

# The Essential Package of Hospital Services for Afghanistan



Islamic Republic  
of Afghanistan  
Ministry of Public Health

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## **Islamic Republic of Afghanistan Ministry of Public Health**

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## Abbreviations

ANC	antenatal care
BHC	basic health center
BPHS	Basic Package of Health Services
CHC	comprehensive health center
CHW	community health worker
DH	district hospital
DOTS	Directly Observed Therapy, Short Course
DPT	diphtheria pertussis tetanus
EC	European Commission
ECG	electrocardiogram
ENT	ear-nose-throat
EPHS	Essential Package of Hospital Services
EPI	Expanded Program on Immunization
HMIS	health management information system
HP	health post
ICRC	International Committee of the Red Cross
IMR	infant mortality rate
IP	inpatient
MMR	maternal mortality ratio
MOPH	Ministry of Public Health
MSH	Management Sciences for Health
NEDL	national essential drug list
NGO	nongovernmental organization
OPD	outpatient department
OT	operating theater
PH	provincial hospital
PHC	primary health care
RH	regional hospital
STD	sexually transmitted disease
U5M	under-five mortality
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization



## **Islamic Republic of Afghanistan Ministry of Public Health**

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### **Foreword**

The Ministry of Public Health is pleased to present the Essential Package of Hospital Services (EPHS). This document represents a key element in the development of the Afghan health system. The EPHS establishes what each type of hospital in the Afghan health system (district, provincial, and regional) should provide in terms of the services offered at each level and the resultant staff, equipment, diagnostic services, and medications required to provide those hospital services. This, in essence, establishes the standards for the hospitals of our country. The EPHS will help us develop the clinical and administrative standards by which our hospitals should operate and thereby improve quality. The ultimate purpose for the development of the EPHS has been to improve the quality of hospital services provided to the population of Afghanistan.

The EPHS is not a stand-alone document but clearly complements the Basic Package of Health Services (BPHS). These two documents, the BPHS and the EPHS, define the key elements of the health system Afghanistan's Ministry of Public Health is building. They illustrate where basic primary care and hospital services are provided and the referral hospital system necessary to support the BPHS. Figure 1 in this document illustrates the role the district hospitals play as the link between the BPHS and the hospital sector. Afghanistan is building a health system based on basic health services that address our major health problems and supported by our hospital system, as represented in the EPHS.

I would like to express my appreciation to Dr. Shakohmand and the members of the Hospital Management Task Force for development of the EPHS. The MOPH is also grateful to the many other Ministry, NGO, and international staff who made comments on earlier drafts and participated in the development of this document. We are especially grateful to USAID, which, through Management Sciences for Health, has provided funds and technical experts for the development as well as the publication and distribution of the EPHS.

Let us all use this opportunity to recommit ourselves to the ongoing development of the health system of Afghanistan for the benefit of our noble and deserving people.

Dr. Sayed Mohammad Amin Fatimie  
Minister of Public Health  
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March 2005

## **Acknowledgments**

The development of the Essential Package of Hospital Services was completed by the MOPH Hospital Management Task Force. The members of the task force during the time of its development in 2004 were:

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## **1. The Hospital Sector in the Afghan Health System**

### **1.1 Background: The Afghan Health System and Issues Facing Hospitals**

In March 2003, the Ministry of Public Health (MOPH) of Afghanistan released the Basic Package of Health Services (BPHS), the culmination of a process that determined priority health services to address the population's most immediate needs. This package included the most needed services at the health post and health center levels of the health system.

After establishment of the BPHS, the MOPH's Hospital Management Task Force saw the need to develop a framework for the hospital element of the health system. The Basic Package made clear the need for a primary-care-based health system, which requires functioning hospitals in order to have an appropriate referral system where all health conditions may be treated. Health services in Afghanistan operate at three levels: health posts (HP) and community health workers (CHWs) provide service at the community or village level; basic health centers (BHCs), comprehensive health centers (CHCs), and district hospitals operate in the larger villages or communities of a district, provincial and regional hospitals comprise the third level. In urban areas, due to a lack of facilities offering basic curative and preventive services, urban clinics, hospitals, and specialty hospitals provide the services that HPs, BHCs and CHCs provide in rural areas.

Hospitals play a critical role in the Afghan health sector: they are part of the referral system, which aims to reduce high maternal and early childhood mortality rates. In addition, hospitals utilize many of the most skilled health workers and much of the financial resources available in the health system. Hospital management must dramatically improve to ensure that these scarce resources are used in an effective and efficient manner and to enable hospitals to function more effectively as part of the health system. Serious need for improvement exists at all hospital levels—district, provincial and regional hospitals—as well as at Kabul's tertiary and specialty hospitals.

Before it could begin to develop a national policy on hospitals that would define the role of the hospital in the Afghan health system, the Hospital Management Task Force needed to identify the key problems facing the hospital system. The Hospital Management Task Force determined that the key issues facing hospitals could be summarized by six problems and the resulting consequences:

1. **Problem:** Poor distribution of hospitals and hospital beds throughout the country  
**Consequences:** Lack of equitable access to hospital care throughout the country: people in urban areas have access, but semiurban and rural populations have only limited access. Kabul has 1.28 beds per 1000 people, while provinces have only 20% of that amount (0.22 beds per 1000 population).
2. **Problem:** Lack of standards for clinical patient care  
**Consequences:** Poor quality of care
3. **Problem:** Lack of management skills for operation of hospitals  
**Consequences:** Inefficiently run hospitals, poorly managed staff, lack of supplies, and unusable equipment due to lack of maintenance
4. **Problem:** A fragmented and uncoordinated hospital system that is not integrated into the health system

**Consequences:** A referral system that does not work—people from rural areas and basic health centers are not referred to hospitals for problems such as problem pregnancies. Support for a BPHS-based system for secondary and tertiary services is lacking; the roles of hospitals in a BPHS-based health system have not been spelled out.

5. **Problem:** Limited financial resources for hospitals, and sustainability

**Consequences:** Virtually all hospitals in Afghanistan lack adequate financial resources. A user fee system must be developed to help finance hospitals while at the same time ensuring that exemption mechanisms allow the poor continued access to care.

6. **Problem:** Lack of qualified personnel, especially female, in remote areas

**Consequences:** Difficulty in guaranteeing 24-hour coverage, problems with quality of care provided to female patients.

Having reviewed the situation, the Hospital Management Task Force drafted a national policy, the Hospital Policy for Afghanistan's Health System, which was adopted in February 2004 by the MOPH Executive Board (Annex A). This policy provided the rationale, structure, and guidelines needed to complete the definition of a health system appropriate for Afghanistan by

- identifying the needs of the hospital sector;
- establishing 10 key policies related to hospitals;
- setting 31 standards for hospitals in six major areas (responsibilities to the community, patient care, leadership and management, human resource management, management systems, and hospital environment);
- identifying the levels of hospitals in the system and the need for rationalizing the distribution of hospital facilities and beds.

## 1.2 Purpose

The Essential Package of Hospital Services (EPHS) has three purposes: (1) to identify a standardized package of hospital services at each level of hospital, (2) to provide a guide for the MOPH, private sector, nongovernmental organizations (NGOs), and donors on how the hospital sector should be staffed, equipped, and provided materials and drugs, and (3) to promote a health referral system that integrates the BPHS with hospitals. The EPHS defines, for the first time, all the necessary elements of services, staff, facilities, equipment, and drugs for each type of hospital in Afghanistan. The EPHS identifies, with tables, the following elements for each level of hospital so that the inputs or resources needed at each level may be easily compared:

- diagnostic and treatment services for various conditions (Section 2)
- diagnostic tests (Section 3)
- staffing (Section 4)
- equipment and supplies (Section 5)
- essential drugs (Section 6)

Annex A provides the national hospital policy, and Annex B describes the assumptions behind the staffing calculations.

### **1.3 Levels of Hospitals**

Hospitals play a critical role in the Afghan health sector: they are part of the referral system, which aims to reduce high maternal and early childhood mortality rates.

Hospitals are classified into three groups according to size of the referral population, number of beds, workload, and complexity of patient services offered:

- district hospitals (part of the BPHS)
- provincial hospitals
- regional hospitals

Another group of hospitals, specialty hospitals, are referral centers for tertiary medical care and are located primarily in Kabul. They provide education and training for health workers and act as referral hospitals for the provincial and regional hospitals. A separate category of specialty hospitals was not created for the EPHS because each of these hospitals is unique, and it would be difficult in this document to characterize in one group the unique services, staffing, equipment, and drugs required at each of these hospitals.

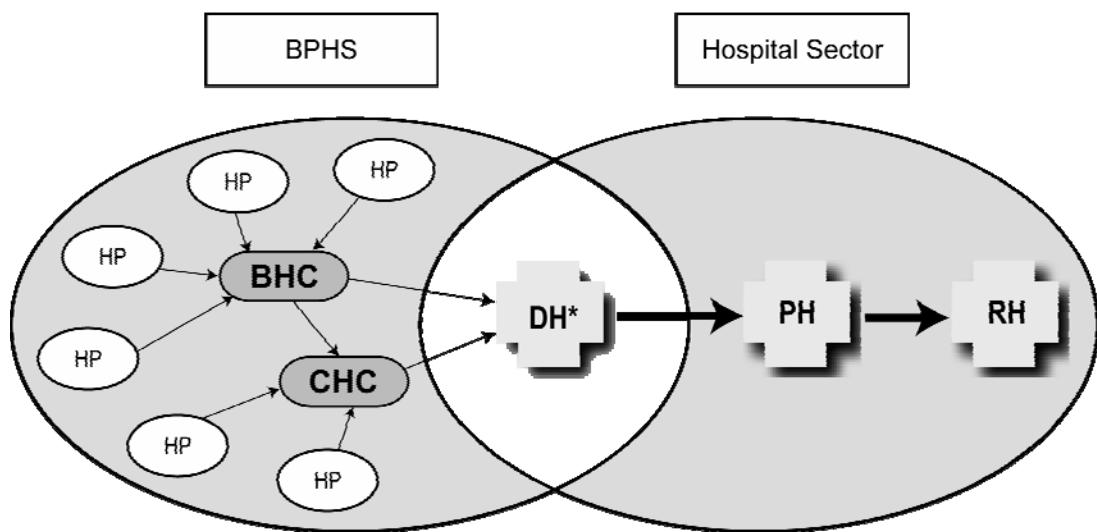
Four core clinical functions will exist in each of the three levels of hospitals: medicine, surgery, pediatrics, and obstetrics and gynecology. Mental health and dental health are predominantly provided as outpatient services at various levels. Mental health services, for instance, are provided as an outpatient service at the district and provincial hospitals, while such services are provided on an inpatient basis at the regional level, if required.

District hospitals (and where there are no district hospitals, provincial hospitals) support the primary health services of the BPHS. District hospitals are typically staffed by junior general medical officers. As compared to district hospitals, provincial hospitals provide more sophisticated services for diagnosing and treating various conditions and support the use of some specialist doctors. Regional hospitals are tertiary hospitals that, in addition to the above, provide more advanced specialized care. Research, as well as training of medical officers, midwives, and nurses, will be practiced at all three levels of hospitals.

### **1.4 The Relationship between the BPHS and the EPHS**

Hospitals provide increasingly sophisticated services in support of referrals from the primary health care system. The health post, basic health center, and comprehensive health center offer basic curative and preventive services. The level of sophistication increases moving from district to urban hospitals. The district hospital (or provincial hospital, where there is no district hospital) is the link between the BPHS and the hospital referral system, as illustrated in Figure 1.

**Figure 1. Link between the BPHS and Hospital Sector**



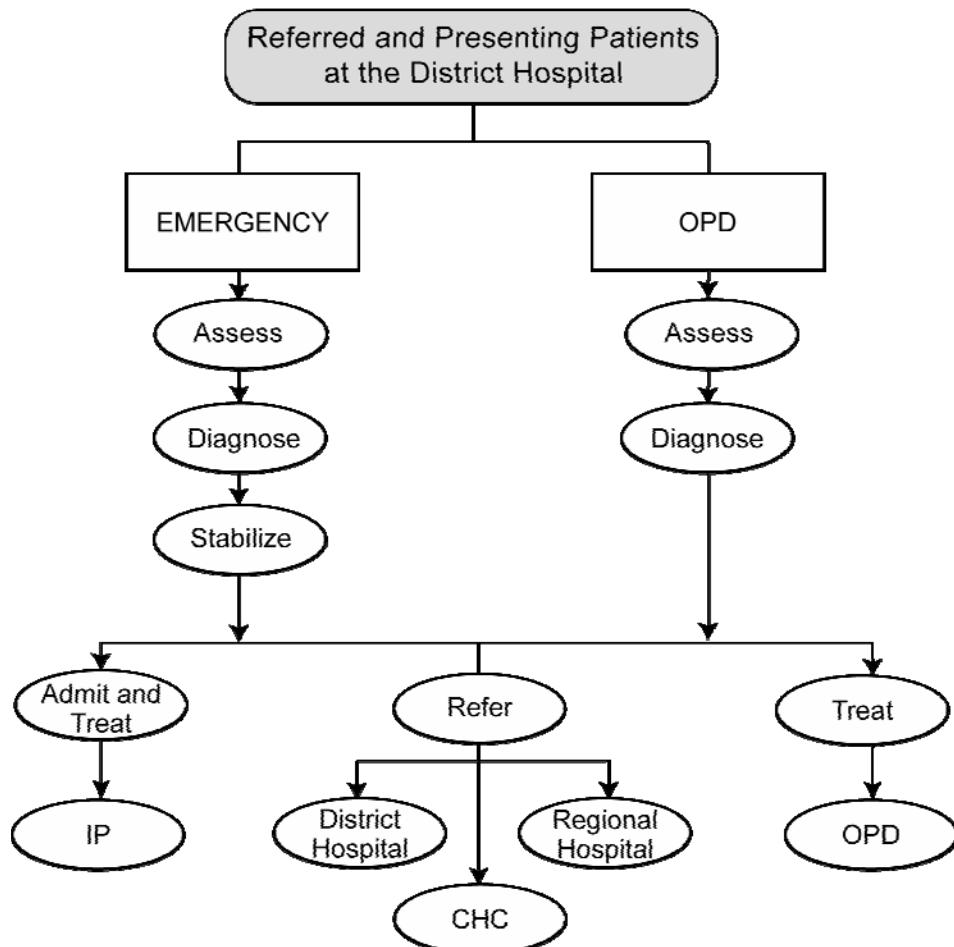
\* Where there is no district hospital, the provincial hospital provides services to fill this role.

**BPHS** HP = health post  
BHC = basic health center  
CHC = comprehensive health center

**Hospitals** DH = district hospital  
PH = provincial hospital  
RH = regional hospital

The district hospital is the entry point to the hospital system, as shown in Figure 2. The flow would be similar for the provincial and regional hospitals in accepting patients from the lower-level health facilities and hospitals.

**Figure 2. Entry and Flow of Patients at the District Hospital**



## 1.5 The Role of Hospitals in the Health System

Each level of hospital plays a role in providing a continuum of care from the health post to regional and specialty hospitals. This section defines the purpose and role of each level of hospital and summarizes its services.

### District Hospitals

#### Purpose:

The district hospital (DH) brings professional inpatient and emergency services closer to the population in rural areas. Its role in supplementing the health centers aims at reducing the maternal mortality ratio (MMR), infant mortality rate (IMR), and under-5 mortality (U5M). The DH is mainly an emergency hospital where patients are assessed, diagnosed, stabilized, and either treated or referred back to a lower level or referred to a higher level of health facility. Provision of 24-hour comprehensive emergency obstetric care service is a crucial aspect of a DH. As illustrated in Figure 2, there are two entry points to the DH: the outpatient department (OPD) and emergency department.

**Role:**

- The DH is an important part of the referral system. It is the first point of entry for referrals from the comprehensive health center and for self-referrals in case of an emergency.
- The DH is part of the BPHS. It functions as a triage station where patients are assessed, diagnosed, stabilized and treated, and referred, if needed, to a higher hospital level.
- The DH OPD functions as the entry point to the health system where no BHCs or CHCs are available.
- The health system promotes a two-way referral system in which patients who no longer need DH care are referred back to the health centers.
- The DH is not to be the primary place for emergency surgery.
- The DH plays a role in building the capacity of health workers, providing health education, collecting health management information system (HMIS) data, and participating actively in improving the health of the population. This role includes health education, immunization campaigns, information sharing with partners, responsiveness to the changing needs of the community, and appropriate use of materials and equipment.

**Summary of services:**

A DH should provide the following clinical, diagnostic, and administrative services. See Section 2 for a more detailed listing of conditions diagnosed and treated at the district hospital.

**Table 1. Summary of Services at a District Hospital**

<b>Clinical and diagnostic services</b>	<ul style="list-style-type: none"> <li>• Inpatient services (24-hour) <ul style="list-style-type: none"> <li>- general surgical services (operating theater, anesthesia, recovery room services, and sterilization services)</li> <li>- general obstetric and gynecology services</li> <li>- general pediatric services (including therapeutic feeding services)</li> <li>- general medical services</li> </ul> </li> <li>• Emergency department open and staffed 24 hours</li> <li>• Outpatient services (including vaccinations, mental health, and dental services)</li> <li>• Hospital pharmacy</li> <li>• Physiotherapy services</li> <li>• Basic laboratory and blood transfusion (no blood bank) services</li> <li>• Basic x-ray and ultrasound services</li> </ul>
<b>Administrative and support services</b>	<ul style="list-style-type: none"> <li>• Management and administration team <ul style="list-style-type: none"> <li>- finance and accounting</li> <li>- procurement and medical stores</li> <li>- human resources</li> <li>- supervision of all support services and buildings</li> <li>- security</li> </ul> </li> <li>• Central sterile supply</li> <li>• Medical records and HMIS statistics</li> <li>• Kitchen</li> <li>• Laundry and tailor</li> </ul>

	<ul style="list-style-type: none"> <li>• Waste management and cleaning services</li> <li>• Maintenance services and workshop</li> <li>• Vehicles: transportation for emergencies and transferring patients</li> </ul>
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## Provincial Hospitals

### Purpose:

The provincial hospital (PH) is the referral hospital for the provincial health system. In essence, the PH is not very different from a district hospital: it offers the same clinical services and possibly a few additional specialities (see Section 4 for staffing). In most cases, the PH is the last referral point for patients referred from the districts. In some instances, the PH can refer patients to higher levels of care—to the regional hospital or to a specialty hospital in Kabul. The PH brings professional inpatient and emergency services closer to the population in rural areas. In their supplementary role to the basic and comprehensive health centres and the district hospital, PH aim to reduce the maternal mortality ratio, infant mortality rate, under-five mortality rate, and other diseases and conditions responsible for the high mortality and morbidity in Afghanistan.

### Role:

- The PH is an important part of the referral system: it is the first point of entry for referrals from the district hospital or comprehensive health center, and for self-referrals for emergencies.
- The PH is supplementary to the BPHS and functions as a triage station where patients are assessed, diagnosed, stabilized, and treated, or referred to a regional hospital.
- The health system promotes a two-way referral system in which patients who no longer need PH care are referred back to the health centers (similar to the referral patterns shown in Figure 2).
- The PH outpatient department functions as the entry point to the health system when no BHCs or CHCs are available.
- Because a PH is primarily an emergency hospital, it does not perform complicated elective surgery (see Section 2).
- The PH's role includes training health professionals, collecting HMIS health information, and actively participating in improving the health of the population through community outreach, health education, immunization campaigns, information sharing with partners, responsiveness to the changing needs of its community and province, and appropriate and efficient use of staff, buildings, equipment, and materials.

### Summary of services:

A PH should offer the clinical, diagnostic, and administrative services described in Table 2. (See Section 2 for a more detailed listing of conditions diagnosed and treated at the PH.)

**Table 2. Summary of Services at a Provincial Hospital**

<b>Clinical and diagnostic services</b>	<ul style="list-style-type: none"> <li>• Inpatient services <ul style="list-style-type: none"> <li>– general surgical services (operating theater, anesthesia, recovery room services, and sterilization services)</li> <li>– general obstetric and gynecology services</li> <li>– general pediatric services (including therapeutic feeding)</li> <li>– general medical services</li> </ul> </li> <li>• Emergency department open and staffed 24 hours</li> <li>• Outpatient services (including vaccinations, basic ear-nose-throat, mental health, eye care, and dental services)</li> <li>• Hospital pharmacy</li> <li>• Physiotherapy services</li> <li>• Basic laboratory, blood transfusion services, and blood bank</li> <li>• Basic x-ray and ultrasound services</li> </ul>
<b>Administrative and support services</b>	<ul style="list-style-type: none"> <li>• Management and administration team <ul style="list-style-type: none"> <li>– finance and accounting</li> <li>– procurement and medical stores</li> <li>– human resources</li> <li>– supervision of all support services and buildings</li> <li>– security</li> </ul> </li> <li>• Central sterile supply</li> <li>• Medical records and HMIS statistics</li> <li>• Kitchen</li> <li>• Laundry and tailor</li> <li>• Waste management and cleaning services</li> <li>• Maintenance services and workshop</li> <li>• Vehicles: transportation for emergencies and transferring patients</li> <li>• Mortuary</li> </ul>

### Regional hospitals

#### **Purpose:**

The regional hospital (RH) is primarily a referral hospital with a number of specialities for assessing, diagnosing, stabilizing and treating, or referring back to a lower-level hospital. The RH provides professional inpatient and emergency services at a higher level than is available at district or provincial hospitals, yet the overall objective remains reduction of the high maternal mortality ratio, infant mortality rate, and under-five mortality rate, and of other diseases and conditions responsible for Afghanistan's high mortality and morbidity.

#### **Role:**

- The RH is an important part of the referral system, having many of the specialists that are not present at other levels of the hospital system.
- The RH has a significant role to play in training health professionals, collecting HMIS and medical research information, and conducting medical and health system research.

### Summary of services:

A RH should have the clinical, diagnostic, and administrative services outlined in Table 3. (See Section 4 for a more detailed listing of specialist staff and Section 2 for the range of conditions diagnosed and treated at the provincial hospital.)

**Table 3. Summary of Services at a Regional Hospital**

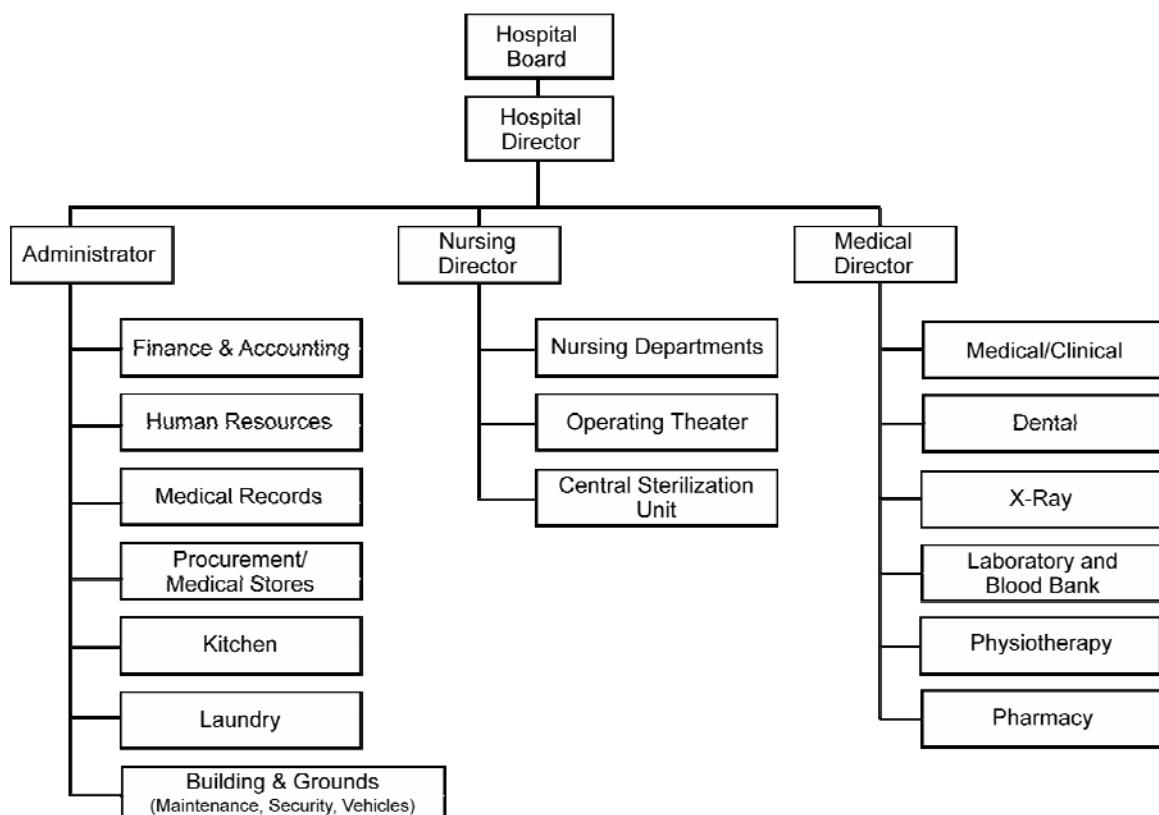
<b>Clinical and diagnostic services</b>	<ul style="list-style-type: none"> <li>• Inpatient services <ul style="list-style-type: none"> <li>- general and specialized surgical services (operating theater, anesthesia, recovery room services, and sterilization services)</li> <li>- obstetric and gynecology services</li> <li>- pediatric services (including therapeutic feeding center)</li> <li>- general and specialized medical services</li> <li>- ophthalmology and ENT services</li> <li>- mental health and psychiatric services</li> <li>- dental services</li> <li>- forensic medicine</li> </ul> </li> <li>• Emergency department open and staffed 24 hours</li> <li>• Outpatient services</li> <li>• Hospital pharmacy</li> <li>• Physiotherapy services</li> <li>• Laboratory, blood transfusion services and blood bank</li> <li>• X-ray and ultrasound services</li> <li>• Endoscopy services</li> <li>• CT scan (Kabul only at tertiary hospital level)</li> </ul>
<b>Administrative and support services</b>	<ul style="list-style-type: none"> <li>• Management and administration team <ul style="list-style-type: none"> <li>- finance and accounting</li> <li>- procurement and medical stores</li> <li>- human resources</li> <li>- supervision of all support services and buildings</li> <li>- security</li> </ul> </li> <li>• Central sterile supply</li> <li>• Medical records and HMIS statistics</li> <li>• Kitchen</li> <li>• Laundry and tailor</li> <li>• Waste management and cleaning services</li> <li>• Maintenance services and workshop</li> <li>• Vehicles: transportation for emergencies and transferring patients</li> <li>• Mortuary</li> </ul>

### 1.6 Organization of Hospitals

The way in which the general administration of hospitals in Afghanistan should be organized is illustrated in Figure 3, “Organizational Structure of Hospitals.” Figure 3 shows the staff positions, the relationship among the various hospital departments, and the necessary reporting relationships. As noted in the following section, hospital boards will be introduced to make sure that hospitals are overseen by community members who can identify the true needs of the community and ensure the accountability of the hospital administration.

While the Hospital Director is responsible for the hospital's operation and the day-to-day management of the facility and its services, the Director is also expected to develop a management team of key staff. Team members should meet on a weekly basis to discuss and resolve the hospital's major plans, problems, and budgets. By promoting participatory management and teamwork, the Hospital Director will be able to improve the quality of care, performance, operation, and management of the hospital.

**Figure 3. Organizational Structure of Hospitals**



## 1.7 The Future of Hospitals in Afghanistan

The top three priorities of the hospital sector in the coming years are to increase access to hospital services, improve the quality of patient care, and to increase the efficiency of hospital operation. Bringing about these improvements will require several initiatives. The following three initiatives can be expected to be operational within the next five to 10 years.

First, **standards must be established.** Hospitals require standards for both clinical and administrative operations in order to improve clinical and managerial performance and to attain an acceptable level of patient care and hospital operation. Standards establish what is expected of hospitals and their staff at all levels of operation; standards permit the monitoring of operations and the measurement of performance. The national hospital policy (Annex A) outlines the six areas for which basic standards need to be developed. The standards for each of these areas are also presented in Table 4. Specific elements of each standard must be developed and specified in greater detail by the Ministry of Public Health.

Second, to strengthen community involvement and support, **hospital boards must be established.** Community support for hospitals is often poor; communities using a hospital tend to regard it as the “government’s hospital” or the “NGO’s hospital” rather than “their” hospital. A hospital board will provide general direction and guidance for the management and operation of the hospital, as well as serving as a link between the community and hospital. Hospital community boards will be made up of volunteers with diverse skills and experiences who will be responsible for the long-term viability of the hospital and ensure that it meets the real and felt needs of the community. Their responsibilities will include:

- ensuring that high quality services are provided;
- maintaining community and government relations and generating community support for the hospital;
- serving as the policy and strategy-setting body of the hospital;
- supporting the leadership of the hospital;
- providing financial oversight;
- helping develop the hospital’s strategic plan.

Third, as the number of hospitals operated by government, NGOs and private entities increases, **hospital certification or accreditation will be needed** to ensure that all hospitals provide a basic standard of care. Accreditation is the process of assessing health institutions against a commonly accepted set of standards in order to ensure and improve the quality of health services. The goal of accreditation is to ensure that providers, both the hospital as an institution and its physicians and nurses, provide high-quality care to patients. Table 5 lists the elements of quality of care that would be considered in an accreditation process.

**Table 4. Standards for Hospitals**

<b>Responsibilities to the Community</b>	<ul style="list-style-type: none"> <li>• The hospital is responsive to the community's (health) needs.</li> <li>• Hospital services are accessible to the community.</li> <li>• The hospital has a proper disaster preparedness plan to properly respond in the event of natural or manmade disasters.</li> </ul>
<b>Patient Care</b>	<ul style="list-style-type: none"> <li>• Patients are treated with dignity and have a right to be treated in a respectful manner.</li> <li>• Quality of clinical care to the patient is high and appropriate for Afghanistan, including the proper staffing, equipment, and supplies.</li> <li>• Quality of care is monitored and measured by agreed-upon indicators (e.g., wound infections, length of hospital stay, operations per patient, mortality rates, etc.).</li> <li>• Women and children receive the basic package of health services at hospitals, including immunization, outpatient care for conditions such as pneumonia and diarrhea, and appropriate assistance at the time of delivery.</li> <li>• Hospitals are “mother and baby friendly” and encourage “rooming-in” and immediate, exclusive breastfeeding.</li> <li>• Care delivery is monitored by the hospital’s health care team to ensure that care meets the needs of patients and to assist in the improvement of care.</li> <li>• Medical records are maintained for each patient and are kept confidential and secure.</li> </ul>
<b>Leadership and Management</b>	<ul style="list-style-type: none"> <li>• The hospital is effectively and efficiently governed, organized, supervised, and managed to ensure the highest quality of care possible for patients.</li> <li>• To ensure the responsiveness of hospitals to the community, a hospital board of directors or board of management is established at each hospital to govern and oversee operation and management of the hospital.</li> </ul>
<b>Human Resource Management</b>	<ul style="list-style-type: none"> <li>• Staff planning ensures a properly trained hospital staff and the appropriate number of staff.</li> <li>• Staff are appointed through a recruitment, selection, and appointment procedure that is consistent with the MOPH human resources policy.</li> <li>• In performing their duties, staff adhere to high ethical standards and a code of conduct.</li> <li>• A comprehensive program of staff development and in-service training meets individual and hospital needs.</li> <li>• Effective workplace relations are developed through use of teams.</li> </ul>

<b>Management Systems</b>	<ul style="list-style-type: none"> <li>• Financial management policies and procedures are developed and adhered to in order to ensure accountability of the hospital's finances from all sources.</li> <li>• Management information systems meet the hospital's internal and external needs.</li> <li>• Patient care, management of services, education, and research are facilitated by the timely collection and analysis of data.</li> <li>• Information technology enhances the hospital's ability to gather, store, and analyze information and to communicate.</li> <li>• Appropriate logistics and purchasing systems are maintained to ensure clinicians have the proper equipment, supplies, and pharmaceuticals to provide patient care.</li> <li>• Buildings and grounds are maintained to ensure a safe patient care and work environment for patients, staff, and visitors.</li> </ul>
<b>Hospital Environment</b>	<ul style="list-style-type: none"> <li>• Infection is effectively controlled throughout the hospital.</li> <li>• The physical environment of the hospital and its equipment are properly maintained to ensure patient and staff safety.</li> <li>• The hospital is accessible to all patients, including those with physical disabilities.</li> <li>• Buildings, grounds, plant, and equipment are regularly maintained to ensure a safe environment for all persons in the hospital.</li> <li>• Waste from the hospital is handled, contained, and disposed of safely and efficiently.</li> <li>• Occupational health measures are adopted to ensure the safety of staff, especially those dealing with direct patient care.</li> <li>• Clean water of sufficient quantity and quality is available for patients and staff and for proper hospital functioning.</li> <li>• Toilets in the hospital are kept clean for use by patients, staff, and visitors.</li> </ul>

Source: Ministry of Health, Hospital Policy for Afghanistan's Health System, February 2004.

**Table 5. Accreditation: Dimensions of Quality of Care**

<b>Technical aspects of quality</b>	<ul style="list-style-type: none"> <li>• Accuracy of diagnosis</li> <li>• Efficacy of treatment (appropriateness of treatment)</li> <li>• Excellence according to professional standards</li> <li>• Necessity of care</li> <li>• Appropriateness</li> <li>• Continuity of care</li> <li>• Consistency</li> </ul>
<b>Interpersonal aspects of quality</b>	<ul style="list-style-type: none"> <li>• Patient satisfaction <ul style="list-style-type: none"> <li>– Time spent with provider</li> <li>– Attitudes of provider and treatment by staff</li> </ul> </li> <li>• Community satisfaction</li> <li>• Amenities</li> </ul>
<b>Social aspects of quality</b>	<ul style="list-style-type: none"> <li>• Efficiency</li> <li>• Accessibility</li> </ul>

Source: W. Newbrander, MSH, "Report on Accreditation of Providers for the National Health Insurance Fund," Ministry of Health, United Republic of Tanzania, July 1999.

## 2. Services Provided by Different Levels of the Hospital Sector

The services provided by hospitals encompass diagnosis and treatment based upon the diagnosis. The services provided by each level of hospital are identified in Table 6, "Diagnosis and Treatment of Common Conditions, by Hospital Level." To define the services provided at each hospital level, Table 6 categorizes the major physiological conditions treated. Within each category are listed the more specific conditions that may present and the hospital level at which those conditions would be treated.

Particular hospital levels are not suited to treat all conditions, but in an emergency situation, the clinicians' only option may be to treat the patient as best they can. For instance, it would be best to use a defibrillator to deal with a cardiac arrest. Table 6 shows that cardiac arrest is primarily dealt with at the regional hospital level since that is the only level where a defibrillator, electrocardiogram machine, advanced cardiologic drugs, and cardiologist are available. However, if a patient at a district hospital has a cardiac arrest, referral is out of the question. In such a case, even though a defibrillator is not available, the district hospital clinical staff will make every attempt to resuscitate the patient as best it can using available staff, equipment, and drugs. Table 6 notes such circumstances in italics.

**Table 6. Diagnosis and Treatment of Common Conditions, by Type of Hospital**

Diagnosis and Treatment of Common Conditions			
		District Hospital	Provincial Hospital
		Provincial Hospital	Regional Hospital
<b>1. ACUTE TRAUMA &amp; SELECTED EMERGENCIES</b>			
1.1	Anaphylaxis	X	X
1.2	Cardiac arrest (simple ABC resuscitation done at all levels, but defibrillator only available at RH)		X
1.3	Abdominal trauma	X	X
1.4	Bites and rabies	X	X
1.5	Burns	X	X
1.6	Natural disasters	X	X
1.7	Head injury	X	X
1.8	Multiple injury to patient	X	X
1.9	Pneumothorax and hemothorax	X	X
1.10	Poisoning	X	X
1.11	Shock	X	X
1.12	Tracheotomy (done at all levels in cases of emergency)	X	X
1.13.	Fluid and electrolyte balance		X
<b>2. AIDS/HIV AND SEXUALLY TRANSMITTED DISEASES</b>			
AIDS Prevention and Management			
2.1	Universal precaution measures	X	X
2.2	Needle-stick injury	X	X
2.3	Mother-to-child transmission of HIV		X
2.4	HIV screening by rapid test	X	X
2.5	Confirmation of HIV infection (by two different Elisa tests)	X	X
2.6	Stages and diagnosis of AIDS		X
2.7	Information, education, and communication	X	X
2.8	Voluntary counseling and testing		X
Sexually Transmitted Diseases (STDs)			
2.9	Gonorrhea and urethral discharge	X	X
2.10	Genital discharge in the female	X	X
2.11	Dysuria in the female	X	X
2.12	Pelvic inflammatory disease	X	X
2.13	Genital ulcer disease	X	X
2.14	Buboes or swollen inguinal glands	X	X
2.15	Venereal warts (genital)	X	X
<b>3. CARDIOVASCULAR CONDITIONS</b>			
3.1	Congenital heart disease		X
3.2	Deep-vein thrombosis	X	X
3.3	Heart failure		X
3.4	Hypertension	X	X
3.5	Pulmonary edema	X	X
3.6	Ischemic heart disease (symptomatic treatment only; refer to tertiary Kabul level if possible)	X	X
3.7	Rheumatic heart disease	X	X
<b>4. CENTRAL NERVOUS SYSTEM</b>			
4.1	Cerebral palsy		X
4.2	Seizure disorders	X	X

<b>5. DENTAL AND ORAL CONDITIONS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
5.1	Abscess, periapical		X	X	X
5.2	Acute necrotizing ulcerative gingivitis		X	X	X
5.3	Alveolitis (dry socket)			X	X
5.4	Cellulitis (oral)		X	X	X
5.5	Gingivitis		X	X	X
5.6	Neoplasms, salivary gland, and hereditary/developmental disorders (refer to Kabul hospital)		—	—	—
5.7	Pericoronitis		X	X	X
5.8	Periodontitis		X	X	X
5.9	Pulpitis		X	X	X
5.10	Temporomandibular joint disorders (refer to Kabul if necessary)				X
5.11	Trauma (jaw trauma: refer to Regional or Kabul tertiary hospital level if necessary)			X	X

<b>6. EARS, NOSE, THROAT CONDITIONS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
6.1	Acute otitis media		X	X	X
6.2	Otitis externa		X	X	X
6.3	Chronic otitis media (CSOM)				X
6.4	Epistaxis		X	X	X
6.5	Foreign bodies in the ears		X	X	X
6.6	Foreign bodies in the nose		X	X	X
6.7	Mastoiditis				X
6.8	Wax on ear			X	X

<b>7. ENDOCRINE SYSTEM</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
7.1	Diabetes mellitus			X	X
7.2	Thyroid diseases (for simple goiter; otherwise refer to Kabul hospital)			X	X

<b>8. EYE CONDITIONS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
8.1	Common eye conditions (for most conditions a generalist may treat at all levels, but for trachoma and cataracts and other complicated conditions, ophthalmologist at RH required)		X	X	X
8.2	Eye injuries (many conditions can be treated at all levels; for those that cannot, refer to ophthalmologist at RH required)		X	X	X

<b>9. FAMILY PLANNING</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
9.1	Hormonal contraceptives		X	X	X
9.2	Intrauterine contraceptive devices (IUCDs)		X	X	X
9.3	Barrier methods		X	X	X
9.4	Surgical contraception		X	X	X
9.5	Periodic abstinence (natural family planning)		X	X	X

<b>10. GASTROINTESTINAL CONDITIONS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
10.1	Amoebiasis		X	X	X
10.2	Diarrheal diseases		X	X	X
10.3	Gastritis		X	X	X
10.4	Peptic ulcer disease		X	X	X
10.5	Upper GI tract bleeding (at all levels patient is stabilized with IVs and antipeptic drugs, but further diagnosis and treatment requires referral for use of endoscope at RH level)				X
10.6	Worms			X	X

<b>11. GYNECOLOGY</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
11.1	Uterus fibromyoma			X	X
11.2	Infertility (only basic treatment offered, advanced tests not available at any of the hospital levels)		X	X	X
11.3	Pelvic masses			X	X
11.4	Menstrual disturbances		X	X	X
11.5	Neoplasms (refer to Kabul hospital)		—	—	—
11.6	Vaginitis (vaginal discharge)		X	X	X
11.7	Pelvic inflammatory disease (PID)		X	X	X
11.8	Abscesses			X	X
11.9	Prolapse and transvaginal operations				X
11.10	Fistulae				X
11.11	Sexual assault			X	X

<b>12. IMMUNIZATION</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
12.1	Vaccination schedule		X	X	X
12.2	Dosage and administration		X	X	X

<b>13. INFECTIOUS (SELECTED) &amp; RELATED CONDITIONS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
13.1	Acute rheumatic fever (ARF)		X	X	X
13.2	Bacterial infections		X	X	X
13.3	Leishmaniasis		X	X	X
13.4	Malaria		X	X	X
13.5	Measles		X	X	X
13.6	Meningitis		X	X	X
13.7	Poliomyelitis		X	X	X
13.8	Tetanus		X	X	X
13.9	Tuberculosis		X	X	X
13.10	Typhoid fever		X	X	X
13.11	Rabies (rather than refer with inherent dangers of transporting publicly, patients treated and isolated with carrier nursing at all hospital levels)		X	X	X
13.12	Viral hemorrhagic fevers		X	X	X

<b>14. MENTAL ILLNESS</b>			<i>(as a psychiatrist is only available at regional hospital level, common psychiatric conditions such as acute psychosis, depression, sleep disorders and suicide attempts will have to be treated at all hospital levels)</i>		
	<b>DH</b>	<b>PH</b>	<b>RH</b>		
14.1	X	X	X		
14.2			X		
14.3			X		
14.4			X		
14.5	X	X	X		
14.6			X		
14.7			X		
14.8	X	X	X		
14.9			X		
14.10	X	X	X		

<b>15. MUSCULOSKELETAL CONDITIONS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
15.1	X	X	X		
15.2			X		
15.3	X	X	X		
15.4			X		
15.5	X	X	X		
15.6			X		

<b>16. NEONATAL CARE &amp; CONDITIONS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
16.1	X	X	X		
16.2	X	X	X		
16.3	X	X	X		
16.4			X		
16.5	X	X	X		
16.6	X	X	X		
16.7	X	X	X		
16.9			X		
16.10	X	X	X		

<b>17. NEOPLASMS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
17.1	—	—	—	—	—
17.2	—	—	—	—	—

<b>18. NUTRITIONAL &amp; HEMATOLOGIC CONDITIONS</b>		
18.1	Anemia	X X X
18.2	Blood transfusion	X X X
18.3	Failure to thrive	X X X
18.4	Growth monitoring and nutrition	X X X
18.5	Malnutrition—severe or moderate, acute/chronic	X X X
18.6	Malnutrition—micronutrient deficiency diseases (Vitamin A, anemia, iodine, Vitamin C) deficiencies	X X X
18.7	Thalassemia (refer to Kabul)	— — —

<b>19. OBSTETRICS</b>			
	DH	PH	RH
<b>Antenatal Care and Complications</b> (at present, many conditions will have to be treated at the hospital level where they present due to lack of or poor transportation for referring patients)			
19.1	Antenatal care	X	X X
19.2	High-risk pregnancy	X	X X
19.3	Anemia in pregnancy	X	X X
19.4	Antepartum hemorrhage (APH)	X	X X
19.5	Cardiac disease in pregnancy		X X
19.6	Diabetes in pregnancy		X X
19.7	Drugs in pregnancy	X	X X
19.8	Malaria in pregnancy	X	X X
19.9	Multiple pregnancy	X	X X
19.10	Pre-eclampsia	X	X X
19.11	Eclampsia	X	X X
19.12	Rhesus (Rh) incompatibility		X X
19.13	Urinary tract infection in pregnancy	X	X X
19.14	Ectopic pregnancy	X	X X
<b>Intrapartum Care and Complications</b>			
19.15	Normal labor and delivery (including assessment of low-birthweight infants)	X	X X
19.16	Complicated labor and delivery (including CS and uterus rupture)	X	X X
<b>Postpartum Care and Complications</b>			
19.17	Postnatal care	X	X X
19.18	Complications of puerperium	X	X X
19.19	Postpartum hemorrhage (PPH)	X	X X
19.20	Puerperal infections	X	X X
19.21	Breast conditions	X	X X
19.22	Deep vein thrombosis (DVT)	X	X X
19.23	Puerperal psychosis (rare condition—it is difficult to refer such patients so basic treatment would have to be done at all levels)	X	X X
19.24	Abortion (due to medical indication: a special committee is necessary)		X
19.25	Incomplete abortion (and complications of abortion)	X	X X
19.26	Destructive operations		X X

<b>20. ORTHOPEDICS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
<b>Orthopedic Trauma Cases</b>					
20.1	Closed fracture and dislocation of all of minor joints and bones		X	X	X
20.2	Supracondylar displaced fractures		X	X	X
20.3	Old condylar and epicondylar fractures (complicated cases)		FA	X	X
20.4	Volkmann's ischemia and compartment syndrome		FA	X	X
20.5	V.I.C.				X
20.6	Soft tissue injuries and crush injuries		X	X	X
20.7	Spinal vertebrae fracture and trauma		FA	X	X
20.8	Pelvic fracture without complication		FA	X	X
20.9	Pelvic fracture with complication		FA	X	X
20.10	Hip joint dislocation		FA	X	X
20.11	Femur neck fracture				X
20.12	Femur fracture				X
20.13	Knee joint dislocation			X	X
20.14	Knee joint inner lesion				X
20.15	Tibia and fibula closed fracture		FA	X	X
20.16	Tibia open fractures				X
20.17	Ankle joint dislocation and fractures				X
20.18	Ankle bones open fractures				X
20.19	Tarsal bones fractures and dislocations			X	X
20.20	Tarsometatarsal joint dislocation			X	X
20.21	Skin graft and tendon injuries			X	X
<b>Orthopedic Procedures</b>					
20.22	Acute osteomyelitis		FA	X	X
20.23	Chronic osteomyelitis				X
20.24	Pyogenic septic arthritis			X	X
20.25	Tuberculosis of bones and joints			X	X
20.26	Gout arthritis			X	X
20.27	Rheumatoid arthritis			X	X
20.28	Congenital bone diseases			X	X
20.29	Osteogenesis imperfecta				X
20.30	Bone tumors (benign and malignant)				X
20.31	Pott's disease				X
20.32	CDH, DDH				X
20.33	Bone cyst			X	X
20.34	Carpal tunnel lesion				X
20.35	Hand flexors and extensors injuries			X	X
20.36	Amputation (open amputation)			X	X
20.37	Scoliosis				X
20.38	Menopausal osteoporosis			X	X
20.39	Genu valgum and Genu varum				X

Note: FA = First Aid

<b>21. RESPIRATORY SYSTEM</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
<b>Acute Upper Respiratory Tract Infections</b>					
21.1	Common cold (Acute Rhinitis, Coryza)		X	X	X
21.2	Pharyngotonsillitis, tonsillitis		X	X	X
21.3	Sore throat		X	X	X
21.4	Sinusitis		X	X	X
<b>Lower Respiratory Tract Conditions</b>					
21.5	Approach to cough or difficult breathing in children		X	X	X
22.6	Pneumonia—Infant age less than 2 months		X	X	X
21.6	Pneumonia—Child age 2 months–5 years		X	X	X
22.7	Pneumonia—Adults		X	X	X
21.7	Acute epiglottitis		X	X	X
22.8	Croup		X	X	X
21.8	Acute bronchitis—Bronchitis (Tracheobronchitis)		X	X	X
22.9	Wheezing & Asthma—Child under 5 years		X	X	X
21.9	Bronchial asthma—Adults		X	X	X
21.10	Chronic obstructive pulmonary disease		X	X	X

<b>22. SIGNS AND SYMPTOMS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
22.1	Coma		X	X	X
22.2	Fever		X	X	X
22.3	Fever of unknown origin		X	X	X
22.4	Hepatosplenomegaly		X	X	X
22.5	Jaundice		X	X	X
22.6	Lymphadenopathy		X	X	

<b>23. SKIN DISEASES</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
23.1	Atopic eczema		X	X	X
23.2	Impetigo		X	X	X
23.3	Ringworm (Tinea)		X	X	X
23.4	Scabies		X	X	X
23.5	Herpes zoster		X	X	X

<b>24. SURGICAL CARE AND CONDITIONS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
24.1	Acute abdomen and traumatic abdomen. (Stabilize and refer. If a competent surgeon and anesthetic service and appropriate equipment are available, then laparotomy can be performed at DH.)			X	X
24.2	Thyroidectomy (Refer to center)		—	—	—
24.3	Mastectomy (Refer to center)		—	—	—
24.4	Chest conditions (Chest tube at all levels)				X
24.5	Hiatus hernia (Refer to center)		—	—	—
24.6	Esophageal operations (Refer to center)		—	—	—
24.7	Biliary tract and liver operations				X
24.8	Pancreas operations (Refer to center)		—	—	—
24.9	Colon operations				X
24.10	Proctological operations (perianal abscess at DH)			X	X
24.11	Hernioraphy (simple at DH)			X	X
24.12	Rectal prolapse, Crohn's disease, all malignancies (Refer complicated cases to center)				X
24.13	Superficial abscesses, cysts, and tumors (Refer to center if suspected malignancy)			X	X
24.14	Cavity abscesses				X
24.15	Cystostomy			X	X
24.16	Kidney stones and nephrectomy				X
24.17	Prostatectomy				X
24.18	Pyeloplasty (Refer to center)		—	—	—
24.19	Circumcision			X	X
24.20	Burns (pending distribution [%] and dept [°] )			X	X
24.21	Vascular and neurosurgery (Refer to center—life-saving procedures can be done by competent surgeons at PH and RH level)		—	—	—

<b>25. URINARY TRACT AND RENAL CONDITIONS</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
25.1	Urinary tract infections		X	X	X
25.2	Renal disease signs and symptoms		X	X	X
25.3	Acute glomerulonephritis		X	X	X
25.4	Acute renal failure		X	X	X
25.5	Chronic renal failure (only treatable at RH level if services are upgraded there)				X
25.6	Hypokalemia			X	X
25.7	Nephrotic syndrome			X	X

### 3. Diagnostic Services Provided by Different Levels of the Hospital Sector

Laboratory and imaging departments support clinicians in their diagnoses of patient conditions. Radiology, laboratory, and other diagnostic services that should be provided by each type of hospital in the health system are identified in Table 7, “Diagnostic Services, by Type of Hospital.”

**Table 7. Diagnostic Services, by Type of Hospital**

Diagnostic Tests Performed		District Hospital	Provincial Hospital	Regional Hospital
<b>1. LABORATORY SERVICES</b>				
	<b>HEMATOLOGY</b>			
1.1	Hemoglobin	X	X	X
1.2	Hematocrite	X	X	X
1.3	Bleeding time and coagulation time test	X	X	X
1.4	Prothrombine time		X	X
1.5	White blood count (WBC and differential) manual	X	X	X
1.6	WBC automated			X
1.7	Erythrocite sedimentation rate (ESR)	X	X	X
1.8	Plateletes and reticulocyte		X	X
1.9	Malaria parasite smear (MPS)	X	X	X
1.10	Histopathology (on Kabul level only in one institute)	-	-	-
	<b>BIOCHEMISTRY</b>			
1.11	Blood sugar, glycometer	X	X	X
1.12	Blood sugar advanced automated			X
1.13	Electrolytes (Na+, K+, Ca++)			X
1.14	Liver function tests (LFT) and liver enzymatic test		X	X
1.15	Kidney function tests			X
	<b>SEROLOGY</b>			
1.16	Creative protein	X	X	
1.17	Toxoplasmosis (Kabul tertiary hospital level only)			X
1.18	Anti-Streptolysine-O (ASLO)	X	X	
1.19	Rubeola AG			X
1.20	Typhoid AG (Widal)		X	X
1.21	CD 4 cell count			X
1.22	Brucellosis		X	X
	<b>CULTURE</b>			
1.22	Culture and sensitivity testing			X
	<b>GRAM STAIN</b>			
1.23	Body fluids	X	X	X

		DH	PH	RH
<b>URINE TEST</b>				
1.24	Macroscopic	X	X	X
1.25	Chemical	X	X	X
1.26	Microscopic	X	X	X
1.27	Pregnancy test	X	X	X
<b>STOOL TESTS</b>				
1.28	Macroscopic	X	X	X
1.29	Microscopic	X	X	X
<b>SPUTUM TESTS</b>				
1.30	Acid fast bacil (AFB) Ziehl-Nielson	X	X	X
<b>BLOOD TRANSFUSION AND BLOOD BANK SERVICES</b>				
1.31	Blood grouping (Beth Vincent/Simonin)	X	X	X
1.32	Cross matching	X	X	X
1.33	HIV antibody (I and II) testing	X	X	X
1.34	Hepatitis B surface antigen	X	X	X
1.35	Hepatitis C virus	X	X	X
1.36	VDRL testing (syphylis)	X	X	X

2. IMAGING SERVICES		DH	PH	RH
<b>X-RAY</b>				
2.1	Chest	X	X	X
2.2	Abdomen	X	X	X
2.3	Skeletal	X	X	X
2.4	IVP (KUB)			X
2.5	Hystero salpyngography			X
2.6	Barium enema and barium meal			X
<b>ULTRASOUND</b>				
2.7	Ultrasound (simple portable at DH/PH, doppler at RH)	X	X	X
<b>3. ELECTROCARDIOGRAPHY (ECG)</b>				
<b>4. ELECTROENCEPHALOGRAPHY (EEG)</b>				
<b>5. ELECTROMYOGRAPHY (only in Kabul)</b>				
<b>6. ENDOSCOPY</b>				

## **4. Staffing of Hospitals by Type of Hospital**

A hospital's most critical resources are its human resources. Because human resources for health are scarce in Afghanistan, the critical skills needed must be identified, based on the conditions that a hospital is expected to treat. However, while identifying the skills the staff for each type of hospital must possess, the Hospital Management Task Force found it impossible to specify the number of staff needed because (1) within each type of hospital the number of staff will vary according to the number of beds and services provided, and (2) a large difference exists between the number of staff required to operate a hospital and the number of staff that would be ideal. To address this quandary, Table 8, "Staffing of District, Provincial, and Regional Hospitals," provides staffing figures within the following guidelines:

1. Since for each type of hospital the number of beds may vary, the midpoint in the range of number of beds was chosen to determine staffing. For instance, district hospitals may have from 25 to 75 beds. The staffing for district hospitals in Table 8 therefore reflects staffing for a 50-bed hospital—the midpoint. While the range in the number of beds is specified for each level of hospital, the allocation of those beds to various clinical services is not specified (e.g., the number of surgical beds, the number of pediatric beds, etc.). Instead, the hospital director is expected to allocate beds to clinical services according to the needs of the community and situation. For instance, in the event of an earthquake, many hospital beds should be shifted to serve as surgical beds for the duration of the emergency.
2. Two staffing levels are given for each type of hospital—"minimum staffing" and "advised staffing." Minimum staffing reflects the minimum number of staff required for a hospital of that type, size, and number of beds to operate in a responsible manner. The number given as minimum staff may not be the desired or ideal number, but it is the number of staff required for the hospital truly to function as expected. The second staffing figure reflects the "best case" or ideal number of staff. Providing the necessary training institutions, the proper training programs, and an intake of qualified candidates adequate to reach such staffing levels will require a great deal of effort. Thus the number in the "advised staff" column for each type of hospital may be considered the number of staff Afghanistan aspires to in the medium term—five to 10 years. (See Annex B for the assumptions underlying the advised staffing patterns.)

**Table 8. Staffing of District, Provincial, and Regional Hospitals****Minimum and advised staffing levels for hospital with midpoint number of beds in each hospital category**

Position	District Hospital (25–75 beds)		Provincial Hospital (75–250 beds)		Regional Hospital (300–450 beds)	
	Staffing for 50 Beds		Staffing for 150 beds		Staffing for 350 Beds	
	Minimum Staffing	Advised Staffing	Minimum Staffing	Advised Staffing	Minimum Staffing	Advised Staffing
<b>1. MANAGEMENT</b>						
Hospital Director	1	1	1	1	1	1
Medical Director (duties performed by the hospital director at district and provincial hospitals)	—	—	—	1	1	1
Nursing Director/Chief Nurse	1	1	1	1	1	1
Administrator	1	1	1	1	1	1
Subtotal	3	3	3	4	4	4
<b>2. PHYSICIANS</b>						
Surgeons (For regional hospital includes all other specialty surgeons)	2	2	2	5	4	8
Ophthalmologist	—	—	—	—	1	3
ENT	—	—	—	—	1	3
Anesthesiologist doctor (includes reanimation)	—	1	1	2	2	4
Obstetrician and Gynecologist	1	2	2	4	4	6
Pediatrician	1	1	2	2	4	4
Medical specialists (internal medicine, psychiatry, dermatology, and cardiology)	—	1	2	3	4	5
General practitioners (nonspecialized— <i>malaige</i> )	3	3	7	13	14	28
Radiologist (medical imaging including X-ray and ultrasound)	—	—	—	1	1	2
Dentist	—	—	1	1	1	3
Subtotal	7	10	17	31	36	66
<b>3. NURSES/MIDWIVES</b>						
Operating theater and sterilization	2	3	5	6	10	12
Midwives	3	4	8	9	12	15
Ward nurses	8	8	12	24	28	58
Anesthetic nurses	2	2	2	3	4	5
ER (emergency room) and OPD (outpatient department) nurses	2	2	4	7	8	12
Subtotal	17	19	31	49	62	102
<b>4. TECHNICAL STAFF</b>						
Psychologist	—	1	—	2	1	4
Physiotherapist	1	1	1	4	2	6
Pharmacist	1	2	2	2	2	3
X-Ray technician	1	2	2	2	2	4
Laboratory technician	2	2	4	3	4	5
Blood-bank technician	—	2	—	2	—	3
Dental technician	1	1	1	2	3	4
Vaccinator	2	2	2	2	2	2
Nutritionist/Cook	—	1	—	2	—	3
Technical assistants (x-ray, lab, pharmacy, physiotherapy)	—	—	2	3	4	5
Subtotal	8	14	14	24	20	39
<b>5. SUPPORT STAFF</b>						
Administration (procurement, accounting, human resources, medical records, clerks)	2	2	3	4	6	8
Storekeeper	—	1	1	2	2	3
Maintenance	1	2	2	4	4	6
Cleaners, waste management, and grounds (gardeners)	5	8	16	20	20	34
Laundry	2	2	2	4	4	8
Cook	2	2	4	4	4	5
Drivers	1	1	2	2	3	4
Guards (and porters)	4	5	5	10	8	15
Tailor	—	—	—	2	—	4
Mullah	—	—	—	1	—	1
Subtotal	17	23	35	53	51	88
<b>TOTAL STAFF</b>						
Administration	3	3	3	4	4	4
Physicians	7	10	17	31	36	66
Nursing/Midwives	17	19	31	49	62	102
Technical	8	14	14	24	20	39
Support	17	23	35	53	51	88
<b>TOTAL</b>	<b>52</b>	<b>69</b>	<b>100</b>	<b>161</b>	<b>173</b>	<b>299</b>

## 5. Equipment for Hospitals by Type of Hospital

If doctors and nurses lack the equipment necessary to provide patient care, their knowledge and skills are wasted. If quality of care is to improve, the basic equipment necessary for each level of hospital—district, provincial, and regional—must be clearly identified. Table 9, “Equipment and Supplies List, by Type of Hospital,” lists the equipment and supplies needed by each level of hospital. When specialized equipment is required, such as ultrasound machines, maintenance and operational training plans should be included.

Great care was taken in selecting appropriate technology equipment for all levels of hospitals. Choices have been informed by (1) grassroots-level experience in Afghanistan, (2) the necessity to offer appropriate technology to help lower maternal, neonatal, infant, and child mortality, (3) cost-effectiveness considerations, and (4) recurrent cost considerations.

For instance, appropriate technology neonatal incubators, such as the Van Hemel Neonatal Incubator,<sup>1</sup> have been added at all three hospital levels. However, at the DH level (and quite frequently, at the PH level as well), such an incubator can be used for only short periods of time due to the absence of 24-hour electricity. Caring for a premature neonate at delivery or following a caesarean section may require other methods, such as kangaroo care.<sup>2</sup>

Ultrasonography was considered important at all levels, although the exact type of ultrasound machine would differ at each hospital level: portable ultrasounds for DH and PH levels and a larger machine, perhaps with echo Doppler functions, for the RH level. Oxygen concentrators were deemed indispensable for all three levels of hospitals. However, ventilators and anaesthetic machines, for use during operations, will be available only at the RH level: at the DH and PH levels, local, spinal, and ketamine anesthesia will be practiced.

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<sup>1</sup> The Van Hemel Neonatal Incubator costs about US\$385 and is easy to maintain.

<http://www.clinicalresearch.nl/incubator/INFO.HTM> (accessed 9 Sept. 04).

<sup>2</sup> <http://www.prematurity.org/baby/kangaroo.html> (accessed 9 Sept. 04).

**Table 9. Equipment and Supplies List, by Type of Hospital**

		Equipment and Supplies		
		District Hospital	Provincial Hospital	Regional Hospital
<b>1. NONMEDICAL EQUIPMENT</b>				
<b>1.1 Administration</b>				
Office furniture		X	X	X
Office equipment		X	X	X
Computer		X	X	X
Stationary		X	X	X
<b>1.2 Communications</b>				
Radios		X	X	X
Telephone (type depends on level)		X	X	X
<b>1.3 Medical maintenance and power</b>				
Generator (including backup for OT, lab/blood bank, and maternity)		X	X	X
Solar		X	X	X
Emergency lights (back-up lighting in key areas)		X	X	X
Voltage stabilizer for all electronic equipment		X	X	X
Tools and spare parts		X	X	X
Fuel and oil		X	X	X
<b>1.4 Water Supply (24/7)</b>				
Water source for safe drinking water at 100 liters per patient per day		X	X	X
Water pump		X	X	X
Storage reservoir, holding tank		X	X	X
Water purification chemicals/filters		X	X	X
Utility sinks with taps		X	X	X
Hand washing sinks with taps		X	X	X
Surgical scrub sinks in operating theater		X	X	X
<b>1.5 Waste Disposal</b>				
Incinerator/burial pit		X	X	X
Septic tanks		X	X	X
Drainage systems		X	X	X
Sanitation facilities for patients and families		X	X	X
Sharps containers (in all locations where sharps are used)		X	X	X
Rubbish bins (in all rooms)		X	X	X
<b>1.6 Safety and Security</b>				
Fire extinguishers		X	X	X
Water hoses and buckets		X	X	X
Spotlights		X	X	X
<b>1.7 Vehicles</b>				
Vehicle, 4-wheel drive		1	1	2
Ambulance, 4-wheel drive		1	2	4
Fuel and oil		X	X	X

<b>1.8 Medical stores</b>	<b>DH</b>	<b>PH</b>	<b>RH</b>
Refrigerators	X	X	X
Cool boxes	X	X	
Vaccine carriers	X	X	
Shelves	X	X	X
Padlocks	X	X	X

<b>1.9 Kitchen</b>			
Ovens	X	X	X
Cooking stove	X	X	X
Cooking pots and utensils	X	X	X
Dishes, cups, cutlery	X	X	X
Dishwashing machine			X
Refrigerators	X	X	X
Shelves	X	X	X

<b>1.10 Laundry</b>	<b>DH</b>	<b>PH</b>	<b>RH</b>
Washing equipment	X	X	X
Washing machine		X	X
Basins	X	X	X
Irons	X	X	X
Water heater (electrical/diesel/wood)	X	X	X
Wash detergent/powder	X	X	X
Sewing/repair kits	X	X	X

<b>1.11 Housekeeping</b>	<b>DH</b>	<b>PH</b>	<b>RH</b>
Mops	X	X	X
Brushes	X	X	X
Brooms	X	X	X
Soap and disinfectant	X	X	X
Buckets	X	X	X

<b>1.12 Mortuary</b>	<b>DH</b>	<b>PH</b>	<b>RH</b>
Mortuary fridge		X	X

<b>2. MEDICAL EQUIPMENT</b>			
<b>2.1 Basic Equipment Sets for Medical and Nursing Examinations</b>	<b>DH</b>	<b>PH</b>	<b>RH</b>
Sphygmomanometer	X	X	X
Stethoscope	X	X	X
Vision chart	X	X	X
Thermometer	X	X	X
Dressing (Lister) scissors	X	X	X
Torch/flashlight	X	X	X
Adult scale	X	X	X
Pediatric and infant scales	X	X	X
Height measuring scale (and height board for infants and young children)	X	X	X
Fetal stethoscope Pinard (specifically for OB/GYN)	X	X	X
Ophthalmoscope and otoscope set (specifically for ER)	X	X	X
Reflex hammer (specifically for ER)	X	X	X
Tourniquet	X	X	X
Hand washing facilities (container or running water)	X	X	X
Sharps container (in all rooms)	X	X	X
Wall clock	X	X	X

<b>2.2 Emergency equipment</b>	<b>DH</b>	<b>PH</b>	<b>RH</b>
Basic examination set (see 2.1) plus ophthalmoscope and otoscope set and reflex hammer	X	X	X
Defibrillator			X
Electrocardiography (ECG)		X	X
Examination lamp	X	X	X
Patient separators/dividers	X	X	X
Suction machine (foot/pedal operated)	X	X	X
Fetal stethoscope (Pinard)	X	X	X
Oxygen (concentrator)	X	X	X
Oxygen cylinder (various sizes)	X	X	X
Ambu bag, masks, guedel (oropharyngeal airway, adult and child)	X	X	X
Drip (IV) stands	X	X	X
Kramer splints, different sizes	X	X	X
Suture set	X	X	X
Wound dressing set	X	X	X
Bowls and bassins	X	X	X
Examination trolleys, stretchers, and wheelchairs	X	X	X
Dressings trolley	X	X	X
Bed pan	X	X	X

<b>2.3 Operating Theater/Room</b>	<b>DH</b>	<b>PH</b>	<b>RH</b>
Operating table with accessories (lithotomy poles—stirrups & arm rests)	2	2	4
Instrument sets for each operating table, consisting of			
- wound set	5	10	15
- minor set	1	2	4
- laparotomy set	2	4	6
- caesarian section set/hysterectomy set	2	4	6
- gynecology set	1	2	4
- obstructed labor set	1	1	1
- episiotomy set	1	2	3
- suture set	5	7	10
- amputation set	1	1	2
- arm and leg pneumatic tourniquet			X
- diathermy set			X X
Suction machine (foot/pedal operated) one per OR table	X	X	X
Bucket for decontamination, one for each table	X	X	X
Heating and cooling equipment	X	X	X

<b>2.4 Anesthesia</b>			
Basic examination equipment (see 2.1)	X	X	X
Oxygen (concentrator)—if oxygen, then oxygen saturation monitor advisable	X	X	X
Ventilator machine		X	X
Anesthetic machine		X	X
Laryngoscope set (handle and different size blades, spare bulbs)	X	X	X
Magill forceps	X	X	X
Nontoothed artery forceps	X	X	X
Endotracheal introducer (malleable)	X	X	X
Ambu bag, masks (0–5), guedel (oropharyngeal airway), adult and child	X	X	X
Suction machine (foot operated)	X	X	X
Refrigerator, lockable	X	X	X
Pedal waste bin	X	X	X

2.5 Sterilization equipment	DH	PH	RH
Autoclave (approximately 60–70 L per OT/OR table), electric or gas heated team/pressure autoclaves	X	X	X
Each autoclave (high pressure steam sterilizer) with:			
- autoclave carts	X	X	X
- metal instruments trays (rigid containers/perforated trays or pans)	X	X	X
- metal wire baskets	X	X	X
- cloth/linen for surgical wraps (woven textiles)	X	X	X
- dry steriliser Poupinel (electric)		X	X
- metal instrument containers with lid for dry sterilizer		X	X
- sterilization drums and boxes	X	X	X
Indicators for both steam and dry heat (consumables):			
- indicator tape	X	X	X
- chemical indicators (time/temperature/pressure and time/temperature)	X	X	X
- biological indicators	X	X	X
High-level disinfection:			
- boilers for boiling items (electric) or pots with lids	X	X	X
- electric/gas/kerosene stoves	X	X	X
- plastic containers with lids for chemical HLD and rinsing (endoscopes)			X
- tables for instrument preparation and for wrapping (dedicated)	X	X	X
- shelves/cabinets for with doors for storage	X	X	X

2.6 Obstetrics and Gynecology	DH	PH	RH
OB/GYN examination table	X	X	X
Basic examination equipment (see 2.1)	X	X	X
Doppler (small, portable, battery operated)	X	X	X
Fetal heart monitoring machine			X
Dilatation and curettage set	X	X	X
Delivery table	X	X	X
Dressing trolley	X	X	X
Examination lamp	X	X	X
Bed pan	X	X	X
Manual vacuum aspirator (for D&C)	X	X	X
Vacuum extractor (for childbirth)	X	X	X
Infant mucus aspiration pear	X	X	X
Infant cot	X	X	X
Infant warmer	X	X	X
Incubator, neonatal, Van Hemel	X	X	X
Nebulizer	X	X	X
Infant emergency resuscitation equipment	X	X	X
Speculum (all sizes)-retractor vaginal	X	X	X
Intravenous (IV) poles	X	X	X
Scale, infant, with tray	X	X	X
Apron and boots (and masks and caps)	X	X	X

<b>2.7 Medical</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
Electrocardiogram (ECG) machine				X	X
Basic examination equipment (see 2.1)			X	X	X
Examination table			X	X	X
Examination lamp			X	X	X
Medicine storage cabinets or cupboards			X	X	X
Table and chairs			X	X	X

<b>2.8 Pediatrics</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
Infant scale			X	X	X
Photo therapy equipment					X
Circumference measurement tape			X	X	X
Height measurement board /mat for infants and young children			X	X	X
Children height measurement board			X	X	X
Growth monitoring charts			X	X	X

<b>2.9 Specialist (ENT, Ophthalmology, etc.)</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
Highly specialised equipment					X
Bronchoscopes and endoscopes					X
ENT mirror or lamp			X	X	X
Nasal speculum			X	X	X
Ear speculum			X	X	X
Dental specialized equipment				X	X

<b>2.10 Nursing wards</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
Ventilators/AC/Bukharies (where appropriate)			X	X	X
Basic examination equipment (see 2.1)			X	X	X
Beds with mattresses and pillows, and bedside tables			X	X	X
Stretchers on wheels			X	X	X
Intravenous (IV) stands			X	X	X
Medicine storage cabinets or cupboards			X	X	X
Dressing trolleys			X	X	X
Bedpans and urinals			X	X	X
Pedal waste bin			X	X	X
Patient and bed linen			X	X	X

<b>2.11 Outpatient Department (OPD)</b>					
Basic examination equipment (see 2.1)			X	X	X
Examination table			X	X	X
X-ray viewer			X	X	X
Examination lamp			X	X	X
Scales, infant and adult			X	X	X
Medicine storage cabinets or cupboards			X	X	X
Pedal wastebin			X	X	X
Table and chairs			X	X	X

2.12 Orthopedics and Physiotherapy (equipment only if physiotherapist present)	DH	PH	RH
Brown frame with pulleys and weights	X	X	X
Weights for traction	X	X	X
Thomas splint		X	X
Blocks for elevating beds	X	X	X
Pillows (various sizes and shapes)	X	X	X
Bed frames for traction		X	X
Walking frames	X	X	X
Treatment bench	X	X	X
Measuring tape and goniometer	X	X	X
Pulley system	X	X	X
Floor mattress	X	X	X
Weights: 0.25–5kg	X	X	X
Dumb-bells: ½–5kg	X	X	X
Walking bars	X	X	X
Steps	X	X	X
Crutches	X	X	X
Wheelchairs	X	X	X

2.13 X-Ray/Radiology	DH	PH	RH
X-ray machine (fixed and/or mobile)	X	X	X
X-ray developing machine (manual) and darkroom equipment	X	X	X
X-ray protection material (e.g., lead aprons and protective walls)	X	X	X
X-ray wall viewer	X	X	X
Ultrasound machine (small, portable with voltage stabilizer at DH and RH level)		X	X
Voltage stabilizer for x-ray machine	X	X	X

2.14 Laboratory	DH	PH	RH
Microscope (electric where electricity through grid available)	X	X	X
Distiller machine	X	X	X
Hemoglobinometer (Sali method at DH and PH and Haemacue and RH)	X	X	X
Hermatocry + D290t (HCT) centrifuge (electric)	X	X	X
Centrifuge (hand and electric)	X	X	X
Glucometer		X	X
Glycostrips	X		
Urine strips	X	X	X
Pregnancy test	X	X	X
Water bath	X	X	X
Counting chamber	X	X	X
ESR rack, (automated) pipette and tube	X	X	X
Spirit lamp	X	X	X
Timer/stop watch	X	X	X
Slide rack	X	X	X
Measuring jug and cylinders	X	X	X
Fridge (absorption type)	X	X	X
Rotator for syphilis test	X	X	X
Sterilizer (dry heat)	X	X	X
Balance	X	X	X
Spectrophotometer (colorimeter on PH level)			X

2.15 Blood Bank/Transfusion Service	DH	PH	RH
Examination table	X	X	X
Blood donor beds		X	X
Refrigerator		X	X
Deep fridge			X
Water bath		X	X
Autoclave		X	X
Automated pipette, adjustable (10–100 micro liter)	X	X	X
Stethoscope		X	X
Sphygmomanometer		X	X
Adult scale	X	X	X
Crystallizing dish	X	X	X
Cool box	X	X	X
Lens mirror	X	X	X
Shaking machine (vs 1–2 kg scale for manual stirring of blood bag)	X	X	X
Transfusion bags	X	X	X
Cross match test	X	X	X
HIV tests	X	X	X
Hepatitis B and C tests	X	X	X
VDRL test	X	X	X

2.16 Infection Prevention	DH	PH	RH
Buckets for general waste, one for each treatment area	X	X	X
Buckets for contaminated waste, one for each treatment area and one for each bed in DR	X	X	X
Buckets for decontaminating instruments, one for each treatment area, OT table, and delivery bed	X	X	X
Sharps containers	X	X	X
Impermeable aprons	X	X	X
Utility gloves (for housekeeping staff)	X	X	X
Eye protection or face shield	X	X	X

## 6. Essential Drugs for Hospitals by Type of Hospital

Drugs are necessary for treating most patients in hospitals, and they can be very expensive. It is important that hospitals have the necessary drugs, but only those absolutely necessary for the types of conditions diagnosed and treated at that level of hospital. In 2003 the MOPH defined the National Essential Drug List (NEDL) for Afghanistan. Table 10, “Essential Drugs for Hospitals, by Type of Hospital” is a subset of the complete NEDL. Each hospital must adhere to this list and not add to its formulary expensive and “exotic” drugs that benefit very few patients. Table 10 identifies the basic drugs needed by each level of hospital based upon the conditions diagnosed and treated at that level (see Table 6).

**Table 10. Essential Drugs for Hospitals, by Type of Hospital**

Drug	Dosage	District Hospital			Provincial Hospital			Regional Hospital		
		DH	PH	RH	DH	PH	RH	DH	PH	RH
<b>1. Anesthetics and Oxygen</b>										
<b>1.1 General Anesthetics and Oxygen</b>										
Halothane	cylinder			X						
Ketamine	injection 50mg (as hydrochloride)/ml in 10ml vial	X	X	X						
Sodium thiopental	powder for injection, 0.5g, 1g (sodium salt) in ampoule			X						
Oxygen	inhalation	X	X	X						
<b>1.2 Local Anesthetics</b>										
Lidocaine	injection 1%, 2% (hydrochloride) in vial	X	X	X						
Lidocaine	topical forms 2%, 4% (hydrochloride)	X	X	X						
Lidocaine + Adrenaline	injection 1%–2% (hydrochloride) + epinephrine 1:200 000 in vial	X	X	X						
Lidocaine	dental cartridge, 2% (hydrochloride) + epinephrine 1:80 000	X	X	X						
Bupivacain (not in EDL but critical for hospitals)		X	X	X						
<b>2. Analgesics, Antipyretics, Nonsteroidal Anti-inflammatory Drugs (NSAID) Medicines Used to Treat Gout</b>										
<b>2.1 Nonopiod Analgesics / Antipyretics / NSAID</b>										
Acetaminophen	tablet 325mg, 500mg, syrup 120mg/5ml	X	X	X						
Acetaminophen (Paracetamol)	suspension, drop 100 mg/ml	X	X	X						
Acetyl Salicylic Acid	500 mg	X	X	X						
Ibuprofen	tablet 200mg, 400mg	X	X	X						
<b>2.2 Opioid Analgesics</b>										
Morphine	injection, 10mg (hydrochloride or sulfate) in 1ml ampoule	X	X	X						
Pethidine	injection, 50 mg (hydrochloride) in 1ml ampoule	X	X	X						
Pethidine	tablet 50mg, 100mg	X	X	X						
<b>2.3 Medicines Used to Treat Gout</b>										
Allopurinol	tablet 100mg			X						
Colchicine	tablet 500 microgram			X						
<b>3. Anticonvulsant /Anti-epileptics</b>										
Carbamazepin	tablet 100mg, 200mg			X						
Diazepam	injection 5mg/ml in 2ml ampoule	X	X	X						
Ethosuxamid	capsule 250mg, syrup 250mg/5ml			X						
Magnesium Sulphate	injection 500mg/ml in 2ml ampoule	X	X	X						
Phenobarbital	tablet 15mg 100mg, injection 200mg/ml ampoule capsule or tablet, 25mg, 50mg, 100mg	X	X	X						
Phenobarbital (Complementary)	(sodium salt) injection 50mg (sodium salt)/ml in 5ml vial	X	X	X						
Valproic acid	enteric-coated tablet, 200mg, 500mg (sodium salt)			X						
<b>4. Antidotes and Other Substances Used in Poisonings</b>										
<b>4.1 Nonspecific Antidotes</b>										
Activated Charcoal	powder/tablet 500mg, 1g	X	X	X						
<b>4.2 Specific Antidotes</b>										
Acetyl Cystein	injection, 200mg/ml in 10ml ampoule			X						
Atropine Sulphate	injection, 1mg (Sulfate) in 1ml ampoule	X	X	X						
BAL (Dimercaprol)	injection in oil 50mg/ml in 2ml ampoule			X						
Deferoxamine	powder for injection, 500 mg (mesilate) in vial			X						
Diphenhydramine	injection [dosage], cap/tab 25mg, 50mg; syrup 5mg/5ml	X	X	X						
Methylen Blue (Methylthioninium)	injection 10 mg/ml in 10ml ampoule			X						
Naloxone	injection 400 microgram (Hydrochloride) in 1ml ampoule	X	X	X						
Calcium gluconate	injection 1 gram, 10% in 10ml ampoule	X	X	X						
Protamine Sulphate (Complementary)	injection 10mg/ml in 5ml ampoule			X						
Flumazenil	injection 100 micrograms/ml ampoule	X	X	X						

5. Antihistamines			DH	PH	RH
<b>5.1 H1 Receptor Antagonists</b>					
Chlorpheniramine Maleate			tablet 4mg, injection 10mg/1ml	X	X
Promethazine			tablet 25mg, injection 25mg/ml		X
Promethazine Hydrochloride			syrup 5mg/5ml		X
<b>5.2 H2 Receptor Antagonists</b>					
Ranitidine			tablet 150 mg, 300mg, injection 50mg/2ml ampoule	X	X
6. Anti-infective Medicines			DH	PH	RH
<b>6.1 Anthelmintics</b>					
<b>6.1.1 Intestinal Anthelmintics</b>					
Mebendazole			chewable tablet 100mg	X	X
<b>(Complementary)</b>					
Albendazol			chewable tablet, 200mg, 400mg	X	X
<b>6.1.2 Antifilarials</b>					
Diethylcarbamazine			tablet 50mg, 100mg (dihydrogen citrate)	X	X
<b>6.2 Antibacterials</b>					
<b>6.2.1 Beta Lactam Medicine</b>					
Amoxycillin			tablet 500mg and 250mg (anhydrous)	X	X
Amoxycillin			powder for oral suspension, 125mg (anhydrous)/5ml, 250 mg/5ml	X	X
Amoxycillin			syrup	X	X
Ampicillin			powder for injection 1g and 500mg (as sodium salt) in vial	X	X
Benzathine Benzyl			powder for injection, 1,2 million IU & 2.4 million IU in 5ml vial	X	X
Benzyl Penicillin G (Crystal)			powder for injection 1 million IU and 5 million IU (sodium or potassium salt) in vial	X	X
Cloxacillin			vial 500mg for injection	X	X
Cloxacillin			capsule/tablet 500mg, 250mg (as sodium salt)	X	X
Phenoxy Methyl Penicillin			tablet 250mg, 500mg (as potassium salt)	X	X
Procaine Penicillin			powder for injection, 2 million IU and 4 00 000 IU in vial	X	X
<b>(Complementary)</b>					
Amoxicillin + Clavulanic Acid (restricted indication)			tablet 500mg + 125 mg		X
Amoxicillin + Clavulanic Acid (restricted indication)			for oral suspension 125mg, 31.25mg/5ml		X
Ceftriaxone (restricted indication)			vial 1 gram, 500mg	X	X
<b>6.2.2 Other Antibacterial</b>					
Chloramphenicol			capsule 250mg	X	X
Chloramphenicol			oral suspension 125mg (as palmitate)/5ml	X	X
Chloramphenicol			powder for injection 1 gram and 500 mg (sodium succinate) in vial	X	X
Doxycycline			capsule/tablet 100mg (hydrochloride)	X	X
Erythromycin			tablet 400mg/200mg (ethyl succinate)	X	X
Gentamicine			injection 20mg, 40mg, 80mg (as sulfate)/ml in 2ml vial	X	X
<b>(Complementary)</b>					
Ciprofloxacin (restricted indication)			tablet 500 mg 250mg (as hydrochloride)	X	X
Ciprofloxacin (restricted indication)			injection 2mg/ml, 50ml bottle	X	X
<b>6.2.3 Antileprosy medicines (in speciality facilities only)</b>					
Clofazimine			capsule 50mg, 100mg	--	--
Dapsone			tablet 25mg, 50mg, 100mg	--	--
Rifampicin			capsule or tablet 150mg, 300mg	--	--

6.2.4 Antituberculosis medicines			DH	PH	RH
Ethambutol	tablet 400mg		X	X	X
INH	tablet 100mg, 300mg		X	X	X
Pyrazinamid	tablet 500mg		X	X	X
Rifampicin	capsule or tablet 150mg, 300 mg		X	X	X
Rifampicin	syrup 100mg/5ml				X
Streptomycin	powder for injection 1g (as sulfate) in vial		X	X	X
<b>(Complementary)</b>					
Thiacetazon +Isoniazid	tablet 50mg + 100mg & 150mg + 300mg				X
6.3 Antifungal medicines			DH	PH	RH
Benzoic acid+ Salicylic	cream or ointment 6% + 3%		X	X	X
Griseofulvin	capsule or tablet 125mg, 250mg			X	X
Ketoconazol	tablet 200 mg, topical cream 2%		X	X	X
Nystatin	tablet 100 000 IU, 500 000 IU		X	X	X
Nystatin	vaginal tablet 100 000 IU		X	X	X
6.4 Antiviral Medicine			DH	PH	RH
Aciclovir	ophthalmic ointment 3%			X	X
6.5 Antiprotozoal medicines			DH	PH	RH
6.5.1 Anti-amoebic and Antigiardiasis medicines			DH	PH	RH
Metronidazol	tablet 250mg, 400mg		X	X	X
Metronidazol	injection 500mg in 100ml vial		X	X	X
Metronidazol	oral suspension, 200mg (as benzoate)/5ml				X
6.5.2 Antileishmaniasis			DH	PH	RH
Meglumine Antimonate	injection, 30%, equivalent to approx. 8.1% antimony in 5ml ampoule		X	X	X
Stibogluconate Sodium	injection 100mg/ml ampoule		X	X	X
6.5.3 Antimalarial			DH	PH	RH
Chloroquine	tablet, base 150mg (as phosphate or sulfate)		X	X	X
Chloroquine	syrup, base 50mg (as phosphate or sulfate) /5ml		X	X	X
Pyrimethamin + Sulfadoxine (Fansidar)	tablet 25mg + 500mg		X	X	X
Quinine	tablet 300mg (as bisulfate or sulfate)		X	X	X
Quinine	injection, 300mg (as dihydrochloride)/ml in 2ml ampoule		X	X	X
<b>(Complementary)</b>					
Artesunate	tablet 50 mg (Note: Provided only in malarial endemic areas)		X	X	X
Artemether	80mg/ml 2ml Ampule (for IM only)		X	X	X
6.6 Sulfonamide/Related			DH	PH	RH
Co-Trimoxazole (Sulfamethoxazole+Trimethoprim)	suspension 200mg + 40mg/5ml		X	X	X
Co-Trimoxazole (Sulfamethoxazole+Trimethoprim)	tablet 100mg + 20mg & 400mg + 80mg		X	X	X
6.7 Urinary and Intestinal Antiseptics			DH	PH	RH
Nalidixic Acid	tablet 250mg 500mg, 250mg/5ml Syrup				X
Nitrofurantoin	tablet 100mg		X	X	X
Furazolidon	tablet 100mg, Syrup 125mg/5ml				X
7. Antimigraine Medicines			DH	PH	RH
Acetyl Salicylic Acid	tablet, 300mg 500mg		X	X	X
Acetaminophen	tablet 325mg		X	X	X
Ergotamine	tablet 1mg (tartrate)				X
Propranolol	tablet 20mg 40mg (hydrochloride)		X	X	X

<b>8. Antiparkinsonism Medicines</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
Biperidin	tablet 2mg (hydrochloride)				X
Biperidin	injection, 5mg (lactate) in 1ml ampoule				X
Levodopa + Carbidopa	tablet 100mg + 10mg				X
Levodopa + Carbidopa	250mg + 25mg				X
Trihexylphenidyl	tablet 2 mg				X

<b>9. Medicines Affecting the Autonomic System</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
<b>9.1 Parasympathomimetics</b>					
Pilocarpine	solution (eye drop), 2%, 4% (Hydrochloride or Nitrate)				X
<b>9.2 Parasympatholytics</b>					
Atropine	solution (eye drop) 0.1%, 0.5%, 1% (sulfate),				X
Atropine	tablet 1mg (sulfate), injection 1mg (sulfate) in 1-ml ampoule		X	X	X
Hyoscine-N-butyl bromide	tablet 10mg, injection 20mg/ml		X	X	X
<b>9.3 Sympathomimetics</b>					
Adrenaline	injection 1mg (as hydrochloride or hydrogen tartrate) in 1-ml ampoule		X	X	X
Salbutamol	tablet 2mg, 4mg (as sulfate)		X	X	X
Salbutamol	inhalation (aerosol), 100 microgram (as sulfate) per dose		X	X	X
Salbutamol	respirator solution for use in nebulizers 5mg (as sulfate)/ml		X	X	X
Dopamine Hydrochloride	injection, 40 mg/ml, 5ml ampoule				X
<b>9.4 Sympatholytics</b>					
Methyldopa	tablet 250mg		X	X	X
Atenolol	tablet 50mg, 100mg				X
Propranolol	tablet 10mg, 40mg		X	X	X
Timolol	solution (eye drop), 0.25%, 0.5% (as maleate)				X
<b>9.5 Muscle Relaxants (Peripherally acting) and Cholinesterase inhibitors</b>					
Alcuronium	injection, 5 mg/ml in 2ml ampoule				X
Suxamethonium (Succinyl Choline)	injection, 50mg (chloride)/ml in 2ml ampoule		X	X	X
<b>9.6 Autonomic Agents, Other</b>					
Bromocriptine	tablet 2.5 mg (as mesilate)				X

<b>10. Medicines Affecting the Blood</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
<b>10.1 Drugs Used in Anemia</b>					
Ferrous Sulphate	tablet, equivalent to 60 mg iron, oral solution		X	X	X
Folic Acid	tablet, 1mg and 5 mg/tablet		X	X	X
Ferrous Sulphate+Folic Acid (Nutritional Supplement for use during pregnancy)	tablet, equivalent to 60 mg iron + 400 microgram folic acid		X	X	X
Hydroxocobalamin	injection, 1mg in 1-ml ampoule		X	X	
<b>(Complementary)</b>					
Iron Dextran	injection equivalent to 50mg iron/ml in 2-ml ampoule				X
<b>10.2 Drugs Affecting Coagulation</b>					
Vit.K (Phytomenadione)	injection 10mg/ml ampoule, tablet, 10mg		X	X	X
Sodium Heparine	injection 1000 IU/ml, 5 ml and 5000 IU/ml, 1 ml		X	X	
Enoxaparin (low molecular weight Heparine) restricted indication only for DVT	sc injection		X	X	X

<b>11. Blood Products and Plasma Substitutes</b>			<b>DH</b>	<b>PH</b>	<b>RH</b>
Dextran 70	Injectable solution 6%				X

<b>12. Cardiovascular Medications</b>		<b>DH</b>	<b>PH</b>	<b>RH</b>
<b>12.1 Anti-anginal Medicines</b>				
Atenolol	tablet, 50mg, 100mg			X
Glyceryl Trinitrate	tablet, (sublingual), 0.5 mg			X
Isosorbide Dinitrate	tablet, (sublingual), 5mg, 10 mg		X	X
Verapamil	tablet, 40 mg, 80 mg (hydrochloride)			X
<b>12.2 Anti-arrhythmic Drugs</b>				
Atenolol	tablet 50mg, 100 mg			X
Digoxin	tablet 0.25 mg, injection 0.5 mg/2ml		X	X
Lidocaine	injection, 20 mg (hydrochloride)/ml in 5ml ampoule			X
Procainamide	injection 1000 mg /10 ml, cap/tab 250mg			X
Verapamil	tab 40mg, 80 mg, injection,			X
Verapamil	2.5mg (hydrochloride)/ml in 2ml ampoule			X
<b>12.3 Anti-hypertensive Agents</b>				
Atenolol	tab 50mg, 100mg			X
Captopril	tablet 25mg			X
Hydralazine	tablet 25mg, 50 mg (hydrochloride), powder			X
Hydralazine	for injection, 20mg (hydrochloride) in ampoule		X	X
Methyl dopa	tablet 250 mg		X	X
Nifedipine	capsule/tablet 10mg		X	X
<b>12.4 Cardiotonics</b>				
Digoxin	tablet 0.25mg, injection 0.5 mg/2ml		X	X
<b>12.5 Platelet Aggregation Inhibitors</b>				
Acetyl Salicylic Acid	tablet 100mg		X	X
<b>13. Dermatological Medicines (topical)</b>		<b>DH</b>	<b>PH</b>	<b>RH</b>
<b>13.1 Anti-infective, Topical</b>				
Methyl Rosanilinium				
Chloride (Gention Violet)	aqueous solution, 0.5%, 1%		X	X
Neomycine+Bacitracine	ointment, 5mg neomycin sulfate + 500 IU bacitracin zinc/G		X	X
Silver Sulfadiazine	cream 1%, in 500-gram container		X	X
<b>13.2 Antifungal, Topical</b>				
Benzoic Acid + Salicylic Acid	ointment or cream 6% + 3%		X	X
Nystatine	ointment 100 000 U/gram, vaginal tablet		X	X
Nystatine	100,000 U, drop 100 000 U/ml, coated tablet 500,000 U		X	X
Tolnaftate	topical cream 1%, topical solution 1%			X
<b>13.3 Anti-inflammatory and Antipruritics, Topical</b>				
Calamine-lotion	lotion		X	X
Hydrocortisone	ointment or cream, 1% (acetate)			X
<b>13.4 Anti-infective/Anti-inflammatory Combination, Topical</b>				
Betamethasone-N	topical cream/ointment Betamethason (as Valerate) 0.1%+ Neomycin Sulfate 0.5%		X	X
<b>13.5 Sun Protectants/Screen</b>				
Zinc Oxide	topical ointment 20%, powder		X	X
<b>13.6 Keratolytics/Caustics</b>				
Benzoyl Peroxide	lotion or cream, 5%			X
Coal Tar	solution, 5%			X
Fluorouracil	ointment, 5%			X
Resorcinol-S	topical cream Resorcinol 2% + sulphur 8%			X
Salicylic Acid	solution, 5%		X	X
<b>13.7 Scabicides/Pediculocides</b>				
Lindane	lotion 1%		X	X
<b>13.8 Local Anesthetics, Topical</b>				
Lidocaine	gel 2 %, 4%		X	X

14. Diagnostic Agents			DH	PH	RH
14.1 Radio Contrast Media					
Barium Sulfate	aqueous suspension				X
Meglumine Compound 76%	injection 20 ml, 100ml (Meglumine diatrizoate 66% + sodium diatrizoate 10%)				X
Meglumine Compound 76%	oral solution (Meglumine diatrizoate 66% + sodium diatrizoate 10%)				X
15. Disinfectants and Antiseptics			DH	PH	RH
Methanol	solution, 70% (denatured)		X	X	X
Chlorhexidine	solution, 5% (digluconate) for dilution		X	X	X
Chlorine releasing comp.	powder for solution, 1 gram per liter		X	X	X
Hydrogenperoxid	solution 6% (= approx. 20 volume)		X	X	X
Iodine Polyvidone	solution, 10%		X	X	X
Gentian Violet	aqueous solution 0, 5%, 1%		X	X	X
Potassium Permanganate	aqueous solution, 1:10 000		X	X	X
16. Diuretics			DH	PH	RH
Furosemide	tablet 40 mg,		X	X	X
Furosemide	injection, 10 mg/ml in 2-ml ampoule		X	X	X
Hydrochlorothiazid	tablet 25 mg 50mg		X	X	X
Mannitol	injectable solution, 10%, 20%				X
Spironolactone	tablet 25 mg				X
17. Gastrointestinal Medicines			DH	PH	RH
17.1 Antacids					
Aluminum hydroxide + Magnesium Hydroxide	chewable tablet aluminum hydroxide 200mg + magnesium hydroxide 200mg		X	X	X
17.2 Laxatives					
Bisacodyl	tablet 5mg		X	X	X
17.3 Drugs Used in Peptic Ulcer					
Histamine H2 Receptor Antagonist Ranitidine	tablet 150 mg, 300mg, injection 50mg/2ml		X	X	X
(Complementary)					
Omeprazol	capsule 20mg			X	X
17.4 Anti-emetics					
Metoclopramid	tablet 10mg (hydrochloride),		X	X	X
Metoclopramid	injection 5mg (hydrochloride)/ml in 2-ml ampoule		X	X	X
17.5 Antimuscarinics/Antispasmodic					
Atropine	injection 1 mg (sulfate) in 1-ml ampoule		X	X	X
Hyoscine -N- Butyl Bromide	tablet, 10 mg,		X	X	X
Hyoscine -N- Butyl Bromide	injection 4 mg/ml in 5-ml ampoule		X	X	X
17.6 Antihemorrhoid Drugs					
Anti-Inflammatory Astringent/Local Anesthetic Drugs	ointment or suppository		X	X	X
17.7 Oral Rehydration Salts (ORS)					
Oral Rehydration Salt	powder, 27,9 g/l		X	X	X
(for Glucose Electrolyte solution)	sodium chloride (3.5 G/L), trisodium citrate dihydrate (2.9 G/L), potassium chloride (1.5 G/L), glucose (20 G/L); trisodium citrate				

18. Hormones, Other Endocrine Medicines, and Contraceptives			DH	PH	RH
<b>18.1. Adrenal Hormones and Synthetic Substitute</b>					
Hydrocortisone	powder for injection		X	X	X
Prednisolone	tablet 5mg		X	X	X
<b>18.3. Contraceptives</b>					
<b>Hormonal Contraceptives</b>					
Ethinylestradiol + Levonorgestrel	tablet 30 microgram + 150 microgram		X	X	X
Ethinylestradiol + Levonorgestrel	tablet 50 microgram + 250 microgram				X
Ethinylestradiol + Norethisterone	tablet 35 microgram + 1.0mg				X
<b>(Complementary)</b>					
Medroxy Progesterone	depot injection, 150mg/ml in 1-ml vial		X	X	X
	50mg/ml in 3ml vial				
<b>18.4 Intrauterine Devices</b>					
Copper-containing device			X	X	X
<b>18.5 Barrier Methods</b>					
Condoms with or without spermicide (Nonoxinol)			X	X	X
<b>18.6 Estrogens</b>					
Ethinylestradiol	tablet 10 microgram, 50 microgram				X
<b>18.7 Progestines</b>					
<b>18.8 Ovulation Inducers</b>					
Clomiphene (Clomifen)	tablet 50 mg (Citrate)				X
<b>18.9 Insulin and Other Antidiabetic Agents</b>					
Glibenclamide	tablet 5mg		X	X	
Insulin injection (soluble)	injection, 40 IU/ml in 10ml vial				X
Insulin injection (soluble)	100 IU/ml in 10ml vial		X	X	
Intermediate-acting insulin	injection, 40 IU/ml in 10-ml vial				X
Intermediate-acting insulin	100 IU/ml in 10ml vial (as compound insulin zinc suspension or isophane insulin)		X	X	
Metformine	tablet, 500mg (hydrochloride)		X	X	
<b>18.9.1 Thyroid Hormones and Antithyroid Medicines</b>					
Levothyroxine	tablet, 50 microgram, 100 microgram (sodium salt)				X
Potassium Iodide	tablet, 60mg				X
Carbimazole	tablet, 5mg				X
<b>19. Immunologicals</b>			DH	PH	RH
<b>19.1 Diagnostic agents</b>					
Tuberculin, Purified Protein Derivative (PPD)	injection		X	X	X
<b>19.2 Sera and Immunoglobulins</b>					
Anti-D immunoglobulin (human)	injection, 250 microgram in single-dose vial			X	X
Antitetanus Immunoglobulin (human)	injection, 500 IU, 1500U, 3 000U ampoule		X	X	X
Pertussis Antitoxin					X
Diphtheria Antitoxin	injection, 10 000 IU, 20 000 IU in vial			X	X
Rabies Immunoglobulin	injection, 150 IU/ml in vial			X	X
<b>19.3 Vaccines</b>					
BCG			X	X	X
DPT			X	X	X
Hepatitis-B			X	X	X
Measles			X	X	X
Poliomyelitis			X	X	X
Tetanus			X	X	X

<b>19.4 For Specific Group of Individuals</b>		
Mumps vaccine		X X X
Rabies vaccine (inactivated: prepared in cell culture)		X X X
Rubella vaccine		X

<b>20. Ophthalmological Preparations and Drugs Used in ENT</b>				
<b>20.1 Antiglaucoma and Miotics</b>		<b>DH</b>	<b>PH</b>	<b>RH</b>
Acetazolamid	tablet, 250mg			X
Pilocarpine	solution (eye drop), 2%, 4% (hydrochloride or nitrate)			X
Timolol	solution (eye drop), 0.25%, 0.5% (as maleate)			X
<b>20.2 Anti-infective, Topical:</b>				
Aciclovir (Acyclovir)	ophthalmic ointment 3%	X	X	X
Chloramphenicol	solution (eye drop) 0.5%	X	X	X
Gentamicine	solution (eye drop) 0.3 % (as sulfate)			X
Sulfacetamide	solution (eye drop) 10%, 20%			X
Silver Nitrate	solution (eye drop) 1%			X
Tetracycline	eye ointment, 1% (hydrochloride)	X	X	X
<b>20.3 Anti-inflammatory Topical Agents</b>				
Prednisolone	solution (eye drop), 0.5%			X
<b>20.4 Local Anesthetics</b>				
Tetracaine	solution (eye drop), 0.5% ( hydrochloride)	X	X	X
<b>20.5. Mydriatics</b>				
Atropine	solution (eye drop), 0.1%, 0.5%, 1% ( Sulfate)			X
Tropicamide	solution (eye drop) 0.5%, 1%			X
<b>20.6 Drugs Used in E.N.T</b>				
<b>20.6.1 Decongestant</b>				
Naphazoline	solution (nasal drop) 0.05%	X	X	X
<b>20.6.2 Removal of Ear Wax</b>				
Glycerin Boric	solution 5%			X

<b>21. Oxytocics and Antioxytocics</b>				
<b>21.1 Oxytocics</b>		<b>DH</b>	<b>PH</b>	<b>RH</b>
Ergometrine	tablet 200 microgram (hydrogen maleate),	X	X	X
Ergometrine	injection 200 microgram (hydrogen maleate)	X	X	X
Oxytocin	injection, 10 IU in 1ml ampoule	X	X	X
<b>21.2 Antioxytocics</b>				
Salbutamol	tablet 4mg (as sulfate)	X	X	X
Salbutamol	injection, 50 microgram (as sulfate)/ml in 5ml ampoule	X	X	X

<b>22. Psychotherapeutic Medicines</b>				
<b>22.1 Medicines Used in Psychotic Disorders</b>		<b>DH</b>	<b>PH</b>	<b>RH</b>
Chlorpromazine	tablet 100mg (hydrochloride),			X
Chlorpromazine	syrup 25mg (hydrochloride)/5ml			X
Chlorpromazine	injection 25 mg (hydrochloride)/ml in 2ml ampoule			X
Haloperidol	tablet 2mg, 5mg, injection 5mg /1ml ampoule	X	X	X
<b>22.2 Medicines Used in Depressive Disorders</b>				
Amitriptyline	tablet, 25 mg (hydrochloride)			X
Fluoxetine	capsule, 20mg	X	X	X
<b>22.3 Medicines Used in Generalized Anxiety and Sleep disorders</b>				
Diazepam	tablet 2mg, 5mg, 10mg; injection 5mg/ml in 2ml ampoule	X	X	X
Alparazolam	tablet 0.5mg		X	X
<b>22.4 Medicines Used in Vertigo</b>				
Dimenhydrinate	tablet 50mg			X

23. Medicines Acting on the Respiratory Tract		DH	PH	RH
23.1 Anti-asthmatic Medicines				
Aminophylline	injection, 25mg/ml in 10-ml ampoule	X	X	X
Aminophylline	tablet 100mg	X	X	X
Beclometasone	inhalation (aerosol), 50 microgram, 250 microgram (dipropionate) per dose			X
Epinephrine (Adrenaline)	injection 1mg (as hydrochloride or hydrogen tartrate) in 1ml ampoule	X	X	X
Salbutamol	tablet 2mg, 4mg (as sulfate)	X	X	X
Salbutamol	inhalation (aerosol), 100 microgram (as sulfate) per dose			X
Salbutamol	syrup, 2mg (as sulfate)/5ml			X
Salbutamol	injection, 50 microgram (as sulfate)/ml in 5ml ampoule			X
Salbutamol	respirator solution for use in nebulizers, 5mg (as sulfate)/ml	X	X	X
24. Solutions Correcting Water, Electrolyte, and Acid-base Disturbances		DH	PH	RH
24.1 Oral				
Oral Rehydration Salts (for glucose-electrolyte solution)	for composition see section 18. 7	X	X	X
Potassium Chloride	Powder for solution			X
24.2 Parenteral				
Glucose	injectable solution, 5% isotonic, 10%, 50% hypertonic	X	X	X
Glucose with Sodium Chloride	injectable solution, 4% glucose, 0.18% sodium chloride (equivalent to Na+30mmol/l Cl-30mmol/l)		X	X
Potassium Chloride	11.2 % solution in 20ml ampoule, (equivalent to K+1.5mmol/ml, Cl-1.5mmol/ml)			X
Sodium Chloride	injectable solution, 0.9% isotonic (equivalent to Na+154 mmol/l, Cl-154 mmol/l)	X	X	X
Sodium Hydrogen Carbonate	injectable solution 1.4% isotonic (equivalent to Na+167mmol/l, HCO3-167 mmol/l)			X
Sodium Hydrogen Carbonate	8.4% solution in 10ml ampoule (equivalent to Na+ 1000 mmol/l, HCO3-1000 mmol/l)			X
Compound Solution of Sodium Lactate (Ringer lactate)	injectable solution	X	X	X
24.3 Miscellaneous				
Water for injection	5ml, 10ml ampoule	X	X	X
25. Vitamins and Minerals		DH	PH	RH
Iodine	iodized oil, 1ml (480mg iodine)			X
Iodine	0.5 ml (240 mg iodine) in ampoule (oral or injectable)			X
Iodine	0.57 ml (308 mg iodine) in dispenser bottle			X
Iodine	capsule, 200 mg			X
Multimicronutrients	capsule	X	X	X
Pyridoxine	tablets 25 and 40 mg, injection (dosage)	X	X	X
Cholecalciferol	ampoule 600,000 IU/ml	X	X	X
Phytomenadione (Vitamin K)	injection, 10mg/ml ampoule	X	X	X
Phytomenadione (Vitamin K)	tablet, 10mg			X
Retinol	sugarcoated tablet, 10 000 IU (as palmitate) (5.5mg)	X	X	X
Retinol	capsule 200 000 IU (as palmitate) (110mg)	X	X	X
Retinol	oral oily solution, 100 000 IU/ml in multidose dispenser (as palmitate)			X
Retinol	injection, 100 000 IU (as palmitate) (55mg) in 2ml ampoule			X



**Annex A. Hospital Policy for Afghanistan's Health System**



**Islamic Transitional Government  
of Afghanistan  
Ministry of Health**

**Policy Statement**

**Hospital Policy for  
Afghanistan's Health System**

**February 2004**

**Ministry of Health  
Policy Statement**

**Hospital Policy for Afghanistan's Health System**

Approved by the MOH Executive Board, February 2004

The Basic Package of Health Services (BPHS) is being expanded throughout Afghanistan. The BPHS is an important element in the redevelopment of the health system because it deals with the priority health problems of the country. Hospitals have an important role in this PHC-focused strategy because district, provincial, and regional hospitals are required to form an integrated referral system providing a range of needed services: from health promotion to disease prevention to basic treatment to disability care to specialized inpatient care. This policy establishes the guidelines for the redevelopment of hospitals as a key element of the Afghan health system.

**Issues: The Need for a Hospital Policy**

The major problems facing Afghanistan's hospitals which must be addressed to ensure that hospitals are part of an integrated health system and providing quality patient care are:

- *The lack of standards for clinical patient care and management of hospitals.* The consequence is poor quality of care for patients.
- *The lack of equitable access to hospital services throughout the country.* People in many parts of the country have no access to a hospital and its services, while other areas, such as Kabul, have a disproportionate number of hospital beds relative to the population. The problem of the skewing of hospital beds and services toward certain areas is often compounded by donors.
- *The concentration of financial resources and health workers at hospitals.* The result is the potential for hospitals to be allocated a disproportionate share of new health workers and financial resources which will reduce the ability of the health system to address basic health problems.
- *The lack of hospital management skills for the operation of hospitals.* As a result, the hospitals are inefficient.
- *The lack of necessary staff, equipment, supplies and pharmaceuticals in many hospitals.* The result is the hospital is often ineffective in the treatment it provides.
- *The referral system does not work.* The hospital system is fragmented and uncoordinated.

As a consequence, there is a need to address the role of hospitals in the health system, the organization and management of hospitals, standards for hospitals and the financial and human resources allocated to hospitals so the Afghan health system is properly planned to address the health problems of the country for the long-term. That is the purpose of this policy.

## **MOH Hospital Policies**

The hospitals of Afghanistan will provide a comprehensive referral network of secondary and tertiary health facilities. The policies guiding the hospital sector are:

1. Hospitals, as part of a unified national health system, will provide necessary curative and emergency services, which complement the Basic Package of Health Services, that includes disability care, offered at basic and comprehensive health centers.
2. Hospitals must be rationally distributed so their services are accessible on an equitable basis for the entire population.
3. The MOH will carefully plan the number of hospitals, their location, hospital beds, and types of hospital beds to ensure that the resources committed to hospitals result in the maximum impact on the population's health status. Because Afghanistan does not have unlimited resources to finance hospitals, so health planning, resource allocation and financial management of hospitals will be undertaken by MOH for the entire hospital sector as a means for maximizing the impact and effectiveness of hospitals on the country's health status.
4. Provision of hospital care must be based on need for hospital care and not on ability to pay.
5. Hospitals must be managed in an efficient manner that adheres to basic clinical and managerial standards that ensure the provision of quality care to all patients, including patients with disabilities.
6. The proportion of the government's annual operational budget for hospitals will not exceed 40% of the total health budget.
7. To ensure budgetary accountability and transparency, the MOPH will develop the appropriate financial systems and develop proper mechanisms, such as empowering financial management of hospitals to their board of directors.
8. Equitable cost-sharing strategies which are appropriate for Afghanistan, will be developed to help make the operation of hospitals more financially sustainable.
9. Hospitals also have a role within the health system to provide supervision of lower level health facilities, a place for professional training of physicians, nurses, midwives, and other health providers as well as supporting necessary national medical and health systems research.
10. Private hospitals are permitted and are part of the health system and must comply with all standards for providing good quality care, be accredited and adhere to all MOH policies.

## **Standards for Hospitals**

Standards are required to improve the clinical and managerial performance to attain an acceptable level of operations for hospitals. Standards establish what is expected of hospitals and their staff at all levels of operation. It is the establishment of such reasonable standards which permits the monitoring of hospital operations against which hospital performance can be measured. This is required to improve the standard of care and management of hospitals in Afghanistan. The following provide the framework of the basic standards. Specific details, elements and components of each standard must be developed and specified in greater detail by the MOH. The following provides a structure and direction for development of detailed standards for hospitals, which will be used for accreditation, ultimately.

**1. Responsibilities to the Community**

- 1.1. The hospital is responsive to the community's needs
- 1.2. Hospital services will be accessible to the community.
- 1.3. Hospitals will have a proper disaster preparedness plan so it can properly respond in the event of natural or man-made disasters.

**2. Patient Care**

- 2.1. Patients will be treated with dignity and have a right to be treated in a respectful manner.
- 2.2. Quality of clinical care to the patient that the hospital serves is high and appropriate for Afghanistan, including the proper staffing, equipment and supplies.
- 2.3. Quality of care will be monitored and measured by agreed indicators (e.g. wound infections, length of hospital stay, operations per patient, mortality rates etc).
- 2.4. Women and children will receive the basic package of health services at hospitals, including immunization, outpatient care for conditions, such as pneumonia and diarrhea, as well as appropriate assistance at the time of delivery.
- 2.5. Hospitals will be "mother and baby friendly" and encourage "rooming-in" and immediate, exclusive breast feeding.
- 2.6. Care delivery is monitored by the hospital's health care team to ensure that care meets the needs of patients and to assist in the improvement of care.
- 2.7. Medical records are maintained for each patient and are kept confidential and secure.

**3. Leadership and Management**

- 3.1. The hospital is effectively and efficiently governed, organized, supervised and managed to ensure the highest quality of care possible for patients.
- 3.2. To ensure the responsiveness of hospitals to the community, a hospital board of directors or board of management will be established at each hospital to govern and oversee the proper operation and management of the hospital.

**4. Human Resource Management**

- 4.1. Staff planning ensures a properly trained hospital staff and the appropriate number of staff.
- 4.2. Staff are appointed through a recruitment, selection and appointment procedure that is consistent with the MOH human resources policy.
- 4.3. In performing their duties, staff adhere to high ethical standards and a code of conduct.
- 4.4. A comprehensive program of staff development and in-service training meets individual and hospital needs.
- 4.5. Effective workplace relations are developed through use of teams

**5. Management Systems**

- 5.1. Financial management policies and procedures are developed and adhered to in order to ensure accountability of the hospital's finances from all sources.
- 5.2. Management information systems meet the hospital's internal and external needs
- 5.3. Patient care, management of services, education and research are facilitated by the timely collection and analysis of data

- 5.4. Information technology enhances the hospital's ability to gather, store and analyze information and to communicate.
- 5.5. Appropriate logistics and purchasing systems are maintained to ensure clinicians have the proper equipment, supplies and pharmaceuticals to provide patient care.
- 5.6. Buildings and grounds are maintained to ensure a safe patient care and work environment for patients, staff and visitors.

## **6. Hospital Environment**

- 6.1. Infection is effectively controlled throughout the hospital
- 6.2. The physical environment of the hospital and its equipment are properly maintained to ensure patient and staff safety and that there are no physical barriers for those with disabilities.
- 6.3. The hospital is accessible to all patients with including those with physical disabilities.
- 6.4. Buildings, grounds, plant and equipment are regularly maintained to ensure a safe environment for all persons in the hospital.
- 6.5. Waste from the hospital is handled, contained and disposed of safely and efficiently
- 6.6. Occupational health measures are adopted to ensure the safety of staff, especially those dealing with direct patient care.
- 6.7. Clean water of sufficient quantity and quality is available for patients and staff and for proper hospital functioning.
- 6.8. Toilets in the hospital are kept clean for use by patients, staff, and visitors.

## **Levels of Hospitals**

There are three levels of hospitals: district (as a part of the BPHS), provincial, and regional, including specialized hospitals. Differentiation of hospital levels is based on the patient services offered. Five core clinical functions will exist in each level of hospital: medicine, surgery, pediatrics, obstetrics and gynecology, and mental health. An escalating level of sophistication will exist from district to urban hospitals. The health post, basic health center and comprehensive health center will offer basic curative and preventative services.

Hospitals in conjunction with the Provincial Coordination Committees (PCC) will ensure the enforcement of a well-functioning referral system. A two-way referral mechanism will be established maintaining a functional link between hospitals and primary health care facilities. First line referrals will stem from health centers to district hospital outpatient departments from where consultation will define whether patients need to be further referred to higher levels or treated at that level. Similarly patients are referred back to primary health care facilities for follow-up. The following general specification of services for various hospital levels will be supplemented by the Basic Package of Hospital Services, to be developed by MOH, will identify, in detail, the clinical services provided at each level, the equipment and supplies required, and the minimum staffing required.

### **District Hospital**

Each district hospital will have from 30 to 75 beds and serve a population of 100,000 to 300,000, covering from one to four districts. The basic services offered at a district hospital are:

- surgery
- medicine
- pediatrics
- obstetrics and gynecology
- mental health (outpatient)
- dental services

The district hospital will also have nutrition, physical therapy, laboratory, radiology, blood transfusion, and pharmacy services.

### **Provincial Hospital**

A provincial hospital serves a province and will have from 100 to 200 beds. In addition to the services offered at a district hospital, the provincial hospital has:

- physical therapy and rehabilitation services;
- nutrition services;
- infectious disease medicine.

### **Regional Hospital**

A regional hospital serves several provinces and will have from 200 to 400 beds. In addition to the services offered at a provincial hospital, the regional hospital has:

- surgery with ENT, urology, neurosurgery, orthopedics, plastic surgery, and physiotherapy;
- medicine with cardiovascular, pulmonary, endocrinology, and dermatology;
- forensic medicine.

Diagnostic services include:

- **laboratory:** hematology, parasitology, bacteriology, virology, allergy and immunology, biochemistry, toxicology, cytology, and pathology;
- **blood bank/transfusion services:** Provides for the taking, preserving, and distributing blood to patients and the diagnosis of blood related diseases (hemophilia, thalassemia, leukemia, and viral diseases—hepatitis, HIV/AIDS);
- **imaging:** routine and specialized radiography, ultrasonography.

### **Rationalization of Hospital Services**

There will be rationalization of services, such as polyclinics, where specialized diagnostic and curative services are provided on an outpatient basis. These facilities will be linked to regional and specialized hospitals for referral of complicated cases requiring inpatient care in order to reduce the burden on these hospitals and to give quality services at an outpatient level. They will not have beds as this duplicates what exists in hospitals and is expensive for the health system.

While there may be a need for some additional specialized diagnostic services for the country, these services are too expensive and for too few patients to be available at every regional hospitals. Further rationalization of services will occur at the urban level where specialized clinical and diagnostic services and equipment will be centralized. These include: pathology and forensic medicine, histology, bio-technical support, centralized statistics center, and research. Equipment and services such as CT-scan and radiotherapy will be

located at only one hospital in the country to provide the services for the entire the country rather than being provided at each regional hospital.

Specialized hospitals will be combined into regional hospitals with multiple specialties, as much as possible. As current specialized hospitals are rehabilitated and new facilities planned, the MOH will seek to combine them with other major hospitals in order to rationalize the number and type of hospitals. The current specialized hospitals include eye, mental health, disabilities, tuberculosis, chest, oncology, orthopedic and prosthesis, maternity, pediatrics, and emergency hospitals.



## Annex B. Staffing Assumptions for Advised Staffing Patterns

The assumptions related to the advised staffing patterns for the hospitals are:

- Related to the % of beds per service based on (1) Mirwais Kandahar, (2) JPHH-1 Jalalabad, and (3) Ghazni hospitals, however modified: surgery to 40% (58%; 57%; 37%); medical to 25% (24%; 28%; 37%) and OB/GYN increased to 20% (5%; 5%; 9%) and pediatrics to 15% (10%; 8%; 15%).
- Staffing doctors: 1:5 (total medical doctors versus total hospital beds: Regional Hospital Afghan standard)
- Staffing nurses 1:5 (with one head nurse/midwife in each ward/department)
- Staffing midwives 1:4
- Staffing psychiatry nurses/psychologists/anesthesiologists: estimate, unexplored area in Afghanistan
- Staffing operating theater 1 table: 2 nurses (OT tables 50 beds = 1 then 1 for every 100 beds)
- Staffing sterilization 1: table (OT tables 50 beds = 1 then 1 for every 100 beds)
- Staffing anesthesia 1: table + 1 night (OT tables 50 beds = 1 then 1 for every 100 beds)
- Staffing for outpatient department (morning shift only):
  - 50 beds: 1
  - 100 beds: 1
  - 150 beds: 2
  - 200 beds: 2
  - 250 beds: 3
  - 300 beds: 4
  - 350 beds: 4
  - 400 beds: 4
- Staffing for emergency room (shifts: morning + night + sleep)
  - 50 beds: 1 + 0 + 0
  - 100 beds: 1 + 1 + 1
  - 150 beds: 2 + 1 + 1
  - 200 beds: 3 + 2 + 2
  - 250 beds: 3 + 2 + 2
  - 300 beds: 4 + 2 + 2
  - 350 beds: 4 + 2 + 2
  - 400 beds: 5 + 3 + 3
- Staffing laboratory and blood bank are based on recommendations of lab and BB experts.
- Staffing X-ray technicians are per X-ray machine covering 24 hrs (not per bed). If mobile machines are used or fluoroscope in the OT, an increase can be considered.
- Staffing physiotherapists covering both OPD and IPD is an estimate based on ICRC experience in Afghanistan.
- Staffing dental technicians and vaccinators are estimates.
- Staffing technical assistants: important for physiotherapy, X-ray, sterilization/OT and pharmacy: preferable to using cleaners

- Staffing pharmacist: estimate based on ICRC experience in Afghanistan
- Staffing administration: estimate
- Staffing storekeeper: estimate
- Staffing maintenance: at minimum, a plumber and an electrician are needed. When hospitals become bigger, other professions may be needed (e.g., a welder and a carpenter). In addition, the plumber and the electrician may need to be available 24 hours a day.
- Staffing kitchen: both cooks and helpers are included in this estimate
- Staffing laundry: depends on if laundry machines are used or hand washing is practiced, whether staff uniforms are washed, etc.
- Staffing drivers: estimate
- Staffing guards: outside guards 24 hours and inside (ward) guards
- Staffing cleaners: includes administration (1), wards (1–2 per ward), corridors (1:50 beds), OT (1: table), and waste management
- Staffing porters for emergency room and OT during day time and 1 per night (> 100 beds): added to guards





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