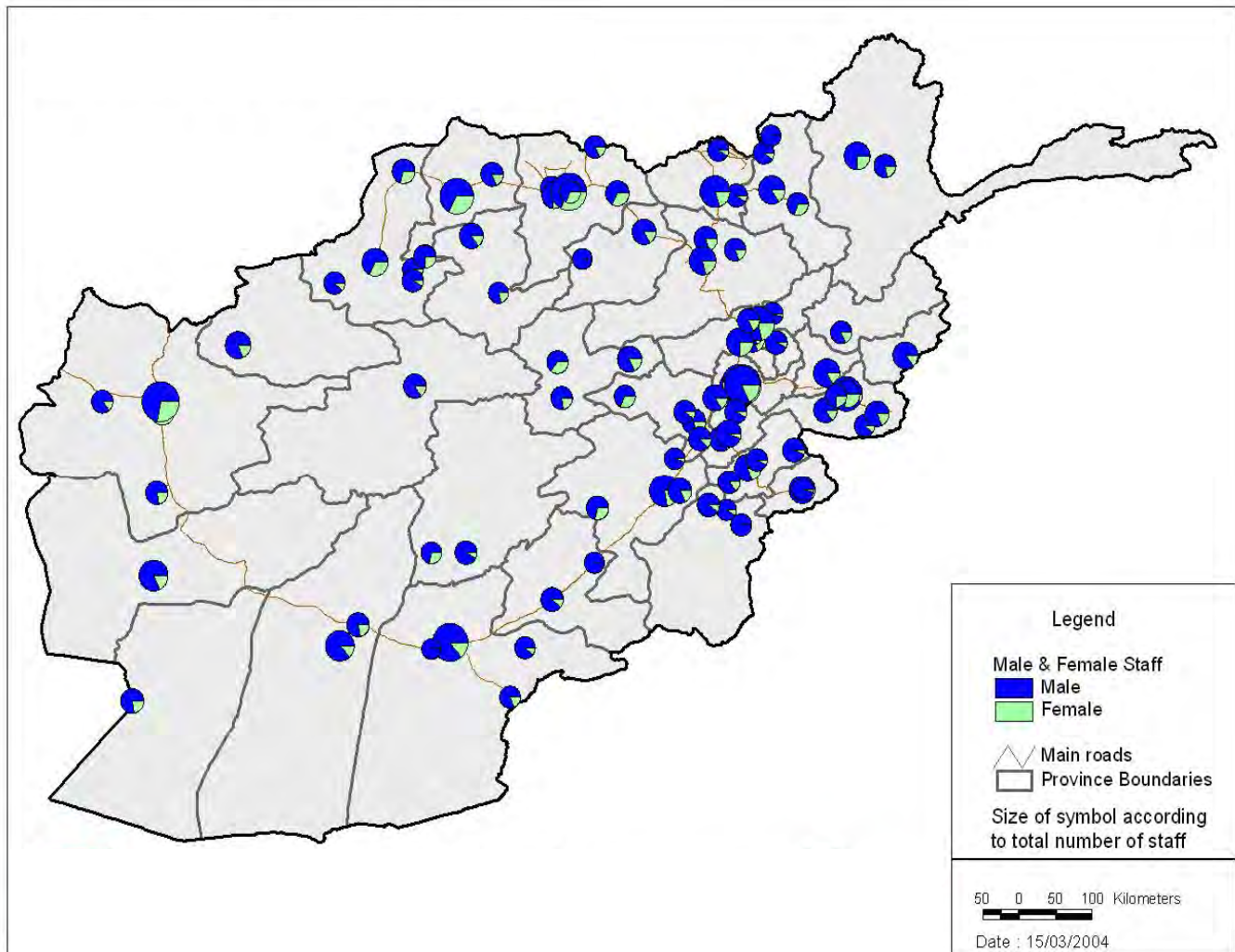
Hospitals with a ratio of more than 3 staff per bed

Province	Hospital name	Staff / bed
FARYAB	Bilchiragh Hospital	3,0
NANGARHAR	Khugyani Hospital	3,1
LOGAR	Mohammad Agha District Hospital	3,1
KABUL	Kabul Mental Health Hospital	3,1
KABUL	Ahmad Shah Baba Mina	3,4
KANDAHAR	Abdul Hakim Hospital	3,5
KABUL	Emergency Surgical Center for War Victims	3,6
FARYAB	Qaisar Hospital	4,0
KABUL	Police Hospital	5,0
BALKH	Hairatan Hospital	6,0
PARWAN	Panjshir Emergency Surgical Centre	6,2
BALKH	Tafahosat Hospital	6,3
KABUL	Stomatology Hospital	9,4

5.2.2 *Ratio between males and females*

Female personnel represent 25.5% of the total workforce. This proportion was exactly the same among staff present on the day of the survey.

Proportion of male and female staff by province



5.2.3 *Staff present on the day of the survey*

78% of the total theoretical staff of the hospitals was present on the day of the survey. This number is high, as a larger proportion of the total staff should not be working during the day time at the moment the survey took place. It is estimated that no more than 2/3 of the personnel should be present, normally.

In four facilities, there was more staff present than the total theoretical number of personnel. Generally, it was because additional personnel had been recently hired by outside employers (NGOs) to the total staff.

However, in many other facilities, the number of staff present on the day of the survey was much less than could be expected and satisfactory explanations could not be found. In 20 facilities, the total of staff present was less than 70% of the theoretical total, and in several cases, absenteeism was much higher. One possible explanation was that some personnel were affected to the hospitals for budgetary purposes, but did not work there in reality.

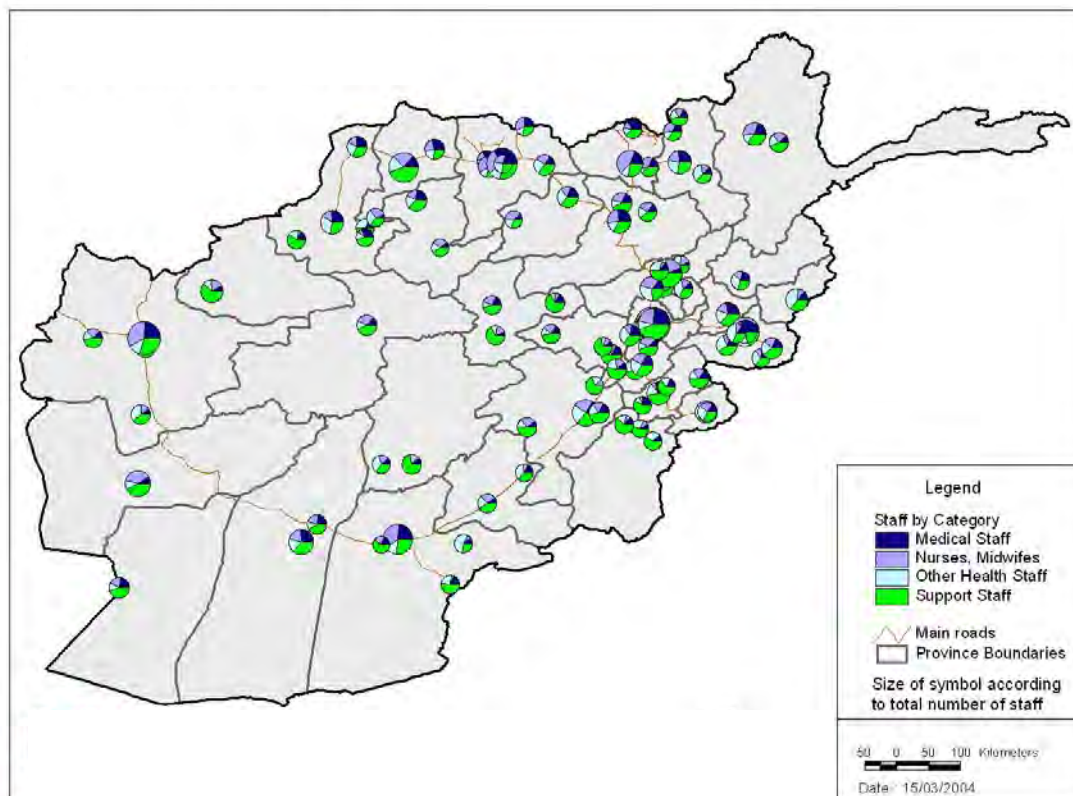
Hospitals where less than 60% of the total staff was present on the day of the survey

Province	Hospital name	Staff present
GHAZNI	Ghazni Civil Provincial Hospital	35,8%
KABUL	Emergency Surgical Center for War Victims	41,0%
WARDAK	Inferally Hospital	41,4%
FARYAB	Garziwal Hospital	46,2%
PARWAN	Panjshir Emergency Surgical Centre	49,2%
KABUL	Karte 3 Surgical Hospital	49,8%
HIRAT	Hirat Regional Hospital	54,0%
FARAH	Farah Provincial Hospital	56,2%
PAKTIKA	Sharan Hospital	57,5%
WARDAK	Quiat Al Khair Hospital	57,8%
GHAZNI	Jaghatu District Hospital	58,8%

There was no difference between males and females in the proportion of personnel present on the day of the survey.

5.3 Personnel categories

Analysis of the different categories of staff is made in the functional chapters. It is however possible to provide an overall picture of the personnel situation:



5.3.1 *Medical staff*

- About 2,420 doctors were found in the hospitals of the country. Of these, 25% were women. However, women are not evenly distributed among the different categories of doctors: they represent 97% of gynecologists but only 9% of surgeons. 1,160 doctors were employed in the hospitals of Kabul province, which had 47% of all medical practitioners employed in the hospitals of the country.
- 180 dentists (of which 22% female) and 78 dental technicians (of which 8% female) were employed in the country's hospitals. The bias towards Kabul province is particularly strong for dentists, as 70% of them are located there. The attraction of the Stomatology hospital is important for dentists (113 dentists have been declared to be employed in this facility), but there is a clear issue with the allocation of dentist staff.
- 340 pharmacists were declared employed by the various hospitals, of which 18% were female.

5.3.2 *Paramedical staff*

- Midwives are essentially female. One single male midwife was declared for the whole country. 340 were employed by the country's hospitals, and 45% worked in Kabul province.
- Nurses are generally male, and this is a problem with the staffing of female wards. It was found that 80% of the 2,660 nurses employed by Afghan hospitals were males.

- 380 laboratory technicians were declared by the different surveyed hospitals. The proportion of female staff among them was 9%.
- In addition, the survey identified 140 nutritionists (70% female), 200 various technicians (such as X-Ray technicians), 310 vaccination community health workers (34% female), 120 environmental health workers and 500 other health workers, for whom there was no identification of specific qualifications. It is surprising to find such a large number of immunization and environmental health personnel in hospitals, and some reallocation towards primary care facilities may be necessary.

5.3.3 Hospital management personnel

450 management personnel were identified during the survey. The proportion of female was 7%. There was not a single woman in charge of procurement, maintenance, store keeping or finance.

5.3.4 Ancillary staff

They represent the bulk of the personnel of Afghan hospitals: 36% (4 770) and their number is often much higher than the requirements of the service would demand (see chapter on support services). Except for the laundry and tailor positions (66% female staff) and cleaners (40% female staff), ancillary staff is predominantly male (70%). No females were found among drivers, gardeners and electricians.

6 Functional analysis of support services

It is very important for hospitals to have access to adequate support and ancillary services. This chapter addresses kitchen, laundry, garage, morgue and maintenance services. In general, these were in better condition than in many developing countries, but relying mostly on an ample supply of staff. Equipment of ancillary services was often insufficient and/or inadequate. Although these services are not as “glamorous” as the ones providing care to patients, they are essential for the good operation of hospital facilities, and targeted investment would be necessary in many facilities. In particular, the physical condition of buildings in support services was found notably less good than that of hospitalization units, and the equipment was generally minimal.

The quasi absence of maintenance services places current heavy investment programs at risk. There is an urgent need to organize building and equipment maintenance, both preventive and curative, in Afghan hospitals.

6.1 Kitchen

25 of the surveyed hospitals (21%) did not have a kitchen. These were mostly small facilities. The largest was Noor Hospital (*Kabul province*) with 41 beds. Actually 19 had less than 20 beds, and the six facilities without beds included in the survey did not have a kitchen.

Four of the hospitals with a kitchen did not have a cook among their staff, but two of them still managed to provide meals to patients.

The majority of hospitals with kitchens (96%) had at least one cook employed. In fact the average number of cooks was 3 for all these hospitals. There were major discrepancies between facilities: 22 hospitals have only one cook, whereas 10 have more than five cooks. The number of cooks is not related to the number of beds in the facility: the Panjshir Emergency Surgical Center (*Parwan province*) declared to have 21 cooks on staff for 49 “official” beds³. Karte 3 Surgical Hospital (*Kabul province*) had 23 cooks and Emergency Surgical Center for War Victims (*Kabul province*) had 16.

Of the 278 cooks found in Afghan public hospitals, 103 (37%) were located in Kabul province hospitals.

14% of hospitals with a kitchen declared they did not serve meals to patients, but only 8% declared not serving meals to staff. 12 hospitals (13%) declared that they served meals to families of patients. The survey included questions on the dietary content of meals. 10 hospitals serving meals to patients and/or staff declared never to serve meat and 44 never to serve eggs. On the other hand, 37 hospitals (40%) served meat at least once a day every day.

In 14 hospitals (15%) the physical condition of the kitchen was very bad, and major rehabilitation work was needed. 38 (41%) hospitals had no storage area for food products, but 36 of them were still able to provide meals to patients and/or staff. 8 hospitals declared that they had no kitchen fuel (but 3 of them could serve meals nevertheless). 37 hospitals (40%) did not have electrical power in the kitchen. More surprisingly, 51 hospitals (55%) did not

³ The number of beds counted by surveyors during their visit of that hospital was 85.

have access to running water in the kitchen, although this is considered a normal prerequisite for food preparation and dish cleaning. Actually, 40 of the surveyed hospitals with a kitchen did not have a sink, but they were not the always same as those lacking water access. 17 hospitals with running water in the kitchen did not have a sink.

The equipment of kitchens was not very sophisticated either. Only 23 hospitals had a refrigerator in the kitchen (25%) but all had some cooking utensils, pots and pans.

6.2 Laundry

57 (49%) of the surveyed hospitals had a laundry. Only three hospitals with more than 100 beds did not have a laundry, two in Kabul (Karte 3 Surgical hospital and IbnSina Emergency hospital) and Qalat hospital (*Zabul province*). The surveyors did not indicate if the laundry service was contracted out in these hospitals. Among the hospital with a laundry in-house, five housed it in a building in bad need for repair: Al Khidmat Al Hajeri hospital (*Kandahar province*), Nasagee hospital (*Baghlan province*), Baraki Rojan hospital (*Logar province*), Shuhada Tagab Behsud hospital (*Wardak province*) and Kabul Infectious Diseases hospital (*Kabul*). In all these facilities, major civil works are needed to upgrade the laundry buildings.

6.2.1 Laundry staff

Interestingly, several hospitals without a laundry declared they had laundry staff. For instance, Karte 3 Surgical hospital had 6 tailors and 12 “dhobis”, the Police hospital in Kabul had one tailor and 6 dhobis. 31 of the 60 hospitals without a laundry had some laundry staff, but most of the time this staff consisted of one dhobi (18 cases).

Only 5 hospitals with a laundry did not have any staff to operate it (9%). All the other hospitals had dhobis and tailors in variable quantities. These quantities were not directly related to the size of the hospitals, as several very large facilities have less than 10 laundry staff.

Hospitals with more than 10 laundry staff

Province	Hospital name	Dhobi	Tailor	Total laundry staff
KABUL	Maiwand Hospital Kabul	5	5	10
KABUL	Wazir Akbar Khan Hospital	6	4	10
PARWAN	Panjshir Emergency Surgical Centre	11	1	12
JAWZJAN	Provincial Hospital Jawzjan	10	3	13
KABUL	Malalay Maternity Hospital	11	4	15
KABUL	Emergency Surgical Center for War Victims	14	3	17
KABUL	Ali Abad Hospital	11	13	24

Although there was no dearth of staff, the level of equipment of the laundries was not as satisfactory. 34 laundries (60%) had at least one washing machine in working condition, but only 17 (29%) had a dryer, 22 (38%) had at least one sewing machine (one hospital, Panshjeer Emergency Surgical Center had 20 sewing machines), and 30 (52%) had irons.

More than 26% of the laundries (15 hospitals) had none of this basic equipment available.

5 laundries had no access to electrical power, and more surprisingly 13 did not have running water inside the laundry; more surprisingly even, 5 of the latter had at least one functional washing machine, although it can be presumed that it did not work without water.

6.3 Garages

24 hospitals (21%) had a car garage on their compound. The presence of a garage was not related to that of vehicles at the disposal of the facility. Garages were poorly equipped. Only two of them had automobile tool sets, one had a compressor in working condition, two had a car pit. Only had welding equipment and two had a car jack on site.

33 of the surveyed hospitals did not have a single driver on their staff, which means that 72% of hospitals had at least one, and again the presence of drivers was not related to the presence of a garage. The number of drivers on the staff of each hospital did not seem directly related to the size or level of activity of the facility.

Hospitals with more than 3 drivers on their staff

Province	Hospital name	Bed count	Number of drivers
KABUL	Kabul Infectious Diseases Hospital	120	4
HILMAND	Lashkar Gah General Hospital	162	4
FARYAB	Faryab Central Hospital	43	4
KANDAHAR	Abdul Hakim Hospital	10	6
HIRAT	Hirat Regional Hospital	527	11
PARWAN	Panjshir Emergency Surgical Centre	49	13
KABUL	Ali Abad Hospital	206	17

6.4 Morgue

11 of the surveyed hospitals had a morgue (9%). All these facilities were large, with over 100 beds. However, several large hospitals, in particular in Kabul, do not have a morgue that could be justified given their size.

Hospital with more than 100 beds without a morgue

Province	Hospital name	Number of beds
KABUL	Kabul Infectious Diseases Hospital	120
KABUL	Ata Turk Hospital	138
KABUL	Indira Ghandi Child Health Hospital	213
KABUL	Rabia-i-Balkhi Hospital	250
KABUL	Malalay Maternity Hospital	310
KABUL	Maiwand Hospital Kabul	351
KABUL	Karte 3 Surgical Hospital	454
NANGARHAR	Medical Hospital of Nangarhar	288
ZABUL	Qalat Hospital	102

Morgue buildings were generally in adequate condition, but morgues do not have proper refrigeration. Only one had air conditioning and 2 have proper ventilation. Improvement of the equipment of morgues would be necessary in most hospitals.

6.5 Maintenance

The survey of the maintenance facilities of surveyed hospitals was entrusted to the civil engineer member of the survey team. Only 11 hospitals were found to have a maintenance unit, and these included both small and large facilities.

Hospitals with a maintenance unit

Province	Hospital name	Bed count
KANDAHAR	Al Khidmat-Al Hajeri Hospital	14
BAMYAN	Panjab Eye Hospital	27
WARDAK	Quiat Al Khair Hospital	39
PARWAN	Panjshir Emergency Surgical Centre	49
HIRAT	Guzara District Hospital	57
KAPISA	Nesaji Gulbahar Hospital	72
KABUL	Emergency Surgical Center for War Victims	81
KABUL	Indira Ghandi Child Health Hospital	213
KABUL	Wazir Akbar Khan Hospital	230
KANDAHAR	Mirwais Hospital	304
NANGARHAR	General Hospital of Public Health	410

Some of Afghanistan largest and busiest hospitals do not have a maintenance unit, and have to rely on outside services for repairs. They cannot implement any preventive maintenance either. Only one in four hospitals with more than 250 beds had a maintenance unit. It must be emphasized, though, that each hospital with a maintenance unit had at least one maintenance technician or a technician in electricity. In two of the hospitals with a maintenance unit, the physical condition of the building was very bad, and needed urgent repair. These were Al Khidma-Al Hageri hospital (*Kandahar province*) and the General Hospital of Public Health (*Nangarhar province*). Of the 11 hospitals with a maintenance unit, 9 had electricity in the unit and 6 had access to running water.

46 hospitals without a maintenance unit had technicians on their staff, either for mechanical or electrical maintenance, but they operated without a workshop and stock of spare parts. In some cases, the number of technicians was rather high (consistently with the over-staffing of Afghan hospitals, in particular in Kabul province).

Hospitals without a maintenance unit but with more than 5 technicians on staff

Province	Hospital name	Number of technicians
JAWZJAN	Provincial Hospital Jawzjan	5
KABUL	Sadre Abn Seena Hospital	5
KABUL	Malalay Maternity Hospital	5
KABUL	Karte 3 Surgical Hospital	7
HIRAT	Hirat Regional Hospital	8
KABUL	Ata Turk Hospital	8

Province	Hospital name	Number of technicians
KABUL	Ali Abad Hospital	10

Existing maintenance units did not provide a very useful service in many cases. 5 of the 11 units could not show a book of interventions and could not say how many repairs they had performed over the past 6 months. For those who could provide this information, the number was often very low and only two hospitals in Kandahar (Mirwais hospital and Al Khidmat-Al Hajeri hospital) gave the impression that their maintenance was really fully operational. In spite of this low level of activity, 9 hospitals declared that maintenance calls were answered on the same day, and the 2 others would react within one week at most. In 2 of the hospitals, a private technician would systematically be called in case of repair need.

8 hospitals organized preventive maintenance monthly, two every three months, and one seemed not to undertake any preventive activities.

Hospitals without a maintenance unit generally had some mechanisms for preventive and curative maintenance, using staff available and other sources. 37 (35%) had preventive maintenance activities performed at least once a month. 21 hospitals (20%) claimed to be able to receive attention to their calls for maintenance on the same day: all these hospitals were located in large urban centers. On the other hand, 10 hospitals declared that they could not get maintenance support in less than one month, and in one case, never.

Maintenance management was found to be a real problem in hospitals without a maintenance unit: 85 hospitals (80%) did not keep a register of repair interventions or were unable to provide information about calls for repairs. This is a particular problem for the 28 hospitals that call external private technicians: 19 of them (68%) indicated that they could not show a record of interventions. The survey did not include questions on the capacity to pay for outside interventions, and the timeliness of such payments.

When maintenance units existed, they were poorly equipped and required upgrading to fully provide useful services. 8 of the 11 hospitals had tools for mechanical repairs and 8 had plumbing tools, but only 5 were equipped to perform electrical repairs, 3 had medical maintenance equipment. Not one hospital declared having equipment, spare parts and tools for cold chain maintenance.

7 Functional analysis of medical units

7.1 Emergencies

The emergency department is often the first contact of patients with any hospital facility or the place where referred patients are received, and the Ministry of Health was interested in having a particularly detailed evaluation of the capacity of hospitals to handle emergencies. The current chapter concentrates on the Emergency Room (ER), as other departments are analyzed in other parts of this report. It should be kept in mind, though, that emergency rooms only provide triage, early diagnosis and emergency care, but can only be considered functional if they can lead patients to other functional units in the facility (operating room, intensive care unit, etc.).

The situation of ER was not very good in the surveyed facilities. 30% of all surveyed facilities had no emergency room at all. In some cases, it was because the hospital was not designed to receive emergencies, but most of the time this was not the case. Some entire provinces have access to only one single ER. Most ER were poorly equipped and not able to handle some of their basic functions: for instance, only 11 hospitals could perform an electrocardiogram and 30 had oxygen available in the ER.

However, over 40,000 patients on average were seen monthly in ER in the country's hospitals⁴, and a total of 252 hospital beds are labeled "emergency room beds"⁵. One of the reasons for this high turnover of patients is the level of staffing, which partly compensates for the lack of equipment: only 14 hospitals (17% of facilities with an ER) did not have a doctor on call 24h/24h and of these 9 had a doctor available on call at all time, leaving only 5 ER without staff at night (6%). In fact, the ER often operates as an outpatient unit, rather than an emergency facility.

It is clear, from the results of the survey, that some upgrading of the technical capacity of emergency rooms is required rapidly. It is also clear that the several hospitals need to be reorganized and equipped to receive emergencies in provinces that are particularly poorly covered.

7.1.1 *Emergency room coverage*

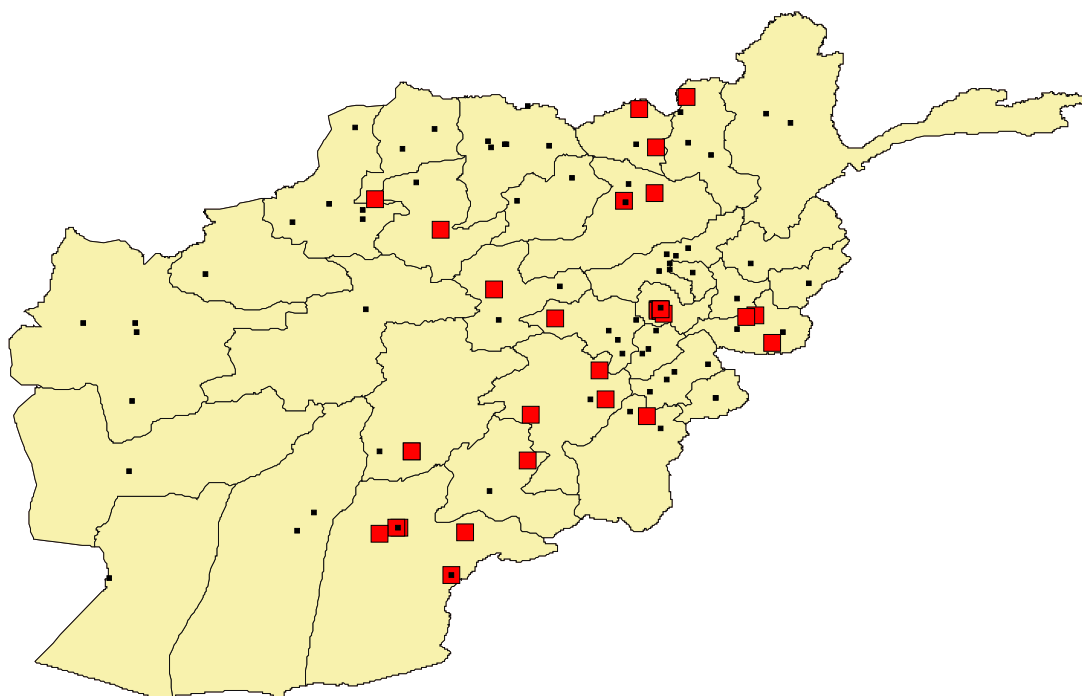
Of the 117 hospitals that were surveyed, only 83 (71%) had an emergency room. In some cases, the absence of an ER was not a surprise as there are facilities that are not organized to receive emergencies. This was the case for the Ministry of Mines hospital in Baghlan province or the stomatology hospital in Kabul, for instance. In other cases, as mentioned higher, facilities that were surveyed proved not to be real hospitals, and had no beds: it was therefore predictable that they could not receive emergencies. Finally, some hospitals may

⁴ The actual figure is likely to be higher, as several hospitals did not keep a record of patients seen in emergency.

⁵ This total does not include the 217 beds that Malalai hospital in Kabul has labeled "emergency beds" during the survey.

receive emergencies without calling their facility “emergency room”. However, the list of 34 hospitals unable to receive emergencies was longer than expected.

Hospitals without an emergency room (■)



Province Name	Hospital Name	Number of beds
BAGHLAN	Ministry of Mines Hospital (Maadan)	16
BAGHLAN	Nahreen District Hospital	10
BAMYAN	Yakawlang Hospital	24
GHAZNI	Jaghori Hospital	50
GHAZNI	Maulawi Abdul Tahir Hospital	25
GHAZNI	Jaghata District Hospital	10
JAWZJAN	Darzab Basic Health Center	4
KABUL	Karte 3 Surgical Hospital	454
KABUL	Maiwand Hospital Kabul	351
KABUL	Rabia-i-Balkhi Hospital	250
KABUL	Ata Turk Hospital	138
KABUL	Kabul Infectious Diseases Hospital	120
KABUL	Noor Hospital (2)	75
KABUL	Kabul Mental Health Hospital	60
KABUL	Noor Hospital (1)	41
KABUL	Stomatology Hospital	30
KABUL	Shaiwaky District Hospital	20
KANDAHAR	Kandahar TB Center	18

Province Name	Hospital Name	Number of beds
KANDAHAR	Abdul Hakim Hospital	10
KANDAHAR	Arghistan District Hospital	8
KANDAHAR	Panjwayi District Hospital	6
KANDAHAR	Al Ahsan Clinic	0
KUNDUZ	Imam Sahib Hospital	0
KUNDUZ	Khan Abad Hospital	0
NANGARHAR	Medical Hospital of Nangarhar	288
NANGARHAR	Achin Basic Health Clinic	0
NANGARHAR	Sultan Pur Clinic	0
PAKTIKA	Sar Hawza Clinic	11
SARI PUL	Tokzar Hospital	10
TAKHAR	Rustaq Hospital	9
URUZGAN	Uruzgan Hospital	21
URUZGAN	Tirinkot CHC	10
WARDAK	Shuhada Tagab, Behsud Hospital	18
ZABUL	Shahjoi Hospital	0

Some provinces have only one hospital with an ER among their facilities: this is the case for Kunduz, Sari Pul, Uruzgan and Zabul provinces. In Bamyan province, the Panjab Eye Hospital only provides specialist ophthalmology emergency services.

7.1.2 Presence of ER staff

Among the 83 hospitals that had an emergency room and declared receiving patients in emergency, the level of staffing was relatively good. 72 of the 83 hospitals had a doctor present 24 hours a day (88%) and 3 more had a doctor on call 24 hours a day.

45 hospitals (55%) did not have a female health worker present 24 hours a day and this probably hampers access of women patients to emergency care, especially at night. In all the hospitals where a female health worker was present all the time at the ER, a doctor was also available. These 37 facilities were likely to be able to provide emergency care to both male and female patients, regardless of the level of their equipment.

Facilities with both a doctor and a female health worker 24h/24h

Province	Hospital name	Province	Hospital name
BADAKHSHAN	Faizabad Hospital	KUNDUZ	Kunduz Regional Hospital
BADGHIS	Qala-i-Naw District Hospital	LAGHMAN	Mehtar Laam Baba Regional Hospital
BALKH	Khulm District Hospital	LOGAR	Baraki Rojan Hospital
BALKH	Kod Barq Hospital	NANGARHAR	Fatumatu Zahra
BALKH	Mazar-i-Sharif General Civil Hospital	NANGARHAR	General Hospital of Public Health
BAMYAN	Bamyan Central Hospital	NANGARHAR	Shenwar Ghani Khail Hospital
FARAH	Farah Provincial Hospital	PAKTYA	Gardez Civil Hospital
FARYAB	Andkhoy Hospital	PAKTYA	Tamir Hospital
FARYAB	Bilchiragh Hospital	PAKTYA	Wamy Hospital

Province	Hospital name	Province	Hospital name
FARYAB	Faryab Central Hospital	PARWAN	Panjshir Emergency Surgical Centre
HIRAT	Guzara District Hospital	PARWAN	Parwan Provincial Hospital
HIRAT	Hirat Regional Hospital	PARWAN	Rukha Hospital
JAWZJAN	Provincial Hospital Jawzjan	SARI PUL	Sar-i-Pul Provincial Hospital
KABUL	Ahmad Shah Baba Mina	TAKHAR	Farkhar Hospital
KABUL	Ali Abad Hospital	TAKHAR	Taloqan Central Hospital
KABUL	Emergency Surgical Center for War Victims	WARDAK	Chak Wardak Hospital
KABUL	Indira Ghandi Child Health Hospital	WARDAK	Inferally Hospital
KABUL	Malalay Maternity Hospital	WARDAK	Quiat Al Khair Hospital
KABUL	Wazir Akbar Khan Hospital		

7.1.3 Obstetrical emergencies

Among the 83 hospitals with an emergency room, only 59 declared that they could accept patients for emergency obstetric care during daytime (72%). This proportion decrease a little for night time, with 57 hospitals declaring to receive them (69.5%).

The ER plays an important role in emergency obstetric care, as patients are seen in the emergency room in 18 cases (30.5%) during the day time, against 41 in the maternity ward. During the night this proportion increases to 37% (21 cases in the ER and 36 in the maternity). However, only 9 of the facilities declaring to receive obstetrical emergencies in the ER had a fetal stethoscope available (43%). It can be assumed that obstetrical emergencies seen in the ER are rapidly transferred to the EOC department.

The role played by the ER is nevertheless important in emergency obstetric care, and the presence of female staff to handle such emergencies, as well as emergencies involving female patients is critical. Surprisingly, not all hospitals receiving obstetrical emergencies in their ER had a female health worker available all the time. Only 7 or 18 facilities receiving obstetrical emergencies in the ER at night (39%) always had a female health worker available.

7.1.4 Other emergencies

Most non-obstetrical emergency cases were first seen in the ER, which generally plays its triage and first aid function. Only 3 hospitals, Farah Provincial hospital (*Farah province*), Kunduz Regional hospital (*Kunduz province*) and Baraki Rojan hospital (*Logar province*) declared that emergency patients were first seen in the medical or surgical wards. Conversely, 32 hospitals (39%) declared that once seen in the ER, patients received care in the wards. All the others declared that care was provided in the emergency room.

7.1.5 Access to emergency care

Emergency rooms were better supplied in pharmaceuticals than expected in several hospitals. Only 10 hospitals (12%) did not have a stock of emergency drugs in the ER, and 58 hospitals (70%) had ringer lactate infusion fluid available in the ER at the time of the survey.

Hospitals lacking a stock of emergency drugs in the ER at the time of the survey⁶

Province	Hospital name
BALKH	Balkh Hospital
BALKH	Tafahosat Hospital
JAWZJAN	Aqcha Hospital
KABUL	Ahmad Shah Baba Mina
KAPISA	Nijrab District Hospital
KHOST	Matun Baba Hospital
NANGARHAR	Khugyani Hospital
PAKTYA	Said Karam Hospital
PARWAN	Parwan Provincial Hospital
SAMANGAN	Deh-i-Village Clinic

Supply in medical and surgical equipment in the emergency rooms was far less abundant. The survey looked for very basic equipment, and many hospitals did not have them available in the ER. If 76 hospitals (93%) of all ER have at least one examination table in good condition (10 in IbnSina Emergency hospital, 12 in Wasir Afbar Khan hospital in Kabul), 8 did not have scissors/forceps available (10%), 21 could not take the blood pressure of an emergency patient by want of a sphygmomanometer in working condition (25%) and 13 (16%) declared not to have a stethoscope in the ER⁷.

Ability to handle minor surgery in the emergency room was measured by the availability of minor surgery kits (for minor injuries requiring stitching) and plaster of Paris (for uncomplicated bone fractures). 63 emergency rooms (77%) had a set of minor surgery instruments, regardless of whether patients were first seen in the ER or in the surgical ward. On the other hand, only 31 emergency rooms (38%) had plaster available.

Medical emergencies could not be addressed very well either. Only 30 hospitals had oxygen available in the ER (37%), 23 had an otoscope in working order (28%) and only 11 had an EKG in a condition to perform electrocardiograms (13.5%). Only 23 emergency rooms (28%) had a needle disposal box to get rid of sharps.

69 hospitals had good condition stretchers available in the emergency room (84%), but some numbers showed that distribution of this capacity among hospitals could be improved. For instance, Nijrab District Hospital (*Kapisa province*) had 50 stretchers attached to its emergency room and Mohammad Agha District Hospital (*Logar province*) had 20, whereas hospitals declaring to receive more than 1,000 patients in emergency per month, such as IbnSina Emergency hospital (*Kabul province*), Nimroz hospital (*Nimroz province*) or Shenwar Ghani Khail hospital (*Nangarhar province*) only have 3 each.

7.1.6 Physical condition of Emergency rooms

Two hospitals had emergency rooms in decrepit condition and in need of urgent reconstruction. All three of the walls, roof and floor were described as in bad condition, to the point of making use of the building unsafe. In addition there was no access to water in

⁶ None of these hospitals had Ringer Lactate available either.

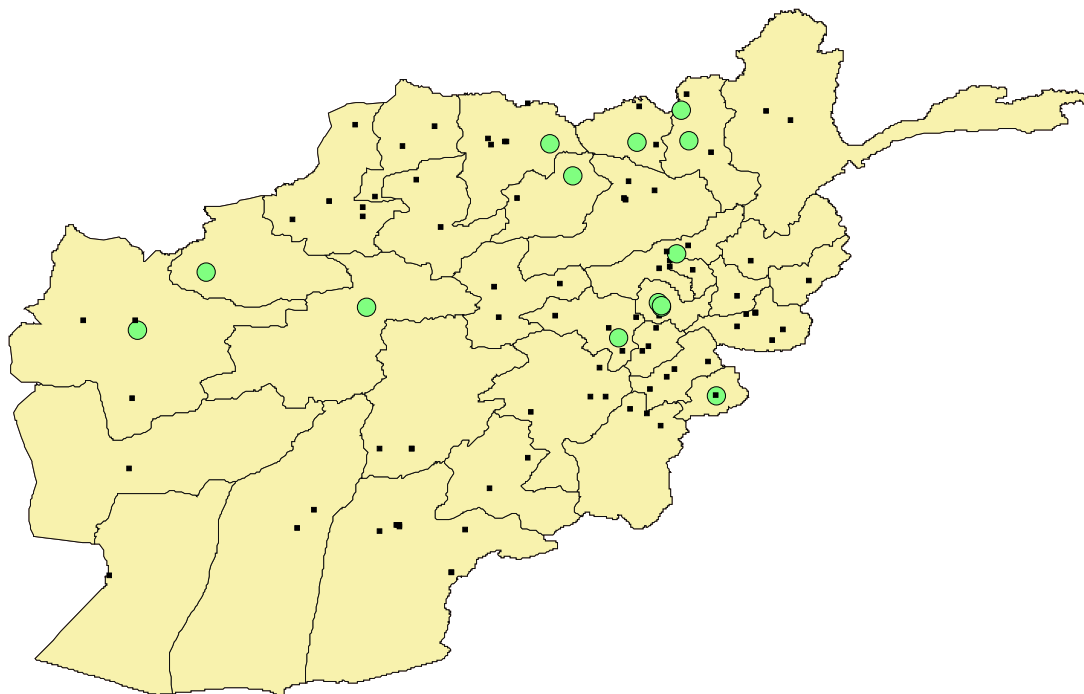
⁷ This may not be highly significant as doctors working in hospitals usually have their own stethoscope with them at all times.

both. These were Kapisa Provincial hospital (*Kapisa province*) and Nimroz hospital (*Nimroz province*). In these two facilities, it seemed that building and equipping a new ER would be justified.

In addition to these two hospitals, four more facilities had buildings in a concerning state of disrepair: Naserage Central Health center (*Hilmand province*), Chagaram hospital (*Parwan province*), Urgun hospital (*Paktika province*) and Qaisar hospital (*Faryab province*). In these four hospitals rehabilitation of emergency rooms could bring major improvements in their capacity to provide 24h/24h care.

26 emergency rooms (32%) were in good physical condition. However, only 14 of these (17% of hospitals with an ER) had power and water in the ER.

Hospitals with ER in good condition with access to power and water (●)



Province	Hospital name
BADGHIS	Qala-i-Naw District Hospital
BALKH	Khulm District Hospital
GHOR	Ghor Provincial Hospital
HIRAT	Guzara District Hospital
KABUL	Emergency Surgical Center for War Victims
KABUL	Khair Khana Hospital
KABUL	Wazir Akbar Khan Hospital
KHOST	Khost Hospital
KUNDUZ	Kunduz Regional Hospital

Province	Hospital name
PARWAN	Panjshir Emergency Surgical Centre
SAMANGAN	ARCS Health Clinic
TAKHAR	Dasht-i-Qala Hospital
TAKHAR	Taloqan Central Hospital
WARDAK	Chak Wardak Hospital

It should be noted, however, the Khair Khana (*Kabul Province*) hospital declared that there was no heating in the emergency room. These 14 hospitals were also among those with the best level of equipment; they all had a doctor available 24 hours a day and a stock of emergency drugs at the ER. The survey could not explore the quality of management of emergencies in these hospitals, nor the performance of staff. These 14 hospitals declared to receive a little over 11,400 emergencies per month, i.e. 28% of all emergencies in the country.

7.2 Blood Banks

The Afghan transfusion system remains little developed and its performance is relatively low. Some facilities have a functional blood bank – although none is fully operational – but large parts of the population do not have access to transfusion. Insufficient equipment and access to consumable hamper the efficiency of the transfusion system. As a result, there are few transfusions performed, most of them are made of whole blood and screening for blood safety is not systematic.

There is a need for additional investment in the transfusion facilities, both in terms of equipment and consumable. The survey could not identify the needs for human resources investment, but they are believed to be important as well. Some additional blood banks are probably needed in addition to the existing ones to get a more adequate geographic coverage, and more attention must be paid to the conservation of blood products.

On the whole, most Afghan blood banks need support in the organization of blood donations. Reliance on family members remains far too high, and there is a need to organize the “recruitment, selection and retention of voluntary, non-remunerated blood donors”⁸. Given that there is no national donor system, each facility should have a staff member in charge of donor education, motivation, recruitment and retention, education and information of the public, maintenance of a blood donor registry and monitoring of transfusion activities.

Support from the Ministry of Health is necessary to organize this activity, with the help of the international community.

7.2.1 Main findings

25 of the surveyed facilities (21%) declared that they had some transfusion activities. However, more hospitals had the possibility to perform transfusion or had blood bank equipment, but did not report any activity. The survey showed that 7 additional facilities had some or all of the equipment that was considered critical in the survey

These 32 hospitals were larger than the average size of Afghan facilities surveyed. They had an average number of beds of 158 (against 71 beds national average). The smallest facility performing transfusions, ARCS health clinic (*Samangan province*) declared to have 41 beds, the largest, Hirat Regional hospital, 527 beds.

Overall, it was found that an average 2,000 transfusions were performed per month in the hospitals of the country. This corresponds to a yearly “transfusion incidence rate” less than 0.12%. International comparisons are not always relevant, and figures from other countries are not always reliable. However, the transfusion incidence rate in developed countries is usually situated between 3% and 5%. In the United States, Canada and Western Europe, the “probability of receiving a transfusion” is about 0.9% per year⁹.

⁸ WHO : Blood safety guidelines. WHO indicates that family/replacement and paid donors are associated with a significantly higher prevalence of transfusion-transmissible infections than voluntary donors.

⁹ The difference between the figures comes from the fact that a large proportion of patients requires several transfusions.

If the figures given by the surveyed hospitals are reliable, Afghanistan has a very low transfusion activity. It can be partly explained by the limited availability of hospital services that require large amounts of transfusion (cardio-vascular surgery, dialysis, oncology, etc.) but also reflects insufficient development of blood banks in the country.

7.2.2 Hospitals with transfusion services

Two categories of facilities were found in the survey: hospitals that perform transfusions, and hospitals that have equipment that could allow them to perform transfusions.

1) Hospital performing transfusions

25 hospitals reported having performed transfusions in the six months before the survey. The average monthly amount of transfusions varied between less than 10 per month (Bamyan Central hospital, Guzara district hospital, ARCS health clinic in Samangan province) to several hundred per month: 208 in Lshkar Gah general hospital (*Hilmand province*), 236 in Hirat Regional hospital, 244 in the Medical hospital of Nangarhar, 244 in Wazir Akbar Khan hospital (Kabul).

Hospitals performing transfusions do not always have the equipment that would be required for the operation of a functional blood bank, and two of them do not have a blood bank refrigerator (Bamyan Central hospital in *Bamyan Province* and Taloqan Central hospital in *Takhar Province*).

However, all hospitals performing transfusions have reagents for blood grouping and cross-matching.

The list of facilities declaring to perform transfusions at the time of the survey is indicated here below:

- Faizabad hospital (*Barakhshan province*)
- Nasagee hospital (*Baghlan province*)
- Bamyan Central hospital (*Bamyan province*)
- Farah Provincial hospital (*Farah province*)
- Faryab Central hospital (*Faryab province*)
- Ghazni Civil Provincial hospital (*Ghazni province*)
- Lashkar Gah General hospital (*Hilmand province*)
- Guzara District hospital (*Hirat province*)
- Hirat Regional hospital (*Hirat province*)
- Provincial hospital in Jawzjan (*Jawzjan province*)
- Ali Abad hospital (*Kabul province*)
- Emergency Surgical Center for War Victims (*Kabul province*)
- IbnSina Emergency hospital (*Kabul province*)
- Karte 3 Surgical hospital (*Kabul province*)
- Khair Khana hospital (*Kabul province*)
- Rabia-i-Balkhi hospital (*Kabul province*)
- Wazir Akbar Khan hospital (*Kabul province*)
- Mirwais hospital (*Kandahar province*)
- Asad Abad hospital (*Kunar province*)

- Kunduz Regional hospital (*Kunduz province*)
- Medical hospital of Nangarhar (*Nangarhar province*)
- Panjshir Emergency Surgical Center (*Parwan province*)
- Parwan Provincial Hospital (*Parwan province*)
- ARCS Health Clinic (*Samangan province*)
- Taloqan Central hospital (*Takhar province*).

2) Hospital with capacity to perform transfusions

Seven hospitals have some capacity but declared to the surveyors that they did not perform transfusions.

- Mazar-i-Sharif General Civil hospital (*Balkh province*) has some equipment and supplies, but declared missing many items to have a functional blood bank. Unable to pack cells, the blood bank did not store double blood bags. It has a blood mixer and a refrigerator and some blood testing consumable (no hepatitis C test kits, though). The hospital had no mechanism for recruiting and contacting donors, and no register of donors. Besides needing additional equipment and consumable, the blood bank seems to require organizational support.
- Abdul Hakim hospital in Kandahar (*Kandahar province*) has a centrifuge to pack cells, a refrigerator, a blood scale, a blood mixer, a stock of double blood bags and some reagents. It requires some additional equipment and supplies and support for the organization of transfusion services.
- Nesaji Gulbahar hospital (*Kapisa province*) has a register of donors and the capacity to pack cells. It has a stock of single and double blood bags, a blood mixer, reagents and a freezer. However, it does not have a refrigerator and cannot test blood for syphilis and HIV.
- Mehtar Laam Baba Regional hospital (*Lahman province*) is nearly fully equipped to start transfusion services with whole blood. It has a full set of reagents, a refrigerator, a blood scale, a blood mixer and a stock of single blood bags. During the visit of the surveyors, it declared having a registry of donors in place.
- Fatumatu Zahra hospital in Jalalabad (*Nangarhar province*) is well equipped, with two refrigerators, cell packing equipment, a stock of double blood bags, and a full donor system in place. However, it cannot test blood for syphilis, HIV and hepatitis C. Minimal investment and support for the organization of transfusion services could make this hospital's blood bank fully functional.
- The same applies to another hospital in Jalalabad, the General Hospital of Public Health (*Nangarhar province*). Its blood bank is fully equipped and functional, and it has an adequate supply of tests for blood safety. The only missing consumable was blood bags.
- Wamy hospital (*Paktya province*) can pack cells and has a stock of single and double blood bags. It has a refrigerator and some testing reagents. It cannot test for HIV, hepatitis C and syphilis, and lacks some equipment (blood shaker, blood mixer, and

freezer). However, this blood bank should be ready to operate with some additional investment and organizational support. It has already set the level of fees for transfusions: 90 Afg.

3) Other facilities

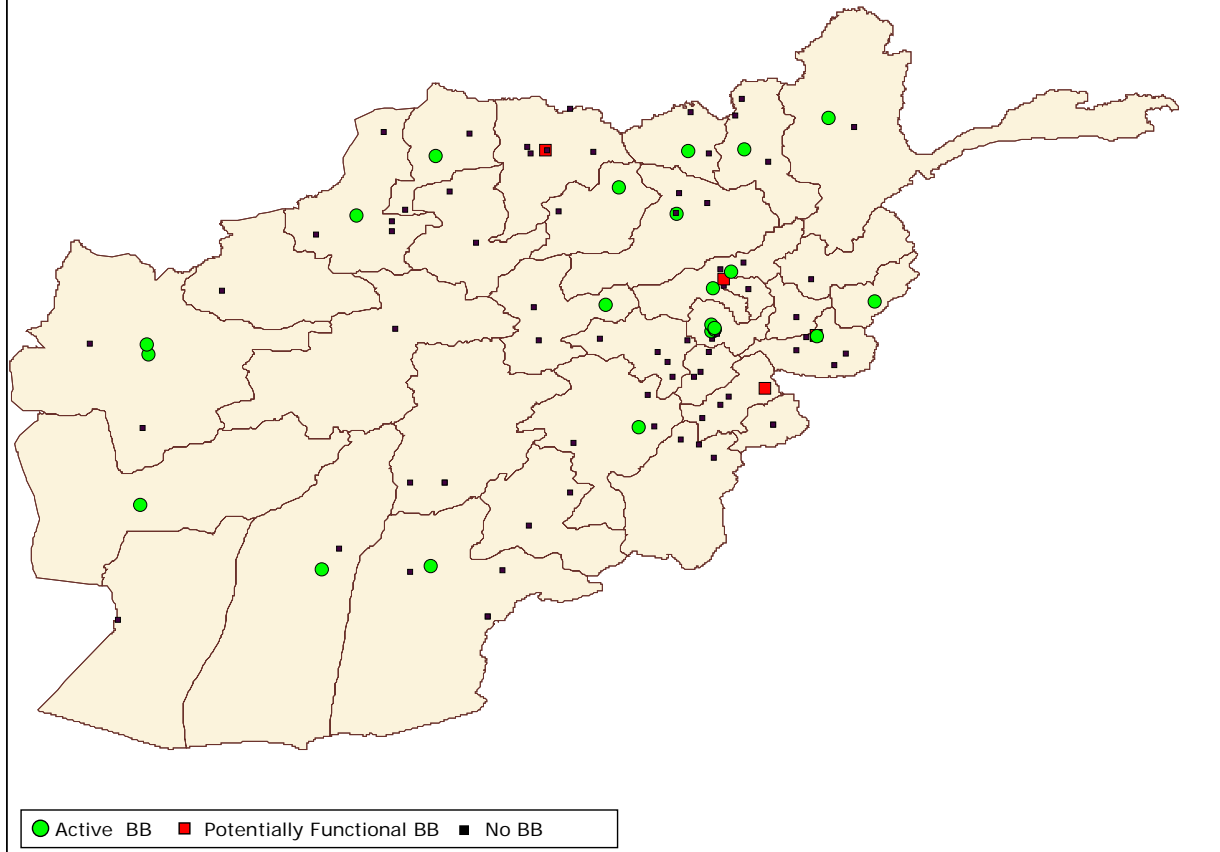
Other hospitals generally reported no capacity and no activity in transfusion. One facility, Inferally hospital (*Wardak province*), declared having reagents for grouping and cross-matching and to have set a price for transfusions (15 Afg), but did not have any other equipment and supply for setting up transfusion services. Qalat Hospital in *Zabul province* has a refrigerator and some reagents but no capacity to set up transfusion services at this point.

Most hospitals without transfusion capacity were small hospitals, but some relatively large facilities declared to have no transfusion capacity:

- Ata Turk hospital in Kabul
- Indira Gandhi Child Health hospital in Kabul
- Kabul Infectious Diseases hospital
- Maiwand hospital in Kabul
- Malalai maternity hospital in Kabul (this was a surprise given the role of this hospital as a reference center for emergency obstetric care)
- Sadre Abn Seena hospital in Kabul
- Qalat hospital (*Zabul province*).

The map here below provides the location of all hospitals performing transfusion services and hospitals with the potential to provide such services with minimal improvements.

BLOOD BANKS



7.2.3 Donor management

In the 25 hospitals performing transfusions, 82.5% of all transfusions were made with blood donated by a family member of the patient, 9.1% with blood from a paid donor, and 8.4% with blood from a volunteer donor.

The world average indicated by WHO is less skewed towards family donors and Afghanistan can progress towards more efficient donor management systems. In European developed countries, 98% of donations come from voluntary non-remunerated donations (the European Council has even forbidden the remuneration of blood donations for all its members) and 2% from family members or the patient. The average in countries with a low human development index is 31% of donations from voluntary non-remunerated donors and 61% from family and relatives. WHO considers that one of the priorities of transfusion services should be the elimination of family and paid blood donor systems and the education, motivation and recruitment of voluntary non-remunerated blood donors from low-risk populations who give blood regularly.

Organized blood donation remains embryonic in the country. Of the 25 hospitals that performed transfusions during the 6 months before the survey, 10 (40%) entirely relied on family members of the transfused patient for a donation. Among these 10 hospitals though, three – Guzara District hospital (*Hirat province*), Khair Khana hospital (*Kabul province*) and

Mirwais hospital (*Kandahar province*) – declared that they have a registry of donors and could organize blood donation services.

Among the 16 hospitals that used non-family donors, most transfusions were still made with blood coming from family members: 73% in average. Only five hospitals relied more on outside donors than on family members for blood donations:

- Lashkar Gah General Hospital (*Hilmand province*) had 66% of their blood donations coming from paid donors
- Emergency Surgical Center for War Victims in Kabul relied on voluntary donations for 50% of their blood supply
- IbnSina Emergency Hospital in Kabul received 44% of their donations from voluntary donors, and 12% from paid donors
- Wazir Akbar Khan Hospital (*Kabul*) had 50% of their blood donations coming from paid donors
- Asad Abad Hospital (*Kunar province*) received 68% of their blood donations from voluntary non-remunerated donors.

Among the hospitals without a functional blood bank, but with some capacity to develop transfusion services, failure to organize a blood donation system appeared to be an important reason for their absence of activity.

Origin of donated blood for the 25 active transfusion centers

Province Name	Hospital Name	% from family donors	% from paid donors	% from unpaid volunteers
GHAZNI	Ghazni Civil Provincial Hospital	100%	0%	0%
HIRAT	Guzara District Hospital	100%	0%	0%
JAWZJAN	Provincial Hospital Jawzjan	100%	0%	0%
KABUL	Ali Abad Hospital	100%	0%	0%
KABUL	Khair Khana Hospital	100%	0%	0%
KABUL	Rabia-i-Balkhi Hospital	100%	0%	0%
KANDAHAR	Mirwais Hospital	100%	0%	0%
KUNDUZ	Kunduz Regional Hospital	100%	0%	0%
PARWAN	Panjshir Emergency Surgical Centre	100%	0%	0%
SAMANGAN	ARCS Health Clinic	100%	0%	0%
KABUL	Karte 3 Surgical Hospital	98%	0%	2%
NANGARHAR	Medical Hospital of Nangarhar	96%	0%	4%
BAGHLAN	Nasagee Hospital	95%	5%	0%
BADAKHSHAN	Faizabad Hospital	92%	8%	0%
BAMYAN	Bamyan Central Hospital	89%	0%	11%
PARWAN	Parwan Provincial Hospital	86%	14%	0%
FARYAB	Faryab Central Hospital	77%	23%	0%
TAKHAR	Taloqan Central Hospital	77%	21%	2%
HIRAT	Hirat Regional Hospital	75%	14%	10%
FARAH	Farah Provincial Hospital	68%	14%	18%
KABUL	Emergency Surgical Center for War Victims	50%	0%	50%
KABUL	Wazir Akbar Khan Hospital	50%	50%	0%
KABUL	IbnSina Emergency Hospital	44%	12%	44%
HILMAND	Lashkar Gah General Hospital	34%	66%	0%
KUNAR	Asad Abad Hospital	32%	0%	68%

7.2.4 Blood transfusion safety

The survey reviewed the capacity of hospitals to perform grouping and cross-matching, and to test blood for syphilis, HIV, hepatitis B and hepatitis C.

It has been mentioned higher that all existing transfusion services are able to perform grouping and cross-matching, and this basic element of blood safety seems to be correctly handled.

However, testing blood for diseases potentially transmitted through transfusion is not always done. Of the 25 hospitals performing transfusion at present, 13 screened donated blood for HIV, hepatitis B and C and syphilis (56%). These were the following:

- Bamyan Central hospital (*Bamyan province*)
- Ghazni Civil Provincial hospital (*Ghazni province*)
- Provincial hospital in Jawzjan (*Jawzjan province*)
- Emergency Surgical Center for War Victims (*Kabul province*)
- Karte 3 Surgical hospital (*Kabul province*)
- Khair Khana hospital (*Kabul province*)
- Rabia-i-Balkhi hospital (*Kabul province*)
- Wazir Akbar Khan hospital (*Kabul province*)
- Mirwais hospital (*Kandahar province*)
- Asad Abad hospital (*Kunar province*)
- Kunduz Regional hospital (*Kunduz province*)
- Panjshir Emergency Surgical Center (*Parwan province*)
- Parwan Provincial Hospital (*Parwan province*)
- ARCS Health Clinic (*Samangan province*)

Capacity to adequately screen donated blood was measured by the availability of reagents for the four transfusion-transmissible infections. In some cases, the absence of reagents may be linked to temporary stock-outs of one product, in other cases it shows a more concerning lack of transfusion safety. The following were found during the survey:

- Faizabad hospital (*Barakhshan province*) had reagents for Hepatitis B and HIV only
- Nasagee hospital (*Baghlan province*) tested for syphilis and hepatitis C only, and not hepatitis B and HIV
- Farah Provincial hospital (*Farah province*) had no testing at all
- Faryab Central hospital (*Faryab province*) had no testing at all
- Lashkar Gah General hospital (*Hilmand province*) only tested donated blood for HIV
- Guzara District hospital (*Hirat province*) had no testing at all
- Hirat Regional hospital (*Hirat province*) only tested donated blood for syphilis.
- Ali Abad hospital (*Kabul province*) had no screening of donated blood for hepatitis C
- IbnSina Emergency hospital (*Kabul province*) had no screening of donated blood for hepatitis C
- Medical hospital of Nangarhar (*Nangarhar province*) had no screening for HIV and hepatitis C
- Taloqan Central hospital (*Takhar province*) was found to only test donated blood for hepatitis B.

Among hospital with potentially functional blood banks, many had testing reagents available but only the Jalalabad General Hospital of Public Health had a complete set. Others are not yet in a condition to screen for all transfusion-transmissible diseases.

Blood safety: Screening for transfusion-transmissible infections
in the 25 facilities performing transfusions

Province Name	Hospital Name	Grouping and cross-matching	Test for syphilis	Test for HIV	Test for Hep. B	Test for Hep. C
BAMYAN	Bamyan Central Hospital	YES	YES	YES	YES	YES
GHAZNI	Ghazni Civil Provincial Hospital	YES	YES	YES	YES	YES
JAWZJAN	Provincial Hospital Jawzjan	YES	YES	YES	YES	YES
KABUL	Ali Abad Hospital	YES	YES	YES	YES	-
KABUL	Emergency Surgical Center for War Victims	YES	YES	YES	YES	YES
KABUL	IbnSina Emergency Hospital	YES	YES	YES	YES	-
KABUL	Karte 3 Surgical Hospital	YES	YES	YES	YES	YES
KABUL	Khair Khana Hospital	YES	YES	YES	YES	YES
KABUL	Rabia-i-Balkhi Hospital	YES	YES	YES	YES	YES
KABUL	Wazir Akbar Khan Hospital	YES	YES	YES	YES	YES
KANDAHAR	Mirwais Hospital	YES	YES	YES	YES	YES
KUNAR	Asad Abad Hospital	YES	YES	YES	YES	YES
KUNDUZ	Kunduz Regional Hospital	YES	YES	YES	YES	YES
PARWAN	Panjshir Emergency Surgical Centre	YES	YES	YES	YES	YES
PARWAN	Parwan Provincial Hospital	YES	YES	YES	YES	YES
SAMANGAN	ARCS Health Clinic	YES	YES	YES	YES	YES
NANGARHAR	Medical Hospital of Nangarhar	YES	YES	-	YES	-
BADAKHSHAN	Faizabad Hospital	YES	-	YES	YES	-
BAGHLAN	Nasagee Hospital	YES	YES	-	-	YES
HIRAT	Hirat Regional Hospital	YES	YES	-	-	-
HILMAND	Lashkar Gah General Hospital	YES	-	YES	-	-
FARAH	Farah Provincial Hospital	YES	-	-	-	-
FARYAB	Faryab Central Hospital	YES	-	-	-	-
HIRAT	Guzara District Hospital	YES	-	-	-	-
TAKHAR	Taloqan Central Hospital	YES	-	-	YES	-
		100%	76%	72%	72%	60%

7.2.5 Transfusion services

Most blood banks only provided transfusions of whole blood. Only 10 operational transfusion services had the capacity to pack cells and thus keep plasma or administer red cells or platelets to patients.

All of these facilities had equipment available in addition to a centrifuge (either blood shakers, or blood mixers, or blood scales) and some consumable. However, none was fully equipped and completely functional. The Guzara District hospital, which is among the facilities able to pack cells, did not have a refrigerator or a freezer, thus reducing the interest of this technology. Red cells can have a shelf life of up to 5 weeks, but only if kept at 4-6°C.

The table here below indicates the status of equipment in both operating and potentially functional blood banks (total of 32 facilities).

Province Name	Hospital Name	Capacity to pack cells	Refrig.	Freezer	Blood scale	Blood shaker	Blood Mixer	Double blood bags
BADAKHSHAN	Faizabad Hospital	-	-	-	YES	-	YES	-
BAGHLAN	Nasagee Hospital	-	YES	YES	-	-	YES	-
BALKH	Mazar-i-Sharif General Civil hospital	-	YES					
BAMYAN	Bamyan Central Hospital	-	-	-	-	-	-	YES
FARAH	Farah Provincial Hospital	-	-	YES	YES	-	-	-
FARYAB	Faryab Central Hospital	-	-	-	-	-	YES	-
GHAZNI	Ghazni Civil Provincial Hospital	YES	YES	-	YES	YES	YES	-
HILMAND	Lashkar Gah General Hospital	-	YES	YES	YES	-	YES	-
HIRAT	Guzara District Hospital	YES	-	-	-	-	-	-
HIRAT	Hirat Regional Hospital	-	YES	-	-	-	YES	-
JAWZJAN	Provincial Hospital Jawzjan	-	YES	-	YES	-	YES	-
KABUL	Ali Abad Hospital	-	YES	YES	-	-	YES	YES
KABUL	Emergency Surgical Center for War Victims	YES	YES	-	YES	YES	-	-
KABUL	IbnSina Emergency Hospital	YES	YES	-	-	-	-	-
KABUL	Karte 3 Surgical Hospital	-	YES	YES	YES	YES	YES	-
KABUL	Khair Khana Hospital	-	YES	-	-	-	YES	YES
KABUL	Rabia-i-Balkhi Hospital	YES	YES	-	-	-	YES	YES
KABUL	Wazir Akbar Khan Hospital	YES	YES	-	YES	YES	YES	-
KANDAHAR	Abdul Hakim Hospital	YES	YES	-	YES	-	YES	YES
KANDAHAR	Mirwais Hospital	YES	YES	YES	YES	-	YES	-
KAPISA	Nesaji Gulbahar Hospital	YES	-	YES	-	-	YES	YES
KUNAR	Asad Abad Hospital	YES	YES	YES	YES	-	YES	YES
KUNDUZ	Kunduz Regional Hospital	YES	YES	-	YES	-	YES	-
LAGHMAN	Mehtar Laam Baba Regional Hospital	-	YES	-	YES	-	YES	-
NANGARHAR	Fatumatu Zahra	YES	YES	-	-	-	YES	YES
NANGARHAR	General Hospital of Public Health	YES	YES	YES	YES	-	YES	-
NANGARHAR	Medical Hospital of Nangarhar	YES	YES	YES	YES	YES	YES	-
PAKTYA	Wamy Hospital	-	YES	-	-	-	-	YES
PARWAN	Panjshir Emergency Surgical Centre	-	-	YES	YES	YES	-	-
PARWAN	Parwan Provincial Hospital	-	YES	YES	-	-	YES	YES
SAMANGAN	ARCS Health Clinic	-	YES	-	YES	-	-	YES
TAKHAR	Taloqan Central hospital	-	-	-	-	-	-	-
		42%	77%	39%	55%	19%	71%	35%

7.2.6 Buildings and facilities

Most blood banks are located in buildings in good condition. However, some hospitals have a blood bank in a building in need of repair: this is the case for Mazar-i-Sharif General Civil hospital (*Balkh Province*), Faryab Central hospital (*Faryab Province*), Rabia-i-Balkhi hospital (*Kabul Province*), and Wazir Akbar Khan hospital (*Kabul Province*).

All hospitals with a blood bank have access to electrical power in the unit. Some hospitals do not have water in the unit: Guzara District hospital, IbnSina Emergency hospital and Rabia-i-Balkhi hospital. In some cases, heating was not available in the unit.

7.2.7 Investment needs

It is difficult, after a punctual survey, to suggest investments in training and organization, and the needs are easier to estimate in terms of facilities, equipment and supplies.

It appeared, however, that several blood banks needed support in the organization and management of a donor recruitment program. This seems to be true for blood banks that could become functional relatively rapidly; it is also true for transfusion centers that are already in operation, but rely heavily on family members for a blood source.

Based on the items that were listed in the survey questionnaire, it is possible to make the following recommendations for investment, so that Afghan blood banks become able to deliver appropriate transfusion services with screened blood. In all the tables here below, the need for investment in a specific facility is indicated by “Y”. These tables take in consideration existing transfusion services, and hospital with the potential to have a functional blood bank.

Existing and potentially operational blood banks requiring support for blood donor management

Province	Hospital Name	Need to invest in blood donor management system
BAGHLAN	Nasagee Hospital	Y
BALKH	Mazar-i-Sharif General Civil Hospital	Y
FARAH	Farah Provincial Hospital	Y
FARYAB	Faryab Central Hospital	Y
GHAZNI	Ghazni Civil Provincial Hospital	Y
HIRAT	Guzara District Hospital	Y
JAWZJAN	Provincial Hospital Jawzjan	Y
KABUL	Ali Abad Hospital	Y
KABUL	Karte 3 Surgical Hospital	Y
KABUL	Khair Khana Hospital	Y
KABUL	Rabia-i-Balkhi Hospital	Y
KANDAHAR	Abdul Hakim Hospital	Y
KANDAHAR	Mirwais Hospital	Y
KAPISA	Nesaji Gulbahar Hospital	Y
KUNDUZ	Kunduz Regional Hospital	Y
LAGHMAN	Mehtar Laam Baba Regional Hospital	Y
PAKTYA	Wamy Hospital	Y
PARWAN	Panjshir Emergency Surgical Centre	Y
SAMANGAN	ARCS Health Clinic	Y

Only blood banks (functional or potentially operational) that declared not having a donor registry, or in spite of having a donor registry still depended on family donors for more than 90% of their donation, are listed here above.

A set of blood banks, both in facilities where transfusion services are already available and facilities with a potentially operational transfusion service, require civil works upgrading, to improve buildings in bad condition, and to provide access to power, water or heating services. The list of these facilities is indicated in the table here below.

Need for civil works

Only facilities where such investment is needed are listed in the table here below

Province	Hospital Name	Need for civil works	Water	Power	Heating
BAGHLAN	Nasagee Hospital	Y	-	-	-
BALKH	Mazar-i-Sharif General Civil Hospital	Y	-	-	-
FARYAB	Faryab Central Hospital	Y	-	-	-
HIRAT	Guzara District Hospital	-	Y	-	-
KABUL	IbnSina Emergency Hospital	-	Y	-	-
KABUL	Khair Khana Hospital	-	-	-	Y
KABUL	Wazir Akbar Khan Hospital	Y	-	-	-
LAGHMAN	Mehtar Laam Baba Regional Hospital	-	Y	-	Y
NANGARHAR	Fatumatu Zahra	-	-	-	Y
NANGARHAR	General Hospital of Public Health	-	-	-	-
NANGARHAR	Medical Hospital of Nangarhar	-	-	-	Y
PARWAN	Parwan Provincial Hospital	-	Y	-	-
SAMANGAN	ARCS Health Clinic	-	-	-	Y

Several facilities require additional equipment to operate properly as blood bank. The list for additional equipment is given here below:

Need for equipment

(in the 32 hospitals with operating and potentially functional blood banks, based on the situation on the day of the survey)

Province	Hospital Name	Refrigerator	Freezer	Blood scale	Blood shaker	Blood Mixer	Tube Sealer
BADAKHSHAN	Faizabad Hospital	Y	Y	-	Y	-	Y
BAGHLAN	Nasagee Hospital	Y	Y	Y	Y	Y	Y
BALKH	Mazar-i-Sharif General Civil Hospital	-	Y	Y	Y	-	Y
BAMYAN	Bamyan Central Hospital	Y	Y	Y	Y	Y	Y
FARAH	Farah Provincial Hospital	Y	-	-	Y	Y	Y
FARYAB	Faryab Central Hospital	Y	Y	Y	Y	-	Y
GHAZNI	Ghazni Civil Provincial Hospital	-	Y	-	-	-	Y
HILMAND	Lashkar Gah General Hospital	-	-	-	Y	-	Y
HIRAT	Guzara District Hospital	Y	Y	Y	Y	Y	Y
HIRAT	Hirat Regional Hospital	-	Y	Y	Y	-	Y
JAWZJAN	Provincial Hospital Jawzjan	-	Y	-	Y	-	Y
KABUL	Ali Abad Hospital	-	-	Y	Y	-	-

Province	Hospital Name	Refrigerator	Freezer	Blood scale	Blood shaker	Blood Mixer	Tube Sealer
KABUL	Emergency Surgical Center for War Victims	-	Y	-	-	Y	Y
KABUL	IbnSina Emergency Hospital	-	Y	Y	Y	Y	Y
KABUL	Karte 3 Surgical Hospital	-	-	-	-	-	Y
KABUL	Khair Khana Hospital	-	Y	Y	Y	-	-
KABUL	Rabia-i-Balkhi Hospital	-	Y	Y	Y	-	-
KABUL	Wazir Akbar Khan Hospital	-	Y	-	-	-	Y
KANDAHAR	Abdul Hakim Hospital	-	Y	-	Y	-	Y
KANDAHAR	Mirwais Hospital	-	-	-	Y	-	-
KAPISA	Nesaji Gulbahar Hospital	Y	-	Y	Y	-	Y
KUNAR	Asad Abad Hospital	-	-	-	Y	-	Y
KUNDUZ	Kunduz Regional Hospital	-	Y	-	Y	-	Y
LAGHMAN	Mehtar Laam Baba Regional Hospital	-	Y	-	Y	-	-
NANGARHAR	Fatumatu Zahra	-	Y	Y	Y	-	-
NANGARHAR	General Hospital of Public Health	-	-	-	Y	-	-
NANGARHAR	Medical Hospital of Nangarhar	-	-	-	-	-	-
PAKTYA	Wamy Hospital	-	Y	Y	Y	Y	Y
PARWAN	Panjshir Emergency Surgical Centre	Y	-	-	-	Y	Y
PARWAN	Parwan Provincial Hospital	-	-	Y	Y	-	-
SAMANGAN	ARCS Health Clinic	-	Y	-	Y	Y	Y
TAKHAR	Taloqan Central Hospital	Y	Y	Y	Y	Y	Y

The need for consumable has also been identified in most of the blood banks of the country, and most hospitals need a larger and more regular set of supplies.

Needs for consumable items
(in the 32 hospitals, based on the situation on the day of the survey)

Province	Hospital Name	Grouping and cross-matching	Test for HIV	Test for Hep B	Test for Hep C	Test for syphilis	Simple blood bags	Double blood bags
BADAKHSHAN	Faizabad Hospital	-	-	-	Y	Y	-	Y
BAMYAN	Bamyan Central Hospital	-	-	-	-	-	-	-
BAGHLAN	Nasagee Hospital	-	Y	Y	-	-	-	Y
BALKH	Mazar-i-Sharif General Civil Hospital	-	-	-	Y	-	Y	Y
FARAH	Farah Provincial Hospital	-	Y	Y	Y	Y	-	Y
FARYAB	Faryab Central Hospital	-	Y	Y	Y	Y	-	Y
GHAZNI	Ghazni Civil Provincial Hospital	-	-	-	-	-	-	Y
HILMAND	Lashkar Gah General Hospital	-	-	Y	Y	Y	Y	Y
HIRAT	Guzara District Hospital	-	Y	Y	Y	Y	-	Y
HIRAT	Hirat Regional Hospital	-	Y	Y	Y	-	Y	Y
JAWZJAN	Provincial Hospital Jawzjan	-	-	-	-	-	-	Y
KABUL	Ali Abad Hospital	-	-	-	Y	-	Y	-
KABUL	Emergency Surgical Center for War Victims	-	-	-	-	-	-	Y
KABUL	IbnSina Emergency Hospital	-	-	-	Y	-	-	Y

Province	Hospital Name	Grouping and cross-matching	Test for HIV	Test for Hep B	Test for Hep C	Test for syphilis	Simple blood bags	Double blood bags
KABUL	Karte 3 Surgical Hospital	-	-	-	-	-	-	Y
KABUL	Khair Khana Hospital	-	-	-	-	-	-	-
KABUL	Rabia-i-Balkhi Hospital	-	-	-	-	-	-	-
KABUL	Wazir Akbar Khan Hospital	-	-	-	-	-	Y	Y
KANDAHAR	Abdul Hakim Hospital	Y	Y	Y	Y	Y	Y	-
KANDAHAR	Mirwais Hospital	-	-	-	-	-	-	Y
KAPISA	Nesaji Gulbahar Hospital	-	Y	-	-	Y	-	-
KUNAR	Asad Abad Hospital	-	-	-	-	-	Y	-
KUNDUZ	Kunduz Regional Hospital	-	-	-	-	-	Y	Y
LAGHMAN	Mehtar Laam Baba Regional Hospital	-	-	-	-	-	-	Y
NANGARHAR	Fatumatu Zahra	-	Y	-	Y	Y	Y	-
NANGARHAR	General Hospital of Public Health	-	-	-	-	-	-	Y
NANGARHAR	Medical Hospital of Nangarhar	-	Y	-	Y	-	-	Y
PAKTYA	Wamy Hospital	-	Y	-	Y	Y	-	-
PARWAN	Panjshir Emergency Surgical Centre	-	-	-	-	-	-	Y
PARWAN	Parwan Provincial Hospital	-	-	-	-	-	-	-
SAMANGAN	ARCS Health Clinic	-	-	-	-	-	-	-
TAKHAR	Taloqan Central Hospital	-	Y	Y	Y	Y	Y	Y

7.2.8 Need for additional blood banks

The map of transfusion services (see section “[Hospitals with transfusion services](#)” above) shows that entire areas of the country are relatively far from any transfusion center.

To provide more appropriate access to transfusion services in remote areas, it could be considered to install fully operational transfusion services in the following facilities:

- Zabul: the blood bank of Qalat hospital has been included in the analysis here above, although it does not exist yet. Given the low access to transfusion services in that part of the country, it is important that it is developed soon. The Qalat hospital has relatively poor access to electrical power at present, and the creation of a blood bank would require better power supply.
- Ghor: there is no access to transfusion services in the province, and the Ghor provincial hospital would benefit from a blood bank, in spite of its small size.
- Nimroz: the small Nimroz hospital could also benefit from a blood bank because of the distance to any transfusion services.
- Badghis: Qala-i-Naw District Hospital could be a facility that would benefit from a blood bank.
- Wardak: Inferally hospital already has some elements of equipment and supplies to create a blood bank. It should be noted, nevertheless, that the building proposed to house that service is in poor condition and has no access to electrical power.

7.2.9 Caveat

It is important to point that blood bank personnel were not specifically identified during the survey. In most hospitals, whole blood transfusions are performed with blood from a family donor, and the transfusion may take place either in the emergency room or the operating theater without specialist personnel involved. Because of the variety of situations among Afghan hospitals, identified before the survey, the questionnaires did not include specific questions about blood bank personnel.

7.3 Maternity and emergency obstetric care

7.3.1 Summary

Afghan hospitals contribute insufficiently to obstetric care for the women of the country. The survey revealed that less than 7% of all deliveries performed in the country took place in hospitals.

Capacity of hospitals to handle emergency obstetric care is one of the main concerns of the Ministry of Health, as it is key to the reduction of maternal mortality in the country.

Defining maternity services and emergency obstetric care was difficult, especially because some terms were not understood in the same way in all the facilities and provinces. Maternity services were defined as the capacity to provide ante-natal and post-natal care as well as normal deliveries. Emergency obstetric care was defined as the capacity to provide maternity services, and to perform complicated deliveries (preferably including C-sections).

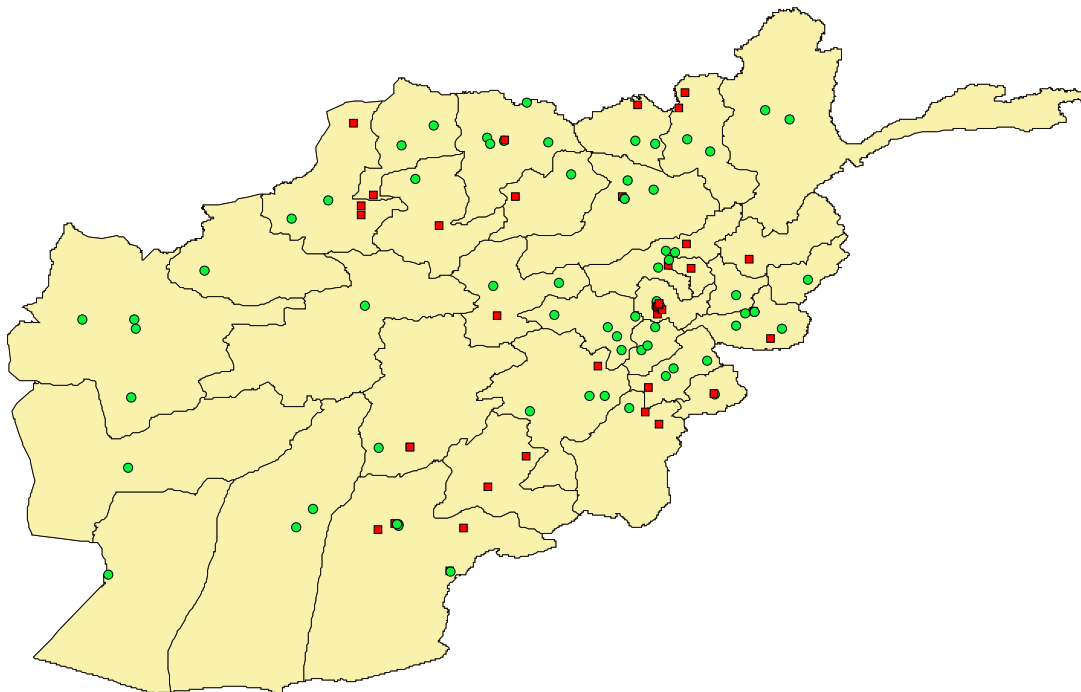
Based on these definitions, the capacity of hospitals, as well as their actual performance, was assessed during the survey. It should be highlighted, however, that the situation of professional staff can be independent from the supply proposed by hospitals. Several hospitals declared a number of deliveries performed in the absence of midwife or gynecologist. Conversely, hospitals without maternity services sometimes had midwives or gynecologists on their staff (Panjab Eye hospital or Kabul police hospital for instance).

It was found that 47 (40%) facilities do not provide maternity and EOC services:

Province	Hospital Name	Province	Hospital Name
BAGHLAN	Ministry of Mines Hospital (Maadan)	KANDAHAR	Al Ahsan Clinic
BALKH	Tafahosat Hospital	KANDAHAR	Arghistan District Hospital
BAMYAN	Panjab Eye Hospital	KANDAHAR	Kandahar TB Center
FARYAB	Andkhoy Hospital	KANDAHAR	Panjwayi District Hospital
FARYAB	Bilchiragh Hospital	KAPISA	Kapisa Provincial Hospital
FARYAB	Garziwal Hospital	KAPISA	Nijrab District Hospital
GHAZNI	Jaghathu District Hospital	KHOST	Matun Baba Hospital
JAWZJAN	Darzab Basic Health Center	KUNDUZ	Imam Sahib Hospital
KABUL	Ali Abad Hospital	NANGARHAR	Achin Basic Health Clinic
KABUL	Ata Turk Hospital	NANGARHAR	Fatumatu Zahra
KABUL	Char Asyab Hospital	NURISTAN	Waant Hospital
KABUL	Emergency Surgical Center for War Victims	PAKTIKA	Sar Hawza Clinic
KABUL	IbnSina Emergency Hospital	PAKTIKA	Urgun Hospital
KABUL	Indira Ghandi Child Health Hospital	PAKTYA	Tamir Hospital
KABUL	Kabul Infectious Diseases Hospital	PARWAN	Changaram Hospital
KABUL	Kabul Mental Health Hospital	SAMANGAN	Deh-i-Village Clinic
KABUL	Maiwand Hospital Kabul	SARI PUL	Tokzar Hospital
KABUL	Noor Hospital (1)	TAKHAR	Dasht-i-Qala Hospital
KABUL	Noor Hospital (2)	TAKHAR	Rustaq Hospital
KABUL	Police Hospital	URUZGAN	Tirinkot CHC
KABUL	Sadre Abn Seena Hospital	URUZGAN	Uruzgan Hospital

Province	Hospital Name	Province	Hospital Name
KABUL	Shaiwaky District Hospital	ZABUL	Qalat Hospital
KABUL	Stomatology Hospital	ZABUL	Shahjoi Hospital
KABUL	Wazir Akbar Khan Hospital		

**Map of hospitals with a maternity service (●)
and without a maternity service (■)**



7.3.2 Maternity services

59 facilities declared receiving maternity patients as out-patients. Because of the comprehensive pattern of the questionnaire, these out-patients may not only be pregnant women or post-natal care patients, but may also include non-pregnancy related gynecology cases.

Among these 59 facilities, some inconsistencies could be noticed that would require further exploration: for instance, Qaisar hospital (*Faryab province*) declares to receive over 250 patients per month on average, although it also declares not to have a single gynecologist or midwife on the staff. Conversely, Khair Khana hospital in Kabul declares receiving less than 60 patients per month on average in spite of a staff of 18 gynecologists and 14 midwives.

Hospitals receiving less than 30 out-patients per month in maternity services

Province	Hospital name
BAGHLAN	Baghlan District Hospital
BALKH	Khulm District Hospital
BALKH	Hairatan Hospital
BAMYAN	Yakawlang Hospital
GHAZNI	Maulawi Abdul Tahir Hospital
KANDAHAR	Al Khidmat-Al Hajeri Hospital
KANDAHAR	Spin Boldak Hospital
KAPISA	Nesaji Gulbahar Hospital
LOGAR	Nayab Aminullah Khan Logar Hospital
PAKTIKA	Sharan Hospital
PAKTYA	Said Karam Hospital
SAMANGAN	ARCS Health Clinic
WARDAK	Shuhada Tagab, Behsud Hospital

The average number of outpatients received per month (the average was calculated between the months of January and June 2003) varied from 2 in Baglan district hospital (*Baghlan province*) to 4,792 in the Medical Hospital of Nangarhar (*Nangarhar province*). Not surprisingly, it is the large urban facilities, with an important catchment area, which provide the most important volume of outpatient services. However, the high figures registered in Faizabad hospital (*Badakhshan province*) and Provincial Hospital Jawsjan (*Jawzjan province*) probably show a high level of trust of the population in the local surroundings.

Hospitals receiving more than 500 outpatients per month in maternity services

Province	Hospital name	Outpatients per month
NANGARHAR	Medical Hospital of Nangarhar	4,792
HIRAT	Hirat Regional Hospital	3,929
KABUL	Rabia-i-Balkhi Hospital	2,100
NANGARHAR	Sultan Pur Clinic	2,008
GHAZNI	Ghazni Civil Provincial Hospital	1,439
KANDAHAR	Abdul Hakim Hospital	1,287
JAWZJAN	Provincial Hospital Jawzjan	1,042
HIRAT	Guzara District Hospital	750
BADAKHSHAN	Faizabad Hospital	621
PARWAN	Rukha Hospital	596

Although the calculation is not fully relevant, it was interesting to relate the number of outpatients to the number of specialized staff (gynecologists and midwives) per facility. The number of visits per obstetric care staff varied greatly from less than 6 per month (Baghlan District Hospital - *Baghlan province*, Khair Khana Hospital - *Kabul province*, Ahmad Shah Baba Mina - *Kabul province*, Pul-i-Khumri Civil Hospital - *Baghlan province*, Shuhada Tagab Behsud Hospital - *Hilmand province*, ARCS Health Clinic - *Samangan province*) to more than 100 per month.

Hospitals with over 100 outpatients per specialized ob-gyn staff

Province	Hospital Name	Patients per ob-gyn staff
PARWAN	Rukha Hospital	298
KANDAHAR	Abdul Hakim Hospital	257
LOGAR	Baraki Rojan Hospital	230
KUNDUZ	Khan Abad Hospital	220
HIRAT	Hirat Regional Hospital	218
HIRAT	Shindand Hospital	216
NANGARHAR	Medical Hospital of Nangarhar	208
HIRAT	Ghoryan Hospital	208
BAMYAN	Bamyan Central Hospital	148
TAKHAR	Farkhar Hospital	125
GHAZNI	Ghazni Civil Provincial Hospital	120
HILMAND	Naserage Central Health Center	117

69 hospitals declared that they had at least one maternity bed. Of these, 38 (55 %) had 5 beds or less. In spite of their small size, most of these maternity units are active and only 6 of the 38 smaller maternity units declared that they had not performed a single normal delivery in the last 6 months before the date of the survey: Bilchiragh Hospital (*Faryab province*), Andkhoy Hospital (*Faryab province*), Dasht-i-Qala Hospital (*Takhar province*), Mohammad Agha District Hospital (*Logar province*) and Tafahosat Hospital (*Balkh province*).

Besides these small units, there are larger maternities in Afghan hospitals: 10 (14.5%) have 20 beds or more.

Province	Hospital name	Maternity beds
KABUL	Malalay Maternity Hospital	217
KABUL	Rabia-i-Balkhi Hospital	113
NANGARHAR	Medical Hospital of Nangarhar	55
HIRAT	Hirat Regional Hospital	40
KABUL	Khair Khana Hospital	35
KABUL	Karte 3 Surgical Hospital	20
NANGARHAR	General Hospital of Public Health	20
BALKH	Mazar-i-Sharif General Civil Hospital	20
BADAKHSHAN	Faizabad Hospital	20
LOGAR	Nayab Aminullah Khan Logar Hospital	20

The maternity beds are not evenly distributed throughout the country, and major discrepancies can be found between provinces. At the time of the survey, there were four provinces without a single maternity bed: this means that medically supervised deliveries and emergency obstetric care were just inexistent there. Rural provinces, especially in the Eastern part of the country are particularly poorly served.

Total population per maternity beds per province

KABUL	391	FARYAB	8
NANGARHAR	88	HILMAND	8
HIRAT	50	BAMYAN	7
BALKH	42	KUNAR	6
BADAKHSHAN	28	KAPISA	5

LOGAR	28	KUNDUZ	5
PARWAN	28	BADGHIS	4
BAGHLAN	22	GHOR	4
WARDAK	22	JAWZJAN	4
PAKTYA	21	NIMROZ	4
GHAZNI	16	PAKTIKA	3
LAGHMAN	15	SAMANGAN	2
KHOST	14	NURISTAN	0
FARAH	13	SARI PUL	0
KANDAHAR	10	URUZGAN	0
TAKHAR	10	ZABUL	0

7.3.3 Normal deliveries performed

8 hospitals performed more than 200 normal deliveries per month on average. Not surprisingly, hospitals with large maternity units performed the largest number of deliveries. However, a smaller facility such as Abdul Hakim Hospital (*Kandahar province*) also performed a large number of deliveries. This hospital is specialized and all its 10 beds are dedicated to maternity services. Conversely, 32 of the hospitals performing normal deliveries (48.5%) declared 20 deliveries per month or less (i.e. less than one per opening day).

Province	Hospital name	Maternity beds	Normal deliveries
KABUL	Malalay Maternity Hospital	217	1,333
KABUL	Rabia-i-Balkhi Hospital	113	1,305
NANGARHAR	Medical Hospital of Nangarhar	55	805
HIRAT	Hirat Regional Hospital	40	488
KHOST	Khost Hospital	14	319
GHAZNI	Ghazni Civil Provincial Hospital	10	244
KANDAHAR	Abdul Hakim Hospital	10	208
KABUL	Karte 3 Surgical Hospital	20	200

In four hospitals, deliveries were recorded although there are no maternity beds. In one case, Taloquan Central hospital (*Takhar province*) the number of deliveries performed was rather high: 28 deliveries per month on average. This hospital, with eight gynecologists and seven midwives, some equipment for obstetrics and an organized night shift, should have a fully maternity service. The three other hospitals performing occasional normal deliveries are: Khan Abad hospital (*Kunduz province*), Dehrawood hospital (*Uruzgan province*) and Sar-i-Pul provincial hospital (*Sari Pul province*).

Most hospitals do not charge for normal deliveries, in accordance with recommendations that hospital care in the public sector should be free for all Afghans. However, cost recovery is practiced in some facilities.

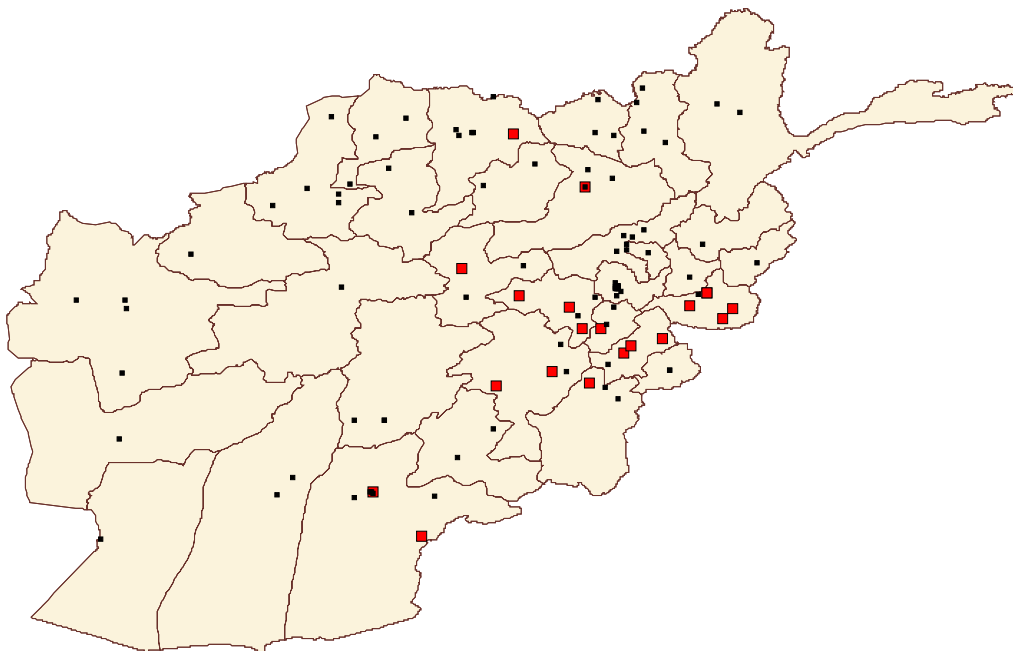
Hospitals charging for deliveries (in Afghanis)

Province	Hospital Name	Amount charged for delivery
BALKH	Khulm District Hospital	1000
PAKTYA	Wamy Hospital	400
GHAZNI	Jaghori Hospital	400
KANDAHAR	Abdul Hakim Hospital	200

BAMYAN	Yakawlang Hospital	150
PAKTIKA	Sharan Hospital	150
WARDAK	Shuhada Tagab, Behsud Hospital	80
KANDAHAR	Spin Boldak Hospital	80
NANGARHAR	Achin Basic Health Clinic	80
NANGARHAR	Khugyani Hospital	58
NANGARHAR	Shenwar Ghani Khail Hospital	58
WARDAK	Quiat Al Khair Hospital	50
NANGARHAR	General Hospital of Public Health	50
NANGARHAR	Medical Hospital of Nangarhar	40
WARDAK	Inferally Hospital	30
KABUL	Ahmad Shah Baba Mina	20
PAKTYA	Said Karam Hospital	20
BAGHLAN	Nasagee Hospital	20
PAKTYA	Gardez Civil Hospital	20
GHAZNI	Ghazni Civil Provincial Hospital	20
LOGAR	Baraki Rojan Hospital	10

The large discrepancies between levels of delivery charges do not seem to be attributable to the level of sophistication and equipment of each facility.

On the other hand, there is a real “cultural” difference between the West and the East of Afghanistan regarding cost recovery for deliveries. The mapping of facilities charging for deliveries (■ in the map here below) shows that all cost recovery for delivery services occurs in the Eastern part of the country.



7.3.4 Staff of maternities

The survey identified 373 obstetricians/gynecologists and 341 midwives working in the hospitals covered by the assessment. They were found to be very poorly distributed among the facilities, with most hospitals operating with a small number of specialized staff in the maternity and emergency obstetric care areas. Conversely, some hospitals had a very large amount of specialists. Malalay Maternity hospital alone has 21% of all specialists working in the country's hospitals. Kabul province, with about 16% of the total population of Afghanistan, concentrated 46% of obstetricians/gynecologists and 45% of midwives.

Facilities with 10 obstetrics specialized staff or more

Province	Hospital Name	Total obstetrics specialists	number of Ob-Gyn Barhaal	Number of Midwives Barhaal
KABUL	Malalay Maternity Hospital	150	70	80
KABUL	Rabia-i-Balkhi Hospital	106	66	40
BALKH	Mazar-i-Sharif General Civil Hospital	40	40	0
KABUL	Khair Khana Hospital	32	18	14
NANGARHAR	Medical Hospital of Nangarhar	23	15	8
KABUL	Karte 3 Surgical Hospital	22	15	7
KUNDUZ	Kunduz Regional Hospital	20	7	13
HIRAT	Hirat Regional Hospital	18	10	8
PARWAN	Parwan Provincial Hospital	16	6	10
JAWZJAN	Provincial Hospital Jawzjan	15	9	6
TAKHAR	Taloqan Central Hospital	15	8	7
GHAZNI	Ghazni Civil Provincial Hospital	12	6	6
HILMAND	Lashkar Gah General Hospital	11	5	6
KABUL	Ahmad Shah Baba Mina	11	2	9
NANGARHAR	General Hospital of Public Health	11	5	6
BAGHLAN	Pul-i-Khumri Civil Hospital	10	4	6

In the above table, it is interesting to notice that the Mazar-i-Sharif General Civil hospital (*Balkh province*) declared to work with a large number of obstetricians but no midwife.

Four hospitals, Inferally Hospital (*Wardak province*), Qaisar hospital (*Faryab province*), Sharan hospital (*Paktika province*) and Sayid Karam hospital (*Paktya province*) have maternity beds and perform deliveries without any obstetrician or midwife. The last three also declared having performed complicated deliveries without such staff.

7.3.5 Day and night staff shifts

Most maternities are staffed during the daytime, but the situation is slightly different during the night. 58 hospitals, of the 69 with a maternity ward, had staff present 24h/24h (84%). However, in one third of cases, only one person was on the shift.

Hospitals with 5 or more specialized staff in the maternity at night

Province	Hospital Name	Night Staff
PARWAN	Panjshir Emergency Surgical Centre	8
BADAKHSHAN	Faizabad Hospital	5
BALKH	Mazar-i-Sharif General Civil Hospital	5
JAWZJAN	Provincial Hospital Jawzjan	5
JAWZJAN	Aqcha Hospital	5
KABUL	Rabia-i-Balkhi Hospital	5
NANGARHAR	Medical Hospital of Nangarhar	5
PARWAN	Parwan Provincial Hospital	5

The “density of staff per maternity bed” varied greatly from one facility to another. The number of obstetrics specialists (ob-gyn doctors and midwives) varied from 0.1 per bed – i.e. 1 person is in charge of 10 beds – in Nayab Aminullah Khan Logar Hospital (*Logar province*) to 7.5 in Provincial hospital Jawzjan (*Jawzjan province*). The high densities of obstetrics staff per bed were mostly found in small maternities. In this regard, the case of Mazar-i-Sharif General Civil hospital is special, as it has a large number of professional staff in its large maternity ward.

Hospitals with 2 or more professional staff per bed in the maternity

Province	Hospital Name	Maternity beds	Specialists per bed
JAWZJAN	Provincial Hospital Jawzjan	2	7.5
KUNDUZ	Kunduz Regional Hospital	5	4.0
HILMAND	Naserage Central Health Center	1	3.0
HIRAT	Guzara District Hospital	3	2.7
BAGHLAN	Nasagee Hospital	5	1.4
FARYAB	Andkhoy Hospital	2	2.5
JAWZJAN	Aqcha Hospital	2	2.5
BAGHLAN	Pul-i-Khumri Civil Hospital	5	2.0
BALKH	Balkh Hospital	3	2.0
BALKH	Mazar-i-Sharif General Civil Hospital	20	2.0
FARYAB	Faryab Central Hospital	4	2.0
KANDAHAR	Al Khidmat-Al Hajeri Hospital	2	2.0

Three hospitals have a large difference between the number of staff available during the day and the night. Mazar-i-Sharif General Civil hospital (*Balkh province*) has 47 less staff during the night in the maternity, Rabia-i-Balkhi Hospital and Karte 3 Surgical Hospital (*Kabul province*) have 20 less staff during the night in the maternity.

7.3.6 Emergency Obstetric Care

Access to emergency obstetric care for complex deliveries is one of the key elements of the reduction of maternal mortality.

59 hospitals declared having performed complicated deliveries during the past 6 months, although 16 of them declared not having performed C-sections. The definition of “complex delivery” was not given a precise meaning in the questionnaire, and several interviewees considered long deliveries or the need for vacuum extraction “complex”.

Ability to perform C-sections is one of the key criteria considered for emergency obstetric care, and two sets of data were examined during the survey: the actual record of number of C-sections performed, and the capacity to perform C-Section (availability of operating light and C-section surgical kits, plus access to blood transfusion).

7.3.6.1 Number of C-Sections performed

The total number of C-Sections per month declared by surveyed hospitals amounts to 428. The total number of monthly deliveries recorded by the survey was 6,851 normal deliveries and 1,172 complicated deliveries. The ratio of C-sections to total number of deliveries is 5.3%, which is definitely rather low (the normal average is about 10%). However, this ratio does not mean much, because it is a ratio of total C-sections to hospital deliveries alone. If the total number of C-sections is compared to the total of deliveries performed in Afghanistan, including those occurring without specialized supervision, the ratio plummets to 0.03%. Clearly, many complicated pregnancies do not result in needed C-sections and this certainly constitutes a major component of maternal mortality.

In spite of being a specialized obstetrical operation, C-sections can be performed by any general surgeon, and it is normal that emergencies C-sections could be performed in hospitals that do not have a maternity unit.

Hospitals can be broken down into several categories, depending on the number of C-Sections performed and the conditions in which they are performed.

7.3.6.2 Hospitals providing C-sections regularly

Some facilities perform at least 4 C-sections per week, and have C-section as part of their maternity facilities. They regularly provide some level of emergency obstetric care to the population.

Surveyed hospitals performing more than one C-section per week

Province	Hospital name	Number of C-sections per month
PAKTYA	Gardez Civil Hospital	4
PAKTYA	Wamy Hospital	5
TAKHAR	Taloqan Central Hospital	6.8
BADAKHSHAN	Faizabad Hospital	7
GHAZNI	Jaghori Hospital	7
PARWAN	Parwan Provincial Hospital	7
PARWAN	Panjshir Emergency Surgical Centre	7
GHAZNI	Maulawi Abdul Tahir Hospital	9
KHOST	Khost Hospital	10
GHAZNI	Ghazni Civil Provincial Hospital	15
BAMYAN	Bamyan Central Hospital	16.2
KABUL	Khair Khana Hospital	19
KANDAHAR	Mirwais Hospital	20

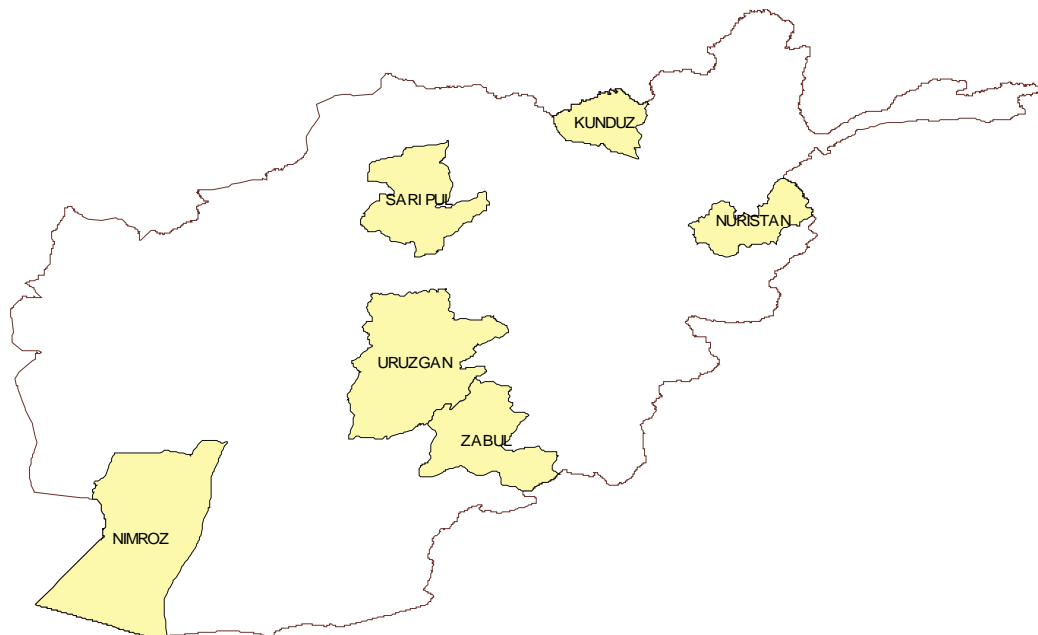
BALKH	Mazar-i-Sharif General Civil Hospital	20.2
NANGARHAR	Medical Hospital of Nangarhar	25
HIRAT	Hirat Regional Hospital	37.3
KABUL	Rabia-i-Balkhi Hospital	57
KABUL	Malalay Maternity Hospital	117

Only 18 hospitals (15%) are in the situation of providing regular C-sections, and they only serve the population of 12 provinces.

7.3.6.3 Hospitals providing occasional emergency C-sections

Several hospitals have maternity or surgery units able to perform C-sections in situations of emergency, but they do not perform enough of them to be fully qualified as “emergency obstetric care” facilities. 25 additional units performed at least on C-section in the six months before the survey. This is evidence that there is a possibility for women to receive a C-section in additional provinces, but outside a routine maternity unit.

Even when all these occasional C-sections are taken in consideration, there remain six provinces in which there was not a single C-section performed during the six months period before the survey: Kunduz, Nimroz, Nuristan, Sari Pul, Uruzgan, Zabul. In these provinces, women have no access to emergency obstetric care.



7.3.6.4 Capacity to perform C-sections

The adequate capacity to perform C-sections can be defined by a combination of infrastructure, equipment and personnel:

- in terms of infrastructure, one needs adequate access to power and water and a building in adequate condition;

- in terms of equipment, the facility requires an operating theater with appropriate surgical light and instruments, capacity for anesthesia, sterilization and transfusion;
- in terms of personnel, the facility at least needs an obstetrician (normally trained in surgery) or a surgeon.

With these criteria, the number of hospitals capable of performing C-sections in good conditions decreased dramatically, and was limited to 10 facilities (8.5% of the surveyed hospitals). Surprisingly, Malalay Maternity Hospital, the Kabul hospital that performs the largest number of C-sections in the country, is not included in the list by want of a blood bank.

Hospitals fully capable of performing C-sections

Province	Hospital
BADAKHSHAN	Faizabad Hospital
BALKH	Mazar-i-Sharif General Civil Hospital
FARAH	Farah Provincial Hospital
HIRAT	Guzara District Hospital
HIRAT	Hirat Regional Hospital
KABUL	Khair Khana Hospital
KABUL	Rabia-i-Balkhi Hospital
KUNAR	Asad Abad Hospital
LAGHMAN	Mehtar Laam Baba Regional Hospital
PARWAN	Panjshir Emergency Surgical Centre

The table here above shows that, based on the data collected and the information declared during the survey, only 8 provinces have at least one facility fully able to provide emergency obstetric care in reasonably safe conditions.

7.4 Intensive care

The survey studied the presence of intensive care units among the visited facilities. Questions were asked about the presence of specialized intensive care beds, the presence of specialized staff, the presence of equipment and supplies (oxygen, ventilators, suction equipment, intubation sets, stock of Ringer lactate and intensive care drugs in the unit) and the condition of the hospital buildings housing the intensive care unit.

Based on the results of the survey, hospitals can be broken down into three categories: hospital with a functional intensive care unit, hospitals with some capacity to provide intensive care but lacking important elements to be considered functional, and hospitals without the capacity to provide intensive care.

It was not easy to define a “functional intensive care unit”. It is normally expected that an ICU should be able to perform ventilation round the clock for at least one patient. It is also generally expected that at least 6 beds be allocated to an intensive care unit, to justify the intensity of personnel and equipment investment needed.

It appeared from the survey that the role of ICU was not very clearly defined in Afghan hospitals. The capacity to provide ventilation support or cardiovascular monitoring was very limited, and several hospitals did not have a basic stock of emergency consumables (drugs and commodities) to operate an intensive care unit.

7.4.1 *Hospitals with a functional intensive care unit*

Not surprisingly, nearly all hospitals belonging to that category are located in the largest cities of the country, and primarily in Kabul. In the capital, no less than 12 hospitals have a functional intensive care unit.

These are:

- Karte 3 surgical hospital
- Malwand hospital
- Malalai maternity hospital
- Raba-i-Balkhi hospital
- Wazir Akbar Khan hospital
- Indira Gandhi Child health hospital
- Ali Abas hospital
- Ata Turk hospital
- Kabul Infectious Diseases hospital
- Kabul Emergency Surgical Center for War Victims
- Kabul Stomatology hospital
- Ahmad Shah Baba Mina hospital

The latter facility, in spite of its small size (16 beds), has declared a vibrant intensive care activity, and has equipment and consumable to support it.

Outside Kabul, only few hospitals are able to provide functional intensive care services. These are:

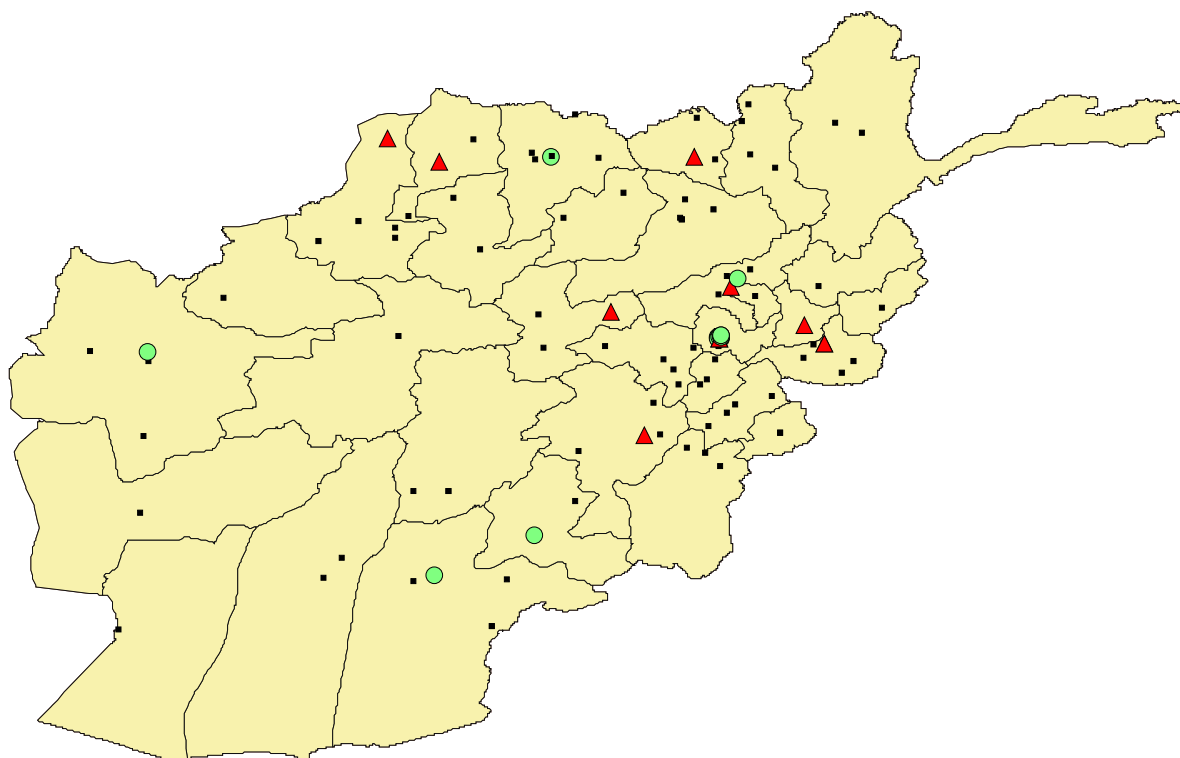
- Mazar-i-Sharif General Civil Hospital in Balkh province
- Hirat Regional Hospital in Hirat province
- Mirwais hospital in Kandahar province
- Panjshir Emergency Surgical centre in Parwan province
- Qalat hospital in Zabul province.

7.4.2 Hospitals with potential to provide intensive care

In addition to the previous list of facilities, some hospitals provide some intensive care, or could provide intensive care, but do not have the level of functionality to be considered operational.

- Bamyan Central Hospital, in Bamyan province, has some intensive care patients, but no specialized unit. Although it can provide ventilation and intubation, surveyors could not identify oxygen sources in the facility (either oxygen extractors or oxygen tanks). This hospital is a small facility (47 beds) but it could have a small functional intensive care unit with some additional equipment and staff.
- Andkhoy hospital in Faryab province has a 3-bed intensive care unit and a full time anesthetist on staff. However, it had no capacity to intubate and ventilate patients and had a limited set of consumable available at the time of the survey.
- Ghazni Civil Provincial hospital has a nearly fully functional ICU, with 12 dedicated specialized beds, and could have been incorporated in the first list of functional hospitals, in particular as the intensive care unit is appropriately staffed. However, at the time of the visit, the ICU had no oxygen and no intubation sets.
- Jawzjan Provincial hospital has a six-bed specialized intensive care unit, and is appropriately staffed. However, at the time of the visit, it had no ICU equipment available and too limited a stock of consumable.
- Kabul Ibn Sina Emergency hospital was expected to be part of the first list. It has a ten-bed intensive care unit with appropriate staffing and a favorable environment. The unit had oxygen, but during the survey had no ventilators or intubation sets.
- Kabul Sadre Abn Seena hospital was also in the same situation. Although appropriately equipped and staffed, it had no intubation sets at the time of the survey.
- Nesaji Gulbahar hospital in Kapisa province has nine intensive care beds in a specialized unit. Nowever, at the time of the survey, it was found to have no oxygen, no ventilator and no consumable available (including no stock of emergency drugs in the unit).
- Kunduz Regional hospital declares to have a nineteen-bed intensive care unit, which appears high for a facility with 82 beds. Specialized staff was available, but there was no oxygen; no intubation sets, and no consumable available at the time of the survey.
- Mehtar Laam Baba Regional hospital in Laghman province has a ten-bed intensive care unit, but oxygen was not available and the ICU was not staffed with specialists at the time of the survey.
- Jalalabad General Hospital of Public Health is a large facility with a 26-bed intensive care unit and specialized staff. It was found to be markedly under-equipped and missing oxygen.
- Jalalabad Medical hospital of Nangarhar has a large 34-bed intensive care unit and specialized staff. However, none of the equipment or consumable to operate the ICU was found by the surveyors at the time of their visit.

The map here below displays of the hospitals that provide functional intensive (●) care and the hospitals that could provide intensive care with additional investment (▲) and the hospitals with no ICU (■). It shows that large areas of the country have no access to a facility that can provide intensive care.



7.4.3 Hospitals that do not provide intensive care

All the other hospitals had no capacity to provide intensive care. The following provinces have no facility able of providing intensive care: Badakhshan, Badghis, Baghlan, Farah, Ghor, Hilmand, Khost, Kunar, Logar, Nimroz, Nuristan, Paktika, Paktya, Samangan, Sari Pul, Takhar, Uruzgan and Wardak.

In concrete terms, this means that patients living in the North Eastern, Eastern, North central and South Western parts of the country have no access to intensive care. More than half of the intensive care capacity of the country is concentrated in Kabul hospitals.

7.5 Operating theaters and surgery

7.5.1 Summary

60% of Afghan hospitals had a surgical ward and could provide surgical services to the population. However, in many cases, they could not operate in appropriate conditions. 13 lacked either power or water supply, many were under-equipped and lacked some basic consumables. However, only four were found to have sterilization equipment that did not work appropriately enough to prevent infection.

Surgical departments seemed to be poorly organized: they performed a little number of operations and could do much more. There was an average of less than 50 surgical operations per operating table per month (less than 2 per day) and an average of less than 4 surgical operations per surgery ward bed per month.

Surgery departments were found to be well staffed, and often over-staffed. Only 2 hospitals with a surgery ward declared not to have a surgeon among their staff, and 61 (87%) had at least one surgeon and one anesthetist. Conversely, nine hospitals without a surgery ward or operating room had surgeons on their staff.

29 hospitals (41%) had more than one surgeon for 5 surgery ward beds, and the average operating activity for all Afghan hospitals was reported to be of 16,5 operations per surgeon per month, i.e. less than one operation per day. In 9 hospitals, surgeons performed less than 5 operations per month.

Surgical activities were made of mostly general surgery and some orthopedics. Only two hospitals had the capacity to perform cardiac or vascular surgery.

7.5.2 Investment recommendations:

It is important to increase the surgical capacity in under-served provinces, and to guarantee that operating theaters and sterilization units are adequately equipped, their equipment maintained and with a regular supply of consumable. It would make sense, in some provinces, to create a surgery department in some hospitals that do not have any surgical capacity at present.

Reorganization of operating theaters management to increase the number of operations per table and the turnaround of surgery ward beds should be a priority to take full advantage of the large amount of staff available in the hospitals.

One of the priorities should be to ensure that hospitals with an operating theater get access to electrical power and water all the time, and that sterilization can be performed in the best conditions. Several surgery wards and operating rooms require upgrading of their physical condition, which could be done rapidly.

In the medium term, it is important that specialized surgery can be performed in more hospitals: at present, only 9 hospitals, of which 5 in Kabul, are equipped to perform endoscopic surgery and few have access to an operating blood bank.

7.5.3 Findings

70 of the surveyed hospitals (60%) declared they had surgery hospitalization beds, and the number of beds varied from 2 in Nahreen District hospital (*Baghlan province*) to 263 in Karte 3 Surgical Hospital (*Kabul province*). 21 hospitals (30%) have surgery wards of 10 beds or less, which seriously limits their capacity to provide significant surgical services to the population.

The average size of a surgery ward was 36 beds, and most hospitals had both a men's and a women's ward. Only 34% of the total number of surgery beds is allocated to women. Although women have about one third of surgery beds reserved for them, they are more frequently hospitalized in surgery than men. The number of female patients represented 46% of all patients admitted in surgery wards.

Of all the surveyed hospitals, 46 had no surgery beds. They did not have surgical equipment or surgical activity. Surprisingly, though, several of them had surgeons on their staff.

Hospitals without surgery wards with surgeons on their staff

Province	Hospital name
BALKH	Hairatan Hospital
FARYAB	Qaisar Hospital
KABUL	Char Asyab Hospital
KABUL	Shaiwaky District Hospital
LOGAR	Nayab Aminullah Khan Logar Hospital
NANGARHAR	Khugyani Hospital
NURISTAN	Waant Hospital
PAKTIKA	Urgun Hospital
WARDAK	Maidan Wardak Hospital

Two provinces, Uruzgan and Nuristan, did not have a single surgery bed among their facilities at the time of the survey.

The number of beds is not a good indication of the actual surgical activities undertaken in surgical departments, because bed occupancy rates are low, and there is no good indication of the average length of stay in surgical departments.

The number of surgery beds varied greatly from one province to another, with major discrepancies in operating capacity and quantity of population per bed:

Province	Total surgery beds	Pop/surgery bed	Province	Total surgery beds	Pop/surgery bed
URUZGAN	0	N/A	KHOST	30	10.000
NURISTAN	0	N/A	PAKTYA	40	10.400

KUNAR	4	76.500	WARDAK	40	10.400
NIMROZ	8	18.700	ZABUL	40	6.000
GHOR	10	47.000	KUNDUZ	47	17.500
SARI PUL	14	33.400	TAKHAR	51	13.600
KAPISA	15	24.000	HILMAND	57	13.000
LAGHMAN	20	18.600	PARWAN	76	9.600
PAKTIKA	21	16.800	GHAZNI	85	11.000
SAMANGAN	22	13.800	BAGHLAN	90	10.000
LOGAR	23	12.500	BALKH	107	8.800
FARYAB	24	32.600	JAWZJAN	108	4.200
BADGHIS	25	12.000	KANDAHAR	139	6.300
FARAH	25	13.500	HIRAT	215	5.500
BAMYAN	26	13.000	NANGARHAR	292	3.700
BADAKHSHAN	27	21.800	KABUL	855	3.800

Most hospitals have both male and female surgery wards, but a few are specialized, and only cater for the need of either sex.

- Nahreen District hospital (Baghlan), Mohammad Agha District hospital (Logar), Asad Abad hospital (Kunar) and Baharak hospital (Badakhshan) declared that they only had male surgery beds.
- Malalay Maternity hospital and Rabia-i-Balkhi hospital (both in Kabul province) only had female surgery beds.

7.5.4 Condition of surgery departments and operating rooms

In general, the physical condition of surgery wards was good. In 30 (42%) hospitals, the operating theater was considered in excellent condition (10 of these hospitals were in Kabul).

However, this was not the case in all hospitals.

Hospital with an operating room without electricity and water

Province	Hospital name
BAGHLAN	Baghlan District Hospital
KABUL	Char Asyab Hospital
LAGHMAN	Mehtar Laam Baba Regional Hospital
PAKTIKA	Sar Hawza Clinic
SARI PUL	Tokzar Hospital
TAKHAR	Farkhar Hospital

It seems from the survey that the operating rooms have received a particular level of attention and support, compared to other parts of hospital facilities in the country.

7.5.5 Staffing of surgery units

Afghan hospitals do not face a dearth of personnel. The survey tools did not cover non-medical staff and was limited to surgeons and anesthetists. The 70 hospitals with surgery activities employed 538 surgeons and 168 anesthetists. However, the breakdown of personnel between the various facilities is very uneven.

Five hospitals, with a total of 92 surgery beds, had neither a surgeon nor an anaesthetist on their staff.

Hospitals without surgeon or anesthetist

Province	Hospital name
ZABUL	Qalat Hospital
PAKTIKA	Sharan Hospital
KABUL	Stomatology Hospital
BAGHLAN	Baghlan District Hospital
BAMYAN	Bamyan Central Hospital
KANDAHAR	Spin Boldak Hospital

Conversely, 6 hospitals had more than 20 surgeons on their staff (2/3 of these hospitals were in Kabul province).

Hospital with more than 20 surgeons

Province	Hospital name	Number of surgeons
KABUL	Ali Abad Hospital	29
KABUL	Maiwand Hospital Kabul	35
BALKH	Mazar-i-Sharif General Civil Hospital	40
KABUL	Noor Hospital (2)	43
HIRAT	Hirat Regional Hospital	43
KABUL	Wazir Akbar Khan Hospital	68

12 hospitals (17% of hospitals with a surgical activity) had not anesthetist on staff, in spite in some cases of a heavy work load. It is probable that anesthesia is provided to patients by nurses or non-specialized doctors.

7.5.6 Sterilization

In spite of the attention paid to operating theaters, it was surprising to notice that several hospitals did not have any sterilization equipment in acceptable condition, and thus could not guarantee the safety of operations. In most cases, they had a sterilization unit with obsolete or out-of-order equipment.

Hospitals without sterilization equipment in working order

Province	Hospital name
KHOST	Matun Baba Hospital
KABUL	Police Hospital
BAGHLAN	Baghlan District Hospital
PAKTYA	Gardez Civil Hospital
NIMROZ	Nimroz Hospital
KABUL	Sadre Abn Seena Hospital

HILMAND	Lashkar Gah General Hospital
HILMAND	Naserage Central Health Center
SARI PUL	Tokzar Hospital

In general, hospitals would have either vertical or horizontal autoclaves, but some had to rely on steam sterilizers, with a less safe performance.

The distribution of sterilization equipment was surprising in some cases. For instance, the small Khulm District hospital (*Balkh province*), with 10 surgery beds, was found to have 7 autoclaves in good condition, which is nearly twice as much as Karte 3 Surgical hospital in Kabul with 263 surgery beds.

Improving the quality of sterilization should be one of the investment priorities for the hospital sector, as post-operative infection has been identified as a serious source of morbidity among hospital patients in Afghanistan.

7.5.7 Equipment of operating rooms

The equipment of operating theaters is highly variable from one facility to another. The survey questionnaire included questions on the presence of various items, and also questions about the condition of these items. When analyzing the results of the survey, only equipment in working order, or easily repairable are taken in consideration. Many hospitals had broken or completely obsolete equipment, which should generally be disposed of.

7.5.7.1 Anesthesia equipment:

Many hospitals do not have ventilators in working condition. 36 of the 70 hospitals (51%) did not have ventilators in acceptable condition. The result is that anesthesia is often undertaken with some level of risk.

7.5.7.2 Operating tables

11 hospitals (16%) did not have one single table in good condition. In 5 of these hospitals, there was no surgical activity, but the 6 other hospitals managed to perform an average of 450 operations per month on inadequate operating tables.

7.5.7.3 Surgical light

Only 24 hospitals (34%) had fixed operating light in acceptable condition, and most hospitals had to rely on mobile operating lights. However, only 53 of the hospitals performing surgery (76%) declared to have mobile operating lights in working condition. It is interesting to note that these numbers are smaller than those of hospitals where the operating room has regular access to power. It seems that the problem of surgical lights is serious in Afghanistan, and the main issues identified to explain it are lack of maintenance, inadequate access to spare parts and irregular power supply.

7.5.7.4 Electrosurgical units

Only 33 hospitals (46%) had an electrosurgical unit in acceptable condition.

7.5.7.5 Vacuum pumps

58 of the surveyed hospitals (83%) had access to vacuum aspiration in their operating theater. Of these, 54 (93%) had an operational electrical vacuum unit in acceptable condition, and only four relied on hand operated equipment.

7.5.7.6 Endoscopy

Nine hospitals (13%) were equipped with endoscopes in operating condition. Logically, these equipment were concentrated in large facilities, with the exception of Quiat Al Khair Hospital (*Wardak province*), which was equipped to perform endoscopic surgery.

7.5.7.7 Surgical kits

Most operating theaters were equipped with surgical instruments and had an adequate supply of such instruments. However, the survey also considered the availability of surgical kits in operating rooms.

44 hospitals (63%) had abdominal surgery kits. 15 hospitals had only one kit available, which creates problems of sterilization and thus limits the operating capacity of the surgical theater. Five of these hospitals actually performed less than 10 operations per month. 14 hospitals (20%) had kidney surgery kits.

38 hospitals (54%) had bone surgery and amputation kits. This seems to reflect the importance of orthopedic surgery in the activity of surgical theaters. The General Hospital of Public Health in Jalalabad (*Nangarhar province*) had the largest number of bone surgery kits.

13 hospitals (19%) had surgical kits for cardiac or vascular surgery. Several hospitals with cardiac or vascular kits were large and equipped to use them, but among these 13 hospitals, there also was Spin Boldak Hospital (*Kandahar province*) which has not performed any operation over the past six months, Nimroz Hospital (*Nimroz province*) with a surgery ward of 8 beds and Sharan hospital (*Paktika province*), which did not have any surgeon on staff at the time of the survey.

7.5.8 Operating activity

Surveyed hospitals declared a total of 7,614 operations per month on average over the six months before the survey. It is difficult to draw any conclusion from this figure, because it does not provide a breakdown between minor and major surgery. In addition, this figure is clearly understated: it is noteworthy that 18 hospitals were not able to provide statistics on their operating activity although in some cases it must have been important (for instance in Maiwand hospital in Kabul, with 146 surgery hospitalization beds and 35 surgeons on the staff). One hospital, Spin Boldak Hospital (*Kandahar province*) declared that no operation had taken place over the past six months. This hospital does not have a surgeon. In addition, one health center, Naserage Central Health Center (*Hilmand province*) declared having performed no surgical operation, in spite of having two surgeons on their staff.

For hospitals that provided elements of information on their activity, it is interesting to note that there are major discrepancies in the “productivity” of the various facilities. The number of “operations per surgery hospitalization bed” gives an idea of the turnover of patients and the general organization of the operating theater. It varied between less than 1 operation per bed per month in Tokzar hospital (*Sari Pul province*) and in Pul-i-Khumri Civil hospital (*Baghlan province*) to more than 10 in Wazir Akbar Khan hospital (*Kabul province*), Parwan Provincial hospital (*Parwan province*) and Malalay Maternity hospital (*Kabul province*).

Although these figures are interesting, they are difficult to analyze as a low operation rate may be caused by several reasons (rehabilitation of the operating room, lack of spare parts or equipment, stock-out of operating room consumable, unavailability of staff, etc.) in addition to a poor organization of the operating theater.

Another interesting ratio is the number of operations performed by staff surgeon in the hospital. The number varied broadly between less than 3 operations per surgeon per month in Farah Provincial hospital (*Farah province*), Tokzar hospital (*Sari Pul province*) and Police hospital (*Kabul province*) to over 50.

Hospitals performing over 50 operations per staff surgeon per month

Province	Hospital name	Number of operations
PARWAN	Panjshir Emergency Surgical Centre	55
PAKTYA	Wamy Hospital	60
GHAZNI	Jaghori Hospital	71
KABUL	Malalay Maternity Hospital	76
NANGARHAR	General Hospital of Public Health	90
PARWAN	Parwan Provincial Hospital	151

7.6 Outpatient departments

Afghan hospitals tend to have a very large activity of outpatient visits. The important number of patients in OPD is in sharp contrast with the hospitalization rates and bed occupancy rates. This seems to show that patients do not get the level of care they would wish to receive at the primary care level, and use the outpatient unit of hospitals as a primary care facility.

Of the 117 surveyed hospitals, only 5 (all in Kabul) declared they did not have an outpatient department (OPD). The five hospitals were Noor hospital, the Emergency Surgical Center for War Victims, Sadre Abn Seena hospital, IbnSina Emergency hospital, and Ali Abad hospital. Hence, outpatient activities were of crucial importance in 112 of the 117 hospitals (96%).

In 7 of the 112 hospitals the OPD was located in a building in urgent need of repair, with severe damage to the floor and roof.

Hospital with an OPD in bad physical condition

Province	Hospital name
BAMYAN	Bamyan Central Hospital
HILMAND	Naserage Central Health Center
BAGHLAN	Ministry of Mines Hospital (Maadan)
BALKH	Mazar-i-Sharif General Civil Hospital
GHAZNI	Ghazni Civil Provincial Hospital
GHAZNI	Jaghatu District Hospital
KABUL	Police Hospital

In 17 hospitals (15%) had no electrical power in the OPD, and 33 (29%) did not have access to running water. In addition, 18 (16%) hospitals declared they had no heating in the OPD, including the Kabul mental health hospital and the OPD of such a large facility as the Medical Hospital of Nangarhar in Jalalabad.

7.6.1 Activity of OPD

Afghan hospitals provide a very large number of outpatient visits and often operate as primary care facilities rather than hospitals. A total of about 492,000 outpatient visits was declared as taking place every month in average in the 112 hospitals with an OPD. This figure does not include some specialized outpatient facilities, but their number is negligible in comparison with the total figure.

These are four types of visits:

- curative visits: about 302,000 per month
- antenatal about 12,700 per month
- family planning about 5,500 per month
- immunization about 171,000 per month

If these figures are dependable, about 6.4 million Afghans consulted in a hospital OPD during the year 2003.

6 of the 112 hospitals with an OPD reported that they had not seen a single outpatient during the six month before the time of the survey. It is possible that the problem was more an issue of recording than actual performance of outpatient visits, because two large hospitals are in this group: Qalat hospital (*Zabul province*) and Sar-i-Pul Provincial Hospital (*Sari Pul province*).

Hospitals with more than 10,000 OPD visits per month

Province	Hospital name	Number of OPD visits/month
HILMAND	Lashkar Gah General Hospital	10 200
NIMROZ	Nimroz Hospital	11 100
KABUL	Indira Ghandi Child Health Hospital	11 900
LAGHMAN	Mehtar Laam Baba Regional Hospital	15 600
JAWZJAN	Provincial Hospital Jawzjan	16 800
HIRAT	Hirat Regional Hospital	30 600
KANDAHAR	Mirwais Hospital	31 800
TAKHAR	Taloqan Central Hospital	33 900
HILMAND	Naserage Central Health Center	45 700
BALKH	Mazar-i-Sharif General Civil Hospital	51 700

The number of OPD visits per month in surveyed hospitals with OPD activities was comprised between 142 and 51,700. It has been difficult to explain this huge variation in number of outpatient visits. Normally, two criteria should explain most of the variation:

- The size of the hospital
- The number of doctors available

However, these explanations did not seem to hold in Afghanistan.

- When considering the size of the hospitals based on the number of their beds, it would be expected that larger hospitals would have more outpatients, and that the ratio of OPD visits over number of hospital beds would not vary too much. However, this figure varied between 3 and 4,575.
- When considering the number of doctors, it should be expected that the number of outpatient visits per staff doctor would be relatively constant, but it is clear that some OPD use doctors who are not on the staff, because the average number of visits per staff doctor varied between 19 and 6,530 per month.

When outpatient consultations are related to the population of the province, the results are the following:

Province	Population	Average OPD consultations / year	Average OPD consultations / inhabitant /year
BADAKHSHAN	589 700	23 000	0.04
BADGHIS	301 200	64 000	0.21
BAGHLAN	907 733	183 000	0.20
BALKH	943 800	688 000	0.73
BAMYAN	339 600	113 000	0.33
FARAH	338 300	29 000	0.09
FARYAB	781 900	181 000	0.23
GHAZNI	930 600	155 000	0.17
GHOR	470 500	74 000	0.16
HILMAND	745 100	182 000	0.24
HIRAT	1 182 600	498 000	0.42
JAWZJAN	454 783	235 000	0.52
KABUL	3 313 800	721 000	0.22
KANDAHAR	874 600	558 000	0.64
KAPISA	359 700	63 000	0.18
KHOST	300 200	60 000	0.20
KUNAR	306 000	34 000	0.11
KUNDUZ	819 600	81 000	0.10
LAGHMAN	372 600	187 000	0.50
LOGAR	291 500	134 000	0.46
NANGARHAR	1 089 100	366 000	0.34
NIMROZ	149 300	133 000	0.89
NURISTAN	111 700	8 000	0.07
PAKTIKA	352 100	43 000	0.12
PAKTYA	414 800	124 000	0.30
PARWAN	726 400	171 000	0.24
SAMANGAN	303 700	76 000	0.25
SARI PUL	467 700	18 000	0.04
TAKHAR	691 700	424 000	0.61
URUZGAN	638 000	133 000	0.21
WARDAK	413 000	140 000	0.34
ZABUL	238 000	3 000	0.01
Total	20 219 316	5 902 000	0.29

During the survey, hospital managers were asked to break down the outpatient figures by type, and it is possible to analyze the reasons why patients come to hospitals.

7.6.2 Curative OPD visits

They represented the largest amount of OPD visits with 302,000 per month. This figure is probably underestimated because 13 hospitals declared no visit over the past 6 months. In fact, it is likely that they were not able to provide patient statistics to the surveyors. Most of these 13 hospitals are active and equipped, and do not have any reason to refuse outpatients. 7 of these 13 hospitals were located in Kabul.

The number of visits varied greatly from one hospital to another. The average number of patients seen was 2,900 per month, which corresponds to over 100 per day, but there were

major discrepancies between facilities. Some hospitals declared less than 10 OPD care visits per day (300 per month)

Hospitals declaring less than 300 care OPD visits per month

Province	Hospital name	Care OPD visits
KABUL	Ata Turk Hospital	5
KANDAHAR	Al Khidmat-Al Hajeri Hospital	142
PAKTIKA	Sar Hawza Clinic	189
KANDAHAR	Al Ahsan Clinic	200
SAMANGAN	Deh-i-Village Clinic	218
BALKH	Tafahosat Hospital	220
ZABUL	Shahjoi Hospital	220
BALKH	Hairatan Hospital	254
FARYAB	Andkhoy Hospital	267
PAKTIKA	Urgun Hospital	268
GHAZNI	Jaghatu District Hospital	285

Others had an intense OPD care activity, with over 10,000 visits per month (>300 per day).

Hospitals declaring more than 10,000 care OPD visits per month

Province	Hospital name	Care OPD visits
BALKH	Mazar-i-Sharif General Civil Hospital	11 354
KABUL	Indira Ghandi Child Health Hospital	11 453
TAKHAR	Taloqan Central Hospital	17 267
KANDAHAR	Mirwais Hospital	23 713
HIRAT	Hirat Regional Hospital	28 152

One of the reasons why outpatient departments may not be in high demand in some facilities is the relatively poor level of equipment available to take care of patients. Only 41 facilities had a basic set of equipment in the examination room: examination table, sphygmomanometer, scale, otoscope. Four OPD had a vision chart, and a baby scale could only be found in 57 facilities (48% of the hospitals).

7.6.3 Antenatal and family planning OPD visits

The case is very different with OPD visits oriented towards women and family planning, when it comes to numbers of patients seen. A large number of facilities declared that they did not provide antenatal OPD (61, or 58%). In Nuristan, Paktika, Uruzgan and Zabul, not a single hospital declared providing antenatal OPD. The number of antenatal OPD visits remained low for the country's estimated needs, but it may not be fully significant. With 12,700 visits per months, the hospital outpatient activities in antenatal care correspond to 76,000 pregnancies, on the basis of two antenatal visits per woman.

Put in perspective with the total number of deliveries expected per year in Afghanistan, these visits correspond to less than 6% of the total need for antenatal care. However, it must be

outlined that this number only corresponds to hospitals, whereas most uncomplicated pregnancies are expected to receive antenatal care at primary care level (CHCs and PHCs). In addition, several hospitals also have an outpatient unit in their maternity, which may be performing some of the visits as well.

Hospital declaring over 500 antenatal OPD visits per month

Province	Hospital name	Antenatal OPD visits
KANDAHAR	Mirwais Hospital	531
KABUL	Rabia-i-Balkhi Hospital	600
HIRAT	Guzara District Hospital	690
PAKTYA	Gardez Civil Hospital	812
KHOST	Khost Hospital	1 075
BAMYAN	Bamyan Central Hospital	1 700

Only 39 hospitals declared conducting family planning OPD activities. 12 provinces did not have a single hospital declaring to conduct family planning OPDs. These were Badghis, Baghlan, Hilmand, Jawzjan, Khost, Kunduz, Nimroz, Nuristan, Paktika, Samangan, Sari Pul and Zabul. Although there are primary care facilities in these provinces with some FP activities, the lack of a referral OPD in one of the province's hospitals represents a weakening of the FP activities.

Hospitals with more than 100 family planning OPD per month

Province	Hospital name	Number of FP OPD per month
HIRAT	Ghoryan Hospital	102
NANGARHAR	Sultan Pur Clinic	127
BADAKHSHAN	Faizabad Hospital	129
HIRAT	Hirat Regional Hospital	221
HIRAT	Guzara District Hospital	235
URUZGAN	Tirinkot CHC	300
PARWAN	Parwan Provincial Hospital	753
KABUL	Malalay Maternity Hospital	806
KABUL	Rabia-i-Balkhi Hospital	891
KABUL	Khair Khana Hospital	907

It is interesting to notice that the most active family planning OPDs are concentrated in few provinces, and in particular Kabul and Hirat provinces.

Hospitals with family planning OPD generally were able to propose a good methods mix. 45 had condoms available, 62 could provide oral contraceptives, 52 proposed injectable contraceptives, 38 provided IUD insertion and 29 could perform tubal ligations.

19 hospitals were able to provide all the methods listed above:

Province	Hospital
BAGHLAN	Pul-i-Khumri Civil Hospital
BALKH	Balkh Hospital
BALKH	Mazar-i-Sharif General Civil Hospital

Province	Hospital
BAMYAN	Yakawlang Hospital
FARAH	Farah Provincial Hospital
FARYAB	Faryab Central Hospital
HILMAND	Lashkar Gah General Hospital
HIRAT	Guzara District Hospital
HIRAT	Hirat Regional Hospital
JAWZJAN	Provincial Hospital Jawzjan
JAWZJAN	Aqcha Hospital
KABUL	Rabia-i-Balkhi Hospital
KABUL	Khair Khana Hospital
KABUL	Malalay Maternity Hospital
KANDAHAR	Mirwais Hospital
LAGHMAN	Mehtar Laam Baba Regional Hospital
LOGAR	Baraki Rojan Hospital
NANGARHAR	Medical Hospital of Nangarhar
PARWAN	Parwan Provincial Hospital

Interestingly, only 3 of these facilities are among the ones providing the largest volume of family planning OPD.

7.6.4 Immunization

Immunization was found to take place in a very large number of hospital facilities, whereas it would have been expected to be a marginal activity at this level. Only 37 hospitals (32%) did not have immunization activities. In particular, the specialized hospitals did not conduct such activities. However, several hospitals had a very intense immunization activity, and 12 hospitals declared they immunized over 100 children per day (3,000 per month).

Province	Hospital name	Number of immunizations per month
URUZGAN	Uruzgan Hospital	3 100
SAMANGAN	ARCS Health Clinic	4 443
HILMAND	Naserage Central Health Center	4 530
NIMROZ	Nimroz Hospital	4 550
GHOR	Ghor Provincial Hospital	5 340
HILMAND	Lashkar Gah General Hospital	6 732
LAGHMAN	Mehtar Laam Baba Regional Hospital	7 520
KANDAHAR	Mirwais Hospital	7 538
FARYAB	Faryab Central Hospital	8 957
JAWZJAN	Provincial Hospital Jawzjan	13 867
TAKHAR	Taloqan Central Hospital	16 483
BALKH	Mazar-i-Sharif General Civil Hospital	40 149

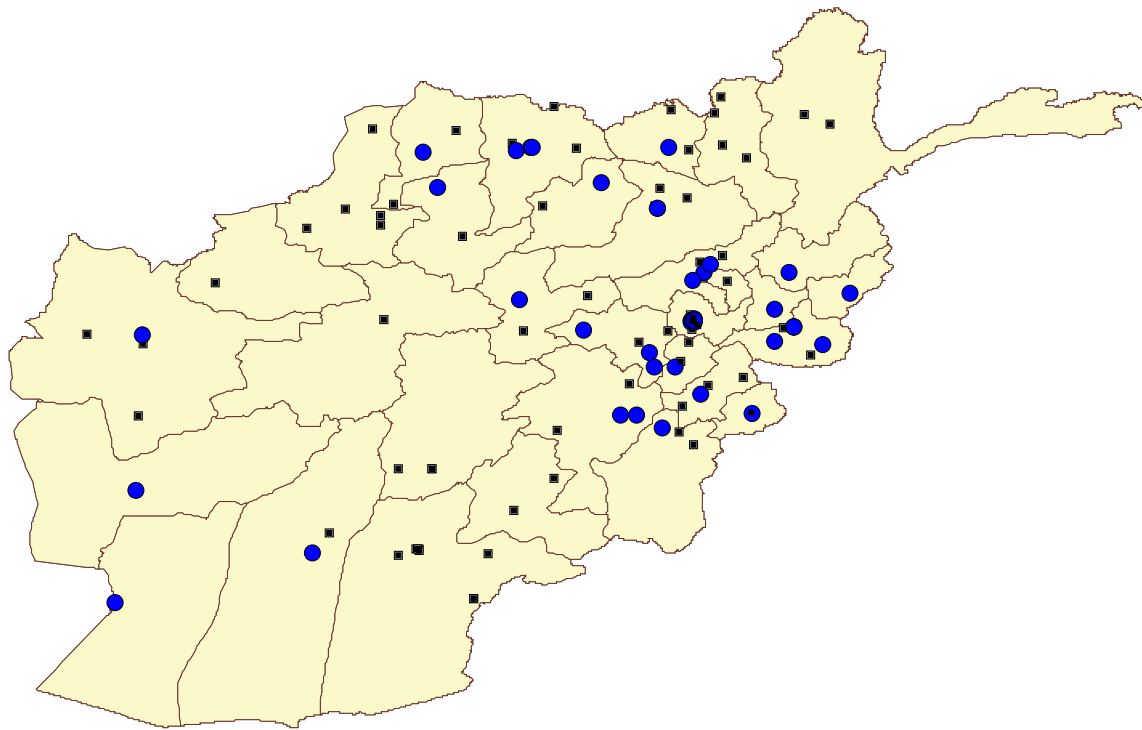
However, only 17 OPD units were found to have a refrigerator in working condition, and this finding is cause for concern about the efficacy of immunization in hospital OPDs.

7.7 Radiology and medical imaging

Modern hospitals cannot operate without appropriate imaging diagnostic technology, and the most common is radiology. The survey reviewed the situation of X-Ray equipment and performance in Afghan public sector hospitals, and provided a picture of the current situation regarding radiology and ultrasonic imaging.

Clearly, too few hospitals are able to provide adequate radiology services. In addition, several facilities have equipment in poor condition, or cannot operate it by want of preventive and curative maintenance. Investment in basic radiology systems could provide useful technical support to quality care in facilities with an adequate supply of electrical power.

At the time of the survey, 41 facilities had both at least one radiology table and development equipment (either manual or automatic) in working condition:



However, 14 of these hospitals had performed no X-Ray for a long time, although 10 (72%) had X-Ray technicians available on their staff. Two of these hospitals having performed no X-Ray, Inferally hospital (*Wardak province*) and Qala-i-Naw District hospital (*Badghis*

province) declared that their X-Ray room had no access to electrical power. Estimating the condition of the equipment in these conditions may be difficult.

Some large hospitals were found among those performing no X-Ray, or not having adequate equipment for imaging, and it would be important to make sure they are targeted for investment: Wazir Akbar Khan hospital (*Kabul province*) would use equipment rapidly as it has 10 X-Ray technicians on staff, Mirwais hospital (*Kandahar province*), Qalat hospital (*Zabul province*), Faizabad hospital (*Badakhshan province*).

In three hospitals, the physical condition of the X-Ray department was found to be particularly bad, and requiring urgent upgrading: these were Naserage Central Health Center (*Hilmand province*), Sari-Pul Provincial hospital (*Sari Pul province*) and Nimroz hospital (*Nimroz province*). In addition, the poor condition of walls in the X-Ray unit of Wamy hospital (*Paktya province*) and Inferally hospital (*Wardak province*) is particularly bad, and it is probable that it is not compatible with an adequate level of radioprotection.

194 X-Ray technicians were identified during the survey. 90 of them (46%) were employed in Kabul province. Although only 42 hospitals declared having performed X-Ray tests (chest, abdomen, skull or IVP) in the 12 months before the survey, many more facilities had X-Ray technicians on their staff. Sometimes, the number of X-Ray technicians was particularly high.

**Equipped hospitals having performed no X-Ray in 2003
In spite of having X-Ray technicians on their staff**

Province	Hospital name	Number of X-Ray technicians
FARYAB	Faryab Central Hospital	1
FARYAB	Garziwal Hospital	1
FARYAB	Andkhoy Hospital	1
GHAZNI	Jaghori Hospital	1
HILMAND	Naserage Central Health Center	1
HIRAT	Guzara District Hospital	1
JAWZJAN	Aqcha Hospital	1
KANDAHAR	Al Khidmat-Al Hajeri Hospital	1
KHOST	Matun Baba Hospital	1
PAKTYA	Wamy Hospital	1
PARWAN	Changaram Hospital	1
ZABUL	Qalat Hospital	1
BADAKHSHAN	Faizabad Hospital	2
KABUL	Stomatology Hospital	2
LOGAR	Nayab Aminullah Khan Logar Hospital	2
WARDAK	Maidan Wardak Hospital	2
KABUL	Noor Hospital (2)	3
TAKHAR	Taloqan Central Hospital	3
KABUL	IbnSina Emergency Hospital	4
KABUL	Khair Khana Hospital	5
KABUL	Sadre Abn Seena Hospital	5
KABUL	Police Hospital	6
KANDAHAR	Mirwais Hospital	7
KABUL	Wazir Akbar Khan Hospital	10

Conversely, several facilities had X-Ray technicians among their personnel, but not operational radiology equipment. However, not a single hospital operated X-Ray equipment without technicians.

Hospitals with X-Ray technicians, but no radiology table or development equipment

Province	Hospital name	X-Ray technicians
BAGHLAN	Nasagee Hospital	2
FARYAB	Faryab Central Hospital	1
FARYAB	Garziwal Hospital	1
HILMAND	Lashkar Gah General Hospital	3
JAWZJAN	Aqcha Hospital	1
KABUL	Noor Hospital (2)	3
KANDAHAR	Al Khidmat-Al Hajeri Hospital	1
KANDAHAR	Mirwais Hospital	7
LOGAR	Nayab Aminullah Khan Logar Hospital	2
PARWAN	Changaram Hospital	1
PARWAN	Parwan Provincial Hospital	3
WARDAK	Maidan Wardak Hospital	2

Radioprotection seems to be very little developed. Only 7 facilities reported that they had dosimeters available and operational. One hospital that reported that it had dosimeters in operation (Qalat hospital) did not have an operational radiology department.

Hospitals reporting dosimeters in operation

Province	Hospital name
KABUL	Ata Turk Hospital
KABUL	Indira Ghandi Child Health Hospital
KABUL	Maiwand Hospital Kabul
KABUL	Emergency Surgical Center for War Victims
NURISTAN	Waant Hospital
PARWAN	Panjshir Emergency Surgical Centre
ZABUL	Qalat Hospital

The number of X-Rays varied widely from on facility to another. Hospitals declared an average of nearly 5,000 X-Rays per month for the whole country. Some hospitals declared less than 10 X-Ray examinations per month, but others had more activity.

Hospitals performing more than 100 X-Rays per month

Province	Hospital name	Number of X-Ray technicians	Monthly number of X-Rays
KABUL	Maiwand Hospital Kabul	9	105
KABUL	Emergency Surgical Center for War Victims	3	109
HIRAT	Hirat Regional Hospital	3	111
PAKTYA	Gardez Civil Hospital	2	120
LAGHMAN	Mehtar Laam Baba Regional Hospital	1	123
KABUL	Karte 3 Surgical Hospital	8	173
JAWZJAN	Provincial Hospital Jawzjan	5	202
KABUL	Ali Abad Hospital	16	249

GHAZNI	Ghazni Civil Provincial Hospital	2	326
KHOST	Khost Hospital	2	393
BALKH	Mazar-i-Sharif General Civil Hospital	3	420
NANGARHAR	General Hospital of Public Health	7	753
KABUL	Indira Ghandi Child Health Hospital	7	774

Ten hospitals did not indicate if they were charging patients for X-Rays. Only two facilities expressly declared that radiology services were free: Tafahosat hospital and Kod Barq hospital (both in Balkh province). Other hospitals charged for X-Rays, and prices varied between 20 and 140 Afghanis (\$0.5 to \$3.4). It seems there are no guidelines on cost recovery for radiology services, and the differences in prices declared by hospitals seem to indicate that hospital directors have the freedom to determine the prices they find appropriate.

In addition to radiology, 12 hospitals performed ultrasound diagnosis (abdominal or cardiac). Apart from two medium size facilities, ultrasonic diagnosis had mostly been performed in large hospitals over 200 beds.

Hospitals having performed more than 100 ultrasound examinations per month

Province	Hospital name	Bed count	Ultrasound examinations per month
KABUL	Rabia-i-Balkhi Hospital	250	100
KABUL	Ali Abad Hospital	206	122
HIRAT	Hirat Regional Hospital	527	131
KABUL	Malalay Maternity Hospital	310	175
LAGHMAN	Mehtar Laam Baba Regional Hospital	64	190
KHOST	Khost Hospital	81	249
KABUL	Indira Ghandi Child Health Hospital	213	250

Several facilities were under-equipped or faced maintenance problems. The most common problem was the absence of a functional film development capability, either manual or automatic. However, several hospitals had horizontal tables that could not be operated, problems with X-Ray tubes, and other maintenance issues.

7.8 Pharmaceuticals

The survey provided a comprehensive review of pharmaceuticals available in hospital pharmacies. The questionnaire was built on the essential drugs lists as defined in the Basic Package of Health Services. Surveyors queried about the availability of each product, and checked that there was no expired drug (beyond the official shelf life).

All the surveyed hospitals (including the ones without beds) had some form of pharmaceutical storage, and had some drugs available. However, the overall availability was rather poor: the average value for all facilities was 43%. This means that less than half of the drugs of the BPHS list were present on the day of the survey.

The survey found that there is an overstaffing of pharmacists, which does not result in a good availability of drugs in hospital pharmacies. Poor management of ordering and stocks seemed to be a frequent problem, and improvement of drug management appeared to be a priority of investment in Afghan hospitals. However, physical improvement was also needed, especially regarding storage condition of drugs and reagents.

7.8.1 Drug availability

Interestingly, it does not seem that problems of supply logistics were the main problem to explain this low availability. Hospitals with a high availability rate are not always the easiest to reach, and none of the Kabul hospitals had a drug availability rate over 60%.

Hospitals with a drug availability rate over 70%

Province	Hospital name	Drug availability
JAWZJAN	Provincial Hospital Jawzjan	70%
NIMROZ	Nimroz Hospital	71%
ZABUL	Qalat Hospital	71%
GHOR	Ghor Provincial Hospital	72%
KHOST	Matun Baba Hospital	76%
BALKH	Khulm District Hospital	79%
LAGHMAN	Mehtar Laam Baba Regional Hospital	81%
PARWAN	Panjshir Emergency Surgical Centre	82%

Expired products were found in 15 facilities (13%), and the maximum number of expired products on the stock was never over 3.

Availability of some specific products has been studied separately (see chapters on operating rooms, ICU and emergencies), but it is useful to analyze the data that were supplied regarding the availability by type of products.

9 products were available in more than 90% of all the facilities: Oral rehydration salts, water for injections, gentian violet, chloroquine, metronidazole, cotrimoxazole, mebendazole, antacid tablets and paracetamol. It is important to note that all these products are primary care

products, and although they have their place in hospitals, they should not be the only ones widely available.

Contrary to the perception that most patients have to go to private pharmacies to get infusion fluids, the survey found that over $\frac{3}{4}$ of the hospitals had basic infusion fluids available in the hospital pharmacy: sodium chloride and sodium lactate.

Availability of antibiotics was important to analyze in a country where infectious diseases remain one of the important causes of hospitalization and mortality. The BPHS includes a list of fourteen antibiotics (in addition to TB treatment products). A large hospital would be expected to have all of these products available at all time. However, the average availability was not different from that of all the drugs (46%), falling to 43% when cotrimoxazole was not longer taken in consideration.

Surprisingly, some of the large hospitals had a poor availability of antibiotics, and there would be a need to improve their stock management and ordering mechanisms in priority.

Large hospitals with an availability of antibiotics below 40%

Province	Hospital name	Bed count	Availability of antibiotics
KABUL	Kabul Infectious Diseases Hospital	120	31%
KABUL	Malalay Maternity Hospital	310	31%
KABUL	IbnSina Emergency Hospital	137	38%
GHAZNI	Ghazni Civil Provincial Hospital	146	38%
KANDAHAR	Mirwais Hospital	304	38%
NANGARHAR	General Hospital of Public Health	410	38%
KABUL	Karte 3 Surgical Hospital	454	38%

It is particularly surprising to find the Kabul Infections Diseases hospital, where antibiotics are expected to be used all the time, among facilities with the lowest availability of such drugs.

Hospitals with the highest availability of antibiotics could be found in various areas of the country, pointing more to drug management difficulties inside hospitals than logistics problems among wholesalers to explain the overall low availability of drugs. It is interesting to note that hospitals in the table here below did not have expired drugs in stock, and could be either large or small.

The figures of antibiotics availability do not give any indication on the rational prescribing and use of these products.

Hospitals with an availability of antibiotics above 80%

Province	Hospital name	Bed count	Availability of antibiotics
NIMROZ	Nimroz Hospital	30	85%
BALKH	Khulm District Hospital	33	85%
GHOR	Ghor Provincial Hospital	36	85%

BAMYAN	Bamyan Central Hospital	47	85%
PAKTYA	Wamy Hospital	60	85%
HIRAT	Hirat Regional Hospital	527	85%
KHOST	Matun Baba Hospital	20	92%
PARWAN	Panjshir Emergency Surgical Centre	49	100%

Family planning products were not widely available in hospital facilities, and this situation should be easy to improve. Five methods were listed in the BPHS (condoms, oral contraceptives, injectable contraceptives, diaphragms and spermicides). Only one facility declared to have all five available: surprisingly, it was the Kabul Infectious Diseases hospital. 41 facilities (39%) had condoms in stock, 17 (16%) had oral contraceptives in stock, and less than 6% of facilities had other methods available.

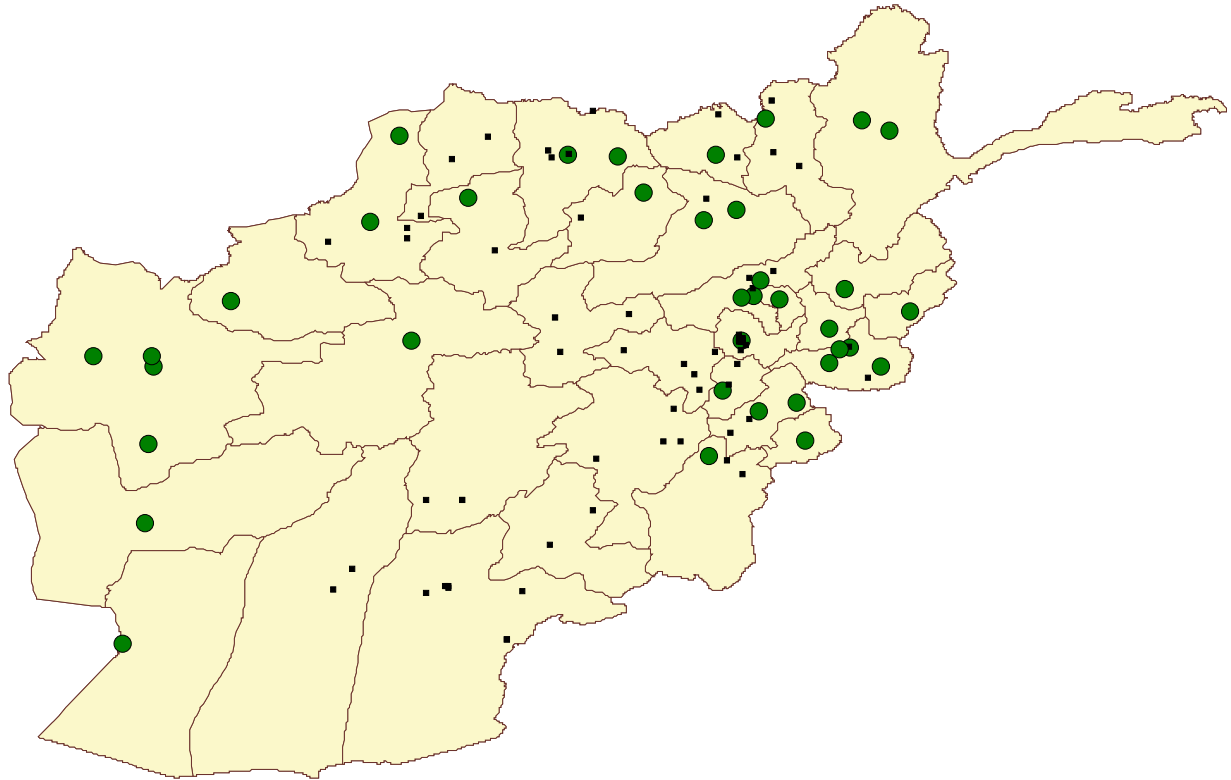
Availability of cardiovascular drugs was slightly better than average, and more than 2/3 of all facilities had hydrochlorothiazide and methyldopa in stock. Above 1/3 of facilities also had a beta-blocker and a calcium inhibitor available. However, cardiovascular drugs were not available where they would have been most expected. Hospitals with at least 5 of the 6 BPHS products in stock were the following:

Province	Hospital name
FARYAB	Qaisar Hospital
BAGHLAN	Ministry of Mines Hospital (Maadan)
BALKH	Khulm District Hospital
GHOR	Ghor Provincial Hospital
PARWAN	Panjshir Emergency Surgical Centre
PARWAN	Parwan Provincial Hospital
TAKHAR	Dasht-i-Qala Hospital
PAKTIKA	Sharan Hospital
ZABUL	Qalat Hospital
KABUL	Ali Abad Hospital
LAGHMAN	Mehtar Laam Baba Regional Hospital
KABUL	Kabul Infectious Diseases Hospital

However, large facilities with an important activity in general medicine did not have a single cardiovascular product in stock: Ghazni Civil Provincial hospital (*Ghazni province*), Medical Hospital of Nangarhar (*Nangarhar province*), Mirwais hospital (*Kandahar province*).

59 (50%) facilities did not have a single anti-TB drug. The survey looked for the presence of five products: ethambutol, INH, rifampicin, pyrazinamide and streptomycin. 37 facilities (32%) had 4 or 5 of the drugs (see map here below). However, 15 facilities had one or two anti-TB drugs, and it is to be feared that adequate treatment cannot be provided by these facilities, especially in the context of DOTS.

Hospitals delivering TB drugs (●)



It is clear from the map above that the central and Southern part of the country does not have appropriate access to TB treatment, and approaches to improve the situation will be needed.

7.8.2 Staffing

Only 12 hospitals did not have a pharmacist (among them, only one of the facilities without beds: the others had pharmacists on their staff). The average number of pharmacists for the remaining hospitals was 3.2, which is a very high number.

It is considered, on average, that a 100 bed hospital should have one pharmacist on staff, provided some competent assistant personnel can support him), two at most if a night duty is organized. During the survey, several hospitals were found to have one pharmacist for facilities of 0 or 1 or 2 beds. The bed/pharmacist ratio was under 30 in 76 hospitals. There is a clear overstaffing of pharmacists in Afghan hospitals

Hospitals with more than 5 pharmacists on their staff

Province	Hospital name	Number of beds	Number of pharmacists
BALKH	Mazar-i-Sharif General Civil Hospital	237	9
GHAZNI	Ghazni Civil Provincial Hospital	146	6
HIRAT	Hirat Regional Hospital	527	11
JAWZJAN	Provincial Hospital Jawzjan	240	10
KANDAHAR	Mirwais Hospital	304	5
KUNDUZ	Kunduz Regional Hospital	82	8
NANGARHAR	General Hospital of Public Health	410	6
PAKTYA	Gardez Civil Hospital	58	6
KABUL	Khair Khana Hospital	109	6
KABUL	Kabul Infectious Diseases Hospital	120	6
KABUL	Ata Turk Hospital	138	6
KABUL	Malalay Maternity Hospital	310	7
KABUL	Maiwand Hospital Kabul	351	7
KABUL	Rabia-i-Balkhi Hospital	250	8
KABUL	Noor Hospital (2)	75	8
KABUL	IbnSina Emergency Hospital	137	8
KABUL	Kabul Mental Health Hospital	60	9
KABUL	Wazir Akbar Khan Hospital	230	9
KABUL	Ali Abad Hospital	206	10
KABUL	Police Hospital	71	10
KABUL	Indira Ghandi Child Health Hospital	213	11
KABUL	Karte 3 Surgical Hospital	454	17

The overstaffing was particularly obvious in Kabul province, where a large majority of hospitals had more than 5 pharmacists.

In spite of this large supply of pharmacists, stock management of the pharmacy was performed by the pharmacists in only 58 hospitals (50%). In 20 facilities, pharmaceutical assistants were in charge of the hospital pharmacy (although a pharmacist was available in 18 cases). In 26 facilities, the person in charge was a nurse (in spite of the presence of a pharmacist in 22 cases). Two small hospitals had their pharmacy managed by the hospital director.

7.8.3 Storage and stock management

Drug ordering was performed once a week in 15 hospitals (14%), only 7 of which had a pharmacist in charge. 35% of facilities ordered pharmaceutical supplies once a month, 32% once every three months and nearly 10% declared that they ordered supplies once every six months or more seldom. Many of these facilities seemed to be re-supplied by NGOs, and probably did not have to order drugs to receive pharmaceuticals.

26 hospitals (25%) did not have a specific room for storage of pharmaceuticals, and in 30 others, the hospital pharmacy was not adequate or not operational. This means that more than

half of the surveyed facilities did not have an appropriate storage place for pharmaceuticals and reagents.

Drugs were stored on shelves in 72% of hospitals, but the condition of shelving material was highly variable. In 12% of facilities, drugs were stored on the ground, and it would be important to make sure these hospitals are able to improve their drug storage rapidly.

Inventory management was not found to be very efficient: 6 facilities had no stock management whatsoever, and only 3 facilities (small size hospitals with less than 100 beds) used a computerized stock management tool. 42 facilities used stock cards and 51 declared only using an order book. Order books, if well kept, can be a useful stock management help, provided inventory checks are performed very regularly. However, inventory checks were found to happen once a week in only 16 facilities (15%). 51 hospitals (44%) declared conducting inventory checks once a month and 38 would perform inventories every three months or less often. Among the hospitals declaring that they conducted inventory checks every six months were some large facilities such as Hirat Regional Hospital (*Hirat province*), General Hospital of Nangarhar (*Nangarhar province*), Mazar-i-Sharif General Civil hospital (*Balkh province*), Malalay hospital and Maiwand hospital (*Kabul province*).

Investment and support in hospital drug management systems could certainly improve the performance of hospital pharmacies, and increase the poor drug availability found during the survey.

Only 25 hospitals (24%) declared that they relied on API for their drug supplies, and 10 of them were located in Kabul. API has often been declared not to be a reliable source of hospital drugs by interviewees. 55 hospitals declared that they received all their pharmaceutical supplies from a central NGO store. 6 hospitals declared purchasing all their drugs from private wholesalers and pharmacies. The others used a combination of various sources.

7.8.4 Physical condition of pharmacies

Three hospital pharmacies had buildings in bad condition, needing urgent rehabilitation.

Province	Hospital name
KUNDUZ	Kunduz Regional Hospital
HILMAND	Naserage Central Health Center
BAGHLAN	Ministry of Mines Hospital (Maadan)

24 facilities (22%) declared they had neither electrical power nor running water in the pharmacy.

13 hospitals had a cold room in the pharmacy, but only 22 facilities (20%) had a refrigerator in working condition. Less than half of facilities (46) had an electric fan available in the pharmacy.

7.9 Laboratories

It should have been easy to determine if a health facility had a laboratory or not, but the survey could not provide this information in an exact manner. 25 hospitals did not have any laboratory activity and did not declare a single test performed in the year prior to the survey, although several (12) declared having at least one laboratory technician. One hospital without any activity recorded, Matun Baba hospital (Khost province) had four technicians on its staff. All other facilities performed some tests and could account for them, even sometimes without specialized staff and a minimal level of equipment.

Like many other hospital services, laboratories are well staffed, but do not perform well by want of adequate equipment, spare parts, reagents and maintenance. Strengthening the water and power supply of laboratories should be an investment priority in several facilities. However, the main issue remains that of equipment and supplies, as many facilities are not able to perform tests that would be expected from a referral level.

7.9.1 Staff

371 laboratory technicians worked in Afghan hospitals and were identified by the survey. Of these, 8.5% were women. Women represented the majority of laboratory technicians in Malalay hospital alone.

16 (14%) hospitals did not have a single laboratory technician. These were small facilities, ranging between 0 and 41 beds. Many of them had laboratory activities nevertheless.

More surprisingly, several hospitals without beds had laboratory technicians on their staff: Imam Sahib hospital (*Kunduz province*), Achin Basic Health clinic and Sultan Pur Clinic (*Nangarhar province*) and Shahjoi hospital (*Zabul province*). Although these facilities have some minimal laboratory activities, their equipment is extremely limited, and could be operated by a less qualified professional within a primary care context. Such technicians could be reallocated to other facilities really needing their competence.

Some hospitals had a large number of laboratory technicians on their staff, even when the size of the facility, in terms of bed numbers, was not very large. Kabul province hospitals had more laboratory technicians than any other in the country.

Hospitals with over 8 laboratory technicians

Province	Hospital name	Bed count	Laboratory technicians
BADGHIS	Qala-i-Naw District Hospital	86	8
KABUL	Malalay Maternity Hospital	310	8
KUNDUZ	Kunduz Regional Hospital	82	8
PAKTYA	Gardez Civil Hospital	58	8
TAKHAR	Taloqan Central Hospital	67	8
KABUL	Kabul Infectious Diseases Hospital	120	9
KABUL	Rabia-i-Balkhi Hospital	250	9
BALKH	Mazar-i-Sharif General Civil Hospital	237	10

NANGARHAR	General Hospital of Public Health	410	10
NANGARHAR	Medical Hospital of Nangarhar	288	10
KABUL	Police Hospital	71	11
KABUL	Wazir Akbar Khan Hospital	230	13
KABUL	Ali Abad Hospital	206	14
KABUL	Indira Ghandi Child Health Hospital	213	18

7.9.2 Performance

Information was required from laboratories about the types and quantities of tests that they perform. The most common tests were, in decreasing order, blood cell counts, malaria diagnosis, urine analysis and hemoglobin count. More than 15,000 of each of these tests were performed per month in the country's hospitals. Diagnostic tests for other infectious diseases were less frequent: 600 for brucellosis, 670 for HIV, 1,200 for hepatitis, 1,600 for typhoid, and 4,100 for tuberculosis.

Different hospitals concentrated on different types of tests. For instance, Indira Gandhi Child Health hospital, with the largest number of laboratory technicians in the country, performed a large number of microscopic diagnostic tests, but very little biochemistry and very little immunology. Most hospitals without a blood bank would not determine the blood group of patients.

The largest facilities generally had the most active laboratories. However, 3 large hospitals, Provincial Hospital Jawsjan (Jawsjan province), Karte 3 Surgical hospital and Wazir Akbar Khan hospital (Kabul province) performed less than 1,000 tests per months.

Hospitals performing over 4,000 tests per month on average

Province	Hospital name
HILMAND	Lashkar Gah General Hospital
HIRAT	Hirat Regional Hospital
KABUL	Ali Abad Hospital
KABUL	IbnSina Emergency Hospital
KABUL	Indira Ghandi Child Health Hospital
KABUL	Maiwand Hospital Kabul
KABUL	Rabia-i-Balkhi Hospital
KANDAHAR	Mirwais Hospital
NANGARHAR	General Hospital of Public Health
NANGARHAR	Medical Hospital of Nangarhar

7.9.3 Physical condition

Six hospitals had a laboratory in very bad physical condition (roof, walls, floor), requiring urgent rehabilitation or rebuilding.

Hospitals with a laboratory in bad physical condition

Province	Hospital name
BAGHLAN	Baghlan District Hospital
BAGHLAN	Ministry of Mines Hospital (Maadan)
BAGHLAN	Pul-i-Khumri Civil Hospital
HILMAND	Naserage Central Health Center
KAPISA	Kapisa Provincial Hospital
NIMROZ	Nimroz Hospital

In 7 facilities, the laboratory had access to neither electricity nor water. The quality of laboratory tests performed in these physical conditions may be questionable.

58 of the surveyed facilities declared that there was a private laboratory within walking distance of the facility. It is highly probable that several patients chose to receive their tests from private facilities when the condition of the hospital laboratory does not seem adequate.

7.9.4 Equipment

Only 4 hospitals with laboratory activities did not have a microscope. Faryab Central Hospital (*Faryab province*) must have recently lost access to microscopes, because it had records of over 2,000 slides examined monthly for malaria in the months prior to the survey.

However, other equipment were much less available. 33 hospitals (38%) did not have a centrifuge, 62 (67%) did not have a centrifuge for micro-haematocrit. Only 42 laboratories (46%) had a manual cell counter, 23 (25%) had a bench autoclave, 34 (37%) had a refrigerator, and only 20 could produce distilled water (22%).

Slightly more sophisticated laboratory equipment was rare: 7 hospitals had a biochemistry analyzer, 2 had an haematology analyzer, and one had an immunology analyzer. None had the three types of equipment available at the same place. Only 6 hospitals had a spectrophotometer in operating condition, and these were large facilities in Kabul, Jalalabad and Hirat.

In addition to poor equipment, most laboratories had difficulties accessing reagents, spare parts and consumable.

Based on their level of equipment and statistics of performance, it is estimated that only 10 facilities were in a condition to perform biochemistry tests. Half of these facilities were located in Kabul.

Hospitals able to perform basic biochemistry tests

Province	Hospital name
BALKH	Mazar-i-Sharif General Civil Hospital
KABUL	Ali Abad Hospital
KABUL	Ata Turk Hospital

KABUL	IbnSina Emergency Hospital
KABUL	Maiwand Hospital Kabul
KABUL	Rabia-i-Balkhi Hospital
NIMROZ	Nimroz Hospital
PAKTYA	Wamy Hospital
SAMANGAN	ARCS Health Clinic
WARDAK	Quiat Al Khair Hospital

7.9.5 Cost recovery

84 (72%) hospitals declared that they did not apply any charge on laboratory tests. A minority of hospitals recovered costs and charged patients. Fee amounts ranged between 1 and 170 Afg.

Hospitals charging over 100 Afg. For laboratory tests

Province	Hospital name	Charge amount
GHAZNI	Jaghori Hospital	120
KHOST	Matun Baba Hospital	170
PAKTYA	Wamy Hospital	130