FINAL REPORT

SECONDARY LEVEL MINIMUM HEALTH SERVICES DELIVERY PACKAGE FOR SECONDARY CARE HOSPITALS (MHSDP)

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2nd of November, 2016

Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
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Acronyms

BHUs	Basic Health Units
BPHS	Basic Package of Health Services
CMWs	Community Midwifes
DHIS	District Health Information System
DHQH	District Headquarter Hospital
EPHS	Essential Package of Health Services
HSD	Health Service Delivery
IDPs	Internally Displaced Persons
KP	Khyber Pakhtunkhwa
KPHCC	Khyber Pakhtunkhwa Health Care Commission
LHWs	Lady Health Workers
MCHCs	Maternal and Child Health Centres
MHSDP-SC	Minimum Health Service Delivery Secondary Care
PSPU	Policy and Strategic Planning Unit
RHCs	Rural Health Centres
THQH	Tehsil Headquarter Hospital

1 MHSDP: Background, concepts and principles

The Government of Pakistan is committed to address the health needs of its population through efficient quality health care services. The devolution of 17 Federal ministries including health ministry to the provinces in 2010 led the responsibility of health sector planning, strategy development and service provision to the provinces. The fiscal and administrative devolution of powers to the provinces gave them an opportunity to decide on health priorities specific to the province. In this connection, Punjab, Sindh, KP and Baluchistan developed their Health Sector Strategies. The implementation of these strategies require the provinces to develop standardized packages of healthcare to ensure provision of quality healthcare services to the population equitably. The current assignment on developing Minimum Health Service Delivery Package for secondary level of care (MHSDP-SC) in KP is one step towards achieving the objectives of Health Sector Strategy, Khyber Pakhtunkhwa (2010-17).

1.1 Packaging of health services delivery (HSD)

After the declaration of Alma-Ata in 1978, debate on the merits of a limited package of interventions versus the notion of comprehensive primary health care started during the late 1970s and 1980s. Essential Health Packages came to prominence when the 1993 World Development Report posed a practical analysis of how the low-income countries' governments spend their very limited health budgets. With the help of epidemiological and costing data, the Report argued that governments should radically shift their health expenditure towards spending on a minimum package of essential public health and clinical services. The concept of packages was further reinforced by the Report of the Commission on Macroeconomics and Health (2001) and the 2006 Disease Control Priorities Project subsequently[1].

The packaging of the health services delivery at various levels of care facilitate in ensuring the availability of the requisite services at that particular level and takes into account the health care needs of the population and the available financial resources. The health service delivery package primarily includes the list of services along with infrastructure, human resource, medicines, supplies and equipment requirements to deliver those services. The standards of service delivery refer to the qualitative aspects of the services that are being provided and sets out the quality protocols for delivery of each service. The terms *"Basic"* and *"Minimum"* are used interchangeably in relation to the Health Service Delivery Package. A Basic or Minimum Health Service Delivery Package is defined as a minimum collection of essential health services to which all the population need to have a guaranteed access. The term "Essential Health Service Delivery Package" refers to those health services that provide a maximum gain in health status for the money spent i.e. the services which provide the best 'value for money'. In other words, 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].

[1]. Essential Health Packages: What Are They For? What Do They Change? WHO Service Delivery Seminar Series Technical Brief No. 2, 3 July 2008. Retrieved from www.who.int/healthsystems/topics/delivery/technical_brief_ehp.pdf on 19th July, 2016

[2] A Basic Health Services Package for Iraq, Ministry of Health 2009. Retrieved from www.emro.who.int/dsaf/libcat/EMROPD_2009_109.pdf on 18th of July, 2016

1.2 Levels of care and HSD system in Pakistan

Pakistani health care system envisages to deliver healthcare through a three-tiered healthcare delivery system and a range of public health interventions, more than two thirds through the government. However, there is a parallel non-government, for-profit and not-for-profit health care system which is highly un-regularized. For description and discussion, the health systems and services that will be referred would actually be through the government.

The range of services that are being provided through the government include promotive, preventive, curative and rehabilitative health care services. The three tiers of the health service delivery system include primary, secondary and tertiary level of care (Figure 1).

Primary Health Care – refers to "essential health care" that is based on practical, scientifically sound and socially acceptable methods and technology, which make universal health care accessible to all individuals and families in a community[3]. Primary health care in Pakistan has two components

- *Community component* of service provision through frontline health workers (Lady Health Workers – LHWs and Community Midwives – CMWs) that involves primarily preventive and health promotive services.
- *Health facility component* including Basic Health Units (BHUs), and Rural Health Centres (RHCs), Maternal and Child Health Centres (MCHCs) and Civil Dispensaries. The MCHCs and Civil Dispensaries are often located in urban and large rural areas.

Secondary Health Care – refers to the medical care that is provided by a specialist or facility upon referral from primary care and that requires more specialized knowledge, skill, or equipment than the primary care professional can provide. The Secondary level health facilities in Pakistan include Tehsil Headquarter Hospital (THQH) and District Headquarter Hospital (DHQH). The services provided at the health facilities are primarily curative in nature.

The Primary and Secondary Health Care constitutes the District Health Service system.

Tertiary Health care – refers to state of the art specialised consultative health care that involves all specialties and sub-specialties supported by availability of required infrastructure, human resource, supplies, medicines and equipment including Hi-tech medical equipment. These tertiary care hospitals are generally located in the provincial capital and ideally expected to receive patients from secondary care hospitals situated in the districts. With few exceptions, these are also affiliated with the medical teaching institutions for graduates and post-graduates.

[3] Declaration of Alma-Ata, September, 1978. Retrieved from http://www.who.int/publications/almaata_declaration_en.pdf on 18th July, 2016

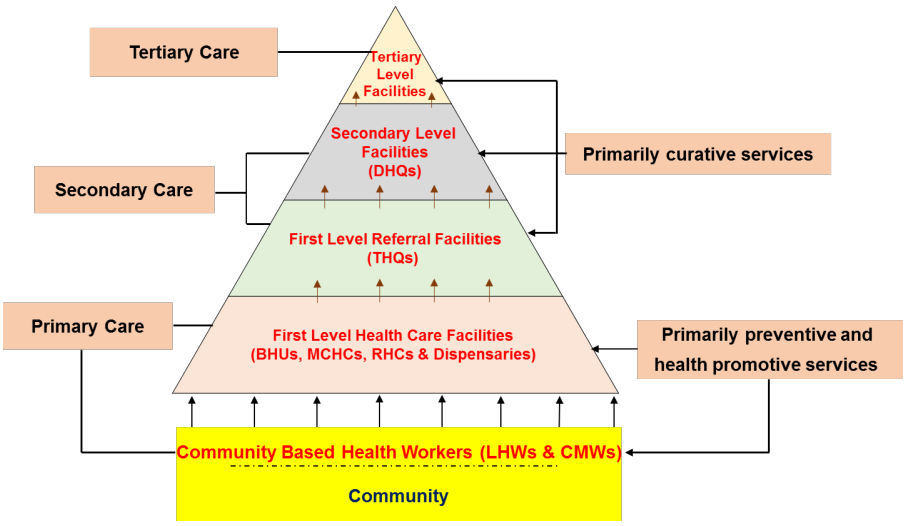

Figure 1: Overview of the health service delivery in Pakistan

1.3 Experiences of developing and implementing HSD Packages

1.3.1 International experience

There is a wealth of experiences with regards to developing and implementing health services delivery packages in developing countries. The experience of Liberia informs us that it started from a Basic Package of Health Services (BPHS) for primary and secondary care and after implementing the basic package for almost four years with considerable success moved on to develop an Essential Package of Health Services for secondary and tertiary care with a more comprehensive set of services. The BPHS for Liberia was developed and made operational in 2007 as a cornerstone of countries National Health Policy and Plan. The BPHS established basic preventive and curative services needed to improve access and health care. After being in place for almost four years i.e. by 2011, BPHS implementation demonstrated significant successes. For the first time in many years, Liberia's clinics, health centers and hospitals were given a set of standard services that they were expected to provide. There has been progressive improvement in coverage of the BPHS each passing year. In 2009, approximately 35% of Liberia's government health facilities were implementing the BPHS, which improved to 80% in 2010, and in 2011, this number again increased to 84%. The country saw considerable improvement in standardized medical services, health human resource development and supply chain management systems to ensure the acceleration of health care for all in Liberia. Liberia developed its ten-year National Health and Social Welfare Policy and Plan (NHSWPP, 2011–2021) and considered it critical to not only expand the services available to all Liberians but also continue to improve and standardize health care delivery systems in order to ensure quality health care for all Liberians. This led to the development of Essential Package of Health Services (EPHS) for secondary and tertiary care, to serve as a cornerstone of the new National Health and Social Welfare Policy and Plan, building upon the successes of the BPHS implementation. The vision behind developing secondary and tertiary care package was to improve referral networks and raise the availability of services and quality of care at all Health Centers and Hospitals. The EPHS for secondary and tertiary care provided a more comprehensive set of services to strengthen key areas that were performing poorly and added new services necessary to address needs at all levels of the

health care system. The EPHS was introduced in two phases; first phase that covered the period 2011-2013, after which a review and modification was to be done on the basis of the progress made[4].

The case of Nepal shows similarities with Liberia to the approach in standardising the package of health care services i.e. to start small and then grow. The first EPHS was published in 1999 by the government of Nepal, called the "Essential Health Care Services package," as part of the Second-Long Term Health Plan, which included 20 broad health areas. The government's Health Sector Strategy (2004) acknowledged that the original EPHS was not affordable for the government to provide, given the available resources and proposed to focus on delivering four main areas of essential care across all districts: safe motherhood and family planning, child health, control of communicable disease, and strengthened outpatient care. The Nepal Health Sector Programme Implementation Plan 2010–2015 updated and expanded the EPHS to include new services under the reproductive health and child health areas, and new programs on mental health, oral health, environmental health, and community-based new-born care, and a community-based nutrition care and support program. In addition, the update adds a non-communicable disease control component to address changes in demographics and diseases[5].

The EPHS developed for Somalia envisage to implement the package in a phased manner (two phases). The EPHS has set distinct criteria for phase 1 and phase 2 that covers all tiers of health service delivery and not only provides the list of services and associated required inputs at each tier but also sets bare minimum operational standards for the services proposed. The facilities who attain the criteria set for phase 1 after evaluation shall be entitled to move to phase 2. The package for Somalia is similar to aforementioned country examples in that it adopts a phased approach but different with regards to inclusion of standards for the services that are proposed at level/tier of care[6].

The country examples presented above put forth following key aspects of Minimum Health Services Package

- The health services package follows the principal of starting small and then growing up. The packages developed in all three countries started with minimum/essential package of health services and after its implementation, proceed towards enhancement/addition of services to the package.
- The packages do take into account the cost associated with the proposed package.
- The packages developed envisage to integrate the primary and secondary levels of care, rather than seeing the package in isolation for each level of care.
- The packages prioritise the selection of services based on population needs and epidemiological trends.

[4] Essential Package of Health Services (EPHS). Secondary & Tertiary Care: The District, County & National Health Systems - Liberia, 2011
[5] Wright, J., Health Finance & Governance Project. July 2015. Essential Package of Health Services Country Snapshot: Nepal. Bethesda, MD: Health Finance & Governance Project, Abt Associates Inc.
[6] Essential Package of Health Services (EPHS), Somalia, 2009

1.3.2 National experience

The experience with regards to standardisation of care at various levels/tiers of care vary across provinces. The Govt. of Punjab has developed the Essential Package of Health Services (EPHS) for primary as well as the secondary care. In 2012, the Punjab Health Care Commission (PHC) developed Minimum Service Delivery Standards (MSDS) for the secondary care hospitals while the Policy and Strategic Planning Unit (PSPU, Govt. of Punjab) with support from TRF developed the Minimum Service Delivery Standards (MSDS) for primary health care. The Minimum Service Delivery Standards provided the protocols for ensuring qualitative aspects of the health services that were enlisted in the Essential Package of Health Services (EPHS). The Punjab Devolved Social Services Programme (PDSSP) also developed the Minimum Service Delivery Standards for Primary and Secondary Health Care for Primary Health Care.

The Essential Package of Health Services for secondary care hospitals in Punjab (EPHS-SC, Punjab) sets out the list of services that should be provided at the secondary care hospitals. The EPHS-SC, Punjab also provides the detail of infrastructure, human resource, medicines, supplies, and equipment requirements to provide the enlisted services. The EPHS-SC Punjab provides the list of services and the associated requirements for DHQH and THQH. It does not provide the list of services and other requirements by the categories of DHQHs (Category A, B, and C) and THQHs (Category A, B and C). The development of the EPHS-SC, Punjab involved review of the relevant literature, government documents, as well as inputs from all the key stakeholders in the government, and a comprehensive consultative process with the technical committee notified by the Govt. of Punjab[7].

2 Background to MHSD Package in KP

2.1 Current status of health and HSD in KP

Pakistan is the sixth most populous country in the world, with a population of around 184 million[8]. The population of Khyber Pakhtunkhwa has increased from 17.7 million in 1998 to 27.9 million in 2014, of which a vast majority (77%) lives in urban areas[9]. Khyber Pakhtunkhwa has 25 districts with a total area of 74,521 km^2 and constitute about 9% of the total area and 15% of the total population of Pakistan. In addition, it is estimated that there are more than 1.8 million Afghan refugees living in the province. The average household size in Khyber Pakhtunkhwa is 7.2 people, second highest in Pakistan after Baluchistan (7.90 people)[10]. High population growth rate, Afghan refugees, Internally Displaced Persons (IDPs) and volatile security situation are some of the key challenges that the government of Khyber Pakhtunkhwa is facing.

Khyber Pakhtunkhwa has the lowest infant and under 5 mortality (58 & 70 per 1000 live births, respectively) compared to other provinces in Pakistan (Figure 2). However, there is

[7] Essential Package of Health Services for Secondary Care, Punjab, 2014
[8] National Institute of Population Studies. Accessed from http://www.nips.org.pk/Home.htm, on 19th July, 2016
[9] Bureau of Statistics, Khyber Pakhtunkhwa. Retrieved from http://kpbos.gov.pk/prd_images/1399372174.pdf on 19th July, 2016
[10] Household integrated economic survey (HIES), 2013-14. Retrieved from http://www.pbs.gov.pk/content/household-integrated-economic-survey-hies-2013-14 on 19th July, 2016

an urban rural disparity in these mortality rates with urban areas faring well (Infant mortality= 53/1000 live births, Under-5 mortality = 58/1000 live births,) compared to rural areas (Infant mortality=53/1000 live births, Under 5 mortality=72/1000 live births)[11].

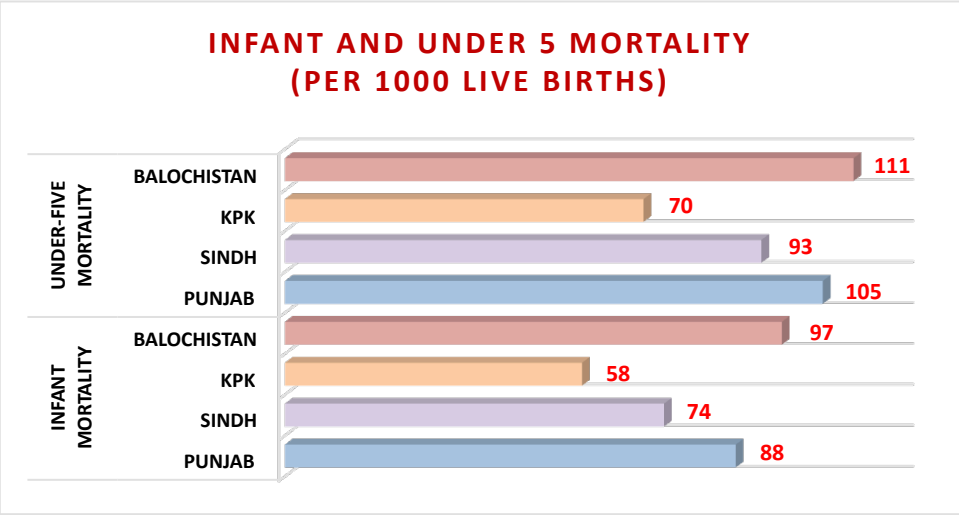

Figure 2: Provincial comparison of Infant and Under 5 mortality rates (Source: PDHS 2012-13)

With regards to the type of illnesses that are being reported by the public sector health facilities through the DHIS system (Jan-June 2016), indicate that the most commonly reported illnesses are Acute Respiratory Infection (49%) followed by Dysentery in less than five-year-old (15%), Fever due to other causes (15%), Dysentery in more than five years old (11%) and Urinary Tract Infection (10%) (Figure 3). A similar pattern of illnesses was observed in the calendar year 2015[12].

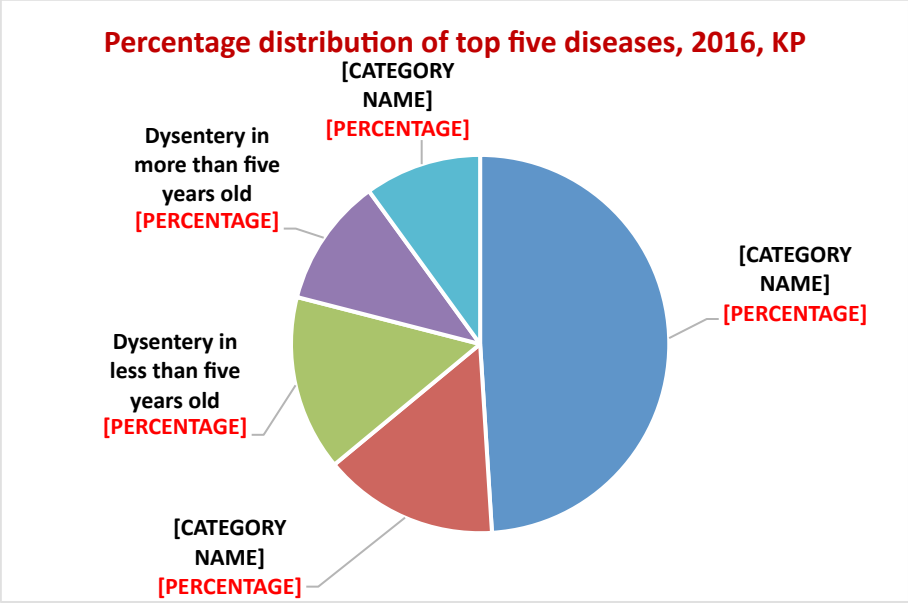

Figure 3: Percentage distribution of top five illnesses reported by Public sector health facilities in KP Jan-June, 2016 (Source: DHIS, KP)

With regards to access to health services, three fifth (60%) of the women in Khyber Pakhtunkhwa had an antenatal check from a skilled provider. Other provinces fared well in

[11] Pakistan Demographic and Health Survey (PDHS), 2012-13
[12] District Health Information System (DHIS), Khyber Pakhtunkhwa

this regard, except Baluchistan where nearly one third (31%) of the women had their antenatal check-up from a skilled health care provider (Figure 4). More than half of the women (56%) had their last birth protected against neonatal tetanus with urban areas performing better (66%) compared to rural areas (54%)[13].

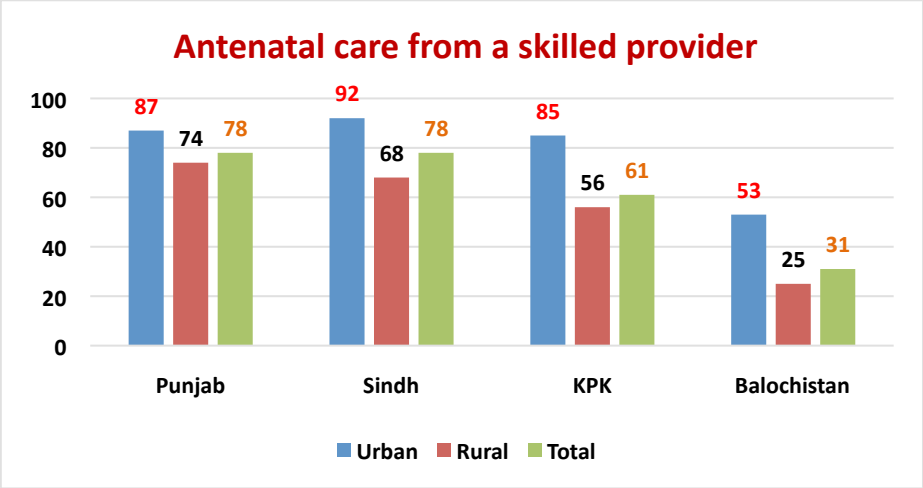

Figure 4: Percentage of women receiving antenatal care from a skilled provider (Source: PDHS 2012-13)

With regards to the place of deliveries, nearly three fifth of the deliveries (60%) in KP are being conducted at home. The deliveries at home show a stark difference between urban and rural areas, with rural areas having twice the proportion (64%) of deliveries at home compared to urban areas (37%). There is also a considerable difference in utilisation of the public sector health facilities for delivering a child in urban (23%) and rural (15%) areas (Figure 5)[13].

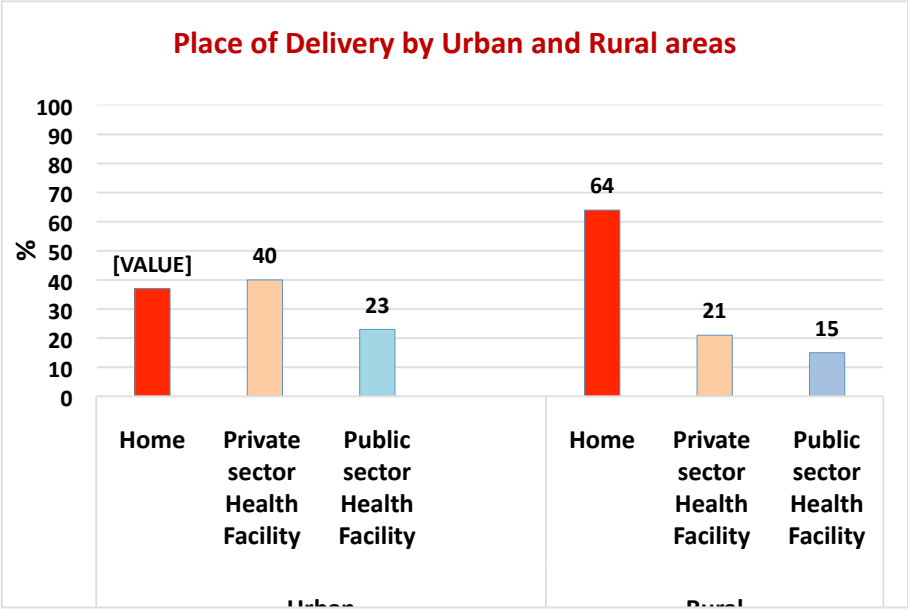

Figure 5: Place of delivery by Urban and Rural areas, KP (Source: PDHS 2012-13)

The public sector health service delivery in KP is through a three-tiered system involving primary, secondary and tertiary health care. The primary health care primarily focusses on the provision of preventive and promotive health care while the secondary and tertiary health

[13] Pakistan Demographic and Health Survey (PDHS), 2012-13

care primarily provide curative health services. The health facilities operating in the province are provided in the Table 1.

Table 1: Health Facilities by types in Khyber Pakhtunkhwa (Source: DHIS cell)

S.No	Type	Number
1.	Teaching/Tertiary Hospitals	9
2.	Category A Hospitals	8
3.	Category B Hospitals	18
4.	Category C Hospitals	19
5.	Category D Hospitals	56
6.	Civil Hospitals	10
7.	Women and Children Hospitals	6
8.	Police Hospitals	4
9.	Jail Hospitals	4
10.	Basic Health Units	771
11.	Civil Dispensaries	447
12.	Rural Health Centers	92
13.	Sub Health Facilities	23
14.	Mother Child Health Centers	56
15.	Leprosy Clinics	24
16.	TB Centers	35
17	Other Health Facilities	12
	Total	**1594**

2.2 Categorisation of Secondary Care Hospitals in KP

The secondary level of care as provided in Khyber Pakhtunkhwa has been categorized/ standardized in to four categories of hospitals (Category A, B, C and D) according to the bed size, the catchment population and of course needs and demands of the local population. All the four categories of hospitals have both in-patient and outpatient services, in addition to emergency, diagnostic and other day care facilities. The table below provides the recommended availability of the clinical specialities across the four categories of secondary care hospitals. The details about each category can be found in **13.613.2**.

Table 2: Speciality wise status across categories of secondary care hospitals in KP

		CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY D
SPECIALTIES	SURGERY				
	MEDICINE				
	GYNAE/OBS				
	PAEDIATRICS				
	DENTISTRY UNIT				
	EYE				
	ENT				
	ORTHOPAEDICS				
	CARDIOLOGY				
	PSYCHIATRY				
	CHEST/TB				
	DIALYSIS UNIT				
	DERMATOLOGY				
	PAEDS SURGERY				
	NEUROSURGERY				

		CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY D
1	Casualty				
2	Labor Room				
3	ICU/CCU				
4	Nursery Peads/ICU				

The number of Category A, B, C and D hospitals across districts in the province of Khyber Pakhtunkhwa are provided in the table below

Table 3: District Wise Approved Categorization of Hospitals

S. No	Name of District	Category-A	Category-B	Category-C	Category-D
1	D.I Khan	1	1	0	3
2	Tank	0	1	0	1
3	Lakki Marwat	0	1	1	2
4	Bannu	1	1	0	2
5	Karak	0	1	1	3
6	Kohat	1	0	0	1
7	Hungu	0	0	1	2
8	Peshawer	0	0	1	3
9	Nawshera	1	0	0	3
10	Charsadda	0	1	1	1
11	Mardan	1	1	1	5
12	Sawabi	0	1	3	2
13	Malakand	0	1	1	3
14	Lower Dir	0	1	2	4
15	Upper Dir	0	1	0	3
16	Swat	1	0	2	4
17	Bunair	0	1	0	1
18	Batagram	0	1	0	1
19	Kohistan	0	1	0	1
20	Abbot abad	1	1	0	3
21	Chitral	0	1	1	1
22	Haripur	0	1	1	4
23	Shangla	0	1	1	2
24	Mansehra	1	0	2	1
25	Torghar*	0	0	0	0
	Total	**8**	**18**	**19**	**56**

*District Torghar was not included in the approved policy

2.3 Improving HSD and quality in KP: achievement & work in progress

The initiatives that had been undertaken by the government of KP in improving the quality of Health Service Delivery (HSD) with regards to policy reforms/legislation, health services regulation and standardizing the provision of services are provided below.

2.3.1 Acts related to health service delivery

2.3.1.1 Private Medical Institutions (Regulation of Services) Ordinance, 1984

The Private Medical Institutions (Regulation of Services) Ordinance, 1984, under which the rules for the registration of the private health care establishments were developed. However, no dedicated body was constituted to carry out the functions of regulation of health services in private sector resulting in non-implementation of the ordinance in practice.

2.3.1.2 Medical and Health Institutions Reforms Act, 1999

The Medical and Health Institutions Reforms Ordinance, 1999, which was passed by the provincial assembly and turned into Medical and Health Institutions Reforms Act, 1999. Through the Act of 1999 definitions of 'health institution' and 'medical institution' were given. A health institution was defined as an institution in public sector or directly under government, delivering health care services to public at large without having teaching arrangements. Similarly, a medical institution was defined as an institution in public sector or directly under government having teaching arrangement in addition to the delivery of health care services to public at large.

2.3.1.3 Medical and Health Institutions and Regulation of Health Care Services Ordinance, 2002

In 2002, Medical and Health Institutions and Regulation of Health Care Services Ordinance was introduced. Through that ordinance, the Act of 1999 and the Medical Institutions (Regulation of Services) Ordinance, 1984 were repealed. The said ordinance was a comprehensive law regulating affairs of teaching/medical institutions, and health institutions defined as a hospital, nursing home or maternity home, clinic, including medical, dental and X-ray clinics, clinical laboratory and a blood bank, delivering health care services to the public or private sector. The ordinance provided for establishment of a management council for the teaching/medical institution, whereas there was a management committee for the public health institution. Under the law, the government had to appoint chief executive for a teaching/medical institution, whereas a medical superintendent was appointed for each of the hospitals. The 'institution-based practice' was also introduced by the ordinance under which the doctors serving in public health institutions were asked to practice in the institution to which they belonged. The Ordinance also provided for the establishment of Health Regulatory Authority having functions, including registration of private health institutions, monitoring institutional private practice, setting standard for the practice of medical, dentistry, nursing and paramedical profession and dealing with malpractice or violation of standards in the private sector, etc.

Recently, the Ordinance of 2002 and its amendments in 2006 and 2010 were repealed and instead two laws were introduced, the MTI (Medical Teaching Institutions) law and KP Health

Care Commission Act 2015. The latter law led to constitution of KP Health Care Commission while the former sets out the governing laws for the medical teaching institutions in the province such as Lady Reading Hospital (LRH), Khyber Teaching Hospital (KTH), Hayatabad Medical Complex (HMC) and Ayub Teaching Hospital.

2.3.2 Health Care Commission

Khyber Pakhtunkhwa Health Care Commission (KPHCC) is a statutory body constituted under Khyber Pakhtunkhwa Care Commission Act 2015 to regulate both public and private Health Care Establishments (HCEs) in Khyber Pakhtunkhwa. The commission as laid down in the Act and the regulations will comprise of a body of commissioners which includes ten members, and a provincial/regional/ district setup responsible for the execution and implementation of the vision, policies and guidelines of the commission under the overall responsibility of Chief Executive. To carry out the regulatory function, KP Health Care Commission is in process of establishing following sections under the oversight of the members of the commission

a) ***Directorate of Registration and Licensing*** for registration, licensing, renewal, cancellation and suspension of registration/license of healthcare establishments. To carry out the tasks which ensure the healthcare services are rendered in accordance with the provisions of the Act, Rules and Standards/Reference manuals of the KPHCC. At the moment, the KPHCC is using a minimum standards checklist developed for clinics and hospitals for the purpose of assessment of healthcare establishments for decision on whether to issue them license or not.

b) Directorate of Complaints Management and Patients' Rights for receiving, managing and resolving complaints.

c) Sections for business support functions including ***Finance section*** led by Chief Financial Officer for maintaining the books of accounts of the Commission; ***Human Resource section; IT section.***

2.3.3 Standards for secondary care

The Health Regulatory Authority developed the Standards for Quality Health Services in KP (at that time NWFP) in 2007 for the primary and secondary care. The secondary care standards set out the quality protocols for following aspects of health service provision at secondary care level

- Quality protocols for management of the hospital including protocols for general management, risk and quality management, financial management and human resource management
- Standards for Client/Patient's Rights
- Standards for access to health services, continuity of care, patient assessment, patient care plans, treatment, documentation of care, patient discharge, transfer and referral
- Standards for key departments/services including Operation Theatre department, Casualty department, and Intensive Care Unit; resuscitation services, maternity services and auxiliary services (Laboratory, Pharmacy and Radiology services)

- Standards for Infection Control, Hygiene and Waste Management

2.4 Government of KP strategic vision and challenges for improving health status

After devolution, Khyber Pakhtunkhwa was the first province to develop a Health Sector Strategy 2010-2017, entailing a responsive health system to improve the health status of the population based on prioritised outcomes. The health sector strategy is based on the strategic directions and priorities of the Comprehensive Development Strategy, Khyber Pakhtunkhwa (CDC, KP 2010-17). The five key priority areas as identified by the health sector strategy are

- Enhance coverage/ access to essential health services
- Reduction in morbidity and mortality
- Improve human resource management
- Improve governance and accountability
- Improve regulation and quality assurance

The health sector strategy refers to poverty, inequality, insufficient access to health care services, the impact of conflict and natural disasters on the access to health services, as key challenges to overcome. Households out of pocket expenditure is a main source of financing for health care in Khyber Pakhtunkhwa (61%)[14]. A high out of pocket expenditure on health can be catastrophic for the households living in poverty or below poverty line. In Khyber Pakhtunkhwa, more than three fifth (61%) of the health services are being accessed from the private sector[15]. The health facility assessment conducted in Khyber Pakhtunkhwa in 2012 indicated that the major issues faced by the facilities were mainly due to the lack of MNCH-related staff at the facilities such as WMOs at RHCs and specialists (including gynaecologist, anaesthetist and paediatrician) at DHQ and THQ hospitals. Infrastructure components required for paediatric care were deficient at most of the THQ hospitals. Major gaps were also revealed in the availability of required medicines, equipment and supplies[16]. Shortage of staff and partial availability of essential medicines, equipment and supplies contribute to underutilisation of the public sector health facilities.

Govt. of Khyber Pakhtunkhwa has undertaken a number of initiatives to ensure progress on the key priority areas identified in the health sector strategy. As a measure to improve the quality of care and standardisation of the health care services, Minimum Health Services Delivery Package (MHSDP) for primary health care and the Minimum Health Service Delivery Standards (MSDS) for primary and secondary care have been developed. For the purpose of regulation and quality improvement of the health care establishments in the public and private sector, Health Care Commission was constituted in 2015 and is in progress towards strengthening of the commission's institutional structure to implement its mandate.

The secondary level of health care serves as a central pivot between primary and tertiary care in the health service delivery system. The health sector strategy for KP, explicitly refers

[14] National Health Accounts for Pakistan, 2011-12, Pakistan Bureau of Statistics
[15] Pakistan Standard of Living Measurement (PSLM), 2014-15, Pakistan Bureau of Statistics
[16] Health Facility Assessment, Khyber Pakhtunkhwa, June 2012

to development and implementation of the Minimum Health Service Delivery Package for secondary health care (MHSDP-SC) with following key considerations/actions[17]

- The MHSDP-SC should be developed for secondary health care along with costing of the services and should include necessary staffing levels/skills mix, equipment and supplies
- Re-designate secondary care facilities in light of MHSDP-SC
- Upgrade health facilities on the basis of the need and according to criteria established by the DoH, which may include a new design for health facilities depending upon the services included in the MHSDP SC and quality standards.
- Outline pathways for referral and use of information communication technology to improve linkages with primary and tertiary health care
- The MHSDP-SC should include dental care, psychiatric services, treatment and management of non-communicable diseases and rehabilitative services
- Define the management structure and expertise required to ensure provision of high quality health services outlined in the package at the DHQH and THQH
- Pilot tele-health to support the provision of specialised care to the poor in the remote areas of the province
- Explore other options to improve health service delivery at secondary level such as district hospital autonomy and contracting out of hospitals.

3 Objectives, processes followed and Final outcome

The Department of Health in Khyber Pakhtunkhwa (KP), in collaboration with Technical Resource Facility (TRF) has developed Minimum Health Service Delivery Package for Primary health care which is being implemented. Similarly, Minimum Service Delivery Quality Standards (MSDS) for primary and secondary level of health care have also been developed by Health Department KP and are under implementation now. The Government of KP requested Technical Resource Facility Plus (TRF+) for assistance in the development of Secondary level MHSDP to promote standardization and delivery of equitable health services, by defining the minimum package of health services for secondary health care levels, which includes the categorized services i.e. A, B, C and D as explained earlier. It can also serve as a management tool to guide resource allocation, which responds to local priorities and needs. The detailed objectives and ToRs are shared in **13.3**.

3.1 MHSDP-for secondary care, but focusing on "Categories of hospitals" in districts

The ToRs for this assignment were carefully designed taking into account all the needs and requirements for developing the MHSDP for secondary level care facilities. The thinking behind had been the previous experience by TRF+ for conducting the same exercise for Department of Health (DoH), Government of Punjab. However, the dynamics and administrative set up for secondary level services delivery is totally different as compared to

[17] Health Sector Strategy, Khyber Pakhtunkhwa, 2010-17

that of Punjab. The DoH has undertaken a thorough exercise on standardizing/categorizing the various secondary level care facilities by applying various criteria (as mentioned above) so that the services and its various requirements in terms of human resource, equipment, infrastructure and medicines can be made available to the population. The categorization of secondary level care facilities necessitated that the four level of packages and its minimum requirements are identified and documented.

4 Process followed for developing MHSDP for secondary care facilities

4.1 Participatory consultation

The process for developing the MHSDP had to be participatory and consultative process with all the stakeholders, as at the end of the day, these stakeholders either have to execute orimplement, monitor and finance the whole process. This would thus necessitate close coordination and cooperation among each other. The list of experts/stakeholders that were met during the course of MHSDP development are provided in **13.4.**

4.2 Defining roles & responsibilities of various key stakeholders

This consultative process thus necessitated that roles and responsibilities are defined, though there were some overlapping areas among the stakeholders.

Three sub-committees were notified by the HSRU, the focal Unit for developing this package. These were

- The Technical/Clinical sub-Committee
- The administrative/management sub-Committee and
- The preventive care sub-Committee.

Following roles and responsibilities of each of the committees guided the consultative process:

4.2.1 The Technical/Clinical sub-Committee

This Sub-Committee was to estimate the various MHSDP disease incidence rates and facility utilization rates for identifying clinical needs. This sub-Committee was made up of seven officials - experienced clinicians and doctors, who had wide experience of working at all levels of health care in the Province. The composition and roles and responsibilities of the Technical/Clinical sub-Committee is provided in the **13.5**.

4.2.2 The administrative/management sub-Committee

This sub-committee had the purpose of defining the human resources needs for implementing the MHSDP at the various levels of health facilities in terms of providing the basic care in addition to the clinical care according to various specialties in various categories of the hospital; this among others included, patients' rights, infection control, waste management and coordination among various specialties. This sub-committee also identified the infra-structure requirements for providing the various specialists' care. The

composition and roles and responsibilities of the administrative/management sub-Committee are provided in the **13.5**.

4.2.3 The Preventive Care sub-Committee.

As discussed earlier, the role of preventive and promotive care at the secondary level care facilities cannot be underscored. The facilities are being utilized for not only basic primary and preventive care but also to provide outreach care and link with various primary care programmes. The composition and roles and responsibilities of the Preventive Care Sub-Committee are provided in the **13.5**.

Following is a diagrammatic illustration of the processes followed.

4.3 The final outcome

The Secondary Health Services Package as shared in the following chapters is thus developed according to all the 4 categories of hospitals (Category A, B, C and D). It has been tried to make it as simple and practical as possible. The basis for defining the minimum services for each of the category is shared in 13.613.6 which explains how the various categories when once fully furnished and operational should be working in harmonization with each other and ensure a good referral system. However, the department feels that till the time all the categories of hospitals are furnished and fully functional, some internal arrangments of 'hub-model' may be considered; *"In cases where Category D hospital doesl not have a theatre, two or three category D hospitals may all be grouped with a category B/C hospital. This may be based onon one of the models from Saidu group of hospitals which hasshared administrative set up. It will be more cost effective, for the time-being. Surgeons/gynaecologists may also share the theatre/diagnostic facilities at category B hospital as and when needed."*

As regards various other services which are part and parcel of MHSDP will be mainly dependent on the human and other resources allocations, based on the standards already defined. Thus, all of them have been combined rather than duplicating it again and again for each of the services. It should also be noted that the MHSDP will be a living document and should be improved after undertaking a formal assessment of the progress. In addition, the optimal functioning of each of the categories of hospitals can be ensured by developing and implementing a practically applicable referral system.

5 MHSDP for Category "A" Secondary Care hospital

5.1 Clinical and Supportive Services

The Category A secondary care hospitals in KP has 350 inpatient beds, 6 Dialysis Units, 6 Dentistry Units and is intended to serve a population of around one million people. The category A secondary care hospitals have both in-patient and outpatient services, in addition to emergency, diagnostic and other day care facilities. The clinical specialities that are recommended to be available at a category A hospital include Surgery, Medicine, Gynae/Obs, Paediatrics, Eye, ENT, Orthopaedics, Cardiology, Psychiatry, Chest/Tb, Dialysis Unit, Dentistry Unit, Paediatric Surgery, Neurosurgery, Dermatology, Accident and Emergency, Intensive Care Unit and a Paeds Nursery/ICU. The table below provide the services that are to be provided by the Category A hospitals based on the available clinical specialities and support services. However, it should be noted that the Clinical Sub-Committee did not recommend any services for the "Paediatric Surgery and Neurosurgery". In addition, it was also noted by the Consultant Team that there will be a definite need of either a Unit (to start with) or a Department to ensure smooth running of Category A hospitals. These have been highlighted in the Table below.

Table 4: MHSDP-SC FOR CATEGORY A SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Clinical Services		
1.	**General Medical (Outpatients, In-patient, Emergency)**		
	Infection: All uncomplicated bacterial, viral, fungal and protozoal infections.	Medical Department	
	GI disorders:		
	Amoebiasis, Gastroenteritis, Diarrhea(chronic), Gastritis, Irritable bowel syndrome, Peptic ulcer disease, Helminthic infection, GI tract bleeding	Medical Department	A specialist post for Gastroenterologist has been proposed; some sections of Medical Department may be allocated for this specialist, also
	Other Medical conditions		
	Thyroid dysfunctions, Diabetes mellitus & other endocrine associated conditions, Liver cirrhosis & other liver conditions (abscess, cyst, etc.), Cerebral palsy, Herpes Zoster Hepatosplenomegaly, Stroke, Ischaemic heart disease, Seizure disorders, Coma	Medical Department	
2.	**Respiratory Problems**		
	Upper and Lower Respiratory Tract infections, Pneumonia, Chronic Obstructive Pulmonary Disease (COPD), Tuberculosis, Asthma, Allergies, Chronic Bronchitis, Emphysema, Acute Bronchitis, Cystic Fibrosis	Chest/TB Department	
3.	**Renal disorders**		
	Acute glomerulonephritis, Acute renal failure, Hypo/hyperkalemia, Nephrotic syndrome, Chronic renal failure,	Dialysis Unit	The Nephrologist at the Dialysis Unit should manage the patients
4.	**General Paediatric (Outpatients, In-patient, Emergency)**		
	All uncomplicated bacterial, viral, fungal and protozoal infections; Neonatal care, Neonatal resuscitation; During delivery: ENC including clean airway, clean clamp and cord cutting, weighing baby, avoid hypothermia and ensure exclusive breast feeding including colostrum; Identify and Manage neonatal jaundice and infections, Phototherapy, Birth injuries, Incubation, Immunization (all births in the hospital and all children <5 visiting hospital to be actively screened for immunization status), Infants of diabetic mothers, Asthma (chronic)	Pediatrics Department	

Table 4: MHSDP-SC FOR CATEGORY A SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Diarrhea (chronic), Failure to thrive Growth retardation, Malnutrition—severe or moderate, acute/chronic, micronutrient deficiency (Vitamin A/C/D deficiencies, anemia, iodine deficiency), Manage Neonatal complications, Congenital anomalies, Bilirubin encephalopathy (kernicterus), Thalassemia		
	Well-baby clinic to be established in the OPD and to have minimally the following services available: EPI plus services, CDD/ARI control activities, Nutrition counseling, Breast feeding counseling and support, Malaria and Dengue control activities, Growth monitoring and counseling, Deworming (provision of anti-helminthic)	Paediatric Outpatient Department	
5.	**General Cardiology (Outpatients, In-patient, Emergency)**		
	Congenital heart disease, Deep-vein thrombosis, Heart failure, Hypertension, Pulmonary oedema, Rheumatic heart disease	Cardiology Department	
	Myocardial infarction, Ischemic heart disease	Cardiology Department	Initial Management and workup, referral in case of need for Angiography and Angioplasty
6.	**General Dermatology(Outpatients, In-patient)**		
	Dermatological therapeutic services including Moles, acne, hives, chickenpox, eczema, rosacea, seborrheic dermatitis, contact dermatitis, keratosis pilaris, psoriasis, vitiligo, impetigo, warts, childhood skin conditions including diaper rash, seborrheic dermatitis, chickenpox, measles, fifth disease, hives, ringworm, rashes from bacterial or fungal infections, rashes from allergic reactions; Common skin conditions caused by pregnancy including stretch marks, melasma, pemphigoid, pruritic urticarial papules and plaques, dermatitis. Basic Dermatological Diagnostic services	Dermatology Department	In case of non-availability of Dermatologist, Medical specialist shall be responsible
	Skin Cancer	Dermatology Department	Initial assessment by Dertmatologist and Referral to a Tertiary care facility
7.	**General Psychiatry (Outpatients, In-patient, Emergency)**		In case of non-availability of Psychiatrist or clinical

Table 4: MHSDP-SC FOR CATEGORY A SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
			staff member from Psychiatry department, Medical specialist shall be responsible
	Acute confusion (Acute psychosis), Depression; Anxiety and stress-related disorders; Sleep disorders; Mania, Schizophrenia, Suicidal ideation, Substance abuse and dependency, Post-traumatic stress problems; IQ/Personality assessment	Psychiatry Department	
8.	**General surgery (Outpatients, In-patient, Emergency)**		
	Elective Surgery		
	Thyroidectomy, Mastectomy, Biliary tract operations, Colon operations, Proctological operations (perianal abscess), Hernioraphy, Rectal prolapse, Superficial abscesses, Cysts, Cavity abscesses, Circumcision Vasectomy, Venous cut down, Excision of sebaceous cyst, Wedge resection of IGTN, Excision of Lipoma, Lymph node Biopsy, Chest Intubation, Supra pubic catheterization (via suprapubic cystostomy kit), Supra pubic catheterization (open Technique), Trucut Biopsy, FNAC D/D Dressings, Skin lesion Biopsy, Cauterization of viral warts, Sigmoidoscopy, Urethral dilatation, DJ Stent Removal, Lord's Dilatation, T. Stich, Polypectomy, Examination Under Anesthesia (EUA), Excision of Fibro adenoma Breast, I/D of Breast Abscess, I/D & D/D under G/A, Feeding Jejunostomy, Colostomy, DJ Stenting, Open Appendicectomy, Haemorrhoidectomy, Lateral Internal Sphincterotomy, Herniotomy, Hydrocele surgery, Varicocele surgery, Undescended Testes (UDT), Simple Mastectomy, Wide Local Excision Varicose Veins Surgery, Perianal Abscess/ Fistula (Low), Peri Anal Fistula High/complex, Mesh repair of inguinal /Ventral Hernias/ Incisional Hernia, Open Cholecystectomy, Gastrojejunostomy, Ureterolithotomy, Vesicolithotomy, Excision of pilonidal Sinus, Ileostomy/ Colostomy Reversal, Upper Gastrointestinal Endoscopy (UGIE) with biopsy, Lower	Surgical Department	

Table 4: MHSDP-SC FOR CATEGORY A SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Gastrointestinal Endoscopy (LGIE) Colonoscopy with biopsy, Hiatus hernia, Crohn's disease		
9.	**Mortuary (Medicolegal)**	Surgical Department	Preferably shall be responsibility of Forensic Department of Medical College in the district, If available
	Routine medico-legal,		
	Specialized medico-legal including re-examination,		
10.	**A&E Services**		The Casualty Medical Officer (CMO) should have capacity building in A&E services. For future planning, the A&E department would be upgraded with a specialist having post-graduation in either Trauma or A&E services. This would require establishing the A&E speciality training in the province
	All medical emergencies including animal/snake bite	Accident and Emergency Department	Management by specialist on-call from relevant department. For cases requiring referral, basic life support and emergency treatment will be given
	Abdominal trauma (minor), Acute appendicitis, Perforated peptic ulcer, Intestinal obstruction, Diverticulitis, Inflammatory bowel disease, Mesenteric adenitis, Cholecystitis, Cholangitis, Cystitis, Urinary Tract Infection, Ureteric colic, Acute urinary retention, Peritonitis, Rectus sheet haematoma, Airways and ambu-bag breath, Cricothyroidotomy, Fluid and electrolyte balance and blood transfusion, Soft Tissue Injuries, Tendon injuries, Abdominal trauma (major), Splenic rupture, Retroperitoneal haemorrhage, Shock/Septicaemia	Accident and Emergency Department	Management by specialist on-call from surgical department
	Advanced acute abdominal conditions like Vascular, Pancreatic, Urological and requiring sub-specialised supervision	Accident and Emergency Department	Assessment, Stabilization and referral by specialist on-call from surgical department
	Multiple Injuries	Accident and Emergency Department	Initial management and stabilization along with referral to specialized unit

Table 4: MHSDP-SC FOR CATEGORY A SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
			if required by specialist on-call from surgical department
	Pneumothorax and hemothorax – chest intubation with observation	Accident and Emergency Department	Initial management by specialist on-call from surgical department if required referral to thoracic facilities
	Initial Management of burns as per rule of 9s and referral to a burn centre in case of 1. Partial-thickness abdomen full-thickness burns of greater than 10% of the BSA in patients less than 10 years or over 50 years of age; 2. Partial-thickness and full-thickness burns on greater than 20% of the BSA in other age groups; 3. Partial-thickness and full-thickness burns involving the face, eyes, ears, hands, feet, genitalia, and perineum, as well as those that involve skin overlying major joints; 4. Full-thickness burns on greater than 5% of the BSA in any age group; 5. Significant electrical burns, including lightning injury (significant volumes of tissue beneath the surface can be injured and result in acute renal failure and other complications); 6. Significant chemical burns; 7. Inhalation injury; 8. Burn injury in patients with pre-existing illness that could complicate treatment, prolong recovery, or affect mortality; 9. Any patient with a burn injury who has concomitant trauma poses an increases risk of morbidity or mortality, and may be treated initially in a trauma center until stable before being transferred to a burn center	Accident and Emergency Department	Initial Management by specialist on-call from surgical department and immediate referral as per the provided criteria
	Head injury, Spinal Injuries	Accident and Emergency Department	Management by specialist on-call from Neurosurgical department, refer if required
	Closed Fracture and Dislocation, Closed Fracture and no dislocation, Femur fracture, Open fractures, Pelvic fracture without complication	Accident and Emergency Department	Management by specialist on-call from Orthopaedic department, refer if required
	Major disaster plan TRIAGE and assessment of trauma patients along with stabilization of the patient with referral to the sub-specialty concerned (if required),	Accident and Emergency Department	

Table 4: MHSDP-SC FOR CATEGORY A SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Patient referral (using ambulance)		
11.	**General Ophthalmology (Outpatients, In-patient, Emergency)**		
	Emergencies: Trauma (except intraocular foreign body and orbital fracture);	Eye Department	Referral in case of complicated trauma
	Common eye conditions; Cataract, Glaucoma, Refraction, Diabetic eye complications	Eye Department	
12.	**General ENT (Outpatients, In-patient, Emergency)**		
	Epistaxis, Upper respiratory tract infections, Rhinitis, Acute & Chronic sinusitis, Granulomatous conditions of nose & PNS, Nasal polyp Septal surgeries, Nasal & facial trauma, Smell disorders, Obstructive sleep apnoea, Oral lesions, Pharyngeal infections, Adenoids & Tonsils & its surgeries, Laryngeal, infections-paediatrics & adults, Voice disorders, Deep neck abscesses, Thyroid masses, Acute management of laryngo-tracheal & neck trauma, Tracheostomy, Dysphagia, Otitis Externa, Wax in ear, Acute otitis media; Chronic otitis media, Balance disorders, Otosclerosis, Otological trauma, Common complications of otitis media, Otitis media with effusion, Diagnostic nasendoscopy, Stridor & airway obstruction with facility for rigid bronchoscopy	ENT Department	
	Head & Neck benign & malignant tumours– primary & metastatic	ENT Department	Screen and Refer
	Foreign body in the ear/nose	ENT Department	Stabilise and Refer
	Mastoiditis, Deafness, Deaf child	ENT Department	Assessment and Referral (if required)
13.	**General Orthopaedic (Outpatients, In-patient, Emergency**)		
	Closed fracture and dislocation of all of minor joints and bones, Supracondylar displaced fractures, Volkmann's ischemia and compartment syndrome, Soft tissue injuries and crush injuries, Pelvic fracture without complication, Hip joint dislocation, Femur neck fracture, Femur fracture, Knee joint dislocation, Tibia and fibula closed fracture, Tibia open fractures, Ankle joint dislocation and fractures, Ankle bones open fractures, Tarsal bones fractures and	Orthopaedic Department	

Table 4: MHSDP-SC FOR CATEGORY A SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	dislocations, Tarso-metatarsal joint dislocation, Skin graft and tendon injuries, Acute osteomyelitis, Pyogenic septic arthritis Tuberculosis of bones and joints, Gout arthritis, Rheumatoid arthritis, Bone Cyst, Carpal tunnel lesion, Hand flexors and extensors injuries, Amputation (open amputation), Menopausal osteoporosis, Change of dressing without anesthesia, Intra articular injection or joint aspiration, Injection for tendinitis, In Growing Toe Nail (IGTN), Below knee and below elbow POP without anesthesia, Skeletal traction COD under GA, TVE POP, Above knee and above elbow POP, Manipulation Under Anesthesia (MUA), Closed reduction of small joints of fingers or toes, Excision of bursa, Application of hip spica, Open muscle biopsy, Trucut biopsy, Closed reduction and percutaneous fixation of distal radius, Closed reduction of knee/hip/below/shoulder, POP under GA, Open Reduction Internal Fixation (ORIF) small bones of hand & foot, Small bone operations of hands/foot to include, fracture fixation/arthrodesis/osteotomes, Forefoot amputation till midtarsal joint, Amputation of finger or thumb		
14.	**General Gynae/Obs (Outpatients, In-patient, Emergency)**		
	Counseling of Maternal and new-born health issues including breast feeding, family planning and personal hygiene	Obstetrics and Gynaecology Department	
	Antenatal care		
	Management of intestinal worms, Malnutrition, Malaria, UTI &STI, Treatment of Vit. A deficiency (if night blindness appears in last trimester), Rhesus (Rh) incompatibility, Management of pre-eclampsia, Management of, Ectopic pregnancy	Obstetrics and Gynaecology Department	
	Natal Care		
	Manage complicated labour, Transfuse safe blood (haemorrhage/blood loss), Manage 3rd degree vaginal tears, Management of prolapsed cord, Management of shoulder dystocia, Manage prolonged and obstructed labour, Caesarean section, Manage	Obstetrics and Gynaecology Department	

Table 4: MHSDP-SC FOR CATEGORY A SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	3rd degree cervical tears		
	Postnatal care		
	Management of PPH/shock, Blood transfusion in case of haemorrhage Management of puerperal sepsis (simple)	Obstetrics and Gynaecology Department	
	Gynaecological/obs; care:		
	Uterus fibromyoma, Infertility, Ovarian cyst and adnexal masses (simple), Menstrual disturbances, Pelvic inflammatory disease (PID), Abscesses, Prolapse and trans-vaginal operations, Complications of puerperium, Puerperium psychosis, Deep vein thrombosis (DVT), Incomplete abortion, Malnutrition—micronutrient deficiency (Vitamin A/C/D deficiencies, anemia, iodine deficiency)	Obstetrics and Gynaecology Department	
	Family Planning:		
	Implants, Tubal ligation, Complications of contraceptives	Obstetrics and Gynaecology Department	
15.	**General Dental services (Outpatients, In-patient, Emergency)**		
	Crowning/ Dentures/ braces, Pulpitis, Periodontitis, Pericoronitis, Gingivitis, Cellulitis (oral), Alveolitis (dry socket), Acute necrotizing ulcerative gingivitis, Abscess (periapical)	Dentistry Department	A specialist post for Dental Surgeon has been created who will be heading this Department
	Support Services		
16.	**Laboratory (Outpatients, In-patient, Emergency)**		
	FBC, ESR, LFTs, Blood urea and electrolytes; CSF/pleural fluid/ascitic fluid/ pericardial aspirate microscopy; Biochemistry, gram's and ZN stain; HBsAg, Anti-HCV; HIV; Toxoplasm/brucella andtibodies; Serum amylase, CPK, Blood glucose; ABGs; Culture and sensitivity testing; Screening of donor, blood grouping and cross match; Storage (Blood bank services)	Pathology Unit/Department	
17.	**Radiology (Outpatients, In-patient, Emergency)**		
	X-ray Chest/abdomen (erect & Supine)/spine/hands/pelvis/joints/ Sinuses; X-ray for fracture; X-ray for age estimation; Ultrasound	Radiology Unit/Department	

Table 4: MHSDP-SC FOR CATEGORY A SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Chest/orbit/Abdomen/ Pelvis; CT brain/Chest/Abdomen/ Pelvis/Spine; Barium swallow; Intravenous Urography (IVU)		
18.	**Anaesthesia services:**		
	Intubation, Manage emergencies and cardiopulmonary resuscitation, Manage convulsions, Cardiac life support, General anaesthesia, Local anaesthesia, Spinal anaesthesia, Epidural anaesthesia	Anesthesia Unit/Department	Services to be provided by Anesthesiologist
	Ventilation	Anesthesia Unit/Department	Stabilization by Anesthesiologist and Refer
19.	**Pharmacy (Outpatients, In-patient, Emergency)**		
	Support prescription of drugs; Manage main drug store (Inventory/stock, forecasting etc); Drug utilization evaluation; Pharmacovigilance; Drug therapeutic goods information and poison control center	Pharmacy Unit/Department	
20.	**Physiotherapy services**		
	Frozen shoulder; Backache therapy; Post-fracture therapy; Therapy of joints; Short wave diathermy; Physiotherapy for chest; Mobilization (postoperative and post stroke)	Physiotherapy Unit/Department	
21.	**IT and Hospital Management Information System**		
	Maintenance of computers; Closed Circuit TV; Central speaker announcement; Health educational corner at OPDs	Administration Department	
22.	**Infection prevention & control, safe environment, hygiene and safe waste disposal:**		Incinerator should be available at the Facility
	Ensure aseptic sterilized diagnostic & therapeutic procedures; Notify ORs and house staff of MRSA/VRSA and other nosocomial infection when it occurs; Segregation of sharp and non-sharp medical waste and local or contractual arrangement for its safe disposal	Administration Department responsible for implementation of the infection control measures	
23.	**Emergency Preparedness and Disaster Management Services:** Plan available to respond to the emergency/ disaster, Buffer supplies to address emergencies	Administration Department	Administration Department to take lead in developing a emergency preparedness and disaster management plan, Liasion within the hospital and with related departments in the district
24.	**Ambulance Service:**	Administration	Service shall be run by

Table 4: MHSDP-SC FOR CATEGORY A SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
		Department	1122 for transporting patients and shall not be used for pick and drop service of any kind and transporting dead bodies

5.2 Human Resource Requirements

The human resource in Category A secondary care hospitals mainly consists of management, clinical and support specialists, general cadre doctors, nursing and paramedic staff and support staff. This documents provides guidance for determining number staff of different categories required to provide indicated package of services effectively. However, government need to develop a comprehensive policy and strategy for human resource development and management to ensure that adequate number of providers equipped with required knowledge and skills are available in these hospitals. The specialist staff has been proposed based on the essential requirement to run the respective hospital as a 24/7 facilities. Proposed essential staff MHSDP-SC listed services for Category A Secondary Care Hospitals are reflected in Tables at **Appendix 13.7**

5.3 Essential Equipment

Secondary hospitals deal with a wide range of acute and chronic ailments including emergencies for which essential and quality diagnostic and care equipment are required. An essential list of equipment and instruments in line with requirements of MHSDP-SC has been developed for Category A hospitals. The proposed list of equipment is placed at **Appendix 13.8**.

5.4 Essential Medicines

Based on the proposal of the clinical sub-committee, the MHSDP-SC for KP envisage the approved list of Medicines, Surgical Disposables and other non- Drug Items of Government prepared by Medicines Co-Ordination Cell (MCC), Khyber Pakhtunkhwa for the year 2015-16 will serve as drug formulary for the district hospitals; however, the concerned hospital will have the liberty to choose the medicines/drugs/surgical items from the MCC list to be procured as per their needs (**Appendix 13.9**).

6 MHSDP for Category "B" Secondary Care hospital

6.1 Clinical and Supportive Services

The Category B secondary care hospitals in KP has 210 inpatient beds, 4 Dialysis Units, 4 Dentistry Units and is intended to serve a population of around half a million people. The category B secondary care hospitals have both in-patient and outpatient services, in addition to emergency, diagnostic and other day care facilities. The clinical specialities recommended to available at a category B hospital include Surgery, Medicine, Gynae/Obs, Paediatrics, Eye, ENT, Orthopaedics, Cardiology, Psychiatry, Chest/Tb, Dialysis Unit, Dentistry Unit, Accident and Emergency, Intensive Care Unit and a Nursery Paeds/ICU. The table below provide the services that are to be provided by the Category B hospitals and the guidelines for referral (if required) based on the available clinical specialities and support services. In

addition, it was also noted by the Consultant Team that there will be a definite need of either a Unit (to start with) or a Department to ensure smooth running of Category B hospitals. These have been highlighted in the Table below.

Table 5: MHSDP-SC FOR CATEGORY B SECONDARY CARE HOSPITALS

S.No	Services	Department	Remarks
	Clinical Services		
1.	**General Medical (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Infection: All uncomplicated bacterial, viral, fungal and protozoal infections.	Medical Department	
	GI disorders:		
	Amoebiasis, Gastroenteritis, Diarrhea(chronic), Gastritis, Irritable bowel syndrome, Peptic ulcer disease, Helminthic infection, GI tract bleeding,	Medical Department	
	Other Medical conditions		
	Thyroid dysfunctions, Diabetes mellitus & other endocrine associated conditions, Liver cirrhosis & other liver conditions (abscess, cyst, etc.), Cerebral palsy, Herpes Zoster Hepatosplenomegaly	Medical Department	
	Stroke	Medical Department	Stabilization and referral to a facility with CT scan
	Ischemic heart disease	Medical Department	Initial Management and referral to Category A hospital for further work up and management
	Seizure disorders	Medical Department	Initial Management and referral to referral to a facility with CT scan (If required)
2.	**General Dermatology (Outpatients, In-patient)** Basic dermatological diagnostic and therapeutic services	Medical Department (Dermatologist)	In case of non-availability of Dermatologist, Medical specialist shall be responsible
3.	**Respiratory Problems**		
	Upper and Lower Respiratory Tract infections, Pneumonia, Chronic Obstructive Pulmonary Disease (COPD), Tuberculosis, Asthma, Allergies, Chronic Bronchitis, Emphysema, Acute Bronchitis, Cystic Fibrosis	Chest/TB Department	
4.	**Renal disorders**		

Table 5: MHSDP-SC FOR CATEGORY B SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Acute glomerulonephritis, Acute renal failure, Hypo/hyperkalemia, Nephrotic syndrome, Chronic renal failure,	Dialysis Unit	The Nephrologist at the Dialysis Unit should manage the patients
5.	**General Pediatrics (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	All uncomplicated bacterial, viral, fungal and protozoal infections, Neonatal care, Neonatal resuscitation During delivery: ENC including clean airway, clean clamp and cord cutting, weighing baby, Avoid hypothermia and ensure exclusive breast feeding including colostrum, Identify and Manage neonatal jaundice and infections, Phototherapy, Birth injuries, Incubation, Immunization (all births in the hospital and all children <5 visiting hospital to be actively screened for immunization status), Infants of diabetic mothers, Asthma (chronic) Diarrhea (chronic), Failure to thrive Growth retardation, Malnutrition—severe or moderate, acute/chronic, micronutrient deficiency (Vitamin A/C/D deficiencies, anemia, iodine deficiency), Manage Neonatal complications, Congenital anomalies, Bilirubin encephalopathy (kernicterus), Thalassemia	Pediatrics Department	
	Well-baby clinic to be established in the OPD and to have minimally the following services available: EPI plus services, CDD/ARI control activities, Nutrition counseling, Breast feeding counseling and support, Malaria and Dengue control activities, Growth monitoring and counseling, Deworming (provision of anti-helminthic)	Paediatric Outpatient Department	
6.	**General Cardiology (Outpatients, In-patient, Emergency)**		
	Congenital heart disease, Deep-vein thrombosis, Heart failure Hypertension, Pulmonary oedema, Rheumatic heart disease	Cardiology Department	
	Myocardial infarction, Ischemic heart disease	Cardiology Department	Initial Management and referral for further work up and management including the assessment of need for Angiography and

Table 5: MHSDP-SC FOR CATEGORY B SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
			Angioplasty
7.	**General Psychiatry (Outpatients, In-patient, Emergency)**		In case of non-availability of Psychiatrist or clinical staff member from Psychiatry department, Medical specialist shall be responsible
	Acute confusion (Acute psychosis), Depression; Anxiety and stress-related disorders; Sleep disorders; Mania, Schizophrenia, Suicidal ideation, Substance abuse and dependency, Post-traumatic stress problems; IQ/Personality assessment	Psychiatry Department	
8.	**General surgery (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Elective		
	Thyroidectomy, Mastectomy, Biliary tract operations, Colon operations, Proctological operations (perianal abscess), Hernioraphy, Rectal prolapse, Superficial abscesses, Cysts, Cavity abscesses, Circumcision Vasectomy, Venous cut down, Excision of sebaceous cyst, Wedge resection of IGTN, Excision of Lipoma, Lymph node Biopsy, Chest Intubation, Supra pubic catheterization (via suprapubic cystostomy kit), Supra pubic catheterization (open Technique), Trucut Biopsy, FNAC D/D Dressings, Skin lesion Biopsy, Cauterization of viral warts, Sigmoidoscopy, Urethral dilatation, DJ Stent Removal, Lord's Dilatation, T. Stich, Polypectomy, Examination Under Anaesthesia (EUA), Excision of Fibro adenoma Breast, I/D of Breast Abscess, I/D & D/D under G/A, Feeding Jejunostomy, Colostomy, DJ Stenting, Open Appendicectomy, Haemorrhoidectomy, Lateral Internal Sphincterotomy, Herniotomy, Hydrocele surgery, Varicocele surgery, Undescended Testes (UDT), Simple Mastectomy, Wide Local Excision Varicose Veins Surgery, Perianal	Surgical Department	

Table 5: MHSDP-SC FOR CATEGORY B SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Abscess/ Fistula (Low), Peri Anal Fistula High/complex, Mesh repair of inguinal /Ventral Hernias/ Incisional Hernia, Open Cholecystectomy, Gastrojejunostomy, Ureterolithotomy, Vesicolithotomy, Excision of pilonidal Sinus, Ileostomy/ Colostomy Reversal, Upper Gastrointestinal Endoscopy (UGIE) with biopsy, Lower Gastrointestinal Endoscopy (LGIE) Colonoscopy with biopsy, Crohn's disease		
9.	**A&E Services**		
	All medical emergencies including animal/snake bite	Accident and Emergency Unit/Department	Previously mentioned as "Casualty" Management by specialist on-call from relevant department. For cases requiring referral, basic life support and emergency treatment will be given
	Abdominal trauma (minor), Acute appendicitis, Perforated peptic ulcer, Intestinal obstruction, Diverticulitis, Inflammatory bowel disease, Mesenteric adenitis, Cholecystitis, Cholangitis, Cystitis, Urinary Tract Infection, Ureteric colic, Acute urinary retention, Peritonitis, Rectus sheet haematoma, Airways and ambu-bag breath, Cricothyroidotomy, Fluid and electrolyte balance and blood transfusion, Soft Tissue Injuries, Tendon injuries, Abdominal trauma (major), Splenic rupture, Retroperitoneal haemorrhage, Shock/Septicaemia	Accident and Emergency Unit/Department	Management by specialist on-call from surgical department
	Advanced acute abdominal conditions like Vascular, Pancreatic, Urological and requiring sub-specialised supervision	Accident and Emergency Unit/Department	Assessment, Stabilization and referral by specialist on-call from surgical department
	Multiple Injuries	Accident and Emergency Unit/Department	Initial management and stabilization by specialist on-call from surgical department along with referral to specialized unit if required
	Pneumothorax and hemothorax – chest intubation with observation	Accident and Emergency Unit/Department	Initial management and stabilization by specialist on-call from surgical department, if required referral to thoracic facilities
	Initial Management of burns as per rule of 9s and referral to a burn	Accident and Emergency	Initial Management by specialist on-call from

Table 5: MHSDP-SC FOR CATEGORY B SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	centre in case of 1. Partial-thickness abdomen full-thickness burns of greater than 10% of the BSA in patients less than 10 years or over 50 years of age; 2. Partial-thickness and full-thickness burns on greater than 20% of the BSA in other age groups; 3. Partial-thickness and full-thickness burns involving the face, eyes, ears, hands, feet, genitalia, and perineum, as well as those that involve skin overlying major joints; 4. Full-thickness burns on greater than 5% of the BSA in any age group; 5. Significant electrical burns, including lightning injury (significant volumes of tissue beneath the surface can be injured and result in acute renal failure and other complications); 6. Significant chemical burns; 7. Inhalation injury; 8. Burn injury in patients with pre-existing illness that could complicate treatment, prolong recovery, or affect mortality; 9. Any patient with a burn injury who has concomitant trauma poses an increases risk of morbidity or mortality, and may be treated initially in a trauma center until stable before being transferred to a burn center	Unit/Department	surgical department and immediate referral as per the provided criteria
	Head injury	Accident and Emergency Unit/Department	Initial management by specialist on-call from surgical department, Based on Glasgow coma scale) – score 8 or less to be referred to neurosurgical facility
	Spinal Injuries	Accident and Emergency Unit/Department	Initial stabilization by specialist on-call from surgical department and referral
	Closed Fracture and Dislocation, Closed Fracture and no dislocation, Femur fracture, Open fractures, Pelvic fracture without complication	Accident and Emergency Unit/Department	Management by specialist on-call from Orthopaedic department, refer if required
	Major disaster plan TRIAGE and assessment of trauma patients along with stabilization of the patient with referral to the sub-specialty concerned (if required),	Accident and Emergency Unit/Department	
	Patient referral (using ambulance)		

Table 5: MHSDP-SC FOR CATEGORY B SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
10.	**General Ophthalmology (Outpatients, In-patient, Emergency)**		
	Emergencies: Trauma (except intraocular foreign body and orbital fracture)	Eye Department	Stabilize and Refer if required
	Common eye conditions, Cataract, Glaucoma, Refraction, Diabetic eye complications	Eye Department	
11.	**General ENT (Outpatients, In-patient, Emergency)**		
	Epistaxis, Upper respiratory tract infections, Rhinitis, Acute & Chronic sinusitis, Granulomatous conditions of nose & PNS, Nasal polyp Septal surgeries, Nasal & facial trauma, Smell disorders, Obstructive sleep apnoea, Oral lesions, Pharyngeal infections, Adenoids & Tonsils & its surgeries, Laryngeal, infections-paediatrics & adults, Voice disorders, Deep neck abscesses, Thyroid masses, Acute management of laryngo-tracheal & neck trauma, Tracheostomy, Dysphagia, Otitis Externa, Wax in ear, Acute otitis media Chronic otitis media, Balance disorders, Otosclerosis, Otological trauma, Common complications of otitis media, Otitis media with effusion	ENT Department	
	Head & Neck benign & malignant tumours– primary & metastatic	ENT Department	Screen and Refer
	Foreign body in the ear/nose	ENT Department	Stabilize and Refer
12.	**General Orthopaedic (Outpatients, In-patient, Emergency**)		
	Closed fracture and dislocation of all of minor joints and bones, Supracondylar displaced fractures, Volkmann's ischemia and compartment syndrome, Soft tissue injuries and crush injuries, Pelvic fracture without complication, Hip joint dislocation, Femur neck fracture, Femur fracture, Knee joint dislocation, Tibia and fibula closed fracture, Tibia open fractures, Ankle joint dislocation and fractures, Ankle bones open fractures, Tarsal bones fractures and dislocations, Tarso-metatarsal joint dislocation, Skin graft and tendon injuries, Acute osteomyelitis, Pyogenic septic arthritis	Orthopaedic Department	

Table 5: MHSDP-SC FOR CATEGORY B SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Tuberculosis of bones and joints, Gout arthritis, Rheumatoid arthritis, Bone Cyst, Carpal tunnel lesion, Hand flexors and extensors injuries, Amputation (open amputation), Menopausal osteoporosis, Change of dressing without anesthesia, Intra articular injection or joint aspiration, Injection for tendinitis, In Growing Toe Nail (IGTN), Below knee and below elbow POP without anesthesia, Skeletal traction COD under GA, TVE POP, Above knee and above elbow POP, Manipulation Under Anaesthesia (MUA), Closed reduction of small joints of fingers or toes, Excision of bursa, Application of hip spica, Open muscle biopsy, Trucut biopsy, Closed reduction and percutaneous fixation of distal radius, Closed reduction of knee/hip/below/shoulder, POP under GA, Open Reduction Internal Fixation (ORIF) small bones of hand & foot, Small bone operations of hands/foot to include, fracture fixation/arthrodesis/osteotomes, Forefoot amputation till midtarsal joint, Amputation of finger or thumb		
13.	**General Gynae/Obs (Outpatients, In-patient, Emergency)**		
	Counseling of Maternal and new-born health issues including breast feeding, family planning and personal hygiene	Obstetrics and Gynaecology Department	
	Antenatal care		
	Management of intestinal worms, Malnutrition, Malaria, UTI &STI, Treatment of Vit. A deficiency (if night blindness appears in last trimester), Rhesus (Rh) incompatibility, Management of pre-eclampsia, Management of, Ectopic pregnancy	Obstetrics and Gynaecology Department	
	Natal Care		
	Manage complicated labour, Transfuse safe blood (haemorrhage/blood loss), Manage 3rd degree vaginal tears, Management of prolapsed cord, Management of shoulder dystocia, Manage prolonged and obstructed labour, Caesarean section, Manage 3rd degree cervical tears	Obstetrics and Gynaecology Department	

Table 5: MHSDP-SC FOR CATEGORY B SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Postnatal care		
	Management of PPH/shock, Blood transfusion in case of haemorrhage Management of puerperal sepsis (simple)	Obstetrics and Gynaecology Department	
	Gynaecological/obs; care:		
	Uterus fibromyoma, Infertility, Ovarian cyst and adnexal masses (simple), Menstrual disturbances, Pelvic inflammatory disease (PID), Abscesses, Prolapse and trans-vaginal operations, Complications of puerperium, Puerperium psychosis, Deep vein thrombosis (DVT), Incomplete abortion, Malnutrition—micronutrient deficiency (Vitamin A/C/D deficiencies, anemia, iodine deficiency)	Obstetrics and Gynaecology Department	
	Family Planning:		
	Implants, Tubal ligation, Complications of contraceptives	Obstetrics and Gynaecology Department	
14.	**General Dental services (Outpatients, In-patient, Emergency)**		
	Crowning/ Dentures/ braces, Pulpitis, Periodontitis, Pericoronitis, Gingivitis, Cellulitis (oral), Alveolitis (dry socket) Acute necrotizing ulcerative gingivitis Abscess (periapical)	Dentistry Department	
	Support Services		
15.	**Laboratory (Outpatients, In-patient, Emergency)**		
	FBC, ESR, LFTs, Blood urea and electrolytes, CSF/pleural fluid/ascitic fluid/, Biochemistry, gram's and ZN stain HBsAg, Anti-HCV, Serum amylase, CPK, Blood glucose, ABGs Screening of donor, blood grouping and cross match, Storage (Blood bank services)	Pathology Unit/Department	
16.	**Radiology (Outpatients, In-patient, Emergency)**		
	X-ray Chest/abdomen (erect & Supine)/spine/hands/pelvis/joints/ Sinuses, X-ray for fracture X-ray for age estimation, Ultrasound /Abdomen/ Pelvis	Radiology Unit/Department	
17.	**Anaesthesia services:**		
	Intubation, Manage emergencies and	Anaesthesia	Services to be provided by

Table 5: MHSDP-SC FOR CATEGORY B SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	cardiopulmonary resuscitation, Manage convulsions, Cardiac life support, General anaesthesia, Local anaesthesia	Unit/Department	Anaesthesiologist
	Ventilation	Anaesthesia Unit/Department	Stabilization by Anaesthesiologist and Refer
18.	**Pharmacy (Outpatients, In-patient, Emergency)**		
	Support prescription of drugs; Manage main drug store (Inventory/stock, forecasting etc); Drug utilization evaluation; Pharmacovigilance; Drug therapeutic goods information and poison control center	Pharmacy Unit/Department	
19.	**Physiotherapy services**		
	Frozen shoulder; Backache therapy; Post-fracture therapy; Therapy of joints; Short wave diathermy; Physiotherapy for chest; Mobilization (postoperative and post stroke)	Surgical and Medical Department	Two Physiotherapist each in the Surgical and Medical Department to provide Physiotherapy services
20.	**Routine medico-legal**		
21.	**IT and Hospital Management Information System**		
	Maintenance of computers; Closed Circuit TV; Central speaker announcement; Health educational corner at OPDs	Administration Department	
22.	**Infection prevention & control, safe environment, hygiene and safe waste disposal:**		
	Ensure aseptic sterilized diagnostic & therapeutic procedures; Notify ORs and house staff of MRSA/VRSA and other nosocomial infection when it occurs; Segregation of sharp and non-sharp medical waste and local or contractual arrangement for its safe disposal	Administration Department responsible for implementation of the infection control measures	
23.	**Ambulance Service:**	Administration Department	Service shall be run by 1122 for transporting patients and shall not be used for pick and drop service of any kind and transporting dead bodies

6.2 Human Resource Requirements

The human resource in Category B secondary care hospitals mainly consists of management, clinical and support specialists, general cadre doctors, nursing and paramedic staff and support staff. The specialist staff has been proposed based on the essential

requirement to run the respective hospital as a 24/7 facilities. Proposed essential staff MHSDP-SC listed services for Category B Secondary Care Hospitals are reflected in Tables at **Appendix 13.7**

6.3 Essential Equipment

An essential list of equipment and instruments in line with requirements of MHSDP-SC has been developed for Category B hospitals. The proposed list of equipment is placed at **Appendix 13.8**.

6.4 Essential Medicines

Based on the proposal of the clinical sub-committee, the MHSDP-SC for KP envisage the approved list of Medicines, Surgical Disposables and other non- Drug Items of Government prepared by Medicines Co-Ordination Cell (MCC), Khyber Pakhtunkhwa for the year 2015-16 will serve as drug formulary for the district hospitals; however, the concerned hospital will have the liberty to choose the medicines/drugs/surgical items from the MCC list to be procured as per their needs (**Appendix 13.9**).

7 MHSDP for Category "C" Secondary Care hospital

7.1 Clinical and Supportive Services

The Category C secondary care hospitals in KP has 110 inpatient beds, 2 Dentistry Units and is intended to serve a population of around 300,000 people. The category C secondary care hospitals have both in-patient and outpatient services, in addition to emergency, diagnostic and other day care facilities. The clinical specialities that are recommended to be available at a category C hospital include Surgery, Medicine, Gynaecology/obstetrics, Paediatric Medicine, Eye, ENT, Orthopaedics, Accident and Emergency (A & E) Department (previously known as "Casualty), and Intensive Care Unit. The table below provide the services that are to be provided by the Category C hospitals and the guidelines for referral (if required) based on the available clinical specialities and support services. In addition, it was also noted by the Consultant Team that it will be a good idea to label some of the services under a particular "Unit" to make it more visibility and recognition. These have been highlighted in the Table below

Table 6: MHSDP-SC FOR CATEGORY C SECONDARY CARE HOSPITALS

S.No	Services	Department	Remarks
	Clinical Services		
1.	**General Medical (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Infection: All uncomplicated bacterial, viral, fungal and protozoal infections.	Medical Department	
	GI disorders:		

Table 6: MHSDP-SC FOR CATEGORY C SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Amoebiasis, Gastroenteritis, Diarrhea(chronic), Gastritis, Irritable bowel syndrome, Peptic ulcer disease, Helminthic infection	Medical Department	
	GI tract bleeding,	Medical Department	Stabilise and Refer
	Renal disorders		
	Acute glomerulonephritis, Acute renal failure, Hypo/hyperkalemia, Nephrotic syndrome	Medical Department	Stabilise and Refer to CAT B hospital
	Other Medical conditions		
	Thyroid dysfunctions, Diabetes mellitus & other endocrine associated conditions, Liver cirrhosis & other liver conditions (abscess, cyst, etc.), Cerebral palsy, Herpes Zoster Hepatosplenomegaly	Medical Department	
	Stroke	Medical Department	Stabilisation and referral to a facility with CT scan
	Ischaemic heart disease	Medical Department	Initial Management and referral to Category A hospital for further work up and management
	Seizure disorders	Medical Department	Initial Management and referral to referral to a facility with CT scan (If required)
2.	**General Cardiology (Outpatients, In-patient, Emergency)**		In case of non-availability of cardiologist, Medical specialist shall be responsible
	Myocardial infarction	Medical Department	Initial Management (including provision of Streptokinase, if required) and referral for further work up and management including the assessment of need for Angiography and Angioplasty
	Deep-vein thrombosis, Hypertension	Medical Department	
	Pulmonary oedema	Medical Department	Stabilise and Referral to CAT B hospital
3.	**General Dermatology(Outpatients, In-patient)** Basic dermatological diagnostic and therapeutic services	Medical Department	In case of non-availability of Dermatologist, Medical specialist shall be responsible
4.	**General Psychiatry (Outpatients, In-patient, Emergency)**		In case of non-availability of Psychiatrist, Medical specialist shall be responsible
	Acute confusion (Acute psychosis), Depression	Medical Department	Initial Management and Referral to a Psychiatrist at Category B secondary care hospital

Table 6: MHSDP-SC FOR CATEGORY C SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Anxiety and stress-related disorders, Sleep disorders	Medical Department	
	Mania, Schizophrenia, Suicidal ideation, Substance abuse and dependency, Post-traumatic stress problems	Medical Department	Stabilize and Refer
5.	**General Paediatric (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	All uncomplicated bacterial, viral, fungal and protozoal infections, Neonatal care, Neonatal resuscitation During delivery: ENC including clean airway, clean clamp and cord cutting, weighing baby, Avoid hypothermia and ensure exclusive breast feeding including colostrum, Identify and Manage neonatal jaundice and infections, Phototherapy, Birth injuries, Incubation, Immunization (all births in the hospital and all children <5 visiting hospital to be actively screened for immunization status), Infants of diabetic mothers, Asthma (chronic) Diarrhea (chronic), Failure to thrive Growth retardation, Malnutrition—severe or moderate, acute/chronic, micronutrient deficiency (Vitamin A/C/D deficiencies, anemia, iodine deficiency)	Paediatric Department	
	Manage Neonatal complications	Paediatric Department	Stabilise and Refer
	Well-baby clinic to be established in the OPD and to have minimally the following services available: EPI plus services, CDD/ARI control activities, Nutrition counseling, Breast feeding counseling and support, Malaria and Dengue control activities, Growth monitoring and counseling, Deworming (provision of anti-helminthic)	Paediatric Outpatient Department	
6.	**General surgery (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Elective Surgery		
	Thyroidectomy, Mastectomy, Biliary tract operations, Colon operations, Proctological operations (perianal abscess), Hernioraphy, Rectal prolapse, Superficial abscesses,	Surgical Department	

Table 6: MHSDP-SC FOR CATEGORY C SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Cysts, Cavity abscesses, Circumcision Vasectomy, Venous cut down, Excision of sebaceous cyst, Wedge resection of IGTN, Excision of Lipoma, Lymph node Biopsy, Chest Intubation, Supra pubic catheterization (via suprapubic cystostomy kit), Supra pubic catheterization (open Technique), Trucut Biopsy, FNAC D/D Dressings, Skin lesion Biopsy, Cauterization of viral warts, Sigmoidoscopy, Urethral dilatation, DJ Stent Removal, Lord's Dilatation, T. Stich, Polypectomy, Examination Under Anaesthesia (EUA), Excision of Fibro adenoma Breast, I/D of Breast Abscess, I/D & D/D under G/A, Feeding Jejunostomy, Colostomy, DJ Stenting, Open Appendicectomy, Haemorrhoidectomy, Lateral Internal Sphincterotomy, Herniotomy, Hydrocele surgery, Varicocele surgery, Undescended Testes (UDT), Simple Mastectomy, Wide Local Excision Varicose Veins Surgery, Perianal Abscess/ Fistula (Low), Peri Anal Fistula High/complex, Mesh repair of inguinal /Ventral Hernias/ Incisional Hernia, Open Cholecystectomy, Gastrojejunostomy, Ureterolithotomy, Vesicolithotomy, Excision of pilonidal Sinus, Ileostomy/ Colostomy Reversal, Upper Gastrointestinal Endoscopy (UGIE) with biopsy, Lower Gastrointestinal Endoscopy (LGIE) Colonoscopy with biopsy		
7.	**General Dental services (Outpatients, In-patient, Emergency)**		
	Pulpitis, Pericoronitis, Gingivitis, Cellulitis (oral), Alveolitis (dry socket) Acute necrotizing ulcerative gingivitis Abscess (periapical)	Surgical Department (Dental Surgeon)	Services to be provided by the dental surgeon with provision of 2 dental units
8.	**A&E Services**		
	All medical emergencies including animal/snake bite		Previously mentioned as "Casualty" Management by specialist on-call from relevant department. For cases requiring referral, basic life support and emergency treatment will be given
	Abdominal trauma (minor), Acute appendicitis, Perforated peptic ulcer, Intestinal obstruction, Diverticulitis,	Accident and Emergency Unit/Department	Management by specialist on-call from surgical

Table 6: MHSDP-SC FOR CATEGORY C SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Inflammatory bowel disease, Mesenteric adenitis, Cholecystitis, Cholangitis, Cystitis, Urinary Tract Infection, Ureteric colic, Acute urinary retention, Peritonitis, Rectus sheet haematoma, Airways and ambu-bag breath, Cricothyroidotomy, Fluid and electrolyte balance and blood transfusion, Soft Tissue Injuries, Tendon injuries		department
	Major disaster plan TRIAGE and assessment of trauma patients along with stabilization of the patient with referral to the sub-specialty concerned (if required),	Accident and Emergency Unit/Department	
	Advanced acute abdominal conditions like Vascular, Pancreatic, Urological and requiring sub-specialized supervision	Accident and Emergency Unit/Department	Initial Management/Stabilization by specialist on-call from surgical department and referral
	Multiple Injuries	Accident and Emergency Unit/Department	Initial management and stabilization by specialist on-call from surgical department along with referral to specialized unit if required
	Pneumothorax and hemothorax – chest intubation with observation	Accident and Emergency Unit/Department	Assessment by specialist on-call from surgical department, if required referral to thoracic facilities
	Shock/Septicemia	Accident and Emergency Unit/Department	Initial stabilization by specialist on-call from surgical department and referral to CAT B hospital
	Head injury (based on Glasgow coma scale) – score 8 or less to be referred to neurosurgical facility Spinal Injuries	Accident and Emergency Unit/Department	Initial Management/Stabilization by specialist on-call from surgical department and referral to a facility having CT scan
	Initial Management of burns as per rule of 9s and referral to a burn centre in case of 1. Partial-thickness abdomen full-thickness burns of greater than 10% of the BSA in patients less than 10 years or over 50 years of age; 2. Partial-thickness and full-thickness burns on greater than 20% of the BSA in other age groups; 3. Partial-thickness and full-thickness burns involving the face, eyes, ears, hands, feet, genitalia, and perineum, as well as those that involve skin overlying major joints; 4. Full-thickness burns on greater than	Accident and Emergency Unit/Department	Initial Management by specialist on-call from surgical department and immediate referral as per the provided criteria

Table 6: MHSDP-SC FOR CATEGORY C SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	5% of the BSA in any age group; 5. Significant electrical burns, including lightning injury (significant volumes of tissue beneath the surface can be injured and result in acute renal failure and other complications); 6. Significant chemical burns; 7. Inhalation injury; 8. Burn injury in patients with pre-existing illness that could complicate treatment, prolong recovery, or affect mortality; 9. Any patient with a burn injury who has concomitant trauma poses an increases risk of morbidity or mortality, and may be treated initially in a trauma center until stable before being transferred to a burn center		
	Closed Fracture and Dislocation, Closed Fracture and no dislocation, Femur fracture, Open fractures, Pelvic fracture without complication	Accident and Emergency Unit/Department	Management by specialist on-call from Orthopaedic Department
	Patient referral (using ambulance)		
9.	**General Ophthalmology (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Emergencies: Trauma	Eye Department	Stabilize and Refer
	Common eye conditions, Cataract, Glaucoma, Refraction, Diabetic eye complications	Eye Department	
10.	**General ENT (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Epistaxis, Upper respiratory tract infections, Rhinitis, Acute & Chronic sinusitis, Granulomatous conditions of nose & PNS, Nasal polyp Septal surgeries, Nasal & facial trauma, Smell disorders, Obstructive sleep apnoea, Oral lesions, Pharyngeal infections, Adenoids & Tonsils & its surgeries, Laryngeal, infections-paediatrics & adults, Voice disorders, Deep neck abscesses, Thyroid masses, Acute management of laryngo-tracheal & neck trauma, Tracheostomy, Dysphagia, Otitis Externa, Wax in ear, Acute otitis media Chronic otitis media, Balance disorders, Otosclerosis, Otological trauma, Common complications of	ENT Department	

Table 6: MHSDP-SC FOR CATEGORY C SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	otitis media, Otitis media with effusion		
	Head & Neck benign & malignant tumours– primary & metastatic	ENT Department	Screen and Refer
	Foreign body in the ear/nose	ENT Department	Stabilize and Refer
11.	**General Orthopaedic (Outpatients, In-patient, Emergency**)		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Closed fracture and dislocation of all of minor joints and bones, Supracondylar displaced fractures, Volkmann's ischemia and compartment syndrome, Soft tissue injuries and crush injuries, Pelvic fracture without complication, Hip joint dislocation, Femur neck fracture, Femur fracture, Knee joint dislocation, Tibia and fibula closed fracture, Tibia open fractures, Ankle joint dislocation and fractures, Ankle bones open fractures, Tarsal bones fractures and dislocations, Tarso-metatarsal joint dislocation, Skin graft and tendon injuries, Acute osteomyelitis, Pyogenic septic arthritis Tuberculosis of bones and joints, Gout arthritis, Rheumatoid arthritis, Bone Cyst, Carpal tunnel lesion, Hand flexors and extensors injuries, Amputation (open amputation), Menopausal osteoporosis, Change of dressing without anesthesia, Intra articular injection or joint aspiration, Injection for tendinitis, In Growing Toe Nail (IGTN), Below knee and below elbow POP without anesthesia, Skeletal traction, COD under GA, TVE POP, Above knee and above elbow POP, Manipulation Under Anaesthesia (MUA), Closed reduction of small joints of fingers or toes, Excision of bursa, Application of hip spica, Open muscle biopsy, Trucut biopsy, Closed reduction and percutaneous fixation of distal radius, Closed reduction of knee/hip/below/shoulder, POP under GA, Open Reduction Internal Fixation (ORIF) small bones of hand & foot, Small bone operations of hands/foot to include, fracture fixation/arthrodesis/osteotomes, Forefoot amputation till midtarsal joint, Amputation of finger or thumb	Orthopaedic Department	
12.	**General Gynae/Obs (Outpatients, In-**		If supportive services are

Table 6: MHSDP-SC FOR CATEGORY C SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	patient, Emergency)		not available, patient shall be referred to designated facility for appropriate management
	Counseling of Maternal and new-born health issues including breast feeding, family planning and personal hygiene	Obstetrics and Gynaecology Department	
	Antenatal care		
	Management of intestinal worms, Malnutrition, Malaria, UTI &STI, Treatment of Vit. A deficiency (if night blindness appears in last trimester), Rhesus (Rh) incompatibility, Management of pre-eclampsia, Management of, Ectopic pregnancy	Obstetrics and Gynaecology Department	
	Natal Care		
	Manage complicated labour, Transfuse safe blood (haemorrhage/blood loss), Manage 3rd degree vaginal tears, Management of prolapsed cord, Management of shoulder dystocia, Manage prolonged and obstructed labour, Caesarean section	Obstetrics and Gynaecology Department	
	Postnatal care		
	Management of PPH/shock, Blood transfusion in case of haemorrhage Management of puerperal sepsis (simple)	Obstetrics and Gynaecology Department	
	Gynecological/obs; care:		
	Uterus fibromyoma, Infertility, Ovarian cyst and adnexal masses (simple), Menstrual disturbances, Pelvic inflammatory disease (PID), Abscesses, Prolapse and trans-vaginal operations, Complications of puerperium, Puerperium psychosis, Deep vein thrombosis (DVT), Incomplete abortion, Malnutrition—micronutrient deficiency (Vitamin A/C/D deficiencies, anemia, iodine deficiency)	Obstetrics and Gynaecology Department	
	Family Planning:		
	Implants, Tubal ligation, Complications of contraceptives	Obstetrics and Gynaecology Department	
	Support Services		
13.	**Laboratory (Outpatients, In-patient, Emergency)**		
	FBC, ESR, LFTs, Blood urea and electrolytes, CSF/pleural fluid/ascitic fluid/ , Biochemistry, gram's and ZN stain, HBsAg, Anti-HCV	Laboratory	

Table 6: MHSDP-SC FOR CATEGORY C SECONDARY CARE HOSPITALS

S.No	Services	Department	Remarks
	Serum amylase, CPK, Blood glucose, ABGs, Screening of donor, blood grouping and cross match, Storage (Blood bank services)		
14.	**Radiology (Outpatients, In-patient, Emergency)**		
	X-ray Chest/abdomen (erect & Supine)/spine/hands/pelvis/joints/ Sinuses, X-ray for fracture X-ray for age estimation, Ultrasound /Abdomen/ Pelvis	Medical Department (Radiologist)	Radiologist in the medical department to provide radiological diagnostic services. If any services is not available, patient shall be referred to designated facility
15.	**Anaesthesia services:**		
	Intubation, Manage emergencies and cardiopulmonary resuscitation, Manage convulsions, Cardiac life support, General anaesthesia, Local anaesthesia	Surgical and Orthopaedic Department (Anaesthesiologist)	One Anaesthesiologist each in the Surgical and Orthopaedic department to provide Anaesthesia services. The two Anaesthesiologist will also provide services for other surgeries conducted by Eye, ENT and Gynae/obs department
	Ventilation		Stabilise and Refer
16.	**Pharmacy (Outpatients, In-patient, Emergency)**		
	Support prescription of drugs, Manage main drug store (Inventory/stock, forecasting etc), Drug utilization evaluation, Pharmacovigilance, Drug therapeutic goods information and poison control center	Pharmacy Unit/Department	
17.	**Physiotherapy services**		
	Frozen shoulder, Backache therapy, Post-fracture therapy, Therapy of joints, Short wave diathermy, physiotherapy for chest, Mobilization (postoperative and post stroke)	Surgical and Medical Department	One Physiotherapist each in the Surgical and Medical Department to provide the Physiotherapy services
18.	**IT and Hospital Management Information System**		
	Maintenance of computers, Closed Circuit TV, Central speaker announcement Health educational corner at OPDs	Administration Department	
19.	**Infection prevention & control, safe environment, hygiene and safe waste disposal:**		
	Ensure aseptic sterilized diagnostic & therapeutic procedures, Notify ORs and house staff of MRSA/VRSA and	Administration Department responsible for	

Table 6: MHSDP-SC FOR CATEGORY C SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	other nosocomial infection when it occurs, Segregation of sharp and non-sharp medical waste and local or contractual arrangement for its safe disposal	implementation of the infection control measures	
20.	**Routine medico-legal**		
21.	**Ambulance Service:**	Administration Department	Service shall be run by 1122 for transporting patients and shall not be used for pick and drop service of any kind and transporting dead bodies

7.2 Human Resource Requirements

The human resource in Category C secondary care hospitals mainly consists of management, clinical and support specialists, general cadre doctors, nursing and paramedic staff and support staff. The specialist staff has been proposed based on the essential requirement to run the respective hospital as a 24/7 facilities. Proposed essential staff MHSDP-SC listed services for Category C Secondary Care Hospitals are reflected in Tables at **Appendix 13.7**

7.3 Essential Equipment

Secondary hospitals deal with a wide range of acute and chronic ailments including emergencies for which essential and quality diagnostic and care equipment are required. An essential list of equipment and instruments in line with requirements of MHSDP-SC has been developed for Category C hospitals. The proposed list of equipment is placed at **Appendix 13.8**.

7.4 Essential Medicines

Based on the proposal of the clinical sub-committee, the MHSDP-SC for KP envisage the approved list of Medicines, Surgical Disposables and other non- Drug Items of Government prepared by Medicines Co-Ordination Cell (MCC), Khyber Pakhtunkhwa for the year 2015-16 will serve as drug formulary for the district hospitals; however, the concerned hospital will have the liberty to choose the medicines/drugs/surgical items from the MCC list to be procured as per their needs (**Appendix 13.9**).

8 MHSDP for Category “D” Secondary Care hospital

8.1 Clinical and Supportive Services

The Category D secondary care hospitals in KP has 40 inpatient beds, 1 Dentistry Units and is intended to serve a population of around 100,000 people. The category D secondary care hospitals have both in-patient and outpatient services, in addition to emergency, diagnostic and other day care facilities. The clinical specialities that are available at a category D hospital include Surgery, Medicine, Gynaecology/obstetrics, Paediatric Medicine, Accident and Emergency (A & E) Department. The table below provide the services that are to be provided by the Category D hospitals and the guidelines for referral (if required) based on

the available clinical specialities and support services. In addition, it was also noted by the Consultant Team that it will be a good idea to label some of the services under a particular "Unit" to make it more visibility and recognition. These have been highlighted in the Table below

Table 7: MHSDP-SC FOR CATEGORY D SECONDARY CARE HOSPITALS

S.No	Services	Department	Remarks
	Clinical Services		
1.	**General Medical (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Infection: All uncomplicated bacterial, viral, fungal and protozoal infections.	Medical Department	
	GI disorders:		
	Amoebiasis, Gastroenteritis, Diarrhea(chronic), Gastritis, Irritable bowel syndrome, Peptic ulcer disease, Helminthic infection	Medical Department	
	GI tract bleeding,	Medical Department	Stabilise and Refer
	Renal disorders		
	Hypo/hyperkalemia,	Medical Department	Initial Management and Referral if required
	Acute glomerulonephritis, Nephrotic syndrome	Medical Department	Patient should be referred to Category B secondary care hospital if ICU care or dialysis is required
	Other Medical conditions		
	Thyroid dysfunctions, Diabetes mellitus & other endocrine associated conditions, Liver cirrhosis & other liver conditions (abscess, cyst, etc.), Cerebral palsy, Herpes Zoster Hepatosplenomegaly	Medical Department	
	Stroke	Medical Department	Stabilisation and referral to a facility with CT scan
	Ischaemic heart disease	Medical Department	Initial Management and referral to Category A hospital for further work up and management
	Seizure disorders	Medical Department	Initial Management and referral to referral to a facility with CT scan (If required)
2.	**General Cardiology (Outpatients, In-patient, Emergency)**		
	Myocardial infarction	Medical Department	Initial Management and referral for further work up and management including the assessment of need for Angiography and

Table 7: MHSDP-SC FOR CATEGORY D SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
			Angioplasty
	Deep-vein thrombosis	Medical Department	Initial management and Referral
	Hypertension	Medical Department	
	Pulmonary oedema	Medical Department	Stabilise and Referral to CAT B hospital
3.	**General Dermatology(Outpatients, In-patient)** Basic dermatological diagnostic and therapeutic services	Medical Department	Medical specialist shall be responsible and assess the need for referral to CAT B hospital
4.	**General Psychiatry (Outpatients, In-patient, Emergency)**		In case of non-availability of Psychiatrist, Medical specialist shall be responsible
	Acute confusion (Acute psychosis), Depression, Mania, Schizophrenia, Suicidal ideation, Substance abuse and dependency, Post-traumatic stress problems	Medical Department	Initial Management and Referral to a Psychiatrist at Category B secondary care hospital
	Anxiety and stress-related disorders, Sleep disorders	Medical Department	
5.	**General ENT (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Epistaxis	Medical Department	Stabilisation and referral
	Upper respiratory tract infections, Rhinitis, Acute & Chronic sinusitis,	Medical Department	
	Pharyngeal infections, Laryngeal, infections-paediatrics & adults, Otitis Externa, Wax in ear, Acute otitis media Chronic otitis media,	Medical Department	
6.	**Radiology (Outpatients, In-patient, Emergency)**		If any services is not available, patient shall be referred to designated facility
	X-ray Chest/abdomen (erect & Supine)/spine/hands/pelvis/joints/ Sinuses, X-ray for fracture, Ultrasound Abdomen/ Pelvis	Medical Department (Radiologist)	Radiologist in the medical department to provide radiological diagnostic services. If any services is not available, patient shall be referred to designated facility
7.	**General Ophthalmology (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Emergencies: Trauma	Medicical Department	Stabilise and Refer
	Common eye conditions, Refraction,	Medical Department	

Table 7: MHSDP-SC FOR CATEGORY D SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
8.	**General Paediatric (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	All uncomplicated bacterial, viral, fungal and protozoal infections, Neonatal care, Neonatal resuscitation During delivery: ENC including clean airway, clean clamp and cord cutting, weighing baby, Avoid hypothermia and ensure exclusive breast feeding including colostrum, Identify and Manage neonatal jaundice and infections, Phototherapy, Birth injuries, Incubation, Immunization (all births in the hospital and all children <5 visiting hospital to be actively screened for immunization status), Infants of diabetic mothers, Asthma (chronic) Diarrhea (chronic), Failure to thrive Growth retardation, Malnutrition— severe or moderate, acute/chronic, micronutrient deficiency (Vitamin A/C/D deficiencies, anemia, iodine deficiency)	Paediatric Department	
	Manage Neonatal complications	Paediatric Department	Stabilise and Refer
	Well-baby clinic to be established in the OPD and to have minimally the following services available: EPI plus services, CDD/ARI control activities, Nutrition counseling, Breast feeding counseling and support, Malaria and Dengue control activities, Growth monitoring and counseling, Deworming (provision of anti-helminthic)	Paediatric Outpatient Department	
9.	**General surgery (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Elective		
	Mastectomy, Biliary tract operations, perianal abscess, Hernioraphy, Rectal prolapse, Superficial abscesses, Cysts, Cavity abscesses, Circumcision, Vasectomy, Venous cut down, Excision of sebaceous cyst, Wedge resection of IGTN, Excision of Lipoma, Lymph node Biopsy, Chest Intubation, Supra pubic catheterization (via suprapubic cystostomy kit), Supra pubic catheterization (open	Surgical Department	

Table 7: MHSDP-SC FOR CATEGORY D SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	Technique), Trucut Biopsy, FNAC D/D Dressings, Skin lesion Biopsy, Cauterization of viral warts, Sigmoidoscopy, Urethral dilatation, Lord's Dilatation, T. Stich, Polypectomy, Examination Under Anaesthesia (EUA), Excision of Fibro adenoma Breast, I/D of Breast Abscess, I/D & D/D under G/A, Open Appendicectomy, Haemorrhoidectomy, Lateral Internal Sphincterotomy, Herniotomy, Hydrocele surgery, Varicocele surgery, Undescended Testes (UDT), Simple Mastectomy, Wide Local Excision, Varicose Veins Surgery, Perianal Abscess/ Fistula (Low), Peri Anal Fistula High/complex, Mesh repair of inguinal /Ventral Hernias/ Incisional Hernia, Open Cholecystectomy, Excision of pilonidal Sinus		
	Adenoids & Tonsils & its surgeries, Acute management of laryngo-tracheal & neck trauma, Tracheostomy,	Surgical Department	Management and assessment of the need for referral by Surgical Specialist
10.	**General Orthopaedic (Outpatients, In-patient, Emergency**)		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Closed fracture and dislocation of all of minor joints and bones, Volkmann's ischemia and compartment syndrome, Bone Cyst, Carpal tunnel lesion, Hand flexors and extensors injuries, Menopausal osteoporosis, Change of dressing without anesthesia, Injection for tendinitis, In Growing Toe Nail (IGTN), Below knee and below elbow POP without anesthesia, Above knee and above elbow POP, Closed reduction of small joints of fingers or toes, Excision of bursa, Open muscle biopsy, Amputation of finger or thumb	Surgical Department	Management and assessment of the need for referral by Surgical Specialist
11.	**Anaesthesia services:**		
	Intubation, Manage emergencies and cardiopulmonary resuscitation, Manage convulsions General anaesthesia, Local anaesthesia	Surgical Department (Anaesthesiologist)	Refer to CAT A or B hospitals (as appropriate) for cases requiring ICU and specialist care One Anaesthesiologist in the Surgical department to provide Anaesthesia services Surgical and Gynae/obs department
	Ventilation		Stabilise and Refer

Table 7: MHSDP-SC FOR CATEGORY D SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
12.	**General Dental services (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall be referred to designated facility for appropriate management
	Pulpitis, Pericoronitis, Gingivitis, Cellulitis (oral), Alveolitis (dry socket) Acute necrotizing ulcerative gingivitis Abscess (periapical)	Surgical Department (Dental Surgeon)	Services to be provided by the dental surgeon with provision of 2 dental units
13.	**A&E Services**		
	All medical emergencies including animal/snake bite	Accident and Emergency Unit/Department	Previously called as "Casualty" Management by the specialist on-call from relevant Department. For cases requiring referral, basic life support and emergency treatment will be given
	Abdominal trauma (minor), Acute appendicitis, Perforated peptic ulcer, Intestinal obstruction, Diverticulitis, Inflammatory bowel disease, Mesenteric adenitis, Cholecystitis, Cholangitis, Cystitis, Urinary Tract Infection, Ureteric colic, Acute urinary retention, Peritonitis, Rectus sheet haematoma, Airways and ambu-bag breath, Cricothyroidotomy, Fluid and electrolyte balance and blood transfusion, Soft Tissue Injuries, Tendon injuries	Accident and Emergency Unit/Department	Management by the specialist on-call from Surgery Department and referral if required
	Advanced acute abdominal conditions like Vascular, Pancreatic, Urological and requiring sub-specialised supervision	Accident and Emergency Unit/Department	Initial Stabilisation by the specialist on-call from Surgery Department and referral
	Multiple Injuries	Accident and Emergency Unit/Department	Initial management and stabilization by the specialist on-call from Surgery Department and referral to specialized unit if required
	Pneumothorax and hemothorax – chest intubation with observation	Accident and Emergency Unit/Department	Initial management and stabilization by the specialist on-call from Surgery Department and referral to CAT B hospital or thoracic facilities, as required
	Shock/Septicaemia	Accident and Emergency Unit/Department	Initial stabilisation by the specialist on-call from Surgery Department and referral to a facility with ICU care
	Head injury (based on Glasgow coma	Accident and	Initial Stabilisation by the

Table 7: MHSDP-SC FOR CATEGORY D SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	scale) – score 8 or less to be referred to neurosurgical facility Spinal Injuries	Emergency Unit/Department	specialist on-call from Surgery Department and referral to a facility having CT scan
	Initial Management of burns as per rule of 9s and referral to a burn centre in case of 1. Partial-thickness abdomen full-thickness burns of greater than 10% of the BSA in patients less than 10 years or over 50 years of age; 2. Partial-thickness and full-thickness burns on greater than 20% of the BSA in other age groups; 3. Partial-thickness and full-thickness burns involving the face, eyes, ears, hands, feet, genitalia, and perineum, as well as those that involve skin overlying major joints; 4. Full-thickness burns on greater than 5% of the BSA in any age group; 5. Significant electrical burns, including lightning injury (significant volumes of tissue beneath the surface can be injured and result in acute renal failure and other complications); 6. Significant chemical burns; 7. Inhalation injury; 8. Burn injury in patients with pre-existing illness that could complicate treatment, prolong recovery, or affect mortality; 9. Any patient with a burn injury who has concomitant trauma poses an increases risk of morbidity or mortality, and may be treated initially in a trauma center until stable before being transferred to a burn center	Accident and Emergency Unit/Department	Initial Management by the specialist on-call from Surgery Department and immediate referral as per the provided criteria
	Closed Fracture and Dislocation, Closed Fracture and no dislocation,	Accident and Emergency Unit/Department	Management by the specialist on-call from Surgery Department and assess the need for referral
	Major disaster plan TRIAGE and assessment of trauma patients along with stabilization of the patient with referral to the sub-specialty concerned (if required),	Accident and Emergency Unit/Department	
	Patient referral (using ambulance)		
14.	**General Gynae/Obs (Outpatients, In-patient, Emergency)**		If supportive services are not available, patient shall

Table 7: MHSDP-SC FOR CATEGORY D SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
			be referred to designated facility for appropriate management
	Counseling of Maternal and new-born health issues including breast feeding, family planning and personal hygiene	Obstetrics and Gynaecology Department	
	Antenatal care		
	Management of intestinal worms, Malnutrition, Malaria, UTI &STI, Treatment of Vit. A deficiency (if night blindness appears in last trimester), Rhesus (Rh) incompatibility, Management of pre-eclampsia, Management of, Ectopic pregnancy	Obstetrics and Gynaecology Department	
	Natal Care		
	Manage complicated labour, Transfuse safe blood (haemorrhage/blood loss), Manage 3rd degree vaginal tears, Management of prolapsed cord, Management of shoulder dystocia, Manage prolonged and obstructed labour, Caesarean section	Obstetrics and Gynaecology Department	
	Postnatal care		
	Management of PPH/shock, Blood transfusion in case of haemorrhage Management of puerperal sepsis (simple)	Obstetrics and Gynaecology Department	
	Gynaecological/obs; care:		
	Uterus fibromyoma, Infertility, Ovarian cyst and adnexal masses (simple), Menstrual disturbances, Pelvic inflammatory disease (PID), Abscesses, Prolapse and trans-vaginal operations, Complications of puerperium, Puerperium psychosis, Deep vein thrombosis (DVT), Incomplete abortion, Malnutrition—micronutrient deficiency (Vitamin A/C/D deficiencies, anemia, iodine deficiency)	Obstetrics and Gynaecology Department	
	Family Planning:		
	Implants, Tubal ligation, Complications of contraceptives	Obstetrics and Gynaecology Department	
	Support Services		
15.	**Laboratory (Outpatients, In-patient, Emergency)**		
	FBC, ESR, LFTs, Blood urea and electrolytes, Biochemistry, gram's and ZN stain, HBsAg, Anti-HCV, Serum amylase, CPK, Blood glucose, ABGs, Screening of donor, blood grouping	Laboratory	

Table 7: MHSDP-SC FOR CATEGORY D SECONDARY CARE HOSPITALS			
S.No	**Services**	**Department**	**Remarks**
	and cross match, Storage (Blood bank services)		
16.	**Pharmacy (Outpatients, In-patient, Emergency)**		
	Support prescription of drugs, Manage main drug store (Inventory/stock, forecasting etc), Drug utilization evaluation	Pharmacy Unit/Department	
17.	**Physiotherapy services**		
	Frozen shoulder, Backache therapy, physiotherapy for chest, Post-fracture therapy, Therapy of joints, Mobilization (postoperative and post stroke)	Surgical and Medical Department	One Physiotherapist to provide the Physiotherapy services to Surgical and Medical Department
18.	**IT and Hospital Management Information System**		
	Maintenance of computers, Closed Circuit TV, Central speaker announcement, Health educational corner at OPDs	Administration Department	
19.	**Infection prevention & control, safe environment, hygiene and safe waste disposal:**		
	Ensure aseptic sterilized diagnostic & therapeutic procedures, Notify ORs and house staff of MRSA/VRSA and other nosocomial infection when it occurs, Segregation of sharp and non-sharp medical waste and local or contractual arrangement for its safe disposal	Administration Department responsible for implementation of the infection control measures	
20.	**Routine medico-legal**		
21.	**Ambulance Service:**	Administration Department	Service shall be run by 1122 for transporting patients and shall not be used for pick and drop service of any kind and transporting dead bodies

8.2 Human Resource Requirements

The human resource in Category D secondary care hospitals mainly consists of management, clinical and support specialists, general cadre doctors, nursing and paramedic staff and support staff. This documents provides guidance for determining number staff of different categories required to provide indicated package of services effectively. The specialist staff has been proposed based on the essential requirement to run the respective hospital as a 24/7 facilities. Proposed essential staff MHSDP-SC listed services for Category D Secondary Care Hospitals are reflected in Tables at **Appendix 13.7**

8.3 Essential Equipment

An essential list of equipment and instruments in line with requirements of MHSDP-SC has

been developed for Category D hospitals. The proposed list of equipment is placed at **Appendix 13.8**.

8.4 Essential Medicines

Based on the proposal of the clinical sub-committee, the MHSDP-SC for KP envisage the approved list of Medicines, Surgical Disposables and other non- Drug Items of Government prepared by Medicines Co-Ordination Cell (MCC), Khyber Pakhtunkhwa for the year 2015-16 will serve as drug formulary for the district hospitals; however, the concerned hospital will have the liberty to choose the medicines/drugs/surgical items from the MCC list to be procured as per their needs (**Appendix 13.9**).

9 Preventive and primary health care services for all categories of secondary care hospitals

The role of preventive and promotive care at the secondary level care facilities cannot be underscored. The secondary health care facilities are being utilized for not only basic primary and preventive care but also to provide outreach care and link with various primary care programmes. Based on the recommendations of the preventive care sub-committee, following are proposed for all categories of secondary care hospitals

- There should be a *Preventive Care Unit* within the hospital which should provide training/capacity building of the hospital staff on preventive care. The Preventive Care Unit should have a Nutritionist, Health Education Officer and a hospital Epidemiologist.

- The OPDs should have a prevention room that caters for the preventive health care services.

- The OPDs should have standardized preventive care videos displayed in local language.

- The secondary care hospitals should be linked/connected through web portals to have access to standard preventive care messages within and across districts.

It is proposed that Knowledge Management (KM) wing sould be established at the Director General Health Office. The Knowledge Management wing in addition to its other knowledge management related responsibilities, will also focus on the IEC (Information Education and Communication) related to prevention of diseases. With regards to development of IEC material and identification of priority illnesses, the KM wing should get information on diseases, which are commonly presented to the district hospitals. The KM wing will identify those, which can easily be prevented with health education. The KM wing will then classify diseases which are common across all the hospitals and which are specific to some hospitals.

The envisaged key role and responsibilities of the KM wing with regards to IEC are

- Obtain HMIS information from all levels of hospitals including secondary and tertiary care hospitals.

- Identify common and relevant diseases.

- Develop themes for prevention.

- Develop materials IEC materials, TV /Radio Adds, billboards etc.

- At the secondary care hospitals level, liaise with heads of the department or nominated personnel from every unit for identification of diseases that needs to be addressed

- Design and develop IEC materials accordingly with the help of Public Health Department of Medical Colleges and Medical Consultants

The key preventive health care services for the prevailing health problems, their prevention and control that should be available across all categories of secondary care hospitals are provided in the Table 8 below. The Hospital Epidemiologist, Nutritionist and the Health Education Officers housed at the proposed Preventive Care Unit in the hospital should serve as the focal point for promotion of the preventive health care services at the hospital and provide training/capacity building of the hospital staff on preventive care.

Table 8: Preventive Health Care Services at Secondary Level Hospitals

Activities / measures to be taken	Responsibility
MATERNAL AND REPRODUCTIVE HEALTH	
1. Delay the first pregnancy at least up to 19 years of age, practice birth spacing for at least 3 years, and limit family size. 2. Counselling on family planning methods • Motivate for family planning • Remove misconceptions • Help make informed choice 3. Seek antenatal care at least 4 times during the pregnancy (first as soon as possible, second 6-month, third 8-month, and fourth 9-month). 4. Take iron tablets regularly from 3 months onwards in pregnancy. 5. Take calcium tablets regularly from 5 months onwards in pregnancy 6. Seek assistance for delivery only from a Skilled Birth Attendant (SBA) such as CMW, LHV, and lady doctor. 7. Promotion of healthy maternal diet and hygiene in the post-partum period 8. Awareness about breast examination for early detection of breast cancers	Gynaecology and Obstetrics Department
INFANT AND CHILD FEEDING PRACTICES	
1. Initiate breastfeeding with first half to one hour after delivery. 2. Give the first bath to the new-born after 24 hours 3. Breastfeed exclusively for 6 months. 4. From about 6 months, provide appropriate complementary feeding such as *khichri* and continue breastfeeding until 24 months. 5. Continue feeding children and increase fluids during illness; increase feeding immediately after illness.	Paediatrics Department
PREVENTION OF MALNUTRITION	
1. Facilitate initiation of early breastfeeding 2. Support and promote exclusive breastfeeding for six months	Paediatrics Department

Activities / measures to be taken	Responsibility
3. Deal with breastfeeding problems in early months 4. Promotion of appropriate complementary feeding from 6 months 5. Promotion of maternal nutritional status through counselling 6. Diagnosing malnutrition in pregnant and lactating women 7. Promotion of maternal nutritional status to prevent anaemia and other micronutrient deficiencies 8. Iron/folic acid/calcium supplementation for pregnant, lactating women 9. Prevention of parasitic infections 10. Vitamin A supplementation: To all children 6 months to 59 months and to post-partum mothers 11. Promote exposure to sunshine for women and children to avoid vitamin D deficiency 12. Exclude diagnose and treat vitamin D deficiency 13. Promotion of iodized salt	
WATER SANITATION AND HYGIENE PROMOTION	
General OPD 1. Availability of clean drinking water 2. Availability of safe tape water for hand washing with soap and other disinfectant. 3. Availability of wash-room, latrine within the waiting area along with wash basin and proper drainage system of the used water. 4. Health education on personal and patient hygiene both body and oral, food intake, cooking, washing of food items, clean clothes and environment. 5. General cleanliness and cross-ventilation of the room/s and space for OPD. 6. Dustbins for various used items like linen and food/edible pouches etc	Hospital administration & sanitary staff; & MO/ WMO/ Paramedics; etc on duty
Ward and casualty (Accident & Emergency Unit/Department) level 1. Availability of all the above protocols, plus 2. Washing and disinfection of the rooms and wards of the hospital. 3. Availability of running water for washing and ante septic dressing of the wounds. 4. Water availability for the hospital staff after handling of patients, giving injection, after using toilet, catheterization etc. 5. Separate washrooms/latrine for patients and staff. 6. Clean drinking water available for both patients and hospital staff. 7. Proper flow of used water from ward to main drain. 8. Health education by the staff of the ward	Hospital administration & sanitary staff
Operation theatre level 1. Regular and proper cleanliness with clean water of the OT after	Hospital administration & sanitary staff

Activities / measures to be taken	Responsibility
use. 2. Disposal of used items, like dressing pads, towels, tissue papers, used sutures, linen, disposable/auto-lock syringes, 3. Running water for scrubbing before operating on each and every patient. 4. Proper drain for used water.	
Hospital Kitchen 1. Use of properly washed food materials 2. Safe and clean tape water for cooking to avoid food poisoning and spread of diseases. 3. Use of plates and cutlery washed with clean water.	Hospital administration & sanitary staff
General clean water and sanitation of hospital 1. Disinfected provision of safe and clean water for use of patients, clients, attendants and hospital staff 2. Chlorination and use of aquatabs in water reservoirs 3. Hospital administration should clean all places with standing water both on ground, lawns and drains. 4. Open blocked drains. 5. Avoid piping of clean and safe water through drains. 6. Applying filters and solar disinfection processes for making clean drinking water available 7. The hospital should keep a monitoring and supervising staff to look into overall cleanliness, ensuring round the clock running of clean water,	Hospital administration and public health engineering Dept.
Patient awareness 1. Promoting safe drinking water measures at home: • Applying solar disinfection • Using Aquatabs • Using boiled water 2. Hygiene Promotion • Hand washing with soap: after using toilet, after handling baby's faeces, before cooking, before feeding • Toilet use 3. Other Measures such as creating awareness about problems created by stagnant water, blocked drains, defecating outdoors.	Cross cutting – All departments to promote the message
IMMUNISATION PRACTICES	
1. Take infants for immunisation even when he or she is sick. Allow sick infant to be immunised during visit for curative care. 2. For every pregnant women and women of childbearing age, seek tetanus toxoid vaccine at every opportunity. 3. Take infant for measles immunisation as soon as possible after the age of 9 months	Immunization services (Infection control services) of DoH with the help of Paediatrics Department

Activities / measures to be taken	Responsibility
4. Motivate families for • Regular and timely immunisation • Giving polio drops on all NIDs	
CONTROL OF TUBERCULOSIS	
1. Health education to: • Identify suspects • Get sputum test done • Educate TB is curable • Inform treatment is free of costs • Inform where TB services are available	Infection control services of DoH with the help of physician and TB control program through Chest/TB Department
CONTROL OF MALARIA	
1. Health education about: • Cleanliness of the surroundings • Netting windows and doors • Use insecticide-treated bed-nets for pregnant women and children under 5 years of age	Infection control of DoH with the help of Malaria control program and physician from Medical Department
CONTROL OF HEPATITIS B AND C	
1. Health education on transmission of hepatitis B and C	Infection control of DoH with the help of Malaria control program and physician from Medical Department
CONTROL OF BLOOD PRESSURE AND PREVENTION OF HEART ATTACK AND STROKES	
1. Health education for control of BP and prevention of heart attack and strokes: • Tobacco cessation • Regular physical activity 30 minutes a day • Reduced salt intake <5 gm per day • Regular use of antihypertensive • Regular use of Aspirin • Weight control	Health promotive and preventive educational programs of DoH and Department of Primary, Secondary and higher education with the help of physicians from Medical and Cardiology Department
HEALTH EDUCATION ABOUT DIABETES	
1. Health Education on diabetes about • Diet guidance • Avoiding sugars • Weight control • Regular physical activity 30 minutes a day • Regular use of oral hypoglycaemic agents/ insulin by person with diabetes meillitus	Health promotive and preventive educational programs of DoH and Department of Primary, Secondary and higher education with the help of physicians from Medical Department
PREVENTION OF IODINE DEFICIENCY	

Activities / measures to be taken	Responsibility
1. Promotion of the use of iodised salt for prevention of iodine deficiency	Health promotive and preventive educational programs of DoH, Department of food and Department of Primary, Secondary and higher education with the help of physicians/Medical Department
HEALTH EDUCATION ON DISABILITIES	
1. Health Education on • Early examination of infants and children • Dealing with disability at home • Making life of disabled productive • Seeking advice on physiotherapy	
HEALTH EDUCATION ON ORAL HEALTH	
1. Health Education on oral health about • Brushing the teeth with use of tooth paste at least twice daily, once in the morning and once before going to sleep • Mouth washing and dental toileting after meals • Use of mouth wash • Harmful effects of naswar/ghutka	Health promotive and preventive educational programs of DoH with extended school health services and extended Masjid health services through local health facility involving physician, surgeon, gynaecologist and Dentistry Department
CARE-SEEKING PRACTICES	
1. Seek appropriate care from trained professionals in the event of illness 2. Administer treatment and medications according to instruction (amount and duration).	Cross cutting – All Departments
HEALTH EDUCATION TO YOUTH	
1. Teaching the youth about roles and responsibilities of men and women in building a healthy family 2. Promoting healthy life style behaviours – exercise, no smoking/naswar, avoiding violence 3. Imparting knowledge about structure of menstrual cycle to females 4. Educating about risks involved in early age marriages and pregnancies	Health promotive and preventive educational programs of DoH with extended school health services and extended Masjid health services through local health facility involving physician, surgeon and gynaecologist. The responsibilities will be cross cuttingfrom all Departments
PREVENTIVE OPHTHALMIC CARE	
Following are some Important Conditions of eye which need to be addressed at Secondary Health Facilities.	Eye Department

Activities / measures to be taken	Responsibility
Communicable Diseases;	
1- Epidemic Kerato-Conjunctivitis and Trachoma;	
Counselor, who can be an Optometrist, will educate the people on importance of face washing and avoidance of contact with the patients.	
2- Ophthalmia neonatorum: Educating the mothers and Hospital staff attending the deliveries in the labour room for early identification of the problem and prompt treatment to prevent complications.	
Non-Communicable diseases;	
1- Optometrist/Counselor: Examination of a newborn child for detection of congenital anomalies of the eye such as Congenital Glaucoma, Congenital Cataracts and ophthalmia neonatorum to prevent Blindness. Educating mothers for awareness of such conditions	
2- Amblyopia: Optometrist is the key person. Educating people in early identification of squint and then advising about the refractive errors and patch therapy.	
3- Glaucoma. Optometrist/Counselor: Educating people regarding the risk factors for development of glaucoma, educating people regarding the importance of taking regular follow-up and treatment for prevention of Blindness from glaucoma.	
4- Diabetic Retinopathy. Optometrist/ Counselor; Educating people for regular examination of the eyes in patients suffering from diabetes. Non-Mydriatic -Fundus photograph. Control of blood sugar Levels. Importance and benefits of Laser application to the fundus as advised by ophthalmologists.	
PREVENTIVE GERIATRIC CARE	
1. All the relevant clinical specialties should provide health education and screening services for population over the age of 60 with a focus on following geriatric problems • Cataract & Visual impairment • Arthritis & locomotion disorder • Cerebrovascular disease & Hypertension • Neurological problems • Respiratory problems including Chronic bronchitis • GIT problems • Psychiatric problems • Loss of Hearing	All the relevant clinical specialties
MENTAL HEALTH PREVENTIVE CARE	
The psychiatric department should take lead in preventive care related to mental health. Following measures could be taken to promote mental health and prevent mental disorders 1. Improve coordination with other specialty departments in the hospital to have referral of the patients having signs of a mental health problem 2. Orientation and skill enhancement of the clinicians in other specialty departments to identify the individuals at risk of developing mental health disorders to facilitate adequate and timely referral 3. Mental health screening sessions at adequate intervals in the OPD using the recommended tools for early detection of mental health disorders	Psychiatry Department with support from other specialty departments

Activities / measures to be taken	Responsibility
4. Counselling sessions for individuals identified as having risk of developing mental health disorders	

10 Physical Infrastructure guidelines for all secondary care hospitals

The importance of an adequate infrastructure for effective and quality health service delivery cannot be underscored. Adequate infrastructure not only promotes the quality of the services provided but also helps in better and facilitated access of the patients to the health facilities. The following guidelines are provided with regards to infrastructure requirements for the secondary care hospitals based on the recommendations/standards of the World Health Organisation (WHO) for secondary care hospitals[18]. It is well understood that it might not be possible to implement all the proposed standards/guidelines by the secondary care hospitals which are already established for practical reasons. However, all the secondary care hospitals should try to implement the proposed standards to the best possible extent. It is proposed that the secondary care hospitals that will be established in future or are in pipeline should consider these standards. In addition to that, quality of care managment standards as already produced for the services and infrastructure by the Department of Health, KP should also be followed.

10.1 Factors to be considered in locating a district hospital

Following factors should be considered while identifying a location for a district hospital[18]

(1) It should be within 15-30 min travelling time and must have metal access road. In a district with good roads and adequate means of transport, this would mean a service zone with a radius of about 25 km.

(2) It should be grouped with other institutional facilities, such as educational (school), tribal (cultural) and commercial (market) centres.

(3) It should be free from dangers of flooding; it must not, therefore, be sited at the lowest point of the district.

(4) It should be in an area free of pollution of any kind, including air, noise, water and land pollution.

(5) It must be serviced by public utilities: water, sewage and storm-water disposal, electricity, gas and telephone. In areas where such utilities are not available, substitutes must be found, such as a deep well for water, generators for electricity and radio communication for telephone.

10.2 Size of the Site

The site must be large enough for all the planned functional requirements to be met and for any expansion envisioned within the coming ten years. Recommended standards vary from

[18] District Health Facilities, Guidelines for Development and Operations, WHO Regional Publications, Western Pacific Series No.22

1.25 to 4 ha (25 to 79 Kanals) per 100 beds; the following minimum requirements have been proposed[18]:

a) 25-bed-capacity - 2 ha/40 Kanals (800 m^2/1.6 Kanals per bed)

b) 100-bed capacity - 4 ha/79 Kanals (400 m^2/0.79 Kanal per bed)

c) 200-bed capacity - 7 ha/138 Kanals (350 m^2/0.69 Kanals per bed)

d) 300-bed capacity - 10 ha/198 Kanals (333 m^2/0.65 per bed)

These areas are for the hospital buildings only, excluding the area needed for staff housing. For smaller hospitals, single-storey construction generally results in effective use of the building, less reliance on expensive mechanical services and lower running and maintenance costs. Thus, hospitals up to 150 beds should be single-storey constructions (with a foundation to support six stories for future needs) unless other parameters dictate that they be multi-storeyed[18].

10.3 Topography

Topography is a determinant of the distribution of form and space. A flat terrain is the easiest and least expensive to build on. A rolling or sloping terrain is more difficult and more expensive to build on, but the solutions can be interesting and innovative; by using the natural slope of the ground, the drainage and sewage disposal systems can be designed so as to result in lower construction and maintenance costs[18].

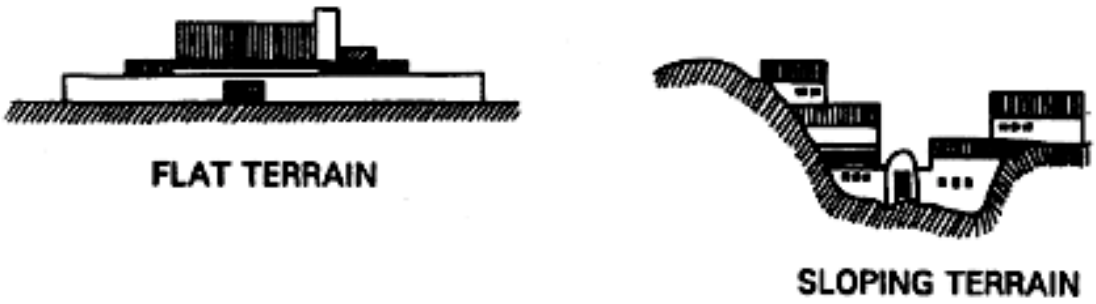

Figure 7: Topography

(Source: District Health Facilities, Guidelines for Development and Operations, WHO Regional Publications, Western Pacific Series No.22)

10.4 Departmental Planning and Design

The different departments of the hospital should be grouped according to zone, as follows[18] (Figure 8)

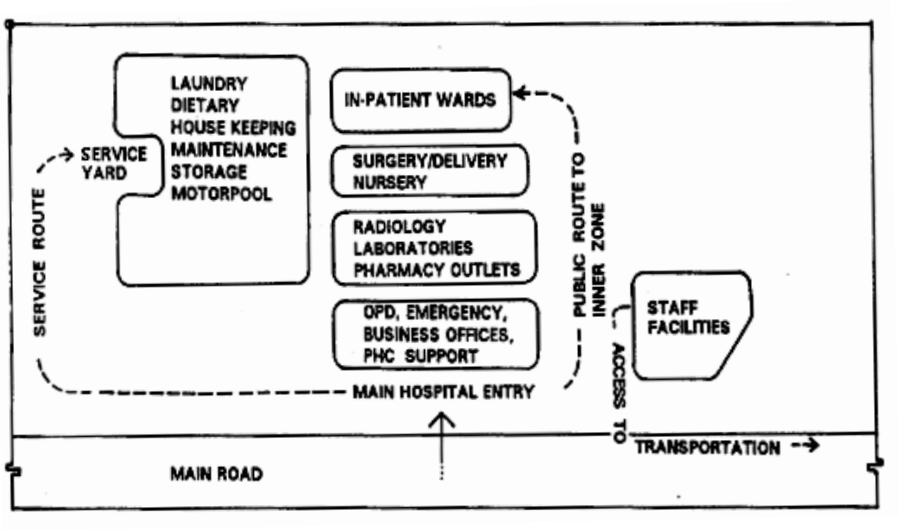

Figure 8: Zoning of the district hospital departments[18]*Error! Bookmark not defined.*

(1) **Outermost zone**, which is the most community oriented

Primary health care support areas including family planning clinic

Out-patient department; consists of reception and waiting areas, consultation rooms, examination rooms, treatment rooms, and staff and supply areas.

Emergency department; This fast-paced department requires a large area that is flexible and can be converted into private areas when necessary, usually by the use of curtains on tracks around delineated spaces. It is vital that the provisions for movement within the emergency department allow for fluidity, with rapid access to the operating, X-ray and other departments. Because of the nature of emergencies, it is recommended that if resources are available, beds be clustered and dedicated to specific types of emergency cases. Accident and trauma, fracture and orthopaedic, obstetrics and gynaecology, and paediatrics cases require different ministrations and emergency procedures.

Administration; the administrative department is orientated to the public but is at the same time private. Areas for business, accounting, auditing, cashiers and records, which have a functional relationship with the public, must be located near the entrance of the hospital. Offices for hospital management, however, can be located in more private areas.

Admitting office, reception

(2) **Second zone**, which receives workload from (1)

Radiology and imaging department; with X-ray, Ultrasound and CT scan facilities (in a Category A hospital). The diagnostic imaging area should be on the ground floor of the hospital, with easy, covered access for wheel-chairs, patient trolleys and beds. Its location close to the emergency section of the out-patient department is helpful, but easy access for all patients should be the first consideration. A separate building is not necessary. The X-ray department should consist of three room; (i) the X-ray room (ii) the dark-room; and (iii) office and storage space. The ultrasound room should contain a patient couch, firm but comfortable, a chair and at least 1 m^2 for the equipment. The lighting must be dim-bright, light makes it difficult to examine a patient properly-but the room must not be very dark.

Handwashing facilities should be located either in the room or close by. There must be a toilet close to the ultrasound room.

Laboratories; The laboratory must be located and designed so as to:

- provide suitable, direct access for patients
- allow reception of deliveries of chemicals
- allow for disposal of laboratory materials and specimens.

The basic utilities that are to be provided in the laboratory are water supply, sanitary drains and drain vents, electricity, compressed air, distilled water, carbon dioxide, steam and gas. Others may be necessary depending on the types of tests to be performed. A method must be designed for identifying the different pipes in the laboratory; the following colour code may be used:

- hot water orange
- cold water blue
- drain brown
- steam gray
- compressed air white

Blood bank; To have blood donation and transfusion services it is important to have screening carried out for anaemia and infectious agents, including human immunodeficiency virus (HIV) type 1 (and, where necessary, type 2), the surface antigen of hepatitis B virus, syphilis, and any other conditions, considered important based on local epidemiological profile and a standard exclusion criteria. There should also be facility for adequate storage of the donated blood after screening.

Pharmacy; The pharmacy must be located so that it is:

- accessible to the out-patient department,
- convenient for dispensing, and
- accessible to the central delivery yard.

(3) **Middle zone** between outer and inner zones

Operating department; the number of operating theatres required is obviously related to the number of hospital beds. As a general rule, one operating theatre is required for every 50 general inpatient beds and for every 25 surgical beds. The preferred location is on the same floor as the surgical wards, which may be the ground floor. It should be connected to the surgical ward by the simplest possible route, It should also:

- be easily accessible from the accident and emergency department;
- be easily accessible for the delivery suite;
- adjoin the intensive care unit;
- adjoin the central sterile supply department;
- be located in a cul-de-sac, so that entry and exit can be controlled; there should be no through-traffic

The overriding principle is that the centre of the theatre suite should be the cleanest area, the requirement for cleanliness decreasing towards the perimeter of the department i.e. the concept of progressive asepticism.

The OT department should provide following rooms/areas (Figure 9)

Transfer area

This area should be large enough to allow for the transfer of a patient from a bed to a trolley. A line should be clearly marked in red on the floor, beyond which no person from outside the operating department should be permitted to set foot without obtaining authority and putting on protective clothing.

Holding bay

This space is required when the corridor system is used and should be located to allow supervision of patients waiting to go into the theatre. One bed per two theatres should be foreseen.

Staff changing rooms

Access to staff changing rooms should be made from the entry side of the transfer area. At both the transfer area and the theatre side of the changing rooms, space must be provided for the storage, putting on and removal of theatre shoes.

Operating theatres

Each theatre should be no less than 6 x 6 m (36 m^2) in area and should have access from the 1 anaesthetic room, scrub-up room and supply room. Separate exit doors should be provided.

Scrub-up room

Scrub-up facilities may be shared by two theatres. A minimum of three scrub up places is required for one theatre, but five places are adequate for two theatres. A clear area within the scrub-up room, at least 2.1 x 2.1 m, must be provided for gowning and for trolley or shelf space for gowns and masks.

Sub-clean-up

In suites of four or more operating theatres, a small utility area is required for each pair of operating theatres, for the disposal of liquid wastes, for rinsing dropped instruments and to hold rubbish, linen and tissue temporarily until they are removed to the main clean-up room.

Sub-sterilizing

An area for sterilizing dropped instruments should be provided to serve two theatres.

Recovery room

The recovery room should be located on the hospital corridor near the entrance to the operating department. The number of patients to be held, until they come out of anaesthesia, depends on the theatre throughput; two beds per theatre is usually satisfactory. In hospitals where there is an intensive care unit, additional room and facilities will be needed.

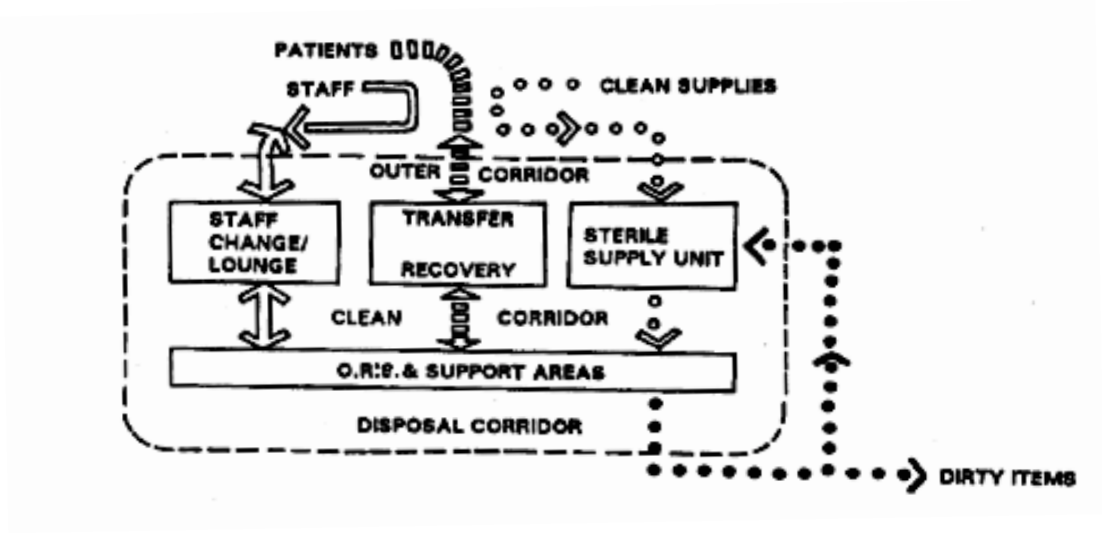

Figure 9: Traffic flow in operating department

Intensive Care Unit; The intensive care unit is for critically ill patients who need constant medical attention and highly specialized equipment, to control bleeding, to support breathing, to control toxaemia and to prevent shock. They come either from the recovery room of the operating theatre, from wards or from the admitting section of the hospital. This unit requires many engineering services, in the form of controlled environment, medical gases, compressed air and power sources. As these requirements are very similar to those in the operating department, it is advisable to locate the intensive care unit adjacent to the recovery room of the operating department. The number of beds in this unit should correspond to approximately 1-2% of the total beds in the hospital.

Obstetrics and Gynaecology department; Proximity to the operating department is desirable, as transfer of delivery patients may be necessary. The Obstetrics and Gynaecology department is a useful one for primary health care activities. Education and training materials on maternal and child health and on family planning can be effectively transmitted to receptive fathers in the waiting room. An area should be provided for this purpose.

Paediatrics Unit/Nursery; the nursery should be located adjacent to the delivery department to ensure protected transport of newborns. Areas must be provided for cribs for both well and ill babies and for support services that include formula and preparation rooms.

(4) **Inner zone**, in the interior but with direct access for the public

Inpatient wards; the wards in a hospital are usually classified according to specialties: medicine, paediatrics, obstetrics-gynaecology and surgery, which are the basic services offered by a district hospital. There are no radical differences between the requirements of medical and surgical wards and only minor differences between those of the other specialties.

(5) **Service zone**, disposed around a service yard

Dietary services/Kitchen; Apart from parenteral feeding (not considered here), hospitals should provide dietary services for those in special need of them (i.e., infants and other patients unable to eat normal meals). These services should be provided whether or not the local custom is for the family to provide regular meals for the patient.

The dietary department of the hospital should advise staff and patients about special diets (that include or exclude specific ingredients), modified diets (containing increased or reduced amounts of certain components, such as carbohydrate or fat), and normal diets. All meals should be composed with the aim of achieving appropriate nutrition, within the limits of the hospital budget, local food habits, and cultural and religious restrictions.

The hospital should provide patients and relatives information on proper nutrition and well-balanced diets. Dietary education should be provided not only during therapeutic care, but on all suitable occasions, and should deal with normal nutrition as well as special diets. A list of food choices may help to illustrate nutritional principles.

The dietary department should be located next to the kitchen or anywhere on the ground floor, directly accessible from the service court to receive daily deliveries of meat, vegetables and dairy products. Direct deliveries to the refrigerated section eliminate traffic through corridors and cooking areas. The direction of the prevailing wind must also be considered. The location of the dietitians depends on the main activities. In case that the dietitian is involved in clinical nutrition, it can be convenient to locate the dietitian in the kitchen or next to the kitchen. When a kitchen is designed, not only the location and the type of the kitchen should be taken into account but also the hygienic rules and regulations should be considered from the start. Kitchens must be located such that heat and odours are not directed towards areas of high population. They should also not be located under wards, especially those for non- ambulant patients, as a fire safety precaution.

Laundry and housekeeping: (a) The housekeeper's office should be on the lowest floor, adjacent to the central linen room.

(b) The central linen room supplies linen for the whole hospital. It must have shelves and spaces for sewing, mending and marking new linen. If laundry is to be handled in the hospital, the central linen room must be adjacent to the "clean" end of the laundry room.

(c) The soiled linen area is for sorting and checking all soiled laundry from the hospital. It must be next to the "dirty" end of the laundry area and provided with sorting bins.

(d) Laundry can either be done in-house or contracted to an outside enterprise. If it is to be done in-house, proper washing and drying equipment must be installed. If it is to be contracted out, areas must be provided for receiving clean and dispatching dirty linen and for sorting.

The facilities must thus include:

- a soiled linen room;
- a clean linen and mending room;
- a laundry-cart storage room;
- a laundry processing room, with equipment sufficient to take care of 7 days' linen;
- janitor's closet, with storage space for housekeeping supplies and equipment and a service sink;
- storage space for laundry supplies.

The last three are not needed if laundry is to be contracted out.

Storage; The standard for central storage space is 2 m^2 per bed; in smaller hospitals, this value is usually increased.

The following compartments must be provided in the hospital storage area:

- pharmacy storeroom,
- furniture room,
- anaesthesia storeroom,
- records storage and
- central storeroom.

The risks of fire and explosion in a medical supplies storeroom and storage of dangerous substances such as nitric and picric acids and inflammable materials such 'as alcohol, oxygen and other gas cylinders merit special attention.

For smooth, rapid flow of materials both to and from the central store, sufficient space and ramps should be provided for handling, unpacking, loading, unloading and inspection. In a hospital planned with a functional central supply and delivery system, many of the traditional ancillary rooms could be eliminated from some departments and be replaced by systems of lifts, with sufficient parking space in the wards for trolleys.

Maintenance and engineering; (a) *Boiler room:* The boiler plant must be designed by a qualified engineer to ensure the safety of patients and staff.

(b) *Fuel storage:* The space will vary according to the fuel used.

(c) *Groundkeeper's tool room:* Space must be provided for working and for the storage of equipment and tools for the staff in charge of landscaping and general upkeep of the garden and grounds.

(d) *Garage:* The garage is best located in a shed or building separated from the hospital itself. If the hospital is to maintain 24-hour ambulance service, additional facilities must be provided for drivers' sleeping quarters.

(e) *Maintenance workshop:* A carefully planned and organized maintenance programme for general repair of medical and nonmedical equipment is necessary for ensuring reliable hospital service. A mechanical workshop with an electric shop, well equipped with tools, equipment and supplies, is conducive to preventive maintenance and is most important in emergencies. Failure of lights or essential equipment in an operating theatre, such as respirators, can have serious consequences. Adequate space for equipment like lathes, welding materials and wood- and metal-working machines should be provided, and there should be storage space for damaged material, such as stretchers, beds, wheelchairs, portable machines and food trolleys. As most repair work is done outside of normal working hours, space should be provided for workers, maintenance staff, supervisory personnel and biomedical engineers.

Mortuary; the mortuary should be in a special service yard, with a discreet entrance; it should be away from the out-patient department, ward block and nursery.

Staff facilities/Residential block; The residential block for the doctors, paramedics and support staff should be located on the periphery near roads and public transport: staff dormitories, quarters or housing.

10.5 Bed Strength and Specialities across Category A, B, C and D secondary care hospitals

The secondary levels of care as provided in Khyber Pakhtunkhwa has been categorized in to Category A, B, C, and D hospitals (as mentioned earlier) according to the bed size, the catchment population and of course needs and demands of the local population. All the four categories of hospitals have both in-patient and outpatient services, in addition to emergency, diagnostic and other day care facilities. Category "A" secondary care hospital has the highest number of specialties and the number of inpatient beds. The number of specialties and the inpatient beds decreases across category "A" to category "D" hospitals[19]. The bed strength and the available specialities by the four hospital categories are provided in the Table 9.

Table 9: Summary of the Criterion for Categorisation of Secondary Care Hospitals

		CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY D
INPATIENT BEDS	**SURGERY**	40 beds	30 beds	20 beds	8 beds
	MEDICINE	40 beds	30 beds	20 beds	8 beds
	GYNAE/OBS	40 beds	20 beds	15 beds	;10 beds
	PAEDIATRICS	40 beds	20 beds	10 beds	10 beds
	EYE	30 beds	20 beds	10 beds	0
	ENT	30 beds	20 beds	10 beds	0
	ORTHOPAEDICS	20 beds	10 beds	10 beds	0
	CARDIOLOGY	15 beds	10 beds	0	0
	PSYCHIATRY	15 beds	10 beds	0	0
	CHEST/TB	10 beds	10 beds	0	0
	DIALYSIS UNIT	6 U	4 U	0	0
	DENTISTRY UNIT	6 U	4 U	2 U	1 U
	PAEDS SURGERY	10 beds	0	0	0
	NEUROSURGERY	10 beds	0	0	0
	DERMATOLOGY	10 beds	0	0	0
	ACCIDENT AND EMERGENCY (Casualty)	10 beds	10 beds	5 beds	4 beds
	LABOR ROOM	10 beds	5 beds	5 beds	2
	ICU/CCU	10 beds	10 beds	5 beds	0
	NURSERY PEADS/ICU	10 beds	5 beds	0	0
	TOTAL BEDS	**350 Beds + 6 Dialysis Units + 6 Dentistry**	**210 Beds + 6 Dialysis Units + 6 Dentistry**	**110 Beds + 2 Dentistry Units**	**42 Beds + 1 Dentistry Unit**

[19] It should be noted that these estimations have been made on Population Census made in 1998; it was recommended that updated projections for each district be made and bed strength also calculated on that projections ensure that populatons need match the services.

	CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY D
	Units	Units		

11 Financial Resources Required

In order to estimate the overall cost implications of implementing the MHSDP-SC at Category A, B, C, and D Secondary Care Hospitals, a financial assessment will be done based on the standards agreed in the MHSDP-SC[20].

12 Way Forward

- In order to ensure smooth implementation of MHSDP KP concerted planning with allocation of resources would be required. The key steps to be followed for implementation of the MHSDP KP are provided belowCosting of the MHSDP SC Package – The costing of the MHSDP SC should be conducted for each category of secondary care hospital and take in to account the envisaged services along with the required infrastructure, human resource, medcines, supplies and equipment.
- Developing a strategy and plan for orientation of health care providers followed by the process for its implementation focussing on a “change management” approach.
- Development of materials for conducting orientation of health care providers for implementation of MHSDP.
- Develop an implementation plan based on the priorities/needs and in line with other structural changes being recommended in the KP
- Ensuring allocation of resources for implementation of MHSDP SC for DoH, KP through the approval of Planning and Development Department and Finance Department.
- A simultaneous exercise should also be considered in terms of developing the “Job description” for sound Human Resources management; there are some duplications and ambiguities in various categories of services.
- An appraisal followed by development of a “Referral system” at all the three levels of services i.e Primary, Secondary and Tertiary level and within the categories of Secondary level be undertaken for optimum utilization of various levels of services.

[20] This is not part of the ToRs assigned to the current team

13 Appendices

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13.2 Government of Khyber Pakhtunkhwa criterion for categorisation of secondary care hospitals according to beds distribution for specialities

SPECIALITY AND SUPPORT DEPARTMENTS IN THE "CATEGORY A" SECONDARY CARE HOSPITAL		
SPECIALTY DEPARTMENTS		
S.NO	**SPECIALTIES**	**Beds Distribution**
1	Surgical	40
2	Medical	40
3	Gynaecology/obstetrics	40
4	Labour room	10
5	Paediatric Medicine	40
6	Nursery paediatrics/ICU	10
7	Paediatric surgery	10
8	Eye	30
9	ENT	30
10	Orthopaedics	20
11	Chest/TB	10
12	Cardiology	15
13	Neurosurgery	10
14	Psychiatry	15
15	Dialysis Unit[21]	6 U
16	Dentistry Unit	6 U
17	Dermatology	10
18	Accident and Emergency (A & E) Department	10
	ICU/CCU	10
	Total	**350 beds + 6 Dialysis Units + 6 Dentistry Units**
SUPPORT UNITS/DEPARTMENTS		
1	Anaesthesia	
2	Radiology	
3	Pharmacy	
4	Pathology	
5	Physiotherapy[22]	
6	Administration	
STAFFING		
1	Clinical	348
2	Support staff	204
	Total	**552**

[21] This should be developed in to a Nephrology Department with time
[22] This is recommended Unit

SPECIALITY AND SUPPORT DEPARTMENTS IN THE "CATEGORY B" SECONDARY CARE HOSPITAL		
SPECIALTY DEPARTMENTS		
S.NO	**SPECIALTIES**	**Beds Distribution**
1	Surgical	30
2	Medical	30
3	Gynaecology/obstetrics	20
4	Labour room	5
5	Paediatric Medicine	20
6	Nursery paediatrics/ICU	5
7	Eye	20
8	ENT	20
9	Orthopaedics	10
10	Chest/TB	10
11	Cardiology	10
12	Psychiatry	10
13	Dialysis Unit[23]	4 U
14	Dentistry Unit	4 U
15	Accident and Emergency (A & E) Department	10
16	ICU/CCU	10
	Total	**210 beds + 4 Dentistry Units + 4 Dialysis Units**
SUPPORT UNITS/DEPARTMENTS		
1	Anaesthesia	
2	Radiology	
3	Pharmacy	
4	Pathology	
5	Administration	
STAFFING		
1	Clinical	218
2	Support staff	151
	Total	**369**

SPECIALITY AND SUPPORT DEPARTMENTS IN THE "CATEGORY C" SECONDARY CARE HOSPITAL		
SPECIALTY DEPARTMENTS		
S.NO	**SPECIALTIES**	**Beds Distribution**
1	Surgical	20
2	Medical	20
3	Gynaecology/obstetrics	15

[23] This should be developed in to a Nephrology Department with time

4	Labour room	5
5	Paediatric Medicine	10
6	Eye	10
7	ENT	10
8	Orthopaedics	10
9	Accident and Emergency (A & E) Department	5
10	ICU/CCU	5
11	Dentistry Unit	2 U
	Total	**110 beds + 2 Dentistry Units**
SUPPORT UNITS/DEPARTMENTS		
1	Pharmacy	
2	Laboratory	
3	Administration	
STAFFING		
1	Clinical	117
2	Support staff	69
	Total	**186**

SPECIALITY AND SUPPORT DEPARTMENTS IN THE "CATEGORY D" SECONDARY CARE HOSPITAL		
SPECIALTY DEPARTMENTS		
S.NO	**SPECIALTIES**	**Beds Distribution**
1	Surgical	8
2	Medical	8
3	Gynaecology/obstetrics	10
4	Labour room	2
5	Paediatric Medicine	10
6	Accident and Emergency (A & E) Unit/Department[24]	4
7	Dentistry Unit	1 U
	Total	**42 Beds + 1 Dentistry Unit**
SUPPORT UNITS/DEPARTMENTS		
1	Pharmacy	
2	Laboratory	
3	Administration	
STAFFING		
1	Clinical	117
2	Support staff	69
	Total	**186**

[24] This is the recommended Unit

13.3 TORs (as of contract)

Development of Secondary Level Minimum Health Service Delivery Package (MHSDP) for Health Department, Khyber Pakhtunkhwa[25]

Background:

The Department of Health in Khyber Pakhtunkhwa, in collaboration with Technical Resource Facility (TRF) has developed Minimum Health Service Delivery Package for Primary health care which is being implemented. Similarly, Minimum Service Delivery Quality Standards (MSDS) for primary and secondary level of health care have also been developed by Health Department KP and are under implementation now. The Governments of KP has now requested Technical Resource Facility *Plus* (TRF+) for assistance in the development of Secondary level MHSDP to promote standardization and delivery of equitable health services, by defining the minimum essential standards for each service at secondary health care levels. It can also serve as a management tool to guide resource allocation, which responds to local priorities and needs.

TRF+ is a four years' project, funded by the UK's Department for International Development (DfID). The TRF+ is managed by Mott MacDonald Group, in partnership with Acasus. The objectives of the TRF+ include the provision of technical assistance to the government for improving health systems and services.

Objective:

The overall aim of the TA is to prepare costed MHSDP for secondary level of public sector health care facilities in KP.

Specific objectives:

1. Developing an MHSDP for each type of public sector secondary care health facility;
2. Spell out required resources (including infrastructure, human resources, supplies and equipment) for each type of facility for implementing the suggested package of services;
3. Prepare a cost estimate for implementing the service package for each type of facility and put a price tag for each service;
4. Support the Government in capacity development for implementation of this secondary level MHSDP.

Scope of Work:

1. Review relevant documents of the DoH, KP. These will include recent legal documents, Acts related to Hospitals, Health Care Commission etc.; besides international/national literature review on MHSDP and Quality Standards will be carried out.

2. Review and analyze the available standards and yardsticks of the health department (planning cell) about the infrastructure, medicines & equipment lists, standard human resource for each level of secondary health care facility etc. Meet with relevant stakeholders in KP, seeking their inputs on preferred processes and ultimate outcome of the assignment;

3. Meet with relevant stakeholders in KP, seeking their inputs on preferred processes and ultimate outcome of the assignment;

4. Develop, share and finalize inception report, outlining methodology, work plan and timelines for implementing the assignment;

5. Based on the above review, provide a situation analysis report before moving further on the assignment.

[25] The elements of scope of work and deliverables highlighted in yellow are not part of the current assignment

6. Develop draft packages including:

- Functions/ services of each type of secondary level facility, including referral services and responses (service package)
- Details of infrastructure, type and number of human resource, supplies & equipment and availability of standard operating procedures.

7. Share packages in consultative process with relevant technical experts and stakeholders;
8. Finalize the packages based on given inputs;
9. Based on identified specific package, work out cost for implementing the package and the cost for each type of facility; based on given assumptions.
10. Based on the package, develop training material for training of health care providers for implementation of MHSDP.
11. Develop training strategy and plan for training of health care providers in consultation with Provincial Health Services Academy (PHSA).
12. Conduct training of master trainers in appropriate number of batches.
13. Develop an implementation plan and suggest next steps for the provincial health department to implement the package.[26]

Deliverables:

1. Inception plan including suggested outlines for service package manual, methodology, deliverables and timelines;
2. Situation Analysis report
3. Draft package of MHSDP for each type of secondary level facilities of Khyber Pakhtunkhwa;
4. Final package of MHSDP for each type of secondary level facilities in Khyber Pakhtunkhwa;
5. Training strategy and plan for training of health care providers;
6. Training material for training of health care providers;
7. Training of master trainers.
8. Implementation strategy for MHSDP with recommendations for next steps.

Timeline:

The TA will last for a period of three months from signing of contract.

Expertise Required:

National Team Leader/ Health Systems Specialist:

- PhD or a Master's in Public Health or equivalent,
- Have a medical background with at least a postgraduate degree in public health or related field;
- 8 – 10 years' experience of working in the health sector and having complete understanding of health care delivery systems and structures are desirable.
- Have experience of developing professionally sound project documents such as project proposals and review report is a must.
- Have proven experience of designing and implementing technical meetings for senior government officials/technical experts.
- Preferably having previous experience in developing such packages.

Public Health Specialist (Mid - level):

- Master in Public Health with clinical experience;

[26] All highlighted areas not the assignment of current team

- Strong analytical and report writing skills;
- Clinical experience specifically at secondary level is considered to be an asset.

Costing Specialist:

- Have a post graduate qualification in accounting/ costing/ financial analysis;
- Proven experience in developing costs for various projects/ services for social sector;
- Candidates with experience in health sector will be preferred.

Research Associate:

- Medical graduate with clinical experience or a postgraduate having worked in the health department at the planning and policy level; a degree in public health will be an additional preference;
- Have the ability to conduct literature review, develop draft reports;
- Previous experience in facilitating technical meetings and coordinating with senior officials is desirable.

Specialists Team:

A team comprising of following specialists will be constituted and notified by the Health Department: Medicine, Surgery, Gynecology/Obstetrics, Pediatrics, Orthopedics and Trauma, ENT, Eye, Psychiatry, Dental Surgery, Radiology, Any other
This team will assist and guide the consultant's team during development of MHSDP.

Required LOE

Tasks	TL/ HSS	PHS	CS	RA
Collecting & reviewing documents and earlier workdone	4	4	0	
Situation analysis report	3	2	2	
Initial meeting with relevant stakeholders/ visit to facilities	5	5	3	
Inception Plan	3	3	0	
Drafting package	7	7	0	
Preparation for consultative meetings/workshops	1	1	0	
Consultative workshops with DoH Specialist Team (3)	3	3	0	
Costing of facilities and pricing of services	0	0	10	
Debriefing to relevant stakeholders	4	4	4	
Finalizing package	5	5	3	
Development of training strategy and plan				
Development of Training Material				
Training of Master Trainers				
Total number of person days	35	34	22	40

13.4 Experts/Stakeholders met/consulted

1. Mr. Muhammad Abid Majid, Secretary Health, DoH, KP
2. Dr. Ali Ahmad, Director General Health DoH, KP

3.	Dr. Shaheen Afridi	Deputy Director Public Health
4.	Dr. Shahid Younas	Chief HSRU, KP
5.	Dr. Ijaz Ahmed	Deputy Chief HSRU, KP
6.	Dr. Shahzad Faisal	Coordinator, HSRU
7.	Dr. Muhammad Khalil Akhter	Coordinator, HSRU
8.	Dr Uzma Alam Zeb	Coordinator, HSRU
9.	Dr. Azmat	DD DHIS cell
10.	Prof. Noor-ul-Iman	Professor of Medicine
11.	Dr. Zubair Ahmad Khan	Surgical Specialist
12.	Professor Dr. Parhaizgar	Professor of Anesthesiology
13.	Dr. Muhammad Ibrar	Professor of Ophthalmology
14.	Dr. Ghareeb Nawaz	Associate Professor ENT
15.	Dr. Gul Naz Syed	Gynaecology and Obstetrics
16.	Dr. Bawar Shah	Child Specialist
17.	Dr. Nasir Saeed	Professor of Ophthalmology, Dean PICO
18.	Dr. M. Ayub Rose	Program Director HIV/AIDS
19.	Dr. Malik Niaz	Program Director TB control Program
20.	Dr. Sahib Gul	Provincial Coordinator MNCH program
21.	Dr. Zafeer Hussain	Health Integrated Program
22.	Dr. Riaz Mohammad	MS DHQ Mardan
23.	Dr. Muhammad Niaz	DHO Swabi
24.	Dr. Naeem Awan	MS GM & GH
25.	Dr Samia Naz	PICO /HMC
26.	Dr. Nasreen Akbar	AD EPI-DGHS Office
27.	Dr. Haroon Khan	Deputy Director (Nutrition)

13.5 Composition, Roles and Responsibilities of the Assignment Committees

A. Clinical Sub-Committee

Committee Members:

Prof. Noor-ul-Iman:	Chair
Dr. Zubair Ahmad Khan:	Member
Dr. Ibrar	Member
Dr. Ghareeb Nawaz	Member
Dr. Gul Naz Syed	Member
Dr. Bawar Shah	Member

Roles and responsibilities:

The work of the Technical/clinical Sub-Committee was to define/discuss an epidemiological profile (as much as possible) of the province as well as an estimate of utilization rates at each level of care and propose the services that are to be included at the secondary care level hospitals.

Wherever possible, this was based on empirical evidence such as estimates obtained from any health surveys undertaken in the Province or from the DHIS.

In many instances, such evidence was weak or lacking, in which case the committee members, through discussion, used their experience, as seasoned clinicians within the Province, to identify and propose the need of services at the secondary care level hospitals.

B. The administrative/management sub-Committee

Committee Members:

Dr. Zafeer Hussain	Chair of the committee, Health Integrated Program
Dr. Riaz Mohammad	MS DHQ Mardan
Dr. Muhammad Niaz	DHO Swabi
Dr. Naeem Awan	MS GM & GH

Roles and responsibilities:

The work of the Administrative/Management Sub-Committee was to define the staffing allocation by cadre and anticipated utilization, the infra-structure requirements and other basic care needs for each facility type and unit delivering the MHSDP.

This was based on best practice sites and other HRH.

Development trends for developing countries; the recommended norms and governmental allocations as permissible within the rules

The Sub-Committee members used their experience, as seasoned professionals within the Province, to make recommendation on staff utilization, skills requirements and post mixes.

The sub-committee members based all considerations on Accessibility, Equitable Distribution and Affordability.

C. The Preventive Care sub-Committee.

Committee Members:

Dr. Nasir Saeed	Chair of the committee, Dean PICO

Dr. M. Ayub Rose PM/PD HIV/AIDS

Dr. Malik Niaz PD TB control Program

Dr. Sahib Gul PC MNCH Health Department

Dr. Azmat ullah/ Hamid Iqbal DD (DHIS)/D/A (DHIS)

Roles and responsibilities:

The work of this Sub-Committee was to define/discuss what the dimensions of preventive are and promotive care based on the epidemiological profile (as much as possible) of the province as well as an estimate of utilization rates various preventive care services at each level of care.

Wherever possible, this was based on empirical evidence such as might be obtained from any health surveys undertaken in the Province or from the DHIS.

These evidence/estimates were used in the MHSDP to provide the required preventive care services. However, it should be mentioned here that these services are just mentioned here and mostly referred to the MHSDP at primary level, already prepared.

13.6 Conceptual Understanding of the MHSDP for Secondary Care According To Categories of Hospitals:

The definitions:

1. *MHSDP:*

The terms *"Basic"* and *"Minimum"* are used interchangeably in relation to the Health Service Delivery Package. A Basic or Minimum Health Service Delivery Package is defined as a minimum collection of essential health services to which all the population need to have a guaranteed access. The term "Essential Health Service Delivery Package" refers to those health services that provide a maximum gain in health status for the money spent i.e. the services which provide the best 'value for money'. In other words, essential services are those services, which if not provided, will result in the most negative impact on the health status of the overall population[27].

2. *The categories of hospitals at secondary level care in the entire district:*

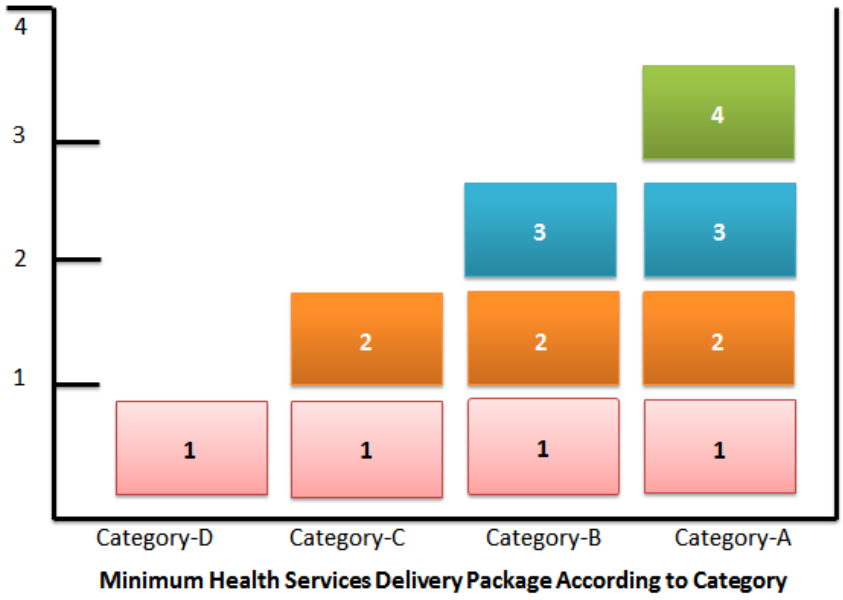
The categorization of hospitals at secondary level of care has been carefully developed and being practiced; the premise being that within a district a strong referral system exists and according to population as well as capacity of beds, human resources and infrastructure all the basic as well as many of the specialists' care is available and people would not have to rush to the Peshawar for the specialist care. The rational of developing this MHSDP is to produce a blue-print which can then be used to negotiate the budgeting for various categories of hospitals with some proper justification.

Having all said, the ideal situation would be to what the Sub-clinical Committee for this exercise is proposing; however this may actually kill the whole purpose for negotiating extra

[27] A Basic Health Services Package for Iraq, Ministry of Health 2009. Retrieved from www.emro.who.int/dsaf/libcat/EMROPD_2009_109.pdf on 18th of July, 2016

budget for furnishing the categories of hospitals beyond the “Category D”. The assumption over here is that, all the categories would definitely be providing the basic/minimum care as has been identified below in the figure as ‘1’. Thus it is illustrated that a step-ladder approach for having various services in various categories identified from ‘2 to 4’ are also expected to be there in addition to ‘1’ also.

Considering this conceptual understanding the category ‘A’ will be expected to provide not only the MHSDP (which is true for all the categories of hospital), it will have to provide as part of ‘essential’ health services the 2, 3 and 4 services. Now, whether you call it as MHSDP for category or the Essential services, it does not make a difference. The reason will be that the Hospital Incharge (MS or Director) will then be indebted to ensure that s/he has to provide all the 1,2,3, and 4 services. And, once this is implemented and operational, the referral systems can work as illustrated by “step-ladder” phenomenon.



Minimum Health Services Delivery Package According to Category

The team feels that putting altogether in one package is a good idea, but since there are categories of hospital beyond ‘D’ which need to offer other essential health services as explained earlier. Thus, The Consultant Team recommends to have one package, but demarcate each category separately by giving various colors to pages or by having ‘dividers’. The advantage may be that everyone will be knowing who is supposed to do what and can refer the patients as and when needed. The disadvantage will be that it may become a bit thick package and sometimes even confusing etc.

13.7 Human Resource Requirements for Category A, B, C and D Hospitals

A. Management

S.No.	Name of Post	CAT A	CAT B	CAT C	CAT D	Remarks

S.No.	Name of Post	CAT A	CAT B	CAT C	CAT D	Remarks
1.	Medical Superintendent	1	1	1	1	
2.	Deputy Medical Superintendent, DMS (Admin)	2	2	1	1	DMS (Admin) will look after administration and will report to MS.
3.	Deputy Medical Superintendent, DMS (Services)	1	1	1	1	DMS(Services) will be responsible for the patient care;
4.	Budget and Accounts Officer going towards managerial post	1	1	1	1	Maintains/manages record of accounts and budgeting
5.	Finance Manager	1	1	0	0	
6.	Director Administration.	1	1	1	1	Maintains records of employees and administrative orders
7.	Head Clerk moving towards Administrative Officer	1	1	1	1	
8.	Accountant	1	1	1	1	
9.	Sr. Clerk moving to Assitant Adminstrative Officer	1	1	1	1	
10.	Cashier	1	1	1	1	
11.	Store Keeper moving to Warehouse Warden	1	1	1	1	
12.	Driver	5	5	3	2	
13.	Naib Qasid moving to Office Assitant	8	6	3	2	

B. Clinical Staffing

S.No.	Name of Post	CAT A	CAT B	CAT C	CAT D	Remarks
1.	Principal Dental Surgeon	1	1	0	0	
2.	Senior Dental Surgeon	1*	1	0	0	*A specialist post for Category A has been approved
3.	Dental Surgeon	1*	1	1	1	*A specialist post for Category A has been approved
4.	Physician	2	2	1	1	
5.	Gastroenterologist	1	0	0	0	This is a new post that has been approved for Category A hospitals
6.	Eye Specialist / Ophthalmologist	2	2	1	0	
7.	Radiologist	2	2	1	1	
8.	Surgeon	2	2	1	1	
9.	Orthopaedic Surgeon	2	2	1	0	
10.	Cardiologist	2	1	0	0	
11.	Neurosurgeon	1	1	0	0	
12.	Nehprologist	1	1	0	0	
13.	TB / Chest Specialist	1	1	0	0	

S.No.	Name of Post	CAT A	CAT B	CAT C	CAT D	Remarks
14.	Gynecologist	2	1	1	1	
15.	Pathologist	1	1	0	0	
16.	ENT Specialist	2	2	1	0	
17.	Pediatrician	2	2	1	1	
18.	Anesthetist	2	1	1	1	
19.	Psychiatrist	2	1	0	0	
20.	Dermatologist	2	1	0	0	
21.	Medical Officer / WMO	108	84	32	16	For CAT A and CAT B following criteria should be followed 3 (MO) + 1(WMO) per unit. This arrangements will only be for Clinical purpose out of these posts of M.Os no one will be posted for administrative duty

C. Support Services

S.No.	Name of Post	CAT A	CAT B	CAT C	CAT D	Remarks
1.	Physiotherapist	6	4	2	1	
2.	Nursing Superintendent	1	1	0	0	
3.	Chief Paramedic	1	1	0	0	This is a new position that has been proposed
4.	Pharmacist	3	2	1	1	
5.	Deputy Nursing Superintendent	2	1	0	0	
6.	Head Nurse	As per criteria	As per criteria	As per criteria	As per criteria	One Head Nurse at 10-Charge Nurses
7.						
8.	Nutritionist	2	1	0	0	
9.	Hospital Epidemiologist	1	1	0	0	
10.	Health Education Officer	1	1	0	0	
11.	Data Entry/Computer Operators	10	8	0	0	
12.	Bio-medical technician	1	1	0	0	
13.	Lab. Technician	6	3	2	1	
14.	Dental Technician	3	2	1	1	
15.	ECG Technician	6	4	2	1	
16.	EEG Technician	1	1	0	0	
17.	Echo Technician	1	1	0	0	
18.	Pharmacy Technician (Dispenser)	2	2	1	1	
19.	Dialysis Technician	2	1	0	0	

S.No.	Name of Post	CAT A	CAT B	CAT C	CAT D	Remarks
20.	Anaesthesia Technician	2	1	1	1	
21.	Sterilisation Technician	2	1	1	1	
22.	Projectionist	1	0	0	0	
23.	CT Scan technician	3	0	0	0	
24.	Radiographer	4	3	2	1	
25.	X-Ray Technician	6	3	2	1	
26.	Optometrist	4	3	2	0	
27.	Operation Theater Assistant	20	10	4	2	
28.	Operation Theater Technician	4	2	1	1	
29.	Lab Assistant	12	6	3	2	
30.	Plumber	3	2	1	1	
31.	Electrician	3	2	1	1	
32.	Security guards	12	6	3	2	
33.	Tailor Master	2	1	0	0	
34.	Lab. Attendant	6	3	1	1	
35.	Ward Servant/Bearer	118	83	47	16	
36.	Tube well operator					As per need
37.	Ward Aya	6	4	2	2	
38.	Sweeper	43	26	13	6	
39.	Mali	10	5	4	2	
40.	Dhobi	8	6	4	2	
41.	Chowkidar	18	12	10	6	
42.	Stretcher Bearer	10	6	4	2	

13.8 Equipment requirements for Category A, B, C and D Secondary Care Hospitals

S.NO	Infrastructure and equipment	CAT A	CAT B	CAT C	CAT D	Remarks
	Out-Patient facilities					
1.	**General provisions (for all OPDs)**					
	Consultation room, Waiting area Token system, Health education corners in all OPDs with posters. TV and DVD player in OPDs for showing health education related programmes in local languages; Stretcher/wheel chair ramp	Yes	Yes	Yes	Yes	
	Furniture:					

S.NO	Infrastructure and equipment	CAT A	CAT B	CAT C	CAT D	Remarks
	Examination couch, Screen, Chair for the consultant, 3 Chairs for the patient and attendant	Yes	Yes	Yes	Yes	Items to be available in each OPD room
	Equipment:					
	Stethoscope, BP apparatus stand type, Tendon hammer, Measuring tap, Torch, Cotton wool, Spatula, Tuning fork 128 cycles/second, weighing machine, examination gloves, ophthalmoscope, X-ray illuminator double table type	Yes	Yes	Yes	Yes	One of each items to be available in each OPD room
	Defibrillator with ECG monitor	Yes	Yes	Yes	Yes	One in the whole Outpatient Department
	Resuscitation Unit	Yes	Yes	Yes	Yes	3 for CAT A, 2 for CAT B, 1 each for CAT C and CAT D Outpatient Department
	Oxygen cylinder with trolley stand, Oxygen flow meter without humidifier, Oxygen masks all sizes	Yes	Yes	Yes	Yes	Quantities to be ascertained based on patient load
	Electric water cooler with filter	Yes	Yes	Yes	Yes	4 for CAT A, 3 for CAT B, 2 for CAT C and 1 for CAT D Outpatient Department
	Portable emergency light with battery backup	Yes	Yes	Yes	Yes	One for each OPD room
	Wheel chair	Yes	Yes	Yes	Yes	10 for CAT A, 6 for CAT B, 4 for CAT C and 2 for CAT D hospital OPD
	Stretcher	Yes	Yes	Yes	Yes	10 for CAT A, 6 for CAT B, 4 for CAT C and 2 for CAT D hospital OPD
	Box for proper disposal of sharps,	Yes	Yes	Yes	Yes	Quantities as per need
	Desktop computer with printer and UPS	Yes	Yes	Yes	Yes	One for the whole OPD department
	Specialty dependent additional equipment					
2.	**Cardiology:**					
	ECG machine (for all OPD patients),	Yes	Yes	Yes	Yes	One in the whole Outpatient Department
	Echocardiography +/- ETT	Yes	Yes	No	No	One in the whole Outpatient Department
3.	**General Medical:** Pulmonary function unit,	Yes	Yes	Yes	No	One in the whole Outpatient Department
4.	**Paediatric:**					

S.NO	Infrastructure and equipment	CAT A	CAT B	CAT C	CAT D	Remarks
	Paediatric stethoscope, Paediatric weighing machine, BP Apparatus with small cuff, Nebulizer	Yes	Yes	Yes	Yes	One of each items to be available in each Paediatric OPD room
5.	**Dermatology:**					
	Magnifying glass, Woods lamp, Glass slides	Yes	Yes	No	No	One for each Dermatology OPD room (Though CAT B does not have Dermatology department but it has dermatologist)
6.	**Psychiatry:**					
	EEG machine, Wechsler intelligence test with key adult/Children, Progressive matrices with key, Wilconsin cord sorting test with key, International personality disorder examination - full version with interpretation,	Yes	Yes	No	No	One of each item for each Psychiatry OPD room
7.	**General Surgery**					
	Proctoscope, Foley's Catheter with bag, kidney tray along with a set of dissecting forceps artery clips and needle holders	Yes	Yes	Yes	Yes	One of each item for each Psychiatry OPD room
8.	**Ophthalmology**					
	Refraction System					
	Autorefractometer with K-reading, Retinoscope, Ophthalmoscope, Refraction box, Vision drum, UPS	Yes	Yes	Yes	No	One of each item for each Eye OPD room
	Consultant OPD					
	Slit lamp, Applanation, Tonometer, A-B scan, YAG-Laser, Argon laser,Torches	Yes	Yes	Yes	No	One of each item for each Consultant Ophthalmologist OPD room
9.	**ENT**					
	ENT examination unit/ENT mirror and light source, Rechargeable autoscope, Tuning forks 512 cycles/second, Audiometer	Yes	Yes	Yes	No	One of each item for each ENT OPD room
10.	**Gynae/Obs;**					
	Antenatal clinic	Yes	Yes	Yes	Yes	
	Gynae examination kit, Fetoscope/sonic aid, Kit for insertion/removal of IUCD, Delivery kit, Ultrasound	Yes	Yes	Yes	Yes	One of each items in each Gynae OPD room
11.	**Orthopaedic:**					
	POP cutter, Cotton roll, Crepe bandage, Local anesthetic, Injectable analgesic	Yes	Yes	Yes	No	Items to be available in each Orthopaedic OPD room as per requirement
12.	**Dental**					
	Complete dental unit with X-Ray with accessories, Dental Lab, Instruments	Yes	Yes	Yes	Yes	

S.NO	Infrastructure and equipment	CAT A	CAT B	CAT C	CAT D	Remarks
	Sets, Root Canal Instruments, Instrument tray/kidney tray Bowls					
	In-patient facilities					
13.	**General provision (for all wards)**					
	Infrastructure					
	Ward, Consultant office with bath room, Doctors duty room with bath room, Doctors changing room, Nurses changing room with bath room, Bath Rooms for patients (one bath room/6 patients), Neonatal Cots	Yes	Yes	Yes	Yes	To be available in each inpatient ward
	High Dependency Beds Beds for thalassemia patients	Yes	Yes	No	No	4 High Dependency Beds /ward 1 thalassemia bed per twenty inpatient beds
	Equipment					
	Stethoscope, BP apparatus stand type, Tendon hammer, Measuring tap, Torch, Cotton wool, Spatula Tuning fork 128 cycles/second, weighing machine, examination gloves, ophthalmoscope, Portable Defibrillator with ECG monitor, Resuscitation unit, Ambu bag, Endotracheal tubes various sizes, Nursing station, ECG monitored beds, Pulse oxymeter Glucometer, Nasogastric tubes, Foleys/Celestic urinary catheter, I.V cannula various sizes, Central line, Drip stands, Instrument tray/Kidney tray/Bowls, Laryngoscope adult straight & curved, Oxygen cylinder with trolley stand, Oxygen flow meter with humidifier, Oxygen flow meter without humidifier, Oxygen masks all sizes, SS urinal/bed pans, Electric water cooler with filter, Heavy duty suction machine, Light duty nebulizer, Light duty suction units, Refrigerator 12 cf., Spirometer, X-ray illuminator double wall type, Sterilizing drums, Meigle forceps, Portable emergency light with battery backup, General Surgery Dressing Instruments Sets, Desktop computer with printer, UPS	Yes	Yes	Yes	Yes	Each item should be available in each inpatient ward in quantities ascertained by ward size/need
	Specialty dependent additional equipment					
14.	**Medicine and Allied ward**					
	Chest drain with under water seal, Three way pleural tape needle, Ascitic tap needle, Pleural/liver biopsy needle, Bone marrow aspiration needle,	Yes	Yes	Yes	Yes	All items to be available in Medicine and Allied ward in quantities

S.NO	Infrastructure and equipment	CAT A	CAT B	CAT C	CAT D	Remarks
						ascertained by need
	ECG machine (for all in-patients in the facility)	Yes	Yes	Yes	Yes	One in each Medicine and Allied ward
15.	**Surgery and Allied ward**					
	Dressing kit, Drains Different Types, Foley's Catheter, Drainage Bags, Airways, Chest Drains, Blood Transfusion sets, Gloves, proctoscopes, Naso-Gastric Tubes,	Yes	Yes	Yes	Yes	All items to be available in Surgery and Allied ward in quantities ascertained by need
16.	**Orthpaedic ward**					
	Fracture bed with frame beam and pulley,	Yes	Yes	Yes	No	
	POP cutter,	Yes	Yes	Yes	Yes	Though there is no Orthopaedic ward in CAT D hospital, POP cutter should be available in Surgical ward
17.	**ENT ward**					
	Rechargeable Autoscope self-illuminating, ENT dressing, Nasal polypus complete set, Head light electric, Diagnostic Set ENT, Tracheotomy set, Minor procedure room: Light source, items for nasal packing/ ear packing and foreign body ear/nose.	Yes	Yes	Yes	No	All items to be available in ENT ward in quantities ascertained by need
18.	**EYE ward**					
	Direct Ophthalmoscope & retinoscope with charger, Refraction box, Boiler, Eye dressing instruments, Torches, Vision drum, Perkin tonometer, Desktop computer with UPS for data entry, Laptop & overhead projector	Yes	Yes	Yes	No	All items to be available in ENT ward in quantities ascertained by need
19.	**Mother and Child ward**					
	Ultrasound, Butter fly various sizes Paediatric urinary catheters, Intensive baby incubator, Oxygen tent paediatric, , BP Apparatus with small cuff, Phototherapy machine, Stethoscope paediatrics, Infant Warmer, Gynae Table, Stethoscopes foetal (aluminium), Gynae examination kit, Female metal catheter F201, F 203, F204, F28, Ultrasound machine, Nebulizers, Suction Machines- Neonatal, Pediatric; Ophthalmoscope; Neonatal/Pediatric Laryngoscopes with straight and Curved blades; Different sizes endotracheal tubes (premature, term, neonatal, Child), Auroscopes					

S.NO	Infrastructure and equipment	CAT A	CAT B	CAT C	CAT D	Remarks
	Paediatric resuscitation unit	Yes	Yes	No	No	
	Incubators	Yes	Yes	No	No	
	Oxygen Concentrators	Yes	Yes	No	No	
	Cardiac Monitors/DC Cardioversion,	Yes	Yes	No	No	
	Infusion pumps	Yes	Yes	No	No	
20.	**Psychiatry ward**					
	Wechsler intelligence test with key adult/Children, Progressive matrices with key, Wilconsin cord sorting test with key, International personality disorder examination - full version with interpretation	Yes	Yes	No	No	
21.	**CCU/ICU**	Yes	Yes	Yes	No	
	10% of total bed strength of the facility with monitors	Yes	Yes	Yes	No	
	Ventilator	Yes	Yes	No	No	3 for CAT A, 2 for CAT B hospital
	Temporary Pace Maker	Yes	Yes	No	No	4 for CAT A and 2 for CAT B hospital
22.	**Operation Rooms (ORs)**					
	Infrastructure					
	Anaesthetist office with bath room, Anaesthesia technicians changing room with bath room, Nursing staff changing room with bath room, Pre-med room, central Sterilization room (for the whole hospital), Scrub room, Recovery room, Patient pre-operative, waiting room	Yes	Yes	Yes	Yes	
	Operation Rooms with H-VEC facility	Yes	Yes	Yes	Yes	4 for CAT A, 3 for CAT B, 2 for CAT C and 1 for CAT D hospital
	Operation Rooms (ORs) Equipment					
	General Provision					
	Stethoscope, Stethoscope Paediatric, BP Apparatus mercury stand type, Instrument tray/Kidney tray/Bowls, Laryngoscope adult straight & curved, Laryngoscope paediatric straight & curved, Meigle forceps, Diathermy with appliances, Catheter, Miscellaneous instruments sets, Nitrous oxide cylinder, Oxygen cylinder with trolley stand, Oxygen flow meter with humidifier, Oxygen flow meter without humidifier, Oxygen masks all sizes, SS Basin with stand, SS Urinals/Bed pans, Sterilizing drums, Tracheotomy set, Wt. machine adult, Wt. machine children, X-ray illuminator double wall type, Anaesthesia machine,	Yes	Yes	Yes	Yes	Each item should be available in each OR in quantities ascertained by OR size/need

S.NO	Infrastructure and equipment	CAT A	CAT B	CAT C	CAT D	Remarks
	Automatic operation table, Defibrillator on trolley, Electric water cooler, Heavy duty suction machine, Infusion pumps, Light duty nebulizer, Mobile OT light with battery, Operation table hydraulic semiautomatic, OT ceiling light LED type with satellite and backup power supply, Pulse oximeter, Refrigerator 12 cb. Ft., Resuscitation unit, Fine Diathermy, NIBP (Non Invasive Monitors Devices)					
	Mobile x-ray 30	Yes	Yes	Yes	No	
	Craniotomy set with pneumatic drill with air	Yes	Yes	No	No	
	Sterilization room:					
	Autoclave vertical automatic, Autoclave horizontal Hot air oven	Yes	Yes	Yes	Yes	
	Specialty dependent ORs equipment					
23.	**General Surgery**					
	General Surgery Set, Vascular Repair Set, Proctoscope electric (set), Sigmoidoscope (fibroptic), Paediatric surgery minor, Paediatric surgery major, General surgery sets major, General surgery sets minor	Yes	Yes	Yes	Yes	
24.	**Eye**					
	Operation Theatre					
	Binocular loup(2.5 x), Operating microscope, Phacoemulsifier, Bipolar cautery, Autoclave, Hot air oven, Boiler, OT tables-2, Cataract sets-4, DCR sets-2, Glaucoma sets-2, Squint sets-2, Entropion/ectropion sets-2, Chalasion sets-2, Instrument trolleys-6,drums-4, Cheital foreceps with container-2, Desktop computer with UPS for data entry	Yes	Yes	Yes	No	
25.	**ENT**					
	Binocular Operating microscope, loops, Head light, ENT surgery instruments major	Yes	Yes	Yes	No	
26.	**Gynae**					
	Gynaecology Sets, Delivery set normal, Obstructed labour set, Obstetric surgery set minor, Obstetric surgery set major, E&C set	Yes	Yes	Yes	Yes	
27.	**Orthopaedic**					
	Orthopaedic Sets, Set for plating, Orthopaedic surgery set, Orthopaedic Operation Table with Traction, Bone drill, 3.5 mm Ortho Set, 4.5 mm Ortho Set, DHS Set, Vascular	Yes	Yes	Yes	No	

S.NO	Infrastructure and equipment	CAT A	CAT B	CAT C	CAT D	Remarks
	Repair Set, Pneumatic Tourniquets,					
28.	**Labor room**					
	Infrastructure					
	Doctors duty room with bath room, Doctors changing room, Nurses changing room with bath room, rooms for patient with a bath room and Delivery tables, Baby warmer, Wheel chair, Stretcher	Yes	Yes	Yes	No	
	Intensive Baby Incubator	Yes	Yes	No	No	
	Equipment					
	Nitrous oxide Cylinder, Nitrous oxide cylinder flow meter, Stethoscope, BP apparatus stand type, Measuring tap, Torch, Cotton wool, weighing machine,examination gloves, Portable Defibrillator with ECG monitor, Resuscitation unit, Ambu bag, Endotracheal tubes various sizes, Nursing station, Pulse oxymeter, Glucometer, Foleys urinary catheter, I.V cannula various sizes, Drip stands Instrument tray/Kidney tray/Bowls, Oxygen cylinder with trolley stand, Oxygen flow meter with humidifier, Oxygen flow meter without humidifier, Oxygen masks all sizes, Electric water cooler with filter, Heavy duty suction machine, Light duty nebuliser, Light duty suction units, Refrigerator 12 cf. ft., X-ray illuminator double wall type, Sterilizing drums, Meigle forceps, Portable emergency light with battery backup, Delivery set normal, Obstructed labour set, Mobile OT Light, Vacuum Extractor, CTG Machine, Sonic/Doppler Sonic aid, DNC Set, Infant Trolley with Warmer, Infant Sucker Machine, Female metal catheter F201, F203, F204, F28, Stethoscopes foetal (aluminium), Hysteroscope	Yes	Yes	No	No	
29.	**A&E**					
	Infrastructure					
	Doctor duty room with bath room, Nursing dressing room with a bath room, Patients waiting area, Patient short term stay area, Day care facility (monitored care for upto 12 hours by house staff), Minor procedure room	Yes	Yes	Yes	Yes	
	Equipment					
	Emergency assessment:					
	Stethoscope, BP apparatus stand type,	Yes	Yes	Yes	Yes	

S.NO	Infrastructure and equipment	CAT A	CAT B	CAT C	CAT D	Remarks
	Tendon hammer, Measuring tap, Torch, Cotton wool, Spatula, Tuning fork 128 cycles/second, weighing machine, examination gloves, ophthalmoscope, Portable Defibrillator with ECG monitor, Resuscitation unit, Ambu bag, Endotracheal tubes various sizes, Nursing station, Pulse oxymeter, Glucometer, Nasogastric tubes, Foleys/Celestic urinary catheter, I.V cannula various sizes, Central line, Drip stands, Instrument tray/Kidney tray/Bowls, Laryngoscope adult straight & curved, Oxygen cylinder with trolley stand, Oxygen flowmeter with humidifier, Oxygen flow meter without humidifier, Oxygen masks all sizes, SS urinal/bed pans, Heavy duty suction machine, Light duty nebuliser, Light duty suction units, Refrigerator 12 cf. ft., Spirometer, ray illuminator double wall type, X-ray illuminator double table type, Sterilizing drums, Meigle forceps, Instrument tray/Kidney tray/Bowls, Portable emergency light with battery backup, General Surgery Dressing Instruments Sets, Electric water cooler with filter, Glucometer, Oxygen tent, TV 28 Inch, Nitrous oxide cylinder 240 cft., Nitrous oxide cylinder flow meter, Desktop computer with UPS and printer					
	ECG monitored beds	Yes	Yes	Yes	Yes	4 for CAT A, 2 for CAT B, 1 each for CAT C and CAT D hospital
	X-Ray Unit 500-MA with accessories (mobile),	Yes	Yes	Yes	No	
	Emergency OR/Minor procedure room:					
	Autoclave horizontal, ECG machine, Diathermy, Mobile OT light, Operation table hydraulic, OT ceiling light with satellite	Yes	Yes	Yes	Yes	
	Cardiac monitor with defibrillator on trolley	Yes	Yes	Yes	No	
30.	**Support Services**					
	Electric Water Cooler, Stretchers, wheel chairs	Yes	Yes	Yes	Yes	
31.	**Laboratory**					
	Refrigerator 12 cb. Ft., Spectrophotometer with U/V, LPG cylinder with burner, Microscope binocular electric, Urine analyser, Haematology Lab. Analyser (Large),	Yes	Yes	Yes	Yes	

S.NO	Infrastructure and equipment	CAT A	CAT B	CAT C	CAT D	Remarks
	Fed 20 for ESR, Finn Pipette-(Jouster) 05-----100mq/L, Finn Pipette-(Jouster) 100-----1000mq/L, Finn Pipette-(Jouster) 0.05-----20mq/L, Haemoglobin meter (sahli), Urinometer with glass cylinder for specific gravity, Sprit lamp, Haemocytometer (complete), Aseptic hood, Autoclave vertical automatic, Automatic lab, Pipettes set, Blood analyser, Blood bank refrigerator, Blood gas analyser, Centrifuge machine, Blood Chemistry Analyser, Lab. Incubator, Lab. Weight Machine/Digital Scale, Glucometer, Hot Air Oven, Desktop computer with UPS and printer					
32.	**Radiology**					
	CT scan	Yes	No	No	No	
	Colour doppler/Ultrasound Machine,	Yes	Yes	No	No	
	Radiation densitometer, X-Ray Cassettes all sizes, Lead gowns, Gloves, Goggles, Shield set, Hangers x-ray, Ultrasound Machine with double probe (vaginal and abdominal), X-Ray Illuminator double wall type, X-Ray Illuminator double table type, Desktop computer with UPS and printer	Yes	Yes	Yes	Yes	
33.	**Pharmacy**					
	Maintenance of stock and inventory, Drugs mentioned in formulary, Refrigerator 12 cb. Ft, Desktop computer with UPS and printer	Yes	Yes	Yes	Yes	
34.	**IT Services** Computerization of hospital services, Computers and networking items	Yes	Yes	Yes	Yes	
35.	**Safe Waste disposal** Collection and segregation at the facility	Yes	Yes	Yes	Yes	Transportation and disposal at incinerator at CAT A hospital
36.	**Mortuary** Electric skull cutter, Mortuary table, Name plates, Mortuary instruments sets	Yes	No	No	No	
37.	**Laundry** Washer, dryer	Yes	Yes	Yes	Yes	
38.	**Canteen** Food available for patients, personnel and attendants	Yes	Yes	Yes	Yes	
39.	**Administration Block**					
	Infrastructure					
	Office Medical Superintendent, Office Deputy Nursing superintendent, Office Superintendent with Sr and Jr clerk,	Yes	Yes	Yes	Yes	

S.NO	Infrastructure and equipment	CAT A	CAT B	CAT C	CAT D	Remarks
	IT office, All offices including A&E, consultant offices and ORs, connected through internal telephone from internal exchange					
	Equipment					
	Computer Desktop with UPS and Printer, Scanner, Sound system with speakers to cover all essential areas for internal announcement, DVD Player connected to TV in OPD, A&E, wards and ORs for patient education on common illnesses with emphasis on primary and secondary prevention, Close Circuit TV System, Laptop, Multimedia with overhead project & screen, Electric Water Cooler with filter, Refrigerator 12 cu ft, TV LCD 46 inches, Photocopier	Yes	Yes	Yes	Yes	
40.	Sets of basic gardening equipment	Yes	Yes	Yes	Yes	To be available in quantities as per need
41.	Fire extinguishers	Yes	Yes	Yes	Yes	To be available in quantities as per need
42.	Stretcher trolley	Yes	Yes	Yes	Yes	To be available in quantities as per need
43.	Wheel chairs	Yes	Yes	Yes	Yes	To be available in quantities as per need

13.9 List of Medicines prepared by Medicines Co-Ordination Cell (MCC), 2015-16, Govt. of KP

	ANAESTHETICS
S.No	**Name of Medicine**
1.	Isoflurane liquid for inhalation
2.	Sevoflurane liquid for inhalation
3.	Inj. Propofol 10mg/ml
4.	Inj. Bupivacaine Spinal 7.5%
5.	Inj. Lignocaine 2%
6.	Sol: Lignocaine 4%
7.	Inj. Lignocaine HCl + Adrenaline
8.	Inj Glycopyrolate
9.	Inj. Atracuriurn Besylate 30 mg
10.	Inj.Atracuriurn Besylate 50 mg
	ANTI-HISTAMINES
S. No	**Name of Medicine**
11.	Tab. Cetirizine 10 mg
12.	Syp. Cetirizine 5 mg/5 ml
13.	Tab Chlorpheniramine 4mg
	ANTI-INFECTIVES
S. No	**Name of Medicine**
14.	Cap Amoxicillin 250 mg

15.	Cap Amoxicillin 500 mg
16.	Susp Amoxicillin 125 mg / 5 ml
17.	Susp Amoxicillin 250 mg / 5 ml
18.	Tab Amoxicillin + Clavulanic Acid 375 mg
19.	Tab Amoxicillin + Clavulanic Acid 625 mg
20.	Tab Amoxicillin + Clavulanic Acid 1gm.
21.	Syp.Amoxicillin + Clavulanic Acid 125 mg +31.5mg /5 ml
22.	Inj Amoxicillin + Clavulanic Acid 1.2 gm
23.	Cap: Cephradine 500mg
24.	Inj: Cephradine 1gm
25.	Inj: Cefotaxime Sodium 500mg
26.	Inj: Cefotaxime Sodium 1gm
27.	Inj: Ceftriaxone 500mg
28.	Inj: Ceftriaxone 1gm
29.	Inj: Ceftriaxone 2gm
30.	Inj Ceftazidime 500mg
31.	Inj Ceftazidime 1 gm
32.	Cap Cefixim 400 mg
33.	Susp. Cefixim 100 mg /5 ml
34.	Susp. Cefixim 200 mg /5 ml
35.	Inj Cefoperazone + Salbactum 1gm
36.	Inj Cefoperazone + Salbactum 2gm
37.	Cap. Doxycycline 100 mg
38.	Inj.Gentamicin Sulphate 80 mg
39.	Inj Amikacin Sulphate 100 mg
40.	Inj Amikacin Sulphate 500 mg
41.	Tab: Clarithromycin 250mg
42.	Tab: Clarithromycin 500mg
43.	Syp: Clarithromycin
44.	Cap Azithromycin 250mg
45.	Tab Azithromycin 500mg,
46.	Syp: Azithromycin 200mg,
47.	Tab: Co-Trimoxazole 80 mg + 400 mg
48.	Tab: Co-Trimoxazole 160 mg + 800 mg
49.	Susp Co-Trimoxazole 40 mg + 200 mg /5ml
50.	Susp Co-Trimoxazole 80 mg +400 mg /5ml
51.	Tab: Ciprofloxacin 500mg
52.	Tab: Ciprofloxacin 500mg
53.	Inf: Ciprofloxacin 100ml
54.	Cap: Levofloxacin 250mg
55.	Cap: Levofloxacin 500mg
56.	Inf: Levofloxacin 100ml
57.	Inj: Vancomycin 500mg
58.	Inj: Vancomycin 1gm
59.	Inj.Piperacillin + Tazobactam 4.5 gm
60.	Tab: Rifampicin + INH 150 mg + 75 mg
61.	Tab: Rifampicin + INH + Ethambutol (150 mg + 75 mg + 300mg)
62.	Tab: Rifampicin + INH + Pyrazinamide + Ethambutol (150 mg + 75 mg + 400 mg + 275 mg)
	ANTI-FUNGALS/ANTI-VIRALS
S. No	**Name of Medicine**
63.	Cap Fluconazole 50mg
64.	Cap Fluconazole 150mg
65.	Nystatin Oral Drops
66.	Tab Clotrimazole 500 mg Vaginal + Applicator
67.	Clotrimazole 1% Vaginal Cream + Applicator

68.	Tab Acyclovir 200mg
69.	Inj. Acyclovir 250mg
70.	Acyclovir Cream
71.	Tab Entacavir 0.5mg
72.	Tab: Telbivudine 600mg
	ANTI-MALARIALS
S.No	**Name of Medicine**
73.	Tab: Artemether + Lumefantarine Tablets (40mg + 240mg)
74.	Sulphadoxine + Pyrimethamine (500 mg + 25 mg) Susp
75.	Tab: Amodiaquine Base 150mg
	AMOEBICIDES
S.No	**Name of Medicine**
76.	Tab .Metronidazole 400 mg
77.	Susp Metronidazole 200 mg / 5 ml
78.	Inf: Metronidazole 100ml
	ANTHELMINTICS
S.No	**Name of Medicine**
79.	Tab:Albendazole 200 mg
80.	Susp: Albendazole 100 mg / 5 ml
	BLOOD FORMATION / COAGULANTS / ANTICOAGULANTS & ANTI ANAEMIC
S.No	**Name of Medicine**
81.	Tab Ferrous Sulphate + Vit. C + Vit-B. Complex + Folic Acid
82.	Syp. Ferrous Sulphate + Vit. C + Vit-B. Complex + Folic Acid
83.	Inj Heparin Sodium 5000 i.u
84.	Inj: Enoxaparin 40mg
85.	Inj: Enoxaparin 60mg
86.	Inj: Enoxaparin 80mg
87.	Tab: warfarin sodium 1mg
88.	Cap.Tranexaminic Acid 250 mg
89.	Cap. Tranexaminic Acid 500 mg
90.	Inj Tranexaminic Acid 250 mg
	ANTIDOTES
S.No	**Name of Medicine**
91.	Inj: Neostigmine 2.5mg
92.	Inj.Desferoxamine 500mg
93.	Tab Deferasirox 100mg
94.	Tab Deferasirox 400mg
	CARDIOVASCULAR
S.No	**Name of Medicine**
95.	Tab Atenolol 50 mg
96.	Tab Atenolol 100 mg
97.	Tab Bisoprolol 5mg
98.	Tab Captopril 25mg
99.	Tab Lisinopril 5 mg
100.	Tab Lisinopril 10 mg
101.	Tab Verapamil 80mg
102.	Tab: Amlodipine Besylate 5mg
103.	Cap Glyceryl Trinitrate 2.6 mg
104.	Tab.Isosorbide Mononitrate 20 mg
105.	Inj Isosorbide Di Nitrate
106.	Tab Amiodarone HCl 200 mg.
107.	Inj: Amiodarone HCl 200 mg.
108.	Inj.Dobutamine HCl 250 mg
109.	Inj: Dopamine HCl 200mg
110.	Inj.Streptokinase 1.5 miu
111.	Resovuastatin 10mg Tab
112.	Tab Furosemide 20 mg
113.	Tab Furosemide 40 mg

114.	Inj Furosemide 10 mg
115.	Tab: Spironolactone 100 mg
116.	Inj Nitoprusside 50mg
117.	Tab Valsartan 80mg
	PSYCHOTHERAPEUTICS
S.No	**Name of Medicine**
118.	Tab. Bromazepam 3 mg
119.	Tab Alprazolam 0.5 mg
120.	Inj Midazolam 5 mg
121.	Inj.Fluphenazine Decanoate 25 mg
122.	Tab. Haloperidol 5 mg
123.	Tab Amitriptyline HCl 25mg
124.	Tab. Dothiepin HCl 25 mg
125.	Fluoxetine HCl 20 mg Cap
126.	Tab Clozapine 25mg,
127.	Tab Clozapine 100mg,
128.	Tab Escitalopram 10 mg
129.	Tab.Risperidone 2mg
130.	Syp. Risperidone
131.	Tab.Lamotrigine 50 mg
	ANALGESICS & ANTIPYRETICS
S.No	**Name of Medicine**
132.	Tab Acetyl Salicylic Acid 75 mg
133.	Tab Acetyl Salicylic Acid 300 mg
134.	Tab: Diclofenic 50mg
135.	Inj: Diclofenic 75mg
136.	Tab Ibuprofen 400 mg
137.	Susp Ibuprofen 100 mg / 5 ml
138.	Tab Mefenamic Acid 250mg
139.	Tab Mefenamic Acid 500mg
140.	Inj. Nalbuphine HCl 20 mg
141.	Tab Paracetamol 500 mg
142.	Syp: Paracetamol 120mg/5ml
143.	Inj Paracetamol 2ml
144.	Inj Tramadol HCl
145.	Inj Katorolac 30mg
	ANTICONVULSANTS
S.No	**Name of Medicine**
146.	Tab Carbamazepine 200 mg
147.	Syp Carbamazepine
148.	Tab Divalporex Sodium 250 mg
149.	Tab Divalporex Sodium 500 mg
150.	Syp: Divalporex Sodium
	ENT PREPARATIONS
S.No	**Name of Medicine**
152.	Betamethasone + Neomycin Drops
153.	Betamethasone + Neomycin Ointment
154.	Nasal Drops Xylometazoline HCl 0.05%
	DRUGS ACTING ON ENDOCRINE SYSTEM
S.No	**Name of Medicine**
155.	Tab Glibenclamide 5 mg
156.	Tab Metformin HCl 500 mg
157.	Tab: Glimipride 2mg
158.	Insulin Regular (Human) 100 IU vial
159.	Insulin Premixed (Human) 30/70 100 IU vial
160.	Inj Hydrocortisone 100 mg
161.	Inj Hydrocortisone 250 mg
162.	Inj.Dexamethasone 4mg

	I.V FLUIDS AND ELECTROLYTES
S.No	**Name of Medicine**
163.	Inj. Sodium Bicarbonate 0.7% iv Solution 20ml
164.	Inj. Potassium Chloride 7.4% iv solution 20ml
165.	Normal Saline 0.9% 100ml
166.	Normal Saline 0.9% 500ml
167.	Normal Saline 0.9% 1000ml
168.	Dextrose 5%100ml
169.	Dextrose 5% 500ml
170.	Dextrose 5% 1000ml
171.	Dextrose + Saline 5% 500ml
172.	Dextrose + Saline 5% 1000ml
173.	Ringer Lactate 500ml
174.	Ringer Lactate 1000ml
175.	Ringer Lactate + Dextrose 500ml
176.	Ringer Lactate + Dextrose 1000ml
177.	Dextrose 5% + 0.45% NaCl 500ml
178.	Dextrose 4.3%+NaCl 0.18% 500ml
179.	Infusion Mannitol 20%
180.	Gelatin Polypeptide 500ml
181.	Amino Acids Infusion 5%+10%
182.	Sterile water for injection 5ml
183.	Dextrose 25% 20ml
184.	Glycine 1.5% Infusion with TSD set
185.	Oral Re-hydration Salt. (ORS)
	GASTROINTESTINAL DRUGS
S.No	**Name of Medicine**
186.	Aluminium Hydroxide + Magnesium Hydroxide + Semithicone Susp:
187.	Aluminium Hydroxide + Magnesium Hydroxide + Semithicone Susp:
188.	Tab Dimenhydrinate 50mg
189.	Inj: Dimenhydrinate
190.	Syp Dimenhydrinate
191.	Inj: Metoclopramide HCL 10mg
192.	Tab. Domperidone 10 mg
193.	Inj Ranitidine HCl
194.	Cap: Omeprazole 20mg
195.	Inj. Omeprazole 40mg
196.	Tab Drotavarine Hcl 40mg
197.	Inj Drotravarine Hcl 40mg
198.	Inj Octreotied 0.1mg
199.	Inj Terlipressin 1mg
	IMMUNOLOGICALS / IMMUNOMODULATORS
S.No	**Name of Medicine**
200	Inj: Rabies Immunoglobulin
201	Inj. Rabies Vaccine ***(Supply order is subject to NOC from NIH Islamabad regarding non- availability of vaccine)***
202	Inj Anti – Venom Sera
203	Inj Hepatitis B Vaccine. 20 mcg with DRAP registered disposable syringe
204	Inj.Tetanus Toxoid
205	Inj. Pegylated Interferon 180mcg, 40Kda + Cap/Tab Ribavarin 400mg + with DRAP registered disposable syringe 3CC (Package rate).
206	Inj. Anti.-D (Rho) Immunoglobulin
	OPHTHALMIC PREPARATIONS
S.No	**Name of Medicine**

207.	Eye Drops Chloramphenicol 0.5
208.	Eye Drops Ciprofloxacin 0.3%
209.	Eye Drops Dexamethasone 1%
210.	Eye Drops Pilocarpine HCL 2 %
211.	Eye Drops.Timolol Maleate
	0.5%
212.	Eye Drops Tropicamide 1 %
213.	Eye drop Tobramycin
214.	Eye drop Tobramycin + Dexa
215.	Eye Oint Polymixin + Zinc
	Bacitracin
216.	Eye Oint Acyclovir
217.	Eye Drop Polymixin + Neomycine+Dexamethasone
	DRUGS USED IN RESPIRATORY DISORDERS
S.No	**Name of Medicine**
218.	Tab Salbutamol 4mg
219.	Solution Salbutamol
220.	Salbutamol 100 mcg/dose aerosol
221.	Spray / Inhaler.Beclomethasone + Salbutamol
222.	Syp Acefyline
	TOPICAL PREPARATIONS
S.No	**Name of Medicine**
223	Polymyxin + Zinc Bacitracin Skin Ointment
224.	Silver Sulphadiazine 1% Cream Jar pack
225.	Clotrimazole 1% Cream
226.	Betamethasone 0.1% Ointment 15gm
227.	Betamethasone 0.1% Cream: 15gm
228.	Betamethasone + Gentamicin Ointment
229.	Lignocaine HCl Gel 2%
230.	Permethrine Cream 5% w/w
231.	Permethrine Lotion 5% w/w
	DISINFECTANTS & ANTISEPTICS
S.No	**Name of Medicine**
232.	Solution Povidone- Iodine 60ml 10%
233.	Solution Povidone- Iodine 450ml 10%
234.	Scrub Povidone- Iodine 7.5% 60ml
235.	Scrub Povidone- Iodine 7.5% 450ml
236.	Solution Chloroxylenol 4.8 %
	VITAMINS / MINERALS
S.No	**Name of Medicine**
237.	Tab. Vitamin B-Complex
238.	Syp Vitamin B-Complex
239.	Tab Pyridoxine HCl 50 mg
240.	Tab Ascorbic Acid 550 mg
241.	Tab Calcium Carbonate
	MISCELLANEOUS THERAPEUTIC AGENTS
S.No	**Name of Medicine**
242.	Inj Oxytocin 5 i.u
243.	Tab. Misoprostol 200mcg
244.	Megulmine diatrizoate
245.	Iopromide Inj 300/370mg
246.	Tab Alfacalcidol 0.5 mcg /ml
247.	Inj. Epoetin Alpha
248.	Inj. Epoetin Beta
249.	Inj. Methoxy Polyvthlene Glycol-Epoetin beta
250.	Solution Hemodialysis

251.	Tab: Mycophenolate Sodium 180mg
252.	Tab: Mycophenolate Sodium 360mg
253.	Tab: Mycophenolate Mofetil 500mg
254.	Cap: Cyclosporine 25mg
255.	Cap: Cyclosporine 100mg
256.	Inj: Basiliximab
257.	Tab: Everolimus
	SURGICAL DISPOSABLES
S.No	**Name of Medicine**
1.	Adhesive Tapes (paper/plastic) Non woven surgical tape
2.	Adhesive surgical tape **PE**
3.	Zinc Oxide Adhesive Plaster different sizes
4.	Cotton Bandages (Surgical)
5.	Cotton Bandages (Surgical)
6.	Cotton Bandages (Surgical)
7.	Absorbent Cotton Wool 100 gm
8.	Absorbent Cotton Wool 200 gm
9.	Absorbent Cotton Wool 200 gm
10.	Absorbent Cotton Wool 400 gm
11.	Absorbent Cotton Wool 400 gm
12.	Crepe Bandages
13.	Gauze Cloth Roll
14.	Gauze Cloth Roll
15.	Medicated Dressing Different Sizes
16.	Knitted paraffin Gauze with 5% Chlorohexidine (Different sizes roll)
17.	Knitted paraffin Gauze with 5% Chlorohexidine (Different sizes roll)
18.	1CC Disposable Syringe blister pack (Regular)
19.	Insulin 1CC Disposable Syringe blister pack
20.	3CC Disposable Syringe blister pack
21.	5CC Disposable Syringe blister pack
22.	10CC Disposable Syringe blister pack
23.	20CC Disposable Syringe blister pack
24.	50CC Disposable Syringes blister pack
25.	60CC Disposable Syringes blister pack
26.	Foleys Catheter (Plain & Silicon) Different Sizes.
27.	I.V Cannula Different Sizes
28.	I.V infusion Set (Sterilized) blister pack
29.	POP Bandages Different Sizes
30.	Urine Bag
31.	Spinal needle 23 & 24 (Disposable) (with and without introducer)
32.	Surgical Blade
33.	Surgical Gloves Sterilized
34.	X-ray film
35.	X-ray film
36.	X-ray film
37.	X-ray film
38.	X-ray film
39.	Auto developer 20 litre
40.	Auto fixer 20 litre
41.	X-ray films
42.	Manual developer
43.	Manual fixer
44.	Mamography HDR/ADM
45.	Mamography ADM

SUTURE MATERIAL	
CHROMIC CAT GUT	
46.	20mm ½ CRB Needle 4/0
47.	20mm ½ CRB Needle 3/0
48.	25mm ½ CRB Needle 2/0
49.	30mm ½ CRB Needle 2/0
50.	30mm ½ CRB Needle 0
51.	30mm ½ CRB Needle 1
52.	40mm ½ CRB Needle 2
53.	40mm ½ CRB Needle 0
54.	40mm ½ CRB Needle 1
S.No	**BLACK BRAIDED SILK**
55.	16mm ½ CRB Needle 4/0
56.	16mm 3/8 cutting curved 4/0
57.	24mm 3/8 CRV Cutting 4/0
58.	30mm ½ CRB Needle 3/0
59.	16mm ½ RB Needle (Non cutting) 3/0
60.	26mm 3/8 rev: Cutting 2/0
61.	30mm ½ RB Needle (Reverse cutting) 2/0
62.	30mm cutting needle (RB) 0
63.	30mm ½ RB Needle 0
64.	25mm ½ Curved cutting 0
65.	30mm ½ CRB Needle 1
66.	30mm ½ Curved cutting 1
67.	30mm cutting needle ½ RB 1
68.	40mm ½ RB Needle 1
69.	40mm ½ RB Cutting 1
70.	40mm ½ CRB Needle 2
S.No.	**POLYGLYCOLIC**
71.	Polyglyctin Braided with Double Needle 6/0
72.	17mm ½ CRB 5/0
73.	16mm 3/8 cutting RB 4/0
74.	20mm ½ round body 4/0
75.	16mm Cutting RB 4/0
76.	17mm non cutting 4/0
77.	16mm 3/8 cutting RB 3/0
78.	20mm ½ round body non cutting 3/0
79.	26mm 3/8 rev: C 2/0
80.	30mm ½ round body non cutting 2/0
81.	30mm ½ CRB 2/0
82.	35mm taper cut ½ C 90cm 2/0
83.	48mm ½ RB non cutting 2
84.	45mm ½ round body non cutting 2
85.	30mm ½ round body non cutting 1
86.	40mm ½ round body non cutting 1
87.	30mm ½ round body non cutting 0
88.	40mm ½ CRB non cutting 0
89.	40mm ½ CRB Needle 1
90.	35mm taper cut ½ C 90cm 1
S.No.	**POLYGLYCOLIC**
91.	2x8mm ½ CRB 8/0
92.	8mm 3/8 fine double 6/0
93.	12mm 3/8rev: cutting 6/0
94.	13mm ½ CRB fine double 5/0
95.	Polypropylene with Double Needle, RB db end 5/0
96.	15mm CC fine 5/0
97.	16mm ½ CRB double
98.	15mm CC fine 4/0

99.	16mm ½ CRB double ended 4/0
100.	19mm cutting curved 4/0
101.	17mm RB Double ended 3/0
102.	19mm cutting curved 3/0
103.	24mm 3/8 C R Cutting curved 3/0
104.	24mm cutting curved 3/0
105.	16mm CC 3/0
106.	25mm ½ CRB Db ended 3/0
107.	26mm RB double ended 3/0
108.	30mm ½ RB 2/0
109.	25mm ½ RB 2/0
110.	75mm 3/8 Rev: C 2/0
111.	25mm taper cut 2/0
112.	75mm ST Cutting Needle 2/0
113.	75mm St Ct 2/0
114.	36mm 3/8 C Rv Cutting 0
115.	30mm ½ RB 0
116.	30mm ½ RB 1
117.	40mm ½ RB 1
118.	30mm ½ CRB 1
	POLYPROPYLENE MESH
S. No	**Size**
119.	30cm x 30cm
120.	6cm x 11cm
121.	15 cm x 15cm
	STEEL WIRE
S. No	**Size**
122.	48mm ½ Trocar Point Heavy 5
	BONE WAX
S. No	**Size**
123.	Bone wax

13.10 Meetings of the Clinical Sub-Committee

A. Minutes of the First Clinical Sub-committee Meeting

Consultative Meeting with Technical Sub-Committee for Developing MHSDP for Secondary Care Level.

Date: August 12, 2016
Place: TRF+ office at PC Hotel, Peshawar

Participants:

COMMITTEE MEMBERS:

Prof. Noor-ul-Iman:	Chair
Dr. Zubair Ahmad Khan:	Member
Dr. Ibrar	Member
Dr. Ghareeb Nawaz	Member
Dr. Gul Naz Syed	Member
Dr. Bawar Shah	Member

TRF+ Representatives:

Dr. Shabina Raza:	Team Leader
Dr. Mohammad. Naeem	Health Specialist

HSRU Representative

Dr. Shahzad Faisal:	Focal person MHSDP assignment

Consultants'' Team:

Dr. Inayat Thaver	Team Leader
Dr. Muhammad Khalid	Public Health Specialist
Mr. Qabil Shah Khattak:	Research Associate

AGENDA:

1. Introduction of the assignment and role definition of various stakeholders

2. Background update on the assignment

3. Discussions on the MHSDP for secondary level

4. Way forward and further consultations

MEETING DETAILS

1. Introduction of the assignment and role definition of various stakeholders

The meeting was chaired by Prof. Noor-ul-Iman. He emphasized the need for having a practical package of services which can be applicable and easily implementable. He shared his experiences as regards lack or ineffective services resulting in lot of sufferings of patients. He also appraised the participants that as part of 20 years future planning, it is envisaged that all the districts should have a medical college along with the teaching hospital; thus the need for improving health services at district level.

2. Background update on the assignment

Dr. Thaver briefly explained the purpose and expected outcome for developing the MHSDP for secondary level care facilities, explaining the need and expected outcome and expectations from the participants of this committee. He also emphasized the need for ensuring that in addition to including the major specialties in the Package, we should have the preventive and promotive care as had already been identified in the MHSDP- for Primary level. The need for inclusion of some support services such waste management, infection control, patients' rights support services may also be included as part of this package.

This was followed by the discussion on MHSDP; Dr. Khalid shared the draft format for the package prepared by the team

3. Discussions on the MHSDP for secondary level

Following are the key highlights of the discussion and agreement:

a. Categories of facilities at secondary level or just secondary care level

Debate was held on the need to have categories and notification as had been issued on this matter. The categories divided as Type A to D are based on the local catchment population and the bed strength, the assumption appears to be the fact that the more the population the more the need for hospitalization and need for more specialties and higher level of care. HSRU made a case for having the package according to various categories, including all the types.

However, it was noted by Chair and other members that though it's a good concept, but considering the fact that we are talking about the "Minimum" possible services, all the facilities disregard of the types should have at least all these services as part of MHSDP. This might be also necessary considering the fact there is no operational referral system within the province and within even districts. It was suggested by the chair that for the time being, the group should pick 6-8 major specialties (which are also recommended by PMDC) and identify various requirements, i.e. function, HR, equipment, medicines etc. so that on can have standardized access to these secondary level care services, disregard to the type of facility.

b. Appreciation of lack of referral system among various level of facilities and short-term solutions

As mentioned earlier, the fact that currently, there is no operational and functional Referral System; thus the rationale for have some standardized package of 'minimum' services by all the secondary level care facilities should be ensured. This should also be further added with the basic preventive and promotive services as had been identified in

the MHSDP for Primary level. Thus the package to be prepared will just mention about the necessity of including these services and referred to the Primary Package.

c. Cross-cutting services for improving secondary level care facilities

It was noted and endorsed by most participants that the package should also identify and briefly mention about the services which are not directly the "health services", but important for smooth running of various services and supplement its effectiveness. These have been grouped as:

- Infection Control services including Waste management
- Patients'' rights and facilitation services
- Reception/facilitation area for the patients
- Nursing counters
- Guidance for patients to reach a particular unit/department, by colour coding
- Patient information board
- Waiting areas having basic utilities such as public toilets
- Wheel chairs and trolley to shift patients
- Laundry services
- Infrastructure supportive services
- Types of floor (no unevenness) and ramps
- Back up electricity and generator etc.
- Emergency supportive facilities
- Triage facilities
- Ambulance services

d. Implementation of package as a follow up

It was emphasized that package should not only be practical and easily implementable. In that context, it was noted that some follow up exercise in terms of SOPs, clinical guidelines and District/provincial Formulary can also be developed and notified. It was also noted that, this Package will be a living document and can be updated/revised after 2-3 years to include other services. In addition, this Package can also serve as prompting to establishing a functional referral system.

4. Way forward and further consultations

It was agreed by the participants, that the technical committee members will get the soft copies of the detailed functions/services, equipment and medicine lists for respective specialties; all will identify/fill the minimum package and various requirements and share it with the consultants' team by 20th of August.

A follow up meeting will be held on 23rd of August to discuss it further and finalize it so that meetings with the a) Administrative committee and b) Preventive committees be also held as a follow up.

The meeting ended with a vote of thanks to the worthy chair.

B. Minutes of the Second Clinical Sub-committee meeting

Consultative Meeting with Technical Sub-Committee for Developing MHSDP for Secondary Care Level.

Date: August 23, 2016
Place: TRF+ office at PC Hotel, Peshawar

Participants:

COMMITTEE MEMBERS:

Prof. Noor-ul-Iman:	Chair
Dr. Zubair Ahmad Khan:	Member
Dr. Ibrar	Member
Dr. Ghareeb Nawaz	Member
Dr. Gul Naz Syed	Member
Dr. Bawar Shah	Member

HSRU Representative

Dr. Shahid Younas	Chief Health Sector Reform Unit
Dr. Shahzad Faisal:	Focal person MHSDP assignment

Consultants'' Team:

Dr. Inayat Thaver	Team Leader
Dr. Muhammad Khalid	Public Health Specialist
Mr. Qabil Shah Khattak:	Research Associate

AGENDA:

1. Discussion on the proposed draft MHSDP package presented in first clinical sub-committee meeting

2. Specialty wise inputs from the committee members

3. Way forward and further consultations

MEETING DETAILS

1. Discussion on the proposed draft MHSDP package presented in first clinical sub-committee meeting

The meeting was chaired by Prof. Noor-ul-Iman. He initiated the discussion on the proposed draft with emphasis that there should be a minimum services package that is applicable to all tiers of the secondary care. Debate was held on the need to have categories and notification as had been issued on this matter. The categories divided as Type A to D are based on the local catchment population and the bed strength, the assumption appears to be the fact that the more the population the more the need for hospitalization and need for more specialties

and higher level of care. HSRU made a case for having the package according to various categories, including all the types. Dr. Shahid Younas appraised the committee members that there is a need for identifying the minimum package of services specific to each tier of the secondary care as the scale and scope of each tier vary and the same set of services cannot be expected from Category D hospital and Category A hospital e.g. the specialties required at the Category D hospital will not be the same as required in Category A hospital and so as the HR and equipment requirements for them. Dr. Shahid further clarified that the activity is to enlist the services that will be expected to be present at each tier rather than having standards for these services. The criterion for the categorization of the secondary care hospitals including the specialty, bed strength and HR details were shared with the committee members. Dr. Noor ul Iman shared his point of view that as it is a set of minimum services, the committee would develop a list of minimum services irrespective of the tier of care, however the HSRU and the consultant team can then decide on which tier to provide which services.

2. Specialty wise inputs from the committee members

Dr. Noor ul Iman led the process of discussion and incorporation of the inputs from the committee members. Item wise discussion was carried out and consensus was built around the need for each service to be included in the package. Along the course of discussion, comments were recorded against each service/HR/Equipment item with regards to its applicability across all tiers or a consideration of the type of the hospital for specifying the details of service. It was also proposed that the approved list of Medicines, Surgical Disposables and other non- Drug Items of Government prepared by Medicines Co-Ordination Cell (MCC), Khyber Pakhtunkhwa for the year 2015-16 will serve as drug formulary for the district hospitals; however the concerned hospital will have the liberty to choose the medicines/drugs/surgical items from the MCC list to be procured as per their needs. The revisions to the proposed draft were made along the course of discussion. Dr. Noor ul Iman informed that the revised package after incorporation of specialty wise inputs from the members will be shared with the committee members.

3. Way forward and further consultations

It was agreed by the participants, that the HSRU team and the consultants will hold meetings with the Administrative and Preventive sub-committees and after having their inputs a joint meeting of all the three sub-committees will be held to have consensus on the developed package.

The meeting ended with a vote of thanks to the worthy chair.

13.11 Meetings of the Preventive Sub-Committee Meetings

A. Minutes of the First Preventive Sub-Committee Meeting

Consultative Meeting with Preventive Sub-Committee for Developing MHSDP for Secondary Care Level.

Date: September 2, 2016
Place: TRF+ office at PC Hotel, Peshawar

Participants:

COMMITTEE MEMBERS:

Dr. Nasir Saeed	Chair of the committee, Dean PICO
Dr. M. Ayub Rose	PM/PD HIV/AIDS
Dr. Malik Niaz	PD TB control Program
Dr. Sahib Gul	PC MNCH Health Department
Dr. Azmat ullah/ Hamid Iqbal	DD (DHIS)/D/A (DHIS)

HSRU Representative

Dr. Shahid Younas	Chief Health Sector Reform Unit
Dr. Shahzad Faisal:	Focal person MHSDP assignment

TRF+ Team

Dr. Shabina Raza	TRF+ Team Leader
Dr. Shabnam	RMNCH TRF+
Ms. Shazia Khalid	M&E Specialist TRF+

Consultants'' Team:

Dr. Inayat Thaver	Team Leader
Dr. Muhammad Khalid	Public Health Specialist
Mr. Qabil Shah Khattak:	Research Associate

AGENDA:

1. To define/review dimensions of preventive and promotive care based on the epidemiological profile (as much as possible) of the province

2. To estimate utilization rates of various preventive care services at each level of care based on empirical evidence such as might be obtained from any health surveys undertaken in the province or from the DHIS

3. Way forward and further consultations

MEETING DETAILS

1. Discussion on the approach to develop preventive care package for the secondary care as part of the MHSDP SC

The meeting was chaired by Prof. Nair Saeed. The discussion was initiated on whether there should be same preventive care package across all types of secondary care hospitals or the package should specify the type of secondary care hospital for each preventive service being offered. Dr. Shahzad Faisal informed that the secondary care hospitals are categorized as Type A to D based on the local catchment population and the bed strength, the assumption appears to be the fact that the more the population the more the need for hospitalization and need for more specialties and higher level of care. Dr. Shahid Younas appraised the committee members that there is a need for identifying the minimum package of services specific to each tier of the secondary care as the scale and scope of each tier vary and the same set of services cannot be expected from Category D hospital and Category A hospital e.g. the specialties required at the Category D hospital will not be the same as required in Category A hospital and so as the HR and equipment requirements for them. Dr. Shahid further clarified that the activity is to enlist the services that will be expected to be present at each tier rather than having standards for these services. Dr. Ayub Rose, Dr. Inayat Thaver and other members of the committee agreed that the preventive care package should be drafted across the four categories of secondary care hospitals (A,B,C,D).

2. Preventive care Theme wise discussion

The proposed draft themes for the preventive care were shared with the committee members. The discussion was initiated on whether to structure the “Preventive Care Themes” according to continuum of care or specialty/ward specific package. Dr. Ayub Rose suggested and other committee members agreed that the themes may be re-structured according to continuum of care. Dr. Ayub Rose suggested that there should be a preventive care unit within the hospital which could provide training/capacity building of the hospital staff on preventive care. The committee members also suggested that there should be a Nutritionist, Health Education Officer and a hospital Epidemiologist in the Preventive Care Unit. Dr. Azmat suggested that a statistical assistant may also be added to the preventive care team. Dr. Ayub Rose proposed that the OPDs should have a prevention room that caters for the preventive health care services. It was also proposed that the OPDs should have standardized preventive care videos displayed in local language. Dr. Azmat suggested that the secondary care hospitals should be linked/connected through web portals to have access to standard preventive care messages within and across districts. Dr. Nasir Saeed proposed that there should be a mechanism for linkage (where possible) between the hospital and the community medicine department of a medical college that may facilitate in the community outreach services. It was also suggested that the District Health Officer (DHO) should serve as a pivot for linkage between various programs (MNCH, LHW, EPI, DHIS) in the district. Dr. Nasir Saeed suggested that the preventive Eye/Ophthalmic care

should be added as a theme while Dr. Thaver proposed to include the preventive Geriatric care and mental health in the proposed themes. Dr. Azmat proposed that a specialist advice may be sought for finalizing the contents of each team, to which all the committee members agreed. Consequently, it was unanimously decided to sort advice from the following entities finalizing the contents of preventive care themes.

- Maternal and Reproductive Health; Advice from Dr. Sahib Gul, PC MNCH Health Dept.

- Infant and Child Feeding Practices; and Prevention of Malnutrition - Advice from Nutrition section/Program

- Promotion of Safe Water and Basic Sanitation; Advice from Dr. Ayub Rose, PM/PD HIV/AIDS

- Immunization Practices; Advice from Dr. Hameed Afridi, DD EPI Program

- Control of Tuberculosis; Advise from Dr. Malik Niaz, PD TB control Program

- Control of Malaria; Advice from Malaria Program

- Control of Hepatitis; Advice from Hepatitis Control Program KP

- Control of blood pressure and prevention of heart attack and strokes; Health education about diabetes; and other Non-Communicable Diseases (NCDs); Advise from Dr. Sabina

- Preventive Eye/Ophthalmic Care; Advise from Dr. Nasir Saeed, Dean PICO

3. Way forward and further consultations

Following action points were identified at the conclusion of the meeting

- The proposed draft of the preventive care themes will be shared with all the committee members

- The committee members and the aforementioned key specialist will provide feedback on the proposed draft by 9th of September, 2016

- Dr. Khalid will incorporate the feedback received

- The committee will discuss the revised draft and its distribution across all tiers of secondary care in the next meeting which is planned on 23rd September, 2016

The meeting ended with a vote of thanks to the worthy chair.

13.12 Meeting of the Administrative Sub-Committee Meeting

Participants

Dr. Zafeer Hussain	Chair of the committee, Health Integrated Program
Dr. Riaz Mohammad	MS DHQ Mardan
Dr. Muhammad Niaz	DHO Swabi
Dr. Naeem Awan	MS GM & GH
Dr Inayat Thaver	TRF Consultant
Dr. Jamal Afridi	Consultant

Chaired by: Dr. Zafeer, Director, Integrated Health Programme.

This meeting was among the last of the series of meeting for developing the MHSDP-SC for KP. The participants discussed and recommended a number on number of suggestions as regards various categories of hospitals, Human Resources, infrastructure standards and the medicines, surgical items and non-medical materials. The details are as follows:

1. Introduction, 'category' definition, criteria and current status

Dr Faisal Shahzad, the focal person from HSRU for this assignment welcomed the participant's followed by formal introduction of all members. He briefed the participants about the MHSDP-SC, its objectives and the process so far held. He informed that the formal categorization of the secondary car hospitals has been formally approved since early 2000s. The members noted that many of the Category -D hospitals have excellent buildings, but there is lack of required HR, especially the specialists. In that context, it was suggested that the PG training of various specialties may consider rotating the trainees in various lower level categories of hospitals. In addition, the members appreciated the fact that, when once the MHSDP-SC is implemented fully, then "referral system" can also be functional because of the variety and need of services in various categories. A number of the 'departments' identified in the documents for various categories were noted which were either not properly represented or not identified; these need to be corrected. Some of them are Dialysis to be changed to the Nephrology and there is no provision for Physiotherapy department.

2. Human Resource recommendations

The HR list with the consultant team (provided by HSRU) was then discussed. It was updated by the Chair that since currently lot of recruitments is being done, it will be good idea to have the latest list and then show it as comparison and the percentage of what has been filled. In that context, Dr. Shahzad has agreed to get the latest list of HR position at the secondary level of care.

- A detailed discussion was held the need to have centralized computerization system for patients recording and for collecting the fees for diagnostics, such as X-ray and laboratory tests; this was to ensure time management of both patient and hospital staff as well as minimizing the pilferage of money. Following has been recommended for category A and B, because of the larger number of beds and more turn-over of patients.

- Instead the position of the Junior Clerk, it should be changed to either "Data Entry Operator (DEO) or Key Punch Operator (KPO) who is of the Grade 8 and can be easily available.
  - 6 DEO/KPO to be distributed as follows
  - For OPD: 1 male; 1 Female
  - For Emergency having 3 shifts 3
  - For working as reliever 1
  - For centralized fees collection and issuing the hospital receipt:
    - 3 for 3 shifts and
    - For working as reliever 1
- Finally, it was recommended that for category A, one needs to have 10 and Category B Hospitals at least 8 KPO/DEO.

- It was also noted by all the participants that there is no JD for any of the HR and even if it's available, it is not known to all and it also needs to be improved. In that context, this committee felt that rather having a designated "Public Health" person in the hospitals, the JDs of the DMS should include all those aspects; this may include, quality assurance, epidemic surveillance, disaster management, crowd management and even disease control planning and training. etc.
- It was noted by the experts of this committee that lot of working of the hospitals gets suffered because of the little number of DMS, especially at night and evening. Thus it was recommended that all the hospitals having the strength of more than 200 beds, there should be two more positions for the DMS which will apply for Category A and B Hospitals. It was also recommended strongly that there should be a designated vehicle and other associated facilities for the MS at least in Category A and B Hospitals.
- The issues related to procurement were also discussed. It was agreed that recommended laws for procurement of medicines should be followed. However, the Committee felt that there should be procurement Office of Grade 16, who should be designated for this assignment at least for Category A and B Hospitals.
- It was recommended that HR should be calculated on the basis of expected/current workload in terms of utilization of services and the current/future population increases. However, some indicative number can be recommended for each category.

3. Expected Infrastructure for Hospitals

- It was noted by the Committee that the internationally recommended infrastructure could be only applied to those hospitals which may be built in future. However, some acceptable changes may be done. However, there were also some reservations and practical recommendations in terms of the infrastructure which should be based on the local situation and environment, geographical terrain and availability of the of the space. Tus, for example it was recommended that instead of having several big houses for staff accommodation, especially in far off places, building of multistoried flats will be more practical.

- Standards for accessing the facilities usually suggests the 'x' Kms. Away. However, in KPcontext, the more practical approach could be how much it takes to access the services.
- The standards for theatre including the number should be based on the following criteria:
    - # of specialty in each Category
    - # of OT days
    - Per day workload for operations
    - # of OT tables in one OT.
- It was nevertheless noted that the OT which have already been built can't be changed, so the recommendation that have already been made in the category document can be considered.
- It was strongly recommended that there should be at least a "Emergency Theatre" for Categories A and B.
- The need for sterilization system for OTs was also discussed. The number would vary according operation Theatres (OTs) i.e. # of OTs and # of operations.
- The need for incinerator was also emphasized and recommended for having it at least at DHQs or mostly the Category A hospitals. Thus in each districts, there should be a centralized waste management approach. It was noted the wastage collected has been found to be 2.5 Kg./bed/day. However, at the need, as illustrated below it was recommended it should ideally be contracted out, because of the cost implications and its follow up management.
- Within the infrastructure and various services, it was recommended that following services should actually be contracted to the private sector:
    - Laundry
    - Electricity and plumbing
    - Genitory/cleaning and washing services
    - Sterilization of waste materials (as mentioned earlier)
    - Parking space, if there is one or for future.
- The importance of having a triage area was again emphasized and should be available in the Accident and Emergency Department/unit. It was also recommended that a provision for simultaneously handling of 20-30 emergencies in Category A and B should also be considered. The need for having an Emergency Theatre has also been mentioned earlier.
- Some provisions for easy accessibility of the disabled and old age people should also be ensured in all the hospitals by having ramps, trolleys, wheel chairs and any other relevant provision.

4. Medicines, surgical items and non-medical materials

The list of Essential Medicines as well as MCC recommended lists were shared to the committee. All the members unanimously agreed to follow the MCC list as has also been recommended by The Clinical Sub-Committee. Some more suggestion have been made which are highlighted as follows:

- Liberty should be given to each hospitals to procure the medicine according to their needs. However, it was recommended that there can be a centralized procurement system at the district level which should have representative for m all the categories of hospitals of that district and then distribution be done according to workload and disease trends. In that context, some budgetary provisions may be made for unforeseen circumstances.
- The issue of testing all the drugs by the “Drug Testing Laboratory” (DTL) was raised which had previously caused the delays upto 4-6 months for getting an approval for its use. However, it was noted that recently, it has improved a lot. In that context, some suggested to have DTL at the district or divisional level also.

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