

A BASIC HEALTH SERVICES PACKAGE

FOR IRAQ



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**World Health
Organization**

Foreword

The Ministry of Health (MOH) is pleased to present the Basic Health Service Package (BHSP), which will pave the way for the successful reform of the health care system and establish the foundations of a decentralized primary health care (PHC) system based on the principles of the Alma-Ata Declaration.

Traditionally, the health care system in Iraq has been based on a centralized, curative and hospital-oriented model. Such a system has lacked the capacity to deliver services that address the major health problems faced by the majority of the population in an equitable and sustainable manner. The current structure of PHC is not based on cost-effective interventions that would ensure maximum health gains for available resources. Neither is it capable of responding effectively and efficiently to the complex and growing health needs of the population. The implementation of BHSP will therefore address these issues and ensure the timely delivery of cost-effective, integrated and standardized health services tailored to meet the priority health issues faced by the majority of the population.

The BHSP will ensure delivery of equitable and accessible health services through four layers of health facilities, starting from the community health house up to the district hospital level. Gradually, the implementation of BHSP will be rolled out to all health districts in all governorates. This process will enable Iraq to meet the benchmarks of National Development Strategy (NDS) 2010-2014, International Compact with Iraq (ICI), Millennium Development Goals (MDGs) and the 2005 constitution of Iraq, which stipulates the devolution and decentralization of financial and administrative authority to the regional and governorates levels.

I would like to extend my gratitude to the UNDG ITF for funding the development of BHSP. I would also like to acknowledge the support and technical assistance provided by the World Health organization and the various departments of MOH which contributed to the, design, development and finalization of the BHSP.

Let us commit ourselves and join our hands together to achieve the noble cause of establishing a responsive and modern health care system that meets the needs and aspirations of the Iraqi people.



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Minister of Health

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The MOH is especially grateful to UNDG ITF for funding the development process of BHSP.

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ARI	Acute Respiratory Infection
BHSP	Basic Health Services Package
CBI	Community-Based Initiative
CD	Communicable Disease
CEA	Cost-Effectiveness Analysis
CHH	Community Health House
CHW	Community Health Workers
CPR	Cardiopulmonary Resuscitation
CVD	Cardio Vascular Diseases
DoH	Directorate of Health
DOTS	Directly Observed Treatment Short Course
EPI	Expanded Programme on Immunization
HALE	Healthy Life Expectancy
HIV	Human Immunodeficiency Virus
ICMMS	Iraq Child and Maternal Mortality Survey
IEC	Information Education and Communication
IFHS	Iraq Family Health Survey
IMCI	Integrated Management of Childhood Illness
IMIRA	Iraq Multiple Indicator Rapid Assessment
IMR	Infant Mortality Rate
LEX	Life Expectancy
MCH	Mother and Child Health
MICS	Iraq Multiple Indicator Cluster Survey
MMR	Maternal Mortality Ratio
MoH	Ministry of Health
NCD	Non-communicable Diseases
NIDs	National Immunization Days
NGOs	Non-Governmental Organizations
OB/GYN	Obstetrics and Gynecology
PHC	Primary Health Care
QA	Quality Assurance
SPHCS	Strengthening Primary Health Care Systems
STI	Sexually Transmitted Infections
TB	Tuberculosis
SBA	Skilled Birth Attendant
WHO	World Health Organisation

Introduction

The health care system in Iraq has been based on a hospital oriented and capital-intensive model that has limited efficiency and does not ensure equitable access. The Ministry of Health (MoH) is the main provider of health care, both curative and preventive. The private sector provides curative services to only a limited population on a fee-for-service basis. In addition, access to health care has been further affected by years of conflict, sanctions and ongoing military operations.

In acknowledgment of these concerns, over the last three years the MoH has undergone a process of re-orientation with the aim of basing Iraq's health system on the primary health care (PHC) model. However, the current structure of PHC is not based on cost-effective public health interventions that would achieve maximum health gains for the money spent. Moreover, the services currently provided at the PHC level only partially meet the health needs of the population. This, combined with low perceived quality of care, has led the population to bypass the primary level and seek care at the secondary and tertiary levels.

In 2004, the MoH articulated its vision for primary health care as "an accessible, affordable, available, safe and comprehensive quality health service of the highest possible standard that is financially sound and founded on scientific principles in order to meet the present and future health needs of Iraqi people, regardless of their ethnicity, geographic origin, gender or religious affiliation." This vision, therefore, calls for integrated reform of the existing PHC system. The development of a basic health services package (BHSP) was identified by the MoH as an appropriate initial step to achieving this goal.

The MoH began to develop the BHSP under the strengthening primary health care systems (SPHCS) project. The process started with a review of the health status of the Iraqi population to determine major health problems and to identify health services essential for addressing these problems (chapter 1.1). The PHC network was also assessed in terms of its infrastructure and human resources in order to determine the scope and type of services it is capable of delivering (chapter 1.2).

The results from the situational analysis (chapter 1.1) were concluded into suggestions for a range of basic health care services to be delivered as a standardized package along a "continuum of care" that links communities, local PHC centres and hospitals. The BHSP package presented in chapter 2 represents the vision of the MoH for a standardized package of basic health services that would form the core of service delivery in all PHC facilities. The package is a "living document" that needs to evolve over time to meet changing needs. With the benefit of experience, the package can be further improved and tailored to enhance the quality of health services.

The costing exercise and plan for the BHSP is expected to be finalized in August 2010. It will entail a method and summary of results for estimating the cost of providing the essential basic services package in Iraq. The costing method for the Iraq BHSP will be undertaken in accordance with global costing procedures with some necessary changes to adapt to the specific circumstances in Iraq.

Despite the limitations, the delivery of the BHSP will build on the existing system in order to meet the immediate needs while initiating change over time. Annex VI outlines both practical and strategic considerations for the implementation of the package.



1. Background: The Current Situation of Primary Health Care

1.1 Health status

The health status of Iraq's population has suffered major blows due to decades of war and economic sanctions. This has resulted in a severe drop in Iraq's gross domestic product and consequently its public expenditure on health. Health services have deteriorated and the sector has faced continuous shortages in drugs and other supplies. Moreover, the current ongoing conflict and poor security situation has further damaged the country's health infrastructure. Many health professionals have fled for safety to neighbouring countries and abroad and the population's access to basic health services has become increasingly impaired.

The assessment of the current health situation in this section focused on:

- identifying priority health problems (in terms of mortality and morbidity) that need to be targeted by interventions in the health service package; and
- identifying differentials in health status (by age, gender or geographic location) so as to define population groups that need to be targeted by the package.

1.1.1 Demographic indicators

Population

The total population of Iraq was estimated to be 31 million in 2008¹ as compared to 28.5 million in 2007.² The annual population growth rate registered 3% on the average over the last three decades.

	Year 2002*	Year 2005**	Year 2007***	Year 2008****
Population (million)	25.5	27.9	28.8	31
Total fertility rate	4	6	5	5
Population growth rate (%)	2	2.7	2.7	3
Crude birth rate (per 1000 population)	29.3	38	37	36
Crude death rate (per 1000 population)	7.8	10	8	5

Sources:

*Year 2002 World Development Indicators, World Bank online.

**Year 2005: World Health Organization country profiles, WHO website.

***Year 2007: Health Compass, MoH.

****Year 2008 COSIT and MOH.

Geographical distribution of the population

In 2008, approximately 66.5³% of the population was living in the urban areas. As a result of the war and ongoing conflict, Iraq has been experiencing very high internal population movements with more people moving to the more secure rural areas. In addition, many Iraqis fled the country altogether.

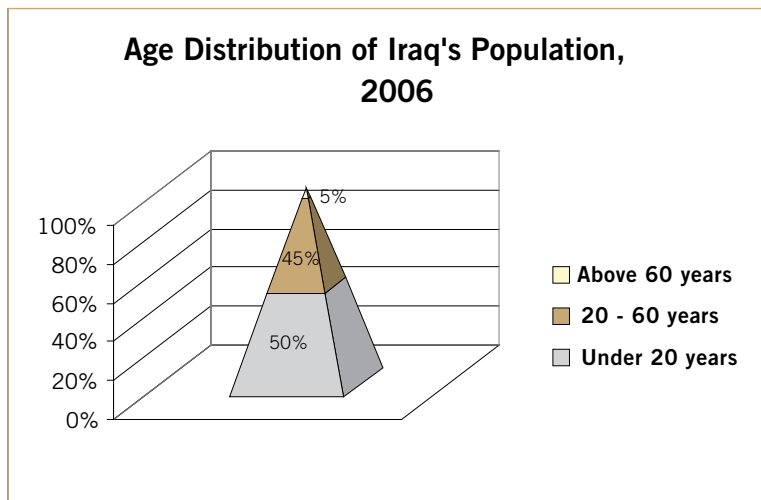
¹ Health Compass 2008

² Source: Iraqi MoH

³ Health Compass 2008

Age distribution of the population

The population pyramid depicts the age distribution of the household population for Iraq in 2006. The age distribution is typical of a population with high fertility. Iraq has a young population with more than half below the age of 20 years and 17% below the age of five years. Only about 5% are 60 years or older (source: Iraq Family Health Survey 2006/07).



Gender Distribution of the population

The average family size is 6.4 persons (Source: Iraq Family Health Survey IFHS, 2006/7). The male to female ratio is 1.02 to 1 (source: WHO Country Co-operation Strategy for Iraq 2005-2010). The gender ratio is balanced at the younger age group; however, there is a severe male deficit in the age groups 40-54 years, especially in the age group 50-54, which is attributed to Iraq's recent history of war and conflict.



1.1.2 Health Indicators

Life expectancy

Life expectancy (LEX) at birth was 60.6 years during 2008 compared to around 58 years during 2007. These figures are very low compared to neighbouring countries in the region.

Mortality Rates

The most recent age-specific mortality rates are as follows:

- Infant mortality rate (IMR) was 35 per 1000 live births on the national level in 2006 according to the most recent Multiple Indicator Cluster Survey (MICS3). However, that same rate was reported to be as high as 107.9 per 1000 in 2003 (WHO country profile).
- Under-five child mortality rate (probability of dying before 5th birthday) was 41 per 1000 live births on the national level according to the 2006 MICS3. However, both the World Bank and WHO reported very high under-five child mortality rate of 130 per 1000 live births in 2003.
- Maternal mortality ratio (MMR) was 84 per 100 000 live births in 2006, according to the Iraq Family Health Survey 2006/7. However, a very high MM ratio of 294/100 000 live births was reported in 1999 (ICMMS).

It is difficult to verify whether the significant decline in age-specific mortality observed between the years 2003 and 2006 is attributable to true improvements in health status or merely represents variations in data sources and/or data collection methods.

Indicator	Year 2003	Year 2006	Unit
Infant mortality rate	107.9	35**	Per 1,000 live births
Under-five mortality rate	130	41**	Per 1,000 live births
Maternal mortality ratio	294 ⁴	84*	Per 100,000 live births

Sources:

Year 2006:* Iraq Family Health Survey (IFHS), 2006

** Iraq Multiple Indicator Cluster Survey (MICS3), 2006

1.1.3 Burden of Disease

Iraq is suffering from a double burden of disease including acute and infectious diseases such as diarrheal diseases, acute respiratory infections, tuberculosis and leishmaniasis. At the same time, chronic conditions such as cardiovascular diseases, diabetes, malnutrition and cancer are of major concern.

The most recent data compiled by the MoH (Iraq Health Compass 2008) shows the following health conditions as the top ten causes of mortality.

⁴ Maternal Mortality Ratio was measured by ICMMS in 1999 as 294 per 100,000 live births

Rank	Cause of Mortality	Cause of Morbidity
1	Cardiovascular diseases	Gastroenteritis
2	Accidents	Accidents
3	Tumors	Bronchitis
4	Senility	Abortion
5	Septicemia	Pneumonia
6	Renal Failure	Cardiovascular diseases
7	Cerebro-vascular strokes	Malignant Neoplasm
8	Hypertension	Inguinal hernia
9	Diabetes Mellitus	Urinary tract infections
10	Acquired Asthma	Diabetes Mellitus

The MoH reported the following leading causes of death for children under-five and mothers:

For Children under Five

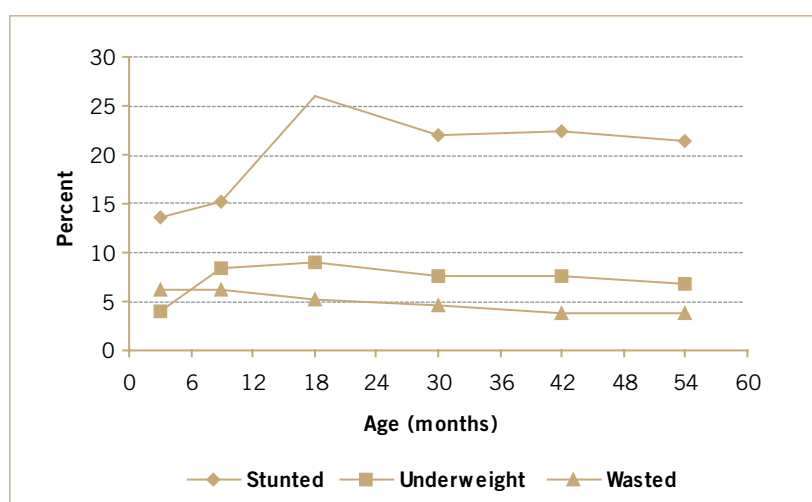
	Cause of Mortality	Cause of Morbidity
1	Acute diarrheal diseases	Diarrheal diseases
2	Acute respiratory infections	Acute respiratory infections
3	Malnutrition	Communicable diseases (measles, mumps, whooping cough, diphtheria, typhoid and leishmaniasis)
4	Congenital anomalies	
5	Septicaemia	

Maternal Causes

	Cause of Mortality	Cause of Morbidity
1	Bleeding	Hypertension
2	Acute pulmonary embolism	Diabetes
3	Hypertension	Depression
4	Irreversible shock	Fistula
5	Amniotic fluid embolism	STDs and reproductive tract infections
6	Sepsis	

Child malnutrition

The figures below, derived from several surveys, confirm the serious nutritional status of young children in Iraq. Child malnutrition became a major problem in Iraq following the 1990-1991 Gulf war and subsequent economic sanctions. The 2006 national figures for malnutrition in children under-five years of age are high in comparison to most countries with some governorates registering seriously high levels. The rates for stunting and wasting are also high and Iraq is among very few Arab countries in which the incidence of low birth weight exceeds 10%.



Percentage of children aged 0-59 months who are undernourished, Iraq, 2006, (MICS3)

Only one in four children aged less than six months are exclusively breastfed (25%). Half of children aged six to nine months old are breastfed and receive solid or semi-solid foods (51%).

Prevalence of malnutrition among children under-5 years:

	ILCS Year 2004	FSVA (WFP) 2007	MICS3 2006
Underweight (%)	11.7	9.1	7.6
Stunting (%)	22.4	21.8	21.4
Wasting (%)	7.5	4.7	4.8

Sources:

Year 2004: Iraq Living Conditions Survey (ILCS), 2004.

Year2007: Iraq Food Security analysis (United Nations World Food Programme)

Communicable diseases

Infectious diseases remain major causes of morbidity and mortality. The surveillance system is in need of support especially in the area of integration, private sector involvement, improving laboratory diagnosis and updating the disease surveillance guidelines. The system covers endemic and epidemic diseases as well as diseases that have global eradication or elimination goals.

Hepatitis: During 2006, WHO provided full technical and logistic support for the study of Viral Hepatitis in Iraq. The primary aim of the study was to estimate the prevalence and incidence of all types of viral hepatitis. Results showed that Hepatitis A is hyper-endemic with a prevalence rate of 96.4 % (compared with previous figures of 90%–95%); Hepatitis E is also endemic with prevalence of 20.3%; both Hepatitis B and C are of low /very low endemicity (1.6% and 0.4%, respectively).

Typhoid: Typhoid fever, a water and food-borne disease, is highly endemic in Iraq. Hot weather and continuous interruptions in electricity and water supplies during the summer months of 2006 to 2008 raised concerns of an expected increase in the occurrence of waterborne diseases. Accordingly, numerous interventions were implemented to prevent and control outbreaks of typhoid fever. In 2005, 2006, 2007 and 2008, a total of 33 720, 26 150, 36 208 and 58 247 typhoid fever cases were recorded, respectively.

Cholera: Poor water quality, bad sanitation and sub-optimal personal hygiene contributed to extensive cholera outbreaks in the summers of 2007 and 2008. In 2007, 4691 cholera cases were reported, including 24 deaths. Most of these cases were reported in the northern governorates of Arbil, Kirkuk and Sulaimaniya. In contrast, most of the 925 cases (including 11 deaths) recorded in 2008 were reported in the central and southern governorates of Babil, Baghdad, Basrah, Diwaniyah and Kerbela. In the first six months of 2009 only two cholera cases were confirmed. A cholera preparedness and response plan was drawn up in 2007 and updated in light of the lessons learnt in 2008.

HIV/AIDS: The cumulative number of HIV/AIDS cases registered from 1986 to 2007 was 269. Among the registered cases, 85% are males and 77% are hemophiliacs who became infected in the early eighties through contaminated blood products. Since 2003, a total of 63 cases have been reported. Unlike the previous cases, sexual transmission has appeared as an important mode of transmission. Although the number of registered HIV cases in Iraq remains low with a prevalence of below 0.1%, risk factors which may lead to the spread of the disease, such as insecurity, the disruption of social structure, increase in sexual violence etc. are present.

Tuberculosis (TB): Based on 2008 estimates, the incidence of TB is 56 per 100 000 population per year for all forms of TB cases with 25 per 100 000 per year for infectious cases. Every year approximately 16 200 people are estimated to have TB in the country. As a result of deteriorating socioeconomic conditions during the last decade, the incidence of TB has been on the rise. The gradual but steady improvement in the security situation in the past two years with additional support from partners such as the Global Fund (GFATM), WHO and the Global Drug Facility has witnessed the revitalization of the National TB Control Programme. Notifications of smear positive cases increased from 37% in 2007 to 43% in 2008. In 2008, the successful treatment outcome of sputum smear positive cases was as high as 87%.



Malaria: The current Malaria situation indicates that Iraq is moving towards an elimination phase in which the disease is isolated to very specific areas. During 2008, active case detection activities identified six cases, two of which were imported. Two of the four indigenous cases were relapsed cases. During 2007, only three Malaria cases were reported: two in Sidican village in the Arbil governorate and one imported case from Ethiopia.

Leishmaniasis: Similarly, the incidence of Kalazar shows a declining trend. In 2008, a total of 1005 cases were reported compared to 806 cases in 2007 (excluding Al-Anbar province), 1572 cases in 2006, 2059 cases in 2005, and 3218 cases in 2004. The reduction in the incidence of both malaria and leishmaniasis is attributed to the comprehensive package of prevention and control activities conducted during previous years by the MoH with full technical and logistics support from WHO. Such activities included (among others): early diagnosis and response, indoor spraying, fogging, entomological surveillance activities, and rodent control activities.

Maternal and Reproductive Health

On average, by the end of their reproductive years, Iraqi women attain a parity of 6.38. The mean number of children born is higher in rural than in urban areas. The miscarriage rate is 9.7 per 100 pregnancies. The rate for still births is 0.8 per 100 viable pregnancies. The total number of pregnancies that do not result in a live birth is 11 per 100 (source: IFHS 2006/7). According to the 2006 MICS3, contraceptive prevalence among women was reported to be 49.8%. Almost 63% of deliveries are conducted at health facilities and 88.5% of deliveries are attended by a skilled health worker (Source: IFHS 2006/7)

The MICS3 reported that in 2006 only 2.7% of Iraqi women had comprehensive knowledge of HIV/AIDS, with 34.7% aware of at least one method of preventing HIV transmission. Only 8.3% of women had an awareness of all three methods of preventing HIV transmission.

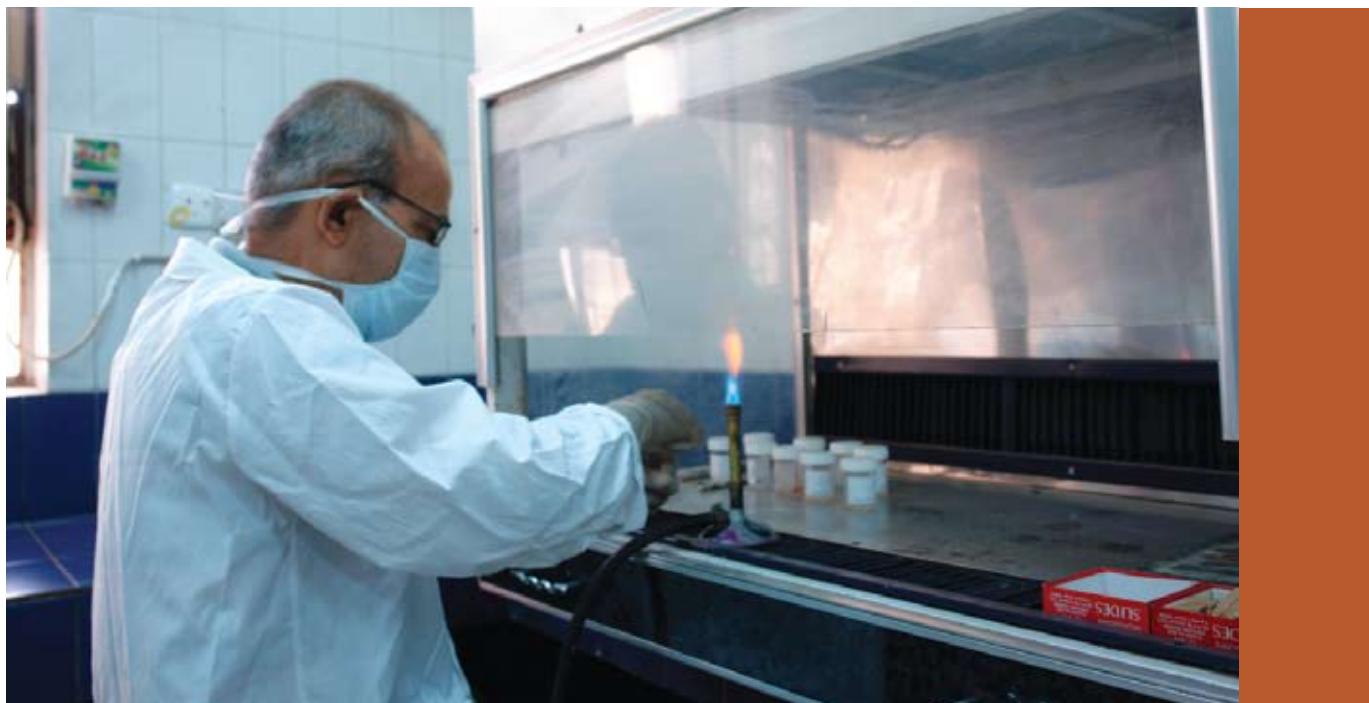
Chronic illnesses

Chronic illnesses such as heart diseases, strokes, cancer, respiratory diseases and diabetes are leading causes of mortality in Iraq (MoH, 2008).

According to Iraq Family Health Survey (IFHS) 2006/7, the most frequently reported chronic conditions are high blood pressure (41.5 per 1000 persons), diabetes (21.8), joint diseases (18.6), heart diseases (12.0) and gastrointestinal disease (11.2). Most of these conditions increase in prevalence as age rises.

Risk Factors

The Chronic Non-communicable Diseases Risk Factors Survey 2006 showed that 40.4% of the adult population (aged 25-65 years) suffered from raised blood pressure, 10.4% had hyperglycemia, and 37.5 had hyper-cholesterolemia. The survey also showed that 66.9% of the adult population was overweight with one-third suffering from obesity. The rate of obesity was found to be higher in females than in males (38.2% and 26.2%, respectively). Furthermore, smokers constituted 21.9% of the adult population while 90.1% of the population had low fruit and vegetable consumption and 56.7% had low levels of physical activity. These results explain the serious disease burden which reflects the increase in morbidity and mortality attributed to NCDs.



1.2 Primary health care service delivery system

The MoH is the main provider of health care in Iraq. There is a Directorate of Health (DoH) in each of the 18 governorates (two in Baghdad). Governorates are further divided for administrative purposes into 118 health districts. Each district covers on average of between 200 000 - 300 000 people.

Primary health care is provided through PHC centres and hospitals. Patients are charged nominal fees for curative care and medicines. Primary health care services including examination, investigations, immunization, antenatal care, health education, etc. are provided free of charge.

1.2.1 PHC infrastructure

PHC centres provide preventive, promotive, and basic curative services, along with simple diagnostic investigations.

There are 1989 PHC centres and sub-centres throughout the country. Approximately 50.4% of the PHC centres are staffed by at least one medical doctor and are referred to as PHC main centres. The remaining 49.6% are staffed by trained health workers (nurses and medical assistants) and are referred to as PHC sub-centres.

In each district there is on average of five to 10 PHC centres serving a population ranging from 10 000 – 45 000. There is currently on average 0.7 PHC centres per 10 000 population. This is low in comparison to both international standards and neighbouring countries (two to three per 10 000). PHC main centres constitute only 30% and PHC sub-centres only 16% of the community needs.

PHC main centres

There are three categories of PHC main centres:

- **Primary health care centres (Category: A) – approximately 817 centres:**
These are the centres that deliver all the primary health care services.
- **Primary health care training centre (Category: B) – approximately 19 centres:**
These centres offer the same services as category (A) plus a training hall within the main building to deliver training activities for medical, paramedical staff of health facilities, medical institutions and medical school students.
- **Primary health care centres with delivery room and emergency unit: (Category: C) – approximately 123 centres:**
These centres deliver the same services as category A facilities in addition to emergency care services (for simple medical and surgical cases) and services for normal labour.

PHC Sub-centres

Primary health care sub-centres: (Category: D) – approximately 53 centres:

These sub-centres deliver simple maternal and child health services, immunization activities and simple curative services.

Hospitals

PHC centres are intended to refer to the second level of care at MoH district and general hospitals. Secondary and tertiary care is provided by 208 government hospitals (49 of which are in the Kurdistan region), providing 36 057 hospital beds and 80 private hospitals (2 273 beds), two thirds of which are located in Baghdad. The ratio of beds in public hospitals is 11.3 per 10 000 population with a bed occupancy rate of 48%.

The past two decades have witnessed a progressive deterioration in the quality of care. Health facilities and hospitals lack proper maintenance and are short of supplies, drugs and equipment. In addition, there has been a continuing depletion of experienced professionals at all staffing levels. Many buildings still lack electricity and proper sanitary amenities and are in dire need of rehabilitation and/or expansion. Human resources are inadequate in number and unevenly distributed. In addition, there is a high turnover of staff at all levels, which has a negative impact on continuity and the delivery of health care services.



1.2.2 Geographical distribution of PHC facilities

PHC facilities are inequitably distributed with large differences both between and within governorates. Large disparities also exist between urban and rural populations, particularly in their ability to access health services. In suburban and rural areas 29% and 26% of people respectively are required to travel 30 km to the nearest PHC centre. In comparison, only 5.4% of urban dwellers travel the same distance. Access to health facilities has also been negatively impacted by the poor security environment, a situation that has disproportionately impacted pregnant women and women in labour.

1.2.3 Referral system between primary and secondary care

In practice, there is minimal coordination between the PHC level and the district hospitals apart from communicable disease surveillance. The referral system is either rudimentary or practically non-existent. No system of general or family practice is yet in place. However, family practice has been accepted as a policy and is being piloted in three locations: Basrah, Baghdad and Mosul. Health centre and hospital care are not coordinated within district health systems. In addition, over two decades of war, conflict and prolonged economic sanctions have led to deterioration in the quality of service provision, a shortage in technical expertise and diagnostic services, and a rationing of drugs. This situation has forced patients to seek services at the tertiary care level. Consequently, the majority of people go directly to the hospital. Approximately 65% of deliveries take place at hospitals. Family planning services are also mainly provided through hospitals (67%).

1.2.4 Human resources

Human Resources for health are inadequate in number and unevenly distributed. In addition, there is a high turnover of staff at all levels, which has a negative impact on the continuity of delivery of health care services. According to MoH 2008 Annual Report, there are about 19 334 physicians nationwide, (compared to 18 887 reported by the 2007 Health Compass). There are insufficient physicians focusing on PHC. Altogether there are 5997 specialists. There are also shortages in some fields such as anesthesia, emergency medicine, psychiatry, community and family medicine.

While the physician to population ratio is lower than other countries in the region, the reported distribution of physicians per 10 000 population varies from 2.9 in Missan to 10.5 in Sulaimaniya. The national average was 6.1 (2008). There is also a severe shortage in qualified nurses, especially females (female to male ratio of nurses stands at 1:3.6). The rate of nurses and paramedical staff per 10 000 populations is 11.4 and 13.2, respectively. There is also shortage of pharmacists and dentists (1.5 and 1.4 per 10 000, respectively). Staffing of PHC centres varies. On average, a main PHC centre is staffed by four physicians, 11 paramedical staff and one to five dentists serving the catchment area of the centre.

1.2.5 Health care utilization

On average, each PHC centre is responsible for providing primary care to a population ranging from 10 000 - 45 000. According to the Rapid Assessment of the Primary Health Care Facilities conducted in 19 districts under the SPHCS Project, the percentage of population attendance varies from 3% - 26%. Variations in the number of people attending PHC centres also occur within the same districts, which could be attributed to the following:

- catchment areas and populations are not allocated for health centres;
- the size of the catchment areas or the population served by the PHC facility varies;
- instability of drug supplies to the PHC centres;

- the distribution of the population might be differed from scattered villages to aggregated small towns.

1.2.6 Other features of the PHC network

- The state of physical infrastructure is not satisfactory and requires major repairs. Although extensive construction and rehabilitation projects have been undertaken by the GOI and the international community major shortages remain. Moreover, PHC centres are unable to function properly due to shortages of equipment and drugs. Efforts are being made to equip the PHC network in order to meet the basic needs of the patients. A draft National List of Essential Medicine has been developed under the SPHCS project, and rational drug use is being promoted.

Medical records are available in all PHC main centres but not in PHC sub-centres. They have been updated in some areas such as Maternal and Child Health (MCH) and Communicable Diseases (CD) while other areas are in need of review and updating to ensure that proper data collection and recording is being practiced.

1.2.7 Health care delivery through the private sector

The private sector has the capacity to supplement weaknesses in the public sector, especially in curative services. Services are provided through a disconnected network of a large number of clinics nationwide and small private hospitals, mostly located in Baghdad. There are no official or formal mechanisms for public-private collaboration and partnership.

Other health service providers

The semi-private sector includes public clinics operating at PHC centres in the afternoon. Such clinics provide curative services and distribute drugs for patients with chronic diseases. Their fees are higher than those charged at public centres but lower than the private sector.

Information on traditional healers is scarce though it is known that there are many traditional and unqualified healers illegally providing their services. They include traditional birth attendants (TBAs), bone setters and herbal medicine dispensers.

Experience in the provision of health care by NGOs is limited. Efforts to strengthen the PHC system through community-based initiatives (CBI) are being introduced under the SPHCS project. Health workers are being trained to have an advisory and/or supportive role that would strengthen the link between health centres and the community.



2. Development of the Basic Health Services Package

2.1 Definition of a Basic Health Service Package (BHSP)

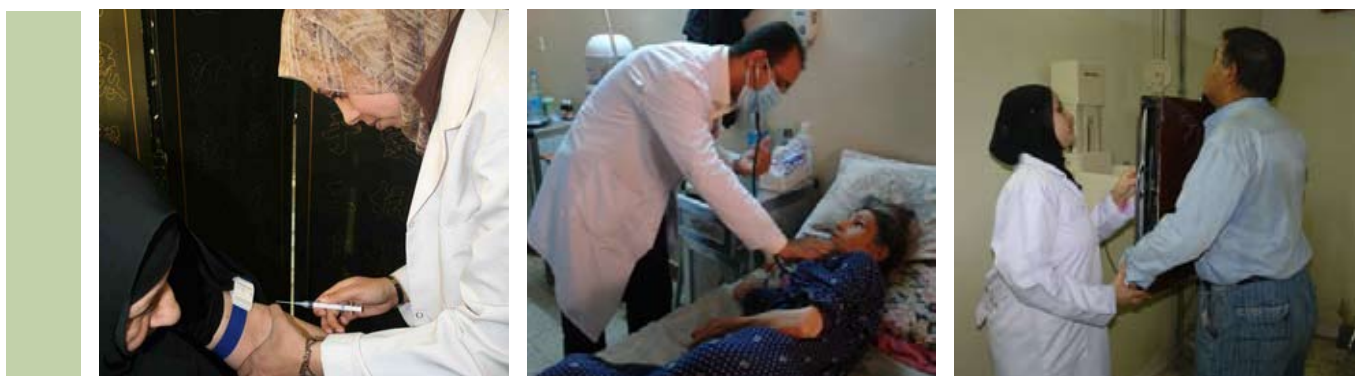
A BHSP is defined as a minimum collection of essential health services that all the population need to have a guaranteed access to. Essential services are those health services that provide a maximum gain in health status (on the national level) for the money spent. Conversely, essential services are those services, which if not provided, will result in the most negative impact on the health status of the overall population.

2.2 Approach and criteria for including a service in the BHSP

The main approach was to identify essential services that would yield maximum gains in health for the money spent (cost-effective services). The balance between available resources and the services provided was also an important consideration. A package that includes a wide range of services beyond the available resources would result in poor quality, low utilization and resource wastage. Finally, all services included in the package were identified as addressing Iraq's health priorities and targeting its most vulnerable populations.

In summary, the Iraq BHSP was designed to:

- address priority health problems and improve health status;
- target the most vulnerable and under-served populations and improve equity and physical/economic access;
- improve allocative efficiency in the use of resources by promoting better allocation of the health budget between primary and secondary care;
- enhance clinical effectiveness and quality of care to improve health outcomes and consumer satisfaction;
- ensure technical and administrative feasibility by considering manpower and operational constraints of the health care system;
- secure financial sustainability by ensuring the package is affordable; and
- ensure the package is both socially and politically acceptable to the Iraqi population and government.



2.3 Components of the BHSP

An attempt has been made to ensure that the proposed package includes:

- services that are practical, essential and comprehensive;
- a range of appropriate diagnostic tests matching the services provided at each level;
- a list of essential medicines for each level of PHC facility; and
- appropriate equipment for each level.

Patients are referred to the next level of care if their needs fall beyond the scope and/or staff competence of the PHC centre. Patients with a need for additional health or social services will be referred as appropriate. PHC centres will include a reporting, supervision and monitoring system for all services provided.

The components of the BHSP are discussed below. Details of the range of services offered at each level of facility are presented in the relevant Tables in the Annex. Most of the services presented in the package are currently being provided but not at all levels and need to be strengthened.

1. Maternal and Newborn Health (Table 1)

Services for women are provided in an integrated and comprehensive manner covering preventive, promotive and curative aspects of care. The focus is on:

- antenatal care
- delivery care
- postnatal care
- family planning
- care for the newborn.

2. Child health and immunization (Table 2)

Services include promotive, preventative and curative services, such as:

- growth monitoring
- Expanded Programme on Immunization (EPI)
- Integrated Management of Childhood Illnesses (IMCI).

3. Communicable diseases treatment and control (Table 3)

This component deals with the management of communicable diseases with the emphasis on prevention, early diagnosis and initiation of measures to prevent transmission and serious morbidity. Disease surveillance and reporting are an integral part of the activities.

Separate chapters deal with diseases, which are priority national public health diseases and/or could cause outbreaks, including:

- TB
- typhoid
- hepatitis
- cholera
- malaria
- leishmaniasis
- schistosomiasis
- meningitis
- HIV/AIDS and STIs.

4. Nutrition (Table 4)

Improvement of nutrition status is provided through a mix of interventions linked to various services and is aimed at specific target groups, in particular women and children. Services include:

- promotion of proper nutrition
- prevention of malnutrition
- treatment of malnutrition.

5. Immunization (Table 5)

Immunization is an essential service and is based on an uninterrupted and monitored cold chain of constantly available vaccines. Services aim to use every opportunity to ensure wider coverage through:

- routine immunization services
- NIDs
- special mass campaigns during outbreaks
- disease surveillance.

6. Non-communicable diseases treatment and prevention (Table 6)

Non-communicable disease treatment and prevention are currently being piloted at the PHC level. The intention is to expand these services to all PHC centres. Services are aimed at promoting healthy lifestyle, risk assessment, recognizing, assessing and initiating treatment and referral of emergency situations. Priority non-communicable diseases are:

- cardio-vascular diseases (hypertension, heart diseases, cerebrovascular diseases)
- diabetes
- arthritis
- gastrointestinal diseases
- chronic obstructive lung diseases
- renal diseases.

Other common non-communicable diseases include:

- rheumatic fever
- skin diseases
- malignancies
- common eye diseases
- common ear problems.

Oral health

Basic oral health care services at PHC level consist of preventive oral health services (oral health education) and basic treatment services including the emergency relief of pain and sepsis (including dental extractions).

7. Mental health (Table 7)

There is a policy direction to include mental health services at PHC level. Mental health services aim at education and awareness raising, case detection, psychosocial management and referral of cases. The main mental health problems include:

- psychosis
- anxiety
- depression
- epilepsy
- mental handicap
- substance abuse
- management of victims of violence.

8. Emergency care (Table 8)

PHC centres provide an emergency and resuscitation service. The aim is to provide first aid and/ or initial management and to have arrangements to transfer patients to first referral facilities. The package specifies what services should be provided but not how they should be provided. In general, PHC sub-centres assess, provide first aid services to stabilize the case and refer to the hospital. PHC main centres assess, diagnose, stabilize and either treat or refer. Emergency services include:

- basic emergency obstetric care
- respiratory/cardiac emergencies (CPR)
- diabetic emergencies
- allergic emergencies
- suspected poisoning
- trauma
- bleeding.

9. Food safety, environmental health and school health (Table 9)

Food safety and inspection services are carried out to prevent food-borne illnesses in schools, food handling places and establishments. Samples are collected regularly and sent for investigation.

Environmental health control is provided through regular audit activities carried out by the PHC main centres where water samples are taken on a daily basis for analysis, and proper waste management is observed.

School health services are already being implemented but need further strengthening. They include coordinated activities covering health promotion services and general check-up of the students through regular organized visits. Students who require more intense clinical assessment and management are referred to the nearest PHC main centres.

Pre-school entry examination for students entering the first grade is carried out at primary schools (aged six years). The examination is conducted at PHC centres for the detection of refractory errors or hearing problems, and congenital or bony abnormalities. The immunization record of students is also checked.

A pre-college entry examination for students who have completed the secondary school and are submitting for colleges is also conducted. This task is undertaken by a special committee at selected PHC centres within the catchment area of the school.

10. Health education (Table 10)

Health education activities are integrated into all services provided at the PHC centres. All clients attending PHC centres receive appropriate health education, information and support. Services are provided through:

- face to face meetings
- health education campaigns in high risk areas
- social mobilization for different health programmes
- health education material
- media.

11. Diagnostic services (Table 11)

Diagnostic laboratory and imaging services support effective delivery of health care. A range of appropriate laboratory tests is made available at each level of health facility matching the services offered. District and central labs provide the necessary support for confirmation of specific tests as per national policies and guidelines of MoH.

Laboratory services include the following fields:

- hematology
- serology
- biochemistry
- virology
- bacteriology
- parasitology.

Imaging services include:

- x-ray
- ultrasound.

12. Essential medicines (Table 12)

A standard list of essential medicines to satisfy the priority health care needs is selected from Iraq's National List with due regard to health services rendered by each level of facility and cost-effectiveness. Essential medicines are intended to be available within the context of a functioning system at all times in adequate amounts.

13. Equipment (Table 13)

A set of essential medical equipment to meet the basic needs of health services is defined for each level of health facility. Criteria for selection are appropriate technology, multiple application and cost-effectiveness. The list includes equipment for:

- laboratory diagnostic services
- radiology diagnostic services
- surgical services.





2.4 Types of facilities offering the BHSP

The BHSP will be offered at four standard levels:

2.4.1 Community health houses

Community health houses will be staffed by male and female community health workers who will have an advisory and supportive role in strengthening the link between the community and the PHC centres. Services provided include Information Education and Communication (IEC) activities, distribution of condoms and oral contraceptives, and micronutrient supplementation and support during vaccination campaigns and growth monitoring. Limited curative care after receiving appropriate training will be provided for IMCI as well as acting as DOTS providers. Female community health workers will focus on providing care for normal deliveries, identifying danger signs, and referring patients to health centres.

2.4.2 PHC sub-centres

PHC sub-centres have no medical doctors. They are staffed by trained health workers (nurses or paramedics, and a vaccinator) and serve a population of 5000 – 10 000. Services offered include preventive and basic curative services and simple diagnostic procedures such as:

- maternal & child health services
- assistance in normal delivery
- IEC activities
- immunization activities
- curative services
- some essential medicines
- some laboratory services.

2.4.3 PHC main centres

Main PHC centres are staffed by doctors, nurses, midwives and laboratory and pharmacy technicians. The centres serve a population ranging from 10 000 – 30 000 and up to a maximum of 45 000 in centres with emergency and obstetric care services. PHC main centres provide a wide range of preventive and curative services, including some complications, difficult cases of childhood illness and other curative services. Areas of services include:

- maternal & child health services
- immunization services
- communicable diseases
- noncommunicable diseases
- mental health
- emergency services
- dental services
- laboratory services
- essential medicines.

Some PHC main centres include provision for simple medical & surgical cases and basic emergency obstetric care (Category C) and have limited space for inpatient care.

2.4.4 District hospitals

The district hospitals (first referral hospital) will provide all services in the BHSP including the most complicated cases. Cases referred to the district hospital level include major surgery under general anesthesia, comprehensive emergency obstetric care (including caesarian sections) and family planning methods. The hospital will also provide a wider range of laboratory services and essential medicines than those provided at PHC centres. The staff will include doctors, OB/GYNs specialists, surgeons, anesthetists, pediatricians, midwives, lab and x-ray technicians, pharmacists, dentists and dental technicians. Each Hospital will provide services to a population ranging from 50 000 – 150 000 depending on geographical access.

2.5 Staffing of PHC facilities

Staffing levels in the BSHP conform to the current MoH standard and will need to be revised. Due to the variation in population numbers served by PHC facilities it was difficult to reach a definitive decision with regards to staffing levels. Because human resources are scarce and unevenly distributed, a study to analyze human resources (numbers, qualifications, job description and distribution) will be needed to identify shortages and to estimate current and future human resource requirements according to service quantity and task, and to adjust them to local realities and priorities. Meanwhile, current MoH standards should be regarded as the minimum requirement to deliver the package.

2.6 Development process of the BHSP

The approach adopted for developing a BHSP for Iraq emphasized “ownership” by the Iraqi Government so that the product generated would emphasize “relevance” to the needs and priorities of the Iraqi people.

The package was developed by a core team of MoH specialists with expertise in all relevant areas. The role of the consultants (EPOS Health Consultants) under the SPHCS project was merely facilitatory and advisory. The



vision was that successful implementation and sustainability are only possible if it is a “national” rather than a donor-driven product.

The collaborative process involved several months of assessment and planning and capitalized on existing studies and previously completed work:

1. A planning workshop was held in Amman in March 2008 with the purpose of defining the product, agreeing on a conceptual framework and brainstorming ideas for BHSP content.
2. An assessment of health status and infrastructure was conducted to identify the current health priorities in Iraq. The analysis was rapid and relied on secondary data sources since the focus was to feed into the package rather than conduct a thorough situational analysis.
3. The content of package (as defined by the services to be delivered at the different levels of the PHC network) was drafted by the relevant MoH experts. A participatory process was used to deal with cross-cutting issues. Several rounds of email and telephone exchanges were utilized to refine and reach consensus on the content.
4. The trade-off between what is affordable or achievable and what is ideal was the biggest challenge that the team had to struggle with given the current implementation realities in Iraq.
5. With the technical assistance of SPHCS consultants, a list was drafted of equipment and essential drug lists for the agreed upon services to be included in the BHSP.

Finally, a series of videoconferences were held in Amman in May 2008 to finalize the BHSP and initiate dialogue regarding implementation priorities and strategic planning issues that the Iraqi government needs to

address to ensure that nationwide implementation of the BHSP is both successful and sustainable.

Details of the components of the BHSP are listed in the Annexes (I-V). For each of the 4 levels the package identifies:

- services that should be available
- diagnostic services
- essential medicines
- equipment by type of facility
- the minimum recommended level / type of staffing
- further areas of support and supervision at district and national levels.

The details are organized under the annexes as follows:

Annex I: Components of the BHSP by type of health facility (Tables 1-10)

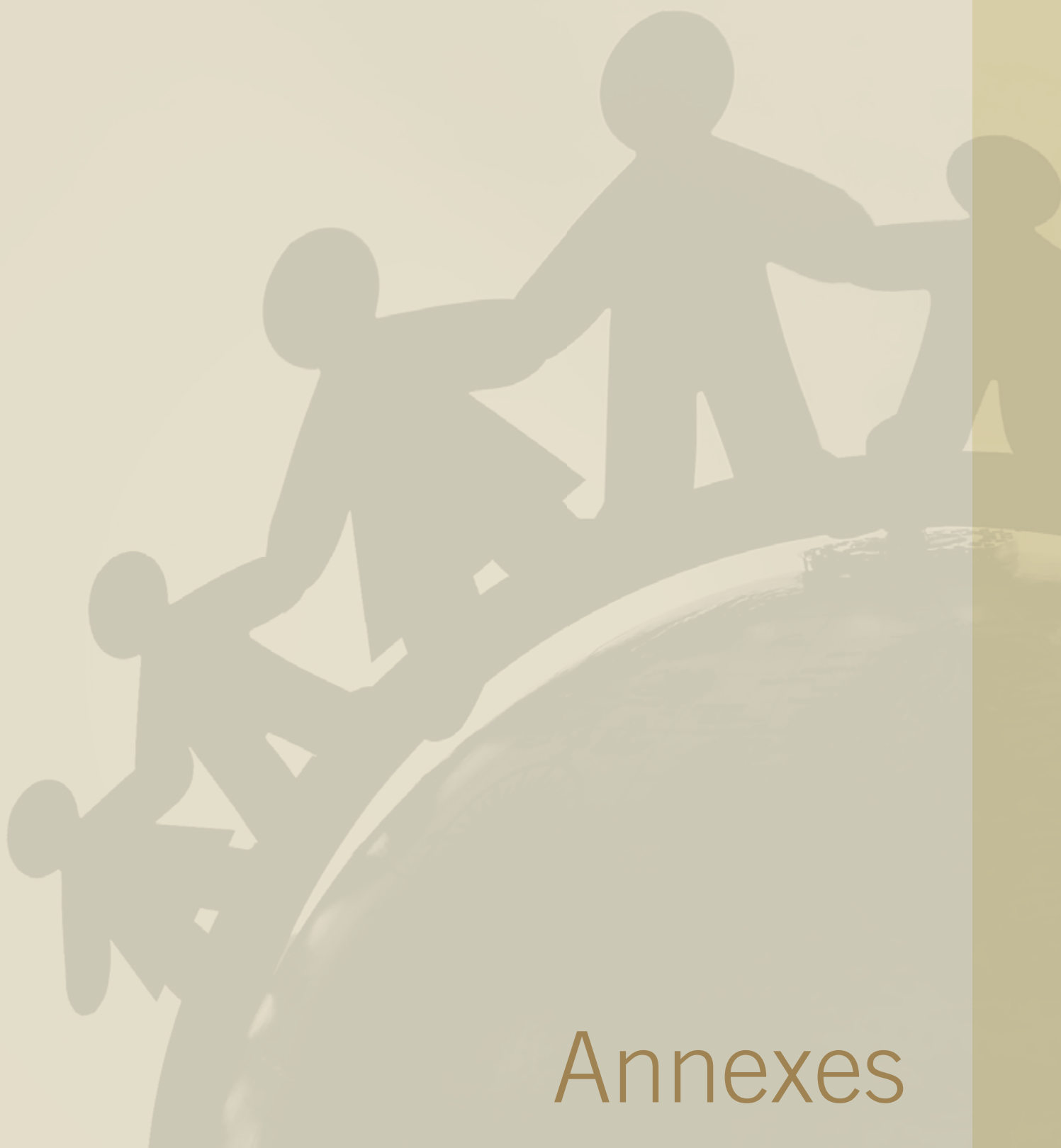
Annex II: Diagnostic services by type of facility (Table 11)

Annex III: Essential medicines by type of facility (Table 12)

Annex IV: Equipment by type of facility (Table 13)

Annex V: Summary of services, staffing, equipment and essential medicine by type of facility (Tables 14-17)

Annex VI: **Guidelines for implementation of BHSP**



Annexes

Table 1: Maternal & Newborn Health Services by Type of Facility

Services	Health Facility Level			
	CHH	PHC sub-Center	PHC main Center	District
Antenatal Care				
Information, education and communication (IEC)	yes	yes	yes	yes
Premarital Examination and counseling			yes	yes
Diagnosis of pregnancy	assumption	assumption	yes	yes
Antenatal visits - weight, height measurement etc..		yes	yes	yes
Tetanus immunization			yes	yes
Multi-micronutrient supplementation		yes	yes	yes
Blood pressure measurement		yes	yes	yes
Blood sugar measurement			yes	yes
Urine analysis			yes	yes
Diagnosis of anemia			yes-blood test	yes-blood test
Treatment of anemia		yes-iron/folic	yes-iron/folic/ blood (acute blood loss)	yes-iron/folic/ blood (acute blood loss)
Treatment of asymptomatic urinary tract infection			yes	yes
Treatment of symptomatic urinary tract infection			yes	yes
Treatment of sexually transmitted diseases			yes-based on lab findings	yes-based on lab findings
Detection of pregnancy at risk (identify danger signs)	yes and refer	yes and refer	yes	yes
Treatment of hypertensive disorders of pregnancy			yes if specialist	yes
Treatment of pre-eclampsia/eclampsia			yes and early referral	yes
Treatment of incomplete miscarriage/abortion				yes
Treatment of ectopic pregnancy		stabilize and refer	stabilize and refer	yes
Reporting		yes	yes	yes
Supervision and monitoring		yes	yes	yes
Delivery Care				
IEC	yes	yes	yes	yes
Monitoring labor				yes
Detection of Fetal Risks	yes	yes and refer	yes	yes
Identify fetal malposition			yes	yes
Assist normal delivery			yes (if category C)	yes
Delivery requiring assisting instrumentation		refer	yes (if category C)	yes
IV oxytocin		refer	yes (if category C)	yes
IV anticonvulsant			yes and refer	yes
IV fluids				yes
Blood Transfusion				yes
Curettage			yes (if category C)	yes
Hysterectomy				yes
Management of prolapsed cord			yes (if category C)	yes
Management of shoulder dystocia			yes (if category C)	yes
Vacuum extraction			yes (if category C)	yes
External cephalic version			yes (if category C)	yes
Caesarian section				yes

Services	Health Facility Level			
	CHH	PHC sub-Center	PHC main Center	District
Antenatal Care				
Confidential reporting about maternal mortality				yes
Supervision and monitoring		yes	yes	yes
Postnatal care				
IEC	yes	yes	yes	yes
Vitamin A supplementation		yes	yes	yes
Detection of anemia	refer suspected cases	refer suspected cases	yes - lab	yes - lab
Treatment of anemia		yes	yes	yes
Diagnosis of puerperal infection	refer suspected cases	refer	yes	yes
Breast examination	yes	yes	yes	yes
Prescription of antibiotics			yes	yes
Counseling on FP and exclusive breastfeeding	yes	yes	yes	yes
Provide Family Planning	yes-condom	yes	yes	yes
Treatment of post-partum psychosis			yes	yes
Confidential reporting about maternal mortality			yes	yes
Reporting	yes	yes	yes	yes
Supervision and monitoring		yes	yes	yes
Family Planning				
Counseling	yes	yes	yes	yes
Clinical examination			yes	yes
Screening for STD	refer	refer	yes	yes
Treatment of STD			yes - oral/IV	yes - oral/IV
Distribute condoms	yes	yes	yes	yes
Distribute oral contraceptives	yes	yes	yes	yes
IUD			yes	yes
Female sterilization				yes
Male sterilization				yes
Reporting	yes	yes	yes	yes
Supervision and monitoring		yes	yes	yes
Care of Newborn				
IEC	yes	yes	yes	yes
Stimulate, clean airway; clean, clamp and cut cord; establish early breastfeeding	yes	yes	yes	yes
Prevention of ophthalmia of newborn	yes	yes	yes	yes
Resuscitation of newborn		yes	yes	yes
Incubator			yes	yes
Manage neonatal infections (ophthalmitis)	early referral	early referral	yes	yes
Manage neonatal sepsis	early referral	early referral	yes	yes
Manage neonatal jaundice	Counseling	Counseling	Counseling	yes
Manage neonatal tetanus	early referral	early referral	early referral	yes
Screening for inborn errors of metabolism				yes
Reporting	yes	yes	yes	yes
Supervision and monitoring		yes	yes	yes

Table 2: Child Health & Immunization Services by Type of Facility

Services	Health Facility Level			
	Community	PHC sub-Center	PHC main Center	Hospital
Information, education and communication (IEC)	yes	yes	yes	yes
Growth Monitoring for Children under 5 Years				
Growth monitoring of children U5 yrs	yes	yes	yes	yes
Dental care for children U5 yrs		yes	yes	yes
Immunization (EPI Services)				
Information, education and communication (IEC)	yes	yes	yes	yes
Ensure Availability of vaccines according to schedule of EPI		yes	yes	yes
Storage of vaccines (cold chain)		yes	yes	yes
Routine immunization (BCG, DPT, OPV, Measles)	yes-support	yes	yes	yes
EPI-plus (EPI+HB+Vitamin supplementation)	yes-support	yes	yes	yes
Vitamin A supplementation according to schedule	yes-support	yes	yes	yes
Follow up for defaulters	yes-support	yes	yes	
Outreach immunization	yes-support	yes	yes	
Campaigns (NIDs)	yes-support	yes-support	yes	
Disease surveillance and case reporting	yes	yes	yes	yes
Reporting	yes	yes	yes	yes
Supervision and monitoring		yes	yes	yes
Integrated Management of Childhood Illness (IMCI) for Children less than 5 years				
IEC, counseling mothers on breastfeeding	yes	yes	yes	yes
Counseling mothers when to return immediately	yes	yes	yes	yes
Counseling mothers what to do at home and follow-up		yes	yes	yes
A. Standard Case Management ARI Children U5 yrs				
No pneumonia (cough or cold)	yes	yes	yes	yes
Pneumonia	refer	yes	yes	yes
Severe pneumonia / severe illness	refer	Pre-referral treatment and refer immediately	Treatment and refer if necessary	yes
B. Ear Problem				
Mastoiditis	refer	Pre-referral treatment and refer	Pre-referral treatment and refer	yes
Acute ear infection	refer	yes	yes	yes
Chronic ear infection	yes and refer	yes	yes	yes
C. Fever				
Mild Fever	yes	yes	yes	yes
Very severe febrile disease	refer	Pre-referral treatment and refer	Pre-referral treatment and refer	yes
Fever with possible bacterial infection	refer	yes	yes	yes
Fever bacterial infection unlikely	refer	yes	yes	yes

Services	Health Facility Level			
	Community	PHC sub-Center	PHC main Center	Hospital
D. Standard Case Management of Diarrhea U5 yrs				
Identification of dehydration	yes	yes	yes	yes
Lab diagnosis for bloody diarrhea			yes	yes
Treatment of Diarrheal symptoms				
No dehydration	yes	yes	yes	yes
Some dehydration	ORS and refer	yes	yes	yes
Severe dehydration	ORS and refer	yes/refer if necessary	yes/refer if necessary	yes
Severe persistent diarrhea	ORS and refer	ORS and refer	yes/refer if necessary	yes
Persistent diarrhea	refer	yes	yes/refer if necessary	yes
Dysentery	refer	yes	yes	yes
E. Reduction of Morbidity and Mortality of Measles				
Measles	yes	yes	yes	yes
Measles with eye or mouth complications	refer	yes and refer	yes and refer	yes
Severe, complicated	refer	refer	refer	yes
F. Malnutrition and Anemia				
Not very low weight and no anemia	yes and refer	yes	yes	yes
Anemia or very low weight	refer	yes/refer if necessary	yes/refer if necessary	yes
Severe malnutrition and anemia	refer	refer	refer	yes
G. Vitamin supplementation				
Vitamin A supplementation		yes	yes	yes
H. Additional Case Management for Infants less than 2 Months				
Possible serious bacterial infection	refer	refer	refer	yes
Local Skin infection	yes	yes	yes	yes
Blood in stool	refer	refer	refer	yes
Feeding problem	refer	yes	yes	yes
Eye infection	refer	refer	yes	yes
Mouth infection	refer	refer	yes	yes

Table 3.1: Communicable Disease Control - Services by Type of Facility

Services	Health Facility Level			
	Community	PHC sub-Center	PHC main Center	Hospital
Information, Education and Communication	yes	yes	yes	yes
Assessment of Risk Factors	support	yes	yes	yes
Surveillance and Disease Reporting	support	yes	yes	yes
RESPIRATORY INFECTIONS				
Acute Respiratory Infection				
Early detection and management	yes, referral of severe cases	yes / referral of severe cases	yes / referral of severe cases	yes
Pneumonia				
Early detection and management	refer	yes / referral of severe cases	yes / referral of severe cases	yes
GASTROINTESTINAL INFECTIONS				
Bloody Diarrhea				
Laboratory diagnosis		refer	yes	yes
Case Management	refer	yes-mild, refer complicated cases	yes	yes
Amoebiasis				
Laboratory diagnosis		yes	yes	yes
Case Management	refer	yes-mild, refer complicated cases	yes	yes
Hemorrhagic Fever				
Clinical diagnosis	refer suspected cases	refer suspected cases	yes	yes
Laboratory diagnosis			yes	yes
Case Management	refer	initial management and early referral	treatment and referral if complicated	yes
Sexually Transmitted Infections (STIs)				
Clinical diagnosis	refer	refer	yes	yes
Laboratory diagnosis	refer	refer	yes	yes
Treatment		yes	yes	yes

 Service not yet provided but will be introduced

Table 3.2: Control of Tuberculosis - Services by Type of Facility

Services	Health Facility Level					
	Community	PHC sub-center	PHC main center	Hospital	District TB Coordinator	Gov. TB Consultant/NTI
Information, education and communication (IEC)	yes	yes	yes	yes	yes	yes
Collection of sputum smear among self-reporting patients (3 consecutive samples)	collect sample and send	collect sample and send	collect sample and send	yes	yes	yes
Diagnosis (lab) by detecting AFB in sputum sample collected	no	no	yes if available	yes	yes	yes
Short course anti-TB drugs (DOTS)	yes	yes	yes	yes	yes	yes
Tracing TB defaulters	yes	yes	yes	yes	yes	yes
x-ray for smear-negative patients	no	no	yes if available	yes	yes	yes
Active case finding in OPD/ community	no	no	no	yes	yes	yes
Preventive therapy for children contacts of TB patients	yes	yes	yes	yes	yes	yes
Management of complicated severe cases	no	no	no	yes	no	yes
Detection and Management MDR - (DOTS plus)	no	no	no	no	no	yes
Tracing TB contacts	yes	yes	yes	yes	yes	yes
Recording and reporting	yes	yes	yes	yes	yes	yes
Supervision and monitoring		yes	yes	yes	yes	yes

Service not yet provided but will be introduced

Table 3.3: HIV / AIDS Services by Type of Facility

Services	Health Facility Level			
	Community	PHC sub-center	PHC main center	Hospital
Information, Education and Communication (IEC)	yes	yes	yes	yes
Referral for voluntary confidential counseling and testing (VCCT)	yes	yes	yes	yes
Diagnosis of HIV/AIDS			Yes, clinical, refer	Yes, clinical, refer
Diagnosis and treatment of STIs			yes	yes
Screening of donated blood for HIV				yes

Iraq is considered low prevalence country of HIV/ AIDS (less than 0.01%). Due to high cultural sensitivity, control activities are limited to HIV focal units in the governorates. Screening is carried out in high risk groups, mainly blood donation, premarital, antenatal, TB etc...Laboratory diagnosis is based on Ag/Ab detection by ELISA method, confirmed by Western Blott. Rapid tests are spared for VCT activity and emergencies. Diagnosis takes place in PH labs, main hospitals and blood banks in the governorates (limited well known focal points). Call for VCT is going on. Main activities are directed to preventive measures at all levels rather than extending the bulk of testing.

Table 3.5: Communicable Diseases - Hepatitis

Intervention and Services	Health Facility Level				Specialist Hospital GIT & Liver Diseases	District	DOH	CDC Baghdad	National Lab
	Community	PHC Sub-Center	PHC Main Center	Hospital					
Information, education and communication (IEC)	yes	yes	yes	yes	yes	yes	yes	yes	
Clinical diagnosis		no and refer	yes	yes	yes				
Laboratory diagnosis (blood)			yes	yes	yes			yes	yes
Treatment of uncomplicated cases - first line treatment			yes	yes	yes				
Treatment of uncomplicated cases - not responding to first line treatment				yes	yes				
Treatment of severe and complicated cases				yes	yes				
Disease surveillance and case reporting			yes	Yes	yes	yes (compilation)	yes		
Supervision and monitoring		yes	yes	yes	yes	yes	yes	yes	yes

 Service not yet provided but will be introduced

Table 3.8: Communicable Diseases - Leishmaniasis(C.L+V.L)

Intervention and Services	Community	Health Facility Level			District	DOH	CDC Baghdad	National Lab
		PHC Sub-Center	PHC Main Center	Hospital				
Information, education and communication (IEC)	yes	yes	yes	yes	yes	yes	yes	yes
Clinical diagnosis			no and refer	yes				
Microscopic diagnosis (blood)				yes				yes
Treatment of uncomplicated cases - first line treatment				yes				
Treatment of uncomplicated cases - not responding to first line treatment				yes				
Treatment of severe and complicated cases				yes				
Insecticide-treated nets					yes	yes		
Disease surveillance and case reporting				yes	yes (compilation)	yes	yes (analysis)	
Supervision and monitoring			yes	yes	yes	yes	yes	yes


 Service not yet provided but will be introduced

Table 3.10: Communicable Diseases - Meningitis

Intervention & Services	Health Facility Level				District	DOH	CDC Baghdad	National Lab
	Community	PHC Sub-Center	PHC Main Center	Hospital				
Information, education & communication (IEC)	yes	yes	yes	yes	yes	yes	yes	yes
Clinical diagnosis				yes				
Lab. diagnosis (csf)				yes				yes
Treatment of uncomplicated cases - first line treatment				yes				
Treatment of uncomplicated cases - not responding to first line treatment				yes				
Treatment of severe and complicated cases				yes				
Disease surveillance and case reporting				yes	yes	yes	yes (analysis)	
Notification				yes	yes	yes	yes	yes
Supervision and monitoring				yes	yes	yes	yes	

Table 4: Nutrition Interventions by Type of Facility

Interventions	Health Facility Level				DOH	MOH/NRI
	Community	PHC Sub-Center	PHC Main Center	Hospital		
Information, Education, Communication	yes	yes	yes	yes	yes	yes
Conducting surveys for assessment of malnutrition	support	support	support	support	yes	yes
Studying of risk factors within catchment area	support	support	support	support	yes	yes
Promotion of Proper Nutrition						
Promotion of use of iodized salt	yes	yes	yes	yes	yes	yes
Promotion of micronutrient-rich foods	yes	yes	yes	yes	yes	yes
Prevention of Malnutrition						
Vitamin A supplementation for children U5 yrs (linked to Child Health services)	support during NIDs	yes	yes	yes	supervision	supervision
Support and promote early initiation of breastfeeding within first hour after delivery and exclusive BF for 6 months (linked to Maternal and Child Health services)	yes	yes	yes	yes	yes	yes
Promotion of appropriate complementary feeding for young children (linked to Child Health services)	yes	yes	yes	yes	yes	yes
Growth monitoring (linked to IMCI)	yes	yes	yes	yes	yes	yes
Iron/folic acid supplementation for pregnant and lactating women (linked to Maternal Health services)	support	yes	yes	yes	supervision	supervision
Vitamin A supplementation postpartum (linked to Maternal Health services)	support	yes	yes	yes	supervision	supervision
Promotion of maternal nutritional status (linked to Maternal Health services)	yes	yes	yes	yes	yes	yes
Control and prevent diarrheal disease and parasitic infections (linked to communicable diseases control)	yes	yes	yes	yes	supervision	supervision
Treatment of Malnutrition						
Micronutrient deficiency diseases diagnosis and treatment	identify and refer	yes	yes	yes	supervision	supervision
Treatment of severe malnutrition	no-refer	stabilize and refer	stabilize and refer	yes	supervision	supervision
Treatment of moderate malnutrition	no-refer	yes	yes	yes	supervision	supervision
Reporting		yes	yes	yes	yes	supervision
Supervision and Monitoring		yes	yes	yes	yes	yes

Table 5: Immunization Services by Type of Facility

Services	Health Facility Level			
	Community	PHC sub-Center	PHC main Center	Hospital
Information, Education and Communication	yes	yes	yes	yes
Ensure availability of vaccines according to EPI		yes	yes	
An elaborate cold chain for transport and storage of vaccines*		yes	yes	
Conduct routine immunization sessions	yes-support	yes	yes	
Campaigns (NIDs)	yes-support	yes-support	yes	yes
Outreach immunization	yes-support	yes-support	yes	
Special mass campaigns during outbreaks	yes-support	yes-support	yes	yes
Immunization of high risk groups (Typhoid, Influenza etc..)			yes	
Vit A supplements according to schedule	yes-support	yes-support	yes	
Follow-up for defaulters	yes-support	yes	yes	
Disease surveillance and reporting of cases		yes	yes	yes
Reporting	yes	yes	yes	yes
Supervision and monitoring		yes	yes	

* Pre-requisite is availability of adequate equipment, sufficient vaccines to be made available by the districts

 Service not yet provided but will be introduced

Table 6: Non-Communicable Disease Control - Services by Type of Facility

Services	Health Facility Level			
	Community	PHC sub-center	PHC main center	Hospital
IEC, Promoting healthy life style, proper nutrition, smoking control and regular check-ups	yes	yes	yes	yes
Cardio Vascular Diseases (Hypertension, Heart Diseases, Cerebrovascular Diseases)				
Screening for Hypertension	promote check-up	refer suspected cases	yes	yes
Treatment of Hypertension			yes / refer severe cases	yes
Diagnosis of Heart Diseases			yes	yes
Treatment of Heart Diseases			refer	yes
Diagnosis of Cerebrovascular Diseases			yes	yes
Treatment of Cerebrovascular Diseases			refer	yes
Emergency management			first aid and refer	yes
Follow-up for risk factors	yes	yes	yes	yes
Diabetes Mellitus				
Screening	promote check-up	refer suspected cases	yes	yes
Treatment of uncomplicated cases			yes	yes
Treatment of complicated cases			refer	yes
Emergency management			first aid and refer	yes
Follow-up for risk factors	yes	yes	yes	yes
Arthritis				
Diagnosis		refer	yes	yes
Treatment		symptomatic relief and refer	yes / refer if necessary	yes
Gastrointestinal Diseases (Peptic Ulcer, Chronic Ulcerative Colitis)				
Diagnosis		refer	refer suspected cases	yes
Treatment		refer	yes / refer if severe	yes
Emergency management		refer	first aid and refer	yes

Services	Health Facility Level			
	Community	PHC sub-center	PHC main center	Hospital
Diagnosis		early referral	yes / refer if necessary	yes
Treatment			yes / refer if complicated	yes
Emergency management		early referral	first aid and refer	yes
Follow-up for risk factors		yes	yes	yes
Urinary Tract Diseases				
Diagnosis of Urinary Tract Infection		refer if persistent or refractory	yes	yes
Treatment of Urinary Tract Infection		initial management/ refer if persistent or refractory	yes / refer if refractory	yes
Other		refer	refer	yes
Skin Diseases				
Treatment of Dermatitis & Common Infections		yes / refer if persistent	yes / refer if necessary	yes
Other		refer	refer	yes
Malignancies				
Breast Cancer				
Early detection			examine / refer if suspected	yes
Treatment				yes
Reporting to cancer register				yes
Cervical Cancer				
Early detection			refer suspected cases	pap smear
Treatment				yes
Reporting to cancer register				yes
Rheumatic Fever				
Diagnosis		early referral if suspected	yes	yes
Secondary Prophylaxis			yes	yes
Treatment acute Rheumatic Fever			refer	yes
Common Eye Diseases				
Conjunctivitis (diagnosis and treatment)		yes / refer if complicated	yes / refer if severe	yes

Services	Health Facility Level			
	Community	PHC sub-center	PHC main center	Hospital
Diagnosis		yes	yes	yes
Correction		refer	yes	yes
Cataract				
Diagnosis		refer suspected cases	yes	yes
Treatment			refer	yes
Glaucoma				
Diagnosis			yes	yes
Treatment			refer	yes
Corneal Opacity				
Diagnosis			yes	yes
Treatment			refer	yes
Reporting cases of blindness			yes	yes
Common Ear Diseases				
Hearing loss				
Diagnosis	refer suspected cases	refer suspected cases	yes	yes
Treatment			yes	yes
Other common ear infections				
			yes	yes

Table 7: Mental Health Services by Type of Facility

Services	Health Facility Level			
	Community	PHC sub-Center	PHC main Center	Hospital
Education and awareness	yes	yes	yes	yes
Case detection		yes	yes	yes
Provide psychological first aid (comfort, assess and ensure basic needs, connect with social support); according to manual	yes	yes	yes	yes
Psychosis: identification and biopsychosocial management		yes (follow-up)	yes	yes
Anxiety Disorders (e.g. post-traumatic stress disorder, panic disorder)		yes (follow-up)	yes	yes
Depression: identification and biopsychosocial management		yes (mild follow-up)	yes	yes
Epilepsy: identification and treatment		refer and follow-up	yes	yes
Mental handicap: identification and education to parents/community	yes	yes	yes	yes
Substance abuse: identification and education	yes	yes	yes	yes
Support group for drug addicts, psychiatry patients/families				yes
Follow-up of psychiatric patients	yes	yes	yes	yes
Referral to appropriate institution			yes	yes
Reporting	yes	yes	yes	yes
Supervision and monitoring		yes	yes	yes

Table 8: Emergency Care by Type of Facility

Services	Health Facility Level			
	Community	PHC sub-Center	PHC main Center	Hospital
Case Management				
Management of respiratory/cardiac emergencies (CPR)	early referral	First Aid & refer	yes / refer if difficult	yes
Assessment of consciousness				
Ensure clear airway passage, rescue breathing, restore circulation				
Management of diabetic emergencies	early referral			
Hypoglycaemia and conscious		First Aid & refer	yes / refer if difficult	yes
Hypoglycaemia and unconscious		Refer	yes / refer if difficult	yes
Management of allergic emergencies	early referral	First Aid & refer	yes / refer if difficult	yes
Drugs				
Management of suspected poisoning	early referral	First Aid & refer	yes / refer if difficult	yes
Management of trauma	early referral	First Aid & refer	yes / refer if difficult	yes
Management of bleeding	early referral	First Aid & refer	yes / refer if difficult	yes
Management of emergency obstetrics	early referral	First Aid & refer	yes / refer if difficult	yes
Coordination with emergency units at referral centre for proper transportation		yes	yes	yes
Reporting		yes	yes	yes
Supervision and monitoring			yes	yes

Table 9: Food Safety, Environmental Health, School Health Services by Type of Facility and Responsible Institution at District and National Levels

Interventions	Health Facility Level				District	DoH	MoH
	Community	PHC	PHC	Hospital			
		Sub-Center	Main Center				
Information, Education and Communication	yes	yes	yes	yes	yes	yes	yes
Food Safety							
Studying of risk factors within catchment area						yes	yes
Follow-up on health conditions at food shops, restaurants and universities cafeterias, hotels, bakery and pastry shops, coffee shops, diary and ice cream shops, butchery shops			yes	yes	yes	yes	yes
Food sampling for food shops, restaurants and universities cafeterias			yes	yes	yes	yes	yes
Follow-up on food industry						yes	yes
Food sampling from food industry						yes	yes
Investigation of food and water samples*						yes*	yes*
Reporting			yes	yes	yes	yes	yes
Environmental Health							
Medical Waste management		yes	yes	yes	yes	yes	yes
Examination of chlorine in water on daily basis		yes	yes	yes	yes	yes	yes
Taking water samples (weekly) for bacteriological & chemical tests		yes	yes	yes	yes	yes	yes
Examination and follow-up of chlorine in water in mobile tankers		yes	yes		yes	yes	yes
Monitoring of intra institutional environmental health		yes	yes	yes	yes	yes	yes
Reporting		yes	yes	yes	yes	yes	yes
School Health							
Formulation of school health services team			yes				
Screening of students for general health according to the strategic plan of MoH			yes		yes	yes	
Pre-school entry examination for students entering the first grade at primary school (age 6 yrs)			yes				

Interventions	Health Facility Level				District	DoH	MoH
	Community	PHC	PHC	Hospital			
		Sub-Center	Main Center				
Preventive measures for communicable diseases			yes				
Diagnose and treat referred cases to PHCs			yes				
Screening for dental health and referral to PHCs			yes				
Assessment of school environmental hygiene			yes				
Follow-up of school canteens			yes				
Follow-up for completion of vaccination according to EPI			yes				
Giving vaccination according to need			yes				
Mental health and psychosocial support of referred cases			yes			yes	
Reporting			yes				
Supervision and monitoring (linkage with health promoting schools)			yes				

Service not yet provided but will be introduced * Done at Food Control Lab (DoH) and NRI (central)

Table 10: Health Education Activities by Type of Facility

Interventions	Health Facility Level			
	Community	PHC Sub-Center	PHC Main Center	Hospital
Face to Face meetings	yes	yes	yes	yes - future strategy
Lectures to Staff	yes	yes	yes	yes - future strategy
Integration of activities into other health programs	yes	yes	yes	yes - future strategy
Follow-up on patients after discharge	yes	yes	yes	yes - future strategy
Social mobilization for different health programs	yes	yes	yes	
Health education campaigns in high risk areas	yes	yes	yes	
Symposium to community	yes	yes	yes	
Distribution of Health Education materials (leaflets, posters, health messages)	yes	yes	yes	yes - future strategy
Broad casting of T.V Spot by T.V present in some PHC centers			yes	

Service not yet provided but will be introduced

Table 11.1: Laboratory Services by Type of Facility - Hematology

Diagnostic Test	Health Facility Level				District	DoH/ PHL	CPHL
	Community	PHC	PHC	Hospital			
		Sub-Center	Main Center				
Hematology							
Blood Film			yes	yes			yes
Hemoglobin		yes	yes	yes			yes
Hematocrit		yes	yes	yes			yes
Red blood cell count			yes	yes			yes
White blood cell count & platelet count			yes	yes			yes
Differential cell count			yes	yes			yes
Erythrocyte Sedimentation Rate (ESR)		yes	yes	yes			yes
Coagulation screening tests				yes			yes
Reticulocyte count			yes	yes			yes
Blood grouping and RH factor		yes	yes	yes			yes
Serology							
Widal test		yes	Yes	Yes		Yes	Yes
Rose Bengal		yes	Yes	Yes		yes	yes
C-reactive Protein (CRP)			Yes	Yes		yes	yes
Anti-streptolysin O Titre (ASOT)			Yes	Yes		Yes	yes
Rheumatoid Factor (RF)			yes	Yes		Yes	Yes
Toxoplasmosis			Yes	Yes		Yes	yes
RPR (VDRL)			yes	Yes		Yes	yes
TPHA			Yes	Yes		Yes	Yes
Infectious Mononucleosis			Yes	Yes		yes	yes
SLE				Yes		yes	yes
G6PD assay				yes			
Coombs test			yes	yes			
Iron & TIBC			yes	yes			yes
Biochemistry							
Blood glucose		yes	yes	yes			yes
Renal Function Test (RFT)			yes	yes			yes
Liver Function Test (LFT)			yes	yes			yes
Lipid profile			yes	yes			yes
Hormonal assays				yes			

Diagnostic Test	Health Facility Level				District	DoH/ PHL	CPHL
	Community	PHC	PHC	Hospital			
		Sub-Center	Main Center				
Bacteriology							
Direct Microscopy:-							
a-General urine exam		Yes	Yes	Yes		Yes	Yes
b-General stool exam		Yes	Yes	Yes		Yes	Yes
Staining Smears:-							
a-Gram stain			Yes	Yes		Yes	Yes
b-Zeil Nelson stain			Yes	Yes		Yes	Yes
c-KLB stain			Yes	Yes		Yes	Yes
Culture:-							
Urine			Yes	Yes		Yes	Yes
Swabs			Yes	Yes		Yes	Yes
Stool				Yes		Yes	Yes
Throat				Yes		Yes	Yes
Sputum				Yes		Yes	Yes
Blood				Yes		Yes	Yes
C.S.F.				Yes		Yes	Yes
Cult.for Coryne.diphtheria				Yes		Yes	Yes
Cholera culture				Yes		Yes	Yes
Sexually- tranmitted disease culture swabs				Yes		Yes	Yes
Rapid Bacteriological Test							
Smart test for Salmonella			Yes				
Smart test for cholera			Yes				
Smart test for Helicobacter			Yes	Yes		Yes	Yes
Smart test for E.coli (O:157 H :7)			Yes	Yes		Yes	Yes
Culture media			Yes	Yes		Yes	Yes
Anti microbial susceptibility			Yes	Yes		Yes	Yes
Parasitology							
Malaria parasite diagnosis			yes	yes		yes	yes
General stool exam			yes	yes		yes	yes
Visceral leishmaniasis (Kalazar) by dip stick method				yes		yes	yes
Visceral leishmaniasis (Kalazar) by IFAT				yes		Yes	yes

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Diagnostic Test	Health Facility Level				District	DoH/ PHL	CPHL
	Community	PHC	PHC	Hospital			
		Sub-Center	Main Center				
Cytology							
Pap smear			yes and refer	yes			
Urine cytology			yes and refer	yes			yes

Service not yet provided but will be introduced

Table 11.2: Diagnostic Services - Imaging Services

Diagnostic Services	Health Facility Level			
	Community	PHC Sub-Center	PHC Main Center	Hospital
1. X-rays				
Chest			yes	yes
Abdomen				yes
Skeletal			yes	yes
2. Ultrasound				
Ultrasound			yes	yes
ECG			yes	yes

Table 12.1: Essential Medicines by Type of Facility

Medicine	Dosage Form and Strength	Health Facility Level			
		Community	PHC	PHC	Hospital
			Sub-Center	Main Center*	
1. Anesthetics					
1.1 General Anesthetics and Oxygen					
Ketamine	Injection: 50 mg (as Hcl)/ml in 10-ml ampoule				yes
Oxygen	Inhalation (medicinal gas)		yes	yes	yes
1.2 Local Anesthetics					
Bupivacaine	Injection: 0.5% (Hcl) in 20ml vial			yes	yes
Lignocaine + Dextrose	Injection: for spinal anesthesia 5% (Hcl) + Dextrose 7.5% (hyperbaric solution - spinal anesthesia/ heavy)in 2 ml amp				yes
Lignocaine	topical forms: (Hcl) 2% gel; 5% oint		yes	yes	yes
Lidocaine + Epinephrine	Dental cartridge: 2% (Hcl) + epinephrine 1:80 000			yes	yes
Lignocaine + Epinephrine	Injection: 2% (Hcl)+epinephrine 1:200 000 in vial			yes	yes
2. Analgesics, Antipyretics, Nonsteroidal Anti-Inflammatory Drugs					
2.1. Non-Opioid Analgesics/Antipyretics/NSAID					
Acetylsalicylic Acid	Tablet: 100 mg		yes	yes	yes
Acetylsalicylic Acid	Tablet: 325mg or 300mg enteric coated		yes	yes	yes
Paracetamol	Tablet: 500 mg		yes	yes	yes
Paracetamol	Syrup: 125 mg/5ml		yes	yes	yes
Paracetamol	Suppositories: 125 mg (infant)		yes	yes	yes
Paracetamol	Suppositories: 250 mg (child)		yes	yes	yes
Paracetamol	Drops: 100mg/ml or 60mg/0.6ml		yes	yes	yes
Diclofenac sodium	Tablet: 25 mg			yes	yes
3. Anti-Allergics and Medicines Used in Anaphylaxis					
Diphenhydramine Hcl	elixir 10mg/5ml		yes	yes	yes
Diphenhydramine Hcl	Injection: 10mg/ml, (1ml Amp)		yes	yes	yes
Diphenhydramine Hcl	Tablet: 25mg		yes	yes	yes
Chlorpheniramine Maleate	Tab 4 mg		yes	yes	yes
Chlorpheniramine Maleate	Syrup:: 2mg/5ml		yes	yes	yes
4. Antidotes					

Medicine	Dosage Form and Strength	Health Facility Level			
		Community	PHC	PHC	Hospital
			Sub-Center	Main Center*	
5. Anticonvulsants/Anti-Epileptics					
Carbamazepine	Tablet: 200 mg			yes	yes
Carbamazepine	Syrup: 100mg/5ml			yes	yes
Diazepam	Injection: 5mg in 2 ml ampoule			yes	yes
Magnesium Sulphate	Injection: 500 mg/ml in 20 ml ampoule			yes	yes
Phenobarbital (Phenobarbitone)	Tablet: 15 - 30 mg			yes	yes
6. Anti-Infective Medicines					
6.1. Anti-helminthics					
Mebendazole	Tablet: 100 mg		yes	yes	yes
Mebendazole	Suspension 100 mg/5 ml		yes	yes	yes
Praziquantel	Tablet: 600 mg		yes	yes	yes
Albendazole	Tablet: 200 mg			yes	yes
Levamisole	Tablet: 40 mg			yes	yes
6.2. Antibacterials					
6.2.1 Beta Lactam Medicines					
Amoxicillin	caps 250mg		yes	yes	yes
Amoxicillin	caps 500mg			yes	yes
Amoxicillin	Syrup: 125mg / 5ml		yes	yes	yes
Amoxicillin	Syrup: 250mg/ 5ml			yes	yes
Amoxicillin + clavulanic acid	Tablet: 500 mg + 125 mg			yes	yes
Ampicillin	powder for injection: 500mg (as sodium)/vial		yes	yes	yes
Ampicillin + cloxacillin	powder for Injection: 500 mg (as sodium) + 500 mg/vial			yes	yes
Benzathine Benzyl Penicillin	powder for injection: 1.4 million IU per vial			yes	yes
Benzathine Benzyl Penicillin	powder for Injection: 2.4 million IU per vial			yes	yes
Benzylpenicillin	powder for Injection: 1 M IU per vial			yes	yes
Phenoxy Methyl Penicillin (Penicillin V)	Tablet: 250 mg		yes	yes	yes
Phenoxy Methyl Penicillin (Penicillin V)	powder for oral suspension 250 mg/5ml		yes	yes	yes
Procaine penicillin + benzyl penicillin sodium	Injection: 300 000 IU (300mg) + 100000 IU (60mg) /vial		yes	yes	yes
Procaine benzyl penicillin	Injection: 600 000 IU vial			yes	yes

Medicine	Dosage Form and Strength	Health Facility Level			
		Community	PHC	PHC	Hospital
			Sub-Center	Main Center*	
6.2.2 Other Antibacterials					
Chloramphenicol	Injection: 1 g vial as sodium succinate vial				yes
Doxycycline	caps/tab 100 mg			yes	yes
Erythromicin	Tablet: 250 mg (ethylsuccinate enteric coated)	yes	yes	yes	yes
Erythromicin	Powder for suspension: 250 mg/5ml	yes	yes	yes	yes
Gentamicin	Ear drops: 03%	yes	yes	yes	yes
Gentamicin	Injection: 10 mg; 40 mg (as sulfate)/ml in 2 ml vial	yes	yes	yes	yes
Cotrimoxazol	Tablet: 480 gm		yes	yes	yes
Cotrimoxazol	Suspension: 240 mg/5ml		yes	yes	yes
6.2.3 Antituberculosis					
Ethambutol	Tablet: 400 mg	yes	yes	yes	yes
Isoniazid	Tablet: 100 mg	yes	yes	yes	yes
Isoniazid	Tablet: 300 mg	yes	yes	yes	yes
Ethambutol + Isoniazide	Tablet: 130 mg (Hcl) + 100 mg	yes	yes	yes	yes
Pyrazinamide	Tablet: 500 mg	yes	yes	yes	yes
Rifampicin (Rifampin)	caps/tab 150 mg	yes	yes	yes	yes
Rifampicin (Rifampin)	caps/tab 300 mg	yes	yes	yes	yes
Streptomycin	powder for injectin 1 g (as sulfate) in vial	yes	yes	yes	yes
6.3 Antifungal					
Nystatin	coated tab 100 000 IU; 500 000 IU		yes	yes	yes
Nystatin	Suspension: 100 000 U/ml		yes	yes	yes
Nystatin	Pessary: 100 000 U		yes	yes	yes
Nystatin	Vag cream 100 000 U/4g		yes	yes	yes
Griseofulvin	Tablet: 125mg; 500 mg		yes	yes	yes
6.4 Antiprotozoal Medicine					
6.4.1 Anti-Amoebic and Antigiardiasis					
Metronidazole	Tablet: 250/500- mg		yes	yes	yes
Metronidazole	I.V. infusion 5mg/ml, (100ml vial)		yes	yes	yes
Metronidazole	oral suspension 200 mg (as benzoate) / 5ml		yes	yes	yes

Medicine	Dosage Form and Strength	Health Facility Level			
		Community	PHC	PHC	Hospital
			Sub-Center	Main Center*	
Chloroquine	Tablet: 150 mg (as phosphate or sulfate)	yes	yes	yes	yes
Chloroquine	syrup 75 mg/5ml	yes	yes	yes	yes
Primaquine	Tablet: 15 mg (as phosphate)			yes	yes
6.4.3 Antileishmaniasis					
Pentostam	Inj: 100mg / ml (6ml vial) or (100ml vial)				yes
6.5. Urinary Antiseptics					
Nitrofurantoin	Tablet: 50100- mg			yes	yes
7. Medicines Affecting the Blood					
7.1 Anti-Anaemia					
Ferrous Gluconate	Syrup: 400mg/15ml		yes	yes	yes
Ferrous Sulfate	Tablet: 200 mg		yes	yes	yes
Ferrous Sulfate + Folic Acid	Tablet: 200mg (65mg Iron) + 0.25mg	yes	yes	yes	yes
Folic Acid	Tablet 1 mg; 5 mg			yes	yes
Iron Dextran	Injection: 50mg/ml,(2ml Amp) deep I.M or slow I.V or I.V infusion			yes	yes
7.2 Medicines affecting Coagulation					
Heparin sodium	Injection: S.C., I.V. 5000 IU/ml, (5ml vial) -				yes
8. Blood Products and Plasma Substitutes					
8.1 Plasma Substitutes					
Dextran 70	5% in dextrose			yes	yes
9. Cardiovascular Medicines					
9.1 Anti-Anginal					
Isosorbide dinitrate	Tablet sublingual: 5 mg			yes	yes
9.2 Anti-Arrhythmics					
Digoxin	Tablet: 125 mcg; 250 mcg			yes	yes
Digoxin	Injection: 250 mcg/ml, (2ml Amp)				yes
Digoxin	Elixir: 50mcg /ml			yes	yes
9.3 Antihypertensive					
Atenolol	Tablet: 50 mg			yes	yes
Atenolol	Tablet: 100 mg			yes	yes
Glyceryl Trinitrate	Tablet: 0.5 mg			yes	yes
Methyl dopa	Tablet: 250			yes	yes

Medicine	Dosage Form and Strength	Health Facility Level			
		Community	PHC	PHC	Hospital
			Sub-Center	Main Center*	
9.4 Antithrombotic					
Acetylsalicylic Acid	Tablet: 100 mg			yes	yes
9.5 Lipid Lowering					
Simvastatin	Tablet: 20 mg; 40 mg			yes	yes
10. Dermatological Medicine (Topical)					
10.1 Antifungal, Topical					
Salicylic acid + benzoic acid	Oint 3% + 6%		yes	yes	yes
Econazole nitrate	Lotion 1%		yes	yes	yes
Clotrimazole	Cream 1%			yes	yes
10.2 Anti-Inflammatory and Anti-Pruritic					
Hydrocortisone	Ointment 1% (acetate)			yes	yes
Zinc oxide	Ointment 15%		yes	yes	yes
10.3 Medicines Affecting Skin Differentiation and Proliferation					
Salicylic acid	Solution: 5% ointment		yes	yes	yes
Benzyl benzoate	25% application		yes	yes	yes
11. Disinfectants and Antiseptics					
Chlorhexidine	solution 5% (digluconate) for dilution		yes	yes	yes
Povidone Iodine	solution 10% (Alcoholic)		yes	yes	yes
12. Diuretics					
Frusemide	Tablet: 40 mg			yes	yes
Frusemide	Injection: 20mg/2ml amp			yes	yes
Hydrochlorothiazide	Tablet: 25 mg, 50 mg			yes	yes
Spironolactone	Tablet: 25 mg			yes	yes
Mannitol	IV solution 10%; 20%				yes
13. Gastrointestinal Medicines					
13.1 Antacids					
Aluminium Hydroxide	Tablet: 500 mg		yes	yes	yes
Aluminium Hydroxide	oral liquid 290 mg/5 ml			yes	yes
Aluminium Hydroxide	Dried gel 200mg +mag. hydroxide 200mg+simethicone 25mg tab		yes	yes	yes
13.2 Anti-Emetics					
Metoclopramide	Tablet: 10 mg (Hcl)		yes	yes	yes
Metoclopramide	Injection: 5 mg (Hcl)/ml in 2-ml ampoule			yes	yes
Metoclopramide	Syrup: 5mg/5ml (Hcl)		yes	yes	yes

Medicine	Dosage Form and Strength	Health Facility Level			
		Community	PHC	PHC	Hospital
			Sub-Center	Main Center*	
Hyoscine butylbromide	Inj: 20mg/ml Amp				yes
Hyoscine butylbromide	Syrup: 1mg/ml			yes	yes
Atropine sulphate	Injection 0.6mg/ml, (1ml Amp)		yes	yes	yes
13.4 Laxatives					
Senna	Traditional dosage forms		yes	yes	yes
Bisacodyl	Supp. 5mg (child)		yes	yes	yes
Bisacodyl	Tablet: 5 mg		yes	yes	yes
13.5 Oral Rehydration Solution					
ORS - oral rehydration salts solution	powder	yes	yes	yes	yes
14. Hormones, Other Endocrine Medicines, Contraceptives					
14.1 Adrenal Hormones and Synthetic Substitutes					
Dexamethasone	Injection: 8mg/2ml (phosphate as di sodium salt)			yes	yes
Dexamethasone	Tablet: 0.5 mg			yes	yes
Hydrocortisone	Inj: 100mg/2ml vial or amp			yes	yes
Prednisolone	Tablet: 5mg			yes	yes
14.2 Contraceptives					
Ethinylestradiol + Norethisterone	Tablet: 20 mcg + 1 mg	yes	yes	yes	yes
Ethinylestradiol + Gestodene	Tablet: 20 mcg + 75 mcg	yes	yes	yes	yes
Ethinylestradiol + Gestodene	Tablet: 30mcg + 75 mcg	yes	yes	yes	yes
IUD	copper T (380)			yes	yes
Condoms		yes	yes	yes	yes
14.3 Insulin and Other Antidiabetic Agents					
Glibenclamide	Tablet: 5 mg			yes	yes
Insulin neutral	Injection: 100 units / ml			yes	yes
Insulin isophane (NPH)	Injection:100 units / ml			yes	yes
Insulin soluble	Injection: 30% + 70% isophane insulin (biphasic) 100 units /ml			yes	yes
Metformin	Tablet: 500 mg (Hcl)			yes	yes
15. Ophthalmological Preparations					
15.1 Anti-Infective Topical					
Tetracycline	eye ointment 1% Hcl	yes	yes	yes	yes
Gentamicin	eye drops: 0.3%		yes	yes	yes
15.2 Anti-Inflammatory and Anti-pruritic					
Calamine	Lotion		yes	yes	yes

Medicine	Dosage Form and Strength	Health Facility Level			
		Community	PHC	PHC	Hospital
			Sub-Center	Main Center*	
Antazoline + naphthazoline	eye drops 0.5% (sulfate) + 0.025% (nitrate)			yes	yes
16. Oxytocics and Antioxytocics					
16.1 Oxytocics					
Ergometrine	Injection: 200 mcg (hydrogen maleate) in 1-ml amp			yes	yes
Oxytocin	Injection: 10 IU in 1-ml ampoule			yes	yes
16.2 Antioxytocics					
Nifedipine	immediate release caps 10 mg			yes	yes
17. Psychotherapeutic Medicines					
17.1 Medicines Used in Psychotic Disorders					
Chlorpromazine	Tablet 100 mg (Hcl)			yes	yes
Chlorpromazine	Injection: 25 mg (Hcl)/ml in 2-ml ampoule			yes	yes
Chlorpromazine	oral liquid 25 mg (Hcl)/5 ml			yes	yes
Haloperidol	Tablet: 1.5mg, 5 mg			yes	yes
Haloperidol	Injection: 5 mg in 1-ml ampoule				yes
17.2 Medicines Used in Depressive Disorders					
Amitriptyline	Tablet: 25 mg (Hcl)			yes	yes
17.3 Medicines Used in Generalized Anxiety and Sleep Disorder					
Diazepam	Tablet: 2 mg			yes	yes
Diazepam	Tablet: 5 mg			yes	yes
18. Medicines Acting on the Respiratory Tract					
18.1 Anti-Asthmatic Medicines					
Aminophylline	Tablet: 100 mg, 225 mg			yes	yes
Aminophylline	Injection: 25 mg/ml in 10-ml amp)			yes	yes
Epinephrine (Adrenaline)	Injection: 1 mg (as Hcl or hydrogen tartrate) in 1-ml amp			yes	yes
Salbutamol	Tablet: 2mg / 4 mg		yes	yes	yes
Salbutamol	Inhalation (aerosol) 100 mcg (as sulfate) per dose		yes	yes	yes
Salbutamol	Syrup 2 mg/5ml (as sulfate)		yes	yes	yes
Salbutamol	Respirator solution for nebulizers 0.5% w/v (20 ml)		yes	yes	yes
18.2 Antitussives					
Dextromethorphan Hbr	Tablet: 15 mg		yes	yes	yes
Dextromethorphan Hbr	Syrup 15 mg/5ml		yes	yes	yes

Medicine	Dosage Form and Strength	Health Facility Level			
		Community	PHC	PHC	Hospital
			Sub-Center	Main Center*	
Oral rehydration salt (ORS)		yes	yes	yes	yes
19.2 Parenteral					
Glucose	injectable solution, 5%; 10% isotonic; 50% hypertonic			yes	yes
Glucose with sodium chloride	injectable solution: 4% glucose, 0.18% sodium chloride (equivalent to Na 30 mmol/l, Cl-30 mmol/l)			yes	yes
Potassium chloride	solution: 11.2% in 20-ml ampoule (equivalent to K 1.5 mmol/ml, Cl-1.5 mmol/ml)				yes
Sodium chloride	injectable solution: 0.9% isotonic (equivalent of Na 154 mmol/l, Cl-154 mmol/l)			yes	yes
Sodium hydrogen carbonate	injectable solution: 1.4% isotonic (equivalent to Na 167 mmol/l, HCO ₃ - 167 mmol/l)				yes
Sodium hydrogen carbonate	injectable solution: 8.4% in 10 ml amp (equivalent to Na 1000 mmol/l, HCO ₃ - 1000 mmol/l)			yes	yes
Sodium Lactate	compound solution: injectable solution			yes	yes
20. Vitamins and Minerals					
Vitamin A (retinol)	cap or tab 4000 units		yes	yes	yes
Vitamin A	palmitate drops 1500 units/1 drop		yes	yes	yes
Vitamin B supplement				yes	yes
Vitamin K (Phytomenadione)	Tablet: 10 mg			yes	yes
Calcium Carbonate	500mg			yes	yes
Multimicronutrients			yes	yes	yes
21. Vaccines					
BCG			yes	yes	yes
DPT			yes	yes	yes
DPT/Hepatitis-B vaccine			yes	yes	yes
Measles			yes	yes	yes
OPV			yes	yes	yes
Tetanus Toxoid			yes	yes	yes
22. Sera and Immunoglobulins					
Ipecacuanna USP			yes	yes	yes

*Note: For a list of Essential Medicines for Emergency Care at PHC Main Centers see separate list.

Table 12.2: List of Essential Medicines for Emergency Unit at PHC Main Center (category C)

Medicine	Dosage Form and Strength
Digoxin	Tablet: 50 mcg
Digoxin	Inj: 50 mcg/ml (2ml Amp)
Frusemide	Inj: 20 mg/2ml Amp
Mannitol	Infusion: 20% - 500 ml
Hydralazine Hcl	Infusion: 20mg per Amp
Methyldopa	Inj: 50mg/ml (5ml Amp)
Glyceryl trinitrate	Tablet: 0.5 mg
Glyceryl trinitrate	Inj: 5mg/10 ml Amp
Atropine sulphate	Inj: 0.6mg/ml Amp
Hyoscinebutylbromide	Inj: 20mg/ml Amp
Ranitidine Hcl	Inj: 25mg/ml (2ml Amp)
Metoclopramide hcl	Inj: 5mg/ml (2ml Amp) IM or IV
Aminophylline	Inj: 25mg/ml (10 ml Amp) IV
Salbutamol as sulphate	Inj: 500mcg in 5 ml Amp
Salbutamol as sulphate	5mg/ml respirator solution for nebulizers
Epinephrine	Inj: 1mg (as Hcl or hydrogen nitrate) Amp
Diphenhydramine Hcl	Inj: 10mg/ml (1ml Amp)
Diazepam	Inj: 5mg/ml (2ml Amp)
Diazepam	Tablet: 2mg, 5mg
Chlorpromazine Hcl	Inj: 25mg/ml (2ml Amp)
Prochlorperazine mesilate	Inj: 12.5 mg/ml, IM (2ml Amp)
Acetylsalicylic Acid	Tablet: 325 mg Enteric-coated
Paracetamol + Phenobarbitone	Supp: 125mg + 10 mg (inf)
Paracetamol	Inj: 1g IV, IM
Amoxycillin as sodium	Inj: 500 mg (Vial)
Penicillin G	Inj: 1 M U per Vial
Cefazolin	Inj: 1 gm IV, IM + solvent water
Metronidazole	Inj: 5 mg/ml (100 ml Vial) IV infusion
Insulin neutral	Inj: 100 units/ml
Insulin soluble + isophane (biphasic)	Inj: 30% +70% 100µ/ml (human only)
Dexamethasone phosphate as disodium	Inj: 8mg/2ml Vial
Hydrocortisone as sodium succinate	Inj: 100mg/2ml Vial or Amp
Tranexamic acid	Inj: 100 mg/ml (5ml Amp)
Phytomenadione Mixed Micelles (Vit. K1 MM)	Inj. 10mg/ml (1ml Amp) (IV inj or slow IV inj within 30 sec)

Medicine	Dosage Form and Strength
Phytomenadione Mixed Micelles (Vit. K1 MM)	Inj. 1mg/1ml (For new born babies) (I.M)
Calcium gluconate (USP)	I.V infusion, slow I.V. inj 10% containing 0.465mEq (9.3mg) total calcium/ml PH adjusted 610) 8.2-ml Amp)
Magnesium sulphate	Inj: 50% (10 ml Amp)
Dextran 70 in normal saline (Plander N)	
Distilled Water for 5 ml injection	
Glucose (dextrose)	Infusion: 5%, 500 ml
Glucose (dextrose)	Infusion: 25%, 20 ml
Sodium bicarbonate	Inj: 8.4% (50 ml Vial)
Sodium chloride	Infusion: 0.9% in 500 ml
Sodium chloride + dextrose	Infusion: 0.18% + 4% IV infusion (as glucose solution)
Diclofenac sodium	Inj: 25mg/ml (3ml Amp)
Tropicamide	Eye drops: 0.5%
Lidocaine	5% oint and jell
Silver sulphadiazine	Cream 1%
Lignocaine	10% spray
Antivenom polyvalent for snake, scorpion, spiders	Inj: Vial
Charocaol activated	50 g single dose plastic bottle of colloidal suspension
Ipecacuanha	Syrup USP
Ampicillin + cloxacillin	Inj: 500 mg (Vial)
Gentamycin	Inj: 80mg (Vial)

Table 13.1: Equipment PHC Main Center

No.	Department	Comments
IMAGING		
1	General X-ray 50KW (500mA - 125kV), floor mounted, bucky stand + Voltage stabiliser complete with accessories	
2	Benchtop semi-auto film processor + stabiliser + Safe Light	
3	Cassettes (3 sizes) + Films + Lead lettering	
4	Viewer X-ray single	
5	Mobile Lead Screen with window	
6	Lead Gown & Hanger	
LABORATORY		
1	Microscope (4x mag)	
2	Centrifuge (medium capacity)	
3	Biochemistry Analyser + stabiliser (ref: MERCK Microlab300)	
4	Haematology analyser (18parameters + 3parts differential) + stabiliser	
5	Counter blood cell/WBC differential 6 digits with totaliser	
6	ELISA	
7	Stopwatch	
8	Lab Glasswares set	
9	haemocytometer counting chamber Fuchs-Rosenthal w 2 white cell pipette	
10	MicroPipette set variable volume (3sizes)	
11	rack staining with glass rods & Dryer slides	
12	Photometer + stabiliser	
13	Westergreen ESR set	
14	oven hot air drying 4.5cuft (126L) +25~+300°C	
15	refrigerator reagent single door 14cf(378l) w alarm	
16	refrigerator domestic w freeze 2 door (approx. 380L)	
17	sealer/stripper cutter blood	
18	fume hood ductless 1200mm length w sso,gas and water	
19	bath water laboratory (approx.22L) 25100-degC, cw cover	
20	refrigerator blood 450 bags lockable w alarm and recorder	
DENTAL UNIT		
1	Dental Treatment Unit/Chair MO + stabiliser cw compressor + suction + filter	
2	Dental X-ray	
3	Tooth extraction Instrument Set, Adult	
4	Tooth extraction Instrument Set, Child	

No.	Department	Comments
5	Dental Diagnostic Instrument Set	
6	Stainless steel instrument tray set	
7	Steriliser hot water electric	
8	autoclave benchtop, flash, steam w prevacuum cycle	
9	Steriliser, oven hot air 4.5cuft (126L) +25~+300°C	
EPI (IMMUNIZATION UNIT)		
1	Desk Office w drawers	
2	Chair office doctor	
3	Chair patient	
4	Bench patient waiting	
5	freezer vaccine single door 18cf(504l) lockable -20 to -40°C w alarm and recorder	
6	cooler box for vaccines (UNICEF or WHO EPI programme for transportation)	
LABOUR & DELIVERY UNIT AND CLINIC FOR WMO		
Delivery Room		
1	Obstetric delivery couch	
2	Baby Basinette mobile w shelf below	
3	Stethoscope infant	
4	Stethoscope adult	
5	Sphygmomanometer mercury (standard)	
6	Infant measuring rod (cradle measure)	
7	Infant scale non-digital	
8	pump suction electric 2 jar (1.5L) 0760-mmHg	
9	Procedure light 30kLux mobile	
10	Fetal Doppler battery	
11	Fetal Scope	
12	Emergency Light with Rechargeable Battery	
13	Infusion stand mobile w 2 prongs	
14	Instrument trolley	
15	handwashing stand cw 2 bowls, mobile	
16	Oxygen Cylinders (Large) + pin index O2 Flowmeter & humidifier + trolley cylinder	
17	Heater, floor	
18	Infant Warmer mobile	
19	Resuscitation Set (Ambu bags, masks, airways, ETT, endotracheal introducer, tubings, Oxygen) for infant	
20	vacuum extractor (manual) cw 3 cups	
21	Instrument Episiotomy set (suturing set)	

No.	Department	Comments
22	Instrument set baby assessment	
23	Instrument vagina examination set	
24	Instrument Delivery Set	
25	Instrument IUCD Insertion Set	
26	Instrument D&C Set	
27	Instrument Stainless steel tray set	
28	warmer blood/fluid dry heat transfusion/infusion rapid flow rate	
29	Monitor - SpO2 + NIBP	
30	Stool for doctors	
31	Instrument cabinet (glass lockable 2 door)	
32	autoclave benchtop, flash, steam w prevacuum cycle	
33	Steriliser hot water electric	
34	Steriliser, oven hot air 4.5cuft (126L) +25~+300°C	
Recovery Room for Delivery		
1	Patient bed 2 section fixed height cw mattress + pillow	
2	bedside cabinets	
3	Infusion stand mobile w 2 prongs	
4	Stethoscope adult	
5	Sphygmomanometer mercury (standard)	
6	Oxygen Cylinders (Large) + pin index O2 Flowmeter & humidifier + trolley cylinder	
7	Heater	
8	Patient Trolley transfer/treatment fixed ht	
9	Wheelchair	
Consultation / Examination Room (WMO/LHV)		
1	Examination couch O&G with foldable stepstool	
2	Sphygmomanometer mercury (standard cuff)	
3	Clinical digital thermometer + disp sleeves	
4	Diagnostic set (Ophthalmoscope+otoscope)	
5	Stethoscope adult	
6	Stethoscope child	
7	Viewer X-ray single	
8	Examination light 15kLux mobile	
9	Heavy Duty Torch light	
10	Instrument Tongue depressor & dressing jar	
11	Ht & Wt scale manual	

No.	Department	Comments
12	Infant Weighing scale manual	
13	ultrasound O&G w convex & TV probe + thermal printer (** training to be provided to WMO)	
14	Desk Office w drawers	
15	Chair office doctor	
16	Chair patient	
17	Bench patient waiting	
MINOR OT or Procedure Room		NB: Depending on the function, if utilised as a Minor OT, then the equipment list is as follows:
Minor OT (for minor surgery)		
1	Operating table hydraulic general surgery cw accessories	
2	Anaesthesia machine minor w ventilator 2 vaporiser	
3	Diathermy machine 300W cw accessories	
4	infusor pressure 500ml	
5	Infusion stand 2 prongs	
6	Viewer X-ray single	
7	pump suction electric 2 jar (1.5L) 0760-mmHg	
8	pump suction battery operated 1 jar (1L)	
9	Monitor patient 4 channel (ECG/SpO2/NIBP)	
10	Operating light 80kLux mobile	
11	Resuscitation Set (Ambu bags, masks, airways, ETT, endotracheal introducer, tubings, Oxygen) for adult, child & infant	
12	Laryngoscope set (adult+child)	
13	Emergency Light with Rechargeable Battery	
14	handwashing stand cw 2 bowls, mobile	
15	Instrument trolley	
16	Oxygen Cylinders (Large) + pin index O2 Flowmeter & humidifier + trolley cylinder	
17	Stainless steel instrument tray set	
18	Surgical Instrument Sets for DHQ (to be specified later)	
19	Surgical Instrument Sets for THQ (to be specified later)	
20	Surgical Instrument Sets for RHC (to be specified later)	
21	Instrument Minor Surgery set + Container	
22	warmer blood/fluid dry heat transfusion/infusion rapid flow rate	
23	Instrument cabinet (glass lockable 2 door)	

No.	Department	Comments
	Recovery Room	NB: If the HF has a separate recovery room for patient recovering from surgery, otherwise the patients can be transferred straight back to the wards.
1	Patient Trolley transfer/treatment fixed ht	
2	Monitor - SpO2 + NIBP	
3	Patient bed 2 section fixed height cw mattress + pillow	
4	bedside cabinets	
5	Stethoscope adult	
6	Sphygmomanometer mercury (standard)	
7	Instrument trolley	
8	Infusion stand 2 prongs	
9	Oxygen Cylinders (Large) + pin index O2 Flowmeter & humidifier + trolley cylinder	
	** PROCEDURE ROOM (can also be used for Emergency cases in the event that there is no separate Casualty Dept)	NB: Depending of the function, if utilised more for simple suturing, dressing, etc.. then the equipment list is as follows:
	Procedure Room	
1	Trolley Procedure Hilo	
2	Patient Trolley transfer/treatment fixed ht	
3	Wheelchair	
4	Anaesthesia machine minor w ventilator 2 vaporiser	
5	Diathermy machine 300W cw accessories	
6	infusor pressure 500ml	
7	Infusion stand 2 prongs	
8	Viewer X-ray single	
9	pump suction electric 2 jar (1.5L) 0760-mmHg	
10	Monitor patient 4 channel (ECG/SpO2/NIBP)	
11	Operating light 80kLux mobile	
12	Resuscitation Set (Ambu bags, masks, airways, ETT, endotracheal introducer, tubings, Oxygen) for adult, child & infant	
13	Laryngoscope set (adult+child)	
14	Emergency Light with Rechargeable Battery	
15	handwashing stand cw 2 bowls, mobile	
16	Instrument trolley	
17	Oxygen Cylinders (Large) + pin index O2 Flowmeter & humidifier + trolley cylinder	

No.	Department	Comments
18	Stainless steel instrument tray set	
19	Surgical Instrument Sets for DHQ (to be specified later)	
20	Surgical Instrument Sets for THQ (to be specified later)	
21	Surgical Instrument Sets for RHC (to be specified later)	
22	Instrument Minor Surgery set + Container	
23	warmer blood/fluid dry heat transfusion/infusion rapid flow rate	
24	Instrument cabinet (glass lockable 2 door)	
25	autoclave benchtop, flash, steam w prevacuum cycle	
26	Steriliser, oven hot air 4.5cuft (126L) +25~+300°C	
27	Steriliser hot water electric	

**** EMERGENCY / CASUALTY (Can be doubled up as Procedure / Minor OT if there are no provision for a separate area/dept)**

Emergency Room

1	Trolley Procedure Hilo	
2	Patient Trolley transfer/treatment fixed ht	
3	Wheelchair	
4	Stretcher canvas	
5	Stethoscope adult	
6	Stethoscope child	
7	Examination couch with foldable stepstool	
8	Clinical digital thermometer + disp sleeves	
9	Diagnostic set (Ophthalmoscope+otoscope)	
10	Heavy Duty Torch light	
11	Instrument Tongue depressor & dressing jar	
12	Sphygmomanometer mercury (standard cuff)	
13	pump suction electric 2 jar (1.5L) 0760-mmHg	
14	Procedure light 30kLux mobile	
15	Viewer X-ray single	
16	Resuscitation Set (Ambu bags, masks, airways, ETT, endotracheal introducer, tubings, Oxygen) for adult, child & infant	
17	Laryngoscope set (adult+child)	
18	Immobilisers, Plints & Cervical collars set	
19	Emergency Light with Rechargeable Battery	
20	handwashing stand cw 2 bowls, mobile	
21	Infusion stand mobile w 2 prongs	
22	Stainless steel instrument tray set	
23	Instrument trolley	
24	Oxygen Cylinders (Large) + pin index O2 Flowmeter & humidifier + trolley cylinder	

No.	Department	Comments
25	Instrument Minor Surgery set + Container	
26	Instrument Dressing set	
27	Instrument cabinet (glass lockable 2 door)	
28	autoclave benchtop, flash, steam w prevacuum cycle	
29	Steriliser, oven hot air 4.5cuft (126L) +25~+300°C	
30	Steriliser hot water electric	
31	ECG Machine 3 / 6 channel	
32	Monitor - SpO2 + NIBP	Can be added as required depending on type of HF.
33	nebuliser electric adult / child ultrasonic	
34	Peak flowmeter adult	
35	Peak flowmeter child	
Observation Rooms		
1	Patient bed 2 section fixed height cw mattress + pillow	No. of beds is dependent on the requirements...
2	bedside cabinets	
3	Infusion stand 2 prongs	
4	pump suction electric 2 jar (1.5L) 0760-mmHg	
5	Stethoscope adult	
6	Sphygmomanometer mercury (standard cuff)	
Consultation / Examination Room (MO)		
1	Examination couch with foldable stepstool	
2	Sphygmomanometer mercury (standard cuff)	
3	Ear digital thermometer + disp sleeves	
4	Clinical digital thermometer + disp sleeves	
5	Diagnostic set (Ophthalmoscope+otoscope)	
6	Stethoscope adult	
7	Stethoscope child	
8	Viewer X-ray single	
9	Heavy Duty Torch light	
10	Instrument Tongue depressor & dressing jar	
11	Ht & Wt scale manual	
12	Desk Office w drawers	
13	Chair office doctor	
14	Chair patient	
15	Bench patient waiting	

No.	Department	Comments
CLINICS		
Consultation / Examination Room (MO)		
1	Examination couch with foldable stepstool	
2	Sphygmomanometer mercury (standard cuff)	
3	Ear digital thermometer + disp sleeves	
4	Clinical digital thermometer + disp sleeves	
5	Diagnostic set (Ophthalmoscope+otoscope)	
6	Stethoscope adult	
7	Stethoscope child	
8	Viewer X-ray single	
9	Heavy Duty Torch light	
10	Instrument Tongue depressor & dressing jar	
11	Ht & Wt scale manual	
12	Desk Office w drawers	
13	Chair office doctor	
14	Chair patient	
15	Bench patient waiting	
WARDS		
Wards (Male) (** depends on the number of beds in the health facility)		
1	Patient bed 2 section fixed height cw mattress + pillow	
2	bedside cabinets	
3	table overbed mobile fixed height w support at both side	
4	Infusion stand 2 prongs	
5	Oxygen Cylinders (Large) + pin index O2 Flowmeter & humidifier + trolley cylinder	
Wards (Female) (** depends on the number of beds in the health facility)		
1	Patient bed 2 section fixed height cw mattress + pillow	
2	bedside cabinets	
3	table overbed mobile fixed height w support at both side	
4	Infusion stand 2 prongs	
5	Oxygen Cylinders (Large) + pin index O2 Flowmeter & humidifier + trolley cylinder	
1	nebuliser electric adult / child ultrasonic	
2	Pump Infusion Syringe	
3	Pump Infusion Volumetric	
4	Stethoscope adult	

No.	Department	Comments
5	Sphygmomanometer mercury	
6	Infusion stand 2 prongs	
7	Instrument Ward Dressing Sets	
8	trolley instrument	
9	Steriliser hot water electric	
HEALTH EDUCATION		
	T.V.	
	CD player	
	Video camera	
	Digital camera	
	Advertising board for health issues	
	Computer	

Table 13.2: Equipment PHC Sub-Center

No.	Department	Comments
LABORATORY		
1	Microscope (4x mag)	
2	Centrifuge (medium capacity)	
3	Hemoglobinometer	
4	Counter blood cell/WBC differential 6 digits with totaliser	
5	Stopwatch	
6	Lab Glasswares set	
7	Rack test tubes & test tubes	
8	Haemocytometer counting chamber Fuchs-Rosenthal w 2 white cell pipette	
9	Pipette glass set fixed volume (3sizes)	
10	Rack staining with glass rods & Dryer slides	
11	Westergreen ESR set	
12	refrigerator domestic1 door (approx. 250L)	
EPI (IMMUNIZATION UNIT)		
1	Desk Office w drawers	
2	Chair office doctor	
3	Chair patient	
4	Bench patient waiting	
5	freezer vaccine single door 18cf(504l) lockable -20 to -40°c w alarm and recorder	
6	cooler box for vaccines (UNICEF or WHO EPI programme for transportation)	
CLINIC FOR Female Health Worker/Midwife with Delivery		
Delivery Room		
1	Obstetric delivery couch	
2	Patient bed 2 section fixed height cw mattress + pillow	
3	Baby Basinette mobile w shelf below	
4	Tape measurement plastic	
5	Weighing scale hanging type for home delivery	
6	Infant measuring rod (cradle measure)	
7	Infant scale non-digital	
8	pump suction electric 2 jar (1.5L) 0760-mmHg	

No.	Department	Comments
9	Procedure light 30kLux mobile	
10	Fetal Doppler battery	
11	Fetal Scope	
12	Emergency Light with Rechargeable Battery	
13	Infusion stand mobile w 2 prongs	
14	Instrument trolley	
15	handwashing stand cw 2 bowls, mobile	
16	Oxygen Cylinders (Large) + pin index O2 Flowmeter & humidifier + trolley cylinder	
17	Heater, floor	
18	vacuum extractor (manual) cw 3 cups	
19	Instrument set baby assessment	
20	Instrument vagina examination set	
21	Instrument Delivery Set (Clinic)	
22	Instrument Delivery Set (Home Delivery) cw carry bag	
23	Instrument Stainless steel tray set	
24	Stool	
25	Instrument cabinet (glass lockable 2 door)	
26	Steriliser hot water electric	
27	Gas cooker single unit cw LPG gas cylinder	
28	Sterilisator non-electric (pressured steam, large capacity)	
Consultation / Examination Room (midwife / female health worker)		
1	Examination couch O&G with foldable stepstool	
2	Sphygmomanometer mercury (standard cuff)	
3	Clinical digital thermometer + disp sleeves	
4	Stethoscope adult	
5	Stethoscope child	
6	Heavy Duty Torch light	
7	Instrument Tongue depressor & dressing jar	
8	trolley instrument	
9	Bathroom weighing scale dial	
10	Desk Office w drawers	
11	Chair office doctor	
12	Chair patient	
13	Bench patient waiting	
CLINIC		

No.	Department	Comments
Consultation / Examination / Treatment Room		
1	Examination couch with foldable stepstool	
2	Sphygmomanometer mercury (standard cuff)	
3	Clinical digital thermometer + disp sleeves	
4	Stethoscope adult	
5	Stethoscope child	
6	Heavy Duty Torch light	
7	Viewer X-ray single	
8	Instrument Tongue depressor & dressing jar	
9	Ht & Wt scale manual	
10	Trolley instrument	
11	Instrument Dressing set	
12	Steriliser hot water electric	
13	Desk Office w drawers	
14	Chair office doctor	
15	Chair patient	
16	Bench patient waiting	

Table 14: Community Health Houses: Services, Equipment and Essential Medicines

Population Catchment Area: 1 000 - 1 500

Services	Type and Number of Staff	Equipment	Essential Medicines
Information, Education and Communication (IEC)			
Maternal and Newborn Health			
Antenatal care; referral of pregnancy at risk	CHW (female), 1	Scissors	Analgesics:
Diagnosis of anemia and treatment with iron/folic acid			Paracetamol
Referral of all deliveries, if not possible attend normal deliveries	CHW (male), 1	Forceps	
Identify sick newborns, provide first aid and refer			Antihistamines:
Detection of post-partum anemia & puerperal infection; initiate treatment and refer			Chlorpheniramine Maleate
Multi-micronutrient supplementation / Ferrous Sulphate and Folic Acid		Thermometer	
Counseling on FP and exclusive breastfeeding			
Distribution of condoms and oral contraceptives		Home delivery kit	Anti-TB Drugs
Child Health and Immunization			Short course drugs (DOTS)
Support EPI outreach and immunization campaigns		ORS Measurement jug	
Growth monitoring			Supplements:
Management of ARI and IMCI and refer complicated cases		Tape measure (nutrition)	Ferrous Sulph. + Folic A.
Communicable Diseases			
Case detection of communicable diseases and early referral		Sputum collection container	
Tuberculosis - DOTS			
Collection of sputum smear among people with cough for more than 4 weeks and send		Health Education Material	Disinfectants:
Provide Short course anti-TB drugs (DOTS)			Chlorhexidine
Tracing TB defaulters			
Preventive therapy for children contacts of TB patients			Oral Rehydration:
Tracing TB contacts			ORS
Recording and reporting			
Malaria			Contraceptives:
Case detection and referral			Oral, condoms

Services	Type and Number of Staff	Equipment	Essential Medicines
Distribution of insecticide-treated nets			
HIV/AIDS			
IEC and referral to focal points for VCCT			Anti-infectives:
Leishmaniasis / Kalaazar			Tetracycline
Distribution of insecticide-treated nets			
Nutrition			
Promotion of use of iodized salt			Vitamins and Minerals:
Promotion of micronutrient-rich foods			Retinol
Support during NIDs for Vitamin A supplementation for children U5 yrs			
Support and promote exclusive breastfeeding			
Promotion of appropriate complementary feeding for young children			
Growth monitoring			
Iron/folic acid supplementation for pregnant and lactating women			
Vitamin A supplementation postpartum			
Micronutrient deficiency diseases diagnosis and referral			
Immunization			
Support routine immunization sessions			
Support campaigns (NIDs), outreach and special mass campaigns			
Support Vitamin A supplements during NIDs			
Follow-up for defaulters			
Non-communicable Diseases			
Promote healthy life style, proper nutrition, smoking control and regular check-ups			
Identification of individuals at risk and referral			
Follow-up of patients and for risk factors			
Mental Health			
Health education and awareness raising			
Case detection and referral			
Psychological first aid (comfort, assess and ensure basic needs, connect with social support)			
Substance abuse: identification and education			
Follow-up of patients and for risk factors			

Table 15: PHC Sub-Centers: Services, Staffing, Equipment and Essential Medicines

Population Catchment Area: 1 000 - 1 500

Services and Interventions	Type and Number of Staff	Equipment	Essential Medicines
Information, Education and Communication (IEC)			
Maternal and Newborn Health	PARAMEDICAL STAFF	LABORATORY	General Anesthetics:
Antenatal care; identify pregnancies at risk and refer	Medical assistant (male) 1	Microscope (4x mag)	Oxygen
If referral not possible assist with normal deliveries, identification of danger signs, stabilize and refer	Medical assistant (female) 1	Centrifuge (medium capacity)	
Detection of post-partum anemia & puerperal infection; initiate treatment and refer	Nurse (male) 1	Hemoglobinometer	Local Anesthetics:
Identify sick newborns, provide first aid and refer	Nurse (female) 1	Stopwatch	Lignocaine
Multi-micronutrient supplementation/ Ferrous Sulph. and F Acid	Pharmacy assistant 1	Lab Glassware set	
Counseling on FP and exclusive breastfeeding		Rack test tubes & test tubes	Analgesics:
Contraceptive Services: Distribution of condoms and oral contraceptives; IUDs if trained	SOCIAL WORK	Haemocytometer counting chamber	Paracetamol, Acetylsalicylic Acid
Screening for and treatment of STDs	Social worker 1	Pipette glass set fixed volume	
Child Health and Immunization		Rack staining with glass rods & Dryer slides	
Delivery of EPI services; support during campaigns	HEALTH AUDIT	Westergreen ESR set	
Growth monitoring	Health auditor 1	Refrigerator (domestic)	
Management of ARI and IMCI and refer severe cases		Sputum collection container	
Communicable Diseases	SUPPORT STAFF	EPI (IMMUNIZATION UNIT)	Antihistamines:
Acute Respiratory Infection	Administrator 1	Freezer vaccine	Chlorpheniramine Maleate, Diphenhydramine Hcl
Early detection and management; referral of severe cases	Registrar 2	cooler box for vaccines	Anti-Helminthics:
Pneumonia	Cleaner 2		Mebendazole, Praziquantel
Early detection and referral	Guard 1	DELIVERY ROOM	

Services and Interventions	Type and Number of Staff		Equipment	Essential Medicines
	Garden worker	1	Obstetric delivery couch + stool	Anti-Bacterial:
Tuberculosis Ensure immunisation coverage			Tape measurement plastic	Amoxicillin, Ampicillin, Penicillin, Erythromycin, Gentamicin
Act as DOTS provider:			Weighing scale hanging type	
Collection of sputum smear among self-reporting patients (3 consecutive samples) and send for laboratory diagnosis			Infant measuring rod (cradle)	Anti-TB Drugs:
Provide Short course anti-TB drugs (DOTS)			Infant scale non-digital	Short course drugs
Tracing TB defaulters			Procedure light	
Preventive therapy for children contacts of TB patients			Fetal Doppler battery	Anti-Amoebic:
Tracing TB contacts			Fetal Scope	Metronidazole
Recording and reporting			Emergency Light (Battery)	
Bloody Diarrhoea			Infusion stand	
Laboratory diagnosis; management if mild; referral of severe cases			Instrument trolley	Anti-Anemia:
Amoebiasis			Hand washing stand	Ferrous Sulphate + Folic Acid, Ferrous Gluconate
Laboratory diagnosis; management if mild; referral if severe			Heater, floor	
Typhoid			Heater, floor	Anti-Fungal (skin):
Early referral of suspected cases			Instrument set baby assessment	Salicylic acid + benzoic acid
Cholera			Instrument vagina exam. set	
Initial management and referral of suspected cases			Instrument Delivery Set (Clinic)	Anti-Inflammatory:
Hemorrhagic Fever			Instrument Delivery Set (Home Delivery)	Zinc oxide, Salicylic Acid, Benzyl Benzoate
Initial management and referral of suspected cases			Instrument Stainless steel tray set	Disinfectants:
Leishmaniasis / Kalaazar			Instrument Stainless steel tray set	Chlorhexidine, Povidine Iodine
Early referral of suspected cases			Instrument cabinet	
Distribution of insecticide-treated nets				
Malaria			Steriliser hot water electric	
Clinical diagnosis; take sample and send; referral for treatment			Gas cooker single unit cw LPG gas cylinder	Antacids:

Services and Interventions	Type and Number of Staff	Equipment	Essential Medicines
Distribution of insecticide-treated nets		Steriliser non-electric (pressured steam, large)	Aluminium Hydroxide
Schistosomiasis			
Referral of suspected cases			Anti-emetics:
Meningitis			
Early referral of suspected cases			Metoclopramide
Hepatitis			
Early referral of suspected cases			Anticholinergic: Hyoscine Butylbromide, Atropine Sulphate
HIV / AIDS		CONSULTATION / EXAMINATION (female health worker)	
IEC and referral to focal points for VCCT		Examination couch + stool	
Sexually Transmitted Infections (STIs)		Sphygmomanometer	
Diagnosis and treatment, referral if complicated		Clinical digital thermometer + disp sleeves	
Nutrition		Stethoscope adult	
Promotion of use of iodized salt		Stethoscope child	Laxatives:
Promotion of micronutrient-rich foods		Heavy Duty Torch light	Senna, Bisacodyl
Vitamin A supplementation for children U5 yrs		Instrument Tongue depressor & dressing jar	Oral Rehydration:
Support and promote exclusive breastfeeding		Trolley instrument	ORS
Promotion of appropriate complementary feeding for young children		Weighing scale dial	
Growth monitoring			Contraceptives:
Iron/folic acid supplementation for pregnant and lactating women		CONSULTATION / EXAMINATION ROOM	Oral, condoms, IUDs (if trained)
Vitamin A supplementation postpartum		Examination couch with foldable stepstool	
Diagnosis and treatment of mild malnutrition; refer severe cases		Sphygmomanometer	Anti-Infectives (eye): Tetracycline, Gentamicin
Immunization		Clinical digital thermometer + disp sleeves	
Ensure availability of vaccines according to EPI schedule		Stethoscope adult	Anti-Asthmatic:

Services and Interventions	Type and Number of Staff	Equipment	Essential Medicines
An elaborate cold chain for transport and storage of vaccines		Stethoscope child	Salbutamol
Conduct routine immunization sessions; follow-up defaulters		Heavy Duty Torch light	
Support campaigns (NIDs); outreach immunization and special mass campaigns during outbreaks		Viewer X-ray single	Anti-Tussive:
Vit A supplements according to schedule		Instrument Tongue depressor & dressing jar	Dextromethorphan Hbr
Disease surveillance and reporting of cases		Ht & Wt scale manual	
Non-communicable Diseases		Trolley instrument	
Promote healthy life style, proper nutrition, smoking control and regular check-ups		Instrument Dressing set	Vitamins and Minerals: Vit A, Micro-nutrients
Identification of individuals at risk and referral; follow-up of patients and on risk factors		Steriliser hot water electric	
Mental Health		HEALTH AUDIT	Vaccines:
Health education and awareness raising		Chlorometer	BCG, DPT, DPT/ Hepatitis-B vaccine, Measles, OPV, Tetanus
Case detection; provide psychological first aid (comfort, assess and ensure basic needs, connect with social support) and referral			
Substance abuse: identification and education		HEALTH EDUCATION MATERIAL	
Follow-up of patients			
Emergency Care			
Provide first aid for respiratory/cardiac, diabetic, allergic, poisoning, trauma, bleeding and obstetrics emergencies			
Coordination with emergency units at referral centre for proper transportation			
Environmental Health			
Medical Waste management			
Examination of chlorine in water			
Taking water samples for bacteriological & chemical tests			
Examination of chlorine in water in mobile tankers			

Table 16: PHC Main Centers (Category A): Services, Staffing, Equipment and Essential Medicines

Population Catchment Area: 10 000 - 30 000

Services	Type and Number of Staff	Equipment	Essential Medicines
Information, Education and Communication			
Maternal and Newborn Health			
Premarital examination and counseling	MEDICAL STAFF	LABORATORY	General Anaesthetics:
Antenatal care	Physician (male) 3	Microscope (4x mag)	Oxygen
Treatment of mild pre-eclampsia/eclampsia	Physician (female) 3	Centrifuge (medium capacity)	Local Anaesthetics:
Management of incomplete miscarriage/abortion if referral is not possible	Dentist 2	Biochemistry Analyser + stabiliser	Lignocaine; Lidocaine+Epinephrine
Assist normal deliveries, provide basic emergency obstetric care if referral is not possible	Pharmacist 1	Hematology analyser + stabiliser	Analgesics:
Treatment of anemia	Bacteriologist 1	Counter blood cell/ WBC differential	Paracetamol, Acetylsalicylic Acid; Diclofenac
Treatment of puerperal infection		ELISA system	
Management of post-partum psychosis		Stopwatch	Anticonvulsants:
Provide newborn care; management of neo-natal infections and sepsis	PARAMEDICAL STAFF	Lab Glassware set	Carbamazepine, Diazepam, Magnesium Sulphate; Phenobarbital
Multi-micronutrient supplementation incl. Iron/folic	Medical assistant (male) 3	Haemocytometer counting chamber	
Counseling on FP and exclusive breastfeeding	Medical assistant (fem) 3	Micropipette set variable volume	
Contraception Services: Distribution of condoms and oral contraceptives; IUDs if trained	Nurse (male) 2	Rack staining with glass rods & Dryer slides	Antihistamines:
Screening for and treatment of STDs	Nurse (female) 2	Spectrophotometer + stabiliser	Chlorpheniramine Maleate, Diphenhydramine Hcl
Child Health and Immunization			
Delivery of EPI Services	Dentist assistant 2 Pharmacy assistant	Westergreen ESR set Oven hot air drying	Anti-Helminthics Mebendazole, Praziquantel, Albendazole, Levamisole

Services	Type and Number of Staff	Equipment	Essential Medicines
Growth monitoring	Laboratory assistant (incl. technician for malaria)	3	Refrigerator reagent w alarm
Management of ARI and IMCI (pneumonia, diarrhea, measles, fever/ malaria) and referral if complicated	x-ray technician	2	Refrigerator domestic w freeze
School health			Sealer/stripper cutter blood
Communicable Diseases			Fume hood ductless Anti-Bacterial:
Acute Respiratory Diseases Diagnosis and management	SUPPORT STAFF		
Pneumonia Early detection and management; referral of severe cases		Water bath Refrigerator blood Kits and reagents for different tests including transport media	Amoxicillin, Ampicillin, Cotrimoxazole, Erythromycin, Gentamicin, Benzathine Benzyl Penicillin, Penicillin V, Procaine Penicillin, Benzyl penicillin, Doxycycline, Cephalixin; Chloramphenicol
Tuberculosis	Administrator	1	Sputum collection container Anti-TB Drugs
Ensure immunisation coverage	Registrar	4	EPI (IMMUNIZATION UNIT) Ethambutol, INH, Pyrazinamide, Rifampicin, Streptomycin
Act as DOTS provider	Statistician	1	Freezer vaccine
Collect sputum smears; laboratory diagnosis	Computer operator	1	Cooler box for vaccines Anti-Fungal
x-ray for smear-negative patients (if available)	Cleaner	6	Nystatin, Griseofulvin
Provide short course anti-TB drugs (DOTS)	Guard	2	Anti-Amoebic
Tracing TB defaulters	Garden worker	2	DELIVERY ROOM Metronidazole, Diloxanide Furoate
Preventive therapy for children contacts of TB	Driver	1	Obstetric delivery couch + stool Antimalarial:
Tracing TB contacts			Baby Bassinet mobile Chloroquine, Primaquine
Recording and reporting			Stethoscope infant Stethoscope adult Anti-Leishmaniasis
Bloody Diarrhoea			Sphygmomanometer Pentostam
Laboratory diagnosis and treatment	Environmental & School Health		Infant measuring rod Urinary Antiseptics:

Services	Type and Number of Staff	Equipment	Essential Medicines
Amoebiasis	School health assistant	1	Infant scale non-digital
Laboratory diagnosis and treatment	Health Audit	1	Suction pump electric
Typhoid			Procedure light, mobile
Laboratory diagnosis; treatment; refer if difficult			Fetal Doppler battery
			Anti-Anemia: Ferrous Sulphate + Folic Acid, Ferrous Gluconate, Iron Dextran
Cholera	Social worker	1	Fetal Scope
Initial management of suspected cases and early referral; reporting			Emergency Light with Rechargeable Battery
			Infusion stand mobile
			Dextran 70
Hemorrhagic Fever			Instrument trolley
Early referral of suspected cases			Anti- Anginal:
Leishmaniasis			Hand washing stand
Clinical diagnosis of cutaneous; first line treatment of uncomplicated cases; referral if complicated			Oxygen Cylinders + pin index O2 flow meter & humidifier
Distribution of Insecticide-treated nets			Heater, floor
			Digoxin
Kalaazar			Infant warmer (mobile)
Referral of suspected cases			Vacuum extractor (manual)
Distribution of insecticide-treated nets			Vasodilators:
Schistosomiasis			Instrument set baby assessment
Diagnosis and treatment; refer if complicated			Instrument vagina examination set
Malaria			Instrument Delivery Set (clinic)
Clinical and laboratory diagnosis; treatment and referral if severe			Instrument Delivery Set (home)
			Atenolol, Methyldopa, Propranolol, Sodium Nitroprusside
Hepatitis			Instrument IUCD Insertion Set
Clinical and laboratory diagnosis; first line treatment; referral if not responding			Instrument D&C set
			Acetylsalicylic Acid
Meningitis			Instrument Stainless steel tray set
Clinical diagnosis and referral of suspected cases			Instrument cabinet

Services	Type and Number of Staff	Equipment	Essential Medicines
HIV / AIDS		Steriliser, hot water electric	Lipid Lowering: Simvastatin
IEC and referral to focal points for VCCT		Steriliser oven hot air	Anti-Fungal (skin):
Sexually Transmitted Infections (STIs)			Salicylic Acid + Benzoic Acid, Nystatin; Clotrimazole
Clinical and laboratory diagnosis; treatment		RECOVERY ROOM	
Disease surveillance and reporting of cases		Infusion stand mobile	Anti-Inflammatory:
Nutrition		Oxygen Cylinders + pin index O2 Flow meter & humidifier	Zinc Oxide, Hydrocortisone, Salicylic Acid, Benzyl Benzoate
Promotion of use of iodized salt		Patient Trolley transfer/treatment	
Promotion of micronutrient-rich foods			Disinfectants:
Vitamin A supplementation for children U5 yrs			Chlorhexidine; Povidone Iodine
Support and promote exclusive breastfeeding		CONSULTATION ROOM	Diuretics:
Promotion of appropriate complementary feeding for young children		Sphygmomanometer	Frusemide, Hydrochlorothiazide, Spironolactone
Growth monitoring		Ear digital thermometer + disp sleeves	Antacids:
Iron/folic acid supplementation for pregnant and lactating women		Clinical digital thermometer + disp sleeves	Aluminium Hydroxide
Vitamin A supplementation postpartum		Diagnostic set (Ophthalmoscope + otoscope)	Anti-Emetics:
Diagnosis and treatment of mild malnutrition; referral of severe cases		Stethoscope adult	Metoclopramide
Immunization		Stethoscope child	Anticholinergics:
Ensure availability of vaccines according to EPI schedule		Viewer X-ray single	Hyoscine Butyl bromide, Atropine Sulphate
An elaborate cold chain for transport and storage of vaccines		Heavy Duty Torch light	Laxatives:

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Services	Type and Number of Staff	Equipment	Essential Medicines
Conduct routine immunization sessions and follow-up for defaulters		Instrument Tongue depressor & dressing jar	Senna, Bisacodyl
Support campaigns (NIDs); outreach immunization and special mass campaigns during outbreaks		Ht & Wt scale manual	Oral Rehydration:
Vit A supplements according to schedule		ECG	ORS
Immunization of high risk groups (Typhoid, Influenza etc..)			Adrenal Hormones:
Disease surveillance and reporting of cases		IMAGING	Dexamethasone (or Hydrocortisone)
Non-communicable Diseases		General X-ray 50KW (500mA - 125kV)	Contraceptives:
Promote healthy life style, proper nutrition, smoking control and regular check-ups		Film processor	Oral, condoms, IUDs (if trained)
Cardio Vascular Diseases		Cassettes + Films + Lead lettering	Antidiabetics:
Screening and treatment of hypertension		Viewer X-ray single	Insulin, Glibenclamide, Metformin
Diagnosis and treatment of heart diseases & cerebrovascular diseases		Mobile Lead Screen with window	
Emergency management (first aid) and referral		Lead Gown & Hanger	Anti-Infectives (eye):
Follow-up for risk factors		Ultrasound	Tetracycline
			Anti-Inflammatory (eye):
Diabetes		DENTAL UNIT	Indomethacin, Prednisolone; Antazoline +Naphthazoline
Screening, treatment and referral if complicated		Dental Treatment Unit	
Emergency management (first aid) and referral		Dental X-ray	Oxytocics:
Follow-up for risk factors		Tooth extraction Set, Adult	Ergometrine, Oxytocin
Arthritis		Tooth extraction Set, Child	
Diagnosis, symptomatic treatment and referral		Dental Diagnostic Instrument Set	Antioxytocics:
		Stainless steel instrument tray set	Nifedipine

Services	Type and Number of Staff	Equipment	Essential Medicines
Gastrointestinal Diseases		Steriliser hot water electric	
Refer suspected cases of Peptic Ulcer and Chronic Ulcerative Colitis		Autoclave benchtop, flash, steam	Psychotherapeutics:
Emergency management (first aid) and referral		Steriliser, oven hot air	Amitriptyline, Diazepam, Chlorpromazine, Haloperidol
Treatment of other common diseases			
Chronic Respiratory Diseases (Asthma, Chronic Obstructive Diseases)			Anti-Asthmatic:
Diagnosis and management; refer if complicated		HEALTH AUDIT	Salbutamol, Aminophylline, Epinephrine
Emergency management (first aid) and referral		Chlorometer	
Follow-up for risk factors			Anti-Tussive:
Urinary Tract Infections		HEALTH EDUCATION	Dextromethorphan Hbr
Diagnosis and treatment; refer if refractory		T.V, CD player, Video Camera , Digital camera, advertising board	
Skin Diseases		Computer	
Diagnosis and treatment of dermatitis and comon infections; refer if necessary			
Malignancies			Parenteral:
Breast Cancer Early detection and referral if suspected			Glucose, Glucose+Sodium Chloride, Sodium Chloride, Sodium Hydrogen carbonate, Sodium Lactate
Cervical Cancer Early referral if suspected; promote pap smear			
			Vitamins and Minerals:
Eye Diseases			Vit A, Vit B, Vit K, Calcium Carbonate, Multimicronutrient
Diagnosis and treatment of conjunctivitis			

Services	Type and Number of Staff	Equipment	Essential Medicines
Diagnosis and correction of refractory errors			Vaccines:
Diagnosis and referral of cataract			BCG, DPT, DPT/ Hepatitis-B vaccine, Measles, OPV, Tetanus
Diagnosis and referral of glaucoma			
Diagnosis and referral of corneal opacity			
Ear Diseases			
Diagnosis and treatment of common infections			
Diagnosis and referral of hearing loss			
Rheumatic Fever			
Diagnosis and secondary prophylaxis treatment			
Mental Health			
Health education and awareness raising			
Case detection and management of mental disorders; refer to specialist if necessary			
Substance abuse: identification and education			
Emergency Care			
Provide first aid emergency measures for respiratory/cardiac, diabetic, allergic, poisoning, trauma, bleeding and obstetrics and refer			
Coordination with referral centre for transportation			
Dental Care			
Education on dental hygiene			
Periodic check-up			
Treatment (tooth extraction and filling)			
Food Safety and Environmental Health			
Follow-up on health conditions of food handlers, food sampling and send for investigation			
Medical Waste management			
Examination of chlorine in water			
Taking water samples for testing			
Examination of chlorine in water in mobile tankers			
Reporting			

Table 17: PHC Main Centers (Category C with emergency and obstetrics room): Services, Staffing, Equipment and Essential Medicines

Population Catchment Area: 10 000 - 45 000

Services	Type and Number of Staff	Equipment	Essential Medicines	
Information, Education and Communication				
Maternal and Newborn Health				
Premarital examination and counseling	MEDICAL STAFF	LABORATORY	General Anaesthetics:	
Antenatal care	Physician (male)	3	Microscope (4x mag)	Oxygen
Treatment of mild pre-eclampsia/eclampsia	Physician (female)	3	Centrifuge (medium capacity)	Local Anaesthetics:
Management of incomplete miscarriage/abortion	Dentist	2	Biochemistry Analyser + stabiliser	Lignocaine; Lidocaine+Epinephrine
Assist normal deliveries, provide basic emergency obstetric care	Pharmacist	1	Hematology analyser + stabiliser	Analgesics:
Treatment of anemia	Bacteriologist	1	Counter blood cell/ WBC differential	Paracetamol, Acetylsalicylic Acid; Diclofenac
Treatment of puerperal infection			ELISA	
Management of post-partum psychosis			Stopwatch	Anticonvulsants:
Provide newborn care; management of neo-natal infections and sepsis	PARAMEDICAL STAFF		Lab Glassware set	Carbamazepine, Diazepam, Magnesium Sulphate; Phenobarbital
Multi-micronutrient supplementation incl. Iron/folic	Medical assistant (male)	3	Haemocytometer counting chamber	
Counseling on FP and exclusive breastfeeding	Medical assistant (fem)	3	Micropipette set variable volume	
Contraception Services: Distribution of condoms and oral contraceptives; IUDs	Nurse (male)	2	Rack staining with glass rods & Dryer slides	Antihistamines:
Screening for and treatment of STDs	Nurse (female)	2	Spectrophotometer + stabiliser	Chlorpheniramine Maleate, Diphenhydramine Hcl
Child Health and Immunization				
Delivery of EPI Services	Dentist assistant	2	Westergreen ESR set	Anti-Helminthics
	Pharmacy assistant	2	Oven hot air drying	Mebendazole, Praziquantel, Albendazole, Levamisole

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Services	Type and Number of Staff	Equipment	Essential Medicines
Growth monitoring	Laboratory assistant (incl. technician for malaria)	3	Refrigerator reagent w alarm
Management of ARI and IMCI (pneumonia, diarrhea, measles, fever/malaria) and referral if complicated	x-ray technician	2	Refrigerator domestic w freeze
School health			Sealer/stripper cutter blood
Communicable Diseases			Fume hood ductless
Acute Respiratory Diseases Diagnosis and management	SUPPORT STAFF		Anti-Bacterial:
Pneumonia Early detection and management; referral of severe cases			Water bath Refrigerator blood Kits and reagents for different tests including transport media Sputum collection containers
			Amoxicillin, Ampicillin, Cotrimoxazole, Erythromycin, Gentamicin, Benzathine Benzyl Penicillin, Penicillin V, Procaine Penicillin, Benzyl penicillin, Doxycycline, Cephalixin; Chloramphenicol
Tuberculosis	Administrator	1	EPI (IMMUNIZATION UNIT)
Ensure immunisation coverage	Registrar	4	Freezer vaccine
Act as DOTS provider	Statistician	1	Cooler box for vaccines
Collect sputum smears; laboratory diagnosis	Computer operator	1	
x-ray for smear-negative patients (if available)	Cleaner	6	
Provide short course anti-TB drugs (DOTS)	Guard	2	
Tracing TB defaulters	Garden worker	2	DELIVERY ROOM
Preventive therapy for children contacts of TB	Driver	1	Obstetric delivery couch + stool
Tracing TB contacts			Baby Bassinet mobile
Recording and reporting			Stethoscope infant
			Stethoscope adult
Bloody Diarrhoea			Sphygmomanometer
Laboratory diagnosis and treatment	Environmental & School Health		Infant measuring rod
			Anti-Fungal Nystatin, Griseofulvin
			Anti-Amoebic
			Metronidazole, Diloxanide Furoate
			Antimalarial: Chloroquine, Primaquine
			Anti-Leishmaniasis Pentostam
			Urinary Antiseptics:

Services	Type and Number of Staff	Equipment	Essential Medicines
Amoebiasis	School health assistant	1	Infant scale non-digital
Laboratory diagnosis and treatment	Health Audit	1	Suction pump electric
Typhoid			Anti-Anemia:
Laboratory diagnosis; treatment; refer if difficult		Procedure light, mobile Fetal Doppler battery	Ferrous Sulphate + Folic Acid, Ferrous Gluconate, Iron Dextran
Cholera	Social worker	1	Fetal Scope
Initial management of suspected cases and early referral; reporting			Plasma Substitutes
			Dextran 70
Hemorrhagic Fever			Anti- Anginal:
Early referral of suspected cases		Emergency Light with Rechargeable Battery Instrument trolley	
Leishmaniasis			Isosorbide dinitrate
Clinical diagnosis of cutaneous; first line treatment of uncomplicated cases; referral if complicated		Hand washing stand Oxygen Cylinders + pin index O2 flow meter & humidifier	Anti-Arrhythmics:
Distribution of Insecticide-treated nets		Heater, floor	Digoxin
Kalaazar			
Referral of suspected cases Distribution of insecticide-treated nets		Infant warmer (mobile) Resuscitation set for infant	Vasodilators:
Schistosomiasis			Cinnarizine
Diagnosis and treatment; refer if complicated		Vacuum extractor (manual) Instrument set baby assessment	
Malaria			Anti-Hypertensives:
Clinical and laboratory diagnosis; treatment and referral if severe		Instrument episiotomy set Instrument vagina examination set	Atenolol, Methyldopa, Propranolol, Sodium Nitroprusside
Hepatitis			Anti-thrombotics:
Clinical and laboratory diagnosis; first line treatment; referral if not responding		Instrument set baby assessment Instrument delivery set	Acetylsalicylic Acid
Meningitis			
Clinical diagnosis and referral of suspected cases		Instrument IUCD insertion set Instrument D&C set	

Services	Type and Number of Staff	Equipment	Essential Medicines
HIV / AIDS		Instrument stainless steel tray set	Lipid Lowering: Simvastatin
IEC and referral to focal points for VCCT		Warmer blood/fluid dry heat transfusion/infusion rapid flow rate	Anti-Fungal (skin):
Sexually Transmitted Infections (STIs)		Monitor - SpO2 + NIBP	Salicylic Acid + Benzoic Acid, Nystatin; Clotrimazole
Clinical and laboratory diagnosis; treatment		Instrument cabinet	
Disease surveillance and reporting of cases		Autoclave benchtop, flash, steam	Anti-Inflammatory:
Nutrition		Steriliser, hot water electric	Zinc Oxide, Hydrocortisone, Salicylic Acid, Benzyl Benzoate
Promotion of use of iodized salt		Steriliser oven hot air	
Promotion of micronutrient-rich foods			Disinfectants:
Vitamin A supplementation for children U5 yrs		RECOVERY ROOM	Chlorhexidine; Povidone Iodine
Support and promote exclusive breastfeeding		Infusion stand mobile	Diuretics:
Promotion of appropriate complementary feeding for young children		Oxygen Cylinders + pin index O2 Flow meter & humidifier	Frusemide, Hydrochlorothiazide, Spironolactone
Growth monitoring		Patient Trolley transfer/treatment	Antacids:
Iron/folic acid supplementation for pregnant and lactating women			Aluminium Hydroxide
Vitamin A supplementation postpartum		CONSULTATION ROOM	Anti-Emetics:
Diagnosis and treatment of mild malnutrition; referral of severe cases		Sphygmomanometer	Metoclopramide
Immunization		Ear digital thermometer + disp sleeves	Anticholinergics:
Ensure availability of vaccines according to EPI schedule		Clinical digital thermometer + disp sleeves	Hyoscine Butyl bromide, Atropine Sulphate
An elaborate cold chain for transport and storage of vaccines		Diagnostic set (Ophthalmoscope +otoscope)	Laxatives:
Conduct routine immunization sessions and follow-up for defaulters		Stethoscope adult	Senna, Bisacodyl

Services	Type and Number of Staff	Equipment	Essential Medicines
Support campaigns (NIDs); outreach immunization and special mass campaigns during outbreaks		Stethoscope child	Oral Rehydration:
Vit A supplements according to schedule		Viewer X-ray single	ORS
Immunization of high risk groups (Typhoid, Influenza etc..)		Heavy Duty Torch light	Adrenal Hormones:
Disease surveillance and reporting of cases		Instrument Tongue depressor & dressing jar	Dexamethasone (or Hydrocortisone)
Non-communicable Diseases		Ht & Wt scale manual	Contraceptives:
Promote healthy life style, proper nutrition, smoking control and regular check-ups			Oral, condoms, IUDs (if trained)
Cardio Vascular Diseases		MINOR OT or Procedure Room	Antidiabetics:
Screening and treatment of hypertension		Operating table + accessories	Insulin, Glibenclamide, Metformin
Diagnosis and treatment of heart diseases & cerebrovascular diseases		Anaesthesia machine minor w ventilator 2 vaporiser	
Emergency management (first aid) and referral		Diathermy machine 300W cw accessories	Anti-Infectives (eye):
Follow-up for risk factors		Infuser pressure 500ml	Tetracycline
		Infusion stand 2 prongs	Anti-Inflammatory (eye):
Diabetes		Viewer X-ray single	Indomethacin, Prednisolone; Antazoline+ Naphthazoline
Screening, treatment and referral if complicated		Suction pump electric	
Emergency management (first aid) and referral		Suction pump battery operated	Oxytocics:
Follow-up for risk factors		Monitor patient 4 channel (ECG/SpO2/ NIBP)	Ergometrine, Oxytocin
Arthritis		Operating light, mobile	
Diagnosis, symptomatic treatment and referral		Resuscitation Set for adult, child & infant	Antioxytocics:
		Laryngoscope set (adult+child)	Nifedipine
Gastrointestinal Diseases		ECG	

Services	Type and Number of Staff	Equipment	Essential Medicines
Refer suspected cases of Peptic Ulcer and Chronic Ulcerative Colitis			Psychotherapeutics:
Emergency management (first aid) and referral		AUTOCLAVE ROOM	Amitriptyline, Diazepam, Chlorpromazine, Haloperidol
Treatment of other common diseases		Autoclave/steriliser steam	
Chronic Respiratory Diseases (Asthma, Chronic Obstructive Diseases)		Autoclave bench top, flash, steam	Anti-Asthmatic:
Diagnosis and management; refer if complicated		Steriliser hot water electric	Salbutamol, Aminophylline, Epinephrine
Emergency management (first aid) and referral		Steriliser, oven hot air	
Follow-up for risk factors		Instrument trolley	Anti-Tussive:
Urinary Tract Infections			Dextromethorphan Hbr
Diagnosis and treatment; refer if refractory			
Skin Diseases			
Diagnosis and treatment of dermatitis and common infections; refer if necessary			
Malignancies		RECOVERY ROOM	Parenteral:
Breast Cancer Early detection and referral if suspected		Infusion stand mobile	Glucose, Glucose+Sodium Chloride, Sodium Chloride, Sodium Hydrogen carbonate, Sodium Lactate
Cervical Cancer Early referral if suspected; promote pap smear		Oxygen Cylinders + pin index O2 Flow meter & humidifier	
		Patient Trolley transfer/treatment	Vitamins and Minerals:
Eye Diseases			Vit A, Vit B, Vit K, Calcium Carbonate, Multimicronutrient
Diagnosis and treatment of conjunctivitis			
Diagnosis and correction of refractory errors		IMAGING	Vaccines:

Services	Type and Number of Staff	Equipment	Essential Medicines
Diagnosis and referral of cataract		General X-ray 50KW (500mA - 125kV)	BCG, DPT, DPT/ Hepatitis-B vaccine, Measles, OPV, Tetanus
Diagnosis and referral of glaucoma		Film processor	
Diagnosis and referral of corneal opacity		Cassettes + Films + Lead lettering	Emergency Medicines:
		Viewer X-ray single	See separate list
Ear Diseases		Mobile Lead Screen with window	
Diagnosis and treatment of common infections		Lead Gown & Hanger	
Diagnosis and referral of hearing loss		Ultrasound	
Rheumatic Fever		DENTAL UNIT	
Diagnosis and secondary prophylaxis treatment		Dental Treatment Unit	
		Dental X-ray	
Mental Health		Tooth extraction Set, Adult	
Health education and awareness raising		Tooth extraction Set, Child	
Case detection and management of mental disorders; refer to specialist if necessary		Dental Diagnostic Instrument Set	
Substance abuse: identification and education		Stainless steel instrument tray set	
Emergency Care		Steriliser hot water electric	
Provide emergency measures for respiratory/cardiac, diabetic, allergic, poisoning, trauma, bleeding and obstetrics		Autoclave benchtop, flash, steam	
Coordination with referral centre for transportation		Steriliser, oven hot air	
Dental Care			
Education on dental hygiene			
Periodic check-up			
Treatment (tooth extraction and filling)			
Food Safety and Environmental Health		HEALTH AUDIT	
Follow-up on health conditions of food handlers, food sampling and send for investigation		Chlorometer	

Services	Type and Number of Staff	Equipment	Essential Medicines
Medical Waste management			
Examination of chlorine in water			
Taking water samples for testing			
Examination of chlorine in water in mobile tankers			
Reporting			

Annex VI Guidelines for implementation of the BHSP

VI.1 Guidelines for short-term implementation

VI.1.1 Implementation planning

- finalize and reach consensus regarding the services and levels of provision of the BHSP;
- formulate and define role of the Project Implementation/Coordination Unit in each district and at the central level;
- develop district/governorate implementation plans (implementation planning workshop); and
- develop a monitoring and evaluation plan.

VI.1.2 Infrastructure

- utilize the results of the “Needs Assessment of PHC Facilities “ to ensure that the physical facility and equipment meet the requirements for delivering the BHSP;
- implement any necessary renovations or equipment procurement; and
- initiate national debate regarding the future vision for the PHC network (see long-term issues).

VI.1.3 Service delivery

- develop (update/review) “standards” / norms and clinical protocols for services included in the BHSP;
- develop referral guidelines and gate-keeping mechanisms between the different level of PHC facilities;
- review staff levels, patterns and qualifications to ensure they meet BHSP requirements - fill human resource gaps through mechanisms as MoH appointment, contracting, and overtime hours;
- conduct training needs assessment for medical staff;
- train all medical staff (physicians, nurses, and technicians) on the delivery and standards of BHSP; and
- develop facility QA programmes (a management approach, a systematic process to check whether services provided meet the specified requirements/standards.- this will involve developing explicit organizational standards and an accreditation-like process, including definition of quality of services provided, translation into quantifiable standards/manual and measurement of performance against set standards)

VI.1.4 Organization and management

- develop facility and equipment maintenance plans;
- develop a medical record system and facility information systems;
- develop (update/review) procurement and inventory systems;
- develop a waste management plan;
- train administrative and support staff on the new systems; and
- initiate dialogue about long term decentralization through the district management approach and possibly test the model in two districts.

VI.1.5 Financing

- cost the BHSP;
- identify additional funding required (difference between cost of delivering the BHSP as identified in 5.1 and current MoH allocation to PHC facilities);
- identify possible sources of funds to fill the gap in 5.2 in the short-term (additional MoH allocation or donor funding); and
- initiate national dialogue regarding long-term financing and sustainability issues (see long-term issues).

VI.2 Long-term issues to be considered

The following discussion presents certain features of the Iraq PHC system that will have an impact on the successful implementation of the BHSP. While some of these issues do not need to be dealt with immediately, they will nevertheless have to be addressed in the long term.

VI.2.1 Infrastructure

According to various sources, the total number of PHC units and centres in Iraq in 2005 was approximately 0.5-1 per 10 000 population. This is low both by international standards and compared to neighboring countries (2-3 per 10 000).

The range of PHC per population (0.5/10 000 to 1/10 000) also varies depending on geographical location. This geographic inequity in the distribution of PHC facilities is also a problem.

Moreover, the number of facilities at the different levels of the PHC network (sub-centres, main centres and district hospitals) makes referral problematic. The number of district hospitals (85) for the whole country is very low.

These features pose the following issues for discussion:

- Redefining the three levels of PHC facilities:
 - increase the total number of PHC centres?
 - determine the future of PHC sub-centres - upgrade them to main PHC centres?
 - increase the number of district hospitals?
- Review the geographic distribution of the PHC network and determine, based on population served and utilization rates which facilities should be maintained /expanded and which ones should be shut down.
- Utilize the results of the “Needs Assessment of PHC Facilities” to determine the rehabilitation and equipment needs of the PHC facilities to be upgraded.

VI.2.2 Management and organization

Iraq has a centralized model of health care management where decisions (like staff appointments, procurement of supplies) that affect the operation of health facilities at the district level are made at the central MoH level.



- The District Management Approach provides a decentralized model that can be adopted in Iraq. Management of service delivery functions (eg, hours of operation, procurement etc) would be delegated to the health districts. This would increase the ability to meet community needs.
- Referral guidelines and gate-keeping mechanisms can be developed whereby PHC doctors or nurses would refer patients from one level to the next, according to specific guidelines.

VI.2.3 Service Delivery

- In the short-term, the General Practice model can be strengthened and the Family Health Model will be implemented in the long-term. Physicians would be trained in family medicine so that the family physician would provide services in the BHSP to a specific family roster and act as the gatekeeper of the system, referring patients to higher level facilities if necessary.
- Develop standards and norms for all services in the package to ensure quality of care.
- Staffing levels and patterns in the pilot facilities would be revised against the package requirements. New health manpower needs would be met and redundant staff would be retrained or relocated. Physicians and nurses will be trained to meet the needs of the package.

VI.2.4 Financing

In 2004, Iraq's total expenditure on health per capita was 135 International dollars. Its total expenditure on health as percentage of GDP was 5.3%. These levels of health spending are low by both international standards and compared to neighbouring countries. Moreover, most of the MOH budget is spent on curative care rather than PHC.

There are two types of costs to be considered in the implementation of the BHSP:

- **Capital costs:** these are the initial investments (facility renovation, equipment, staff training, etc) that are needed to enable the existing PHC network to deliver the new BHSP.
- **Operating expenses:** these are the recurrent (running) costs of delivering the BHSP (staff salaries, supplies/drugs, facility/equipment maintenance costs, and other overhead costs). These should be

ideally funded from local sources to ensure financial sustainability. However, the current spending levels on PHC will not sustain the delivery of acceptable quality BHSP. The following options could be considered:

- increasing the overall health budget, ie, increase government spending on health;
- reallocating the health budget: shifting the spending from curative to primary health care; and
- financing the BPHS through an integrated combination of public and private expenditures – households may contribute affordable visit fees and co-payments for drugs and investigations.

The Government of Iraq and the MoH, in specific, are looking into different health care financing mechanisms to ensure long-term financial sustainability. One option is adopting a social health insurance to finance secondary and tertiary care. Universal access to PHC, through the BHSP, will form the cornerstone of any health system reform to be adopted. It is foreseen that a 10-15% increase in government health spending recommended by the recent health conference held in Baghdad (June 2008) will support funding for nation-wide implementation of the BHSP.

¹ Maternal Mortality Ratio was measured by ICMMS in 1999 as 294 per 100 000 live births.