



# Minimum Health Services Delivery Package for Primary Health Care Facilities in Khyber Pakhtunkhwa

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Final (Revised)

Technical Component

**31 August 2012**

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## Abbreviations and Acronyms

1.	ARI	Acute Respiratory Infection
2.	ANC	Antenatal Care
3.	AusAID	Australian Aid Agency
4.	BCC	Behaviour Change Communication
5.	BHU	Basic Health Unit
6.	BMI	Body Mass Index
7.	CD	Community Dispensaries
8.	CMWs	Community Midwives
9.	COPD	Chronic Obstructive Pulmonary Disease
10.	CPR	Cardio-Pulmonary Resuscitation
11.	CVD	Cardiovascular disease
12.	DFID	Department for International Development
13.	DOH	Department of Health
14.	DHIS	District Health Information System
15.	DHQH	District Headquarter Hospital
16.	EPI	Extended Programme for Immunisation
17.	FE	Financial Expert
18.	HH	Health House
19.	HMIS	Health Management Information System
20.	HSRU	Health Sector Reform Unit
21.	IDD	Iodine Deficiency Disorder
22.	IMNCI	Integrated Management of Neonatal and Childhood Illness
23.	IUCD	Intra Uterine Contraceptive Device
24.	JSI	John Snow Inc.
25.	KP	Khyber Pakhtunkhwa
26.	LHWs	Lady Health Workers
27.	LHV	Lady Health Visitor
28.	MHSDP	Minimum Health Services Delivery Package
29.	NID	National Immunisation Day
30.	NNS	National Nutritional Survey
31.	OPD	Outpatient Department
32.	ORS	Oral Rehydration Solution
33.	PCSIR	Pakistan Council for Scientific & Industrial Research
34.	PDHS	Pakistan Demographic and Household Survey
35.	PEI	Polio eradication initiative
36.	PPH	Post-Partum Haemorrhage
37.	PHC	Primary Health Care
38.	PHS	Public Health Specialist
39.	ROEC	Reed's Odourless Earth Closet
40.	RA	Research Associate
41.	RHC	Rural Health Centres
42.	RUTF	Ready-to-use Therapeutic Foods
43.	SAM	Severe Acute Malnutrition
44.	SODIS	Solar water disinfection
45.	STI	Sexually Transmitted Infection
46.	TRF	Technical Resource Facility
47.	THQH	Tehsil Headquarter Hospital
48.	VIP	Ventilated improved pit
49.	WHO	World Health Organisation







## Background and Introduction

The Department of Health (DOH) of Khyber Pakhtunkhwa (KP) is committed to improve the health status of the people of the province, with a renewed focus on provision of Primary Health Care (PHC). The first outcome of Health Strategy prepared by the department of health is “*Enhancing coverage and access to minimum health services especially for the poor and vulnerable*”.

PHC services along with basic curative aspect are currently available in varying degrees through several tiers of health services delivery outlets, including the community level. However, there is a need to define and document Minimum Health Services Delivery Package (MHSDP) from each level. This will serve as a reference standard and guide for the availability of health services at a specific level of health care.

In 2008, the DOH worked on the development of a minimum service delivery package, but there is need for the review and finalization of the earlier draft into a practical, acceptable and sustainable package based on consultations with all the relevant stakeholders.

With emergence of new dimensions in health systems, such as public-private partnership, it has become imperative to have standard packages of services at different levels with known cost. Only then it will be possible to let out services to the private sector such as for new initiatives like “Social Protection Schemes”. The details of package for each level of service should define:

- Functions at that level
- Infrastructure
- Staff
- Equipment
- Medicines and supplies, and
- Cost for the above

The costing of MHSDP for different levels of services will also be carried out to have information for mobilizing the necessary funding.

The Technical Resource Facility (TRF) is a five years project, funded by the UK's Department for International Development (DFID) and Australian Aid Agency (AusAID). The TRF is managed by HLSP, a member of Mott MacDonald Group, in partnership with John Snow Inc. (JSI) and Semiotics. The TRF is mandated to support improvements in policy, strategies and systems and help to build the capacity of government functionaries at federal, regional and district levels by providing strategic technical assistance. The purpose of the technical assistance is to help the government achieve its goal of improving people's access to quality health care services thereby improving their health, with focus on poor people and marginalised groups.

The TRF has supported the DOH of KP in developing MHSDP by funding the cost of technical assistance, i.e. 2 Consultants, one public health specialist (PHS - Dr. Arjumand Faisal) and other financial expert (FE – Afeef Mahmood) and a research associate (RA - Muhammad Imran).

The PHS proposes that the developed MHSDP should be seen as a dynamic process for the next five years i.e. 2012 to 2017. Currently it has been prepared keeping in view the resources available with respect to functional requirement for PHCs with minimum standards such as infrastructure, manpower, instruments, equipment, drugs, vaccinations and other supplies, etc.



## The Primary Health Care services

The following services are recommended to be included in PHC at the Alma-Ata Declaration in 1978:

1. Education concerning prevailing health problems and the methods of preventing and controlling them
2. Promotion of food supply and proper nutrition
3. An adequate supply of safe water and basic sanitation
4. Maternal and child health care, including family planning
5. Immunization against the major infectious diseases
6. Appropriate treatment of common diseases and injuries
7. Prevention and control of locally endemic diseases, and
8. Provision of essential drugs

The effective implementation of PHC services through an integrated system results in improving the health indicators of the covered population.

## The facilities and cadres delivering PHC services

In Khyber Pakhtunkhwa, the PHC services are delivered through a network of facilities with various levels of functions in each one of them. These include the following:

**Table 1: Distribution of PHC facilities in KP**

#	Type	Number
1.	RHCs	87
2.	BHUs	848
3.	CDs	415
4.	MCHCs	94
5.	LHWs	13,100
6.	CMWs	500
7.	Other centres (T.B, leprosy etc.)	123

Also, the number of cadres employed to deliver the services in abovementioned facilities have multiple nomenclatures and there is lack of uniformity in positions even in similar types of facilities, which creates confusions about the roles and job descriptions.

The DOH desires to deliver the PHC components with a limited number of cadres, through a network of:

- i. Community Midwives (CMWs)
- ii. Lady Health Workers (LHWs) at Health Houses (HHs) and homes of the community people
- iii. Community Dispensaries (CDs)
- iv. Basic Health Units (BHUs), and
- v. Rural Health Centres (RHCs)



The different levels will provide some or all of the 8 PHC components listed above and also, some additional components. Currently, even the similar levels do not deliver uniform and standardised services. Therefore, it is desired by the DOH that a MHSDP be developed for each level of facility to bring uniformity of services in each level of PHC facility.

The objectives of MHSDP are to:

- Provide comprehensive primary health care to the community through the network of community-based workers and Primary Health Centres.
- Achieve and maintain an acceptable standard of quality of care.
- Make the services more responsive and sensitive to the needs of the community.

The comprehensive PHC services planned to be delivered through MHSDP are presented below in Table 2. The defined MHSDP covers all the essential service elements including preventive, promotive, curative and rehabilitative primary health care. This implies a wide range of services that include:

- **LHW services:**
  - limited hours limited PHC and family planning services
- **CMW services:**
  - 24-hours maternal and new-born care services
  - limited hours minor illnesses treatment service for other members of the family
- **CD services:**
  - 6-hours general treatment services
  - 6-hours ANC and PNC services
  - Limited health education services
  - Immunisation services
- **BHU services:**
  - 6-hours planned health education services at the centre and in schools
  - 6-hours general treatment services
  - 6-hours ANC, PNC and delivery services
  - Limited lab services
  - 6-hour referral service
- **RHC services:**
  - 6-hours planned health education services at the centre and in schools
  - 6-hours general treatment services
  - 24-hour delivery and new-born care services (Basic EmONC Services)
  - 24-hour inpatient service (22 beds)
  - 24-hour emergency services, such as appropriate management of injuries, accident, dog bite/snake bite cases; First Aid, stabilisation of the condition of the patient in these and other emergency conditions;
  - 24-hour timely and appropriate referral



- 6-hour selected surgical services ensuring universal infection control measures (stitching, abscess draining, **removal of ingrowing toe nail**, circumcision, E & C, back slab plaster, splinting, gastric lavage, catheterisation)
- 24-hour medico legal services
- Sunrise to sunset post mortem services

**Table 2: MHSDP for the network of PHC Facilities**

1. Education concerning prevailing health problems and the methods of preventing and controlling them	<ul style="list-style-type: none"> <li>• In built in services 2 – 7</li> </ul>
2. Proper nutrition	<ul style="list-style-type: none"> <li>• Assessment of nutritional status</li> <li>• Prevention of malnutrition</li> <li>• Management of malnutrition</li> </ul>
3. An adequate supply of safe water and basic sanitation	<ul style="list-style-type: none"> <li>• Promoting measures for safe drinking water supply at home level</li> <li>• Testing of chlorine level at supply source</li> <li>• Testing of faecal contamination at supply source</li> </ul>
4. Maternal and child health care, including family planning	
4.1. Maternal Health	<ul style="list-style-type: none"> <li>• Antenatal care</li> <li>• Delivery care</li> <li>• Postpartum care</li> </ul>
4.2. New-born Health	<ul style="list-style-type: none"> <li>• Care of the new-born (Essential Newborn Care)</li> </ul>
4.3. Child health	<ul style="list-style-type: none"> <li>• Integrated management of neonatal and childhood illness (IMNCI)</li> <li>• School health services</li> </ul>
4.4. Adolescent health	<ul style="list-style-type: none"> <li>• Roles and responsibilities of men and women in building a healthy family</li> <li>• Promoting healthy life style behaviours</li> <li>• Imparting knowledge about structure of menstrual cycle</li> </ul>



	<ul style="list-style-type: none"> <li>• Educating about risks involved in early age marriages</li> </ul>
4.5. Family planning	<ul style="list-style-type: none"> <li>• Natural methods</li> <li>• Non-permanent methods</li> <li>• Permanent methods</li> </ul>
5. Immunization	<ul style="list-style-type: none"> <li>• Expanded program on immunization (EPI)</li> <li>• Polio eradication initiative (PEI)</li> </ul>
6. Appropriate treatment of common diseases and injuries	<ul style="list-style-type: none"> <li>• First aid</li> <li>• Treatment of common diseases and injuries</li> </ul>
7. Prevention and control of locally endemic diseases	
7.1. Management and control of endemic communicable disease	<ul style="list-style-type: none"> <li>• Tuberculosis</li> <li>• Malaria</li> <li>• Hepatitis B and C</li> <li>• Dengue fever</li> <li>• STIs and HIV</li> <li>• Trachoma</li> <li>• Leishmaniasis</li> <li>• Brucellosis</li> <li>• Worm infestation</li> </ul>
7.2. Management and control of endemic non communicable diseases	<ul style="list-style-type: none"> <li>• Hypertension</li> <li>• Diabetes</li> <li>• Asthma</li> <li>• COPD</li> <li>• Arthritis</li> <li>• Irritable bowel syndrome</li> <li>• Peptic ulcers</li> <li>• Cancer</li> </ul>
7.3. Disability prevention	<ul style="list-style-type: none"> <li>• Early detection of visual, hearing, orthopaedic disability</li> <li>• Preventing Iodine deficiency</li> <li>• Primary eye care</li> </ul>



7.4. Mental Health	<ul style="list-style-type: none"> <li>• Anxiety</li> <li>• Depression</li> </ul>
7.5. Oral health	<ul style="list-style-type: none"> <li>• Tooth extraction</li> <li>• Scaling</li> <li>• Filling</li> <li>• Management of gingivitis</li> <li>• Education about oral health</li> </ul>
8. Provision of essential drugs	<ul style="list-style-type: none"> <li>• Described in “support services - section D”</li> </ul>

The support services offered to provide the above services will include the following:

**Table 3: Support services**

A. Infrastructure	<ul style="list-style-type: none"> <li>• Minimum rooms and areas</li> </ul>
B. Human resource	<ul style="list-style-type: none"> <li>• Types of health workers by health facility</li> </ul>
C. Equipment and supplies	<ul style="list-style-type: none"> <li>• Type of equipment by health facility</li> </ul>
D. Essential drugs, vaccines & supplies	<ul style="list-style-type: none"> <li>• Types of drugs and supplies by health facility</li> </ul>
E. Diagnostic services	<ul style="list-style-type: none"> <li>• Type of diagnostic services</li> </ul>
F. Referral Services	<ul style="list-style-type: none"> <li>• Referral systems</li> </ul>
G. Information Systems, reporting and monitoring	<ul style="list-style-type: none"> <li>• Management information systems</li> <li>• Monitoring performance</li> <li>• Reporting notifiable diseases</li> </ul>

The following pages describe the MHSDP planned to be offered through each of the five PHC service levels. Note: not all services will be offered from any one facility but comprehensive PHC services will be delivered through networking of these facilities.



## 1 Education concerning prevailing health problems and the methods of preventing and controlling them

In regions that have low literacy levels in combination with harmful traditional practices, the need for health information, education and behavioural change communication cannot be over emphasized. Similarly, in KP, there is need to focus on improving health and living conditions of people at the primary level. Little awareness of the risk factors prevail that can lead to ill health. Therefore, the foremost priority in delivering PHC is that community people should be well informed about the need for taking preventive measures for healthy pregnancy and safe delivery, neonatal and child health, immunisation, family planning, prevention against endemic communicable and non-communicable diseases, etc.

Community level health centres must play a crucial role in behaviour change, in coordination with outreach programmes. In order to have a measureable impact on morbidity and mortality, PHC services need to focus on improving health-related behaviours of the families at home level. The following key areas have an effect on the quality of health and health care:

- Promotion of health
- Prevention of illness
- Early recognition of illness
- Seeking care from an appropriate provider outside of the home when necessary
- Providing quality care to sick in the home

The behaviours that have already been demonstrated to have a public health impact and that can be feasibly changed in a relatively cost-effective manner should be the focus of behavioural change communication (BCC).

The provincial district health team should shortlist behaviours that have broad public health importance in the district. BCC interventions should be undertaken from all the five PHC levels (LHW, CMW, CD, BHU and RHC) in a coordinated way.

It is being proposed that a Health Education Officer (HEO) be hired at BHU and RHC level for carrying out BCC regularly and effectively. This person should preferably be a female with a bachelor's or master's degree and with good interpersonal communication skills. The daily activity plan for each month should be developed specifying daily BCC activities. The plan should elaborate sessions to be held in groups, time for individual counselling and school or other community sessions. A certain topic should be the focus for BCC for a specified period, such as a month or a quarter of the year for which simple, action oriented messages be prepared and relevant materials obtained through the EDOH office.

It is important that same messages are given from all levels and there should not be any contradiction among messages at any level.



It is also important that messages should clearly identify the actions that need to be taken by the community people.

**Table 4: Examples for BCC<sup>1</sup>**

**REPRODUCTIVE HEALTH PRACTICES:**

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. 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).
3. Take iron tablets regularly from 3 months onwards in pregnancy.
4. Take calcium tablets regularly from 5 months onwards in pregnancy
5. Seek assistance for delivery only from a skilled birth attendant (SBA) such as CMW, LHV, lady doctor.

**INFANT AND CHILD FEEDING PRACTICES:**

6. Initiate breastfeeding with first half to one hour after delivery.
7. Give the first bath to the new-born after 24 hours
8. Breast feed exclusively for 6 months.
9. From about 6 months, provide appropriate complementary feeding such as *khichri* and continue breast feeding until 24 months.
10. Continue feeding children and increase fluids during illness; increase feeding immediately after illness.

**IMMUNISATION PRACTICES:**

11. Take infants for immunisation even when he or she is sick. Allow sick infant to be immunised during visit for curative care.
12. For every pregnant women and women of childbearing age, seek tetanus toxoid vaccine at every opportunity.
13. Take infant for measles immunisation as soon as possible after the age of 9 months

**CARE-SEEKING PRACTICES:**

14. Seek appropriate care when infant or child is recognised as being sick (i.e. looks unwell, not playing, not eating or drinking, lethargic or change in consciousness, vomiting everything, high fever, fast or difficult breathing).

**OTHER EXAMPLES**

15. Wash hands with soap: after using toilet, after handling baby's faeces, before cooking, before feeding
16. Apply SODIS daily to make water safe for drinking purposes.

<sup>1</sup>Adapted from Emphasis Behaviors in Maternal and Child Health. 1997. BASICS Technical Report



17. Use iodized salt regularly
18. Use insecticide-treated bed-nets for pregnant women and children under 5 years of age
19. Mix and administer ORS correctly during diarrhoea in children.
20. Administer treatment and medications according to instruction (amount and duration).

Similar action oriented messages are required to bring behaviour change for health promotion, disease prevention or appropriate management of specific illnesses.

From the prepared list, the district team should first choose which of the behaviours should be focused in their programme and then develop strategies appropriate for the local context and implement it. The strategy for service delivery and BCC could be built on the following action plan:

- Assess critical negative behaviours, constraints, and opportunities for improvement
- Develop targeted communication messages based on consumer research
- Reach caregivers and those who influence decisions through individual, community, and mass media interventions, with the action-oriented messages
- Strengthen skills and performance of community-based workers in BCC



## 2 Proper Nutrition

According to National Nutritional Survey (NNS) 2011, 18% of women of reproductive age had low body mass index (BMI) and were underweight in Pakistan. In KP, 36.3% women had low haemoglobin levels, 5.4% women had iron deficiency anaemia, 71.1% mothers of sampled child had vitamin A deficiency, 61.4% pregnant women had hypocalcaemia, 39.2% Vitamin D deficiency, and 23.9% mothers had less than normal excretion of iodine levels.

The NNS 2011 also reported that every 1 in 4 index child\* (24.1%) is underweight. Only 53.2% children had normal haemoglobin level ( $Hb \geq 12\text{gm/dL}$ ) and iron deficiency anaemia was present in 13.4% index children. Vitamin A deficiency was present in 77.5%, zinc deficiency in 34%, Vitamin D deficiency in 29.7%

The recommended minimum health services for improving nutrition at the five PHC levels are:

- Nutritional Assessment
- Prevention of Malnutrition
- Treatment of Malnutrition

### 2.1 Nutritional Assessment

#### a) Growth Monitoring:

A commonly recommended measure is monthly growth monitoring. The major role of a growth chart (weight chart) is to focus the attention of health worker (LHW, LHV, doctor) on growth of a child through construction of calendar and plotting his/her weight on monthly basis and creating a path (a growth curve).

Reference lines are provided in the chart that provides comparison between the actual growth of a child as shown by his growth curve on the chart (created by regular plotting). This comparison with reference lines help a health worker to understand whether the child's growth curve may be considered acceptable or good or unsatisfactory growth for taking appropriate action.

Theoretically, though this seems to be a simple exercise but it has met with several difficulties in the field compromising its effectiveness and challenging its utility. If this is to be followed by LHWs and health centres, then it should be ensured that it is done correctly and timely appropriate actions are taken.

\*Index child in the survey has been defined as the "selected youngest child of less than five years of age"



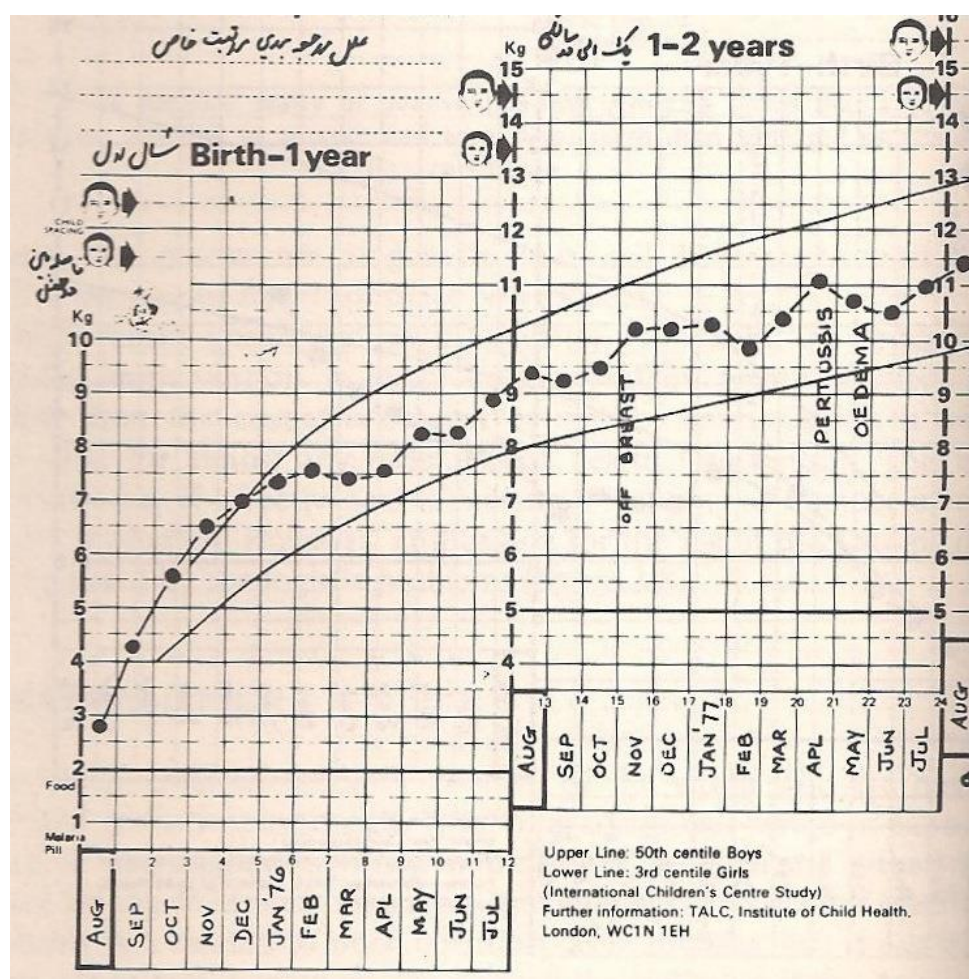


Figure 1: Sample growth chart

Source: See How They Grow: monitoring child growth for appropriate health care in developing countries. 1979. Oxford University Press

## 2.2 Prevention of Malnutrition

Accelerating interventions aimed at improving infant and young child feeding (IYCF) at community level is a key priority in the effort to improve survival, growth, and development of children with equity. However, IYCF practices remain far from optimal as caregivers often lack the practical support, one-to-one counselling and correct information. Community-based IYCF counselling and support can play an important role in improving these practices: it can ensure access to these services in the poorest and the most vulnerable communities with limited access to health care, and therefore become an important strategy for programming with an equity focus.

UNICEF recently developed a new set of generic tools for programming and capacity development on community based IYCF counselling. The package of tools guides local adaptation, design, planning and implementation of community based IYCF counselling and support services at scale. It also contains training tools to equip community-based workers, using an interactive and experiential adult learning approach, with relevant knowledge and skills on the recommended breastfeeding and complementary feeding practices for children from 0 up to 24 months, enhance their counselling, problem solving, negotiation and



communication skills, and prepare them to effectively use the related counselling tools and job aids.

#### **a) Exclusive Breastfeeding**

Exclusive breastfeeding means that the baby has no other food or drink but breast milk – not even water or pacifier (*chosney*). Babies do not need anything else until 6 months old. If they are given food or drinks even in small amounts or if they suck on a pacifier many of the advantages of breastfeeding are lost. Babies may get diarrhoea, allergies and mothers are more likely to conceive again. Studies have shown that both individual counselling and group counselling have led to increase in exclusive breast feeding.

#### **b) Complementary Feeding**

By 6 months of age, the breastmilk by itself is no longer enough for the baby and they need to be given other foods. Start with little amount of soft foods, such as mashed banana or *khichri* and gradually increase the amount and variety of foods. Studies have shown that educational strategies are of benefit in populations that have means to procure appropriate food. However, in populations where resources are deficient, educational interventions are of benefit only when they are combined with food supplements.

#### **c) Promotion of Maternal Nutrition**

All pregnant women should be counselled by a trained service provider on food-intake with focus on the following: (a) Increased energy intake through one additional meal a day, (b) improved variety (cereal/starchy roots plus animal foods/legumes/nuts plus fruit/vegetable, whatever is possible), (c) reduced workload (or at least have regular resting moments), and (d) monitor weight gain in pregnancy (a woman should gain 10-12 kg weight during pregnancy). Manuals “Nutrition Training for Primary Health Care Workers” developed in April 1992 by Pakistan Child Survival Project could be used as the primary source of information, however, some improvement may be required in a few places.

#### **d) Diagnosis of Micronutrient Deficiency**

Health care provider must be well aware of the symptoms and signs of micronutrient deficiencies for early recognition and timely action. Anaemia, iodine deficiency, Vitamin A deficiency, Vitamin D deficiency have been dealt in the text below.

#### **e) Iron + Folic Acid Supplementation**

Iron deficiency is by far the commonest nutritional cause of anaemia and is often associated with folate deficiency, especially during pregnancy.

Iron deficiency adversely affects: (a) the cognitive performance, behaviour, and physical growth of infants, preschool and school-aged children, (b) the immune status and morbidity from infections of all age groups, (c) the use of energy sources by muscles and thus the physical capacity and work performance of adolescents and adults of all age groups, (d) Moreover, iron-deficient humans have impaired gastrointestinal functions and altered patterns of hormone production and metabolism. The latter include those for neurotransmitters and thyroidal hormones which are associated with neurological, muscular, and temperature-regulatory alterations that limit the capacity of individuals exposed to the cold to maintain their body temperature. In addition, DNA replication and repair involve iron-dependent enzymes, (e) Finally, as much as a 30% impairment of physical work capacity and performance is reported in iron-deficient men and women.

During pregnancy, iron deficiency is associated with multiple adverse outcomes for both mother and infant, including an increased risk of haemorrhage, sepsis, maternal mortality, perinatal mortality, and low birth weight. It is estimated that nearly all women are to some degree iron deficient, and that more than half of the pregnant women in developing countries suffer from anaemia.



Therefore, in pregnancy, routine laboratory confirmation of iron deficiency anaemia is neither medically necessary nor justified from a cost-benefit point because most pregnant women eventually become anaemic. As a preventive measure, all women should be given supplementation with oral iron tablets in combination with folate, after the first trimester.

#### **f) Prevention of Parasitic Infections**

Hookworm infestation plays a role in causing anaemia by causing chronic blood loss. There is evidence that anthelmintic treatment of women during pregnancy improves maternal health, increases birth weight and reduces infant mortality.

School-age children are assumed to be at greatest risk and are expected to benefit most from deworming. Those who have been treated gain much more from their increased time at school, not only because they are free from illness but also because their cognitive performance improves and they learn significantly better. Preschool children are just as much at risk of disease and anthelmintic treatment is recommended for children as young as 12 months.

Deworming can be effectively added to on going public health programmes. A good example is the simultaneous delivery of deworming tablets with vitamin A supplements. Deworming can be added to Integrated Management of Neonatal and Childhood Illness (IMNCI); school health programmes and maternal and child health programmes. Deworming drugs are safe and can be delivered by non-health staff such as community volunteers after simple training.

Deworming is often recommended routinely. However, in the absence of simultaneous efforts to eradicate the reservoir of infection, re infestation quickly follows. Therefore, attention should also be given to prevent parasitic infections.

#### **g) Vitamin A**

Xerophthalmia is the most specific Vitamin A deficiency (VAD) disorder and is the leading cause of preventable blindness in children. Anaemia can result from VAD in children and women, likely due to multiple apparent roles of vitamin A in supporting iron mobilization and transport, and haematopoiesis. Pre-existing VAD appears to worsen infection and increases the risk of disease and death, especially from measles and diarrhoea, as it is essential for the functioning of the immune system. Vitamin A supplementation has been shown to reduce the risk of death in 6–59 month old children by about 23–30%.

The WHO strategy for elimination of Vitamin A deficiency is to ensure that young children living in areas where the intake of vitamin A is inadequate receive the vitamin through a combination of breast feeding, dietary improvement, food fortification, and supplementation.

Combining the administration of vitamin A supplements with immunization is an important part of this effort. WHO advocates vitamin A supplementation every four to six months. The recommended doses of vitamin A supplementation for the prevention of vitamin A deficiency are indicated in the following table.

**Table 5: Potential target groups and immunisation contacts in countries with vitamin A deficiency**

Target group	Immunization contact	Vitamin A dose
Infants aged 9–11 months Children aged 12 months and older	Measles vaccine contact	100,000 IU 200,000 IU
Children aged 1–4 years	Booster doses* Special campaigns* Delayed primary	200,000 IU



	immunization doses*	
Mothers in post-partum	Within six weeks of birth	200,000 IU

\* The optimal interval between doses is four to six months. A dose should not be given too soon after a previous dose of vitamin A supplement: the minimum recommended interval between doses for the prevention of vitamin A deficiency is one month (the interval can be reduced in order to treat clinical vitamin A deficiency and measles cases).

In pregnant women in high-risk areas, vitamin A deficiency occurs especially during the last trimester when demand by both the unborn child and the mother is highest. The mother's deficiency is demonstrated by the high prevalence of night blindness during this period.

Many high-risk countries adopted the WHO policy of supplementing mothers with a 200,000 IU oral dose of vitamin A within six weeks after delivery to enrich their breast milk content of vitamin A, although in practice coverage remains quite low. In 2011, WHO recommended that Vitamin A supplementation should not be included as a public health intervention in postpartum period for women as the coverage in the past has been insignificant. However, the stakeholders in the workshops for finalising MHSDP recommended continuation of vitamin A supplementation to mothers in the post-partum period.

### **h) Exposure to Sunshine + Vitamin D Supplementation**

Deficiency of Vitamin D is now known to have multiple effects: (a) predisposes children to respiratory diseases, (b.) psoriasis, (c) diabetes, (d) asthma, (e) periodontal disease, (f) congestive heart failure, (g) schizophrenia and depression, and (h) cancer.

Mothers with 15ng/mL of 25-OH-D levels have 4 times higher risk of caesarean sections, five-fold increase in pre-eclampsia, 3 times more likely to develop gestational diabetes, and twice more chances of bacterial vaginosis. Given the growing evidence that adequate maternal vitamin D status is essential during pregnancy, not only for maternal well-being but also for foetal development, health care professionals who provide obstetric care should consider assessing maternal vitamin D status by measuring the 25-OH-D concentrations of pregnant women. On an individual basis, a mother should be supplemented with adequate amounts of vitamin D3 to ensure that her 25-OH-D levels are in a sufficient range (>32 ng/mL).

Vitamin D deficiency in mother not only endangers her life but can lead to damage in-utero, while the foetus is developing. Much of that damage may be permanent and cannot be fully reversed by taking Vitamin D after birth.

The main source of Vitamin D is sunlight, which converts precursors in the skin to Vitamin D. Women living in urban slums and observing *purdah* or infants and toddlers, do not get enough exposure to sunlight. Therefore health education emphasizing the benefits of sunshine for children and mothers is essential.

The doses of sunshine or oral vitamin D3 used in healthy children should be designed to maintain 25-OH-D levels above 50 ng/mL. As a rule, in the absence of significant sun exposure, most healthy children need about 1,000 IU of vitamin D3 daily per 11 kg (25 lb) of body weight to obtain levels greater than 50 ng/mL. Some will need more, and others less. Children with chronic illnesses such as autism, diabetes, and/or frequent infections should be supplemented with higher doses of sunshine or vitamin D3, doses adequate to maintain their 25-OH-D levels in the mid-normal of the reference range (65 ng/mL) — and should be so supplemented year-round.

### **i) Iodized Salt**

The effects of iodine deficiency are serious: (a) in foetus - spontaneous abortion, stillbirth, congenital anomalies, perinatal mortality, (b) in Neonate - endemic cretinism including mental deficiency with a mixture of mutism, spastic diplegia, squint, hypothyroidism and



short stature, infant mortality, (c) In child and adolescent -impaired mental function, delayed physical development, iodine-induced hyperthyroidism (d) in adults - impaired mental function, iodine-induced hyperthyroidism, and (e) in all ages – goitre, hypothyroidism, Increased susceptibility to nuclear radiation.

Serious iodine deficiency have visible impairment, however, of far greater significance is IDD's less visible mental impairment that reduces intellectual capacity at home, in school and at work. A simple, effective and cheap technical weapon is iodized salt. Salt has been chosen as a vehicle to provide regular iodine because it is widely available and consumed in regular amounts throughout the year, and also because the cost of iodizing it is extremely low.

A WHO survey on iodine status worldwide lists Pakistan as having severe iodine deficiency with 135 million people having insufficient iodine intake. Therefore, it is essential to promote the regular use of iodized salt in every home.

## 2.3 Treatment of Malnutrition

### a) Management of Mild to Moderate Malnutrition

According to modified Gomez Classification, children with 70% to 80% of expected weight-for-age have mild malnutrition (Grade I) and 60% to 70% of expected weight-for-age have moderate malnutrition (Grade II). The management of malnutrition should address the underlying causes of poor nutrition but some of these are beyond the scope of health care provider. Therefore, the focus should be on changing feeding practices to improve child's diet within available resources of the family.

A child with mild malnutrition needs and improved diet to provide additional calories. These extra calories can be provided by one meal per day more than the normal recommendation for a child of that age if the quality of the meals is adequate. Children under two years of age should also be breastfed more frequently.

A child with moderate malnutrition needs even more calories. Hence, such a child will need two extra meals in addition to those he should normally have at that age. Also high energy between-meal snacks such as *panjeeri*, *suji ka halwa* and *cholley* are recommended.

It is important to give energy dense foods such as *khichri* with added oil to malnourished children. One way to overcome dietary bulk and meet energy needs is to add extra oil to child's food. In general, additional calories should be the focus of diets for malnourished children, but protein and other nutrients like iron and vitamin A are also important.

Ready-to-use Therapeutic Foods (RUTF) are not being recommended as they are expensive and are not manufactured in Pakistan.

### b) Management of Severe Malnutrition

Children with less than 60% of expected weight-for-age are classified as having severe malnutrition and develop characteristics that are: (a) Marasmus – wasted and thin, no subcutaneous fat, face wrinkled, eyes prominent, looks like a worried old man, irritable and hungry; (b) Kwashiorkor – pitting oedema over the face, arms and feet or entire body may be swollen, distinctive hair changes making them sparse and depigmented, skin changes, apathetic or irritable and no appetite. WHO guidelines recommend that these children should be treated after admission in a health facility.

The MHSDP does not recommend community-based management of severe acute malnutrition (SAM).



**Table 6: Proper nutrition services at PHC facilities**

#	Services	CMW	LHW	CD	BHU	RHC
1	<b>Assessment of nutritional status</b>					
i	Growth monitoring up to three years	No	Yes	Yes	Yes	Yes
2	<b>Prevention of malnutrition</b>					
i	Facilitate initiation of early breastfeeding	Yes	Yes	Yes	Yes	Yes
ii	Support and promote exclusive breastfeeding	Yes	Yes	Yes	Yes	Yes
iii	Deal with breastfeeding problems in early months	Yes	Yes	Yes	Yes	Yes
iv	Promotion of appropriate complementary feeding from 6 months	No	Yes	Yes	Yes	Yes
v	Promotion of maternal nutritional status through counselling	Yes	Yes	No	Yes	Yes
vi	Diagnosing malnutrition in pregnant and lactating women	Yes	Yes	Yes	Yes	Yes
vii	Iron/folic acid supplementation for pregnant, lactating women	Yes	Yes	Yes	Yes	Yes
viii	Prevent parasitic infections	No	Yes	Yes	Yes	Yes
ix	Vitamin A supplementation: To all children 6 months to 59 months and to post-partum mothers	Yes	Yes	No	Yes	Yes
x	Promote exposure to sunshine for women and children to avoid vitamin D deficiency	Yes	Yes	Yes	Yes	Yes
xi	Exclude vitamin D deficiency	No	No	No	Yes	Yes
xii	Promotion of iodized salt	Yes	Yes	Yes	Yes	Yes
3	<b>Treatment of Malnutrition</b>					
i	Diagnosis of micronutrient deficiency and treatment	Yes – refer to BHU/ RHC	Yes – refer to BHU/ RHC	Yes – refer to BHU/ RHC	Yes	Yes
ii	Treatment of mild + moderate	No	Yes	Yes	Yes	Yes



#	Services	CMW	LHW	CD	BHU	RHC
	malnutrition					
iii	Treatment of severe malnutrition through WHO Guidelines	No	Refer to THQH/DHQH	Refer to THQH/DHQH	Refer to THQH/DHQH	Refer to THQH/DHQH



### 3 An adequate supply of safe water and basic sanitation

Around 2.2 million people die globally due to basic hygiene related diseases every year, such as typhoid, diarrhoea, hepatitis A, cholera, etc. Majority of the deaths occur among the children in developing countries (90%). According to WHO estimates, 94% of diarrhoeal cases are preventable through modifications to the environment, including interventions to increase the availability of clean water, and to improve sanitation and hygiene.

According to the PSLSM Survey 2010-11, the water sources at household level in Khyber Pakhtunkhwa are tap water in 45%, hand pump in 13%, motor pump in 11%, dug well in 10% and others 20%. Hence, there is a need to adopt measures for improving the availability of safe drinking water at home level and improving overall sanitation and water supply:

- a) Promotion of sanitation – use of toilets and appropriate garbage disposal
- b) Testing of faecal contamination of water from supply sources
- c) Testing of chlorine level in water from supply source
- d) Promoting measures for household water treatment and safe storage
- e) Promotion of hand washing

#### a) Promotion of sanitation – use of toilets and appropriate garbage disposal

Sanitation involves interventions to reduce people's exposure to diseases by providing a clean environment for living and measures to break the cycle of disease. Sanitation includes disposing of or hygienic management of human and animal excreta, refuse, waste water, the control of disease vectors and provision of washing facilities for personal and domestic hygiene. Improvement in sanitation conditions involves both behaviours and facilities which work together to form a hygienic environment.

The following types of latrines are being proposed for hygienic management of human excreta. Any of these could be selected and promoted depending on the available resources in the area and economic condition of the household:

- Pit latrine
- Ventilated improved pit (VIP) latrine and Reed's odourless earth closet (ROEC)
- Pour-Flush latrine (water seal latrine)
- Septic tank

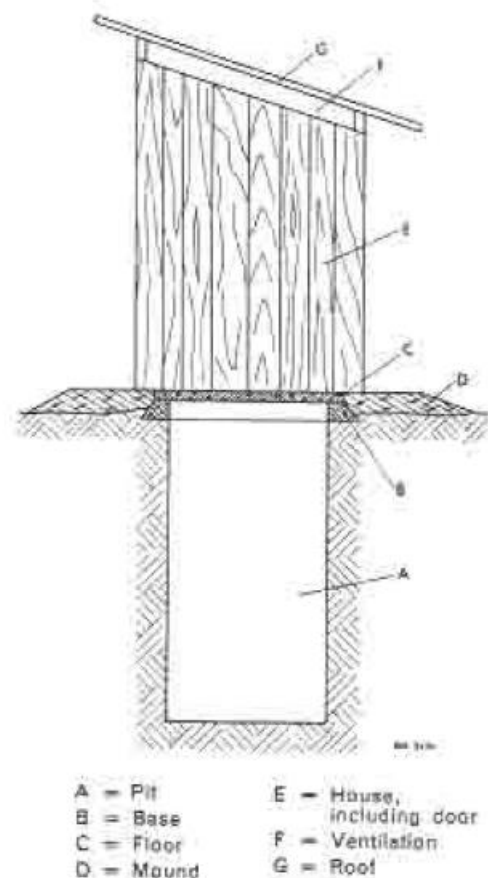


Figure 2: Pit latrine



**Pit Latrine:** This is the cheapest and most basic form of latrine. It consists of a square, rectangular or circular pit dug into the ground, which is covered by a hygienic cover, slab or floor. This slab has a hole through which excreta fall into the pit. Either a seat or squat hole with foot rests can be installed, depending in user preference. A lid should be used to cover the hole. The latrine is covered with a shelter and should be situated well away from water sources.

Pit latrines produce unpleasant smells and allow flies to breed easily, hence should be installed far from the residence and sources of water, but not far enough to fall into disuse. The recommended distance of the latrine should be between 6m minimum to a maximum of 30m. Less than 6m distance may cause the smell and flies to spread diseases and more than 30m distance could be inconvenient at night.

**Ventilated improved pit (VIP) and Reed's odourless earth closet (ROEC):** Both of these are improved types of pit latrines which aim to remove smells and flies from the latrine using a vent pipe. The main difference being that the pit of the ROEC is wholly offset from the slab and connected to a pit by a chute, whereas in VIP it is generally directly under the cover slab. These latrines share certain advantages: there are fewer problems with smells or flies, the slab, vent pipe and shelter are re-usable; and the excreta are isolated.

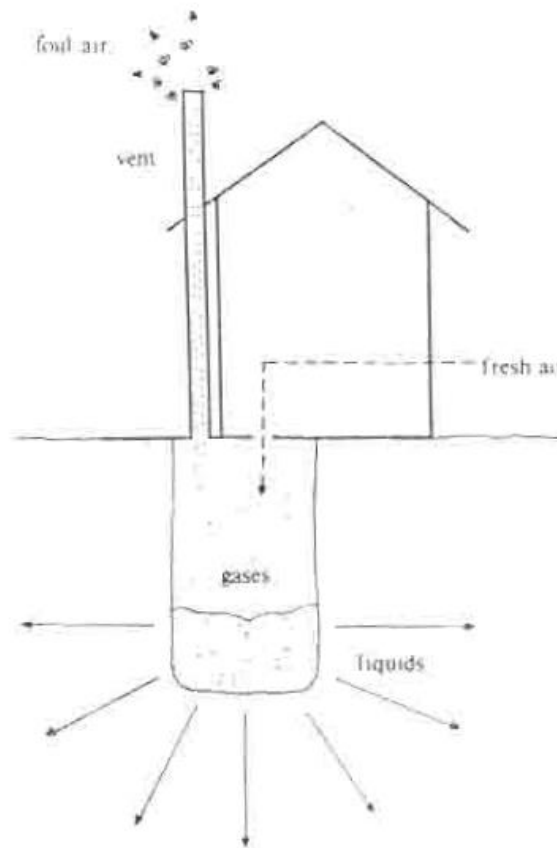
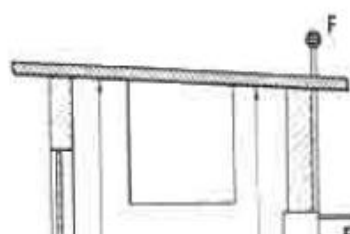


Figure 3: Ventilated improved pit latrine

**Pour flush latrine:** This latrine uses a pit for excreta disposal, but have a special pan which is cast in a cover slab and provides a water seal. This ensures that all the odours are kept in the pit, although sometimes a vent pipe is also fitted, these latrines require only 1-3 litres for each flush and are most appropriate where water is used for anal cleansing and where there is reasonably good level of water service.





**Septic tanks:** Septic tanks are watertight chambers sited below ground level. The solids settle out and break in the tank, while the effluent stays in the tank for a while before overflowing into a sealed soak pit. Septic tanks must be emptied, usually mechanically, at regular intervals. Septic tanks allow safe disposal of waste water, particularly in rural areas, where waste water is often discharged in the rivers.

Septic tanks have the advantages of little maintenance, isolation of excreta, few problems with odour or flies and possible later connection to a sewerage system. Their disadvantages are the high cost of construction, recurrent mechanical emptying, the need for permeable soils so that soak pits can function properly, and the need for a piped water supply to the latrine.

In KP, solid waste (garbage) is mainly collected by municipalities and the waste collection efficiency ranges from 0% in low income rural areas to 90% in high income large cities. For the disposal of the waste, the waste should be deposited at the designated dump sites for the municipality to be taken for burial where centralized waste disposal facilities are present. In the communities where centralized waste disposal facility does not exist, the waste should be disposed off at a selected dump site that is at appropriate distance from the houses.

#### **b) Testing of faecal contamination of water from supply sources**



The people who use small community water supplies are at risk of faecal oral diseases (such as typhoid, diarrhoea, hepatitis A, cholera, etc.) from bacteria known as faecal coliforms. Therefore, to ensure the provision of safe water, detection and control of faecal contamination in the water sources should be done. The tests for the bacteria are easy and cheap with portable kits and show if there is risk for the people drinking water from the source.

The purpose of the test is to check the number of faecal coliforms in a standard amount of water. The more faecal coliforms in the water, the higher is the risk for the health. There are generally two types of tests for faecal contamination<sup>1</sup>.

- **Membrane filtration test:** This test uses a fine, sterile filter or membrane. A known quantity of the water to be tested is filtered through the membrane and any faecal coliforms stick in the fine holes in the membrane. The membrane is placed on a culture medium which provides nutrients to the faecal coliform and the membrane is then kept at 44°C in an incubator for 14-18 hours. After incubation, any faecal coliforms will have grown to form “colonies” which can be seen with the naked eye and counted. The number of colonies is equal to the number of faecal coliforms in the water that was filtered.

This method does not work well when water is very turbid, as the turbidity will block the fine holes in the membrane.

- **Multiple tube test:** This test is sometimes called “the most probable number” method as it uses statistical tables to estimate the number of faecal coliforms in the water. The test is carried out by adding water to a series of tubes containing culture medium. The tubes are then incubated at 44°C for up to 48 hours.

The presence of faecal coliforms is shown by the formation of gas in the tubes and a colour change. The number of tubes which show the presence of faecal coliforms in the culture medium is then compared with the statistical tables and estimation is made.

The multiple tube test is time consuming and usually is done in a laboratory. However, it can be used to test samples of turbid water.

In cases where faecal coliforms are present in water sources, there is a need to decide which amount of contamination should be responded with prioritized action. The table 7 presents the need to take action against presence of faecal coliforms.

**Table 7: Priorities for taking action for faecal contamination**

Faecal coliforms	Action needed
0	None
1-10	Action
11-50	Urgent action
50+	Immediate action

### c) Testing of chlorine level in water from supply source

Chlorine is used to disinfect the water contaminations from microorganisms that may cause water-borne diseases. The testing of chlorine levels at the water source is important because (a) if there is not enough chlorine in the water, the microorganisms will not be killed,

<sup>1</sup> For details on each test, refer to WHO Guidelines for drinking water quality, Volume I, Geneva, 1995



and (b) if there is too much chlorine in the water, the people may not be willing to drink the water due to the taste of chlorine and chose to drink water from other unsafe sources.

When chlorine is dosed correctly, it leaves a disinfectant residual which helps to prevent recontamination in the distribution system or household storage tank. If chlorine cannot be detected in a distribution system, it may indicate that contamination has entered the system or the dosing is incorrect.

The quickest and simplest method for testing for chlorine residual is the DPD (diethyl paraphenylenediamine) indicator test, using a comparator. A tablet of DPD is added to a sample of water, colouring it red. The strength of colour is measured against standard colours on a chart to determine the chlorine concentration. The stronger the colour, the higher is the concentration of chlorine in the water.

#### **d) Promoting measures for household water treatment and safe storage**

Once water has been transported to the household in a safe way, it can become contaminated due to unhygienic handling. The promotion of measures for safe water at household, also called managing the water at the “point-of-use”, are highly cost effective and can significantly improve the microbial water quality and reduce the risk of diarrhoea and other water borne diseases.

Water could be disinfected and made drinkable using the following effective methods:

- Solar disinfection (SODIS)
- Aquatabs
- Boiling

**SODIS:** Using solar radiation is an accessible, economically feasible option for disinfecting water at home level. This method of treatment utilizes both the UV radiation in sunlight as well as the thermal effects of sunlight to inactivate waterborne microbes.

It is very cost effective as it only requires sunlight and PET bottles. Clear PET bottles are filled with the water and set out in the sun for 6 hours. The UV-A rays in sunlight kill microorganisms (viruses, bacteria and parasites) and prevent many waterborne diseases. The method also works when air and water temperatures are low.

#### ***Points to consider while using SODIS***

- **Turbidity of water:** If the water is very turbid, the effectiveness of the method is reduced. To determine the turbidity of the water, place the filled PET bottle on top of a newspaper headline and look at the bottom of the bottle from the neck at the top and through the water. If the letters of the headline are readable, the water can be used for SODIS. If the letters are not readable, the water must be filtered first.
- **Cloudy weather:** Cloudiness affects the strength of solar radiation and thus also the effectiveness of the method. (a) If less than half of the sky is clouded over, 6 hours will be enough to completely disinfect the water, (b) If more than half of the sky is covered with clouds, the bottle must be placed in the sun for 2 consecutive days.

The method does not work satisfactorily during lengthy periods of rain. On such days, collecting rainwater is recommended.

- **Preventing recontamination:** The treated water should be kept in the bottle and drunk directly from the bottle, or poured into a cup or glass immediately before it is drunk. In this way, it is possible to prevent the treated water from becoming contaminated again.

**Aquatabs:** Aquatabs are water purification tablets which use NaDCC which is also known as Sodium Dichloroisocyanurate or Troclosene Sodium. These tablets can be used for life-long household water treatment as well as treating water in the health facilities. They are



effervescent (self-dissolving) tablets which are available in a range of tablet sizes, formulated to treat a specific volume of water – ranging from 1L to 2,500L.

### **Points to consider while using Aquatabs**

- If the water is relatively clear / clean then a dosage rate of 2mg of chlorine per litre can be used.
- If the water is dirty it should either be filtered through a cloth such as a *dupatta* or allowed sit until the sediment settles down and then decant off the clear water. Where water is dirty, 5mg of chlorine per litre dosage rate should be used.

**Boiling water:** Boiling or heating of water with fuel is effective in destroying all classes of waterborne pathogens. WHO recommends bringing the water to a rolling boil as an indication that a high temperature has been achieved to destroy the pathogens.

A major disadvantage of boiling is the consumption of fuel, which may have a high cost in some areas. Therefore, where affordable and sustainable sources of fuel are available, heating household water to a rolling boil is an effective and accessible method of treatment for water.

**Safe storage:** In KP, more than half population has no access to tap water. The water for household use is usually collected by a variety of physical methods, such as manual (e.g., dipping in dug well), passive (e.g., roof catchments) and mechanical (e.g., hand pumps, motor pumps), and it is stored in a variety of containers.

A general guideline is that the choice of household water storage vessels must: (a) be compatible with the intended uses (bringing water, treating water for improving quality, storing water), (b) meet the daily water volume needs of the household, and (c) manageable for the users (women, men or children).

Depending on the purpose, the water storage vessels for household should: (a) have a capacity between 1-25 litres, rectangular or cylindrical with one or more handles and flat bottoms for portability and ease of storage, (b) made of lightweight, oxidation-resistant plastic (c) fitted with a 6-9 cm screw-cap opening to facilitate cleaning, but small enough to discourage or prevent the introduction of hands or dipping utensils, and (d) fitted with a durable, protected and easily closed tap for dispensing water.

In areas where tap water is available, quality control is easier to achieve in above ground water tanks as entry of ground water and surface water is avoided. Underground tanks carry a greater risk of contamination, and if constructed, they should be on higher ground than the surrounding, watertight to eliminate possible entry of ground water, and should extend about 20 cm to 30 cm above the ground surface. They should be at least 15m away from installations like latrines. They should be covered and screened to prevent breeding of mosquitoes and other possible disease vectors, entry of polluting matter and living organisms and algae growth induced by sunlight. Watertight top should be used to prevent surface water from entering the tank.

### **e) Promotion of hand washing**

The practice of hand washing can reduce the risk of food-borne diseases spread by pathogenic microorganisms. According to WHO, among 90% of deaths related to diarrhoea occurring in developing countries, as significant proportion is attributed to *shigella*. Washing hands with soap and water can reduce the risk of diarrhoea from *shigella* and other causes by up to 35 per cent. The health workers should promote hand washing particularly:

- Before food preparation;
- During food preparation to avoid cross contamination;
- Before and after handling raw meat, poultry and fish products;



- Before serving food;
- Before eating;
- Before feeding the baby;
- After changing diapers;
- After using the toilet, (not just after defecation, as the pathogens can also be picked up from previous users of toilets via door handles, taps and drying towels)
- After blowing nose/sneezing;
- After handling unsanitary objects such as waste/garbage containers;
- After contact with toxic substances or chemicals;
- After touching/handling livestock or pets

The table below summarises the water, sanitation and hygiene interventions that will be carried out at the five standard levels of care taking into consideration the cadre of staff available at each level.

**Table 8: Water and sanitation services**

#	Services	CMW	LHW	CD	BHU	RHC
1	<b>Testing of water</b>					
i	Making rapid test kits available for checking faecal contamination	No	No	No	No	Yes
ii	Making kit available for chlorine test	No	No	No	No	Yes
2	<b>Promoting safe drinking water measures at home</b>					
i	Applying solar disinfection	Yes	Yes	Yes	Yes	Yes
ii	Using Aquatabs	Yes	Yes	Yes	Yes	Yes
iii	Using boiled water	Yes	Yes	Yes	Yes	Yes
3	<b>Hygiene Promotion</b>					
i	Hand washing	Yes	Yes	Yes	Yes	Yes
ii	Toilet use	Yes	Yes	Yes	Yes	Yes
4	<b>Other Measures</b>					
i	Create awareness about problems created by stagnant water, blocked drains, defecating outdoors	No	Yes	Yes	Yes	Yes



## 4 Maternal and child health care, including family planning

### 4.1 Maternal Health

The services for maternal health include:

- Antenatal care
- Delivery care
- Postpartum care
- Abortion care

#### Antenatal Care

- Early registration of all pregnancies, ideally within first trimester (before 12<sup>th</sup> week of Pregnancy). However even if a woman comes late in her pregnancy for registration, she should be registered and care given to her according to gestational age.
- Minimum four antenatal check-ups:
  - First visit to the antenatal clinic as soon as pregnancy is suspected (preferably within first 4 months)
  - second visit, 6<sup>th</sup> month
  - third visit at 8<sup>th</sup> month and
  - fourth visit at 9<sup>th</sup> month
- Assessment of pregnant woman: menstrual history, past pregnancy and delivery history, medical history, family history, general examination such as height, weight, B.P., swelling on neck (thyroid goitre), oedema, checking for anaemia, abdominal examination, breast examination and inquiry about vaginal discharge.
- Minimum laboratory investigations like haemoglobin estimation, urine for albumin and sugar, and referral to RHC for blood grouping.
- Identification of high-risk pregnancies and appropriate and prompt referral.
- Folic Acid Supplementation in first trimester, Iron & Folic Acid Supplementation from 12 weeks, injection tetanus toxoid, treatment of anaemia etc.
- Calcium supplementation (at doses of 1.5 – 2.0 g elemental calcium/day) as it leads to reduction in the risk of pre-eclampsia, especially in women who have had previous pre-eclampsia, diabetes, chronic hypertension, renal diseases, autoimmune disease, and multiple pregnancies. The supplementation should be started from 20 weeks of gestation, and should be given several hours apart from iron supplementation, for example morning and evening.
- Treatment of worm infestation once in the second trimester with Albendazole
- Malaria prophylaxis in malaria endemic zones as per the guidelines of Malaria Control Programme.
- Deworming once in pregnancy in the second trimester as it improves haemoglobin levels and birth weight (NEVER give in the first trimester).
- Counselling the pregnant women on diet, rest and exercise, birth preparedness and complication readiness, signs of labour, clean and safe delivery at home, delivery kit for home deliveries, danger signs, infant & young child feeding, initiation of breast feeding, exclusive breast feeding for 6 months, demand feeding, contraception, postnatal care & hygiene



**ANC situation in KP:** Antenatal care is a critical component of safe motherhood. According to PDHS 2008, 51.3% women in KP received ANC from a skilled provider<sup>1</sup>. Among those who received ANC, less than half (43.5%) took iron tablets or syrup, 60% had their urine sample taken, while only 50.6% had blood sample taken and less than one third (27.6%) were informed about danger signs. PSLSM Survey 2010-11 reports that 74% urban and 58% rural pregnant women reported receiving tetanus toxoid injections.

### Delivery care

- Promotion of skilled birth attendants at home or institutional deliveries
- Appropriate and prompt referral of high risk and complicated cases

According to PDHS 2008, in KP, only 37.9% deliveries were conducted by a skilled birth attendant<sup>2</sup>. Information about referral is non-existent.

### Post natal care

- A minimum of 2 postpartum home visits, first within 48 hours of delivery, 2<sup>nd</sup> within 7 to 10 days.
- Initiation of early breast-feeding within half-hour of birth
- Counselling on diet, rest, hygiene, contraception, essential new born care infant feeding.

According to PDHS 2008, in KP, 72.6% women had no post natal check-up<sup>3</sup> and only 23.2% had the first post-natal check-up within the two days.

**Table 9: Antenatal services by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1.	Identify pregnant women in the community	Yes	Yes	No	No	No
2.	Persuade and register pregnant women to receive ANC	Yes	Yes	Yes	Yes	Yes
3	Diagnosis of pregnancy					
i	History	Yes	Yes	Yes	Yes	Yes
ii	Examination	Yes	No	Yes	Yes	Yes
iii	Laboratory	No	No	No	Yes	Yes
4	Antenatal visits					
i	Height	Yes	No	Yes	Yes	Yes

<sup>1</sup>PSLM 2010-11 reported it to be 52% (69% urban, 49% rural)

<sup>2</sup> PSLM 2010-11 also reported it to be 37%

<sup>3</sup> PSLM 2010-11 reported that 77% women did not receive PNC



ii	Weight	Yes	No	Yes	Yes	Yes
iii	BP measurement	Yes	No	Yes	Yes	Yes
iv	Fundal height	Yes	No	Yes	Yes	Yes
v	Goitre	Yes	Yes	Yes	Yes	Yes
vi	Oedema	Yes	Yes	Yes	Yes	Yes
vii	Tetanus immunization	Yes– motivate	Yes or motivate	Yes or motivate	Yes	Yes
viii	Iron/Folic supplementation	Yes	Yes	Yes	Yes	Yes
ix	Calcium supplementation	Yes	Yes	Yes	Yes	Yes
x	Urine for albumin/sugar	No	No	No	Yes	Yes
xi	Blood grouping	No	No	No	Yes	Yes
xii	Counselling on <ul style="list-style-type: none"> <li>○ Diet</li> <li>○ rest and exercises</li> <li>○ identifying SBA for delivery</li> <li>○ arranging money for emergency</li> <li>○ identifying transport for emergency</li> <li>○ identifying blood donor for emergency</li> <li>○ ensuring delivery kit for home deliveries</li> <li>○ danger signs of pregnancy and delivery</li> <li>○ initiation of breast feeding and exclusive breastfeeding for 6 months</li> </ul>	Yes	Yes	Yes	Yes	Yes
xiii	Prevention and management of anaemia					
	a. Examination	Yes	Yes	Yes	Yes	Yes
	b. Laboratory	Refer	Refer	Refer	Yes	Yes



		suspect ed cases to BHU/R HC	suspect ed cases to BHU/R HC	suspect ed cases to BHU/R HC		
	c. Treatment	Yes	Yes	Yes	Yes	Yes
5	Treat minor discomforts and Infections					
i	Treatment of worm infestation	Yes	Yes	Yes	Yes	Yes
ii	Prevention of malaria by promoting use of bed nets	Yes	Yes	Yes	Yes	Yes
iii	Treatment of malaria <ul style="list-style-type: none"> <li>• Presumptive</li> <li>• Based on lab findings</li> </ul>	No No	Yes No	Yes No	Yes Yes	Yes Yes
iv	Treatment of Trichomoniasis	Yes	No	Yes	Yes	Yes
v	Treatment of Moniliasis	Yes	No	Yes	Yes	Yes
vi	Treatment of Urinary Tract Infection	No	No	Yes	Yes	Yes
vii	Syndromic management of sexually transmitted infections	No	No	Refer to BHU/ RHC	Yes	Yes
6	Treatment of hypertensive disorders	No	No	Yes	Yes	Yes
7	Treatment of Diabetes Mellitus	Yes	No	Yes	Yes	Yes
8	Treatment of Vitamin A deficiency*	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
9	Management of pregnant woman in shock	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
10	Management of pre-eclampsia	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
11	Management of eclampsia	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital	Stabilize and refer to hospital
12	Treatment of incomplete miscarriage / abortion	Identify & refer to	Identify & refer to	No	No, refer to hospital	Yes



		hospital	hospital			
13	Treatment of ectopic pregnancy	Identify & refer to hospital	Identify & refer to hospital	Identify & refer to hospital	Refer to hospital	Refer to hospital
14	Ultrasound	No	No	Refer to hospital	Refer to hospital	Refer to hospital

\* in the last trimester, if night blindness appears

**Table 10: Delivery care by type of facility**

#	Services	CMW	LHW	CD	BHU*	RHC
1	Identify true labour and monitor progression of labour – Partograph	Yes	No	No	Yes	Yes
2	Prepare the environment and materials following infection control protocols	Yes	No	No	Yes	Yes
3	Identify foetal malposition	Yes	No	No	Yes & refer to hospital	Yes
4	External cephalic version	No	No	No	No	No - refer to hospital
5	Assist normal delivery	Yes	No	No	Yes	Yes
6	Provide mini delivery kit	Yes	No	No	Yes	Yes
7	Parental administration of oxytocin	Yes	No	No	Yes	Yes
8	Parental administration of anticonvulsants	Yes & refer to hospital	No	Yes and refer	Yes & refer to hospital	Yes & refer to hospital
9	Bimanual compression of uterus	Yes	No	No	Yes	Yes
10	Controlled cord traction	Yes	No	No	Yes	Yes
11	Suturing vaginal tears (1 <sup>st</sup> and 2 <sup>nd</sup> degree)	Yes	No	No	Yes	Yes
12	Suturing vaginal tears (3 <sup>rd</sup> degree)	No - refer to hospital	No	No	No - refer to hospital	No - refer to hospital
13	Provision of intravenous fluids	Yes	No	No	Yes	Yes



#	Services	CMW	LHW	CD	BHU*	RHC
14	Parental administration of antibiotics	Yes	No	No	Yes	Yes
15	Safe blood transfusion	No	No	No	No - refer to hospital	No - refer to hospital
16	Manual removal of placenta	Yes	No	No	Yes	Yes
17	Removal of retained products (e.g. MVA)	No – refer to hospital	No	No – refer to hospital	Refer to hospital	Yes
18	Vacuum extraction (assisted vaginal delivery)	No – refer to hospital	No	No - refer to hospital	No - refer to hospital	Yes
19	Provide emotional support to the mother throughout labour and delivery	Yes	No	Yes	Yes	Yes
20	Identify danger signs in the first, second or third stages of labour	Yes-Refer to hospital	No	Yes-Refer to hospital	Yes	Yes
21	Management of prolapsed cord	No - refer to hospital	No	No - Refer to hospital	No - refer to hospital	No - refer to hospital
22	Management of shoulder dystocia	No - refer to hospital	No	No - Refer to hospital	No - refer to hospital	No - refer to hospital
23	Caesarean section	No - refer to hospital	No	No - refer to hospital	No - refer to hospital	No - refer to hospital

\*Only in those BHUs that have delivery suites with proper facilities.

**Table 11: Postpartum care by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1	Advise maternal diet	Yes	Yes	Yes	Yes	Yes
2	Advise maternal hygiene	Yes	Yes	Yes	Yes	Yes
3	Treatment of anaemia	Yes	Yes	Yes	Yes	Yes
4	Management of	Yes & refer to	Yes & refer to	Yes & refer to	Yes & refer	Yes & refer



	PPH	hospital	hospital	hospital	to hospital	to hospital
5	Treatment of puerperal infection	Yes & refer to hospital	No - refer to hospital	No & refer to hospital	Yes & refer to hospital	Yes or refer to hospital
6	Breast examination	Yes	Yes	Yes	Yes	Yes
7	Antibiotics	Yes – oral	No	Yes – oral	Yes – oral / IV	Yes – oral / IV
8	Counselling on family planning, exclusive breast feeding and hygiene	Yes	Yes	Yes	Yes	Yes
9	Provide contraceptives	Yes – Condoms, Pills	Yes – Condoms, Pills	Yes – Condom, Pills, injectables, IUD	Yes – Condom, Pills, injectables, IUD	Yes – Condom, Pills, injectables, IUD
10	Register births and deaths	Yes	Yes	No	No	No



## 4.2 New-born Health

The two critical elements of immediate Essential New-born Care includes: (a) preventing hypothermia by maintaining the body temperature, and (b) maintaining the airway and breathing. Besides these, essential new-born care includes other measures like breastfeeding the baby within half-an-hour of birth, taking care of the cord and taking care of the eyes and promoting exclusive breastfeeding for 6 months (only breast milk and not even water).

**Table 12: Care of the new-born by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
<b>1</b>	<b>Immediate care</b>					
i	○ Dry and stimulate the baby	Yes	No	No	Yes	Yes
ii	○ Clean airway, assess the baby's breathing and colour, decide if the baby needs for resuscitation, resuscitate if required.	Yes	No	No	Yes	Yes
iii	○ Tie/clamp and cut the cord	Yes	No	No	Yes	Yes
iv	○ Avoid hypothermia, keep the baby warm by placing the baby in skin-to-skin contact with the mother (kangaroo care), covering both mother and baby with a sheet/blanket and covering the baby's head with a cloth	Yes	No	No	Yes	Yes
v	○ Have the mother start breastfeeding within one hour	Yes	No	No	Yes	Yes
vi	○ Give eye care within one hour after birth	Yes	No	No	Yes	Yes
<b>2</b>	<b>Care during the first day</b>					
i	○ Conduct physical examination (colour, breathing, posture and tone, heart rate, warmth, activity, skin, head, eyes, mouth, chest, abdomen, back and spine, anus, genital organs, temperature and weight)	Yes	Yes	No	Yes	Yes
ii	○ Give vitamin K 1mg IM	No	No	No	Yes	Yes
iii	○ Give the first immunisation of	Refer to	Refer	Yes	Yes	Yes



#	Services	CMW	LHW	CD	BHU	RHC
	BCG, polio, hepatitis	BHU/ RHC	to BHU/ RHC			
<b>3</b>	<b>Care up to 28 days</b>					
i	○ Keep the cord clean and dry	Yes	Yes	Yes	Yes	Yes
ii	<ul style="list-style-type: none"> <li>○ Teach and counsel mother/family about</li> <li>○ handwashing,</li> <li>○ cord care,</li> <li>○ exclusive breastfeeding for 6 months, including colostrum</li> <li>○ keeping the baby warm</li> <li>○ completing immunisation</li> <li>○ not applying <i>surma</i></li> <li>○ recognising danger signs and taking appropriate actions if they occur</li> </ul>	Yes	Yes	Yes	Yes	Yes
iii	○ Take care of LBW, breastfeed at every 2 to 2½ hours	Yes	Yes	Yes	Yes	Yes
iv	○ Manage neonatal jaundice	Yes	Yes	Yes	Yes	Yes



### 4.3 Child health

- Close observation of developmental milestones

Physical	Cognitive	Social	Emotional
<p>Newborn: rough, random, uncoordinated, reflexive movement</p> <p><b>3 months:</b> head at 90 degree angle, uses arms top rop; visually track through midline</p> <p><b>5 months:</b> purposeful grasp; roll over; head lag disappears; reaches for objects; transfer objects from hand to hand; plays with feet; exercises body by stretching, moving; touch genitals, rock on stomach for pleasure</p> <p><b>7 months:</b> sits in “tripod”; push head and torso up off the floor; support weight on legs; “raking” with hands</p> <p><b>9 months:</b> gets to and from sitting; crawls, pulls to standing; stooping and recovering; finger thumb opposition; eye hand coordination, but no hand preference</p> <p><b>12 months:</b> walking</p> <p><b>15 months:</b> more complex motor skills</p> <p><b>2 years:</b> learns to climb upstairs first, then down</p>	<p>Sensori-motor: physically explores environment to learn about it; repeats movements to master them, which also stimulates brain cell development</p> <p><b>4-5 months:</b> coos, curious and interested in environment</p> <p><b>6 months:</b> babbles and imitates sounds</p> <p><b>9 months:</b> discriminates between parents and others; trial and error problem solving</p> <p><b>12 months:</b> beginning of symbolic thinking; points to pictures in books in response to verbal cue; object permanence; some may use single words; receptive language more advanced than expressive language</p> <p><b>15 months:</b> learns through imitating complex behaviours; knows objects are used for specific purposes</p> <p><b>2 years:</b> 2 word phrases ;uses more complex toys and understands sequence of putting toys, puzzles together</p>	<p>Attachment: baby settles when parent comforts; toddler seeks comfort from parent, safe-base exploration</p> <p><b>5 months:</b> responsive to social stimuli; facial expressions of emotion</p> <p><b>9 months:</b> socially interactive; plays games with caretakers</p> <p><b>11 months:</b> stranger anxiety; separation anxiety; solitary play</p> <p><b>2 years:</b> imitation, parallel and symbolic, play</p>	<p><b>Birth-1 year:</b> learns fundamental trust in self, caretakers, environment</p> <p><b>1-3 year:</b> mastery of body and rudimentary mastery of environment (can get other’s to take care of him)</p> <p><b>12-18 month:</b> “terrible twos” may begin; wilful, stubborn, tantrums</p> <p><b>18-36 month:</b> feel pride when they are “good” and embarrassment when they are “bad”</p> <p><b>18-36 month:</b> Can recognize distress in others – beginning of empathy</p> <p><b>18-36 month:</b> are emotionally attached to toys or objects for security</p>



### Integrated management of neonatal and childhood illness (IMNCI):

The IMCI strategy was based on the recognition that a limited number of childhood illnesses, such as pneumonia, diarrhoea, measles, malaria, and malnutrition, kill 70% of under-five children. The guidelines relied on the detection of cases using simple clinical signs without laboratory tests and offered empirical treatment. IMCI only covered children aged seven days to five years (excluding the early neonatal period) and targeted health workers at primary-care facilities. Recognizing newborn care as critical for improving child survival, it was strengthened by increasing the newborn-care component of the training programme and including prevention and management of health conditions in the first week of life and the care is now referred to as IMNCI.

### School health services:

This includes regularly planned visits by a Medical Officer (male or female) of BHU and RHC to designated schools. The visits may be planned 6-monthly or yearly per school under jurisdiction. At each visit, medical examination of each child is done and nutritional status is assessed, immunisation record examined and, if required it is arranged, deworming is performed, and follow-up visit is scheduled for those needing it.

**Table 13: Newborn and Child care by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1	Assess 'developmental milestones' at 2, 4, 6, 9, 12, 18 and 24 months	No	Yes	Yes	Yes	Yes
2	Perform growth monitoring up to three years	No	Yes	Yes	Yes	Yes
	<b>IMNCI</b>					
3	Management of ARI					
i	Child with cough/fever	No – refer to BHU/RHC	Yes	Yes	Yes	Yes
ii	Child with pneumonia	No – refer to BHU/RHC	No – refer to BHU/RHC	No – refer to BHU/RHC	Yes	Yes
iii	Child with severe pneumonia	No – refer to hospital	No – refer to hospital	No – refer to hospital	No – refer to hospital	No – refer to hospital
iv	Child with very severe disease	No – refer to hospital	No – refer to hospital	No – refer to hospital	No – refer to hospital	No – refer to hospital
v	Child with wheeze	No – refer to BHU/RHC	No – refer to BHU/RHC	No – refer to BHU/RHC	Yes	Yes



#	Services	CMW	LHW	CD	BHU	RHC
		RHC		RHC		
vi	Child with ear infection	No – refer to BHU/RHC	No – refer to BHU/RHC	No – refer to BHU/RHC	Yes	Yes
vii	Health education for ARI <ul style="list-style-type: none"> <li>Increasing fluids</li> <li>Continue feeding</li> <li>Cleanliness</li> <li>Identifying danger signs &amp; taking timely actions</li> </ul>	Yes	Yes	Yes	Yes	Yes
4	Management of Diarrhoea					
i	With no dehydration	Yes	Yes	Yes	Yes	Yes
ii	Some dehydration	No	Yes	Yes	Yes	Yes
iii	Severe dehydration	No	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
iv	With additional problems: <ul style="list-style-type: none"> <li>Diarrhoea &gt; 14 days</li> <li>With severe malnutrition</li> <li>Fever &gt; 38 C°</li> </ul>	No	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
v	Health education on Diarrhoea/ORT <ul style="list-style-type: none"> <li>How to mix ORS</li> <li>Increasing fluids</li> <li>Continue feeding</li> <li>Handwashing</li> <li>Identifying danger signs &amp; taking timely actions</li> </ul>	Yes	Yes	Yes	Yes	Yes
5	Management of dysentery	No	Refer to BHU/RHC	Refer to BHU/RHC	Yes	Yes
6	Management of fever					
i	History	Yes	Yes	Yes	Yes	Yes
ii	Examination	No	Yes	Yes	Yes	Yes
iii	Laboratory	No	Refer to BHU/	Refer to BHU/	Yes	Yes



#	Services	CMW	LHW	CD	BHU	RHC
			RHC	RHC		
iv	Treatment	Yes – refer if > 101° F	Yes – refer if > 101° F	Yes – refer if > 101° F	Yes	Yes
7	Management of severely ill child	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
8	School health services: Regularly planned visits for					
i	Medical check-ups	No	No	No	Yes – by MO	Yes – by MO
ii	Eye sight testing	No	No	No	Yes – by MO	Yes – by MO
iii	Immunisation	No	No	No	Yes	Yes
iv	Deworming	No	No	No	Yes – by MO	Yes – by MO
v	Treatment and follow-up	No	No	No	Yes – by MO	Yes – by MO
vi	Health education	No	Yes	No	Yes	Yes



#### 4.4 Adolescent health

Young people between the ages of 10-19 years are not only adventurous but vulnerable to different influences, accidents, violence, and other illnesses. Females, due to early age marriages (12-17 ages) are confronted with pregnancy and poor reproductive outcomes. Therefore, there is a need to promote healthy life style behaviours, including teaching the youth about roles and responsibilities of men and women in building a healthy family, imparting knowledge about structure of menstrual cycle to females and educating about risks involved in early age marriages and pregnancies.

**Table 14: Health education to youth by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1	Teaching the youth about roles and responsibilities of men and women in building a healthy family	No	Yes to female youth	Yes	Yes	Yes
2	Promoting healthy life style behaviours – exercise, no smoking/ <i>naswar</i> , avoiding violence	No	No	No	Yes	Yes
3	Imparting knowledge about structure of menstrual cycle to females	No	Yes	No	Yes	Yes
4	Educating about risks involved in early age marriages and pregnancies	No	Yes to females	Yes	Yes	Yes



## 4.5 Family planning

According to PDHS 2008, the contraceptive use of any method in KP was 24.9% and any modern method was 18.7%. Among the modern methods, the condom use was the highest (6.1%), followed by injectables (4.0%), female sterilization (3.6%), pills (3.1%), IUD (1.7%) and male sterilization (0.1%). Any traditional methods were being used by 6.2% couples, which included withdrawal 5.1%, rhythm (1.0%).

Very importantly, the data showed that in KP, among currently married women age 15-49 who were not using contraception and who were visited in the 12 months preceding the survey by a fieldworker or an LHW who discussed family planning was only 24%. This indicates a very high need for motivation for adopting family planning methods.

Motivation for family planning is the process of bringing about an attitudinal change for child spacing and for accepting the advantages of the small family. Counselling plays an important role in motivation.

Counselling is the process of helping clients to make informed and voluntary decisions about the choice of contraceptives. It focuses on the individual client need, and respect client's ability and right to make the decision. The counsellor removes the doubts and misconceptions and assists in the final selection of contraceptive methods, which could be:

- Natural methods(rhythm, LAM, withdrawal)
- Non-permanent methods(condoms/hormonal/IUCDs)
- Permanent methods(sterilisation)

Counselling is also required for couples having infertility.

**Table 15: Family planning services by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1	Counselling on family planning methods to enhance CPR					
i	Motivate for family planning	Yes	Yes	Yes	Yes	Yes
ii	Remove misconceptions	Yes	Yes	Yes	Yes	Yes
iii	Help make informed choice	Yes	Yes	Yes	Yes	Yes
2	Clinical examination	No	No	Yes	Yes	Yes
3	Education about natural methods <ul style="list-style-type: none"> <li>○ Rhythm method</li> <li>○ LAM</li> <li>○ Withdrawal</li> </ul>	Yes	Yes	Yes	Yes	Yes
4	Education about modern methods <ul style="list-style-type: none"> <li>○ Condoms</li> <li>○ Pills</li> </ul>	Yes	Yes	Yes	Yes	Yes



#	Services	CMW	LHW	CD	BHU	RHC
	<ul style="list-style-type: none"> <li>○ Injections</li> <li>○ IUCD</li> <li>○ Tubal ligation</li> <li>○ Vasectomy</li> </ul>					
5	Provision of contraceptives					
i	Distribute condoms	Yes	Yes	Yes	Yes	Yes
ii	Distribute oral pills	Yes	Yes	Yes	Yes	Yes
iii	Give injections	Yes	Yes	Yes	Yes	Yes
iv	Insert IUCDs	No – refer to BHU/ RHC	No – refer to BHU/ RHC	Yes	Yes	Yes
v	Sterilisation females	No – refer to THQH/ DHQH	No – refer to THQH/ DHQH	No – refer to THQH/ DHQH	No – refer to THQH/ DHQH	No – refer to THQH/ DHQH
vi	Sterilisation males	No	No	No – refer to THQH/ DHQH	No – refer to THQH/ DHQH	No – refer to THQH/ DHQH
6	Suggest alternatives in case of side effects	Yes	Yes	Yes	Yes	Yes
7	Referral for couples having infertility to THQH/ DHQH	Yes	Yes	Yes	Yes	Yes



## 5 Immunisation

According to PSLSM Survey 2010-11, 77% of children age 12-23 months were found to be fully immunised based on record and recall. A comparison with the past 5 year surveys shows continuous improvement in immunisation coverage, as it was 61% in 2005-06. Therefore, there is a need to continue this trend further to achieve universal coverage with all seven antigens that include BCG, polio, DPT, measles and hepatitis B.

The province continues to report polio cases (89 cases in 2009, 144 in 2010 and 198 in 2011) indicating a need to enhance efforts for polio eradication. Therefore, for both EPI and PEI efforts need to remain the focus of PHC services through: (a) Expanded program on immunization (EPI), and (b) Polio eradication initiative (PEI).

Currently, EPI includes provision of 8 vaccines:

- Injection BCG
- Polio drops
- Injection pentavalent (Diphtheria, Pertussis, Tetanus, Hepatitis B, Hemophilus influenza B)
- Measles

Pneumococcal Vaccine is planned to be introduced in 2013

**Table 16: Immunisation services by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1	Storage of vaccines	No	No	Yes	Yes	Yes
2	Routine Immunisation	Yes – motivate	Yes	Yes	Yes	Yes
3	Campaigns (NIDs)	Yes	Yes	Yes	Yes	Yes
4	Disease surveillance & case reporting	No	Yes	Yes	Yes	Yes
5	Motivate families for					
i	Regular and timely immunisation	Yes	Yes	Yes	Yes	Yes
ii	Giving polio drops on all NIDs	Yes	Yes	Yes	Yes	Yes
6	Vaccinating out-of schedule child	No	Yes	Yes	Yes	Yes



## 6 Appropriate treatment of endemic common diseases and injuries

**First aid** is the provision of initial care for an injury or illness to an injured or sick person until definitive medical treatment can be accessed. It generally consists of a series of simple and in some cases, potentially life-saving techniques that an individual can be trained to perform with minimal equipment.

The key aims of first aid are to:

- **Preserve life:** the overriding aim is to save lives.
- **Prevent further harm:** such as by moving a patient away from any cause of harm, or applying first aid techniques to prevent worsening of the condition, such as applying pressure to stop a bleed becoming dangerous.
- **Promote recovery:** first aid also involves trying to start the recovery process from the illness or injury, and in some cases might involve completing a treatment, such as in the case of cleaning and dressing a small wound.

**Table 17: Treatment of common injuries by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1	Wound dressing	Yes	Yes	Yes	Yes	Yes
2	Snake bites	No	First aid + refer to DHQH	First aid + refer to DHQH	First aid + refer to DHQH	First aid + refer to DHQH
3	Dog bites	No	First aid + refer to EDOH / DHQH	First aid + refer to EDOH / DHQH	First aid + refer to EDOH / DHQH	First aid + refer to EDOH / DHQH
4	Fractures/ dislocations	No	Refer to hospital	Apply splint & refer to DHQH	Apply splint & refer to DHQH	Apply splint & refer to DHQH
5	Sprains/ strains	Refer to RHC	Refer to RHC	Refer to RHC	Treat or refer to RHC	Treat or refer to DHQH
6	For accidents	No	Refer to hospital	Assess, stabilize, refer to hospital	Assess, stabilize, refer to hospital	Assess, stabilize, refer to hospital
7	CPR	Yes	No	Yes	Yes	Yes

**Treatment of common diseases** will be discussed in section 7.



## 7 Prevention and control of locally endemic diseases

### 7.1 Management and Control of endemic communicable diseases

Infectious diseases continue to be the world's leading killer in developing countries and poor people, women, children, and the elderly are the most vulnerable. The goal is to reduce the negative impact of communicable diseases on health and social well-being as effective and cheap interventions are available for most of them.

Dealing with these diseases needs strong vector control, surveillance systems, community mobilization, involvement and capacity building and emphasis on communicable diseases in complex emergencies. Strengthening of health systems and better use of existing tools is crucial to prevent and control the following diseases, which are a major public health problem:

**Acute respiratory infections (ARI)** are the leading cause of death in young children in Pakistan, responsible for 20-30% of all child deaths under age 5 years. Community-based intervention is viable, effective and practical, however rising antimicrobial resistance among commonly used and low-cost oral agents is of significant concern. Also inadequate training of health care providers, lack of public awareness about seeking timely and appropriate care, and insufficient planning and support for ARI programmatic activities at district level are major hindrances in decreasing the burden of ARI in KP.

The WHO and UNICEF-sponsored IMNCI initiative present opportunities for early case detection and appropriate case management of ARI., Focusing on preventive strategies such as improving nutrition, reducing indoor pollution, improving mass vaccination, as well as introduction of new vaccines effective against important respiratory pathogens will likely have the most impact on reducing severe ARI and deaths from severe disease.

**Diarrhoea and dysentery:** Diarrhoea remains a leading cause of child death around the world. Two recent advances in managing diarrhoeal disease can drastically reduce the number of child deaths: (a) newly formulated ORS solution, containing lower concentrations of glucose and salts, and Zinc supplementation to decrease the duration and severity of diarrhoea and the likelihood of future diarrhoea episodes in the 2-3 months following supplementation.

Zinc is an important micronutrient for a child's overall health and development and it is lost in greater quantities during diarrhoea. Children less than 6 months of age should receive ½ tablet of 20 mg once a day for 10/14 days, while children 6 months and older should receive 1 tablet per day for 10/14 days. For infants, the tablet is dissolved in a small amount (5 ml) of expressed breastmilk, ORS, or clean water in a small spoon. Older children can chew the tablet or be given dissolved in a small amount of clean water in a small spoon. This supplementation also helps to improve the diet (Zinc supplementation in diarrhoea).

**Tuberculosis:** Pakistan ranks 7th amongst the countries with a highest burden of TB in the world. However, National Tuberculosis Programme (NTP) has achieved a remarkable and steady improvement in numbers of TB cases detected, from 11 050 in 2000 to 248 115 in 2008, and treatment success rates reached 91% in 2007. To handle this burden, TB services are integrated into the primary public health care system at district level and Directly Observed Treatment Short-course (DOTS) strategy for TB is being followed in KP

**Malaria:** Malaria is endemic in rural areas of Pakistan where there are two seasonal peaks: in August (mainly due to the milder vivax-malaria) and October (the potentially fatal falciparum-malaria). About 12% of people living in the rural areas carry malaria parasites in the blood without showing symptoms of malaria. The stagnant water bodies in the rural areas and city slums provide excellent breeding grounds for mosquitoes.



**Hepatitis B and C:** Pakistan carries one of the world's highest burdens of chronic hepatitis and mortality due to liver failure and hepatocellular carcinomas. There is a moderate to high prevalence of hepatitis B and hepatitis C in different area, and the key modes of transmission are contaminated needle use in medical care, unsafe blood and blood product transfusion and drug abuse.

**Typhoid:** Typhoid fever is a severe systemic infection caused by *Salmonella typhi* and occurs in all ages, with highest incidence especially in children. According to WHO (World Health Organization), the overall incidence of typhoid fever is 412 cases per 100,000 population per year in Pakistan<sup>4</sup>.

**Dengue fever:** This disease assumed epidemic proportion in 2010-11 in Pakistan, especially in Lahore. However, it has potential of spreading with similar or higher intensity to other provinces, including KP. Hence, it is important for health care providers to remain alert and immediately report any suspect case to higher authorities and arrange appropriate treatment or referral.

**STI and HIV:** Sexually transmitted infections (STIs) are transmitted during any type of sexual exposure, including intercourse (vaginal or anal), oral sex, and the sharing of sexual devices, such as vibrators. Although treatment exists for many STIs, however some are usually incurable, such as HIV, HPV, and Hepatitis B and C. The two most common STIs in men are gonorrhoea and syphilis.

The most effective way to prevent the spread of STDs is abstinence. Alternatively, the diligent use of latex barriers condoms, such as during vaginal or anal intercourse and oral-genital contact helps decrease the spread of many of these infections. Many STIs can be present in, and spread by, people who do not have any symptoms of the condition and have not yet been diagnosed with an STD. Therefore, public awareness and education about these infections and the methods of preventing them is important.

**Trachoma:** It is chronic bilateral follicular kerato conjunctivitis, which is highly infectious disease and its sources of infection and re infection are flies, fingers and faces with dirty secretions. Infection occurs generally in early childhood, peaking around 5-7 years of age and in adulthood leads to conjunctival scarring, trichiasis and ultimately blindness due to corneal opacification. Trachoma is associated with poverty, poor personal and community hygiene, poor healthcare and lack of clean water facilities.

**Scabies:** Scabies is a contagious skin infection caused by the microscopic mite *Sarcoptes scabiei*, that spreads rapidly in crowded conditions and is found worldwide. The principal sign of the disease is a pimple-like rash that is most commonly found on the hands, especially the webbing between the fingers, the skin folds of the wrist, elbow or knee, the penis, the breast or the shoulder. Infestation often causes intense itching all over the body, especially at night. Scratching of itchy areas results in sores that may become infected by bacteria.

**Leishmaniasis:** The disease is transmitted by the bite of the infected female sandfly, infected with one species of flagellate protozoa. Three species of leishmaniasis are endemic to Pakistan. Visceral Leishmaniasis due to *Leishmania infantum* occurs sporadically in the Northern Areas, Azad Kashmir, and neighboring parts of KP and Punjab. Zoonotic cutaneous Leishmaniasis due to *L. major* is endemic to the southwest, mainly occurring in Balochistan and neighbouring Punjab and Sindh provinces. Anthroponotic cutaneous leishmaniasis (ACL), caused by *L. tropica* and transmitted by the sandfly vector *Phlebotomus sergenti*, has the widest distribution, occurring in urban areas of southern Punjab and Balochistan, but also focally in the Northern Areas and Azad Kashmir.

**Brucellosis:** This is primarily a disease of animals in which man is an accidental host. The occupational source of exposure predisposes the farmers, shepherds, butchers, laboratory workers, veterinarians and slaughterhouse workers to a greater risk of contracting the disease through inhalation of contaminated aerosols, contact with conjunctival mucosa, or entry of the bacteria through cuts and abrasions in the skin as a result of contact with



infected animals or their products. The non-occupational sources of exposure include ingestion of infected meat, unpasteurized milk and milk products. Other routes of transmission identified are: infection through breast milk, having an infected household member, through sexual transmission, through exchange blood transfusion, and the infection contracted by an obstetrician during the delivery of a transplacentally infected baby. The MOs from RHCs in KP reported that they receive cases of Brucellosis in their centre.

**Tinea:** This is commonly referred as ringworm, which is a skin infection due to a fungus. It is often seen in PHC facilities, especially among children but it may affect people of all ages. Ringworm can affect the skin on beard (tinea barbae), body (tinea corporis), feet (tinea pedis) also called athlete's foot, groin area (tinea cruris) also called jock itch, and scalp (tinea capitis).

Ringworm spreads easily from one person to another such as by touching the person who has the infection, or by coming into contact with items contaminated by the fungus, such as combs, unwashed clothing, and shower or pool surfaces. Ringworm may also be transmitted from pets that carry the fungus. Cats are common carriers.

**Table 18: Management and Control of endemic communicable diseases by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1	<b>Respiratory problems</b>					
i	Common cold and cough	No	Yes	Yes	Yes	Yes
ii	Acute Bronchitis	No	Refer to BHU/ RHC	Yes	Yes	Yes
iii	Pneumonia	No	Refer	Refer	Yes	Yes
iv	Lower respiratory tract infections in elderly	No	No	No	Yes	Yes
2	<b>GI problems</b>					
i	Acute diarrhoea	No	Yes	Yes	Yes	Yes
ii	Chronic diarrhoea	No	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
iii	Dysentery	No	Refer to BHU/ RHC	Yes	Yes	Yes
iv	Health education about hand washing	Yes	Yes	Yes	Yes	Yes
3	<b>Control of Tuberculosis</b>					
i	Identification of suspects	No	Yes & refer to BHU/ RHC	Yes & refer to BHU/ RHC	Yes	Yes
ii	Sputum smear examination	No	No	No	Yes	Yes



#	Services	CMW	LHW	CD	BHU	RHC
iii	X-Ray for smear negative cases	No	No	No	Refer to RHC	Yes
iv	Treatment of diagnosed cases	No	Participate in DOTS	Participate in DOTS	Yes	Yes
v	TB-DOTS recording & reporting	No	Yes	Yes	Yes	Yes
vi	Screening of contacts	No	No	Yes	Yes	Yes
vii	Health education: <ul style="list-style-type: none"> <li>Identify suspects</li> <li>Get sputum test done</li> <li>TB is curable</li> <li>Treatment is free of costs</li> <li>Where TB services are available</li> </ul>	No	Yes	Yes	Yes	Yes
<b>4</b>	<b>Control of Malaria</b>					
i	Diagnosis					
a	Clinical	No	Yes	Yes	Yes	Yes
b	Laboratory	Refer to BHU/ RHC	Refer to BHU/ RHC	Refer to BHU/ RHC	Yes	Yes
ii	Treatment					
iii	Uncomplicated case	No	Yes	Yes	Yes	Yes
iv	Complicated case	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
v	Provide ITNs	Yes	No	No	No	No
vi	Health education: <ul style="list-style-type: none"> <li>Cleanliness of the surroundings</li> <li>Netting windows and doors</li> <li>Use bednets</li> </ul>	Yes	Yes	Yes	Yes	Yes
<b>5</b>	<b>Typhoid</b>					
i	Diagnosis					



#	Services	CMW	LHW	CD	BHU	RHC
	a. History	No	Yes	Yes	Yes	Yes
	b. Examination	No	Refer to RHC	Yes	Yes	Yes
	c. Laboratory	No	No	Refer to RHC	Refer to RHC	Yes
ii	Treatment	No	No	No	No	Yes
6	<b>Dengue Fever</b>					
i	Diagnosis					
	a. History	No	Yes	Yes	Yes	Yes
	b. Examination	No	No	Yes	Yes	Yes
	c. Laboratory	No	No	Refer to BHU/ RHC	Yes	Yes
ii	Treatment	No	No	No	Yes	Yes
7	<b>Skin infections</b>					
i	Common wounds/ infections	Yes	Yes	Yes	Yes	Yes
ii	Scabies	No	Yes	Yes	Yes	Yes
8	<b>Sexually Transmitted Infections</b>					
i	Diagnosis					
	a. History	Yes	Refer to RHC	Yes	Yes	Yes
	b. Examination	Refer to RHC	No	Refer to RHC	Yes	Yes
	c. Laboratory	No	No	No	Refer to RHC	Yes
ii	Treatment	No	No	No	Yes	Yes
9	<b>Hepatitis A and E</b>					
i	Diagnosis					
	a. History	Yes	Refer to RHC	Yes	Yes	Yes
	b. Examination	Refer to RHC	Refer to RHC	Yes	Yes	Yes



#	Services	CMW	LHW	CD	BHU	RHC
	c. Laboratory	No	No	No	Yes	Yes
ii	Treatment	No	No	Yes	Yes	Yes
iii	Health education on transmission of hepatitis	Yes	Yes	Yes	Yes	Yes
10	<b>Hepatitis B and C</b>					
i	Diagnosis					
	a. History	No	Refer to RHC	Refer to RHC	Yes	Yes
	b. Examination	No	Refer to RHC	Refer to RHC	Yes	Yes
	c. Laboratory	No	No	No	Refer to RHC	Yes
ii	Treatment	No	No	No	No – refer to hospital	No – refer to hospital
iii	Health education on transmission of hepatitis B and C	No	Yes	Yes	Yes	Yes
11	<b>Leishmaniasis</b>					
i	Diagnosis					
	a. History	No	Yes	Yes	Yes	Yes
	b. Examination	No	Refer to RHC	Yes	Yes	Yes
	c. Laboratory	No	No	Refer to RHC	Refer to RHC	Yes
ii	Treatment	No	No	No	No	Yes
12	<b>Brucellosis</b>					
i	Diagnosis					
	a. History	No	Yes	Yes	Yes	Yes
	b. Examination	No	Refer to RHC	Yes	Yes	Yes
	c. Laboratory	No	No	Refer to RHC	Refer to RHC	Yes
ii	Treatment	No	No	No	No	Yes



#	Services	CMW	LHW	CD	BHU	RHC
13	<b>Tinea (foot, inguinal, face, armpits, breasts)</b>					
i	Diagnosis					
	a. History	No	Refer to BHU/ RHC	Refer to BHU/ RHC	Yes	Yes
	b. Examination	No	No	No	Yes	Yes
ii	Treatment	No	No	No	Yes	Yes
14	<b>Trachoma</b>					
i	Diagnosis					
	a. History	No	Yes	Yes	Yes	Yes
	b. Examination	No	Refer to BHU/ RHC	Refer to BHU/ RHC	Yes	Yes
ii	Treatment	No	No	No	Yes	Yes
15	<b>HIV/AIDS</b>					
i	Health education on transmission of HIV/AIDS	Yes	Yes	Yes	Yes	Yes



## 7.2 Management and control of endemic non communicable diseases

According to WHO, Cardiovascular disease (CVD), cancer, respiratory disease and diabetes are the leading causes of death in low-income countries. Low income group people are most at risk of developing chronic diseases and dying prematurely, as they have higher rates of exposure to risk factors such as smoking and maternal under-nutrition. Also, poor are less likely to benefit from early detection and proper management, hence, their poverty contributes directly to the higher prevalence of NCDs and mortality rates. NCDs also restrict people from gainful employment due to frequent exacerbations of the illness. Furthermore, costly hospital health care required for dealing with heart attacks, strokes, complications of diabetes requires a lot of expenditures that are not available.

**Heart attacks and strokes** can be prevented/ delayed in hypertensive patients with regular use of antihypertensive drugs. Addition of aspirin and statins is recommended for people with 10 year cardiovascular risk > 30%. If myocardial infarction occurs then aspirin should be given in acute phase. Secondary prevention should be instituted in post myocardial and post stroke phase by emphasizing on tobacco cessation, healthy diet, regular physical activity, aspirin, angiotensin-converting enzyme inhibitor, beta blocker and statin.

For **diabetes** Type 1, daily insulin injections are necessary. In contrast, initial measures in diabetes type 2 are modification of diet, maintenance of healthy body weight and regular physical activity. If the target blood sugar levels are not achieved then hypoglycaemic agents are added. Regular visual inspections (every 3-6 months) of feet ulceration, assessment of sensations, palpation of foot pulses are important. Screening and evaluation for laser treatment for diabetic retinopathy is also required. Optimal glycaemic control is best to prevent the onset and progression of neuropathies.

For **asthma**, there are two goals in PHC: (a) providing relief of symptoms through oral or inhaled short acting B2 agonists, and (b) steroids inhalation for moderate/severe asthma to improve lung function and reduce frequency and severity of exacerbations.

In **COPD**, cessation of smoking is essential for preventing exacerbation and disease progression, while short or long acting bronchodilators are used for relief of breathlessness.

**Arthritis** is a form of joint disorder that involves inflammation of one or more joints. The most common form is osteoarthritis, which is a degenerative joint disease and results from trauma to the joint, infection of the joint, or age. Other arthritis forms are rheumatoid arthritis, psoriatic arthritis, septic arthritis and auto immune diseases. Osteoarthritis is manageable at BHU and RHC after ruling out other forms.

**Irritable Bowel Syndrome (IBS):** IBS or spastic colon is a symptom-based diagnosis characterized by chronic abdominal pain, discomfort, bloating, and alteration of bowel habits. As a functional bowel disorder, IBS has no known organic cause. Diarrhoea or constipation may predominate, or they may alternate. Previously, it was a diagnosis of exclusion, however, a diagnosis of IBS can now be made on the basis of symptoms alone, in the absence of alarm features such as age of onset greater than 50 years, weight loss, gross hematochezia, systemic signs of infection or colitis, or family history of IBS. Although there is no cure for IBS, there are treatments that attempt to relieve symptoms, including dietary adjustments, medication and psychological interventions. Patient education and a good doctor-patient relationship are important in prevention and treatment of IBS.

**Peptic Ulcer:** A peptic ulcer is the most common ulcer of an area of the gastrointestinal tract that is usually acidic and thus extremely painful. It is defined as mucosal erosions equal to or greater than 0.5 cm. As many as 70–90% of such ulcers are associated with *Helicobacter pylori*, a spiral-shaped bacterium that lives in the acidic environment of the



stomach. Ulcers can also be caused or worsened by drugs such as aspirin, ibuprofen, and other NSAIDS.

For **cancer**, the primary care physician has to be aware of the presenting features of common cancers in females and males and must refer to DHQH or tertiary care hospital where facilities for confirmation of diagnosis are available.

**Table 19: Management and control of endemic non communicable diseases by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1	<b>Hypertension</b>					
i	Diagnosis					
	a. History	Yes	Yes	Yes	Yes	Yes
	b. Examination	Yes	No	Yes	Yes	Yes
	c. Laboratory <ul style="list-style-type: none"> <li>○ Blood cholesterol</li> <li>○ Lipid profile</li> <li>○ Serum creatinine</li> </ul>	No	No	No	Refer to hospital	Refer to hospital
ii	Treatment	Refer to BHU/ RHC	Refer to BHU/ RHC	Yes	Yes	Yes
iii	Health education for control of BP and prevention of heart attack and strokes: <ul style="list-style-type: none"> <li>○ Tobacco cessation</li> <li>○ Regular physical activity 30 minutes a day</li> <li>○ Reduced salt intake &lt;5 gm per day</li> <li>○ Regular use of antihypertensive</li> <li>○ Regular use of Aspirin</li> <li>○ Weight control</li> </ul>	Yes	Yes	Yes	Yes	Yes
2	<b>Diabetes Mellitus</b>					
i	Diagnosis					
	a. History	Yes	No	Refer to BHU	Yes	Yes
	b. Examination	Refer to BHU	No	Refer to BHU	Yes	Yes
	c. Laboratory	No	No	Refer to	Yes	Yes



#	Services	CMW	LHW	CD	BHU	RHC
				BHU		
ii	Treatment	No	No	Refer to BHU	Yes	Yes
iii	Health education on:					
	a. Diet guidance	No	No	Yes	Yes	Yes
	b. Avoiding sugars	Yes	No	Yes	Yes	Yes
	c. Weight control	No	No	Yes	Yes	Yes
	d. Regular physical activity 30 minutes a day	Yes	No	Yes	Yes	Yes
	e. Regular use of oral hypoglycaemic agents/ insulin	No	No	No	Yes	Yes
iv	Prevention/early detection of foot complications	No	No	Yes	Yes	Yes
v	Screening for diabetic retinopathy	No	No	No	Refer to DHQH	Refer to DHQH
3	<b>Asthma</b>					
i	Diagnosis					
	a. History	No	Refer to BHU / RHC	Yes	Yes	Yes
	b. Examination	No	No	Yes – refer to BHU/ RHC	Yes	Yes
	c. Laboratory	No	No	No	Yes	Yes
	d. X-ray	No	No	No	Refer to RHC	Yes
ii	Treatment	No	No	No	Yes	Yes
4	<b>COPD</b>					
i	Diagnosis					
	a. History	No	Refer to BHU	Yes	Yes	Yes
	b. Examination	No	Refer to BHU	Yes – refer	Yes	Yes



#	Services	CMW	LHW	CD	BHU	RHC
	c. Laboratory	No	No	No	Refer to DHQH	Refer to DHQH
	d. X-ray	No	No	No	Refer to DHQH	Yes
ii	Treatment	No	No	No	Yes	Yes
5	<b>Cancers</b>					
i	Diagnosis					
	a. History	No	No	No	Yes	Yes
	b. Examination	No	No	No	Yes	Yes
	c. Laboratory	No	No	No	Refer to DHQH	Refer to DHQH
ii	Treatment	No	No	No	No	No
iii	Health education for breast examination	No	Yes	Yes	Yes	Yes
6	<b>Arthritis</b>					
i	Diagnosis					
	a. History	No	Refer to DHQH	Yes	Yes	Yes
	b. Examination	No	No	Refer to DHQH	Yes	Yes
	c. Laboratory	No	No	No	Refer to DHQH	Refer to DHQH
	d. X-ray	No	No	No	Refer to DHQH	Yes
ii	Treatment	No	No	No	Yes	Yes
7	<b>Irritable Bowel Syndrome</b>					
i	Diagnosis					
	a. History	No	Yes	Yes	Yes	Yes
	b. Examination	No	Refer to	Refer to	Yes	Yes



#	Services	CMW	LHW	CD	BHU	RHC
			DHQH	DHQH		
	c. Laboratory	No	No	No	Refer to DHQH	Refer to DHQH
ii	Treatment	No	No	No	No	No
8	<b>Peptic ulcer</b>					
i	Diagnosis					
	a. History	No	Yes	Yes	Yes	Yes
	b. Examination	No	Refer to DHQH	Refer to DHQH	Yes	Yes
	c. Laboratory	No	No	No	Refer to DHQH	Refer to DHQH
ii	Treatment	No	No	No	Yes or refer to DHQH	Yes or refer to DHQH



### 7.3 Disability prevention

There are several hundred people in KP with permanent disabilities as a result of movement, hearing, seeing, or mental impairments. The precise numbers are unknown but it is clear that there is a need to initiate adequate PHC services to prevent disabilities or to minimize their effects. However, the programme for people with disabilities requires a clear definition of who is disabled. The WHO definitions are:

**Impairment:** any loss or abnormality of psychological, physiological or anatomical structure or function

**Disability:** any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being

**Handicap:** is a disadvantage for a given individual, resulting from an impairment or disability that limits or prevents the fulfilment of a role that is normal (depending on age, sex, social and cultural factors) for that individual.

Prevention of disabilities begins with the primary prevention of diseases, injuries and conditions that can lead to impairments and disabilities. Secondary prevention, or treatment of diseases, injuries and potentially disabling conditions, prevents the sequelae of impairments and disabilities. Tertiary preventions include interventions to limit or compensate for impairments or disabilities. An example related to impairment is the proper positioning and movement of paralysed limbs to prevent deformities. This prevents the impairment (paralysis) from progressing to deformities, which would increase the disability. In another example, eye glasses can compensate for a visual impairment and eliminate a disability.

The suggested services at different levels of PHC are given below:

**Table 20: Disability prevention services by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1	<b>Identification/referral for</b>					
i	Visual impairment	Yes	Yes	Yes	Yes	Yes
ii	Hearing disability	Yes	Yes	Yes	Yes	Yes
iii	Orthopaedic disability	Yes	Yes	Yes	Yes	Yes
2	<b>Control of iodine deficiency</b>					
i	Identification of goitre and referral to DHQH	Yes	Yes	Yes	Yes	Yes
ii	Health education about illnesses due to iodine deficiency	Yes	Yes	Yes	Yes	Yes
3	<b>Primary eye care</b>					
i	Diagnosis and treatment of common eye diseases	No – refer to hospital	Yes	Yes	Yes	Yes
ii	Refraction Services	No – refer to	No	No	No	Yes



#	Services	CMW	LHW	CD	BHU	RHC
		hospital				
iii	Detection of cataract cases and referral for cataract surgery	No	Yes	Yes	Yes	Yes
iv	Detection of glaucoma and referral	No	Yes	Yes	Yes	Yes
4	<b>Health education on</b>					
i	Early examination of infants	Yes	Yes	Yes	Yes	Yes
ii	Dealing with disability at home	No	No	No	Yes	Yes
iii	Making life of disabled productive	No	No	No	Yes	Yes
iv	Seeking advice on physiotherapy	No	No	No	Yes	Yes



## 7.4 Mental health

Treating mental disorder as early as possible, holistically and close to the person's home and community lead to the best health outcome. Services at PHC level include early identification of mental disorders, treatment of common mental disorders, management of stable psychiatric patients, referral to other levels where required, attention to the mental health needs of people with physical health problems, and mental health promotion and prevention.

Certain skills and competencies are required to effectively assess, diagnose, treat, support and refer people with mental disorders; it is essential that primary care workers are adequately prepared and supported in their mental health work.

In-service training should provide basic education on the epidemiology, identification, and treatment of major mental disorders. Relationships between mental and physical health and illness should also be highlighted. Health care providers (HCPs) should be taught how to discuss information with patients and families in a patient-centred and positive manner, how to negotiate treatment plans, and how to motivate and prepare patients to self-manage and follow their treatment plans at home. Communication skills are indispensable for all primary care workers, as health outcomes depend on a good patient–health worker relationship. As such, HCPs should be taught how to actively listen, show empathy, use open and closed questioning techniques, and manage their nonverbal communication.

The advantages for integrating mental health services into PHC are: (a) better acceptability as it reduces stigma for people with mental disorders and for their families, (b) improves access to mental health services and treatment of co-morbid physical conditions like cancer, diabetes, tuberculosis, etc., (c) improves detection, (d) improves follow-up, (e) social integration is maintained resulting in better chances of recovery, (f) both direct and indirect costs are greatly reduced.

**Table 21: Mental health services by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1	Attention deficit disorder	No	No	No	Refer to DHQH	Refer to DHQH
2	Generalized anxiety disorder	No	No	Identify and refer	Yes	Yes
3	Obsessive compulsive disorder	No	No	No	Refer to DHQH	Refer to DHQH
4	Panic disorder	No	No	No	Refer to DHQH	Refer to DHQH
5	Bipolar disorder	No	No	No	Refer to DHQH	Refer to DHQH
6	Depression	No	No	Identify and refer	Yes	Yes
7	Schizophrenia	No	No	No	Refer to DHQH	Refer to DHQH



#	Services	CMW	LHW	CD	BHU	RHC
8	Alcohol abuse and dependence	No	No	Identify and refer to DHQH	Refer to DHQH	Refer to DHQH
9	Drug abuse	No	No	Identify and refer to DHQH	Refer to DHQH	Refer to DHQH

## 7.5 Oral health

Oral health is essential to general health and quality of life. It is a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual's capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing.

The most common oral diseases are dental cavities, periodontal (gum) disease, oral cancer, oral infectious diseases, trauma from injuries, and hereditary lesions. Severe periodontal (gum) disease, which may result in tooth loss, is found in 15–20% of middle-aged (35–44 years) adults. Worldwide, 60–90% of school children and nearly 100% of adults have dental cavities.

**Table 22: Oral health services by type of facility**

#	Services	CMW	LHW	CD	BHU	RHC
1	Tooth extraction	No	No	No	No	Yes
2	Scaling	No	No	No	No	Yes
3	Filling	No	No	No	No	Yes
4	Management of gingivitis and oral ailments	No	No	No	Yes	Yes
5	Health education on oral hygiene	No	Yes	Yes	Yes	Yes

## A. Infrastructure

### For Health House of LHW:

The LHW house is designated as a Health House. She is advised to establish a corner in the house where she can give counselling or treat minor illnesses in privacy. If possible, this place should display relevant posters. She is provided with the necessary material equipment and registers for recording her performance. These are to be safely stored in a separate cupboard.



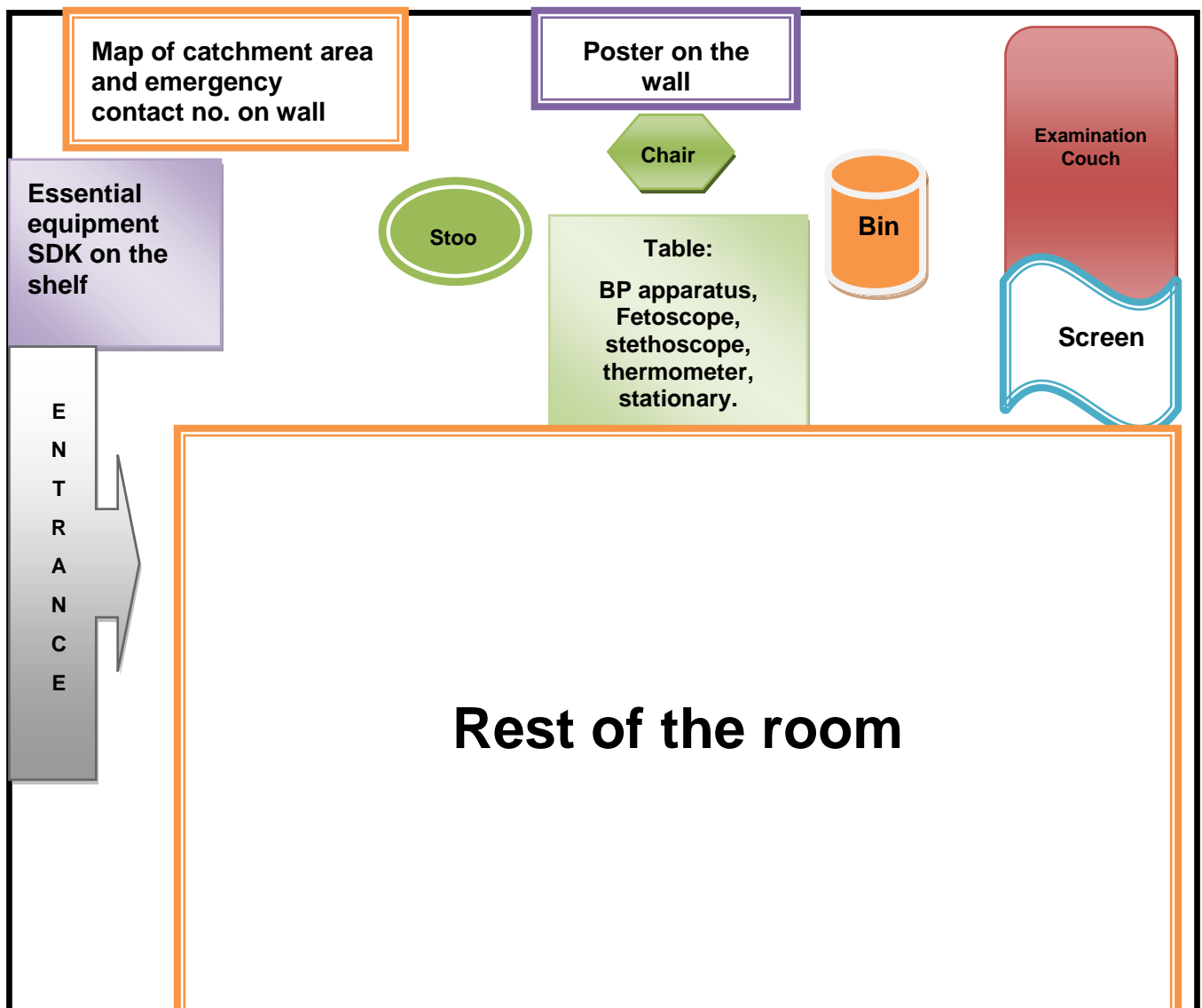
### For Work Station of CMW:

A room in the house of CMW will be her Work Station, which is a place where pregnant mothers will contact a CMW for consultation and examination. Please note that this will not be a Birthing Station as MNCH Programme promotes safe delivery at mothers' home. The programme intends to gradually replace TBAs with trained CMWs, and it is very important that they compete with TBAs for the socially acceptable practices for the place of birth without compromising the quality.

A CMW needs a small place of not more than 4x6 feet in a room near the exit door in her house for establishing her Working Station. The need and importance of a Work Station should be mentioned to CMWs during their training so that she and her family are well prepared to make some arrangement. This is also very important that choice of the corner for Work Station should be made without disturbing family's privacy. MNCH Programme will provide an examination couch to place there for ANC and PNC check-ups. CMW will keep her equipment, medicines and supplies in a secured corner. A suggested layout of a typical Work Station is presented on the next page:

The CMW will also hang a poster on the most prominent wall of her work station highlighting her catchment population, its indicators for maternal and child health, list of danger signs during pregnancy, list of do's and don'ts for her, and the most appropriate facilities for referral for different situations and needs

CMW will hang a signboard of 3x4 feet on the wall above the front door of her house. The board provided by the NMNCH Programme will be made up of tin and colour pink. The board will display her name, qualifications, affiliation with government, and a very brief summary of the services she provides. Her telephone number may also be mentioned.





**For Community Dispensary:**

The infrastructure of CDs already exists. However, a more ideal infrastructure is being proposed, which could be used for the constructions of the new facilities or when renovation of the old facilities is being carried out. Some features could be added in the current facilities wherever feasible, depending on the available resources, such as power supply back up.

**Location:** It should be located in an easily accessible area. The area chosen should have the facility for electricity, all weather road communication, adequate water supply, telephone. The building should be well lit and ventilated with as much use of natural light and ventilation as possible.

**Nomenclature:** Appropriate names in local languages should be given to various types of facilities, instead of CD. The building should have a prominent board displaying the name of the Centre in the local language.

**Compound:** The area should have a rubbish pit for disposal of refuse and medical waste. The surroundings should be kept clean with no water-logging in and around the centre and vector breeding places.

**Entrance:** It should be well-lit and ventilated with space for Registration and record room, drug dispensing room, and waiting area for patients. A poster with listed services, their prices and operation timings should be displayed in a prominent place. The text should be in an understandable format, e/g/ local or national language.

**Waiting area:** This should have adequate space and seating arrangements for waiting clients / patients. It should protect clients/patients from the sun, rain and extremes of temperature.

The walls should carry posters imparting health education. Booklets / leaflets may be provided in the waiting area for the same purpose.

**Toilets:** Latrines or toilets should exist within the facility or facility compound.

**Safe water supply:** Running water (pipe) should be available within the facility. Safe drinking water should be available in the facility.

**Examination rooms:** Two examination rooms should be available, one for pharmacy technician and other for LHV. Examinations should be held behind curtains/ screens to ensure the privacy of patients/ clients.

**Dressing Room/Injection Room/Vaccination Room:** This should be well equipped with all the emergency drugs, instruments and vaccines.

**Storage area:** Separate area for storage of sterile and common linen and other materials/ drugs/ consumable etc. should be provided with adequate storage space. The area should be well-lit and ventilated and should be rodent/pest free.

**For Basic Health Unit and Rural Health Centre:**

The infrastructure of BHUs and RHCs already exist. However, a more ideal infrastructure is being proposed, which could be used for the constructions of the new facilities or when renovation of the old facilities is being carried out. Some minor features could be added in the current facilities, wherever feasible, depending on the available resources.

**Location:** It should be located in an easily accessible area. The area chosen should have the facility for electricity, all weather road communication, adequate water supply, telephone. The building should be well lit and ventilated with as much use of natural light and ventilation as possible.



**Nomenclature:** Appropriate names in local languages should be given to various types of facilities, instead of CD, BHU and RHC. The building should have a prominent board displaying the name of the Centre in the local language.

**Compound:** The facility compound should have boundary wall with gate and should be clean. The area should have a rubbish pit for disposal of refuse and medical waste. The surroundings should be kept clean with no water-logging in and around the centre and vector breeding places.

**Entrance:** It should be well-lit and ventilated with space for Registration and record room, drug dispensing room, and waiting area for patients. The doorway leading to the entrance should also have a ramp facilitating easy access for handicapped patients, wheel chairs, stretchers etc.

A poster with listed services, opening times and emergency contacts during closing times should be displayed in a prominent place where the clients/ patients can see it. The text should be in an understandable format, e/g/ local or national language.

**Waiting area:** This should have adequate space and seating arrangements for waiting clients / patients. It should protect clients/patients from the sun, rain and extremes of temperature. There should designated separate male and female waiting areas with chairs or other seating arrangements. The walls and ceilings should be intact with no broken masonry and are free from dirt and stains. The floor should be clean of debris/trash.

The walls should carry posters imparting health education. Booklets / leaflets may be provided in the waiting area for the same purpose.

A list with all fees and possible exemptions should be displayed in a prominent area where the clients/patients can see it. The text should be in an understandable format, e/g/ local or national language.

A locked complaint / suggestion box should be provided and it should be ensured that the complaints/suggestions are looked into at regular intervals and the complaints are addressed.

**Toilets:** Latrines or toilets should exist within the facility or facility compound. Staff and clients/patients/attendants have access to separate latrines or toilets. There should be separate and clean toilets for men and women.

**Safe water supply:** Running water (pipe) should be available within the facility or there is a tank within the facility or there is a protected water source within 200 metres of the facility (borehole, water tank, protected spring) and temporary storage container e.g. jerry cans or drums should be available. Safe drinking water should be available in the facility.

**Examination rooms:** Separate examination rooms should be available and consultations and examinations are held behind curtains/ screens to ensure the privacy of patients/ clients.

**Wards:** In RHCs, there should be 5 beds wards for males and females separately that have the necessary furniture, as described earlier. Clean linen should be provided and cleanliness should be ensured at all times. Cooking should not be allowed inside the wards for admitted patients. A suitable arrangement for provision of nutritious and hygienic food at reasonable rates should be made wherever feasible and possible.

**Operation Theatre:** In RHCs, to facilitate conducting selected surgical procedures. It should have a changing room, sterilization area operating area and washing area. Separate facilities for storing of sterile and unsterile equipment /instruments should be available in the OT. The OT should be well-equipped with all the necessary accessories and equipment

**Labour Room:** The LR should be well-lit and ventilated with an attached toilet and drinking water facilities and should have designated place for newborn care.



**Dressing Room/Injection Room:** This should be well equipped with all the emergency drugs and instruments.

**Laboratory:** Sufficient space with workbenches and separate area for collection and screening should be available. Should have marble/stone table top for platform and wash basins.

**General Store:** Separate area for storage of sterile and common linen and other materials/ drugs/ consumable etc. should be provided with adequate storage space. The area should be well-lit and ventilated and should be rodent/pest free.

Besides the above, the health facility should have

- Dispensing cum store area
- Vaccine storage and immunisation area
- BCC and family planning counsel area
- Office room
- Utility room for dirty linen and used items

**Laundry:** RHC should have its own arrangement for safe washing of bed linen, blankets, and sheets used in different areas.

**Decent Residential Accommodation** with all the amenities, like 24-hrs water supply, electricity, etc. should be available for medical officers, paramedical staff, support staff in RHCs, and for peon/*chowkidar* at BHUs.

**Other Amenities:**

- Electricity with generator + POL back-up or generation of solar energy
- Adequate water supply
- Telephone: at least one direct line

Wherever possible garden should be developed



## B. Human Resource

CMWs and LHWs work as individuals in the communities or their established centres (birthing station for CMWs and health houses for LHWs). Therefore, human resource requirement for CD, BHU and RHC is being proposed.

The human resource requirements are being projected based on the basis of maximum:

- 6-7 patients per hour per doctor
- 5 patients per hour per LHV
- 8-10 patients per hour per CD

These projections should be viewed in a dynamic process such that if the utilisation goes up, the manpower would be increased accordingly.

**Table 23: Type and number of health workers in CD**

#	Type of Health Worker	Proposed posts
1	Pharmacy technician/Dispenser	1
2	LHV	1
3	EPI Technician	1
4	Chowkidar/orderly	1
5	Behishti cum sweeper	1

**Table 24: Type and number of health workers in BHU**

#	Type of Health Worker	Proposed posts
1	Medical Officer (male or female)	1
2	LHV	1
3	PHC technician/ Medical technician/dispenser (pharmacy + dressings)	2
4	Laboratory technician	1
5	EPI technician	1
6	Health Educator	0
7	Dai	1
8	Computer operator	1
9	Orderly	1
10	Chowkidar	1
11	Cleaner	1



**Table 25: Type and number of health workers in RHC**

#	Type of Health Worker	Proposed posts
1.	Male Medical Officer	3 (2 morning + 1 evening)
2.	Woman Medical Officer	1 (morning)
3.	Nurse	3 (8 hourly shift)
4.	LHV	3 (8 hourly shift)
5.	Health Educator	1 (morning)
6.	Medical Technician (pharmacy + dressing)	3 (2 morning + 1 evening)
7.	EPI Technician	2 (1centre + 1 outreach)
8.	Laboratory technician	2 (1 morning + 1 evening)
9.	X Ray technician	2 (1 morning + 1 evening)
10.	Optician	1 (morning)
11.	Dai	2 (1 morning + 1 evening)
12.	Dental Surgeon	1 (morning)
13.	Dental technicians	1 (morning)
14.	Computer Operator	1 (morning)
15.	Ambulance driver	2 (1 morning + 1 evening)
16.	Peons	2 (1 morning + 1 evening)
17.	Sweeper	2 (1 morning + 1 evening)
18.	Gardner	1
19.	Chowkidar	2
20.	Washerman	1



## C. Equipment and supplies

### C.1 Equipment and supplies for LHWs

**Table 26: Items required for LHW Health House**

#	Items	Life of items
1.	Salter Scale	1 for three years
2.	Six Type Charts	1 set for 2 years
3.	LHW Kit	1 kit for 3 years
4.	Health House Board	1 board for 3 years
5.	Identity Card	One year/subject to conditions

**Table 27: Items in LHW Kit per LHW per month**

#	Items	No.
1.	Paracetamol Tablets	200 tablets
2.	Paracetamol Syrup	10 bottles
3.	Chloroquine Tablets 150 mg	100 tablets
4.	Chloroquine Syrup 50 mg/5 ml	5 bottles
5.	Iron + Folic tablets	1000 tablets
6.	Antiseptic lotion	1 bottle
7.	Amoxyciline Suspension 125 mg	5 bottles
8.	Polyfax eye ointment	10 tubes
9.	Vitamin B Syrup	7 bottles
10.	B.B. Lotion	2 bottles
11.	Sticking Plaster	1 roll
12.	Mabendazole Tablets	100 tablets
13.	Cotton Roll	1 roll
14.	Cotton Bandage	1 roll
15.	Piperazine syrup	5 bottles
16.	ORS	20 sachets
17.	Zinc Sulphate Susp	7 bottles
18.	Thermometers	1 each per year
19.	Scissors	1 for two years
20.	Pencil Torch	1 for 6 months
21.	Condoms	100 pcs per month
22.	Oral Pills	10 cycles/month
23.	Depo Injection with syringe	3 injections/month
24.	Health education material	
25.	Data recording and reporting instruments	



## C.2 Equipment and supplies for CMWs

**Table 28: List of equipment for CMWs**

#	Items	No.
1.	Office table	1
2.	Office chair	1
3.	Client stool	1
4.	Examination couch	1
5.	Delivery table	1
6.	Safety box with syringe cutting machine	1
7.	Steriliser (electric 12x16)	1
8.	Vacuum extraction equipment	1
9.	Baby ambubag	1
10.	Screen	1
11.	Fetoscope	1
12.	BP apparatus	1
13.	Thermometer	1
14.	Stethoscope	1
15.	Baby weighing machine	1
16.	Weighing machine adult	1
17.	Measuring tape	2
18.	Delivery items (Forcep, Sponge Forcep, Kidney Tray, Steel Bowl, Speculum, Infusion with set, I/V Cannula)	1
19.	Equipment required for episiotomies	1
20.	Kit box steel	1
21.	Signboard	1

**Table 29: List of medicines and supplies, with estimated 20 clients per month per CMW**

#	Items	No.
1.	Disposable delivery kit	50
2.	Lignocaine 2%	1
3.	Suture material	
4.	Urine Dipsticks	Container of 50/100
5.	Hemoglobinometer	1
6.	Kit for blood grouping	
7.	Plastic sheet	1
8.	Partograph chart	1
9.	Urinary catheters 12G 1x use	3
10.	Amoxicillin tablets (250 & 500 mg) Cefaclor ( <b>Velosef</b> ) if allergic to penicillin	80 20
11.	Metronidazole tablets (200 & 400 mg)	200 each
12.	IV fluid Normal Saline or Ringers lactate IL	40
13.	Injection Magnesium Sulphate	4



#	Items	No.
14.	Tablet Misoprostal 200 mcg	20
15.	Tablet Paracetamol/Mefenamic acid	100
16.	Pyodine Antiseptic solution	2
17.	Injection Oxytocin required for AMSTL	20
18.	Disposable syringes 5cc	100
19.	Iron, Folic acid (tablets)	3600
20.	Vitamin A (capsule)	20
21.	Contraceptives (Condoms, Pills, IUCD)	
22.	IUCD Insertion Kit	
23.	Mebendazole 500 mg	20
24.	Cannula (18 and 20 size)	10
25.	Cotton roll (400g)	1
26.	Antifungal vaginal tablets with applicator	20
27.	Baby blanket	2
28.	Gloves	
29.	Health education materials	
30.	Data recording and reporting instruments	

### C.3 List of equipment and supplies for CD, BHU and RHC

Table 30: List of equipment proposed for CD, BHU and RHC

#	Items	CD	BHU	RHC
<b>1. OPD</b>				
1.	Stethoscope	2	2	7
2.	B. P. apparatus (mercury)	2	2	4
3.	Clinical thermometer	12	12	48
4.	Examination torch	2	2	4
5.	Tongue depressor disposable	-	-	-
6.	ENT diagnostic set	2	2	4
7.	Examination couch	2	2	3
8.	Linen sheets for couch/beds	10	10	40
9.	Revolving stool	2	2	3
10.	ORS measuring jug	1	2	4
11.	ORS feeding containers and spoons	6	10	20
12.	Tape measure for nutrition assessment	1	2	3
13.	Baby weighing machine	1	1	2
14.	Weighing scale for adults	1	1	2
15.	Tuning fork	0	2	3
16.	Patella hammer	0	2	3
17.	Scissors	2	2	-
18.	Dressing trays	1	1	-
19.	Dressing scissors	1	1	-
20.	Kidney tray- large size	2	2	-
21.	Bowl large size	2	2	-
22.	Dressing drum	1	1	-
23.	Sterilizer	1	1	-



#	Items	CD	BHU	RHC
24.	IV drip stand	1	2	-
25.	Needle holder forceps	2	2	-
26.	Artery forceps straight	2	2	-
27.	Artery forceps curved	2	2	-
28.	Screen four fold	2	2	-
29.	Oxygen gas cylinder	0	?	-
30.	Tissue forceps – plain	0	2	-
31.	Tissue forceps – toothed	0	2	-
32.	Vision testing chart	1	1	-
33.	Cold box refrigerator for EPI	1	1	-
34.	Vaccine carrier and ice pack	0	2 + 6	-
35.	Breast pumps	1	1	-
36.	Stretcher	0	1	-
37.	Wheel chair	0	0	1
38.	Scalpel handle and blades	2	2	-
39.	Tourniquet	2	2	-
40.	Suturing silk	-	-	-
41.	Nebulizer	0	2	-
42.	Observation beds	0	2	-
43.	Pillows	0	4	-
44.	Blankets	0	4	
<b>2. In All Areas</b>				
1.	Running water	6 hours	6 hours	24 hours
2.	Soaps			
3.	Sinks/ basins			
4.	Alcohol and glycerine for handrub			
5.	Antiseptic solution			
6.	Detergent			
7.	Disinfectant (5% hypochlorite solution – common bleach)			
8.	Latex gloves			
9.	Utility gloves			
10.	Masks surgical			
11.	Masks N95			
12.	Eye wear			
13.	Head cover/ cap			
14.	Footwear (closed shoes)			
15.	Aprons/ Macintosh			
16.	Gowns (non-sterile and sterile in OT)			
17.	Puncture resistant sharp containers			
18.	Mops for cleaning	3	4	12
19.	Buckets for cleaning	3	4	6
20.	Green/white/blue buckets (non-infectious waste)	4	4	8
21.	Red buckets (infectious waste)	4	4	8
22.	Plastic bags – green/white/blue			
23.	Plastic bags – red			
24.	Fluid proof laundry bags			
25.	Ambubag for infant, child and adult	0		
26.	Pedal suction machine (electric?)	0		
27.	Relevant posters			



#	Items	CD	BHU	RHC
<b>3. Ward</b>				
1.	Bed with side table/locker	-	-	10
2.	Foot steps	-	-	10
3.	Baby cots	-	-	4
4.	Patient trolley	-	-	1
5.	Oxygen gas cylinder	-	-	2
6.	Nebulizer + Masks	-	-	1
7.	Peak flow meter	-	-	1
8.	Spacers for inhalers	-	-	2
9.	Bedding clothing	-	-	20
i.	Foam pillows	-	-	20
ii.	Bed sheets	-	-	40
iii.	Vinyl sheets (rexine)	-	-	12
iv.	Foam mattress	-	-	20
v.	Adult blankets	-	-	20
vi.	Baby blankets	-	-	8
10.	Plastic chairs (for in-patient attendants)	-	-	10
11.	Benches for patient attendants	-	-	10
12.	Radiant warmer/heater for newborn	-	-	1
<b>4. Labour Room</b>				
1.	Running water	-	6 hours	24-hour
2.	Availability of Hot water	-	6 hours	24-hour
3.	An area earmarked for new-born care	-	Yes	Yes
4.	Labour /Delivery Table	-	1	1
5.	Macintosh	-	4	8
6.	Shadowless Lamps	-	1	1
7.	Normal delivery set	-	2	4
8.	E&C set	-	0	2
9.	Equipment for assisted vacuum delivery	-	0	1
10.	Valsellum uterine forceps	-	0	2
11.	Standard surgical set (for minor procedures like episiotomies stitching)	-	2	4
12.	Equipment for Manual Vacuum Aspiration	-	1	1
13.	Emergency drug tray with inj. Oxytocin, Inj. Diazepam, Tab. Nifedepine, Magnesium sulphate, Inj. Lignocaine hydrochloride, Inj. Methyl ergometrine maleate, misoprostol, Sterilised cotton and gauze	-	1	1
14.	Baby resuscitation apparatus.	-	1	1
15.	Feotoscope	-	1	1
16.	Mucus extractor with suction tube and a foot operated suction machine	-	1	1
17.	Neonatal resuscitation trolley	-	1	1
18.	Radiant warmer /Heater for newborn baby	-	1	1
19.	Cusco's vaginal speculum (each of	-	2	8



#	Items	CD	BHU	RHC
	small, medium and large size)			
20.	Sim's vaginal speculum – single & double ended - (each of small, medium and large size)	-	2	8
21.	Disposable vaginal speculum	-		
22.	Anterior Vaginal wall retractor	-	0	2
23.	Chittle forceps	-	0	2
24.	Ayre's spatula	-	0	2
25.	<b>For family planning</b>			
i.	IUD insertion kit	-	1	1
<b>5.Vaccine storage</b>				
1.	ILR/Deep Freezer	-	1	1
2.	Ice box	-	1	1
3.	Ice packs	-	10	10
<b>6. Laboratory</b>				
1.	Sputum and blood specimen bottles	-		
2.	Centrifuge (bench top)	-	1	1
3.	Centrifuge machine	-	1	1
4.	Stop watch	-	1	2
5.	Refrigerator	-	1	1
6.	Binocular microscope	-	1	1
7.	Urine meter.	-	1	1
8.	Calorie metre for Hb estimation	-	1	1
9.	DLC counter	-	1	1
10.	Haemocytometer	-	1	2
11.	ESR Racks.	-	1	2
12.	ESR Pipettes	-	1	2
13.	Water Bath	-	1	1
14.	Glass rods	-	2	4
15.	Glass slides	-		
16.	Cover slips	-		
17.	Centrifuge Tubes(Plastic)	-	6	12
18.	Centrifuge Tubes (Glass)	-	6	12
19.	Glass Pipettes various sizes corrected	-	6	12
20.	Jester Pipettes Fixed -various sizes	-	0	2
21.	Jester pipettes adjustable- various sizes	-	0	2
22.	Test tubes	-	10	20
23.	Pipette stands	-	1	2
24.	Sahli Haemoglobinometer	-	1	1
25.	Table lamp.	-	1	1
26.	Lancets (pack)	-	2	6
27.	Tube Sealer.	-		1
28.	Blood Grouping Viewing Box.	-		1
29.	Surgical Blades.	-		
30.	Test Tube Holder.	-	2	4
31.	Reagent Bottles.	-	4	4
32.	Gas Burner.	-	1	1
33.	Stainless Steel Test Tube Racks.	-	1	1
34.	Glucometer	-	1	1



#	Items	CD	BHU	RHC
<b>7. Dental unit</b>				
1.	Dental unit (complete with chair, light, hand piece unit with hand pieces, suction and compressor	-	-	1
2.	Dental hand instruments (set)	-	-	2
3.	Aseptic Trolley	-	-	1
4.	Dental Autoclave	-	-	1
5.	Amalgamator ?	-	-	1
6.	Dental X-ray unit	-	-	1
7.	Intraoral X-ray film processor	-	-	1
8.	X-ray view box	-	-	1
9.	Lead apron	-	-	1
10.	Ultrasonic scaler	-	-	1
11.	Dental operating stool	-	-	1
<b>8. Operation Theatre</b>				
1.	Operation table	-	-	1
2.	Shadowless Lamps	-	-	1
3.	Macintosh	-	-	4
4.	Patients Trolley	-	-	1
5.	Oxygen Cylinder (large size with regulator)	-	-	2
6.	Instruments Trolley	-	-	1
7.	Dressing Drum( large size)	-	-	2
8.	Stand for Dressing.	-	-	2
9.	Scissors	-	-	4
10.	Dressing trays	-	-	2
11.	Dressing scissors	-	-	2
12.	Kidney tray- large size	-	-	4
13.	Bowl large size	-	-	4
14.	Sterilizer	-	-	1
15.	Needle holder forceps	-	-	4
16.	Artery forceps straight	-	-	2
17.	Artery forceps curved	-	-	2
18.	Tissue forceps – plain	-	-	4
19.	Tissue forceps – toothed	-	-	4
20.	Scalpel handle and blades	-	-	4
21.	Tourniquet	-	-	4
22.	Suturing silk	-	-	4
23.	McGill Forceps	-	-	2
24.	Basin	-	-	2
25.	Basin Stands.	-	-	2
26.	Towel Clips.	-	-	
27.	BP Handle	-	-	2
28.	BP Blades	-	-	
29.	Dissecting Forceps (plain)	-	-	2
30.	Needle Holder(large size)	-	-	2
31.	Sponge Holding Forceps( large size)	-	-	2
32.	Metallic Catheter (1-12)	-	-	2
33.	Nose Speculum.	-	-	2
34.	Proctoscope.	-	-	2
35.	Arm Splint Different sizes.	-	-	6
36.	Instruments Cabinet Large size.	-	-	1



#	Items	CD	BHU	RHC
37.	Spot Light	-	-	1
38.	Nail Brush	-	-	2
39.	Thermometer	-	-	
40.	Container for thermometer.	-	-	
41.	Stand for Drip	-	-	1
42.	Bucket El.	-	-	1
43.	Aircushion Rubber	-	-	2
44.	Hot Water Bottles	-	-	10
45.	Stomach Tube.	-	-	2
46.	Urine Collecting Bags.	-	-	
47.	Instrument trolley	-	-	1
<b>9. Equipment for eye care and vision testing</b>				
1.	Directophthalmoscope	-	-	1
2.	Illuminated vision testing drum	-	-	1
3.	Trial lens sets with trial frames	-	-	1
4.	Snellen and near vision charts	-	-	1
5.	Battery operated torch	-	-	1
<b>9. Furniture</b>				
1.	Office Table with 3 Drawers	3	4	7
2.	Office Chairs	3	4	7
3.	Office Rack Wooden	3	4	7
4.	Patient's stool	2	3	5
5.	Bench fibre glass	2	2	4
6.	Steel Almirah	3	6	8
<b>10. Others</b>				
1.	Pressure cooker autoclaves	1	-	-
2.	Autoclaves	-	1	1
3.	Electricity supply with backup facility (generator with POL)/ UPS or inverter/ Solar panel	6 hours	6 hours	24 hours
4.	Computer with accessories, including internet access	0	1	1
5.	Fans	5	6	14
6.	Tube lights			
7.	Basins	4	4	6
8.	Gas stove/ cylinder	1	1	1
9.	Ambulance	0	0	1
10.	Pressure cooker	1	1	1
<b>11. X-ray room</b>				
1.	X-ray unit	0	0	1
<b>12. Incinerator</b>				
1.	Incinerator	0	0	1
<b>12. Health education material</b>				
1.	Health education material			
<b>13. Registers and forms</b>				
1.	Data recording and reporting instruments			



## D. Essential drugs, vaccines and supplies by type of facility

**Table 31: List of essential drugs by type of facility**

#	Therapeutic category (generic name)	Description	CD	BHU	RHC
<b>1.</b>	<b>Analgesics, antipyretics, non-steroidal anti-inflammatory drugs</b>				
<b>i.</b>	<b>Non –opioids</b>				
a.	Acetyl salicylic acid (aspirin)	Tablet 500mg	Yes	Yes	Yes
b.	Acetaminophin (paracetamol)	Tablet, 500 mg Strip/blister	Yes	Yes	Yes
c.	Acetaminophin (paracetamol)	Syrup, 125 mg /5 ml	Yes	Yes	Yes
d.	Acetaminophin (paracetamol)	Suppository 100 mg	No	No	Yes
e.	Ibuprofen	Tablets 400mg Strip/blister	Yes	Yes	Yes
f.	Ibuprofen	Syrup 200mg/5ml	Yes	Yes	Yes
g.	Diclofenac Sodium	Tab. 50mg and 75 mg	Yes	Yes	Yes
h.	Diclofenac Sodium	Injection 75mg/3ml	No	Yes	Yes
i.	Tremadol	Inj. 100 mg	No	No	Yes
<b>2.</b>	<b>Antibacterial drugs/ Antiprotozoal</b>				
i.	Amoxicillin	Capsule 250 mg (anhydrous) Strip/blister	Yes	Yes	Yes
ii.	Amoxicillin	Powder for oral suspension, 125 mg/5ml	Yes	Yes	Yes
iii.	Amoxicillin + Clavulanic acid	Tablet 500 mg + 125 mg	Yes	Yes	Yes
iv.	Amoxicillin + Clavulanic acid	Syp. 125 + 31.25	Yes	Yes	Yes
v.	Sulfamethoxazole + Trimethoprim	Tablet, 400 mg + 80mg strip/blister	Yes	Yes	Yes
vi.	Sulfamethoxazole + Trimethoprim	Oral suspension 200mg+40mg/5ml	Yes	Yes	Yes
vii.	Doxycycline	Cap. 100mg	Yes	Yes	Yes
viii.	Tetracycline	Capsules 250 mg	No	Yes	Yes
ix.	Erythromycin	Tab. 250mg	Yes	Yes	Yes
x.	Erythromycin	Suspension 200mg/5ml	Yes	Yes	Yes



#	Therapeutic category (generic name)	Description	CD	BHU	RHC
xi.	Ceftriaxone	Inj. 250mg and 500mg	No	No	Yes
xii.	Ampicillin	Inj.250mg	No	No	Yes
xiii.	Ciprofloxacin	Tab. 500mg	Yes	Yes	Yes
xiv.	Neomycin + Bacitracin	Ointment 5 mg + 500 IU	Yes	Yes	Yes
xv.	Nalidixic Acid	Tablets 250 mg, 500 mg	Yes	Yes	Yes
xvi.	Norfloxacin	Tablets 400 mg	No	No	Yes
xvii.	Metronidazole	Tablet, 400 mg Strip/blister	Yes	Yes	Yes
xviii.	Metronidazole	Oral suspension, 200 mg (as benzoate)/5 ml	Yes	Yes	Yes
xix.	Diloxanide Furoate	Tablets 500 mg	No	Yes	Yes
xx.	Tinidazole	Tablets 500 mg	No	Yes	Yes
<b>3.</b>	<b>Antiallergics and drugs used in anaphylaxis</b>				
i.	Chlorpheniramine	Tablet , 4 mg Strip/blister	Yes	Yes	Yes
ii.	Chlorpheniramine	Syrup ,2 mg /5 ml	Yes	Yes	Yes
iii.	Dexamethasone	Inj. 4mg/ml	Yes	Yes	Yes
iv.	Hydrocortisone	Powder for inj.250mg (assodium succinate )in vial	No	Yes	Yes
v.	Hydrocortisone	Powder for injection , 100mg(as sodium succinate )in vial	No	Yes	Yes
vi.	Adrenaline	Inj. 1mg/ml	No	Yes	Yes
<b>4.</b>	<b>Oxytocics</b>				
i.	Oxytocin	Inj. 10IU/ml	Yes	Yes	Yes
ii.	Ergometrine	Inj. 200mcg/ml	Yes	Yes	Yes
iii.	Misoprostol	Tab. 200mcg	No	Yes	Yes
<b>5.</b>	<b>Hormone replacements (menopausal)</b>				
i.	Oestradiol	Tab. 0.5mg	No	Yes	Yes
ii.	Medroxyprogesterone	Tab. 5mg	No	Yes	Yes
<b>6.</b>	<b>Contraceptives</b>				
i.	Norethisterone enantate (8 weekly)	Inj. 200mg/ml	Yes	Yes	Yes



#	Therapeutic category (generic name)	Description	CD	BHU	RHC
ii.	Medroxyprogesterone acetate (12 weekly)	Inj. 150mg	Yes	Yes	Yes
iii.	Norethisterone + ethinyl oestradiol	Tab. 1mg + 35mcg	Yes	Yes	Yes
iv.	Levonorgestrel + ethinyl oestradiol	Tab. 150mg + 30mg	Yes	Yes	Yes
<b>7.</b>	<b>Contraceptive emergency</b>				
i.	Levonorgestrel	Tab 30mcg, 750mcg, 1.5mg	Yes	Yes	Yes
<b>8.</b>	<b>Oral Rehydration</b>				
i.	Oral rehydration salt, glucose-salt solution	Dry mixture(WHO formula) in sachet for 1 liter of soln.	Yes	Yes	Yes
ii.	Oral rehydration salt, glucose-salt solution	Dry mixture (reduceosmolarity / glucose 75 meq/ 1, Sodium 75 meq / 1, Chloride 65 meq / 1, Potassium 20 meq/ 1, Citrate 10 meq / 1) in sachet for 1 liter of solution	Yes	Yes	Yes
iii.	Zinc sulphate	Tab 20mg	Yes	Yes	Yes
iv.	Zinc sulphate	Syp	Yes	Yes	Yes
<b>9.</b>	<b>Parasitic Infections</b>				
i.	Mebendazole	Tablet, 100 mg Strip/blister	Yes	Yes	Yes
ii.	Mebendazole	Syp 100mg/5ml in 30ml	Yes	Yes	Yes
iii.	Albendazole	Tab 400mg	No	Yes	Yes
iv.	Meglumine antimonite, and sodium stibogluconate	Inj 333 mg	No	Yes	Yes
<b>10.</b>	<b>Antimalarial (Malaria Control Program)</b>				
i.	Chloroquine	Tablet, 150 mg (as phosphate or sulfate) Strip/blister	Yes	Yes	Yes
ii.	Chloroquine	Syrup, 50 mg/5ml (as phosphate or sulphate)	Yes	Yes	Yes
iii.	Sulfadoxin+Pyrimethamine	Tab. Sulfadoxin500mg+ Pyrimethamine25mg	Yes	Yes	Yes
iv.	Sulfadoxin+Pyrimethamine	Syp. Sulfadoxin500mg+ Pyrimethamine25mg/5ml	Yes	Yes	Yes



#	Therapeutic category (generic name)	Description	CD	BHU	RHC
v.	Artesunate	Tab. 50mg	Yes	Yes	Yes
vi.	Primaquine		Yes	Yes	Yes
<b>11.</b>	<b>Antituberculosis drugs (TB program)</b>				
i.	Ethambutol	Tablet, 400 mg Strip/blister	Yes	Yes	Yes
ii.	Rifampicin+Isoniazid	Tablet, 150 mg + 100 mg strip/blister	Yes	Yes	Yes
iii.	Rifampicin+Isoniazid	Tablet, 300 mg + 150 mg Strip/blister	Yes	Yes	Yes
iv.	Isoniazide + Ethambutol	Tablet, 150 mg + 400 mg Strip/blister	Yes	Yes	Yes
v.	Rifampacin + Isoniazide + Pyrazinamide+Ethambutol	Tab., 150mg+75mg+400mg+275mg strip/blister	Yes	Yes	Yes
vi.	Streptomycin	Powder for injection, 1g (assulfate) in vial	Yes	Yes	Yes
vii.	Isoniazide	Tab 100mg	Yes	Yes	Yes
<b>12.</b>	<b>Antifungal Drugs</b>				
i.	Benzoic Acid +Salicylic Acid	Ointment or Cream 6% + 3%	Yes	Yes	Yes
ii.	Nystatin	Tab 500,000 iu,	Yes	Yes	Yes
iii.	Nystatin	Oral drops 100,000 iu/ml	Yes	Yes	Yes
iv.	Clotrimazole	Pessary 100,000iu	No	Yes	Yes
v.	Griseofulvin	Capsules or Tablets 125 mg, 250 mg	Yes	Yes	Yes
vi.	Clotrimazole	1 % Cream	Yes	Yes	Yes
<b>13.</b>	<b>Antianemic drugs</b>				
i.	Ferrous sulphate/fumerate+ folic acid	Tablet , equivalent to 60 mg iron+ folic acid 0.5mg	Yes	Yes	Yes
ii.	Folic acid	Tab. 5mg	Yes	Yes	Yes
iii.	Ferrous Salt	Syp. 25mg iron/ml	Yes	Yes	Yes
<b>14.</b>	<b>Scabicides and pediculicides</b>				
i.	Benzoyl benzoate	Lotion 25%	Yes	Yes	Yes



#	Therapeutic category (generic name)	Description	CD	BHU	RHC
ii.	Permethrin	Cream 5%	No	Yes	Yes
<b>15.</b>	<b>Antipruritic</b>				
i.	Calamin	Lotion 15%	Yes	Yes	Yes
<b>16.</b>	<b>Anticonvulsant</b>				
i.	Magnesium sulphate	Inj. 500mg/ml	Yes	Yes	Yes
<b>17.</b>	<b>Diuretics</b>				
i.	Furosemide	Tab 40 mg Strip/blister	Yes	Yes	Yes
ii.	Furosemide	Inj. Furosemide 20 mg/ 2ml (Amp of 2ml)	No	No	Yes
iii.	Hydrochlorthiazide	Tab 25 mg	No	No	Yes
iv.	Spironolactone	Tab 25mg	No	No	Yes
<b>18.</b>	<b>Antihypertensive/ cardiovascular drugs</b>				
i.	Dispirin CV / Loprin	Tab. 75mg	No	Yes	Yes
ii.	GlycerylTrinitrate	Sublingual Tab. 0.5 mg	No	Yes	Yes
iii.	Propranolol	Tab 40mg Strips/blister	No	Yes	Yes
iv.	Atenolol	Tab 50mg	No	Yes	Yes
v.	Isosorbidedinitrate	Tab. 10mg	No	Yes	Yes
vi.	Methyldopa	Tab. 250mg	Yes	Yes	Yes
vii.	Amlodipine	Tab 5mg	No	No	Yes
viii.	Angiotensin inhibitor (enalapril maleate)	5mg	No	No	Yes
<b>19.</b>	<b>Antacids and other anti-ulcer</b>				
i.	Aluminium Hydroxide + Magnesium Trisilicate	Tab. Aluminium Hydroxide 250mg + Magnesium Trisilicate 500mg	Yes	Yes	Yes
ii.	Ranitidine	Tablets 150 mg	No	Yes	Yes
iii.	Ispaghulla	Ispaghulla Husk	Yes	Yes	Yes
iv.	Omeprazole	Cap. 20mg	No	Yes	Yes
<b>20.</b>	<b>Anti-emetic drugs</b>				
i.	Dimenhydrinate	Tab.50mg	No	Yes	Yes



#	Therapeutic category (generic name)	Description	CD	BHU	RHC
ii.	Dimenhydrinate	Syp.12.5mg/4ml	Yes	Yes	Yes
iii.	Dimenhydrinate	Inj. 10mg/2ml	Yes	Yes	Yes
<b>21.</b>	<b>Antispasmodic drugs</b>				
i.	Hyoscine butyl bromide	Tablet10 mg	Yes	Yes	Yes
ii.	Hyoscine butyl bromide	Inj. 20mg/2ml	Yes	Yes	Yes
iii.	Atropine Sulphate	Injection 0.5 mg/ ml Amp of 1ml	No	No	Yes
<b>22.</b>	<b>Laxatives</b>				
i.	Glycerine	Suppository	Yes	Yes	Yes
ii.	Ispaghula		Yes	Yes	Yes
iii.	Enema	Small and large	Yes	Yes	Yes
<b>23.</b>	<b>Antidiabetic</b>				
i.	Glibenclamide	Tab 5mg	No	Yes	Yes
ii.	Metformin	Tablet HCl 500 mg	No	Yes	Yes
iii.	Insulin	Inj. 40 IU/ml	No	No	Yes
iv.	Insulin	Inj. 100 IU/ml	No	No	Yes
<b>24.</b>	<b>Ophthalmic preparation</b>				
i.	PolymyxinB+Bacitracin Zinc	Eye oint. 10,000iu+500iu	Yes	Yes	Yes
ii.	Tetracycline	Eye oint. 1%	Yes	Yes	Yes
iii.	Chloramphenicol	Eye drops 0.5%	No	No	Yes
iv.	Chloramphenicol	Eye-oint. 1%	No	No	Yes
<b>25.</b>	<b>Ear drops</b>				
i.	Soda glycerine	Ear drops	Yes	Yes	Yes
ii.	Chloramphenicol	Ear drops	Yes	Yes	Yes
iii.	PolymyxinB+LignocaineHCl	Ear Drops PolymyxinB 10,000iu+Lignocaine HCl 50mg	Yes	Yes	Yes
<b>26.</b>	<b>Antiasthmatic drugs</b>				
i.	Salbutamol	Inhalation 100mcg/dose for use in nebuliser	No	Yes	Yes
ii.	Salbutamol	Tablet 4mg	Yes	Yes	Yes



#	Therapeutic category (generic name)	Description	CD	BHU	RHC
iii.	Salbutamol	Syp.	Yes	Yes	Yes
iv.	Aminophyllin	Inj. 250mg	No	No	Yes
v.	Theophyllin	Tab.SR 200mg	No	No	Yes
vi.	Prednisolone	Tab 5mg	No	No	Yes
<b>27.</b>	<b>Antitussives</b>				
i.	(Cough Syrup) Triprolidine HCl. + Pseudoephedrine HCl + Dextromethorphan HBr.	Syrup.Each 5ml contains: TriprolidineHCl. 1.25mg + Pseudoephedrine HCl . 30mg +Dextromethorphan HBr. 10mg.	Yes	Yes	Yes
<b>28.</b>	<b>Antidepressants/ Anxiolytics</b>				
i.	Fluoxetine	Cap 20mg	No	Yes	Yes
ii.	Diazepam	Tab 5mg	No	Yes	Yes
<b>29.</b>	<b>Vitamins and minerals</b>				
i.	B-Complex	Tab.B-Complex + Minerals	Yes	Yes	Yes
ii.	B-Complex	Syp.	Yes	Yes	Yes
iii.	Pyridoxine	Tab. 50mg	Yes	Yes	Yes
iv.	Calcium Lactate	Tab. 10mg	Yes	Yes	Yes
v.	Ascorbic Acid	Tab. 100mg	Yes	Yes	Yes
vi.	Vitamin A	Cap. 50,000 IU, 100,000 IU, 200,000 IU	Yes	Yes	Yes
<b>30.</b>	<b>Antidotes and other substances used in poisonings</b>				
i.	Activated charcoal powder	Powder	Yes	Yes	Yes
ii.	Naloxone	Inj. 400mcg/ml	No	Yes	Yes
<b>31.</b>	<b>Disinfectants, antiseptics and anti-infectives</b>				
i.	Chlorine	5% concentrated solution	Yes	Yes	Yes
ii.	Povidone iodine	Solution , 10%	Yes	Yes	Yes
iii.	Hydrogen peroxide	Soln. 6%	Yes	Yes	Yes
iv.	Gentian violet	Paint 0.5%, 1%,	Yes	Yes	Yes
v.	Benzoin compound		Yes	Yes	Yes
vi.	Tincture				



#	Therapeutic category (generic name)	Description	CD	BHU	RHC
<b>32.</b>	<b>Parenterals</b>				
i.	Dextrose	Infusion 5% 500ml	No	Yes	Yes
ii.	Dextrose	Infusion 5% 1000ml	No	Yes	Yes
iii.	Glucose with sodium chloride	Injectable solution, 5% glucose, 0.9% sodium chloride 1000ml with IV set	No	Yes	Yes
iv.	Glucose with sodium chloride	Injectable solution, 5% glucose, 0.18% sodium chloride 500ml with IV set	No	Yes	Yes
v.	Sodium chloride	Injectable soln. 0.9% isotonic 1000ml	No	Yes	Yes
vi.	Sodium Bicarbonate		No	Yes	Yes
vii.	Ringer's Lactate	Injectable solution 1000ml with IV set	No	Yes	Yes
viii.	Ringer's Lactate	Injectable solution 500ml With IV set	No	Yes	Yes
ix.	Haemaccel	3%, 5% intravenous solution	No	Yes	Yes
x.	Dextran	Injection 6%	No	Yes	Yes
<b>33.</b>	<b>Topical antibiotics/ antibacterials</b>				
i.	Polymyxin B +Bacitracin Zinc ointment	Polymyxin B Sulphate 10000iu+Bacitracin Zinc 500mg/gm	Yes	Yes	Yes
ii.	Silver sulphadiazene	1% cream	Yes	Yes	Yes
iii.	Tetracycline	Oint. 1%	No	Yes	Yes
<b>34.</b>	<b>Local anesthetics</b>				
i.	Lidocaine	Injection, 2% (hydrochloride) in 10 -ml ampoule	Yes	Yes	Yes
ii.	Lidocaine	Topical forms, 2% (HCl)	No	Yes	Yes
<b>35.</b>	<b>Preoperative medication</b>				
i.	Adrenaline	Inj. 1mg/ml	No	No	Yes
ii.	Diazepam	Injection, 5 mg/ml in 2-ml ampoule	No	No	Yes



#	Therapeutic category (generic name)	Description	CD	BHU	RHC
iii.	Atropine	Inj. Atropine 1mg	No	No	Yes
<b>36.</b>	<b>Vaccines</b>				
i.	BCG		Yes	Yes	Yes
ii.	OPV		Yes	Yes	Yes
iii.	Pentavalent		Yes	Yes	Yes
iv.	Measles vaccine		Yes	Yes	Yes
v.	Hepatitis B vaccine		No	No	Yes
vi.	Tetanus toxoid		Yes	Yes	Yes

Table 32: List of supplies by type of facility

#	Item	CD	BHU	RHC
<b>1.</b>	<b>Cotton, Gauze and Bandages</b>			
i.	Absorbent cotton wool, 500 g i. 500 g, roll, non-sterile, ii. Surgical hydrophilic cotton	Yes	Yes	Yes
ii.	Crepe elastic bandage 7.5cm x 5m, per (roll) i. 100% cotton, unbleached, ii. Elasticity; minimum of 150%, unstretched 3m, stretched 5m	Yes	Yes	Yes
iii.	Gauze pad / compress 10cm x 10cm, 12 ply sterile, pack of 20, Absorbent gauze 100% cotton	Yes	Yes	Yes
iv.	Gauze bandage 5cmx10m, absorbent wow, pack of 10 rolls	Yes	Yes	Yes
v.	Gauze roll 90cm x 100M non-sterile, with selvages, absorbent 100% cotton i. Gauze roll width 22.5cm after 4 folds, ii. Weight 23 gm/m <sup>2</sup> , type 17 threads/cm <sup>2</sup>	Yes	Yes	Yes
<b>2.</b>	<b>Catheters and tubes</b>			
i.	Foley catheter, sterile CH 10, 40cm, balloon 3-5 ml latex silicone coated	No	No	Yes
ii.	Foley catheter, sterile CH 16, 40 cm, balloon 10ml, latex silicone coated	No	No	Yes



#	Item	CD	BHU	RHC
iii.	Foley catheter sterile, CH 18, 40cm, balloon 10ml, latex, silicone coated	No	No	Yes
iv.	Suction tube CH 8, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector, )	No	No	Yes
v.	Suction tube CH 10, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector )	No	Yes	Yes
vi.	Suction tube CH 14, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector )	No	Yes	Yes
vii.	Suction tube CH 16, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector)	No	Yes	Yes
<b>3.</b>	<b>Sutures</b>			
i.	Chromic catgut	Yes	Yes	Yes
ii.	Silk braided	Yes	Yes	Yes
<b>4.</b>	<b>Syringes, cannula and needles</b>			
i.	Syringe 10cc, Luer, sterile disposable, two piece, ( P/P or PEF) box of 100	No	No	Yes
ii.	Syringe, 20cc Luer, sterile disposable, two piece, (P/P or PEF), box of 100	No	No	Yes
iii.	Syringe 5cc, Luer, sterile disposable, two piece (P/P or PEF), box of 100	Yes	Yes	Yes
iv.	Syringe 50/60cc, Luer lock sterile disp, concentric tip, box of 100	No	No	Yes
v.	Needle Luer, IM, disposable, 21G (0.8x38mm) sterile, stainless steel, box 100	No	No	Yes
vi.	Needle disp 19G (1.1x40mm), sterile, stainless steel, box of 100	No	No	Yes
vii.	Needle disp 21G (0.8x40mm), sterile, stainless steel, box of 100	No	No	Yes
viii.	Needle disp 22G (0.7x30mm), sterile, stainless steel, box of 100	No	No	Yes
ix.	Needle disp 23G (0.6x25mm), sterile, stainless steel, box of 100	No	No	Yes
x.	Needle disp 25G (0.5x16mm), sterile. stainless	No	No	Yes



#	Item	CD	BHU	RHC
	steel, box of 100			
xi.	IV Cannula, short, 18G, 20G, 22G (1.1x32mm) i. Sterile, disposable, ii. Trocar: Stainless steel, iii. Injection port, iv. Cannula: Polypropylene or Teflon	No	No	Yes
<b>5.</b>	<b>Gloves</b>			
i.	Gloves, examination latex, large, non-sterile, powdered, box of 100	Yes	Yes	Yes
ii.	Gloves, examination latex, medium, non-sterile, powdered, box of 100	Yes	Yes	Yes
<b>6.</b>	<b>Surgical adhesive tapes</b>			
i.	Tape adhesive, 2.5 cm x 5 meter, roll (Colour white, non-stretch, Aerated textile strip impregnated with adhesive. Storage: dry conditions and at less than 25 degrees C if possible )	Yes	Yes	Yes
<b>7.</b>	<b>Blade and razor</b>			
i.	Razor safety, stainless steel, 3 piece unit (handle and blade holder), reusable ( Razor blades, double edged, steel, disposable, pack of 5. Box of 10 packs )	Yes	Yes	Yes
<b>8.</b>	<b>Test strips</b>			
i.	Blood glucose test strips	Yes	Yes	Yes
ii.	Urine protein test strips	Yes	Yes	Yes
iii.	Urine pregnancy test	Yes	Yes	Yes
iv.	Bowie-Dick strips for checking sterilisation	Yes	Yes	Yes
<b>9.</b>	<b>Others</b>			
i.	Battery dry cell alkaline AA size 1.5V or LR6 (for otoscope), single unit	Yes	Yes	Yes
ii.	Tongue depressor (wooden), disposable, box of 100	Yes	Yes	Yes
iii.	Towels or paper wraps for covering instruments for sterilisation	Yes	Yes	Yes
iv.	Apron, utility plastic reusable, unit (Straight apron with bib and neckband back fastening, Moisture	Yes	Yes	Yes



#	Item	CD	BHU	RHC
	proof and blood, water, chemical and stain resistant. Able to withstand extreme temperature, Length 120cm, width 90cm, Re-usable and able to withstand disinfection. Material: Opaque/transparent plastic, PVC, vinyl or polypropylene )			
v.	Bucket, plastic, approximately 12 litres, with lid. Unit	Yes	Yes	Yes
vi.	Swipes/ Mops	Yes	Yes	Yes
vii.	<i>Jharoo</i>	Yes	Yes	Yes
viii.	Dusters	Yes	Yes	Yes
<b>10.</b>	<b>Laboratory supplies</b>			
i.	Gram's Iodine	No	Yes	Yes
ii.	Crystal violet stain	No	Yes	Yes
iii.	Ziehl Neilsen stain	No	Yes	Yes
iv.	ABO & Rh antibodies	No	Yes	Yes
v.	RPR test kits for syphilis	No	No	Yes
<b>11.</b>	<b>X-Ray radiology</b>			
i.	X- ray film, blue sensitive, interleaved, 18 x 24 cm, box of 100	No	No	Yes
ii.	X- ray film, blue sensitive, interleaved, 24 x 30 cm, box of 100	No	No	Yes
iii.	X- ray film, blue sensitive, interleaved, 30 x 40 cm, box of 100	No	No	Yes
iv.	X-ray developer powder for 25 liters, 2.6Kg	No	No	Yes
v.	X-ray fixer for 22.5 L, 3.3kg	No	No	Yes



## E. Diagnostic services by type of facility

**Table 33: List of diagnostic services by type of facility**

#	Services	BHU	RHC
<b>1.</b>	<b>Laboratory Services</b>		
<b>a.</b>	<b>Hematology</b>		
i.	Hemoglobin	Yes	Yes
ii.	Red and white blood cell count	Yes	Yes
iii.	Differential cell count	Yes	Yes
iv.	ESR	Yes	Yes
v.	Hematocrit	Yes	Yes
vi.	Malaria parasite smear (MPS)	Yes	Yes
vii.	Bleeding time and coagulation time	Yes	Yes
viii.	Blood grouping and Rh factors	Yes	Yes
ix.	Hepatitis B and C and syphilis tests	Yes	Yes
x.	HIV test	No	Yes
<b>b.</b>	<b>Bacteriology</b>		
i.	Ziehl-Nielsen staining for acid fast bacilli (AFB)	Yes	Yes
ii.	Direct smear for AFB	Yes	Yes
iii.	Gram's staining	Yes	Yes
<b>c.</b>	<b>Serology</b>		
i.	Typhi dot	No	Yes
<b>d.</b>	<b>Clinical Pathology</b>		
i.	Urine analysis: physical exam	Yes	Yes
ii.	Chemical exam: Albumin (qualitative)	Yes	Yes
iii.	Chemical exam: Albumin (quantitative)	Yes	Yes
iv.	Chemical exam: Glucose (qualitative)	Yes	Yes
v.	Chemical exam: Glucose (quantitative)	Yes	Yes
vi.	Microscopic (stool test)	Yes	Yes



#	Services	BHU	RHC
vii.	Macroscopic (stool test)	Yes	Yes
viii.	Pregnancy test	Yes	Yes
<b>e.</b>	<b>Biochemistry</b>		
i.	Blood-sugar test	Yes	Yes
ii.	Urea test	No	Yes
iii.	Creatinine test	No	Yes
iv.	Total protein test	No	Yes
v.	Simple liver-function test	No	Yes
vi.	Brucellosis	No	Yes
<b>f.</b>	<b>Gram Stain</b>		
i.	Body fluids	Yes	Yes
<b>2.</b>	<b>Imaging Services</b>		
<b>a.</b>	<b>X-Rays</b>		
i.	Chest	No	Yes
ii.	Abdomen	No	Yes
iii.	Skeletal	No	Yes
iv.	Ultrasound	No	Yes



## **F. Infection Control**

The Maternal Newborn and Child Health (MNCH) Programme has been operative in KP for responding to the health needs of mothers and children, and achieving the MDGs 4 and 5. The environmental impact of MNCH Programme relates to (1) management of injection safety and sharps (needles, scalpels, blades, etc.) (2) management of anatomical and other health care waste (cold chain waste, mercury, x-ray films, etc.), (3) medicine and cytotoxic drugs (outdated, contaminated and discarded medicines), (4) plastic waste (tubings, catheters, etc.) (5) infectious solid waste (items contaminated with blood, cotton dressings, etc.), (6) general waste, (7) construction waste (waste generated from construction and expansion activities), and scale of civil works to consolidate public health facilities and providing utilities (water, sanitation, and cold storage) to strengthen MNCH service delivery, and (8) reduce nosocomial (healthcare facility-acquired) infections. An important issue is the duty of care towards healthcare workers, waste disposal workers, patients and the public at large. Occupational health and safety, and safeguarding the health of vulnerable groups, is central to this.

A number of initiatives have been taken by various Health Programmes, development partners and technical bodies for developing and implementing infection control and environment plan, but they are not coordinated. For example, the Hepatitis Control Programme in its current PC-1 has emphasized on developing and implementing protocols for infection control and injection safety within public and private sector facilities and providing basic equipment to public sector facilities for injection safety. Hence, there is a need to bring all stakeholders on one platform through MHSDP for shaping behaviours of health care providers, raising awareness among the clients and institutionalizing systems for universal and effective implementation of infection management and environment plan.

The protocols for implementing infection control for CMWs and in BHUs and RHCs have been attached as annex.



## G. Referral Services

An effective referral system ensures a close relationship between all levels of the health system and helps to ensure people receive the best possible care closest to home. It also assists in making cost-effective use of hospitals and primary health care services. Support to health centres and outreach services by experienced staff from the hospital or district health office helps build capacity and enhance access to better quality care. Appropriate and prompt referral of cases needing specialist care should include:

- a) Stabilisation of patient
- b) Appropriate support for patient during transport
- c) Providing transport facilities either by PHC ambulance/ vehicle or other available referral transport

In KP, a high proportion of clients seen at the outpatient clinics at secondary facilities could be appropriately looked after at primary health care centres at lower overall cost to the client and the health system. A good referral system can help to ensure:

- Clients receive optimal care at the appropriate level
- Hospital facilities are used optimally and cost-effectively
- Clients who most need specialist services can access them in a timely way
- Primary health services are well utilized and their reputation is enhanced

Being a **system**, examination of a referral system requires consideration of all its parts. Referral flows are depicted in figure 5 and important components of a referral system are listed in figure 6. The design and functioning of a referral system will be influenced by:

- **Health systems determinants:** capabilities of lower levels; availability of specialized personnel; training capacity and organizational arrangements for transport.
- **General determinants**, such as: population size and density; terrain and distances between urban centres; pattern and burden of disease; demand for and ability to pay for referral care; and culture and tradition<sup>1</sup>.

It is recommended that the RHC should have an ambulance for transport of patients. This may be outsourced, wherever feasible.

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<sup>1</sup>WHO. Referral Systems - a summary of key processes to guide health services managers



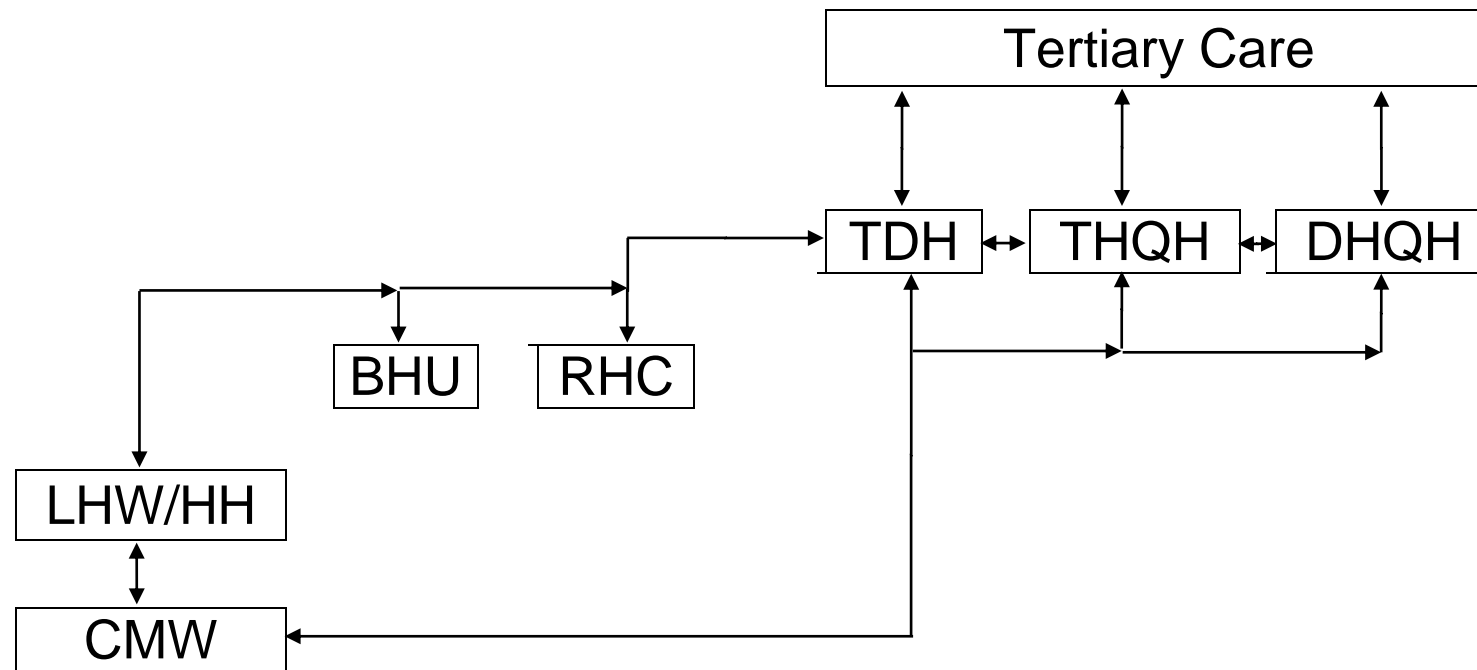


Figure 6: System for referral



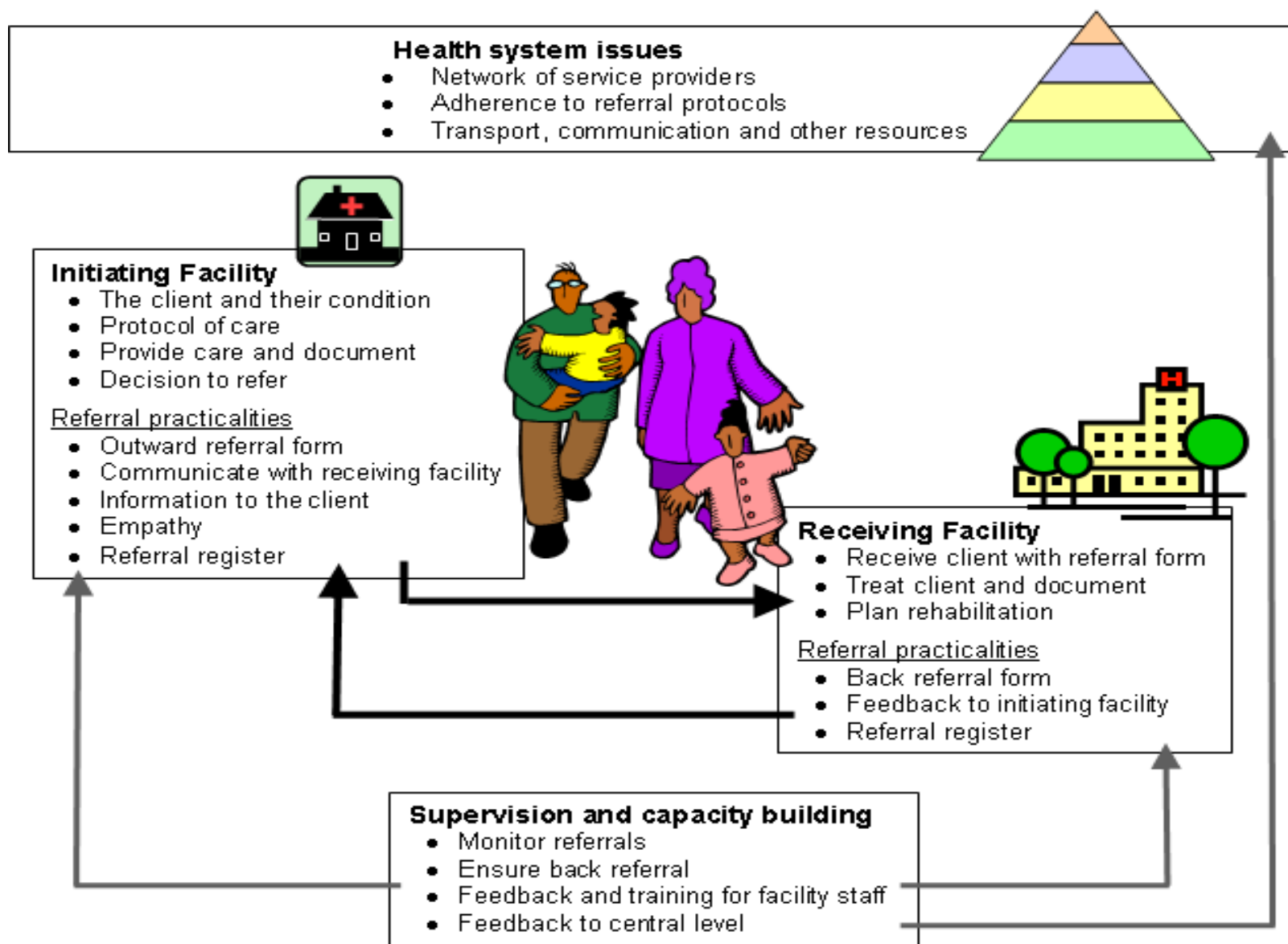


Figure 7: Important components of referral system

Source: WHO. Referral Systems - a summary of key processes to guide health services managers



## H. Information Systems, monitoring and reporting

### Management information systems

A functioning Management Information System (MIS) is an essential tool for strengthening planning and management. A countrywide facility-based Health Management Information System (HMIS) was developed in Pakistan in the early 1990s. The objective of National HMIS was not only to record information on health events but also to monitor the availability of critical items of first level care facilities. This entailed monitoring availability of drugs, contraceptives, functionality of equipment, repair and maintenance of facilities and utilities. HMIS has the capacity to provide information on monthly / quarterly and annual basis on the above mentioned items. HMIS findings were to be used for improving the quality and coverage of care, for the detection and control of diseases through regular and timely reporting and to ensure the availability of critical items in first level care facilities (FLCFs). HMIS was designed to provide information on service related indicators such as facility utilization rate, referrals, immunization, maternal care and family planning. In addition, it also provided information by age on 18 priority diseases. This initiative assisted mid- and senior health managers in making informed decisions.

The HMIS data flowed directly from the peripheral health facilities to the District Computer Centres, then to the Provincial Computer Centres. Ultimately, the information reached the National HMIS Cell on computer diskettes where it was analysed through HMIS software and also through Statistical Package of Social Sciences (SPSS).

Besides this, a parallel community based information system has also been developed in 1994, which is functioning under the National Program for Family Planning and Primary Health Care (NPFP&PHC). In addition there are several other information systems specifically geared to the needs of vertical programs such as EPI, TB, AIDS, and Malaria etc., which are not fully integrated into HMIS. However, the software for NPFP & PHC is based on the same parameters that of HMIS software<sup>1</sup>.

In 2009, the DOH in KP modified HMIS into District Health Information System (DHIS) which provided information and enabled district level analysis. This change was desired to make district level health managers to gain timely detailed information about the district and initiate required measures.

Besides above, the DHIS differed from HMIS as it not only gathers information from FLCF but also from secondary hospitals, indoors, diagnostic services and about resources (HR, Finance, logistics). DHIS also rationalizes indicators responsive to health managers' needs and has 43 indicators for BHU (monthly 34 + yearly 9), 79 indicators for hospitals and 276 variables for RHCs. It reports on 42 diseases from OPD and 50 diseases from indoors. The software is flexible to accommodate present and future needs<sup>2</sup>.

The newly developed DHIS system offers a viable platform for a system of monitoring and reporting. The challenge is to incorporate DHIS into a system of performance management that provides incentives to ensure that monitoring data is used effectively by health managers. The strategy suggests strengthening the capacity of HSRU units in the provinces to develop an effective model of generating data and measuring results to make health programmes and policies more responsive to the needs of end-users<sup>3</sup>.

<sup>1</sup>GOP.National Health Management Information System (HMIS), Pakistan. 2003. [available online: <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan018847.pdf>]

<sup>2</sup>District Health Information System (DHIS) Training Manual for Trainers.NMNCH . 2009

<sup>3</sup>Responsiveness and Accountability in the Health Sector, Pakistan.TRF Pakistan. 2010







## **I. Requirements of Successful Implementation of MHSDP**

Currently, PHCs fixed centres face issues such as the inability to perform up to the expectations due to different reasons, such as: (a) non-availability of doctors/LHVs at BHUs and RHCs. When posted, doctors/LHVs get themselves posted on deputation elsewhere or often remain absent reflecting their demotivation to work at PHC facilities; (b) inadequate physical infrastructure and facilities; (c) insufficient quantities of drugs; (d) lack of accountability to the public, and (e) lack of understanding about set standards for quality care, etc.

Similarly, LHWs and CMWs have issues of: (a) inaccessibility to the population in their defined geographical areas, (b) lack of equipment or non-availability of required medicines, (c) restrictions imposed by the families on their movement, (d) interrupted payment of salary or stipend, (e) inadequate knowledge or skill to perform.

A successful implementation of MHSDP depends on improving:

- Generating motivation of the staff through incentives for good performance
- Improving knowledge and skills of the PHC staff
- Providing all necessary equipment
- Ensuring regular and uninterrupted supply of medicine, supplies and vaccine
- Encouraging through supportive supervision
- Monitoring the progress in through DHIS and generating timely reports
- Taking timely remedial actions.







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# Annex I – Minimum Services, Equipment, Supplies and Medicines for CMWs







## **1 Education concerning prevailing health problems and the methods of preventing and controlling them**

**Table 4: Examples for BCC<sup>1</sup>**

### **REPRODUCTIVE HEALTH PRACTICES:**

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. 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).
3. Take iron tablets regularly from 3 months onwards in pregnancy.
4. Take calcium tablets regularly from 5 months onwards in pregnancy
5. Seek assistance for delivery only from a skilled birth attendant (SBA) such as CMW, LHV, lady doctor.

### **INFANT AND CHILD FEEDING PRACTICES:**

6. Initiate breastfeeding with first half to one hour after delivery.
7. Give the first bath to the new-born after 24 hours
8. Breastfeed exclusively for 6 months.
9. From about 6 months, provide appropriate complementary feeding such as *khichri* and continue breastfeeding until 24 months.
10. Continue feeding children and increase fluids during illness; increase feeding immediately after illness.

### **IMMUNISATION PRACTICES:**

11. Take infants for immunisation even when he or she is sick. Allow sick infant to be immunised during visit for curative care.
12. For every pregnant women and women of childbearing age, seek tetanus toxoid vaccine at every opportunity.
13. Take infant for measles immunisation as soon as possible after the age of 9 months

### **CARE-SEEKING PRACTICES:**

14. Seek appropriate care when infant or child is recognised as being sick (i.e. looks unwell, not playing, not eating or drinking, lethargic or change in consciousness, vomiting everything, high fever, fast or difficult breathing).

### **OTHER EXAMPLES**

15. Wash hands with soap: after using toilet, after handling baby's faeces, before cooking,

<sup>1</sup>Adapted from Emphasis Behaviors in Maternal and Child Health. 1997. BASICS Technical Report



before feeding

16. Apply SODIS daily to make water safe for drinking purposes.
17. Use iodized salt regularly
18. Use insecticide-treated bed-nets for pregnant women and children under 5 years of age
19. Mix and administer ORS correctly during diarrhoea in children.
20. Administer treatment and medications according to instruction (amount and duration).



## 2 Proper Nutrition

Table 6: Proper nutrition services by CMW

#	Services	CMW
1	<b>Assessment of nutritional status</b>	
i	Growth monitoring up to three years	No
2	<b>Prevention of malnutrition</b>	
i	Facilitate initiation of early breastfeeding	
ii	Support and promote exclusive breastfeeding	Yes
iii	Deal with breastfeeding problems in early months	
iv	Promotion of appropriate complementary feeding from 6 months	No
v	Promotion of maternal nutritional status through counselling	
vi	Diagnosing malnutrition in pregnant and lactating women	
vii	Promotion of maternal nutritional status	Yes
viii	Iron/folic acid supplementation for pregnant, lactating women	Yes
ix	Prevent parasitic infections	No
x	Vitamin A supplementation: To all children 6 months to 59 months and to post-partum mothers	No
xi	Promote exposure to sunshine for women and children to avoid vitamin D deficiency	Yes
xii	Exclude vitamin D deficiency	No
xiii	Promotion of iodized salt	Yes
3	<b>Treatment of Malnutrition</b>	
i	Diagnosis of micronutrient deficiency and treatment	Yes – refer to BHU/ RHC
ii	Treatment of mild + moderate malnutrition	No
iii	Treatment of severe malnutrition through WHO Guidelines	No



### 3 An adequate supply of safe water and basic sanitation

Table 7: Water and sanitation services

#	Services	CMW
1	<b>Testing of water</b>	
i	Making rapid test kits available for checking faecal contamination	No
ii	Making kit available for chlorine test	No
2	<b>Promoting safe drinking water measures at home</b>	
i	Applying solar disinfection	Yes
ii	Using Aquatabs	Yes
iii	Using boiled water	Yes
3	<b>Hygiene Promotion</b>	
i	Hand washing	Yes
ii	Toilet use	Yes
4	<b>Other Measures</b>	
i	Create awareness about problems created by stagnant water, blocked drains, defecating outdoors	No



## 4 Maternal and child health care, including family planning

Table 9: Antenatal services

#	Services	CMW
1.	Identify pregnant women in the community	Yes
2.	Persuade and register pregnant women to receive ANC	Yes
3	Diagnosis of pregnancy	
i	History	Yes
ii	Examination	Yes
iii	Laboratory	No
4	Antenatal visits	
i	Height	Yes
ii	Weight	Yes
iii	BP measurement	Yes
iv	Fundal height	Yes
v	Goitre	Yes
vi	Oedema	Yes
vii	Tetanus immunization	Yes– motivate
viii	Iron/Folic supplementation	Yes
ix	Calcium supplementation	Yes
x	Urine for albumin/sugar	No
xi	Blood grouping	No
xii	Counselling on <ul style="list-style-type: none"> <li>○ Diet</li> <li>○ rest and exercises</li> <li>○ identifying SBA for delivery</li> <li>○ arranging money for emergency</li> <li>○ identifying transport for emergency</li> <li>○ identifying blood donor for emergency</li> <li>○ ensuring delivery kit for home deliveries</li> <li>○ danger signs of pregnancy and delivery</li> <li>○ initiation of breast feeding and exclusive breastfeeding for 6</li> </ul>	Yes



	months	
xiii	Prevention and management of anaemia	
	d. Examination	Yes
	e. Laboratory	Refer suspected cases to BHU/RHC
	f. Treatment	Yes
5	Treat minor discomforts and Infections	
i	Treatment of worm infestation	Yes
ii	Prevention of malaria by promoting use of bednets	Yes
iii	Treatment of malaria <ul style="list-style-type: none"> <li>• Presumptive</li> <li>• Based on lab findings</li> </ul>	No No
iv	Treatment of Trichomoniasis	Yes
v	Treatment of Moniliasis	Yes
vi	Treatment of Urinary Tract Infection	No
vii	Syndromic management of sexually transmitted infections	No
6	Treatment of hypertensive disorders	No
7	Treatment of Diabetes Mellitus	Yes
8	Treatment of Vitamin A deficiency*	Refer to hospital
9	Management of pregnant woman in shock	Refer to hospital
10	Management of pre-eclampsia	Refer to hospital
11	Management of eclampsia	Refer to hospital
12	Treatment of incomplete miscarriage / abortion	Identify & refer to hospital
13	Treatment of ectopic pregnancy	Identify & refer to



		hospital
14	Ultrasound	No

\* in the last trimester, if night blindness appears

**Table 10: Delivery care**

#	Services	CMW
1	Identify true labour and monitor progression of labour –Partograph	Yes
2	Prepare the environment and materials following infection control protocols	Yes
3	Identify foetal malposition	Yes
4	External cephalic version	No
5	Assist normal delivery	Yes
6	Provide mini delivery kit	Yes
7	Parental administration of oxytocin	Yes
8	Parental administration of anticonvulsants	Yes & refer to hospital
9	Bimanual compression of uterus	Yes
10	Controlled cord traction	Yes
11	Suturing vaginal tears (1 <sup>st</sup> and 2 <sup>nd</sup> degree)	Yes
12	Suturing vaginal tears (3 <sup>rd</sup> degree)	No - refer to hospital
13	Provision of intravenous fluids	Yes
14	Parental administration of antibiotics	Yes
15	Safe blood transfusion	No
16	Manual removal of placenta	Yes
17	Removal of retained products (e.g. MVA)	Refer
18	Vacuum extraction(assisted vaginal delivery)	Yes
19	Provide emotional support to the mother throughout labour and delivery	Yes
20	Identify danger signs in the first, second or third stages of labour	Yes
21	Management of prolapsed cord	No - refer to



#	Services	CMW
		hospital
22	Management of shoulder dystocia	No - refer to hospital
23	Caesarean section	Refer to hospital

Table 11: Postpartum care

#	Services	CMW
1	Advise maternal diet	Yes
2	Advise maternal hygiene	Yes
3	Treatment of anaemia	Yes
4	Management of PPH	Yes & refer to hospital
5	Treatment of puerperal infection	Yes & refer to hospital
6	Breast examination	Yes
7	Antibiotics	Yes – oral
8	Counselling on family planning, exclusive breast feeding and hygiene	Yes
9	Provide contraceptives	Yes – Condoms, Pills
10	Register births and deaths	Yes



## 4.1 New-born Health

**Table 12: Care of the new-born**

#	Services	CMW
<b>1</b>	<b>Immediate care</b>	
i	○ Dry and stimulate the baby	Yes
ii	○ Clean airway, assess the baby's breathing and colour, decide if the baby needs for resuscitation, resuscitate if required.	Yes
iii	○ Tie/clamp and cut the cord	Yes
iv	○ Avoid hypothermia, keep the baby warm by placing the baby in skin-to-skin contact with the mother (kangaroo care), covering both mother and baby with a sheet/blanket and covering the baby's head with a cloth	Yes
v	○ Have the mother start breastfeeding within half hour	Yes
vi	○ Give eye care within one hour after birth	Yes
<b>2</b>	<b>Care during the first day</b>	
i	○ Conduct physical examination (colour, breathing, posture and tone, heart rate, warmth, activity, skin, head, eyes, mouth, chest, abdomen, back and spine, anus, genital organs, temperature and weight)	Yes
ii	○ Give vitamin K 1mg IM	No
iii	○ Give the first immunisation of BCG, polio, hepatitis	Refer to BHU/ RHC
<b>3</b>	<b>Care up to 28 days</b>	
i	○ Keep the cord clean and dry	Yes
ii	○ Teach and counsel mother/family about <ul style="list-style-type: none"> <li>○ handwashing,</li> <li>○ cord care,</li> <li>○ exclusive breastfeeding for 6 months, including colostrum</li> <li>○ keeping the baby warm</li> <li>○ completing immunisation</li> <li>○ not applying <i>surma</i></li> <li>○ recognising danger signs and taking appropriate actions if they occur</li> </ul>	Yes
iii	○ Take care of LBW, breastfeed at every 2 to 2½ hours	Yes



#	Services	CMW
iv	○ Manage neonatal jaundice	Yes



## 4.2 Child health

Table 13: Newborn and Child care

#	Services	CMW
1	Assess 'developmental milestones' at 2, 4, 6, 9, 12, 18 and 24 months	No
2	Perform growth monitoring up to three years	No
	<b>IMNCI</b>	
3	Management of ARI	
i	Child with cough/fever	No – refer to BHU/ RHC
ii	Child with pneumonia	No – refer to BHU/ RHC
iii	Child with severe pneumonia	No – refer to hospital
iv	Child with very severe disease	No – refer to hospital
v	Child with wheeze	No – refer to BHU/ RHC
vi	Child with ear infection	No – refer to BHU/ RHC
vii	Health education for ARI <ul style="list-style-type: none"> <li>○ Increasing fluids</li> <li>○ Continue feeding</li> <li>○ Cleanliness</li> <li>○ Identifying danger signs &amp; taking timely actions</li> </ul>	Yes
4	Management of Diarrhoea	
i	With no dehydration	Yes
ii	Some dehydration	No



#	Services	CMW
iii	Severe dehydration	No
iv	With additional problems: <ul style="list-style-type: none"> <li>○ Diarrhoea &gt; 14 days</li> <li>○ With severe malnutrition</li> <li>○ Fever &gt; 38 C<sup>0</sup></li> </ul>	No
v	Health education on Diarrhoea/ORT <ul style="list-style-type: none"> <li>○ How to mix ORS</li> <li>○ Increasing fluids</li> <li>○ Continue feeding</li> <li>○ Handwashing</li> <li>○ Identifying danger signs &amp; taking timely actions</li> </ul>	Yes
5	Management of dysentery	No
6	Management of fever	
i	History	Yes
ii	Examination	No
iii	Laboratory	No
iv	Treatment	Yes – refer if > 101 <sup>0</sup> F
7	Management of severely ill child	Refer to hospital
8	School health services: Regularly planned visits for	
i	Medical check-ups	No
ii	Eye sight testing	No
iii	Immunisation	No
iv	Deworming	No
v	Treatment and follow-up	No
vi	Health education	No



### 4.3 Adolescent health

**Table 14: Health education to youth**

#	Services	CMW
1	Teaching the youth about roles and responsibilities of men and women in building a healthy family	No
2	Promoting healthy life style behaviours – exercise, no smoking/ <i>naswar</i> , avoiding violence	No
3	Imparting knowledge about structure of menstrual cycle to females	No
4	Educating about risks involved in early age marriages and pregnancies	No



## 4.4 Family planning

Table 15: Family planning services

#	Services	CMW
1	Counselling on family planning methods to enhance CPR	
i	Motivate for family planning	Yes
ii	Remove misconceptions	Yes
iii	Help make informed choice	Yes
2	Clinical examination	No
3	Education about natural methods <ul style="list-style-type: none"> <li>○ Rhythm method</li> <li>○ LAM</li> <li>○ Withdrawal</li> </ul>	Yes
4	Education about modern methods <ul style="list-style-type: none"> <li>○ Condoms</li> <li>○ Pills</li> <li>○ Injections</li> <li>○ IUCD</li> <li>○ Tubal ligation</li> <li>○ Vasectomy</li> </ul>	Yes
5	Provision of contraceptives	
i	Distribute condoms	Yes
ii	Distribute oral pills	Yes
iii	Give injections	Yes
iv	Insert IUCDs	No – refer to BHU/ RHC
v	Sterilisation females	No – refer to THQH/ DHQH
vi	Sterilisation males	No
6	Suggest alternatives in case of side effects	Yes



#	Services	CMW
7	Referral for couples having infertility to THQH/ DHQH	Yes



## 5 Immunisation

Table 16: Immunisation services

#	Services	CMW
1	Storage of vaccines	No
2	Routine Immunisation	Yes – motivate
3	Campaigns (NIDs)	Yes
4	Disease surveillance & case reporting	No
5	Motivate families for	
i	Regular and timely immunisation	Yes
ii	Giving polio drops on all NIDs	Yes
6	Vaccinating out-of schedule child	No



## 6 Appropriate treatment of endemic common diseases and injuries

**Table 17: Treatment of common injuries**

#	Services	CMW
1	Wound dressing	Yes
2	Snake bites	No
3	Dog bites	No
4	Fractures/ dislocations	No
5	Sprains/ strains	Refer to RHC
6	For accidents	No
7	CPR	Yes

**Treatment of common diseases** will be discussed in section 7.



## 7 Prevention and control of locally endemic diseases

### 7.1 Management and Control of endemic communicable diseases

Table 18: Management and Control of endemic communicable diseases

#	Services	CMW
1	<b>Respiratory problems</b>	
i	Common cold and cough	No
ii	Acute Bronchitis	No
iii	Pneumonia	No
iv	Lower respiratory tract infections in elderly	No
2	<b>GI problems</b>	
i	Acute diarrhoea	No
ii	Chronic diarrhoea	No
iii	Dysentery	No
iv	Health education about hand washing	Yes
3	<b>Control of Tuberculosis</b>	
i	Identification of suspects	No
ii	Sputum smear examination	No
iii	X-Ray for smear negative cases	No
iv	Treatment of diagnosed cases	No
v	TB-DOTS recording & reporting	No
vi	Screening of contacts	No
vii	Health education: <ul style="list-style-type: none"> <li>○ Identify suspects</li> <li>○ Get sputum test done</li> <li>○ TB is curable</li> <li>○ Treatment is free of costs</li> <li>○ Where TB services are available</li> </ul>	No
4	<b>Control of Malaria</b>	
i	Diagnosis	
	a. Clinical	No



#	Services	CMW
	b. Laboratory	Refer to BHU/ RHC
ii	Treatment	
iii	Uncomplicated case	No
iv	Complicated case	Refer to hospital
v	Provide ITNs	Yes
vi	Health education: <ul style="list-style-type: none"> <li>○ Cleanliness of the surroundings</li> <li>○ Netting windows and doors</li> <li>○ Use bednets</li> </ul>	Yes
5	<b>Typhoid</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No
6	<b>Dengue Fever</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No
7	<b>Skin infections</b>	
i	Common wounds/ infections	Yes
ii	Scabies	No
8	<b>Sexually Transmitted Infections</b>	
i	Diagnosis	
	a. History	Yes



#	Services	CMW
	b. Examination	Refer to RHC
	c. Laboratory	No
ii	Treatment	No
9	<b>Hepatitis A and E</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to RHC
	c. Laboratory	No
ii	Treatment	No
iii	Health education on transmission of hepatitis	Yes
10	<b>Hepatitis B and C</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No
iii	Health education on transmission of hepatitis B and C	No
11	<b>Leishmaniasis</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No
12	<b>Brucellosis</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No



#	Services	CMW
ii	Treatment	No
13	<b>Tinea (foot, inguinal, face, armpits, breasts)</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
ii	Treatment	No
14	<b>Trachoma</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
ii	Treatment	No
15	<b>HIV/AIDS</b>	
i	Health education on transmission of HIV/AIDS	Yes



## 7.2 Management and control of endemic non communicable diseases

**Table 19: Management and control of endemic non communicable diseases**

#	Services	CMW
1	<b>Hypertension</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory <ul style="list-style-type: none"> <li>○ Blood cholesterol</li> <li>○ Lipid profile</li> <li>○ Serum creatinine</li> </ul>	No
ii	Treatment	Refer to BHU/ RHC
iii	Health education for control of BP and prevention of heart attack and strokes: <ul style="list-style-type: none"> <li>○ Tobacco cessation</li> <li>○ Regular physical activity 30 minutes a day</li> <li>○ Reduced salt intake &lt;5 gm per day</li> <li>○ Regular use of antihypertensive</li> <li>○ Regular use of Aspirin</li> <li>○ Weight control</li> </ul>	Yes
2	<b>Diabetes Mellitus</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to BHU
	c. Laboratory	No
ii	Treatment	No
iii	Health education on:	
	a. Diet guidance	No
	b. Avoiding sugars	Yes
	c. Weight control	No



#	Services	CMW
	d. Regular physical activity 30 minutes a day	Yes
	e. Regular use of oral hypoglycaemic agents/ insulin	No
iv	Prevention/early detection of foot complications	No
v	Screening for diabetic retinopathy	No
3	<b>Asthma</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
	d. X-ray	No
ii	Treatment	No
4	<b>COPD</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
	d. X-ray	No
ii	Treatment	No
5	<b>Cancers</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No
iii	Health education for breast examination	No
6	<b>Arthritis</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No



#	Services	CMW
	c. Laboratory	No
	d. X-ray	No
ii	Treatment	No
7	<b>Irritable Bowel Syndrome</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No
8	<b>Peptic ulcer</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No



### 7.3 Disability prevention

Table 20: Disability prevention services

#	Services	CMW
1	<b>Identification/referral for</b>	
i	Visual impairment	Yes
ii	Hearing disability	Yes
iii	Orthopaedic disability	Yes
2	<b>Control of iodine deficiency</b>	
i	Identification of goitre and referral to DHQH	Yes
ii	Health education about illnesses due to iodine deficiency	Yes
3	<b>Primary eye care</b>	
i	Diagnosis and treatment of common eye diseases	No – refer to hospital
ii	Refraction Services	No – refer to hospital
iii	Detection of cataract cases and referral for cataract surgery	No
iv	Detection of glaucoma and referral	No
4	<b>Health education on</b>	
i	Early examination of infants	Yes
ii	Dealing with disability at home	No
iii	Making life of disabled productive	No
iv	Seeking advice on physiotherapy	No



## 7.4 Mental health

**Table 21: Mental health services**

#	Services	CMW
1	Attention deficit disorder	No
2	Generalized anxiety disorder	No
3	Obsessive compulsive disorder	No
4	Panic disorder	No
5	Bipolar disorder	No
6	Depression	No
7	Schizophrenia	No
8	Alcohol abuse and dependence	No
9	Drug abuse	No



## 7.5 Oral health

**Table 22: Oral health services**

#	Services	CMW
1	Tooth extraction	No
2	Scaling	No
3	Filling	No
4	Management of gingivitis and oral ailments	No
5	Health education on oral hygiene	No



## Equipment and supplies for CMWs

**Table 26: List of equipment for CMWs**

#	Items	No.
1.	Office table	1
2.	Office chair	1
3.	Client stool	1
4.	Examination couch	1
5.	Delivery table	1
6.	Safety box with syringe cutting machine	1
7.	Steriliser (electric 12x16)	1
8.	Vacuum extraction equipment	1
9.	Baby ambubag	1
10.	Screen	1
11.	Fetoscope	1
12.	BP apparatus	1
13.	Thermometer	1
14.	Stethoscope	1
15.	Baby weighing machine	1
16.	Weighing machine adult	1
17.	Measuring tape	2
18.	Delivery items (Forcep, Sponge Forcep, Kidney Tray, Steel Bowl, Speculum, Infusion with set, I/V Cannula)	1
19.	Equipment required for episiotomies	1
20.	Kit box steel	1
21.	Signboard	1

**Table 27: List of medicines and supplies, with estimated 20 clients per month per CMW**

#	Items	No.
1.	Disposable delivery kit	50
2.	Lignocaine 2%	1
3.	Suture material	
4.	Urine Dipsticks	Container of 50/100
5.	Hemoglobinometer	1
6.	Kit for blood grouping	
7.	Plastic sheet	1
8.	Partograph chart	1
9.	Urinary catheters 12G 1x use	3
10.	Amoxicillin tablets (250 & 500 mg) Cefaclor ( <b>Velosef</b> ) if allergic to penicillin	80 20
11.	Metronidazole tablets (200 & 400 mg)	200 each
12.	IV fluid Normal Saline or Ringers	40



#	Items	No.
	lactate IL	
13.	Injection Magnesium Sulphate	4
14.	Tablet Misoprostal 200 mcg	20
15.	Tablet Paracetamol/Mefenamic acid	100
16.	Pyodine Antiseptic solution	2
17.	Injection Oxytocin required for AMSTL	20
18.	Disposable syringes 5cc	100
19.	Iron, Folic acid (tablets)	3600
20.	Vitamin A (capsule)	20
21.	Contraceptives (Condoms, Pills, IUCD)	
22.	IUCD Insertion Kit	
23.	Mebendazole 500 mg	20
24.	Cannula (18 and 20 size)	10
25.	Cotton roll (400g)	1
26.	Antifungal vaginal tablets with applicator	20
27.	Baby blanket	2
28.	Gloves	
29.	Health education materials	
30.	Data recording and reporting instruments	







## Annex II – Minimum Services, Equipment, Supplies and Medicines for LHWs







# 1 Education concerning prevailing health problems and the methods of preventing and controlling them

Table 4: Examples for BCC<sup>1</sup>

## REPRODUCTIVE HEALTH PRACTICES:

21. Delay the first pregnancy at least up to 19 years of age, practice birth spacing for at least 3 years, and limit family size.
22. 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).
23. Take iron tablets regularly from 3 months onwards in pregnancy.
24. Take calcium tablets regularly from 5 months onwards in pregnancy
25. Seek assistance for delivery only from a skilled birth attendant (SBA) such as CMW, LHV, lady doctor.

## INFANT AND CHILD FEEDING PRACTICES:

26. Initiate breastfeeding with first half to one hour after delivery.
27. Give the first bath to the new-born after 24 hours
28. Breastfeed exclusively for 6 months.
29. From about 6 months, provide appropriate complementary feeding such as *khichri* and continue breastfeeding until 24 months.
30. Continue feeding children and increase fluids during illness; increase feeding immediately after illness.

## IMMUNISATION PRACTICES:

31. Take infants for immunisation even when he or she is sick. Allow sick infant to be immunised during visit for curative care.
32. For every pregnant women and women of childbearing age, seek tetanus toxoid vaccine at every opportunity.
33. Take infant for measles immunisation as soon as possible after the age of 9 months

## CARE-SEEKING PRACTICES:

34. Seek appropriate care when infant or child is recognised as being sick (i.e. looks unwell, not playing, not eating or drinking, lethargic or change in consciousness, vomiting everything, high fever, fast or difficult breathing).

## OTHER EXAMPLES

35. Wash hands with soap: after using toilet, after handling baby's faeces, before cooking,

<sup>1</sup>Adapted from Emphasis Behaviors in Maternal and Child Health. 1997. BASICS Technical Report



before feeding

36. Apply SODIS daily to make water safe for drinking purposes.
37. Use iodized salt regularly
38. Use insecticide-treated bed-nets for pregnant women and children under 5 years of age
39. Mix and administer ORS correctly during diarrhoea in children.
40. Administer treatment and medications according to instruction (amount and duration).



## 2 Proper Nutrition

**Table 6: Proper nutrition services at PHC facilities**

#	Services	LHW
1	<b>Assessment of nutritional status</b>	
i	Growth monitoring up to three years	Yes
2	<b>Prevention of malnutrition</b>	
i	Facilitate initiation of early breastfeeding	
ii	Support and promote exclusive breastfeeding	Yes
iii	Deal with breastfeeding problems in early months	
iv	Promotion of appropriate complementary feeding from 6 months	Yes
v	Promotion of maternal nutritional status through counselling	
vi	Diagnosing malnutrition in pregnant and lactating women	
vii	Promotion of maternal nutritional status	Yes
viii	Iron/folic acid supplementation for pregnant, lactating women	Yes
ix	Prevent parasitic infections	Yes
x	Vitamin A supplementation: To all children 6 months to 59 months and post-partum mothers	Yes
xi	Promote exposure to sunshine for women and children to avoid vitamin D deficiency	Yes
xii	Exclude vitamin D deficiency	No
xiii	Promotion of iodized salt	Yes
3	<b>Treatment of Malnutrition</b>	
i	Diagnosis of micronutrient deficiency and treatment	Yes – refer to BHU/ RHC
ii	Treatment of mild + moderate malnutrition	Yes
iii	Treatment of severe malnutrition through WHO Guidelines	Refer to THQH/ DHQH



### 3 An adequate supply of safe water and basic sanitation

Table 8: Water and sanitation services

#	Services	LHW
1	<b>Testing of water</b>	
i	Making rapid test kits available for checking faecal contamination	No
ii	Making kit available for chlorine test	No
2	<b>Promoting safe drinking water measures at home</b>	
i	Applying solar disinfection	Yes
ii	Using Aquatabs	Yes
iii	Using boiled water	Yes
3	<b>Hygiene Promotion</b>	
i	Hand washing	Yes
ii	Toilet use	Yes
4	<b>Other Measures</b>	
i	Create awareness about problems created by stagnant water, blocked drains, defecating outdoors	Yes



## 4 Maternal and child health care, including family planning

Table 9: Antenatal services

#	Services	LHW
1.	Identify pregnant women in the community	Yes
2.	Persuade and register pregnant women to receive ANC	Yes
3	Diagnosis of pregnancy	
i	History	Yes
ii	Examination	No
iii	Laboratory	No
4	Antenatal visits	
i	Height	No
ii	Weight	No
iii	BP measurement	No
iv	Fundal height	No
v	Goitre	No
vi	Oedema	Yes
vii	Tetanus immunization	Yes or motivate
viii	Iron/Folic supplementation	Yes
ix	Calcium supplementation	Yes
x	Urine for albumin/sugar	No
xi	Blood grouping	No
xii	Counselling on <ul style="list-style-type: none"> <li>○ Diet</li> <li>○ rest and exercises</li> <li>○ identifying SBA for delivery</li> <li>○ arranging money for emergency</li> <li>○ identifying transport for emergency</li> <li>○ identifying blood donor for emergency</li> <li>○ ensuring delivery kit for home deliveries</li> <li>○ danger signs of pregnancy and delivery</li> <li>○ initiation of breast feeding and exclusive breastfeeding for 6</li> </ul>	Yes



	months	
xiii	Prevention and management of anaemia	
	g. Examination	Yes
	h. Laboratory	No
	i. Treatment	Yes
5	Treat minor discomforts and Infections	
i	Treatment of worm infestation	Yes
ii	Prevention of malaria by promoting use of bednets	Yes
iii	Treatment of malaria <ul style="list-style-type: none"> <li>• Presumptive</li> <li>• Based on lab findings</li> </ul>	Yes No
iv	Treatment of Trichomoniasis	No
v	Treatment of Moniliasis	No
vi	Treatment of Urinary Tract Infection	No
vii	Syndromic management of sexually transmitted infections	No
6	Treatment of hypertensive disorders	No
7	Treatment of Diabetes Mellitus	No
8	Treatment of Vitamin A deficiency*	Refer to hospital
9	Management of pregnant woman in shock	Refer to hospital
10	Management of pre-eclampsia	Refer to hospital
11	Management of eclampsia	Refer to hospital
12	Treatment of incomplete miscarriage / abortion	Identify & refer to hospital
13	Treatment of ectopic pregnancy	Identify & refer to hospital
14	Ultrasound	No

\* in the last trimester, if night blindness appears



**Table 10: Delivery care**

#	Services	LHW
1	Identify true labour and monitor progression of labour –Partograph	No
2	Prepare the environment and materials following infection control protocols	No
3	Identify foetal malposition	No
4	External cephalic version	No
5	Assist normal delivery	No
6	Provide mini delivery kit	No
7	Parental administration of oxytocin	No
8	Parental administration of anticonvulsants	No
9	Bimanual compression of uterus	No
10	Controlled cord traction	No
11	Suturing vaginal tears (1 <sup>st</sup> and 2 <sup>nd</sup> degree)	No
12	Suturing vaginal tears (3 <sup>rd</sup> degree)	No
13	Provision of intravenous fluids	No
14	Parental administration of antibiotics	No
15	Safe blood transfusion	No
16	Manual removal of placenta	No
17	Removal of retained products (e.g. MVA)	No
18	Vacuum extraction(assisted vaginal delivery)	No
19	Provide emotional support to the mother throughout labour and delivery	No
20	Identify danger signs in the first, second or third stages of labour	No
21	Management of prolapsed cord	No
22	Management of shoulder dystocia	No
23	Caesarean section	Refer to hospital

**Table 11: Postpartum care**

#	Services	LHW
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1	Advise maternal diet	Yes
2	Advise maternal hygiene	Yes
3	Treatment of anaemia	Yes
4	Management of PPH	Yes & refer to hospital
5	Treatment of puerperal infection	No - refer to hospital
6	Breast examination	Yes
7	Antibiotics	No
8	Counselling on family planning, exclusive breast feeding and hygiene	Yes
9	Provide contraceptives	Yes – Condoms, Pills
10	Register births and deaths	Yes



## 4.1 New-born Health

**Table 12: Care of the new-born**

#	Services	LHW
<b>1</b>	<b>Immediate care</b>	
i	○ Dry and stimulate the baby	No
ii	○ Clean airway, assess the baby's breathing and colour, decide if the baby needs for resuscitation, resuscitate if required.	No
iii	○ Tie/clamp and cut the cord	No
iv	○ Avoid hypothermia, keep the baby warm by placing the baby in skin-to-skin contact with the mother (kangaroo care), covering both mother and baby with a sheet/blanket and covering the baby's head with a cloth	No
v	○ Have the mother start breastfeeding within half hour	No
vi	○ Give eye care within one hour after birth	No
<b>2</b>	<b>Care during the first day</b>	
i	○ Conduct physical examination (colour, breathing, posture and tone, heart rate, warmth, activity, skin, head, eyes, mouth, chest, abdomen, back and spine, anus, genital organs, temperature and weight)	Yes
ii	○ Give vitamin K 1mg IM	No
iii	○ Give the first immunisation of BCG, polio, hepatitis	Refer to BHU/ RHC
<b>3</b>	<b>Care up to 28 days</b>	
i	○ Keep the cord clean and dry	Yes
ii	<ul style="list-style-type: none"> <li>○ Teach and counsel mother/family about</li> <li>○ handwashing,</li> <li>○ cord care,</li> <li>○ exclusive breastfeeding for 6 months, including colostrum</li> <li>○ keeping the baby warm</li> <li>○ completing immunisation</li> <li>○ not applying <i>surma</i></li> <li>○ recognising danger signs and taking appropriate actions if they occur</li> </ul>	Yes



#	Services	LHW
iii	○ Take care of LBW, breastfeed at every 2 to 2½ hours	Yes
iv	○ Manage neonatal jaundice	Yes



## 4.2 Child health

Table 13: Newborn and Child care

#	Services	LHW
1	Assess 'developmental milestones' at 2, 4, 6, 9, 12, 18 and 24 months	Yes
2	Perform growth monitoring up to three years	Yes
	<b>IMNCI</b>	
3	Management of ARI	
i	Child with cough/fever	Yes
ii	Child with pneumonia	No – refer to BHU/RHC
iii	Child with severe pneumonia	No – refer to hospital
iv	Child with very severe disease	No – refer to hospital
v	Child with wheeze	No – refer to BHU/RHC
vi	Child with ear infection	No – refer to BHU/RHC
vii	Health education for ARI <ul style="list-style-type: none"> <li>○ Increasing fluids</li> <li>○ Continue feeding</li> <li>○ Cleanliness</li> <li>○ Identifying danger signs &amp; taking timely actions</li> </ul>	Yes
4	Management of Diarrhoea	
i	With no dehydration	Yes
ii	Some dehydration	Yes
iii	Severe dehydration	Refer to hospital
iv	With additional problems: <ul style="list-style-type: none"> <li>○ Diarrhoea &gt; 14 days</li> </ul>	Refer to hospital



#	Services	LHW
	<ul style="list-style-type: none"> <li>○ With severe malnutrition</li> <li>○ Fever &gt;38 C<sup>0</sup></li> </ul>	
v	Health education on Diarrhoea/ORT <ul style="list-style-type: none"> <li>○ How to mix ORS</li> <li>○ Increasing fluids</li> <li>○ Continue feeding</li> <li>○ Handwashing</li> <li>○ Identifying danger signs &amp; taking timely actions</li> </ul>	Yes
5	Management of dysentery	Refer to BHU/RHC
6	Management of fever	
i	History	Yes
ii	Examination	Yes
iii	Laboratory	Refer to BHU/ RHC
iv	Treatment	Yes – refer if > 101° F
7	Management of severely ill child	Refer to hospital
8	School health services: Regularly planned visits for	
i	Medical check-ups	No
ii	Eye sight testing	No
iii	Immunisation	No
iv	Deworming	No
v	Treatment and follow-up	No
vi	Health education	Yes



### 4.3 Adolescent health

**Table 14: Health education to youth**

#	Services	LHW
1	Teaching the youth about roles and responsibilities of men and women in building a healthy family	Yes to female youth
2	Promoting healthy life style behaviours – exercise, no smoking/ <i>naswar</i> , avoiding violence	No
3	Imparting knowledge about structure of menstrual cycle to females	Yes
4	Educating about risks involved in early age marriages and pregnancies	Yes to females



## 4.4 Family planning

Table 15: Family planning services

#	Services	LHW
1	Counselling on family planning methods to enhance CPR	
i	Motivate for family planning	Yes
ii	Remove misconceptions	Yes
iii	Help make informed choice	Yes
2	Clinical examination	No
3	Education about natural methods <ul style="list-style-type: none"> <li>○ Rhythm method</li> <li>○ LAM</li> <li>○ Withdrawal</li> </ul>	Yes
4	Education about modern methods <ul style="list-style-type: none"> <li>○ Condoms</li> <li>○ Pills</li> <li>○ Injections</li> <li>○ IUCD</li> <li>○ Tubal ligation</li> <li>○ Vasectomy</li> </ul>	Yes
5	Provision of contraceptives	
i	Distribute condoms	Yes
ii	Distribute oral pills	Yes
iii	Give injections	Yes
iv	Insert IUCDs	No – refer to BHU/ RHC
v	Sterilisation females	No – refer to THQH/ DHQH
vi	Sterilisation males	No
6	Suggest alternatives in case of side effects	Yes



#	Services	LHW
7	Referral for couples having infertility to THQH/ DHQH	Yes



## 5 Immunisation

**Table 16: Immunisation services**

#	Services	LHW
1	Storage of vaccines	No
2	Routine Immunisation	Yes
3	Campaigns (NIDs)	Yes
4	Disease surveillance & case reporting	Yes
5	Motivate families for	
i	Regular and timely immunisation	Yes
ii	Giving polio drops on all NIDs	Yes
6	Vaccinating out-of schedule child	Yes



## 6 Appropriate treatment of endemic common diseases and injuries

**Table 17: Treatment of common injuries**

#	Services	LHW
1	Wound dressing	Yes
2	Snake bites	First aid + refer to DHQH
3	Dog bites	First aid + refer to EDOH / DHQH
4	Fractures/ dislocations	Refer to hospital
5	Sprains/ strains	Refer to RHC
6	For accidents	Refer to hospital
7	CPR	No

**Treatment of common diseases** will be discussed in section 7.



## 7 Prevention and control of locally endemic diseases

### 7.1 Management and Control of endemic communicable diseases

Table 18: Management and Control of endemic communicable diseases

#	Services	LHW
1	<b>Respiratory problems</b>	
i	Common cold and cough	Yes
ii	Acute Bronchitis	Refer to BHU/ RHC
iii	Pneumonia	Refer
iv	Lower respiratory tract infections in elderly	No
2	<b>GI problems</b>	
i	Acute diarrhoea	Yes
ii	Chronic diarrhoea	Refer to hospital
iii	Dysentery	Refer to BHU/ RHC
iv	Health education about hand washing	Yes
3	<b>Control of Tuberculosis</b>	
i	Identification of suspects	Yes & refer to BHU/ RHC
ii	Sputum smear examination	No
iii	X-Ray for smear negative cases	No
iv	Treatment of diagnosed cases	Participate in DOTS
v	TB-DOTS recording & reporting	Yes
vi	Screening of contacts	No
vii	Health education: <ul style="list-style-type: none"> <li>Identify suspects</li> <li>Get sputum test done</li> <li>TB is curable</li> <li>Treatment is free of costs</li> <li>Where TB services are available</li> </ul>	Yes
4	<b>Control of Malaria</b>	



#	Services	LHW
i	Diagnosis	
	a. Clinical	Yes
	b. Laboratory	Refer to BHU/ RHC
ii	Treatment	
iii	Uncomplicated case	Yes
iv	Complicated case	Refer to hospital
v	Provide ITNs	No
vi	Health education: <ul style="list-style-type: none"> <li>○ Cleanliness of the surroundings</li> <li>○ Netting windows and doors</li> <li>○ Use bednets</li> </ul>	Yes
<b>5</b>	<b>Typhoid</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to RHC
	c. Laboratory	No
ii	Treatment	No
<b>6</b>	<b>Dengue Fever</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No
<b>7</b>	<b>Skin infections</b>	
i	Common wounds/ infections	Yes
ii	Scabies	Yes
<b>8</b>	<b>Sexually Transmitted Infections</b>	
i	Diagnosis	
	a. History	Refer to RHC



#	Services	LHW
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No
9	<b>Hepatitis A and E</b>	
i	Diagnosis	
	a. History	Refer to RHC
	b. Examination	Refer to RHC
	c. Laboratory	No
ii	Treatment	No
iii	Health education on transmission of hepatitis	Yes
10	<b>Hepatitis B and C</b>	
i	Diagnosis	
	a. History	Refer to RHC
	b. Examination	Refer to RHC
	c. Laboratory	No
ii	Treatment	No
iii	Health education on transmission of hepatitis B and C	Yes
11	<b>Leishmaniasis</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to RHC
	c. Laboratory	No
ii	Treatment	No
12	<b>Brucellosis</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to RHC
	c. Laboratory	No
ii	Treatment	No



#	Services	LHW
13	<b>Tinea (foot, inguinal, face, armpits, breasts)</b>	
i	Diagnosis	
	a. History	Refer to BHU/ RHC
	b. Examination	No
ii	Treatment	No
14	<b>Trachoma</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to BHU/ RHC
ii	Treatment	No
15	<b>HIV/AIDS</b>	
i	Health education on transmission of HIV/AIDS	No



## 7.2 Management and control of endemic non communicable diseases

**Table 19: Management and control of endemic non communicable diseases**

#	Services	LHW
1	<b>Hypertension</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	No
	c. Laboratory <ul style="list-style-type: none"> <li>○ Blood cholesterol</li> <li>○ Lipid profile</li> <li>○ Serum creatinine</li> </ul>	No
ii	Treatment	Refer to BHU/ RHC
iii	Health education for control of BP and prevention of heart attack and strokes: <ul style="list-style-type: none"> <li>○ Tobacco cessation</li> <li>○ Regular physical activity 30 minutes a day</li> <li>○ Reduced salt intake &lt;5 gm per day</li> <li>○ Regular use of antihypertensive</li> <li>○ Regular use of Aspirin</li> <li>○ Weight control</li> </ul>	Yes
2	<b>Diabetes Mellitus</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No
iii	Health education on:	
	a. Diet guidance	No
	b. Avoiding sugars	No
	c. Weight control	No
	d. Regular physical activity 30 minutes a day	No



#	Services	LHW
	e. Regular use of oral hypoglycaemic agents/ insulin	No
iv	Prevention/early detection of foot complications	No
v	Screening for diabetic retinopathy	No
3	<b>Asthma</b>	
i	Diagnosis	
	a. History	Refer to BHU / RHC
	b. Examination	No
	c. Laboratory	No
	d. X-ray	No
ii	Treatment	No
4	<b>COPD</b>	
i	Diagnosis	
	a. History	Refer to BHU
	b. Examination	Refer to BHU
	c. Laboratory	No
	d. X-ray	No
ii	Treatment	No
5	<b>Cancers</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No
iii	Health education for breast examination	Yes
6	<b>Arthritis</b>	
i	Diagnosis	



#	Services	LHW
	a. History	Refer to DHQH
	b. Examination	No
	c. Laboratory	No
	d. X-ray	No
ii	Treatment	No
7	<b>Irritable Bowel Syndrome</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to DHQH
	c. Laboratory	No
ii	Treatment	No
8	<b>Peptic ulcer</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to DHQH
	c. Laboratory	No
ii	Treatment	No



### 7.3 Disability prevention

Table 20: Disability prevention services

#	Services	LHW
1	<b>Identification/referral for</b>	
i	Visual impairment	Yes
ii	Hearing disability	Yes
iii	Orthopaedic disability	Yes
2	<b>Control of iodine deficiency</b>	
i	Identification of goitre and referral to DHQH	Yes
ii	Health education about illnesses due to iodine deficiency	Yes
3	<b>Primary eye care</b>	
i	Diagnosis and treatment of common eye diseases	Yes
ii	Refraction Services	No
iii	Detection of cataract cases and referral for cataract surgery	Yes
iv	Detection of glaucoma and referral	Yes
4	<b>Health education on</b>	
i	Early examination of infants	Yes
ii	Dealing with disability at home	No
iii	Making life of disabled productive	No
iv	Seeking advice on physiotherapy	No



## 7.4 Mental health

**Table 21: Mental health services**

#	Services	LHW
1	Attention deficit disorder	No
2	Generalized anxiety disorder	No
3	Obsessive compulsive disorder	No
4	Panic disorder	No
5	Bipolar disorder	No
6	Depression	No
7	Schizophrenia	No
8	Alcohol abuse and dependence	No
9	Drug abuse	No



## 7.5 Oral health

**Table 22: Oral health services**

#	Services	LHW
1	Tooth extraction	No
2	Scaling	No
3	Filling	No
4	Management of gingivitis and oral ailments	No
5	Health education on oral hygiene	Yes



## Equipment and supplies for LHWs

**Table 26: Items required for LHW Health House**

#	Items	Life of items
1.	Salter Scale	1 for three years
2.	Six Type Charts	1 set for 2 years
3.	LHW Kit	1 kit for 3 years
4.	Health House Board	1 board for 3 years
5.	Identity Card	One year/subject to conditions

**Table 27: Items in LHW Kit per LHW per month**

#	Items	No.
1.	Paracetamol Tablets	200 tablets
2.	Paracetamol Syrup	10 bottles
3.	Chloroquine Tablets 150 mg	100 tablets
4.	Chloroquine Syrup 50 mg/5 ml	5 bottles
5.	Iron + Folic tablets	1000 tablets
6.	Antiseptic lotion	1 bottle
7.	Amoxyciline Suspension 125 mg	5 bottles
8.	Polyfax eye ointment	10 tubes
9.	Vitamin B Syrup	7 bottles
10.	B.B. Lotion	2 bottles
11.	Sticking Plaster	1 roll
12.	Mabendazole Tablets	100 tablets
13.	Cotton Roll	1 roll
14.	Cotton Bandage	1 roll
15.	Piperazine syrup	5 bottles
16.	ORS	20 sachets
17.	Zinc Sulphate Susp	7 bottles
18.	Thermometers	1 each per year
19.	Scissors	1 for two years
20.	Pencil Torch	1 for 6 months
21.	Condoms	100 pcs per month
22.	Oral Pills	10 cycles/month
23.	Depo Injection with syringe	3 injections/month
24.	Health education material	
25.	Data recording and reporting instruments	











# Annex III – Minimum Services, Equipment, Supplies and Medicines for CDs







# 1 Education concerning prevailing health problems and the methods of preventing and controlling them

Table 4: Examples for BCC<sup>1</sup>

## REPRODUCTIVE HEALTH PRACTICES:

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. 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).
3. Take iron tablets regularly from 3 months onwards in pregnancy.
4. Take calcium tablets regularly from 5 months onwards in pregnancy
5. Seek assistance for delivery only from a skilled birth attendant (SBA) such as CMW, LHV, lady doctor.

## INFANT AND CHILD FEEDING PRACTICES:

6. Initiate breastfeeding with first half to one hour after delivery.
7. Give the first bath to the new-born after 24 hours
8. Breastfeed exclusively for 6 months.
9. From about 6 months, provide appropriate complementary feeding such as *khichri* and continue breastfeeding until 24 months.
10. Continue feeding children and increase fluids during illness; increase feeding immediately after illness.

## IMMUNISATION PRACTICES:

11. Take infants for immunisation even when he or she is sick. Allow sick infant to be immunised during visit for curative care.
12. For every pregnant women and women of childbearing age, seek tetanus toxoid vaccine at every opportunity.
13. Take infant for measles immunisation as soon as possible after the age of 9 months

## CARE-SEEKING PRACTICES:

14. Seek appropriate care when infant or child is recognised as being sick (i.e. looks unwell, not playing, not eating or drinking, lethargic or change in consciousness, vomiting everything, high fever, fast or difficult breathing).

## OTHER EXAMPLES

15. Wash hands with soap: after using toilet, after handling baby's faeces, before cooking,

<sup>1</sup>Adapted from Emphasis Behaviors in Maternal and Child Health. 1997. BASICS Technical Report



before feeding

16. Apply SODIS daily to make water safe for drinking purposes.
17. Use iodized salt regularly
18. Use insecticide-treated bed-nets for pregnant women and children under 5 years of age
19. Mix and administer ORS correctly during diarrhoea in children.
20. Administer treatment and medications according to instruction (amount and duration).



## 2 Proper Nutrition

**Table 6: Proper nutrition services at PHC facilities**

#	Services	CD
1	<b>Assessment of nutritional status</b>	
i	Growth monitoring up to three years	Yes
2	<b>Prevention of malnutrition</b>	
i	Facilitate initiation of early breastfeeding	
ii	Support and promote exclusive breastfeeding	Yes
iii	Deal with breastfeeding problems in early months	
iv	Promotion of appropriate complementary feeding from 6 months	Yes
v	Promotion of maternal nutritional status through counselling	
vi	Diagnosing malnutrition in pregnant and lactating women	
vii	Promotion of maternal nutritional status	No
viii	Iron/folic acid supplementation for pregnant, lactating women	Yes
ix	Prevent parasitic infections	Yes
x	Vitamin A supplementation: To all children 6 months to 59 months and post-partum mothers	No
xi	Promote exposure to sunshine for women and children to avoid vitamin D deficiency	Yes
xii	Exclude vitamin D deficiency	No
xiii	Promotion of iodized salt	Yes
3	<b>Treatment of Malnutrition</b>	
i	Diagnosis of micronutrient deficiency and treatment	Yes – refer to BHU/ RHC
ii	Treatment of mild + moderate malnutrition	Yes
iii	Treatment of severe malnutrition through WHO Guidelines	Refer to THQH/ DHQH



### 3 An adequate supply of safe water and basic sanitation

Table 8: Water and sanitation services

#	Services	CD
1	<b>Testing of water</b>	
i	Making rapid test kits available for checking faecal contamination	No
ii	Making kit available for chlorine test	No
2	<b>Promoting safe drinking water measures at home</b>	
i	Applying solar disinfection	Yes
ii	Using Aquatabs	Yes
iii	Using boiled water	Yes
3	<b>Hygiene Promotion</b>	
i	Hand washing	Yes
ii	Toilet use	Yes
4	<b>Other Measures</b>	
i	Create awareness about problems created by stagnant water, blocked drains, defecating outdoors	Yes



#### 4. Maternal and child health care, including family planning

Table 8: Antenatal services

#	Services	CD
1.	Identify pregnant women in the community	No
2.	Persuade and register pregnant women to receive ANC	Yes
3	Diagnosis of pregnancy	
i	History	Yes
ii	Examination	Yes
iii	Laboratory	No
4	Antenatal visits	
i	Height	Yes
ii	Weight	Yes
iii	BP measurement	Yes
iv	Fundal height	Yes
v	Goitre	Yes
vi	Oedema	Yes
vii	Tetanus immunization	Yes or motivati e
viii	Iron/Folic supplementation	Yes
ix	Calcium supplementation	Yes
x	Urine for albumin/sugar	No
xi	Blood grouping	No
xii	Counselling on <ul style="list-style-type: none"> <li>○ Diet</li> <li>○ rest and exercises</li> <li>○ identifying SBA for delivery</li> <li>○ arranging money for emergency</li> <li>○ identifying transport for emergency</li> <li>○ identifying blood donor for emergency</li> <li>○ ensuring delivery kit for home deliveries</li> </ul>	Yes



	<ul style="list-style-type: none"> <li>○ danger signs of pregnancy and delivery</li> <li>○ initiation of breast feeding and exclusive breastfeeding for 6 months</li> </ul>	
xiii	Prevention and management of anaemia	
	j. Examination	Yes
	k. Laboratory	Refer suspected cases to BHU/RHC
	l. Treatment	Yes
5	Treat minor discomforts and Infections	
i	Treatment of worm infestation	Yes
ii	Prevention of malaria by promoting use of bednets	Yes
iii	Treatment of malaria <ul style="list-style-type: none"> <li>• Presumptive</li> <li>• Based on lab findings</li> </ul>	Yes No
iv	Treatment of Trichomoniasis	Yes
v	Treatment of Moniliasis	Yes
vi	Treatment of Urinary Tract Infection	Yes
vii	Syndromic management of sexually transmitted infections	Refer to BHU/RHC
6	Treatment of hypertensive disorders	Yes
7	Treatment of Diabetes Mellitus	Yes
8	Treatment of Vitamin A deficiency*	Refer to hospital
9	Management of pregnant woman in shock	Refer to hospital
10	Management of pre-eclampsia	Refer to hospital
11	Management of eclampsia	Refer to



		hospital
12	Treatment of incomplete miscarriage / abortion	No
13	Treatment of ectopic pregnancy	Identify & refer to hospital
14	Ultrasound	Refer to hospital

\* in the last trimester, if night blindness appears

**Table 9: Delivery care**

#	Services	CD
1	Identify true labour and monitor progression of labour –Partograph	No
2	Prepare the environment and materials following infection control protocols	No
3	Identify foetal malposition	No
4	External cephalic version	No
5	Assist normal delivery	No
6	Provide mini delivery kit	No
7	Parental administration of oxytocin	No
8	Parental administration of anticonvulsants	Yes and refer
9	Bimanual compression of uterus	No
10	Controlled cord traction	No
11	Suturing vaginal tears (1 <sup>st</sup> and 2 <sup>nd</sup> degree)	No
12	Suturing vaginal tears (3 <sup>rd</sup> degree)	No
13	Provision of intravenous fluids	No
14	Parental administration of antibiotics	No
15	Safe blood transfusion	No
16	Manual removal of placenta	No
17	Removal of retained products (e.g. MVA)	No
18	Vacuum extraction(assisted vaginal delivery)	No – refer to hospital



#	Services	CD
19	Provide emotional support to the mother throughout labour and delivery	Yes
20	Identify danger signs in the first, second or third stages of labour	Yes – refer to hospital
21	Management of prolapsed cord	No – refer to hospital
22	Management of shoulder dystocia	No – refer to hospital
23	Caesarean section	No – Refer to hospital

Table 11: Postpartum care

#	Services	CD
1	Advise maternal diet	Yes
2	Advise maternal hygiene	Yes
3	Treatment of anaemia	Yes
4	Management of PPH	Yes & refer to hospital
5	Treatment of puerperal infection	No & refer to hospital
6	Breast examination	Yes
7	Antibiotics	Yes – oral
8	Counselling on family planning, exclusive breast feeding and hygiene	Yes
9	Provide contraceptives	Yes – Condom, Pills, injectables, IUD
10	Register births and deaths	No



### 3.1 New-born Health

Table 12: Care of the new-born

#	Services	CD
<b>1</b>	<b>Immediate care</b>	
i	○ Dry and stimulate the baby	No
ii	○ Clean airway, assess the baby's breathing and colour, decide if the baby needs for resuscitation, resuscitate if required.	No
iii	○ Tie/clamp and cut the cord	No
iv	○ Avoid hypothermia, keep the baby warm by placing the baby in skin-to-skin contact with the mother (kangaroo care), covering both mother and baby with a sheet/blanket and covering the baby's head with a cloth	No
v	○ Have the mother start breastfeeding within half hour	No
vi	○ Give eye care within one hour after birth	No
<b>2</b>	<b>Care during the first day</b>	
i	○ Conduct physical examination (colour, breathing, posture and tone, heart rate, warmth, activity, skin, head, eyes, mouth, chest, abdomen, back and spine, anus, genital organs, temperature and weight)	No
ii	○ Give vitamin K 1mg IM	No
iii	○ Give the first immunisation of BCG, polio, hepatitis	Yes
<b>3</b>	<b>Care up to 28 days</b>	
i	○ Keep the cord clean and dry	Yes
ii	○ Teach and counsel mother/family about <ul style="list-style-type: none"> <li>○ handwashing,</li> <li>○ cord care,</li> <li>○ exclusive breastfeeding for 6 months, including colostrum</li> <li>○ keeping the baby warm</li> <li>○ completing immunisation</li> <li>○ not applying <i>surma</i></li> <li>○ recognising danger signs and taking appropriate actions if they occur</li> </ul>	Yes
iii	○ Take care of LBW, breastfeed at every 2 to 2½ hours	Yes
iv	○ Manage neonatal jaundice	Yes



<b>3.2 Child health</b>
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**Table 13: Newborn and Child care**

#	Services	CD
1	Assess 'developmental milestones' at 2, 4, 6, 9, 12, 18 and 24 months	Yes
2	Perform growth monitoring up to three years	Yes
	<b>IMNCI</b>	
3	Management of ARI	
i	Child with cough/fever	Yes
ii	Child with pneumonia	No – refer to BHU/RH C
iii	Child with severe pneumonia	No – refer to hospital
iv	Child with very severe disease	No – refer to hospital
v	Child with wheeze	No – refer to BHU/ RHC
vi	Child with ear infection	No – refer to BHU/ RHC
vii	Health education for ARI <ul style="list-style-type: none"> <li>○ Increasing fluids</li> <li>○ Continue feeding</li> <li>○ Cleanliness</li> <li>○ Identifying danger signs &amp; taking timely actions</li> </ul>	Yes
4	Management of Diarrhoea	
i	With no dehydration	Yes



#	Services	CD
ii	Some dehydration	Yes
iii	Severe dehydration	Refer to hospital
iv	With additional problems: <ul style="list-style-type: none"> <li>○ Diarrhoea &gt; 14 days</li> <li>○ With severe malnutrition</li> <li>○ Fever &gt; 38 C<sup>0</sup></li> </ul>	Refer to hospital
v	Health education on Diarrhoea/ORT <ul style="list-style-type: none"> <li>○ How to mix ORS</li> <li>○ Increasing fluids</li> <li>○ Continue feeding</li> <li>○ Handwashing</li> <li>○ Identifying danger signs &amp; taking timely actions</li> </ul>	Yes
5	Management of dysentery	Refer to BHU/RHC
6	Management of fever	
i	History	Yes
ii	Examination	Yes
iii	Laboratory	Refer to BHU/RHC
iv	Treatment	Yes – refer if > 101° F
7	Management of severely ill child	Refer to hospital
8	School health services: Regularly planned visits for	
i	Medical check-ups	No
ii	Eye sight testing	No
iii	Immunisation	No
iv	Deworming	No
v	Treatment and follow-up	No
vi	Health education	No







### 3.3 Adolescent health

**Table 14: Health education to youth**

#	Services	CD
1	Teaching the youth about roles and responsibilities of men and women in building a healthy family	Yes
2	Promoting healthy life style behaviours – exercise, no smoking/ <i>naswar</i> , avoiding violence	No
3	Imparting knowledge about structure of menstrual cycle to females	No
4	Educating about risks involved in early age marriages and pregnancies	Yes



### 3.4 Family planning

Table 15: Family planning services

#	Services	CD
1	Counselling on family planning methods to enhance CPR	
i	Motivate for family planning	Yes
ii	Remove misconceptions	Yes
iii	Help make informed choice	Yes
2	Clinical examination	Yes
3	Education about natural methods <ul style="list-style-type: none"> <li>○ Rhythm method</li> <li>○ LAM</li> <li>○ Withdrawal</li> </ul>	Yes
4	Education about modern methods <ul style="list-style-type: none"> <li>○ Condoms</li> <li>○ Pills</li> <li>○ Injections</li> <li>○ IUCD</li> <li>○ Tubal ligation</li> <li>○ Vasectomy</li> </ul>	Yes
5	Provision of contraceptives	
i	Distribute condoms	Yes
ii	Distribute oral pills	Yes
iii	Give injections	Yes
iv	Insert IUCDs	Yes
v	Sterilisation females	No – refer to THQH/ DHQH
vi	Sterilisation males	No – refer to THQH/ DHQH
6	Suggest alternatives in case of side effects	Yes
7	Referral for couples having infertility to THQH/ DHQH	Yes







## 4 Immunisation

Table 16: Immunisation services

#	Services	CD
1	Storage of vaccines	Yes
2	Routine Immunisation	Yes
3	Campaigns (NIDs)	Yes
4	Disease surveillance & case reporting	Yes
5	Motivate families for	
i	Regular and timely immunisation	Yes
ii	Giving polio drops on all NIDs	Yes
6	Vaccinating out-of schedule child	Yes



## 5 Appropriate treatment of endemic common diseases and injuries

**Table 17: Treatment of common injuries**

#	Services	CD
1	Wound dressing	Yes
2	Snake bites	First aid + refer to DHQH
3	Dog bites	First aid + refer to EDOH / DHQH
4	Fractures/ dislocations	Apply splint & refer to DHQH
5	Sprains/ strains	Refer to RHC
6	For accidents	Assess, stabilize, refer to hospital
7	CPR	Yes

**Treatment of common diseases** will be discussed in section 7.



## 6 Prevention and control of locally endemic diseases

### 6.1 Management and Control of endemic communicable diseases

Table 18: Management and Control of endemic communicable diseases

#	Services	CD
1	<b>Respiratory problems</b>	
i	Common cold and cough	Yes
ii	Acute Bronchitis	Yes
iii	Pneumonia	Refer
iv	Lower respiratory tract infections in elderly	No
2	<b>GI problems</b>	
i	Acute diarrhoea	Yes
ii	Chronic diarrhoea	Refer to hospital
iii	Dysentery	Yes
iv	Health education about hand washing	Yes
3	<b>Control of Tuberculosis</b>	
i	Identification of suspects	Yes & refer to BHU/ RHC
ii	Sputum smear examination	No
iii	X-Ray for smear negative cases	No
iv	Treatment of diagnosed cases	Participate in DOTS
v	TB-DOTS recording & reporting	Yes
vi	Screening of contacts	Yes
vii	Health education: <ul style="list-style-type: none"> <li>○ Identify suspects</li> <li>○ Get sputum test done</li> <li>○ TB is curable</li> <li>○ Treatment is free of costs</li> <li>○ Where TB services are available</li> </ul>	Yes
4	<b>Control of Malaria</b>	
i	Diagnosis	



#	Services	CD
	a. Clinical	Yes
	b. Laboratory	Refer to BHU/ RHC
ii	Treatment	
iii	Uncomplicated case	Yes
iv	Complicated case	Refer to hospital
v	Provide ITNs	No
vi	Health education: <ul style="list-style-type: none"> <li>○ Cleanliness of the surroundings</li> <li>○ Netting windows and doors</li> <li>○ Use bednets</li> </ul>	Yes
5	<b>Typhoid</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to RHC
ii	Treatment	No
6	<b>Dengue Fever</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to BHU/ RHC
ii	Treatment	No
7	<b>Skin infections</b>	
i	Common wounds/ infections	Yes
ii	Scabies	Yes
8	<b>Sexually Transmitted Infections</b>	
i	Diagnosis	
	a. History	Yes



#	Services	CD
	b. Examination	Refer to RHC
	c. Laboratory	No
ii	Treatment	No
9	<b>Hepatitis A and E</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	No
ii	Treatment	Yes
iii	Health education on transmission of hepatitis	Yes
10	<b>Hepatitis B and C</b>	
i	Diagnosis	
	a. History	Refer to RHC
	b. Examination	Refer to RHC
	c. Laboratory	No
ii	Treatment	No
iii	Health education on transmission of hepatitis B and C	Yes
11	<b>Leishmaniasis</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to RHC
ii	Treatment	No
12	<b>Brucellosis</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to RHC
ii	Treatment	No



#	Services	CD
13	<b>Tinea (foot, inguinal, face, armpits, breasts)</b>	
i	Diagnosis	
	a. History	Refer to BHU/ RHC
	b. Examination	No
ii	Treatment	No
14	<b>Trachoma</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to BHU/ RHC
ii	Treatment	No
15	<b>HIV/AIDS</b>	
i	Health education on transmission of HIV/AIDS	Yes



## 6.2 Management and control of endemic non communicable diseases

**Table 19: Management and control of endemic non communicable diseases**

#	Services	CD
1	<b>Hypertension</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory <ul style="list-style-type: none"> <li>○ Blood cholesterol</li> <li>○ Lipid profile</li> <li>○ Serum creatinine</li> </ul>	No
ii	Treatment	Yes
iii	Health education for control of BP and prevention of heart attack and strokes: <ul style="list-style-type: none"> <li>○ Tobacco cessation</li> <li>○ Regular physical activity 30 minutes a day</li> <li>○ Reduced salt intake &lt;5 gm per day</li> <li>○ Regular use of antihypertensive</li> <li>○ Regular use of Aspirin</li> <li>○ Weight control</li> </ul>	Yes
2	<b>Diabetes Mellitus</b>	
i	Diagnosis	
	a. History	Refer to BHU
	b. Examination	Refer to BHU
	c. Laboratory	Refer to BHU
ii	Treatment	Refer to BHU
iii	Health education on:	
	a. Diet guidance	Yes
	b. Avoiding sugars	Yes
	c. Weight control	Yes
	d. Regular physical activity 30 minutes a day	Yes
	e. Regular use of oral hypoglycaemic agents/ insulin	No



#	Services	CD
iv	Prevention/early detection of foot complications	Yes
v	Screening for diabetic retinopathy	No
3	<b>Asthma</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes – refer to BHU/ RHC
	c. Laboratory	No
	d. X-ray	No
ii	Treatment	No
4	<b>COPD</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes – refer
	c. Laboratory	No
	d. X-ray	No
ii	Treatment	No
5	<b>Cancers</b>	
i	Diagnosis	
	a. History	No
	b. Examination	No
	c. Laboratory	No
ii	Treatment	No
iii	Health education for breast examination	Yes
6	<b>Arthritis</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to DHQH
	c. Laboratory	No



#	Services	CD
	d. X-ray	No
ii	Treatment	No
7	<b>Irritable Bowel Syndrome</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to DHQH
	c. Laboratory	No
ii	Treatment	No
8	<b>Peptic ulcer</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Refer to DHQH
	c. Laboratory	No
ii	Treatment	No



### 6.3 Disability prevention

Table 20: Disability prevention services

#	Services	CD
1	<b>Identification/referral for</b>	
i	Visual impairment	Yes
ii	Hearing disability	Yes
iii	Orthopaedic disability	Yes
2	<b>Control of iodine deficiency</b>	
i	Identification of goitre and referral to DHQH	Yes
ii	Health education about illnesses due to iodine deficiency	Yes
3	<b>Primary eye care</b>	
i	Diagnosis and treatment of common eye diseases	Yes
ii	Refraction Services	No
iii	Detection of cataract cases and referral for cataract surgery	Yes
iv	Detection of glaucoma and referral	Yes
4	<b>Health education on</b>	
i	Early examination of infants	Yes
ii	Dealing with disability at home	No
iii	Making life of disabled productive	No
iv	Seeking advice on physiotherapy	No



## 6.4 Mental health

**Table 21: Mental health services**

#	Services	CD
1	Attention deficit disorder	No
2	Generalized anxiety disorder	Identify and refer
3	Obsessive compulsive disorder	No
4	Panic disorder	No
5	Bipolar disorder	No
6	Depression	Identify and refer
7	Schizophrenia	No
8	Alcohol abuse and dependence	Identify and refer to DHQH
9	Drug abuse	Identify and refer to DHQH



## 6.5 Oral health

**Table 22: Oral health services**

#	Services	CD
1	Tooth extraction	No
2	Scaling	No
3	Filling	No
4	Management of gingivitis and oral ailments	No
5	Health education on oral hygiene	Yes



## C. Equipment and supplies

Table 23: List of equipment proposed for CD

#	Items	CD
<b>1. OPD</b>		
1.	Stethoscope	2
2.	B. P. apparatus (mercury)	2
3.	Clinical thermometer	12
4.	Examination torch	2
5.	Tongue depressor disposable	-
6.	ENT diagnostic set	2
7.	Examination couch	2
8.	Linen sheets for couch/beds	10
9.	Revolving stool	2
10.	ORS measuring jug	1
11.	ORS feeding containers and spoons	6
12.	Tape measure for nutrition assessment	1
13.	Baby weighing machine	1
14.	Weighing scale for adults	1
15.	Tuning fork	0
16.	Patella hammer	0
17.	Scissors	2
18.	Dressing trays	1
19.	Dressing scissors	1
20.	Kidney tray- large size	2
21.	Bowl large size	2
22.	Dressing drum	1
23.	Sterilizer	1
24.	IV drip stand	1
25.	Needle holder forceps	2
26.	Artery forceps straight	2
27.	Artery forceps curved	2
28.	Screen four fold	2
29.	Oxygen gas cylinder	0
30.	Tissue forceps – plain	0
31.	Tissue forceps – toothed	0
32.	Vision testing chart	1
33.	Cold box refrigerator for EPI	1
34.	Vaccine carrier and ice pack	0
35.	Breast pumps	1
36.	Stretcher	0
37.	Wheel chair	0
38.	Scalpel handle and blades	2
39.	Tourniquet	2
40.	Suturing silk	-
41.	Nebulizer	0
42.	Observation beds	0
43.	Pillows	0
44.	Blankets	0



#	Items	CD
<b>2. In All Areas</b>		
1.	Running water	6 hours
2.	Soaps	
3.	Sinks/ basins	
4.	Alcohol and glycerine for handrub	
5.	Antiseptic solution	
6.	Detergent	
7.	Disinfectant (5% hypochlorite solution – common bleach)	
8.	Latex gloves	
9.	Utility gloves	
10.	Masks surgical	
11.	Masks N95	
12.	Eye wear	
13.	Head cover/ cap	
14.	Footwear (closed shoes)	
15.	Aprons/ Macintosh	
16.	Gowns (non-sterile and sterile in OT)	
17.	Puncture resistant sharp containers	
18.	Mops for cleaning	3
19.	Buckets for cleaning	3
20.	Green/white/blue buckets (non-infectious waste)	4
21.	Red buckets (infectious waste)	4
22.	Plastic bags – green/white/blue	
23.	Plastic bags – red	
24.	Fluid proof laundry bags	
25.	Ambubag for infant, child and adult	0
26.	Pedal suction machine (electric?)	0
27.	Relevant posters	
<b>3. Ward</b>		
1.	Bed with side table/locker	-
2.	Foot steps	-
3.	Baby cots	-
4.	Patient trolley	-
5.	Oxygen gas cylinder	-
6.	Nebulizer + Masks	-
7.	Peak flow meter	-
8.	Spacers for inhalers	-
9.	Bedding clothing	-
i.	Foam pillows	-
ii.	Bed sheets	-
iii.	Vinyl sheets (rexine)	-
iv.	Foam mattress	-
v.	Adult blankets	-
vi.	Baby blankets	-
10.	Plastic chairs (for in-patient attendants)	-
11.	Benches for patient attendants	-
12.	Radiant warmer/heater for newborn	-
<b>4. Labour Room</b>		
1.	Running water	-
2.	Availability of Hot water	-
3.	An area earmarked for new-born care	-



#	Items	CD
4.	Labour /Delivery Table	-
5.	Macintosh	-
6.	Shadowless Lamps	-
7.	Normal delivery set	-
8.	E&C set	-
9.	Equipment for assisted vacuum delivery	-
10.	Valsellum uterine forceps	-
11.	Standard surgical set (for minor procedures like episiotomies stitching)	-
12.	Equipment for Manual Vacuum Aspiration	-
13.	Emergency drug tray with inj. Oxytocin, Inj. Diazepam, Tab. Nifedepine, Magnesium sulphate, Inj. Lignocaine hydrochloride, Inj. Methyl ergometrine maleate, misoprostol, Sterilised cotton and gauze	-
14.	Baby resuscitation apparatus.	-
15.	Feotoscope	-
16.	Mucus extractor with suction tube and a foot operated suction machine	-
17.	Neonatal resuscitation trolley	-
18.	Radiant warmer /Heater for newborn baby	-
19.	Cusco's vaginal speculum (each of small, medium and large size)	-
20.	Sim's vaginal speculum – single & double ended - (each of small, medium and large size)	-
21.	Disposable vaginal speculum	-
22.	Anterior Vaginal wall retractor	-
23.	Chittle forceps	-
24.	Ayre's spatula	-
25.	<b>For family planning</b>	
i.	IUD insertion kit	-
	<b>5.Vaccine storage</b>	
1.	ILR/Deep Freezer	-
2.	Ice box	-
3.	Ice packs	-
	<b>6. Laboratory</b>	
1.	Sputum and blood specimen bottles	-
2.	Centrifuge (bench top)	-
3.	Centrifuge machine	-
4.	Stop watch	-
5.	Refrigerator	-
6.	Binocular microscope	-
7.	Urine meter.	-
8.	Calorie metre for Hb estimation	-
9.	DLC counter	-
10.	Haemocytometer	-
11.	ESR Racks.	-
12.	ESR Pipettes	-
13.	Water Bath	-
14.	Glass rods	-
15.	Glass slides	-
16.	Cover slips	-



#	Items	CD
17.	Centrifuge Tubes(Plastic)	-
18.	Centrifuge Tubes (Glass)	-
19.	Glass Pipettes various sizes corrected	-
20.	Jester Pipettes Fixed -various sizes	-
21.	Jester pipettes adjustable- various sizes	-
22.	Test tubes	-
23.	Pipette stands	-
24.	Sahli Haemoglobinometer	-
25.	Table lamp.	-
26.	Lancets (pack)	-
27.	Tube Sealer.	-
28.	Blood Grouping Viewing Box.	-
29.	Surgical Blades.	-
30.	Test Tube Holder.	-
31.	Reagent Bottles.	-
32.	Gas Burner.	-
33.	Stainless Steel Test Tube Racks.	-
34.	Glucometer	-
<b>7. Dental unit</b>		
1.	Dental unit (complete with chair, light, hand piece unit with hand pieces, suction and compressor	-
2.	Dental hand instruments (set)	-
3.	Aseptic Trolley	-
4.	Dental Autoclave	-
5.	Amalgamator ?	-
6.	Dental X-ray unit	-
7.	Intraoral X-ray film processor	-
8.	X-ray view box	-
9.	Lead apron	-
10.	Ultrasonic scaler	-
11.	Dental operating stool	-
<b>8. Operation Theatre</b>		
1.	Operation table	-
2.	Shadowless Lamps	-
3.	Macintosh	-
4.	Patients Trolley	-
5.	Oxygen Cylinder (large size with regulator)	-
6.	Instruments Trolley	-
7.	Dressing Drum( large size)	-
8.	Stand for Dressing.	-
9.	Scissors	-
10.	Dressing trays	-
11.	Dressing scissors	-
12.	Kidney tray- large size	-
13.	Bowl large size	-
14.	Sterilizer	-
15.	Needle holder forceps	-
16.	Artery forceps straight	-
17.	Artery forceps curved	-
18.	Tissue forceps – plain	-
19.	Tissue forceps – toothed	-
20.	Scalpel handle and blades	-



#	Items	CD
21.	Tourniquet	-
22.	Suturing silk	-
23.	McGill Forceps	-
24.	Basin	-
25.	Basin Stands.	-
26.	Towel Clips.	-
27.	BP Handle	-
28.	BP Blades	-
29.	Dissecting Forceps (plain)	-
30.	Needle Holder(large size)	-
31.	Sponge Holding Forceps( large size)	-
32.	Metallic Catheter (1-12)	-
33.	Nose Speculum.	-
34.	Proctoscope.	-
35.	Arm Splint Different sizes.	-
36.	Instruments Cabinet Large size.	-
37.	Spot Light	-
38.	Nail Brush	-
39.	Thermometer	-
40.	Container for thermometer.	-
41.	Stand for Drip	-
42.	Bucket El.	-
43.	Aircushion Rubber	-
44.	Hot Water Bottles	-
45.	Stomach Tube.	-
46.	Urine Collecting Bags.	-
47.	Instrument trolley	-
<b>9. Equipment for eye care and vision testing</b>		
1.	Directophthalmoscope	-
2.	Illuminatedvision testing drum	-
3.	Trial lens sets with trial frames	-
4.	Snellen and near vision charts	-
5.	Battery operated torch	-
<b>9. Furniture</b>		
1.	Office Table with 3 Drawers	3
2.	Office Chairs	3
3.	Office Rack Wooden	3
4.	Patient's stool	2
5.	Bench fibre glass	2
6.	Steel Almirah	3
<b>10. Others</b>		
1.	Pressure cooker autoclaves	1
2.	Autoclaves	-
3.	Electricity supply with backup facility (generator with POL)/ UPS or inverter/ Solar panel	6 hours
4.	Computer with accessories, including internet access	0
5.	Fans	5
6.	Tube lights	
7.	Basins	4
8.	Gas stove/ cylinder	1
9.	Ambulance	0
<b>11. X-ray room</b>		



#	Items	CD
1.	X-ray unit	0
	<b>12. Incinerator</b>	
1.	Incinerator	0
	<b>13. Health education material</b>	
2.	Health education material	
	<b>14. Registers and forms</b>	
2.	Data recording and reporting instruments	



<b>Essential drugs, vaccines and supplies for CD</b>
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Table 31: List of essential drugs

#	Therapeutic category (generic name)	Description	CD
<b>1.</b>	<b>Analgesics , antipyretics, non-steroidal anti-inflammatory drugs</b>		
i.	<b>Non –opioids</b>		
a.	Acetyl salicylic acid (aspirin)	Tablet 500mg	Yes
b.	Acetaminophin (paracetamol)	Tablet,500 mg Strip/blister	Yes
c.	Acetaminophin (paracetamol)	Syrup, 125 mg /5 ml	Yes
d.	Acetaminophin (paracetamol)	Suppository 100 mg	No
e.	Ibuprofen	Tablets 400mg Strip/blister	Yes
f.	Ibuprofen	Syrup 200mg/5ml	Yes
g.	Diclofenac Sodium	Tab. 50mg and 75 mg	Yes
h.	Diclofenac Sodium	Injection 75mg/3ml	No
i.	Tremadol	Inj. 100 mg	No
<b>2.</b>	<b>Antibacterial drugs/ Antiprotozoal</b>		
i.	Amoxicillin	Capsule 250 mg (anhydrous) Strip/blister	Yes
ii.	Amoxicillin	Powder for oral suspension, 125 mg/5ml	Yes
iii.	Amoxicillin + Clavulanic acid	Tablet 500 mg + 125 mg	Yes
iv.	Amoxicillin + Clavulanic acid	Syp. 125 + 31.25	Yes
v.	Sulfamethoxazole + Trimethoprim	Tablet, 400 mg + 80mg strip/blister	Yes
vi.	Sulfamethoxazole + Trimethoprim	Oral suspension 200mg+40mg/5ml	Yes
vii.	Doxycycline	Cap. 100mg	Yes
viii.	Tetracycline	Capsules 250 mg	No
ix.	Erythromycin	Tab. 250mg	Yes
x.	Erythromycin	Suspension 200mg/5ml	Yes



#	Therapeutic category (generic name)	Description	CD
xi.	Ceftriaxone	Inj. 250mg and 500mg	No
xii.	Ampicillin	Inj.250mg	No
xiii.	Ciprofloxacin	Tab. 500mg	Yes
xiv.	Neomycin + Bacitracin	Ointment 5 mg + 500 IU	Yes
xv.	Nalidixic Acid	Tablets 250 mg, 500 mg	Yes
xvi.	Norfloxacin	Tablets 400 mg	No
xvii.	Metronidazole	Tablet, 400 mg Strip/blister	Yes
xviii.	Metronidazole	Oral suspension, 200 mg (as benzoate)/5 ml	Yes
xix.	Diloxanide Furoate	Tablets 500 mg	No
xx.	Tinidazole	Tablets 500 mg	No
<b>3.</b>	<b>Antiallergics and drugs used in anaphylaxis</b>		
i.	Chlorpheniramine	Tablet , 4 mg Strip/blister	Yes
ii.	Chlorpheniramine	Syrup ,2 mg /5 ml	Yes
iii.	Dexamethasone	Inj. 4mg/ml	Yes
iv.	Hydrocortisone	Powder for inj.250mg (assodium succinate )in vial	No
v.	Hydrocortisone	Powder for injection , 100mg(as sodium succinate )in vial	No
vi.	Adrenaline	Inj. 1mg/ml	No
<b>4.</b>	<b>Oxytocics</b>		
i.	Oxytocin	Inj. 10IU/ml	Yes
ii.	Ergometrine	Inj. 200mcg/ml	Yes
iii.	Misoprostol	Tab. 200mcg	No
<b>5.</b>	<b>Hormone replacements (menopausal)</b>		
i.	Oestradiol	Tab. 0.5mg	No
ii.	Medroxyprogesterone	Tab. 5mg	No
<b>6.</b>	<b>Contraceptives</b>		



#	Therapeutic category (generic name)	Description	CD
i.	Norethisterone enantate (8 weekly)	Inj. 200mg/ml	Yes
ii.	Medroxyprogesterone acetate (12 weekly)	Inj. 150mg	Yes
iii.	Norethisterone + ethinyl oestradiol	Tab. 1mg + 35mcg	Yes
iv.	Levonorgestrel + ethinyl oestradiol	Tab. 150mg + 30mg	Yes
<b>7.</b>	<b>Contraceptive emergency</b>		
i.	Levonorgestrel	Tab 30mcg, 750mcg, 1.5mg	Yes
<b>8.</b>	<b>Oral Rehydration</b>		
i.	Oral rehydration salt, glucose-salt solution	Dry mixture(WHO formula) in sachet for 1 liter of soln.	Yes
ii.	Oral rehydration salt, glucose-salt solution	Dry mixture (reduce osmolarity / glucose 75 meq/ 1, Sodium 75 meq / 1, Chloride 65 meq / 1, Potassium 20 meq/ 1, Citrate 10 meq / 1) in sachet for 1 liter of solution	Yes
iii.	Zinc sulphate	Tab 20mg	Yes
iv.	Zinc sulphate	Syp	Yes
<b>9.</b>	<b>Parasitic Infections</b>		
i.	Mebendazole	Tablet, 100 mg Strip/blister	Yes
ii.	Mebendazole	Syp 100mg/5ml in 30ml	Yes
iii.	Albendazole	Tab 400mg	No
iv.	Meglumine antimonite, and sodium stibogluconate	Inj 333 mg	No
<b>10.</b>	<b>Antimalarial (Malaria Control Program)</b>		
i.	Chloroquine	Tablet, 150 mg (as phosphate or sulfate) Strip/blister	Yes
ii.	Chloroquine	Syrup, 50 mg/5ml (as phosphate or sulphate)	Yes
iii.	Sulfadoxin+Pyrimethamine	Tab. Sulfadoxin 500mg+ Pyrimethamine 25mg	Yes
iv.	Sulfadoxin+Pyrimethamine	Syp. Sulfadoxin 500mg+	Yes



#	Therapeutic category (generic name)	Description	CD
		Pyrimethamine 25mg/5ml	
v.	Artesunate	Tab. 50mg	Yes
vi.	Primaquine		Yes
<b>11.</b>	<b>Antituberculosis drugs (TB program)</b>		
i.	Ethambutol	Tablet, 400 mg Strip/blister	Yes
ii.	Rifampicin+Isoniazid	Tablet, 150 mg + 100 mg strip/blister	Yes
iii.	Rifampicin+Isoniazid	Tablet, 300 mg + 150 mg Strip/blister	Yes
iv.	Isoniazide + Ethambutol	Tablet, 150 mg + 400 mg Strip/blister	Yes
v.	Rifampacin + Isoniazide + Pyrazinamide+Ethambutol	Tab., 150mg+75mg+400mg+275mg strip/blister	Yes
vi.	Streptomycin	Powder for injection, 1g (assulfate) in vial	Yes
vii.	Isoniazide	Tab 100mg	Yes
<b>12.</b>	<b>Antifungal Drugs</b>		
i.	Benzoic Acid +Salicylic Acid	Ointment or Cream 6% + 3%	Yes
ii.	Nystatin	Tab 500,000 iu,	Yes
iii.	Nystatin	Oral drops 100,000 iu/ml	Yes
iv.	Clotrimazole	Pessary 100,000iu	No
v.	Griseofulvin	Capsules or Tablets 125 mg, 250 mg	Yes
vi.	Clotrimazole	1 % Cream	Yes
<b>13.</b>	<b>Antianemic drugs</b>		
i.	Ferrous sulphate/fumerate+ folic acid	Tablet , equivalent to 60 mg iron+ folic acid 0.5mg	Yes
ii.	Folic acid	Tab. 5mg	Yes
iii.	Ferrous Salt	Syp. 25mg iron/ml	Yes
<b>14.</b>	<b>Scabicides and pediculicides</b>		
i.	Benzoyl benzoate	Lotion 25%	Yes



#	Therapeutic category (generic name)	Description	CD
ii.	Permethrin	Cream 5%	No
<b>15.</b>	<b>Antipruritic</b>		
i.	Calamin	Lotion 15%	Yes
<b>16.</b>	<b>Anticonvulsant</b>		
i.	Magnesium sulphate	Inj. 500mg/ml	Yes
<b>17.</b>	<b>Diuretics</b>		
i.	Furosemide	Tab 40 mg Strip/blister	Yes
ii.	Furosemide	Inj. Furosemide 20 mg/ 2ml (Amp of 2ml)	No
iii.	Hydrochlorthiazide	Tab 25 mg	No
iv.	Spironolactone	Tab 25mg	No
<b>18.</b>	<b>Antihypertensive/ cardiovascular drugs</b>		
i.	Dispirin CV / Loprin	Tab. 75mg	No
ii.	GlycerylTrinitrate	Sublingual Tab. 0.5 mg	No
iii.	Propranolol	Tab 40mg Strips/blister	No
iv.	Atenolol	Tab 50mg	No
v.	Isosorbidedinitrate	Tab. 10mg	No
vi.	Methyldopa	Tab. 250mg	Yes
vii.	Amlodipine	Tab 5mg	No
viii.	Angiotensin inhibitor (enalapril maleate)	5mg	No
<b>19.</b>	<b>Antacids and other anti-ulcer</b>		
i.	Aluminium Hydroxide + Magnesium Trisilicate	Tab. Aluminium Hydroxide 250mg + Magnesium Trisilicate 500mg	Yes
ii.	Ranitidine	Tablets 150 mg	No
iii.	Ispaghulla	Ispaghulla Husk	Yes
iv.	Omeprazole	Cap. 20mg	No
<b>20.</b>	<b>Anti-emetic drugs</b>		
i.	Dimenhydrinate	Tab.50mg	No



#	Therapeutic category (generic name)	Description	CD
ii.	Dimenhydrinate	Syp.12.5mg/4ml	Yes
iii.	Dimenhydrinate	Inj. 10mg/2ml	Yes
<b>21.</b>	<b>Antispasmodic drugs</b>		
i.	Hyoscine butyl bromide	Tablet10 mg	Yes
ii.	Hyoscine butyl bromide	Inj. 20mg/2ml	Yes
iii.	Atropine Sulphate	Injection 0.5 mg/ ml Amp of 1ml	No
<b>22.</b>	<b>Laxatives</b>		
i.	Glycerine	Suppository	Yes
ii.	Ispaghula		Yes
iii.	Enema	Small and large	Yes
<b>23.</b>	<b>Antidiabetic</b>		
i.	Glibenclamide	Tab 5mg	No
ii.	Metformin	Tablet HCl 500 mg	No
iii.	Insulin	Inj. 40 IU/ml	No
iv.	Insulin	Inj. 100 IU/ml	No
<b>24.</b>	<b>Ophthalmic preparation</b>		
i.	PolymyxinB+Bacitracin Zinc	Eye oint. 10,000iu+500iu	Yes
ii.	Tetracycline	Eye oint. 1%	Yes
iii.	Chloramphenicol	Eye drops 0.5%	No
iv.	Chloramphenicol	Eye-oint. 1%	No
<b>25.</b>	<b>Ear drops</b>		
i.	Soda glycerine	Ear drops	Yes
ii.	Chloramphenicol	Ear drops	Yes
iii.	PolymyxinB+LignocaineHCl	Ear Drops PolymyxinB 10,000iu+ Lignocaine HCl 50mg	Yes
<b>26.</b>	<b>Antiasthmatic drugs</b>		
i.	Salbutamol	Inhalation 100mcg/dose for use in nebuliser	No



#	Therapeutic category (generic name)	Description	CD
ii.	Salbutamol	Tablet 4mg	Yes
iii.	Salbutamol	Syp.	Yes
iv.	Aminophyllin	Inj. 250mg	No
v.	Theophyllin	Tab.SR 200mg	No
vi.	Prednisolone	Tab 5mg	No
<b>27.</b>	<b>Antitussives</b>		
i.	(Cough Syrup) Triprolidine HCl. + Pseudoephedrine HCl + Dextromethorphan HBr.	Syrup.Each 5ml contains: TriprolidineHCl. 1.25mg + Pseudoephedrine HCl . 30mg +Dextromethorphan HBr. 10mg.	Yes
<b>28.</b>	<b>Antidepressants/ Anxiolytics</b>		
i.	Fluoxetine	Cap 20mg	No
ii.	Diazepam	Tab 5mg	No
<b>29.</b>	<b>Vitamins and minerals</b>		
i.	B-Complex	Tab.B-Complex + Minerals	Yes
ii.	B-Complex	Syp.	Yes
iii.	Pyridoxine	Tab. 50mg	Yes
iv.	Calcium Lactate	Tab. 10mg	Yes
v.	Ascorbic Acid	Tab. 100mg	Yes
vi.	Vitamin A	Cap. 50,000 IU, 100,000 IU, 200,000 IU	Yes
<b>30.</b>	<b>Antidotes and other substances used in poisonings</b>		
i.	Activated charcoal powder	Powder	Yes
ii.	Naloxone	Inj. 400mcg/ml	No
<b>31.</b>	<b>Disinfectants, antiseptics and anti-infectives</b>		
i.	Chlorine	5% concentrated solution	Yes
ii.	Povidone iodine	Solution , 10%	Yes
iii.	Hydrogen peroxide	Soln. 6%	Yes
iv.	Gentian violet	Paint 0.5%, 1%,	Yes



#	Therapeutic category (generic name)	Description	CD
v.	Benzoin compound		Yes
vi.	Tincture		
<b>32.</b>	<b>Parenterals</b>		
i.	Dextrose	Infusion 5% 500ml	No
ii.	Dextrose	Infusion 5% 1000ml	No
iii.	Glucose with sodium chloride	Injectable solution, 5% glucose, 0.9% sodium chloride 1000ml with IV set	No
iv.	Glucose with sodium chloride	Injectable solution, 5% glucose, 0.18% sodium chloride 500ml with IV set	No
v.	Sodium chloride	Injectable soln. 0.9% isotonic 1000ml	No
vi.	Sodium Bicarbonate		No
vii.	Ringer's Lactate	Injectable solution 1000ml with IV set	No
viii.	Ringer's Lactate	Injectable solution 500ml With IV set	No
ix.	Haemaccel	3%, 5% intravenous solution	No
x.	Dextran	Injection 6%	No
<b>33.</b>	<b>Topical antibiotics/ antibacterials</b>		
i.	Polymyxin B +Bacitracin Zinc ointment	Polymyxin B Sulphate 10000iu+Bacitracin Zinc 500mg/gm	Yes
ii.	Silver sulphadiazene	1% cream	Yes
iii.	Tetracycline	Oint. 1%	No
<b>34.</b>	<b>Local anesthetics</b>		
i.	Lidocaine	Injection, 2% (hydrochloride) in 10 -ml ampoule	Yes
ii.	Lidocaine	Topical forms, 2% (HCl)	No
<b>35.</b>	<b>Preoperative medication</b>		
i.	Adrenaline	Inj. 1mg/ml	No



#	Therapeutic category (generic name)	Description	CD
ii.	Diazepam	Injection, 5 mg/ml in 2-ml ampoule	No
iii.	Atropine	Inj. Atropine 1mg	No
<b>36.</b>	<b>Vaccines</b>		
i.	BCG		Yes
ii.	OPV		Yes
iii.	Pentavalent		Yes
iv.	Measles vaccine		Yes
v.	Hepatitis B vaccine		No
vi.	Tetanus toxoid		Yes

Table 34: List of supplies

#	Item	CD
<b>1.</b>	<b>Cotton, Gauze and Bandages</b>	
i.	Absorbent cotton wool, 500 g i. 500 g, roll, non-sterile, ii. Surgical hydrophilic cotton	Yes
ii.	Crepe elastic bandage 7.5cm x 5m, per (roll) i. 100% cotton, unbleached, ii. Elasticity; minimum of 150%, unstretched 3m, stretched 5m	Yes
iii.	Gauze pad / compress 10cm x 10cm, 12 ply sterile, pack of 20, Absorbent gauze 100% cotton	Yes
iv.	Gauze bandage 5cmx10m, absorbent wow, pack of 10 rolls	Yes
v.	Gauze roll 90cm x 100M non-sterile, with selvages, absorbent 100% cotton i. Gauze roll width 22.5cm after 4 folds, ii. Weight 23 gm/m <sup>2</sup> , type 17 threads/cm <sup>2</sup>	Yes
<b>2.</b>	<b>Catheters and tubes</b>	
i.	Foley catheter, sterile CH 10, 40cm, balloon 3-5 ml latex silicone coated	No
ii.	Foley catheter, sterile CH 16, 40 cm, balloon 10ml, latex silicone coated	No



#	Item	CD
iii.	Foley catheter sterile, CH 18, 40cm, balloon 10ml, latex, silicone coated	No
iv.	Suction tube CH 8, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector, )	No
v.	Suction tube CH 10, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector )	No
vi.	Suction tube CH 14, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector )	No
vii.	Suction tube CH 16, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector)	No
<b>3.</b>	<b>Sutures</b>	
i.	Chromic catgut	Yes
ii.	Silk braided	Yes
<b>4.</b>	<b>Syringes, cannula and needles</b>	
i.	Syringe 10cc, Luer, sterile disposable, two piece, ( P/P or PEF) box of 100	No
ii.	Syringe, 20cc Luer, sterile disposable, two piece, (P/P or PEF), box of 100	No
iii.	Syringe 5cc, Luer, sterile disposable, two piece (P/P or PEF), box of 100	Yes
iv.	Syringe 50/60cc, Luer lock sterile disp, concentric tip, box of 100	No
v.	Needle Luer, IM, disposable, 21G (0.8x38mm) sterile, stainless steel, box 100	No
vi.	Needle disp 19G (1.1x40mm), sterile, stainless steel, box of 100	No
vii.	Needle disp 21G (0.8x40mm), sterile, stainless steel, box of 100	No
viii.	Needle disp 22G (0.7x30mm), sterile, stainless steel, box of 100	No
ix.	Needle disp 23G (0.6x25mm), sterile, stainless steel, box of 100	No
x.	Needle disp 25G (0.5x16mm), sterile. stainless steel, box of 100	No
xi.	IV Cannula, short, 18G, 20G, 22G (1.1x32mm) i. Sterile, disposable, ii. Trocar: Stainless steel, iii. Injection port, iv. Cannula: Polypropylene or Teflon	No



#	Item	CD
<b>5.</b>	<b>Gloves</b>	
i.	Gloves, examination latex, large, non-sterile, powdered, box of 100	Yes
ii.	Gloves, examination latex, medium, non-sterile, powdered, box of 100	Yes
<b>6.</b>	<b>Surgical adhesive tapes</b>	
i.	Tape adhesive, 2.5 cm x 5 meter, roll (Colour white, non-stretch, Aerated textile strip impregnated with adhesive. Storage: dry conditions and at less than 25 degrees C if possible )	Yes
<b>7.</b>	<b>Blade and razor</b>	
i.	Razor safety, stainless steel, 3 piece unit (handle and blade holder), reusable ( Razor blades, double edged, steel, disposable, pack of 5. Box of 10 packs )	Yes
<b>8.</b>	<b>Test strips</b>	
i.	Blood glucose test strips	Yes
ii.	Urine protein test strips	Yes
iii.	Urine pregnancy test	Yes
iv.	Bowie-Dick strips for checking sterilisation	Yes
<b>9.</b>	<b>Others</b>	
i.	Battery dry cell alkaline AA size 1.5V or LR6 (for otoscope), single unit	Yes
ii.	Tongue depressor (wooden), disposable, box of 100	Yes
iii.	Towels or paper wraps for covering instruments for sterilisation	Yes
iv.	Apron, utility plastic reusable, unit (Straight apron with bib and neckband back fastening, Moisture proof and blood, water, chemical and stain resistant. Able to withstand extreme temperature, Length 120cm, width 90cm, Re-usable and able to withstand disinfection. Material: Opaque/transparent plastic, PVC, vinyl or polypropylene )	Yes
v.	Bucket, plastic, approximately 12 litres, with lid. Unit	Yes
vi.	Swipes/ Mops	Yes
vii.	<i>Jharoo</i>	Yes
viii.	Dusters	Yes
<b>10.</b>	<b>Laboratory supplies</b>	
i.	Gram's Iodine	No



#	Item	CD
ii.	Crystal violet stain	No
iii.	Ziehl Neilsen stain	No
iv.	ABO & Rh antibodies	No
v.	RPR test kits for syphilis	No
<b>11.</b>	<b>X-Ray radiology</b>	
i.	X- ray film, blue sensitive, interleaved, 18 x 24 cm, box of 100	No
ii.	X- ray film, blue sensitive, interleaved, 24 x 30 cm, box of 100	No
iii.	X- ray film, blue sensitive, interleaved, 30 x 40 cm, box of 100	No
iv.	X-ray developer powder for 25 liters, 2.6Kg	No
v.	X-ray fixer for 22.5 L, 3.3kg	No







## Annex IV – Minimum Services, Equipment, Supplies and Medicines for BHUs







# 1 Education concerning prevailing health problems and the methods of preventing and controlling them

Table 6: Examples for BCC<sup>1</sup>

## REPRODUCTIVE HEALTH PRACTICES:

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. 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).
3. Take iron tablets regularly from 3 months onwards in pregnancy.
4. Take calcium tablets regularly from 5 months onwards in pregnancy
5. Seek assistance for delivery only from a skilled birth attendant (SBA) such as CMW, LHV, lady doctor.

## INFANT AND CHILD FEEDING PRACTICES:

6. Initiate breastfeeding with first half to one hour after delivery.
7. Give the first bath to the new-born after 24 hours
8. Breastfeed exclusively for 6 months.
9. From about 6 months, provide appropriate complementary feeding such as *khichri* and continue breastfeeding until 24 months.
10. Continue feeding children and increase fluids during illness; increase feeding immediately after illness.

## IMMUNISATION PRACTICES:

11. Take infants for immunisation even when he or she is sick. Allow sick infant to be immunised during visit for curative care.
12. For every pregnant women and women of childbearing age, seek tetanus toxoid vaccine at every opportunity.
13. Take infant for measles immunisation as soon as possible after the age of 9 months

## CARE-SEEKING PRACTICES:

14. Seek appropriate care when infant or child is recognised as being sick (i.e. looks unwell, not playing, not eating or drinking, lethargic or change in consciousness, vomiting everything, high fever, fast or difficult breathing).

## OTHER EXAMPLES

15. Wash hands with soap: after using toilet, after handling baby's faeces, before cooking,

<sup>1</sup>Adapted from Emphasis Behaviors in Maternal and Child Health. 1997. BASICS Technical Report



before feeding

16. Apply SODIS daily to make water safe for drinking purposes.
17. Use iodized salt regularly
18. Use insecticide-treated bed-nets for pregnant women and children under 5 years of age
19. Mix and administer ORS correctly during diarrhoea in children.
20. Administer treatment and medications according to instruction (amount and duration).



## 2 Proper Nutrition

**Table 6: Proper nutrition services at PHC facilities**

#	Services	BHU
1	<b>Assessment of nutritional status</b>	
i	Growth monitoring up to three years	Yes
2	<b>Prevention of malnutrition</b>	
i	Facilitate initiation of early breastfeeding	
ii	Support and promote exclusive breastfeeding	Yes
iii	Deal with breastfeeding problems in early months	
iv	Promotion of appropriate complementary feeding from 6 months	Yes
v	Promotion of maternal nutritional status through counselling	
vi	Diagnosing malnutrition in pregnant and lactating women	
vii	Promotion of maternal nutritional status	Yes
viii	Iron/folic acid supplementation for pregnant, lactating women	Yes
ix	Prevent parasitic infections	Yes
x	Vitamin A supplementation: To all children 6 months to 59 months and to post-partum mothers	Yes
xi	Promote exposure to sunshine for women and children to avoid vitamin D deficiency	Yes
xii	Exclude vitamin D deficiency	Yes
xiii	Promotion of iodized salt	Yes
3	<b>Treatment of Malnutrition</b>	
i	Diagnosis of micronutrient deficiency and treatment	Yes
ii	Treatment of mild + moderate malnutrition	Yes
iii	Treatment of severe malnutrition through WHO Guidelines	Refer to THQH/ DHQH



### 3 An adequate supply of safe water and basic sanitation

Table 8: Water and sanitation services

#	Services	BHU
1	<b>Testing of water</b>	
i	Making rapid test kits available for checking faecal contamination	No
ii	Making kit available for chlorine test	No
2	<b>Promoting safe drinking water measures at home</b>	
i	Applying solar disinfection	Yes
ii	Using Aquatabs	Yes
iii	Using boiled water	Yes
3	<b>Hygiene Promotion</b>	
i	Hand washing	Yes
ii	Toilet use	Yes
4	<b>Other Measures</b>	
i	Create awareness about problems created by stagnant water, blocked drains, defecating outdoors	Yes



## 4 Maternal and child health care, including family planning

Table 9: Antenatal services

#	Services	BHU
1.	Identify pregnant women in the community	No
2.	Persuade and register pregnant women to receive ANC	Yes
3	Diagnosis of pregnancy	
i	History	Yes
ii	Examination	Yes
iii	Laboratory	Yes
4	Antenatal visits	
i	Height	Yes
ii	Weight	Yes
iii	BP measurement	Yes
iv	Fundal height	Yes
v	Goitre	Yes
vi	Oedema	Yes
vii	Tetanus immunization	Yes
viii	Iron/Folic supplementation	Yes
ix	Calcium supplementation	Yes
x	Urine for albumin/sugar	Yes
xi	Blood grouping	Yes
xii	Counselling on <ul style="list-style-type: none"> <li>○ Diet</li> <li>○ rest and exercises</li> <li>○ identifying SBA for delivery</li> <li>○ arranging money for emergency</li> <li>○ identifying transport for emergency</li> <li>○ identifying blood donor for emergency</li> <li>○ ensuring delivery kit for home deliveries</li> <li>○ danger signs of pregnancy and delivery</li> <li>○ initiation of breast feeding and exclusive breastfeeding for 6 months</li> </ul>	Yes



xiii	Prevention and management of anaemia	
	m. Examination	Yes
	n. Laboratory	Yes
	o. Treatment	Yes
5	Treat minor discomforts and Infections	
i	Treatment of worm infestation	Yes
ii	Prevention of malaria by promoting use of bednets	Yes
iii	Treatment of malaria <ul style="list-style-type: none"> <li>• Presumptive</li> <li>• Based on lab findings</li> </ul>	Yes Yes
iv	Treatment of Trichomoniasis	Yes
v	Treatment of Moniliasis	Yes
vi	Treatment of Urinary Tract Infection	Yes
vii	Syndromic management of sexually transmitted infections	Yes
6	Treatment of hypertensive disorders	Yes
7	Treatment of Diabetes Mellitus	Yes
8	Treatment of Vitamin A deficiency*	Refer to hospital
9	Management of pregnant woman in shock	Refer to hospital
10	Management of pre-eclampsia	Refer to hospital
11	Management of eclampsia	Refer to hospital
12	Treatment of incomplete miscarriage / abortion	No, refer to hospital
13	Treatment of ectopic pregnancy	Refer to hospital
14	Ultrasound	Refer to hospital

\* in the last trimester, if night blindness appears



**Table 10: Delivery care**

#	Services	BHU*
1	Identify true labour and monitor progression of labour – Partograph	Yes
2	Prepare the environment and materials following infection control protocols	Yes
3	Identify foetal malposition	Yes & refer to hospital
4	External cephalic version	No
5	Assist normal delivery	Yes
6	Provide mini delivery kit	Yes
7	Parental administration of oxytocin	Yes
8	Parental administration of anticonvulsants	Yes & refer to hospital
9	Bimanual compression of uterus	Yes
10	Controlled cord traction	Yes
11	Suturing vaginal tears (1 <sup>st</sup> and 2 <sup>nd</sup> degree)	Yes
12	Suturing vaginal tears (3 <sup>rd</sup> degree)	No - refer to hospital
13	Provision of intravenous fluids	Yes
14	Parental administration of antibiotics	Yes
15	Safe blood transfusion	No - refer to hospital
16	Manual removal of placenta	Yes
17	Removal of retained products (e.g. MVA)	Refer to hospital
18	Vacuum extraction(assisted vaginal delivery)	Yes
19	Provide emotional support to the mother throughout labour and delivery	Yes
20	Identify danger signs in the first, second or third stages of labour	Yes
21	Management of prolapsed cord	No - refer to hospital
22	Management of shoulder dystocia	No - refer to hospital



#	Services	BHU*
23	Caesarean section	No – refer to hospital

\*Only in those BHUs that have delivery suites with proper facilities.

**Table 11: Postpartum care**

#	Services	BHU
1	Advise maternal diet	Yes
2	Advise maternal hygiene	Yes
3	Treatment of anaemia	Yes
4	Management of PPH	Yes & refer to hospital
5	Treatment of puerperal infection	Yes & refer to hospital
6	Breast examination	Yes
7	Antibiotics	Yes – oral / IV
8	Counselling on family planning, exclusive breast feeding and hygiene	Yes
9	Provide contraceptives	Yes – Condom, Pills, injectables, IUD
10	Register births and deaths	No



## 4.1 New-born Health

**Table 12: Care of the new-born**

#	Services	BHU
<b>1</b>	<b>Immediate care</b>	
i	○ Dry and stimulate the baby	Yes
ii	○ Clean airway, assess the baby's breathing and colour, decide if the baby needs for resuscitation, resuscitate if required.	Yes
iii	○ Tie/clamp and cut the cord	Yes
iv	○ Avoid hypothermia, keep the baby warm by placing the baby in skin-to-skin contact with the mother (kangaroo care), covering both mother and baby with a sheet/blanket and covering the baby's head with a cloth	Yes
v	○ Have the mother start breastfeeding within half hour	Yes
vi	○ Give eye care within one hour after birth	Yes
<b>2</b>	<b>Care during the first day</b>	
i	○ Conduct physical examination (colour, breathing, posture and tone, heart rate, warmth, activity, skin, head, eyes, mouth, chest, abdomen, back and spine, anus, genital organs, temperature and weight)	Yes
ii	○ Give vitamin K 1mg IM	Yes
iii	○ Give the first immunisation of BCG, polio, hepatitis	Yes
<b>3</b>	<b>Care up to 28 days</b>	
i	○ Keep the cord clean and dry	Yes
ii	○ Teach and counsel mother/family about <ul style="list-style-type: none"> <li>○ handwashing,</li> <li>○ cord care,</li> <li>○ exclusive breastfeeding for 6 months, including colostrum</li> <li>○ keeping the baby warm</li> <li>○ completing immunisation</li> <li>○ not applying <i>surma</i></li> <li>○ recognising danger signs and taking appropriate actions if they occur</li> </ul>	Yes
iii	○ Take care of LBW, breastfeed at every 2 to 2½ hours	Yes



#	Services	BHU
iv	○ Manage neonatal jaundice	Yes



## 4.2 Child health

**Table 13: Newborn and Child care**

#	Services	BHU
1	Assess 'developmental milestones' at 2, 4, 6, 9, 12, 18 and 24 months	Yes
2	Perform growth monitoring up to three years	Yes
	<b>IMNCI</b>	
3	Management of ARI	
i	Child with cough/fever	Yes
ii	Child with pneumonia	Yes
iii	Child with severe pneumonia	No – refer to hospital
iv	Child with very severe disease	No – refer to hospital
v	Child with wheeze	Yes
vi	Child with ear infection	Yes
vii	Health education for ARI <ul style="list-style-type: none"> <li>○ Increasing fluids</li> <li>○ Continue feeding</li> <li>○ Cleanliness</li> <li>○ Identifying danger signs &amp; taking timely actions</li> </ul>	Yes
4	Management of Diarrhoea	
i	With no dehydration	Yes
ii	Some dehydration	Yes
iii	Severe dehydration	Refer to hospital
iv	With additional problems: <ul style="list-style-type: none"> <li>○ Diarrhoea &gt; 14 days</li> <li>○ With severe malnutrition</li> <li>○ Fever &gt; 38 C°</li> </ul>	Refer to hospital
v	Health education on Diarrhoea/ORT <ul style="list-style-type: none"> <li>○ How to mix ORS</li> </ul>	Yes



#	Services	BHU
	<ul style="list-style-type: none"> <li>○ Increasing fluids</li> <li>○ Continue feeding</li> <li>○ Handwashing</li> <li>○ Identifying danger signs &amp; taking timely actions</li> </ul>	
5	Management of dysentery	Yes
6	Management of fever	
i	History	Yes
ii	Examination	Yes
iii	Laboratory	Yes
iv	Treatment	Yes
7	Management of severely ill child	Refer to hospital
8	School health services: Regularly planned visits for	
i	Medical check-ups	Yes – by MO
ii	Eye sight testing	Yes – by MO
iii	Immunisation	Yes
iv	Deworming	Yes – by MO
v	Treatment and follow-up	Yes – by MO
vi	Health education	Yes



### 4.3 Adolescent health

**Table 14: Health education to youth**

#	Services	BHU
1	Teaching the youth about roles and responsibilities of men and women in building a healthy family	Yes
2	Promoting healthy life style behaviours – exercise, no smoking/ <i>naswar</i> , avoiding violence	Yes
3	Imparting knowledge about structure of menstrual cycle to females	Yes
4	Educating about risks involved in early age marriages and pregnancies	Yes



#### 4.4 Family planning

Table 15: Family planning services

#	Services	BHU
1	Counselling on family planning methods to enhance CPR	
i	Motivate for family planning	Yes
ii	Remove misconceptions	Yes
iii	Help make informed choice	Yes
2	Clinical examination	Yes
3	Education about natural methods <ul style="list-style-type: none"> <li>○ Rhythm method</li> <li>○ LAM</li> <li>○ Withdrawal</li> </ul>	Yes
4	Education about modern methods <ul style="list-style-type: none"> <li>○ Condoms</li> <li>○ Pills</li> <li>○ Injections</li> <li>○ IUCD</li> <li>○ Tubal ligation</li> <li>○ Vasectomy</li> </ul>	Yes
5	Provision of contraceptives	
i	Distribute condoms	Yes
ii	Distribute oral pills	Yes
iii	Give injections	Yes
iv	Insert IUCDs	Yes
v	Sterilisation females	No – refer to THQH/ DHQH
vi	Sterilisation males	No – refer to THQH/ DHQH
6	Suggest alternatives in case of side effects	Yes
7	Referral for couples having infertility to THQH/	Yes



Annex IV – Minimum Services, Equipment, Supplies and Medicines for BHUs

#	Services	BHU
	DHQH	



## 5 Immunisation

Table 16: Immunisation services

#	Services	BHU
1	Storage of vaccines	Yes
2	Routine Immunisation	Yes
3	Campaigns (NIDs)	Yes
4	Disease surveillance & case reporting	Yes
5	Motivate families for	
i	Regular and timely immunisation	Yes
ii	Giving polio drops on all NIDs	Yes
6	Vaccinating out-of schedule child	Yes



## 6 Appropriate treatment of endemic common diseases and injuries

**Table 17: Treatment of common injuries**

#	Services	BHU
1	Wound dressing	Yes
2	Snake bites	First aid + refer to DHQH
3	Dog bites	First aid + refer to EDOH / DHQH
4	Fractures/ dislocations	Apply splint & refer to DHQH
5	Sprains/ strains	Treat or refer to RHC
6	For accidents	Assess, stabilize, refer to hospital
7	CPR	Yes

**Treatment of common diseases** will be discussed in section 7.



## 7 Prevention and control of locally endemic diseases

### 7.1 Management and Control of endemic communicable diseases

Table 18: Management and Control of endemic communicable diseases

#	Services	BHU
1	<b>Respiratory problems</b>	
i	Common cold and cough	Yes
ii	Acute Bronchitis	Yes
iii	Pneumonia	Yes
iv	Lower respiratory tract infections in elderly	Yes
2	<b>GI problems</b>	
i	Acute diarrhoea	Yes
ii	Chronic diarrhoea	Refer to hospital
iii	Dysentery	Yes
iv	Health education about hand washing	Yes
3	<b>Control of Tuberculosis</b>	
i	Identification of suspects	Yes
ii	Sputum smear examination	Yes
iii	X-Ray for smear negative cases	Refer to RHC
iv	Treatment of diagnosed cases	Yes
v	TB-DOTS recording & reporting	Yes
vi	Screening of contacts	Yes
vii	Health education: <ul style="list-style-type: none"> <li>○ Identify suspects</li> <li>○ Get sputum test done</li> <li>○ TB is curable</li> <li>○ Treatment is free of costs</li> <li>○ Where TB services are available</li> </ul>	Yes
4	<b>Control of Malaria</b>	
i	Diagnosis	



#	Services	BHU
	a. Clinical	Yes
	b. Laboratory	Yes
ii	Treatment	
iii	Uncomplicated case	Yes
iv	Complicated case	Refer to hospital
v	Provide ITNs	No
vi	Health education: <ul style="list-style-type: none"> <li>○ Cleanliness of the surroundings</li> <li>○ Netting windows and doors</li> <li>○ Use bednets</li> </ul>	Yes
5	<b>Typhoid</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to RHC
ii	Treatment	No
6	<b>Dengue Fever</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
ii	Treatment	Yes
7	<b>Skin infections</b>	
i	Common wounds/ infections	Yes
ii	Scabies	Yes
8	<b>Sexually Transmitted Infections</b>	
i	Diagnosis	
	a. History	Yes



#	Services	BHU
	b. Examination	Yes
	c. Laboratory	Refer to RHC
ii	Treatment	Yes
9	<b>Hepatitis A and E</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
ii	Treatment	Yes
iii	Health education on transmission of hepatitis	Yes
10	<b>Hepatitis B and C</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to RHC
ii	Treatment	No – refer to hospital
iii	Health education on transmission of hepatitis B and C	Yes
11	<b>Leishmaniasis</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to RHC
ii	Treatment	No
12	<b>Brucellosis</b>	
i	Diagnosis	
	a. History	Yes



#	Services	BHU
	b. Examination	Yes
	c. Laboratory	Refer to RHC
ii	Treatment	No
13	<b>Tinea (foot, inguinal, face, armpits, breasts)</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
ii	Treatment	Yes
14	<b>Trachoma</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
ii	Treatment	Yes
15	<b>HIV/AIDS</b>	
i	Health education on transmission of HIV/AIDS	Yes



## 7.2 Management and control of endemic non communicable diseases

**Table 19: Management and control of endemic non communicable diseases**

#	Services	BHU
1	<b>Hypertension</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory <ul style="list-style-type: none"> <li>○ Blood cholesterol</li> <li>○ Lipid profile</li> <li>○ Serum creatinine</li> </ul>	Refer to hospital
ii	Treatment	Yes
iii	Health education for control of BP and prevention of heart attack and strokes: <ul style="list-style-type: none"> <li>○ Tobacco cessation</li> <li>○ Regular physical activity 30 minutes a day</li> <li>○ Reduced salt intake &lt;5 gm per day</li> <li>○ Regular use of antihypertensive</li> <li>○ Regular use of Aspirin</li> <li>○ Weight control</li> </ul>	Yes
2	<b>Diabetes Mellitus</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
ii	Treatment	Yes
iii	Health education on:	
	a. Diet guidance	Yes
	b. Avoiding sugars	Yes
	c. Weight control	Yes
	d. Regular physical activity 30 minutes a day	Yes
	e. Regular use of oral hypoglycaemic agents/ insulin	Yes



#	Services	BHU
iv	Prevention/early detection of foot complications	Yes
v	Screening for diabetic retinopathy	Refer to DHQH
3	<b>Asthma</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
	d. X-ray	Refer to RHC
ii	Treatment	Yes
4	<b>COPD</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to DHQH
	d. X-ray	Refer to DHQH
ii	Treatment	Yes
5	<b>Cancers</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to DHQH
ii	Treatment	No
iii	Health education for breast examination	Yes
6	<b>Arthritis</b>	
i	Diagnosis	
	a. History	Yes



#	Services	BHU
	b. Examination	Yes
	c. Laboratory	Refer to DHQH
	d. X-ray	Refer to DHQH
ii	Treatment	Yes
7	<b>Irritable Bowel Syndrome</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to DHQH
ii	Treatment	No
8	<b>Peptic ulcer</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to DHQH
ii	Treatment	Yes or refer to DHQH



### 7.3 Disability prevention

Table 20: Disability prevention services

#	Services	BHU
1	<b>Identification/referral for</b>	
i	Visual impairment	Yes
ii	Hearing disability	Yes
iii	Orthopaedic disability	Yes
2	<b>Control of iodine deficiency</b>	
i	Identification of goitre and referral to DHQH	Yes
ii	Health education about illnesses due to iodine deficiency	Yes
3	<b>Primary eye care</b>	
i	Diagnosis and treatment of common eye diseases	Yes
ii	Refraction Services	No
iii	Detection of cataract cases and referral for cataract surgery	Yes
iv	Detection of glaucoma and referral	Yes
4	<b>Health education on</b>	
i	Early examination of infants	Yes
ii	Dealing with disability at home	Yes
iii	Making life of disabled productive	Yes
iv	Seeking advice on physiotherapy	Yes



## 7.4 Mental health

**Table 21: Mental health services**

#	Services	BHU
1	Attention deficit disorder	Refer to DHQH
2	Generalized anxiety disorder	Yes
3	Obsessive compulsive disorder	Refer to DHQH
4	Panic disorder	Refer to DHQH
5	Bipolar disorder	Refer to DHQH
6	Depression	Yes
7	Schizophrenia	Refer to DHQH
8	Alcohol abuse and dependence	Refer to DHQH
9	Drug abuse	Refer to DHQH



## 7.5 Oral health

**Table 22: Oral health services**

#	Services	BHU
1	Tooth extraction	No
2	Scaling	No
3	Filling	No
4	Management of gingivitis and oral ailments	Yes
5	Health education on oral hygiene	Yes



## Equipment and supplies for a BHU

**Table 24: List of equipment proposed for BHU**

#	Items	BHU
<b>1. OPD</b>		
1.	Stethoscope	2
2.	B. P. apparatus (mercury)	2
3.	Clinical thermometer	12
4.	Examination torch	2
5.	Tongue depressor disposable	-
6.	ENT diagnostic set	2
7.	Examination couch	2
8.	Linen sheets for couch/beds	10
9.	Revolving stool	2
10.	ORS measuring jug	2
11.	ORS feeding containers and spoons	10
12.	Tape measure for nutrition assessment	2
13.	Baby weighing machine	1
14.	Weighing scale for adults	1
15.	Tuning fork	2
16.	Patella hammer	2
17.	Scissors	2
18.	Dressing trays	1
19.	Dressing scissors	1
20.	Kidney tray- large size	2
21.	Bowl large size	2
22.	Dressing drum	1
23.	Sterilizer	1
24.	IV drip stand	2
25.	Needle holder forceps	2
26.	Artery forceps straight	2
27.	Artery forceps curved	2
28.	Screen four fold	2
29.	Oxygen gas cylinder	?
30.	Tissue forceps – plain	2
31.	Tissue forceps – toothed	2
32.	Vision testing chart	1
33.	Cold box refrigerator for EPI	1
34.	Vaccine carrier and ice pack	2 + 6
35.	Breast pumps	1
36.	Stretcher	1
37.	Wheel chair	0
38.	Scalpel handle and blades	2
39.	Tourniquet	2
40.	Suturing silk	-
41.	Nebulizer	2
42.	Observation beds	2
43.	Pillows	4
44.	Blankets	4
<b>2. In All Areas</b>		
1.	Running water	6 hours



#	Items	BHU
2.	Soaps	
3.	Sinks/ basins	
4.	Alcohol and glycerine for handrub	
5.	Antiseptic solution	
6.	Detergent	
7.	Disinfectant (5% hypochlorite solution – common bleach)	
8.	Latex gloves	
9.	Utility gloves	
10.	Masks surgical	
11.	Masks N95	
12.	Eye wear	
13.	Head cover/ cap	
14.	Footwear (closed shoes)	
15.	Aprons/ Macintosh	
16.	Gowns (non-sterile and sterile in OT)	
17.	Puncture resistant sharp containers	
18.	Mops for cleaning	4
19.	Buckets for cleaning	4
20.	Green/white/blue buckets (non-infectious waste)	4
21.	Red buckets (infectious waste)	4
22.	Plastic bags – green/white/blue	
23.	Plastic bags – red	
24.	Fluid proof laundry bags	
25.	Ambubag for infant, child and adult	
26.	Pedal suction machine (electric?)	
27.	Relevant posters	
<b>3. Ward</b>		
1.	Bed with side table/locker	-
2.	Foot steps	-
3.	Baby cots	-
4.	Patient trolley	-
5.	Oxygen gas cylinder	-
6.	Nebulizer + Masks	-
7.	Peak flow meter	-
8.	Spacers for inhalers	-
9.	Bedding clothing	-
i.	Foam pillows	-
ii.	Bed sheets	-
iii.	Vinyl sheets (rexine)	-
iv.	Foam mattress	-
v.	Adult blankets	-
vi.	Baby blankets	-
10.	Plastic chairs (for in-patient attendants)	-
11.	Benches for patient attendants	-
12.	Radiant warmer/heater for newborn	-
<b>4. Labour Room</b>		
1.	Running water	6 hours
2.	Availability of Hot water	6 hours
3.	An area earmarked for new-born care	Yes
4.	Labour /Delivery Table	1
5.	Macintosh	4



#	Items	BHU
6.	Shadowless Lamps	1
7.	Normal delivery set	2
8.	E&C set	0
9.	Equipment for assisted vacuum delivery	0
10.	Valsellum uterine forceps	0
11.	Standard surgical set (for minor procedures like episiotomies stitching)	2
12.	Equipment for Manual Vacuum Aspiration	1
13.	Emergency drug tray with inj. Oxytocin, Inj. Diazepam, Tab. Nifedepine, Magnesium sulphate, Inj. Lignocaine hydrochloride, Inj. Methyl ergometrine maleate, misoprostol, Sterilised cotton and gauze	1
14.	Baby resuscitation apparatus.	1
15.	Feotoscope	1
16.	Mucus extractor with suction tube and a foot operated suction machine	1
17.	Neonatal resuscitation trolley	1
18.	Radiant warmer /Heater for newborn baby	1
19.	Cusco's vaginal speculum (each of small, medium and large size)	2
20.	Sim's vaginal speculum – single & double ended - (each of small, medium and large size)	2
21.	Disposable vaginal speculum	
22.	Anterior Vaginal wall retractor	0
23.	Chittle forceps	0
24.	Ayre's spatula	0
25.	For family planning	
i.	IUD insertion kit	1
<b>5.Vaccine storage</b>		
1.	ILR/Deep Freezer	1
2.	Ice box	1
3.	Ice packs	10
<b>6. Laboratory</b>		
1.	Sputum and blood specimen bottles	
2.	Centrifuge (bench top)	1
3.	Centrifuge machine	1
4.	Stop watch	1
5.	Refrigerator	1
6.	Binocular microscope	1
7.	Urine meter.	1
8.	Calorie metre for Hb estimation	1
9.	DLC counter	1
10.	Haemocytometer	1
11.	ESR Racks.	1
12.	ESR Pipettes	1
13.	Water Bath	1
14.	Glass rods	2
15.	Glass slides	
16.	Cover slips	
17.	Centrifuge Tubes(Plastic)	6
18.	Centrifuge Tubes (Glass)	6



#	Items	BHU
19.	Glass Pipettes various sizes corrected	6
20.	Jester Pipettes Fixed -various sizes	0
21.	Jester pipettes adjustable- various sizes	0
22.	Test tubes	10
23.	Pipette stands	1
24.	Sahli Haemoglobinometer	1
25.	Table lamp.	1
26.	Lancets (pack)	2
27.	Tube Sealer.	
28.	Blood Grouping Viewing Box.	
29.	Surgical Blades.	
30.	Test Tube Holder.	2
31.	Reagent Bottles.	4
32.	Gas Burner.	1
33.	Stainless Steel Test Tube Racks.	1
34.	Glucometer	1
<b>7. Dental unit</b>		
1.	Dental unit (complete with chair, light, hand piece unit with hand pieces, suction and compressor	-
2.	Dental hand instruments (set)	-
3.	Aseptic Trolley	-
4.	Dental Autoclave	-
5.	Amalgamator ?	-
6.	Dental X-ray unit	-
7.	Intraoral X-ray film processor	-
8.	X-ray view box	-
9.	Lead apron	-
10.	Ultrasonic scaler	-
11.	Dental operating stool	-
<b>8. Operation Theatre</b>		
1.	Operation table	-
2.	Shadowless Lamps	-
3.	Macintosh	-
4.	Patients Trolley	-
5.	Oxygen Cylinder (large size with regulator)	-
6.	Instruments Trolley	-
7.	Dressing Drum( large size)	-
8.	Stand for Dressing.	-
9.	Scissors	-
10.	Dressing trays	-
11.	Dressing scissors	-
12.	Kidney tray- large size	-
13.	Bowl large size	-
14.	Sterilizer	-
15.	Needle holder forceps	-
16.	Artery forceps straight	-
17.	Artery forceps curved	-
18.	Tissue forceps – plain	-
19.	Tissue forceps – toothed	-
20.	Scalpel handle and blades	-
21.	Tourniquet	-
22.	Suturing silk	-



#	Items	BHU
23.	McGill Forceps	-
24.	Basin	-
25.	Basin Stands.	-
26.	Towel Clips.	-
27.	BP Handle	-
28.	BP Blades	-
29.	Dissecting Forceps (plain)	-
30.	Needle Holder (large size)	-
31.	Sponge Holding Forceps (large size)	-
32.	Metallic Catheter (1-12)	-
33.	Nose Speculum.	-
34.	Proctoscope.	-
35.	Arm Splint Different sizes.	-
36.	Instruments Cabinet Large size.	-
37.	Spot Light	-
38.	Nail Brush	-
39.	Thermometer	-
40.	Container for thermometer.	-
41.	Stand for Drip	-
42.	Bucket El.	-
43.	Aircushion Rubber	-
44.	Hot Water Bottles	-
45.	Stomach Tube.	-
46.	Urine Collecting Bags.	-
47.	Instrument trolley	-
<b>9. Equipment for eye care and vision testing</b>		
1.	Directophthalmoscope	-
2.	Illuminated vision testing drum	-
3.	Trial lens sets with trial frames	-
4.	Snellen and near vision charts	-
5.	Battery operated torch	-
<b>9. Furniture</b>		
1.	Office Table with 3 Drawers	4
2.	Office Chairs	4
3.	Office Rack Wooden	4
4.	Patient's stool	3
5.	Bench fibre glass	2
6.	Steel Almirah	6
<b>10. Others</b>		
1.	Pressure cooker autoclaves	-
2.	Autoclaves	1
3.	Electricity supply with backup facility (generator with POL)/ UPS or inverter/ Solar panel	6 hours
4.	Computer with accessories, including internet access	1
5.	Fans	6
6.	Tube lights	
7.	Basins	4
8.	Gas stove/ cylinder	1
9.	Ambulance	0
<b>11. X-ray room</b>		
1.	X-ray unit	0
<b>12. Incinerator</b>		



#	Items	BHU
1.	Incinerator	0
	<b>13. Health education material</b>	
1.	Health education material	
	<b>14. Registers and forms</b>	
1.	Data recording and reporting instruments	



## D. Essential drugs, vaccines and supplies for a BHU

Table 31: List of essential drugs

#	Therapeutic category (generic name)	Description	BHU
<b>1.</b>	<b>Analgesics , antipyretics, non-steroidal anti- inflammatory drugs</b>		
i.	<b>Non –opioids</b>		
a.	Acetyl salicylic acid (aspirin)	Tablet 500mg	Yes
b.	Acetaminophin (paracetamol)	Tablet,500 mg Strip/blister	Yes
c.	Acetaminophin (paracetamol)	Syrup, 125 mg /5 ml	Yes
d.	Acetaminophin (paracetamol)	Suppository 100 mg	No
e.	Ibuprofen	Tablets 400mg Strip/blister	Yes
f.	Ibuprofen	Syrup 200mg/5ml	Yes
g.	Diclofenac Sodium	Tab. 50mg and 75 mg	Yes
h.	Diclofenac Sodium	Injection 75mg/3ml	Yes
i.	Tremadol	Inj. 100 mg	No
<b>2.</b>	<b>Antibacterial drugs/ Antiprotozoal</b>		
i.	Amoxicillin	Capsule 250 mg (anhydrous) Strip/blister	Yes
ii.	Amoxicillin	Powder for oral suspension, 125 mg/5ml	Yes
iii.	Amoxicillin + Clavulanic acid	Tablet 500 mg + 125 mg	Yes
iv.	Amoxicillin + Clavulanic acid	Syp. 125 + 31.25	Yes
v.	Sulfamethoxazole + Trimethoprim	Tablet, 400 mg + 80mg strip/blister	Yes
vi.	Sulfamethoxazole + Trimethoprim	Oral suspension 200mg+40mg/5ml	Yes
vii.	Doxycycline	Cap. 100mg	Yes
viii.	Tetracycline	Capsules 250 mg	Yes



#	Therapeutic category (generic name)	Description	BHU
ix.	Erythromycin	Tab. 250mg	Yes
x.	Erythromycin	Suspension 200mg/5ml	Yes
xi.	Ceftriaxone	Inj. 250mg and 500mg	No
xii.	Ampicillin	Inj.250mg	No
xiii.	Ciprofloxacin	Tab. 500mg	Yes
xiv.	Neomycin + Bacitracin	Ointment 5 mg + 500 IU	Yes
xv.	Nalidixic Acid	Tablets 250 mg, 500 mg	Yes
xvi.	Norfloxacin	Tablets 400 mg	No
xvii.	Metronidazole	Tablet, 400 mg Strip/blister	Yes
xviii.	Metronidazole	Oral suspension, 200 mg (as benzoate)/5 ml	Yes
xix.	Diloxanide Furoate	Tablets 500 mg	Yes
xx.	Tinidazole	Tablets 500 mg	Yes
<b>3.</b>	<b>Antiallergics and drugs used in anaphylaxis</b>		
i.	Chlorpheniramine	Tablet , 4 mg Strip/blister	Yes
ii.	Chlorpheniramine	Syrup ,2 mg /5 ml	Yes
iii.	Dexamethasone	Inj. 4mg/ml	Yes
iv.	Hydrocortisone	Powder for inj.250mg (as sodium succinate )in vial	Yes
v.	Hydrocortisone	Powder for injection , 100mg(as sodium succinate )in vial	Yes
vi.	Adrenaline	Inj. 1mg/ml	Yes
<b>4.</b>	<b>Oxytocics</b>		
i.	Oxytocin	Inj. 10IU/ml	Yes
ii.	Ergometrine	Inj. 200mcg/ml	Yes
iii.	Misoprostol	Tab. 200mcg	Yes
<b>5.</b>	<b>Hormone replacements (menopausal)</b>		
i.	Oestradiol	Tab. 0.5mg	Yes



#	Therapeutic category (generic name)	Description	BHU
ii.	Medroxyprogesterone	Tab. 5mg	Yes
<b>6.</b>	<b>Contraceptives</b>		
i.	Norethisterone enantate (8 weekly)	Inj. 200mg/ml	Yes
ii.	Medroxyprogesterone acetate (12 weekly)	Inj. 150mg	Yes
iii.	Norethisterone + ethinyl oestradiol	Tab. 1mg + 35mcg	Yes
iv.	Levonorgestrel + ethinyl oestradiol	Tab. 150mg + 30mg	Yes
<b>7.</b>	<b>Contraceptive emergency</b>		
i.	Levonorgestrel	Tab 30mcg, 750mcg, 1.5mg	Yes
<b>8.</b>	<b>Oral Rehydration</b>		
i.	Oral rehydration salt, glucose-salt solution	Dry mixture(WHO formula) in sachet for 1 liter of soln.	Yes
ii.	Oral rehydration salt, glucose-salt solution	Dry mixture (reduce osmolarity / glucose 75 meq/ 1, Sodium 75 meq / 1, Chloride 65 meq / 1, Potassium 20 meq/ 1, Citrate 10 meq / 1) in sachet for 1 liter of solution	Yes
iii.	Zinc sulphate	Tab 20mg	Yes
iv.	Zinc sulphate	Syp	Yes
<b>9.</b>	<b>Parasitic Infections</b>		
i.	Mebendazole	Tablet, 100 mg Strip/blister	Yes
ii.	Mebendazole	Syp 100mg/5ml in 30ml	Yes
iii.	Albendazole	Tab 400mg	Yes
iv.	Meglumine antimonite, and sodium stibogluconate	Inj 333 mg	Yes
<b>10.</b>	<b>Antimalarial (Malaria Control Program)</b>		
i.	Chloroquine	Tablet, 150 mg (as phosphate or sulfate) Strip/blister	Yes
ii.	Chloroquine	Syrup, 50 mg/5ml (as	Yes



#	Therapeutic category (generic name)	Description	BHU
		phosphate or sulphate)	
iii.	Sulfadoxin+Pyrimethamine	Tab. Sulfadoxin500mg+ Pyrimethamine25mg	Yes
iv.	Sulfadoxin+Pyrimethamine	Syp. Sulfadoxin500mg+ Pyrimethamine25mg/5ml	Yes
v.	Artesunate	Tab. 50mg	Yes
vi.	Primaquine		Yes
<b>11.</b>	<b>Antituberculosis drugs (TB program)</b>		
i.	Ethambutol	Tablet, 400 mg Strip/blister	Yes
ii.	Rifampicin+Isoniazid	Tablet, 150 mg + 100 mg strip/blister	Yes
iii.	Rifampicin+Isoniazid	Tablet, 300 mg + 150 mg Strip/blister	Yes
iv.	Isoniazide + Ethambutol	Tablet, 150 mg + 400 mg Strip/blister	Yes
v.	Rifampacin + Isoniazide + Pyrazinamide+Ethambutol	Tab.,150mg+75mg+400mg+275 mg strip/blister	Yes
vi.	Streptomycin	Powder for injection, 1g (assulfate) in vial	Yes
vii.	Isoniazide	Tab 100mg	Yes
<b>12.</b>	<b>Antifungal Drugs</b>		
i.	Benzoic Acid +Salicylic Acid	Ointment or Cream 6% + 3%	Yes
ii.	Nystatin	Tab 500,000 iu,	Yes
iii.	Nystatin	Oral drops100,000 iu/ml	Yes
iv.	Clotrimazole	Pessary 100,000iu	Yes
v.	Griseofulvin	Capsules or Tablets 125 mg, 250 mg	Yes
vi.	Clotrimazole	1 % Cream	Yes
<b>13.</b>	<b>Antianemic drugs</b>		
i.	Ferrous sulphate/fumerate+ folic acid	Tablet , equivalent to 60 mg	Yes



#	Therapeutic category (generic name)	Description	BHU
		iron+ folic acid 0.5mg	
ii.	Folic acid	Tab. 5mg	Yes
iii.	Ferrous Salt	Syp. 25mg iron/ml	Yes
<b>14.</b>	<b>Scabicides and pediculicides</b>		
i.	Benzoyl benzoate	Lotion 25%	Yes
ii.	Permethrin	Cream 5%	Yes
<b>15.</b>	<b>Antipruritic</b>		
i.	Calamin	Lotion 15%	Yes
<b>16.</b>	<b>Anticonvulsant</b>		
i.	Magnesium sulphate	Inj. 500mg/ml	Yes
<b>17.</b>	<b>Diuretics</b>		
i.	Furosemide	Tab 40 mg Strip/blister	Yes
ii.	Furosemide	Inj. Furosemide 20 mg/ 2ml (Amp of 2ml)	No
iii.	Hydrochlorthiazide	Tab 25 mg	No
iv.	Spironolactone	Tab 25mg	No
<b>18.</b>	<b>Antihypertensive/ cardiovascular drugs</b>		
i.	Dispirin CV / Loprin	Tab. 75mg	Yes
ii.	GlycerylTrinitrate	Sublingual Tab. 0.5 mg	Yes
iii.	Propranolol	Tab 40mg Strips/blister	Yes
iv.	Atenolol	Tab 50mg	Yes
v.	Isosorbidedinitrate	Tab. 10mg	Yes
vi.	Methyldopa	Tab. 250mg	Yes
vii.	Amlodipine	Tab 5mg	No
viii.	Angiotensin inhibitor (enalapril maleate)	5mg	No
<b>19.</b>	<b>Antacids and other anti-ulcer</b>		



#	Therapeutic category (generic name)	Description	BHU
i.	Aluminium Hydroxide + Magnesium Trisilicate	Tab. Aluminium Hydroxide 250mg + Magnesium Trisilicate 500mg	Yes
ii.	Ranitidine	Tablets 150 mg	Yes
iii.	Ispaghulla	Ispaghulla Husk	Yes
iv.	Omeprazole	Cap. 20mg	Yes
<b>20.</b>	<b>Anti-emetic drugs</b>		
i.	Dimenhydrinate	Tab.50mg	Yes
ii.	Dimenhydrinate	Syp.12.5mg/4ml	Yes
iii.	Dimenhydrinate	Inj. 10mg/2ml	Yes
<b>21.</b>	<b>Antispasmodic drugs</b>		
i.	Hyoscine butyl bromide	Tablet10 mg	Yes
ii.	Hyoscine butyl bromide	Inj. 20mg/2ml	Yes
iii.	Atropine Sulphate	Injection 0.5 mg/ ml Amp of 1ml	No
<b>22.</b>	<b>Laxatives</b>		
i.	Glycerine	Suppository	Yes
ii.	Ispaghula		Yes
iii.	Enema	Small and large	Yes
<b>23.</b>	<b>Antidiabetic</b>		
i.	Glibenclamide	Tab 5mg	Yes
ii.	Metformin	Tablet HCl 500 mg	Yes
iii.	Insulin	Inj. 40 IU/ml	No
iv.	Insulin	Inj. 100 IU/ml	No
<b>24.</b>	<b>Ophthalmic preparation</b>		
i.	PolymyxinB+Bacitracin Zinc	Eye oint. 10,000iu+500iu	Yes
ii.	Tetracycline	Eye oint. 1%	Yes
iii.	Chloramphenicol	Eye drops 0.5%	No
iv.	Chloramphenicol	Eye-oint. 1%	No
<b>25.</b>	<b>Ear drops</b>		



#	Therapeutic category (generic name)	Description	BHU
i.	Soda glycerine	Ear drops	Yes
ii.	Chloramphenicol	Ear drops	Yes
iii.	PolymyxinB+LignocaineHCl	Ear Drops PolymyxinB 10,000iu+ Lignocaine HCl 50mg	Yes
<b>26.</b>	<b>Antiasthmatic drugs</b>		
i.	Salbutamol	Inhalation 100mcg/dose for use in nebuliser	Yes
ii.	Salbutamol	Tablet 4mg	Yes
iii.	Salbutamol	Syp.	Yes
iv.	Aminophyllin	Inj. 250mg	No
v.	Theophyllin	Tab.SR 200mg	No
vi.	Prednisolone	Tab 5mg	No
<b>27.</b>	<b>Antitussives</b>		
i.	(Cough Syrup) Triprolidine HCl. + Pseudoephedrine HCl + Dextromethorphan HBr.	Syrup.Each 5ml contains: TriprolidineHCl. 1.25mg + Pseudoephedrine HCl . 30mg +Dextromethorphan HBr. 10mg.	Yes
<b>28.</b>	<b>Antidepressants/ Anxiolytics</b>		
i.	Fluoxetine	Cap 20mg	Yes
ii.	Diazepam	Tab 5mg	Yes
<b>29.</b>	<b>Vitamins and minerals</b>		
i.	B-Complex	Tab.B-Complex + Minerals	Yes
ii.	B-Complex	Syp.	Yes
iii.	Pyridoxine	Tab. 50mg	Yes
iv.	Calcium Lactate	Tab. 10mg	Yes
v.	Ascorbic Acid	Tab. 100mg	Yes
vi.	Vitamin A	Cap. 50,000 IU, 100,000 IU, 200,000 IU	Yes
<b>30.</b>	<b>Antidotes and other substances used in poisonings</b>		
i.	Activated charcoal powder	Powder	Yes



#	Therapeutic category (generic name)	Description	BHU
ii.	Naloxone	Inj. 400mcg/ml	Yes
<b>31.</b>	<b>Disinfectants, antiseptics and anti-infectives</b>		
i.	Chlorine	5% concentrated solution	Yes
ii.	Povidone iodine	Solution , 10%	Yes
iii.	Hydrogen peroxide	Soln. 6%	Yes
iv.	Gentian violet	Paint 0.5%, 1%,	Yes
v.	Benzoin compound		Yes
vi.	Tincture		
<b>32.</b>	<b>Parenterals</b>		
i.	Dextrose	Infusion 5% 500ml	Yes
ii.	Dextrose	Infusion 5% 1000ml	Yes
iii.	Glucose with sodium chloride	Injectable solution, 5% glucose, 0.9% sodium chloride 1000ml with IV set	Yes
iv.	Glucose with sodium chloride	Injectable solution, 5% glucose, 0.18% sodium chloride 500ml with IV set	Yes
v.	Sodium chloride	Injectable soln.0.9%isotonic1000ml	Yes
vi.	Sodium Bicarbonate		Yes
vii.	Ringer's Lactate	Injectable solution 1000ml with IV set	Yes
viii.	Ringer's Lactate	Injectable solution 500ml With IV set	Yes
ix.	Haemaccel	3%, 5% intravenous solution	Yes
x.	Dextran	Injection 6%	Yes
<b>33.</b>	<b>Topical antibiotics/ antibacterials</b>		
i.	Polymixin B +Bacitracin Zinc ointment	Polymyxin B Sulphate 10000iu+Bacitracin Zinc 500mg/gm	Yes



#	Therapeutic category (generic name)	Description	BHU
ii.	Silver sulphadiazene	1% cream	Yes
iii.	Tetracycline	Oint. 1%	Yes
<b>34.</b>	<b>Local anesthetics</b>		
i.	Lidocaine	Injection, 2% (hydrochloride) in 10 -ml ampoule	Yes
ii.	Lidocaine	Topical forms, 2% (HCl)	Yes
<b>35.</b>	<b>Preoperative medication</b>		
i.	Adrenaline	Inj. 1mg/ml	No
ii.	Diazepam	Injection, 5 mg/ml in 2-ml ampoule	No
iii.	Atropine	Inj. Atropine 1mg	No
<b>36.</b>	<b>Vaccines</b>		
i.	BCG		Yes
ii.	OPV		Yes
iii.	Pentavalent		Yes
iv.	Measles vaccine		Yes
v.	Hepatitis B vaccine		No
vi.	Tetanus toxoid		Yes

Table 32: List of supplies

#	Item	BHU
<b>12.</b>	<b>Cotton, Gauze and Bandages</b>	
i.	Absorbent cotton wool, 500 g i. 500 g, roll, non-sterile, ii. Surgical hydrophilic cotton	Yes
ii.	Crepe elastic bandage 7.5cm x 5m, per (roll) i. 100% cotton, unbleached, ii. Elasticity; minimum of 150%, unstretched 3m, stretched 5m	Yes
iii.	Gauze pad / compress 10cm x 10cm, 12 ply sterile, pack of 20, Absorbent gauze 100% cotton	Yes



#	Item	BHU
iv.	Gauze bandage 5cmx10m, absorbent wow, pack of 10 rolls	Yes
v.	Gauze roll 90cm x 100M non-sterile, with selvages, absorbent 100% cotton i. Gauze roll width 22.5cm after 4 folds, ii. Weight 23 gm/m <sup>2</sup> , type 17 threads/cm <sup>2</sup>	Yes
<b>13.</b>	<b>Catheters and tubes</b>	
i.	Foley catheter, sterile CH 10, 40cm, balloon 3-5 ml latex silicone coated	No
ii.	Foley catheter, sterile CH 16, 40 cm, balloon 10ml, latex silicone coated	No
iii.	Foley catheter sterile, CH 18, 40cm, balloon 10ml, latex, silicone coated	No
iv.	Suction tube CH 8, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector, )	No
v.	Suction tube CH 10, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector )	Yes
vi.	Suction tube CH 14, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector )	Yes
vii.	Suction tube CH 16, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector)	Yes
<b>14.</b>	<b>Sutures</b>	
i.	Chromic catgut	Yes
ii.	Silk braided	Yes
<b>15.</b>	<b>Syringes, cannula and needles</b>	
i.	Syringe 10cc, Luer, sterile disposable, two piece, ( P/P or PEF) box of 100	No
ii.	Syringe, 20cc Luer, sterile disposable, two piece, (P/P or PEF), box of 100	No
iii.	Syringe 5cc, Luer, sterile disposable, two piece (P/P or PEF), box of 100	Yes
iv.	Syringe 50/60cc, Luer lock sterile disp, concentric tip, box of 100	No
v.	Needle Luer, IM, disposable, 21G (0.8x38mm) sterile, stainless steel, box 100	No
vi.	Needle disp 19G (1.1x40mm), sterile, stainless steel, box of 100	No



#	Item	BHU
vii.	Needle disp 21G (0.8x40mm), sterile, stainless steel, box of 100	No
viii.	Needle disp 22G (0.7x30mm), sterile, stainless steel, box of 100	No
ix.	Needle disp 23G (0.6x25mm), sterile, stainless steel, box of 100	No
x.	Needle disp 25G (0.5x16mm), sterile. stainless steel, box of 100	No
xi.	IV Cannula, short, 18G, 20G, 22G (1.1x32mm) i. Sterile, disposable, ii. Trocar: Stainless steel, iii. Injection port, iv. Cannula: Polypropylene or Teflon	No
<b>16.</b>	<b>Gloves</b>	
i.	Gloves, examination latex, large, non-sterile, powdered, box of 100	Yes
ii.	Gloves, examination latex, medium, non-sterile, powdered, box of 100	Yes
<b>17.</b>	<b>Surgical adhesive tapes</b>	
i.	Tape adhesive, 2.5 cm x 5 meter, roll (Colour white, non-stretch, Aerated textile strip impregnated with adhesive. Storage: dry conditions and at less than 25 degrees C if possible )	Yes
<b>18.</b>	<b>Blade and razor</b>	
i.	Razor safety, stainless steel, 3 piece unit (handle and blade holder), reusable ( Razor blades, double edged, steel, disposable, pack of 5. Box of 10 packs )	Yes
<b>19.</b>	<b>Test strips</b>	
i.	Blood glucose test strips	Yes
ii.	Urine protein test strips	Yes
iii.	Urine pregnancy test	Yes
iv.	Bowie-Dick strips for checking sterilisation	Yes
<b>20.</b>	<b>Others</b>	
i.	Battery dry cell alkaline AA size 1.5V or LR6 (for otoscope), single unit	Yes
ii.	Tongue depressor (wooden), disposable, box of 100	Yes
iii.	Towels or paper wraps for covering instruments for sterilisation	Yes
iv.	Apron, utility plastic reusable, unit (Straight apron with bib and neckband back fastening, Moisture proof and blood, water, chemical	Yes



#	Item	BHU
	and stain resistant. Able to withstand extreme temperature, Length 120cm, width 90cm, Re-usable and able to withstand disinfection. Material: Opaque/transparent plastic, PVC, vinyl or polypropylene )	
v.	Bucket, plastic, approximately 12 litres, with lid. Unit	Yes
vi.	Swipes/ Mops	Yes
vii.	<i>Jharoo</i>	Yes
viii.	Dusters	Yes
<b>21.</b>	<b>Laboratory supplies</b>	
i.	Gram's Iodine	Yes
ii.	Crystal violet stain	Yes
iii.	Ziehl Neilsen stain	Yes
iv.	ABO & Rh antibodies	Yes
v.	RPR test kits for syphilis	No
<b>22.</b>	<b>X-Ray radiology</b>	
i.	X- ray film, blue sensitive, interleaved, 18 x 24 cm, box of 100	No
ii.	X- ray film, blue sensitive, interleaved, 24 x 30 cm, box of 100	No
iii.	X- ray film, blue sensitive, interleaved, 30 x 40 cm, box of 100	No
iv.	X-ray developer powder for 25 liters, 2.6Kg	No
v.	X-ray fixer for 22.5 L, 3.3kg	No



## Diagnostic services in BHU

Table 33: List of diagnostic services in a BHU

#	Services	BHU
<b>1.</b>	<b>Laboratory Services</b>	
<b>a.</b>	<b>Hematology</b>	
i.	Hemoglobin	Yes
ii.	Red and white blood cell count	Yes
iii.	Differential cell count	Yes
iv.	ESR	Yes
v.	Hematocrit	Yes
vi.	Malaria parasite smear (MPS)	Yes
vii.	Bleeding time and coagulation time	Yes
viii.	Blood grouping and Rh factors	Yes
ix.	Hepatitis B and C and syphilis tests	Yes
x.	HIV test	No
<b>b.</b>	<b>Bacteriology</b>	
i.	Ziehl-Nielsen staining for acid fast bacilli (AFB)	Yes
ii.	Direct smear for AFB	Yes
iii.	Gram's staining	Yes
<b>c.</b>	<b>Serology</b>	
i.	Typhi dot	No
<b>d.</b>	<b>Clinical Pathology</b>	
i.	Urine analysis: physical exam	Yes
ii.	Chemical exam: Albumin (qualitative)	Yes
iii.	Chemical exam: Albumin (quantitative)	Yes
iv.	Chemical exam: Glucose (qualitative)	Yes
v.	Chemical exam: Glucose (quantitative)	Yes
vi.	Microscopic (stool test)	Yes



#	Services	BHU
vii.	Macroscopic (stool test)	Yes
viii.	Pregnancy test	Yes
<b>e.</b>	<b>Biochemistry</b>	
i.	Blood-sugar test	Yes
ii.	Urea test	No
iii.	Creatinine test	No
iv.	Total protein test	No
v.	Simple liver-function test	No
vi.	Brucellosis	No
<b>f.</b>	<b>Gram Stain</b>	
i.	Body fluids	Yes
<b>2.</b>	<b>Imaging Services</b>	
<b>a.</b>	<b>X-Rays</b>	
i.	Chest	No
ii.	Abdomen	No
iii.	Skeletal	No
iv.	Ultrasound	No







# Annex V – Minimum Services, Equipment, Supplies and Medicines for RHCs







# 1 Education concerning prevailing health problems and the methods of preventing and controlling them

**Table 4: Examples for BCC<sup>1</sup>**

## **REPRODUCTIVE HEALTH PRACTICES:**

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. 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).
3. Take iron tablets regularly from 3 months onwards in pregnancy.
4. Take calcium tablets regularly from 5 months onwards in pregnancy
5. Seek assistance for delivery only from a skilled birth attendant (SBA) such as CMW, LHV, lady doctor.

## **INFANT AND CHILD FEEDING PRACTICES:**

6. Initiate breastfeeding with first half to one hour after delivery.
7. Give the first bath to the new-born after 24 hours
8. Breastfeed exclusively for 6 months.
9. From about 6 months, provide appropriate complementary feeding such as *khichri* and continue breastfeeding until 24 months.
10. Continue feeding children and increase fluids during illness; increase feeding immediately after illness.

## **IMMUNISATION PRACTICES:**

11. Take infants for immunisation even when he or she is sick. Allow sick infant to be immunised during visit for curative care.
12. For every pregnant women and women of childbearing age, seek tetanus toxoid vaccine at every opportunity.
13. Take infant for measles immunisation as soon as possible after the age of 9 months

## **CARE-SEEKING PRACTICES:**

14. Seek appropriate care when infant or child is recognised as being sick (i.e. looks unwell, not playing, not eating or drinking, lethargic or change in consciousness, vomiting everything, high fever, fast or difficult breathing).

## **OTHER EXAMPLES**

15. Wash hands with soap: after using toilet, after handling baby's faeces, before cooking,

<sup>1</sup>Adapted from Emphasis Behaviors in Maternal and Child Health. 1997. BASICS Technical Report



before feeding

16. Apply SODIS daily to make water safe for drinking purposes.
17. Use iodized salt regularly
18. Use insecticide-treated bed-nets for pregnant women and children under 5 years of age
19. Mix and administer ORS correctly during diarrhoea in children.
20. Administer treatment and medications according to instruction (amount and duration).



## 2 Proper Nutrition

Table 6: Proper nutrition services

#	Services	RHC
1	<b>Assessment of nutritional status</b>	
i	Growth monitoring up to three years	Yes
2	<b>Prevention of malnutrition</b>	
i	Facilitate initiation of early breastfeeding	
ii	Support and promote exclusive breastfeeding	Yes
iii	Deal with breastfeeding problems in early months	
iv	Promotion of appropriate complementary feeding from 6 months	Yes
v	Promotion of maternal nutritional status through counselling	
vi	Diagnosing malnutrition in pregnant and lactating women	
vii	Promotion of maternal nutritional status	Yes
viii	Iron/folic acid supplementation for pregnant, lactating women	Yes
ix	Prevent parasitic infections	Yes
x	Vitamin A supplementation: To all children 6 months to 59 months and to post-partum mothers	Yes
xi	Promote exposure to sunshine for women and children to avoid vitamin D deficiency	Yes
xii	Exclude vitamin D deficiency	Yes
xiii	Promotion of iodized salt	Yes
3	<b>Treatment of Malnutrition</b>	
i	Diagnosis of micronutrient deficiency and treatment	Yes
ii	Treatment of mild + moderate malnutrition	Yes
iii	Treatment of severe malnutrition through WHO Guidelines	Refer to THQH/ DHQH



### 3 An adequate supply of safe water and basic sanitation

Table 8: Water and sanitation services

#	Services	RHC
1	<b>Testing of water</b>	
i	Making rapid test kits available for checking faecal contamination	Yes
ii	Making kit available for chlorine test	Yes
2	<b>Promoting safe drinking water measures at home</b>	
i	Applying solar disinfection	Yes
ii	Using Aquatabs	Yes
iii	Using boiled water	Yes
3	<b>Hygiene Promotion</b>	
i	Hand washing	Yes
ii	Toilet use	Yes
4	<b>Other Measures</b>	
i	Create awareness about problems created by stagnant water, blocked drains, defecating outdoors	Yes



## 4 Maternal and child health care, including family planning

Table 9: Antenatal services

#	Services	RHC
1.	Identify pregnant women in the community	No
2.	Persuade and register pregnant women to receive ANC	Yes
3	Diagnosis of pregnancy	
i	History	Yes
ii	Examination	Yes
iii	Laboratory	Yes
4	Antenatal visits	
i	Height	Yes
ii	Weight	Yes
iii	BP measurement	Yes
iv	Fundal height	Yes
v	Goitre	Yes
vi	Oedema	Yes
vii	Tetanus immunization	Yes
viii	Iron/Folic supplementation	Yes
ix	Calcium supplementation	Yes
x	Urine for albumin/sugar	Yes
xi	Blood grouping	Yes
xii	Counselling on <ul style="list-style-type: none"> <li>○ Diet</li> <li>○ rest and exercises</li> <li>○ identifying SBA for delivery</li> <li>○ arranging money for emergency</li> <li>○ identifying transport for emergency</li> <li>○ identifying blood donor for emergency</li> <li>○ ensuring delivery kit for home deliveries</li> <li>○ danger signs of pregnancy and delivery</li> </ul>	Yes



	<ul style="list-style-type: none"> <li>○ initiation of breast feeding and exclusive breastfeeding for 6 months</li> </ul>	
xiii	Prevention and management of anaemia	
	a. Examination	Yes
	b. Laboratory	Yes
	c. Treatment	Yes
5	Treat minor discomforts and Infections	
i	Treatment of worm infestation	Yes
ii	Prevention of malaria by promoting use of bednets	Yes
iii	Treatment of malaria <ul style="list-style-type: none"> <li>• Presumptive</li> <li>• Based on lab findings</li> </ul>	Yes Yes
iv	Treatment of Trichomoniasis	Yes
v	Treatment of Moniliasis	Yes
vi	Treatment of Urinary Tract Infection	Yes
vii	Syndromic management of sexually transmitted infections	Yes
6	Treatment of hypertensive disorders	Yes
7	Treatment of Diabetes Mellitus	Yes
8	Treatment of Vitamin A deficiency*	Refer to hospital
9	Management of pregnant woman in shock	Refer to hospital
10	Management of pre-eclampsia	Refer to hospital
11	Management of eclampsia	Stabilize and refer to hospital
12	Treatment of incomplete miscarriage / abortion	Yes
13	Treatment of ectopic pregnancy	Refer to hospital
14	Ultrasound	Refer to hospital

\* in the last trimester, if night blindness appears



**Table 10: Delivery care**

#	Services	RHC
1	Identify true labour and monitor progression of labour – Partograph	Yes
2	Prepare the environment and materials following infection control protocols	Yes
3	Identify foetal malposition	Yes
4	External cephalic version	No - refer to hospital
5	Assist normal delivery	Yes
6	Provide mini delivery kit	Yes
7	Parental administration of oxytocin	Yes
8	Parental administration of anticonvulsants	Yes & refer to hospital
9	Bimanual compression of uterus	Yes
10	Controlled cord traction	Yes
11	Suturing vaginal tears (1 <sup>st</sup> and 2 <sup>nd</sup> degree)	Yes
12	Suturing vaginal tears (3 <sup>rd</sup> degree)	No - refer to hospital
13	Provision of intravenous fluids	Yes
14	Parental administration of antibiotics	Yes
15	Safe blood transfusion	No - refer to hospital
16	Manual removal of placenta	Yes
17	Removal of retained products (e.g. MVA)	Yes
18	Vacuum extraction(assisted vaginal delivery)	Yes
19	Provide emotional support to the mother throughout labour and delivery	Yes
20	Identify danger signs in the first, second or third stages of labour	Yes
21	Management of prolapsed cord	No - refer to hospital
22	Management of shoulder dystocia	No - refer to hospital
23	Caesarean section	No - refer to



#	Services	RHC
		hospital

Table 11: Postpartum care

#	Services	RHC
1	Advise maternal diet	Yes
2	Advise maternal hygiene	Yes
3	Treatment of anaemia	Yes
4	Management of PPH	Yes & refer to hospital
5	Treatment of puerperal infection	Yes or refer to hospital
6	Breast examination	Yes
7	Antibiotics	Yes – oral / IV
8	Counselling on family planning, exclusive breast feeding and hygiene	Yes
9	Provide contraceptives	Yes – Condom, Pills, injectables, IUD
10	Register births and deaths	No



## 4.1 New-born Health

**Table 12: Care of the new-born**

#	Services	RHC
<b>1</b>	<b>Immediate care</b>	
i	○ Dry and stimulate the baby	Yes
ii	○ Clean airway, assess the baby's breathing and colour, decide if the baby needs for resuscitation, resuscitate if required.	Yes
iii	○ Tie/clamp and cut the cord	Yes
iv	○ Avoid hypothermia, keep the baby warm by placing the baby in skin-to-skin contact with the mother (kangaroo care), covering both mother and baby with a sheet/blanket and covering the baby's head with a cloth	Yes
v	○ Have the mother start breastfeeding within half hour	Yes
vi	○ Give eye care within one hour after birth	Yes
<b>2</b>	<b>Care during the first day</b>	
i	○ Conduct physical examination (colour, breathing, posture and tone, heart rate, warmth, activity, skin, head, eyes, mouth, chest, abdomen, back and spine, anus, genital organs, temperature and weight)	Yes
ii	○ Give vitamin K 1mg IM	Yes
iii	○ Give the first immunisation of BCG, polio, hepatitis	Yes
<b>3</b>	<b>Care up to 28 days</b>	
i	○ Keep the cord clean and dry	Yes
ii	○ Teach and counsel mother/family about <ul style="list-style-type: none"> <li>○ handwashing,</li> <li>○ cord care,</li> <li>○ exclusive breastfeeding for 6 months, including colostrum</li> <li>○ keeping the baby warm</li> <li>○ completing immunisation</li> <li>○ not applying <i>surma</i></li> <li>○ recognising danger signs and taking appropriate actions if they occur</li> </ul>	Yes
iii	○ Take care of LBW, breastfeed at every 2 to 2½ hours	Yes



#	Services	RHC
iv	○ Manage neonatal jaundice	Yes



## 4.2 Child health

Table 13: Newborn and Child care

#	Services	RHC
1	Assess 'developmental milestones' at 2, 4, 6, 9, 12, 18 and 24 months	Yes
2	Perform growth monitoring up to three years	Yes
	<b>IMNCI</b>	
3	Management of ARI	
i	Child with cough/fever	Yes
ii	Child with pneumonia	Yes
iii	Child with severe pneumonia	No – refer to hospital
iv	Child with very severe disease	No – refer to hospital
v	Child with wheeze	Yes
vi	Child with ear infection	Yes
vii	Health education for ARI <ul style="list-style-type: none"> <li>○ Increasing fluids</li> <li>○ Continue feeding</li> <li>○ Cleanliness</li> <li>○ Identifying danger signs &amp; taking timely actions</li> </ul>	Yes
4	Management of Diarrhoea	
i	With no dehydration	Yes
ii	Some dehydration	Yes
iii	Severe dehydration	Refer to hospital
iv	With additional problems: <ul style="list-style-type: none"> <li>○ Diarrhoea &gt; 14 days</li> <li>○ With severe malnutrition</li> <li>○ Fever &gt; 38 °C</li> </ul>	Refer to hospital
v	Health education on Diarrhoea/ORT <ul style="list-style-type: none"> <li>○ How to mix ORS</li> </ul>	Yes



#	Services	RHC
	<ul style="list-style-type: none"> <li>○ Increasing fluids</li> <li>○ Continue feeding</li> <li>○ Handwashing</li> <li>○ Identifying danger signs &amp; taking timely actions</li> </ul>	
5	Management of dysentery	Yes
6	Management of fever	
i	History	Yes
ii	Examination	Yes
iii	Laboratory	Yes
iv	Treatment	Yes
7	Management of severely ill child	Refer to hospital
8	School health services: Regularly planned visits for	
i	Medical check-ups	Yes – by MO
ii	Eye sight testing	Yes – by MO
iii	Immunisation	Yes
iv	Deworming	Yes – by MO
v	Treatment and follow-up	Yes – by MO
vi	Health education	Yes



### 4.3 Adolescent health

**Table 14: Health education to youth**

#	Services	RHC
1	Teaching the youth about roles and responsibilities of men and women in building a healthy family	Yes
2	Promoting healthy life style behaviours – exercise, no smoking/ <i>naswar</i> , avoiding violence	Yes
3	Imparting knowledge about structure of menstrual cycle to females	Yes
4	Educating about risks involved in early age marriages and pregnancies	Yes



## 4.4 Family planning

Table 15: Family planning services

#	Services	RHC
1	Counselling on family planning methods to enhance CPR	
i	Motivate for family planning	Yes
ii	Remove misconceptions	Yes
iii	Help make informed choice	Yes
2	Clinical examination	Yes
3	Education about natural methods <ul style="list-style-type: none"> <li>○ Rhythm method</li> <li>○ LAM</li> <li>○ Withdrawal</li> </ul>	Yes
4	Education about modern methods <ul style="list-style-type: none"> <li>○ Condoms</li> <li>○ Pills</li> <li>○ Injections</li> <li>○ IUCD</li> <li>○ Tubal ligation</li> <li>○ Vasectomy</li> </ul>	Yes
5	Provision of contraceptives	
i	Distribute condoms	Yes
ii	Distribute oral pills	Yes
iii	Give injections	Yes
iv	Insert IUCDs	Yes
v	Sterilisation females	No – refer to THQH/ DHQH
vi	Sterilisation males	No – refer to THQH/ DHQH
6	Suggest alternatives in case of side effects	Yes
7	Referral for couples having infertility to THQH/ DHQH	Yes







## 5 Immunisation

Table 16: Immunisation services

#	Services	RHC
1	Storage of vaccines	Yes
2	Routine Immunisation	Yes
3	Campaigns (NIDs)	Yes
4	Disease surveillance & case reporting	Yes
5	Motivate families for	
i	Regular and timely immunisation	Yes
ii	Giving polio drops on all NIDs	Yes
6	Vaccinating out-of schedule child	Yes



## 6 Appropriate treatment of endemic common diseases and injuries

**Table 17: Treatment of common injuries**

#	Services	RHC
1	Wound dressing	Yes
2	Snake bites	First aid + refer to DHQH
3	Dog bites	First aid + refer to EDOH / DHQH
4	Fractures/ dislocations	Apply splint & refer to DHQH
5	Sprains/ strains	Treat or refer to DHQH
6	For accidents	Assess, stabilize, refer to hospital
7	CPR	Yes

**Treatment of common diseases** will be discussed in section 7.



## 7 Prevention and control of locally endemic diseases

### 7.1 Management and Control of endemic communicable diseases

Table 18: Management and Control of endemic communicable diseases

#	Services	RHC
1	<b>Respiratory problems</b>	
i	Common cold and cough	Yes
ii	Acute Bronchitis	Yes
iii	Pneumonia	Yes
iv	Lower respiratory tract infections in elderly	Yes
2	<b>GI problems</b>	
i	Acute diarrhoea	Yes
ii	Chronic diarrhoea	Refer to hospital
iii	Dysentery	Yes
iv	Health education about hand washing	Yes
3	<b>Control of Tuberculosis</b>	
i	Identification of suspects	Yes
ii	Sputum smear examination	Yes
iii	X-Ray for smear negative cases	Yes
iv	Treatment of diagnosed cases	Yes
v	TB-DOTS recording & reporting	Yes
vi	Screening of contacts	Yes
vii	Health education: <ul style="list-style-type: none"> <li>○ Identify suspects</li> <li>○ Get sputum test done</li> <li>○ TB is curable</li> <li>○ Treatment is free of costs</li> <li>○ Where TB services are available</li> </ul>	Yes
4	<b>Control of Malaria</b>	
i	Diagnosis	
	a. Clinical	Yes



#	Services	RHC
	b. Laboratory	Yes
ii	Treatment	
iii	Uncomplicated case	Yes
iv	Complicated case	Refer to hospital
v	Provide ITNs	No
vi	Health education: <ul style="list-style-type: none"> <li>○ Cleanliness of the surroundings</li> <li>○ Netting windows and doors</li> <li>○ Use bednets</li> </ul>	Yes
<b>5</b>	<b>Typhoid</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
ii	Treatment	Yes
<b>6</b>	<b>Dengue Fever</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
ii	Treatment	Yes
<b>7</b>	<b>Skin infections</b>	
i	Common wounds/ infections	Yes
ii	Scabies	Yes
<b>8</b>	<b>Sexually Transmitted Infections</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes



#	Services	RHC
ii	Treatment	Yes
9	<b>Hepatitis A and E</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
ii	Treatment	Yes
iii	Health education on transmission of hepatitis	Yes
10	<b>Hepatitis B and C</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
ii	Treatment	No – refer to hospital
iii	Health education on transmission of hepatitis B and C	Yes
11	<b>Leishmaniasis</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
ii	Treatment	Yes
12	<b>Brucellosis</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
ii	Treatment	Yes
13	<b>Tinea (foot, inguinal, face, armpits, breasts)</b>	



#	Services	RHC
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
ii	Treatment	Yes
14	<b>Trachoma</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
ii	Treatment	Yes
15	<b>HIV/AIDS</b>	
i	Health education on transmission of HIV/AIDS	Yes



## 7.2 Management and control of endemic non communicable diseases

**Table 19: Management and control of endemic non communicable diseases**

#	Services	RHC
1	<b>Hypertension</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory <ul style="list-style-type: none"> <li>○ Blood cholesterol</li> <li>○ Lipid profile</li> <li>○ Serum creatinine</li> </ul>	Refer to hospital
ii	Treatment	Yes
iii	Health education for control of BP and prevention of heart attack and strokes: <ul style="list-style-type: none"> <li>○ Tobacco cessation</li> <li>○ Regular physical activity 30 minutes a day</li> <li>○ Reduced salt intake &lt;5 gm per day</li> <li>○ Regular use of antihypertensive</li> <li>○ Regular use of Aspirin</li> <li>○ Weight control</li> </ul>	Yes
2	<b>Diabetes Mellitus</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
ii	Treatment	Yes
iii	Health education on:	
	a. Diet guidance	Yes
	b. Avoiding sugars	Yes
	c. Weight control	Yes
	d. Regular physical activity 30 minutes a day	Yes
	e. Regular use of oral hypoglycaemic agents/ insulin	Yes



#	Services	RHC
iv	Prevention/early detection of foot complications	Yes
v	Screening for diabetic retinopathy	Refer to DHQH
3	<b>Asthma</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Yes
	d. X-ray	Yes
ii	Treatment	Yes
4	<b>COPD</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to DHQH
	d. X-ray	Yes
ii	Treatment	Yes
5	<b>Cancers</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to DHQH
ii	Treatment	No
iii	Health education for breast examination	Yes
6	<b>Arthritis</b>	
i	Diagnosis	
	e. History	Yes
	f. Examination	Yes
	g. Laboratory	Refer to DHQH
	h. X-ray	Yes



#	Services	RHC
ii	Treatment	Yes
7	<b>Irritable Bowel Syndrome</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to DHQH
ii	Treatment	No
8	<b>Peptic ulcer</b>	
i	Diagnosis	
	a. History	Yes
	b. Examination	Yes
	c. Laboratory	Refer to DHQH
ii	Treatment	Yes or refer to DHQH



### 7.3 Disability prevention

Table 20: Disability prevention services

#	Services	RHC
1	<b>Identification/referral for</b>	
i	Visual impairment	Yes
ii	Hearing disability	Yes
iii	Orthopaedic disability	Yes
2	<b>Control of iodine deficiency</b>	
i	Identification of goitre and referral to DHQH	Yes
ii	Health education about illnesses due to iodine deficiency	Yes
3	<b>Primary eye care</b>	
i	Diagnosis and treatment of common eye diseases	Yes
ii	Refraction Services	Yes
iii	Detection of cataract cases and referral for cataract surgery	Yes
iv	Detection of glaucoma and referral	Yes
4	<b>Health education on</b>	
i	Early examination of infants	Yes
ii	Dealing with disability at home	Yes
iii	Making life of disabled productive	Yes
iv	Seeking advice on physiotherapy	Yes



## 7.4 Mental health

**Table 21: Mental health services**

#	Services	RHC
1	Attention deficit disorder	Refer to DHQH
2	Generalized anxiety disorder	Yes
3	Obsessive compulsive disorder	Refer to DHQH
4	Panic disorder	Refer to DHQH
5	Bipolar disorder	Refer to DHQH
6	Depression	Yes
7	Schizophrenia	Refer to DHQH
8	Alcohol abuse and dependence	Refer to DHQH
9	Drug abuse	Refer to DHQH



## 7.5 Oral health

**Table 22: Oral health services**

#	Services	RHC
1	Tooth extraction	Yes
2	Scaling	Yes
3	Filling	Yes
4	Management of gingivitis and oral ailments	Yes
5	Health education on oral hygiene	Yes



## Equipment and supplies in RHC

Table 30: List of equipment proposed for RHC

#	Items	RHC
	<b>1. OPD</b>	
1.	Stethoscope	7
2.	B. P. apparatus (mercury)	4
3.	Clinical thermometer	48
4.	Examination torch	4
5.	Tongue depressor disposable	-
6.	ENT diagnostic set	4
7.	Examination couch	3
8.	Linen sheets for couch/beds	40
9.	Revolving stool	3
10.	ORS measuring jug	4
11.	ORS feeding containers and spoons	20
12.	Tape measure for nutrition assessment	3
13.	Baby weighing machine	2
14.	Weighing scale for adults	2
15.	Tuning fork	3
16.	Patella hammer	3
17.	Scissors	-
18.	Dressing trays	-
19.	Dressing scissors	-
20.	Kidney tray- large size	-
21.	Bowl large size	-
22.	Dressing drum	-
23.	Sterilizer	-
24.	IV drip stand	-
25.	Needle holder forceps	-
26.	Artery forceps straight	-
27.	Artery forceps curved	-
28.	Screen four fold	-
29.	Oxygen gas cylinder	-
30.	Tissue forceps – plain	-
31.	Tissue forceps – toothed	-
32.	Vision testing chart	-
33.	Cold box refrigerator for EPI	-
34.	Vaccine carrier and ice pack	-
35.	Breast pumps	-
36.	Stretcher	-
37.	Wheel chair	1
38.	Scalpel handle and blades	-
39.	Tourniquet	-
40.	Suturing silk	-
41.	Nebulizer	-
42.	Observation beds	-



#	Items	RHC
43.	Pillows	-
44.	Blankets	
<b>2. In All Areas</b>		
1.	Running water	24 hours
2.	Soaps	
3.	Sinks/ basins	
4.	Alcohol and glycerine for handrub	
5.	Antiseptic solution	
6.	Detergent	
7.	Disinfectant (5% hypochlorite solution – common bleach)	
8.	Latex gloves	
9.	Utility gloves	
10.	Masks surgical	
11.	Masks N95	
12.	Eye wear	
13.	Head cover/ cap	
14.	Footwear (closed shoes)	
15.	Aprons/ Macintosh	
16.	Gowns (non-sterile and sterile in OT)	
17.	Puncture resistant sharp containers	
18.	Mops for cleaning	12
19.	Buckets for cleaning	6
20.	Green/white/blue buckets (non-infectious waste)	8
21.	Red buckets (infectious waste)	8
22.	Plastic bags – green/white/blue	
23.	Plastic bags – red	
24.	Fluid proof laundry bags	
25.	Ambubag for infant, child and adult	
26.	Pedal suction machine (electric?)	
27.	Relevant posters	
<b>3. Ward</b>		
1.	Bed with side table/locker	10
2.	Foot steps	10
3.	Baby cots	4
4.	Patient trolley	1
5.	Oxygen gas cylinder	2
6.	Nebulizer + Masks	1
7.	Peak flow meter	1
8.	Spacers for inhalers	2
9.	Bedding clothing	20
i.	Foam pillows	20
ii.	Bed sheets	40
iii.	Vinyl sheets (rexine)	12
iv.	Foam mattress	20
v.	Adult blankets	20
vi.	Baby blankets	8
10.	Plastic chairs (for in-patient attendants)	10
11.	Benches for patient attendants	10
12.	Radiant warmer/heater for newborn	1
<b>4. Labour Room</b>		
1.	Running water	24-hour



#	Items	RHC
2.	Availability of Hot water	24-hour
3.	An area earmarked for new-born care	Yes
4.	Labour /Delivery Table	1
5.	Macintosh	8
6.	Shadowless Lamps	1
7.	Normal delivery set	4
8.	E&C set	2
9.	Equipment for assisted vacuum delivery	1
10.	Valsellum uterine forceps	2
11.	Standard surgical set (for minor procedures like episiotomies stitching)	4
12.	Equipment for Manual Vacuum Aspiration	1
13.	Emergency drug tray with inj. Oxytocin, Inj. Diazepam, Tab. Nifedepine, Magnesium sulphate, Inj. Lignocaine hydrochloride, Inj. Methyl ergometrine maleate, misoprostol, Sterilised cotton and gauze	1
14.	Baby resuscitation apparatus.	1
15.	Feotoscope	1
16.	Mucus extractor with suction tube and a foot operated suction machine	1
17.	Neonatal resuscitation trolley	1
18.	Radiant warmer /Heater for newborn baby	1
19.	Cusco's vaginal speculum (each of small, medium and large size)	8
20.	Sim's vaginal speculum – single & double ended - (each of small, medium and large size)	8
21.	Disposable vaginal speculum	
22.	Anterior Vaginal wall retractor	2
23.	Chittle forceps	2
24.	Ayre's spatula	2
25.	<b>For family planning</b>	
i.	IUD insertion kit	1
	<b>5.Vaccine storage</b>	
1.	ILR/Deep Freezer	1
2.	Ice box	1
3.	Ice packs	10
	<b>6. Laboratory</b>	
1.	Sputum and blood specimen bottles	
2.	Centrifuge (bench top)	1
3.	Centrifuge machine	1
4.	Stop watch	2
5.	Refrigerator	1
6.	Binocular microscope	1
7.	Urine meter.	1
8.	Calorie metre for Hb estimation	1
9.	DLC counter	1
10.	Haemocytometer	2
11.	ESR Racks.	2
12.	ESR Pipettes	2
13.	Water Bath	1
14.	Glass rods	4



#	Items	RHC
15.	Glass slides	
16.	Cover slips	
17.	Centrifuge Tubes(Plastic)	12
18.	Centrifuge Tubes (Glass)	12
19.	Glass Pipettes various sizes corrected	12
20.	Jester Pipettes Fixed -various sizes	2
21.	Jester pipettes adjustable- various sizes	2
22.	Test tubes	20
23.	Pipette stands	2
24.	Sahli Haemoglobinometer	1
25.	Table lamp.	1
26.	Lancets (pack)	6
27.	Tube Sealer.	1
28.	Blood Grouping Viewing Box.	1
29.	Surgical Blades.	
30.	Test Tube Holder.	4
31.	Reagent Bottles.	4
32.	Gas Burner.	1
33.	Stainless Steel Test Tube Racks.	1
34.	Glucometer	1
<b>7. Dental unit</b>		
1.	Dental unit (complete with chair, light, hand piece unit with hand pieces, suction and compressor	1
2.	Dental hand instruments (set)	2
3.	Aseptic Trolley	1
4.	Dental Autoclave	1
5.	Amalgamator ?	1
6.	Dental X-ray unit	1
7.	Intraoral X-ray film processor	1
8.	X-ray view box	1
9.	Lead apron	1
10.	Ultrasonic scaler	1
11.	Dental operating stool	1
<b>8. Operation Theatre</b>		
1.	Operation table	1
2.	Shadowless Lamps	1
3.	Macintosh	4
4.	Patients Trolley	1
5.	Oxygen Cylinder (large size with regulator)	2
6.	Instruments Trolley	1
7.	Dressing Drum( large size)	2
8.	Stand for Dressing.	2
9.	Scissors	4
10.	Dressing trays	2
11.	Dressing scissors	2
12.	Kidney tray- large size	4
13.	Bowl large size	4
14.	Sterilizer	1
15.	Needle holder forceps	4
16.	Artery forceps straight	2
17.	Artery forceps curved	2
18.	Tissue forceps – plain	4



#	Items	RHC
19.	Tissue forceps – toothed	4
20.	Scalpel handle and blades	4
21.	Tourniquet	4
22.	Suturing silk	4
23.	McGill Forceps	2
24.	Basin	2
25.	Basin Stands.	2
26.	Towel Clips.	
27.	BP Handle	2
28.	BP Blades	
29.	Dissecting Forceps (plain)	2
30.	Needle Holder(large size)	2
31.	Sponge Holding Forceps( large size)	2
32.	Metallic Catheter (1-12)	2
33.	Nose Speculum.	2
34.	Proctoscope.	2
35.	Arm Splint Different sizes.	6
36.	Instruments Cabinet Large size.	1
37.	Spot Light	1
38.	Nail Brush	2
39.	Thermometer	
40.	Container for thermometer.	
41.	Stand for Drip	1
42.	Bucket El.	1
43.	Aircushion Rubber	2
44.	Hot Water Bottles	10
45.	Stomach Tube.	2
46.	Urine Collecting Bags.	
47.	Instrument trolley	1
	<b>9. Equipment for eye care and vision testing</b>	
1.	Directophthalmoscope	1
2.	Illuminated vision testing drum	1
3.	Trial lens sets with trial frames	1
4.	Snellen and near vision charts	1
5.	Battery operated torch	1
	<b>9. Furniture</b>	
1.	Office Table with 3 Drawers	7
2.	Office Chairs	7
3.	Office Rack Wooden	7
4.	Patient's stool	5
5.	Bench fibre glass	4
6.	Steel Almirah	8
	<b>10. Others</b>	
1.	Pressure cooker autoclaves	-
2.	Autoclaves	1
3.	Electricity supply with backup facility (generator with POL)/ UPS or inverter/ Solar panel	24 hours
4.	Computer with accessories, including internet access	1
5.	Fans	14
6.	Tube lights	
7.	Basins	6
8.	Gas stove/ cylinder	1



#	Items	RHC
9.	Ambulance	1
	<b>11. X-ray room</b>	
1.	X-ray unit	1
	<b>12. Incinerator</b>	
1.	Incinerator	1
	<b>13. Health education material</b>	
1.	Health education material	
	<b>14. Registers and forms</b>	
1.	Data recording and reporting instruments	



## Essential drugs, vaccines and supplies in RHC

Table 31: List of essential drugs in RHC

#	Therapeutic category (generic name)	Description	RHC
<b>1.</b>	<b>Analgesics , antipyretics, non-steroidal anti- inflammatory drugs</b>		
i.	<b>Non –opioids</b>		
a.	Acetyl salicylic acid (aspirin)	Tablet 500mg	Yes
b.	Acetaminophin (paracetamol)	Tablet,500 mg Strip/blister	Yes
c.	Acetaminophin (paracetamol)	Syrup, 125 mg /5 ml	Yes
d.	Acetaminophin (paracetamol)	Suppository 100 mg	Yes
e.	Ibuprofen	Tablets 400mg Strip/blister	Yes
f.	Ibuprofen	Syrup 200mg/5ml	Yes
g.	Diclofenac Sodium	Tab. 50mg and 75 mg	Yes
h.	Diclofenac Sodium	Injection 75mg/3ml	Yes
i.	Tremadol	Inj. 100 mg	Yes
<b>2.</b>	<b>Antibacterial drugs/ Antiprotozoal</b>		
i.	Amoxicillin	Capsule 250 mg (anhydrous) Strip/blister	Yes
ii.	Amoxicillin	Powder for oral suspension, 125 mg/5ml	Yes
iii.	Amoxicillin + Clavulanic acid	Tablet 500 mg + 125 mg	Yes
iv.	Amoxicillin + Clavulanic acid	Syp. 125 + 31.25	Yes
v.	Sulfamethoxazole + Trimethoprim	Tablet, 400 mg + 80mg strip/blister	Yes
vi.	Sulfamethoxazole + Trimethoprim	Oral suspension 200mg+40mg/5ml	Yes
vii.	Doxycycline	Cap. 100mg	Yes
viii.	Tetracycline	Capsules 250 mg	Yes



#	Therapeutic category (generic name)	Description	RHC
ix.	Erythromycin	Tab. 250mg	Yes
x.	Erythromycin	Suspension 200mg/5ml	Yes
xi.	Ceftriaxone	Inj. 250mg and 500mg	Yes
xii.	Ampicillin	Inj.250mg	Yes
xiii.	Ciprofloxacin	Tab. 500mg	Yes
xiv.	Neomycin + Bacitracin	Ointment 5 mg + 500 IU	Yes
xv.	Nalidixic Acid	Tablets 250 mg, 500 mg	Yes
xvi.	Norfloxacin	Tablets 400 mg	Yes
xvii.	Metronidazole	Tablet, 400 mg Strip/blister	Yes
xviii.	Metronidazole	Oral suspension, 200 mg (as benzoate)/5 ml	Yes
xix.	Diloxanide Furoate	Tablets 500 mg	Yes
xx.	Tinidazole	Tablets 500 mg	Yes
<b>3.</b>	<b>Antiallergics and drugs used in anaphylaxis</b>		
i.	Chlorpheniramine	Tablet , 4 mg Strip/blister	Yes
ii.	Chlorpheniramine	Syrup ,2 mg /5 ml	Yes
iii.	Dexamethasone	Inj. 4mg/ml	Yes
iv.	Hydrocortisone	Powder for inj.250mg (as sodium succinate )in vial	Yes
v.	Hydrocortisone	Powder for injection , 100mg(as sodium succinate )in vial	Yes
vi.	Adrenaline	Inj. 1mg/ml	Yes
<b>4.</b>	<b>Oxytocics</b>		
i.	Oxytocin	Inj. 10IU/ml	Yes
ii.	Ergometrine	Inj. 200mcg/ml	Yes
iii.	Misoprostol	Tab. 200mcg	Yes
<b>5.</b>	<b>Hormone replacements (menopausal)</b>		
i.	Oestradiol	Tab. 0.5mg	Yes



#	Therapeutic category (generic name)	Description	RHC
ii.	Medroxyprogesterone	Tab. 5mg	Yes
<b>6.</b>	<b>Contraceptives</b>		
i.	Norethisterone enantate (8 weekly)	Inj. 200mg/ml	Yes
ii.	Medroxyprogesterone acetate (12 weekly)	Inj. 150mg	Yes
iii.	Norethisterone + ethinyl oestradiol	Tab. 1mg + 35mcg	Yes
iv.	Levonorgestrel + ethinyl oestradiol	Tab. 150mg + 30mg	Yes
<b>7.</b>	<b>Contraceptive emergency</b>		
i.	Levonorgestrel	Tab 30mcg, 750mcg, 1.5mg	Yes
<b>8.</b>	<b>Oral Rehydration</b>		
i.	Oral rehydration salt, glucose-salt solution	Dry mixture(WHO formula) in sachet for 1 liter of soln.	Yes
ii.	Oral rehydration salt, glucose-salt solution	Dry mixture (reduce osmolarity / glucose 75 meq/ 1, Sodium 75 meq / 1, Chloride 65 meq / 1, Potassium 20 meq/ 1, Citrate 10 meq / 1) in sachet for 1 liter of solution	Yes
iii.	Zinc sulphate	Tab 20mg	Yes
iv.	Zinc sulphate	Syp	Yes
<b>9.</b>	<b>Parasitic Infections</b>		
i.	Mebendazole	Tablet, 100 mg Strip/blister	Yes
ii.	Mebendazole	Syp 100mg/5ml in 30ml	Yes
iii.	Albendazole	Tab 400mg	Yes
iv.	Meglumine antimonite, and sodium stibogluconate	Inj 333 mg	Yes
<b>10.</b>	<b>Antimalarial (Malaria Control Program)</b>		
i.	Chloroquine	Tablet, 150 mg (as phosphate or sulfate) Strip/blister	Yes
ii.	Chloroquine	Syrup, 50 mg/5ml (as	Yes



#	Therapeutic category (generic name)	Description	RHC
		phosphate or sulphate)	
iii.	Sulfadoxin+Pyrimethamine	Tab. Sulfadoxin500mg+ Pyrimethamine25mg	Yes
iv.	Sulfadoxin+Pyrimethamine	Syp. Sulfadoxin500mg+ Pyrimethamine25mg/5ml	Yes
v.	Artesunate	Tab. 50mg	Yes
vi.	Primaquine		Yes
<b>11.</b>	<b>Antituberculosis drugs (TB program)</b>		
i.	Ethambutol	Tablet, 400 mg Strip/blister	Yes
ii.	Rifampicin+Isoniazid	Tablet, 150 mg + 100 mg strip/blister	Yes
iii.	Rifampicin+Isoniazid	Tablet, 300 mg + 150 mg Strip/blister	Yes
iv.	Isoniazide + Ethambutol	Tablet, 150 mg + 400 mg Strip/blister	Yes
v.	Rifampacin + Isoniazide + Pyrazinamide+Ethambutol	Tab.,150mg+75mg+400mg+275 mg strip/blister	Yes
vi.	Streptomycin	Powder for injection, 1g (assulfate) in vial	Yes
vii.	Isoniazide	Tab 100mg	Yes
<b>12.</b>	<b>Antifungal Drugs</b>		
i.	Benzoic Acid +Salicylic Acid	Ointment or Cream 6% + 3%	Yes
ii.	Nystatin	Tab 500,000 iu,	Yes
iii.	Nystatin	Oral drops100,000 iu/ml	Yes
iv.	Clotrimazole	Pessary 100,000iu	Yes
v.	Griseofulvin	Capsules or Tablets 125 mg, 250 mg	Yes
vi.	Clotrimazole	1 % Cream	Yes
<b>13.</b>	<b>Antianemic drugs</b>		
i.	Ferrous sulphate/fumerate+ folic acid	Tablet , equivalent to 60 mg	Yes



#	Therapeutic category (generic name)	Description	RHC
		iron+ folic acid 0.5mg	
ii.	Folic acid	Tab. 5mg	Yes
iii.	Ferrous Salt	Syp. 25mg iron/ml	Yes
<b>14.</b>	<b>Scabicides and pediculicides</b>		
i.	Benzoyl benzoate	Lotion 25%	Yes
ii.	Permethrin	Cream 5%	Yes
<b>15.</b>	<b>Antipruritic</b>		
i.	Calamin	Lotion 15%	Yes
<b>16.</b>	<b>Anticonvulsant</b>		
i.	Magnesium sulphate	Inj. 500mg/ml	Yes
<b>17.</b>	<b>Diuretics</b>		
i.	Furosemide	Tab 40 mg Strip/blister	Yes
ii.	Furosemide	Inj. Furosemide 20 mg/ 2ml (Amp of 2ml)	Yes
iii.	Hydrochlorthiazide	Tab 25 mg	Yes
iv.	Spironolactone	Tab 25mg	Yes
<b>18.</b>	<b>Antihypertensive/ cardiovascular drugs</b>		
i.	Dispirin CV / Loprin	Tab. 75mg	Yes
ii.	GlycerylTrinitrate	Sublingual Tab. 0.5 mg	Yes
iii.	Propranolol	Tab 40mg Strips/blister	Yes
iv.	Atenolol	Tab 50mg	Yes
v.	Isosorbidedinitrate	Tab. 10mg	Yes
vi.	Methyldopa	Tab. 250mg	Yes
vii.	Amlodipine	Tab 5mg	Yes
viii.	Angiotensin inhibitor (enalapril maleate)	5mg	Yes
<b>19.</b>	<b>Antacids and other anti-ulcer</b>		



#	Therapeutic category (generic name)	Description	RHC
i.	Aluminium Hydroxide + Magnesium Trisilicate	Tab. Aluminium Hydroxide 250mg + Magnesium Trisilicate 500mg	Yes
ii.	Ranitidine	Tablets 150 mg	Yes
iii.	Ispaghulla	Ispaghulla Husk	Yes
iv.	Omeprazole	Cap. 20mg	Yes
<b>20.</b>	<b>Anti-emetic drugs</b>		
i.	Dimenhydrinate	Tab.50mg	Yes
ii.	Dimenhydrinate	Syp.12.5mg/4ml	Yes
iii.	Dimenhydrinate	Inj. 10mg/2ml	Yes
<b>21.</b>	<b>Antispasmodic drugs</b>		
i.	Hyoscine butyl bromide	Tablet10 mg	Yes
ii.	Hyoscine butyl bromide	Inj. 20mg/2ml	Yes
iii.	Atropine Sulphate	Injection 0.5 mg/ ml Amp of 1ml	Yes
<b>22.</b>	<b>Laxatives</b>		
i.	Glycerine	Suppository	Yes
ii.	Ispaghula		Yes
iii.	Enema	Small and large	Yes
<b>23.</b>	<b>Antidiabetic</b>		
i.	Glibenclamide	Tab 5mg	Yes
ii.	Metformin	Tablet HCl 500 mg	Yes
iii.	Insulin	Inj. 40 IU/ml	Yes
iv.	Insulin	Inj. 100 IU/ml	Yes
<b>24.</b>	<b>Ophthalmic preparation</b>		
i.	PolymyxinB+Bacitracin Zinc	Eye oint. 10,000iu+500iu	Yes
ii.	Tetracycline	Eye oint. 1%	Yes
iii.	Chloramphenicol	Eye drops 0.5%	Yes
iv.	Chloramphenicol	Eye-oint. 1%	Yes
<b>25.</b>	<b>Ear drops</b>		



#	Therapeutic category (generic name)	Description	RHC
i.	Soda glycerine	Ear drops	Yes
ii.	Chloramphenicol	Ear drops	Yes
iii.	PolymyxinB+LignocaineHCl	Ear Drops PolymyxinB 10,000iu+ Lignocaine HCl 50mg	Yes
<b>26.</b>	<b>Antiasthmatic drugs</b>		
i.	Salbutamol	Inhalation 100mcg/dose for use in nebuliser	Yes
ii.	Salbutamol	Tablet 4mg	Yes
iii.	Salbutamol	Syp.	Yes
iv.	Aminophyllin	Inj. 250mg	Yes
v.	Theophyllin	Tab.SR 200mg	Yes
vi.	Prednisolone	Tab 5mg	Yes
<b>27.</b>	<b>Antitussives</b>		
i.	(Cough Syrup) Triprolidine HCl. + Pseudoephedrine HCl + Dextromethorphan HBr.	Syrup.Each 5ml contains: TriprolidineHCl. 1.25mg + Pseudoephedrine HCl . 30mg +Dextromethorphan HBr. 10mg.	Yes
<b>28.</b>	<b>Antidepressants/ Anxiolytics</b>		
i.	Fluoxetine	Cap 20mg	Yes
ii.	Diazepam	Tab 5mg	Yes
<b>29.</b>	<b>Vitamins and minerals</b>		
i.	B-Complex	Tab.B-Complex + Minerals	Yes
ii.	B-Complex	Syp.	Yes
iii.	Pyridoxine	Tab. 50mg	Yes
iv.	Calcium Lactate	Tab. 10mg	Yes
v.	Ascorbic Acid	Tab. 100mg	Yes
vi.	Vitamin A	Cap. 50,000 IU, 100,000 IU, 200,000 IU	Yes
<b>30.</b>	<b>Antidotes and other substances used in poisonings</b>		
i.	Activated charcoal powder	Powder	Yes



#	Therapeutic category (generic name)	Description	RHC
ii.	Naloxone	Inj. 400mcg/ml	Yes
<b>31.</b>	<b>Disinfectants, antiseptics and anti-infectives</b>		
i.	Chlorine	5% concentrated solution	Yes
ii.	Povidone iodine	Solution , 10%	Yes
iii.	Hydrogen peroxide	Soln. 6%	Yes
iv.	Gentian violet	Paint 0.5%, 1%,	Yes
v.	Benzoin compound		Yes
vi.	Tincture		
<b>32.</b>	<b>Parenterals</b>		
i.	Dextrose	Infusion 5% 500ml	Yes
ii.	Dextrose	Infusion 5% 1000ml	Yes
iii.	Glucose with sodium chloride	Injectable solution, 5% glucose, 0.9% sodium chloride 1000ml with IV set	Yes
iv.	Glucose with sodium chloride	Injectable solution, 5% glucose, 0.18% sodium chloride 500ml with IV set	Yes
v.	Sodium chloride	Injectable soln.0.9%isotonic1000ml	Yes
vi.	Sodium Bicarbonate		Yes
vii.	Ringer's Lactate	Injectable solution 1000ml with IV set	Yes
viii.	Ringer's Lactate	Injectable solution 500ml With IV set	Yes
ix.	Haemaccel	3%, 5% intravenous solution	Yes
x.	Dextran	Injection 6%	Yes
<b>33.</b>	<b>Topical antibiotics/ antibacterials</b>		
i.	Polymixin B +Bacitracin Zinc ointment	Polymyxin B Sulphate 10000iu+Bacitracin Zinc 500mg/gm	Yes



#	Therapeutic category (generic name)	Description	RHC
ii.	Silver sulphadiazene	1% cream	Yes
iii.	Tetracycline	Oint. 1%	Yes
<b>34.</b>	<b>Local anesthetics</b>		
i.	Lidocaine	Injection, 2% (hydrochloride) in 10 -ml ampoule	Yes
ii.	Lidocaine	Topical forms, 2% (HCl)	Yes
<b>35.</b>	<b>Preoperative medication</b>		
i.	Adrenaline	Inj. 1mg/ml	Yes
ii.	Diazepam	Injection, 5 mg/ml in 2-ml ampoule	Yes
iii.	Atropine	Inj. Atropine 1mg	Yes
<b>36.</b>	<b>Vaccines</b>		
i.	BCG		Yes
ii.	OPV		Yes
iii.	Pentavalent		Yes
iv.	Measles vaccine		Yes
v.	Hepatitis B vaccine		Yes
vi.	Tetanus toxoid		Yes

Table 32: List of supplies

#	Item	RHC
<b>1.</b>	<b>Cotton, Gauze and Bandages</b>	
i.	Absorbent cotton wool, 500 g i. 500 g, roll, non-sterile, ii. Surgical hydrophilic cotton	Yes
ii.	Crepe elastic bandage 7.5cm x 5m, per (roll) i. 100% cotton, unbleached, ii. Elasticity; minimum of 150%, unstretched 3m, stretched 5m	Yes
iii.	Gauze pad / compress 10cm x 10cm, 12 ply sterile,	Yes



#	Item	RHC
	pack of 20, Absorbent gauze 100% cotton	
iv.	Gauze bandage 5cmx10m, absorbent wow, pack of 10 rolls	Yes
v.	Gauze roll 90cm x 100M non-sterile, with selvages, absorbent 100% cotton i. Gauze roll width 22.5cm after 4 folds, ii. Weight 23 gm/m <sup>2</sup> , type 17 threads/cm <sup>2</sup>	Yes
<b>2.</b>	<b>Catheters and tubes</b>	
i.	Foley catheter, sterile CH 10, 40cm, balloon 3-5 ml latex silicone coated	Yes
ii.	Foley catheter, sterile CH 16, 40 cm, balloon 10ml, latex silicone coated	Yes
iii.	Foley catheter sterile, CH 18, 40cm, balloon 10ml, latex, silicone coated	Yes
iv.	Suction tube CH 8, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector, )	Yes
v.	Suction tube CH 10, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector )	Yes
vi.	Suction tube CH 14, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector )	Yes
vii.	Suction tube CH 16, 50cm, sterile, disp, PVC, box of 50 ( i) Open distal end with side windows and connector)	Yes
<b>3.</b>	<b>Sutures</b>	
i.	Chromic catgut	Yes
ii.	Silk braided	Yes
<b>4.</b>	<b>Syringes, cannula and needles</b>	
i.	Syringe 10cc, Luer, sterile disposable, two piece, ( P/P or PEF) box of 100	Yes
ii.	Syringe, 20cc Luer, sterile disposable, two piece, (P/P or PEF), box of 100	Yes
iii.	Syringe 5cc, Luer, sterile disposable, two piece (P/P or PEF), box of 100	Yes



#	Item	RHC
iv.	Syringe 50/60cc, Luer lock sterile disp, concentric tip, box of 100	Yes
v.	Needle Luer, IM, disposable, 21G (0.8x38mm) sterile, stainless steel, box 100	Yes
vi.	Needle disp 19G (1.1x40mm), sterile, stainless steel, box of 100	Yes
vii.	Needle disp 21G (0.8x40mm), sterile, stainless steel, box of 100	Yes
viii.	Needle disp 22G (0.7x30mm), sterile, stainless steel, box of 100	Yes
ix.	Needle disp 23G (0.6x25mm), sterile, stainless steel, box of 100	Yes
x.	Needle disp 25G (0.5x16mm), sterile. stainless steel, box of 100	Yes
xi.	IV Cannula, short, 18G, 20G, 22G (1.1x32mm) i. Sterile, disposable, ii. Trocar: Stainless steel, iii. Injection port, iv. Cannula: Polypropylene or Teflon	Yes
<b>5.</b>	<b>Gloves</b>	
i.	Gloves, examination latex, large, non-sterile, powdered, box of 100	Yes
ii.	Gloves, examination latex, medium, non-sterile, powdered, box of 100	Yes
<b>6.</b>	<b>Surgical adhesive tapes</b>	
i.	Tape adhesive, 2.5 cm x 5 meter, roll (Colour white, non-stretch, Aerated textile strip impregnated with adhesive. Storage: dry conditions and at less than 25 degrees C if possible )	Yes
<b>7.</b>	<b>Blade and razor</b>	
i.	Razor safety, stainless steel, 3 piece unit (handle and blade holder), reusable ( Razor blades, double edged, steel, disposable, pack of 5. Box of 10 packs )	Yes
<b>8.</b>	<b>Test strips</b>	
i.	Blood glucose test strips	Yes



#	Item	RHC
ii.	Urine protein test strips	Yes
iii.	Urine pregnancy test	Yes
iv.	Bowie-Dick strips for checking sterilisation	Yes
<b>9.</b>	<b>Others</b>	
i.	Battery dry cell alkaline AA size 1.5V or LR6 (for otoscope), single unit	Yes
ii.	Tongue depressor (wooden), disposable, box of 100	Yes
iii.	Towels or paper wraps for covering instruments for sterilisation	Yes
iv.	Apron, utility plastic reusable, unit (Straight apron with bib and neckband back fastening, Moisture proof and blood, water, chemical and stain resistant. Able to withstand extreme temperature, Length 120cm, width 90cm, Re-usable and able to withstand disinfection. Material: Opaque/transparent plastic, PVC, vinyl or polypropylene )	Yes
v.	Bucket, plastic, approximately 12 litres, with lid. Unit	Yes
vi.	Swipes/ Mops	Yes
vii.	<i>Jharoo</i>	Yes
viii.	Dusters	Yes
<b>10.</b>	<b>Laboratory supplies</b>	
i.	Gram's Iodine	Yes
ii.	Crystal violet stain	Yes
iii.	Ziehl Neilsen stain	Yes
iv.	ABO & Rh antibodies	Yes
v.	RPR test kits for syphilis	Yes
<b>11.</b>	<b>X-Ray radiology</b>	
i.	X- ray film, blue sensitive, interleaved, 18 x 24 cm, box of 100	Yes
ii.	X- ray film, blue sensitive, interleaved, 24 x 30 cm, box of 100	Yes
iii.	X- ray film, blue sensitive, interleaved, 30 x 40 cm, box of 100	Yes
iv.	X-ray developer powder for 25 liters, 2.6Kg	Yes



Annex V – Minimum Services, Equipment, Supplies and Medicines for RHCs

#	Item	RHC
v.	X-ray fixer for 22.5 L, 3.3kg	Yes



## Diagnostic services in RHCs

Table 33: List of diagnostic services in RHC

#	Services	RHC
<b>1.</b>	<b>Laboratory Services</b>	
<b>a.</b>	<b>Hematology</b>	
i.	Hemoglobin	Yes
ii.	Red and white blood cell count	Yes
iii.	Differential cell count	Yes
iv.	ESR	Yes
v.	Hematocrit	Yes
vi.	Malaria parasite smear (MPS)	Yes
vii.	Bleeding time and coagulation time	Yes
viii.	Blood grouping and Rh factors	Yes
ix.	Hepatitis B and C and syphilis tests	Yes
x.	HIV test	Yes
<b>b.</b>	<b>Bacteriology</b>	
i.	Ziehl-Nielsen staining for acid fast bacilli (AFB)	Yes
ii.	Direct smear for AFB	Yes
iii.	Gram's staining	Yes
<b>c.</b>	<b>Serology</b>	
i.	Typhi dot	Yes
<b>d.</b>	<b>Clinical Pathology</b>	
i.	Urine analysis: physical exam	Yes
ii.	Chemical exam: Albumin (qualitative)	Yes
iii.	Chemical exam: Albumin (quantitative)	Yes
iv.	Chemical exam: Glucose (qualitative)	Yes
v.	Chemical exam: Glucose (quantitative)	Yes
vi.	Microscopic (stool test)	Yes



#	Services	RHC
vii.	Macroscopic (stool test)	Yes
viii.	Pregnancy test	Yes
<b>e.</b>	<b>Biochemistry</b>	
i.	Blood-sugar test	Yes
ii.	Urea test	Yes
iii.	Creatinine test	Yes
iv.	Total protein test	Yes
v.	Simple liver-function test	Yes
vi.	Brucellosis	Yes
<b>f.</b>	<b>Gram Stain</b>	
i.	Body fluids	Yes
<b>2.</b>	<b>Imaging Services</b>	
<b>a.</b>	<b>X-Rays</b>	
i.	Chest	Yes
ii.	Abdomen	Yes
iii.	Skeletal	Yes
iv.	Ultrasound	Yes



# Annex VI – Basic Rules for CMWs to Prevent Infections







# Infection Control Management Project

## Volume 10: Basic Rules for Community Midwives to Prevent Infections

1. Protocols

2. Reference Text

3. Tool for Monitoring

**February 2012**

**Prepared by AAA Team**

**Adapted From:**

A Book for Midwives, Chapter 5. Hesperian Foundation, 2009

WHO Poster, How to Handwash & How to Hand rub, October 2006







## Infection Control Guidelines for Midwives

### You MUST:

1. Clean your hands and wear protective clothing.
2. Clean all spaces including bedding.
3. Clean and sterilize tools.
4. Get rid of wastes safely.



## • List of Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ER	Emergency Room
HIV	Human Immunodeficiency Virus
HLD	High Level Disinfection
IUD	intrauterine device
MVA	Manual vacuum aspiration
PEP	Post-Exposure Prophylaxis
PPE	Personal Protective Equipment

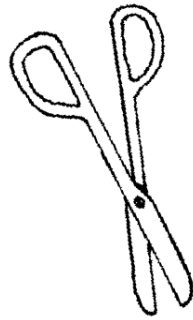


## Reference Text

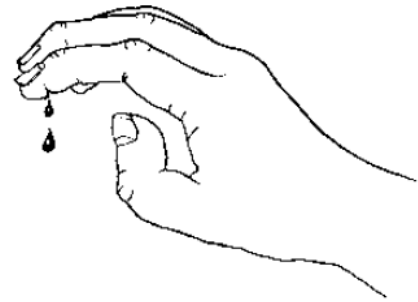
### Preventing infection saves lives

Infection makes people sick and can even kill them. It is one of the most common causes of death after childbirth. Procedures that involve putting medical tools inside a woman's womb, like inserting an intrauterine device (IUD) or doing manual vacuum aspiration (MVA) can also cause infection. Much of the work of a midwife, and any procedure inside the womb (invasive procedure), can only be safe if you are able to follow the steps outlined below to prevent infection.

This volume explains how to avoid infection by killing or controlling harmful germs. Germs are organisms that carry sickness. Germs are everywhere, but they are so small that they can only be seen with a microscope. The dangerous germs in blood, stool, body fluids (like semen and amniotic waters), and dirt can cause serious sickness when they get into someone's body.



*Germs can live tools, even tools that look clean*



*Germs live in body fluids, like blood*

### Infection is caused by Germs

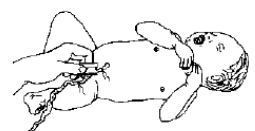
Some sicknesses, like arthritis, diabetes, asthma, and epilepsy, are not caused by germs. They cannot be passed from one person to another. Other sicknesses, like measles, hepatitis, tetanus, womb infection, HIV/AIDS, and the flu, are called infections and are caused by germs. People get sick when the germs that cause these infections get inside their bodies.

### How do Germs get into the body?

Germs can get inside the body in different ways.

**Some germs pass through semen or vaginal mucus** (body fluids) when people have sex. HIV and other sexually transmitted infections like Chlamydia and gonorrhoea can spread this way.

**Some germs pass through blood** when the blood or body fluid of an infected person get into a cut or through the skin — like with a





needle that has been used for piercing or injections. HIV/AIDS, hepatitis B, and hepatitis C can spread this way.

**Some germs live in dirty water** and pass when people drink it. Cholera and diarrheal diseases spread this way.

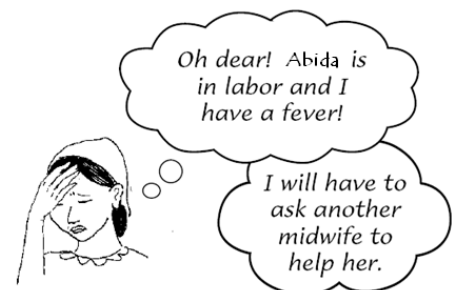
**Some germs live in dirt, on skin, or in the air,** and are not dangerous unless they get into a person's blood. These germs can get into the blood when an instrument that has germs on it is used inside a woman's womb, or to cut the skin or a baby's cord. Tetanus and womb infection can spread this way.

**Some germs pass through the air** when a sick person coughs or sneezes. Colds, flu, and tuberculosis can spread this way.



### Keep sick people away from births

One simple thing midwives can do to prevent infection is to keep sick people away from women who are pregnant or giving birth. Keep anyone who has a sore throat, cough, fever, or other illness that passes through germs away from births. And do not let anyone with a sore on his or her hands or face touch a new baby.



If you are sick but you must go to a birth, you can cover your mouth and nose with a scarf, a folded cloth or a mask. Wash your hands often and cover your mouth when you sneeze or cough. Be sure to wash your hands after each time you sneeze or cough. Try not to touch the new baby too much.

### Anyone may carry germs that cause sickness

People do not always know that they have an infection. And there is no way to tell for sure what germs a person has just by looking at her. Some people have germs in their blood or other body fluids but do not seem sick. To





be safe, and to stop the spread of dangerous infections like hepatitis and HIV/AIDS, health workers must treat everyone as if they might have dangerous germs in their body fluids. Health workers can prevent germs from spreading:

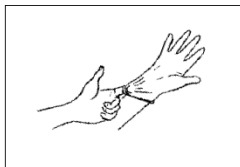
- By wearing gloves and other protective clothing, to prevent blood and other body fluids that contains germs from getting on themselves or others.
- By cleaning and sterilizing the tools they use during births and other procedures.

**Note:** Good general health can help avoid infection. Healthy eating, enough rest, and emotional and spiritual well-being are all important for staying healthy. Sometimes they are enough to help people fight germs that get inside the body so the person does not get sick.

But during birth and invasive medical procedures, a woman's body is more open and vulnerable to infection, and good general health is usually not enough. Germs that are usually kept out of the body can get into the womb. Any cut in the skin also makes a person more vulnerable to infection because the skin usually helps keep germs out of the body. Even an injection can cause an infection if the syringe has harmful germs on it.

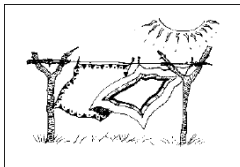
## Prevent infection by keeping germs away

Here are the basic rules to prevent infection.



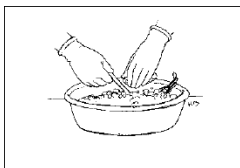
### **Clean your hands and wear protective clothing.**

Wash your hands often and wear protective clothing to prevent spreading germs from one person to another and to keep germs away from yourself.



### **Clean the space and bedding.**

Clean the area where births and exams happen, to keep germs away.



### **Clean and sterilize tools.**

Wash and sterilize tools to kill any germs on them.

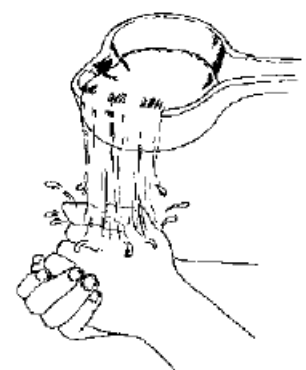


### **Get rid of wastes safely.**

Throw away waste products carefully to prevent people in the community from getting sick from the germs left on them.

# 1. Clean your hands and wear protective clothing

## 1a. Wash your hands often





Washing your hands is one of the most important things you can do to prevent infection. It prevents you from spreading germs to another person, and it helps protect you from germs, too. If you can do nothing else to prevent infection, you must wash your hands.

Wash your hands with soap and clean water. Be sure to rinse all the soap off. When you wash your hands, and especially when you rinse them, use clean water that is flowing, not water sitting in a bowl. When you wash your hands in a bowl, the germs that come off into the water will get back onto your hands again.

- Wash your hands each time before you touch a woman's body.
- Wash after you touch her body, or after you touch anything that has her blood or fluid on it (like the placenta).
- Wash before you put on gloves and after you take gloves off.

Normal hand washing removes most germs. But sometimes to remove more germs, you should wash your hands for a full 3 minutes, and scrub under your fingernails.

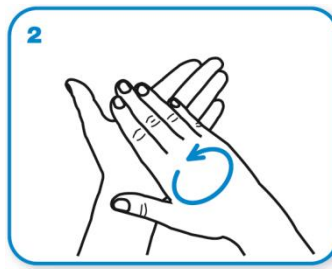


## How to do a 3-minute Handwash

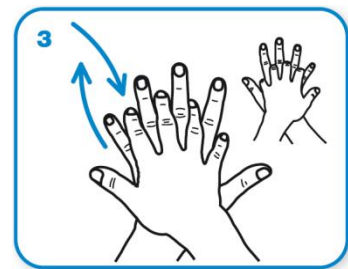
Before you start, take off your rings, bracelets and other jewellery



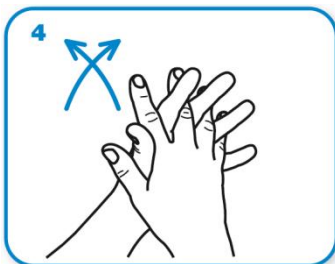
Wash your hands and arms with soap and clean water up to your elbows



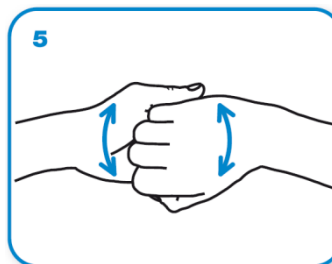
Rub hands palm to palm



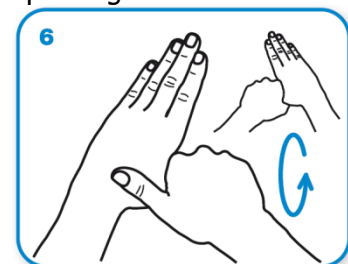
Right palm over left dorsum (back of hand) using fingers of the other hand and repeating on the other side



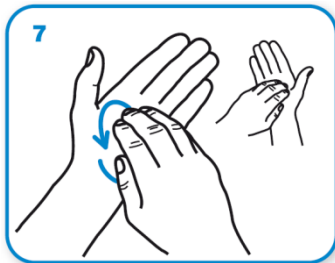
Palm to palm using both hands' fingers between each other



Hook/hold backs of fingers with opposing palms and rub against each other,



Rub left thumb on right palm in a circular manner, and repeat on the other side



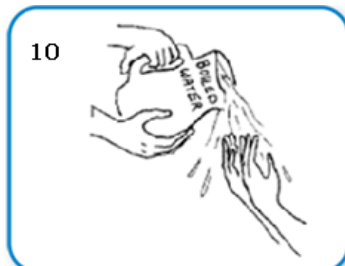
Rub in a circular manner, backwards and forwards with fingers tightly held together of right hand on the left palm and repeat on the other side



If you have a clean brush, scrub your fingernails.



Keep scrubbing, brushing and washing your hands and arms for 3 minutes! Spend most of this time on your hands.



Rinse with clean, running water



Dry your hands in the air instead of using a towel. Do not touch anything until your



hands are dry.

### **Always do a 3-minute hand wash**

#### **Before you**

1. touch the mother's vagina
2. do a pelvic examination
3. deliver the baby
4. sew up a tear

#### **After you**

1. clean up after the birth
2. touch any blood or other body fluids
3. urinate or pass stool



**Clean Water:** The water you use must be boiled before using it to wash your hands or to wash tools before a birth.



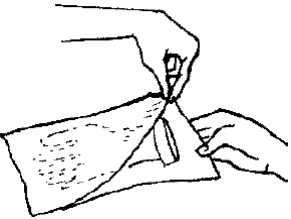
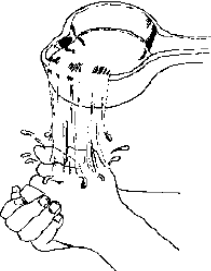
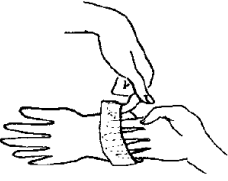

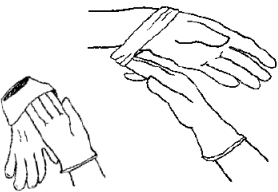



## 1b. Wear Gloves



Latex and other plastic gloves protect women from any germs that may be hiding under your fingernails or on your skin. They also protect you from getting infections. Wear clean gloves whenever you touch the mother's genitals, or any blood or body fluid.

If you are doing invasive procedures, or if you are touching any tools that have been sterilized, you must wear sterile gloves.

How to put on Gloves		
1	2	3
		
Open the package without touching the gloves. Do not touch the outside of a sterile glove with your hand or it will not be sterile anymore.	Carefully wash your hands. Let them dry in the air.	The gloves should be folded out at the cuff. Pick up one glove under the cuff on the inside of the glove and slip your hand into it. Do not touch the outside of the glove.
4	5	6
		
Wiggle your hand in while you pull with your finger tucked inside the glove.	Pick up the second glove by slipping your gloved fingers into the fold of the cuff. Slide your hand into the glove.	Once the gloves are on, do not touch anything that is not sterile — or the gloves will not be sterile anymore either!
Practice with the same pair of gloves over and over again until it feels easy.		



**Remember:**



If you carefully  
wash your hands,  
And put on sterile  
gloves  
And then scratch  
your head  
Your glove will not  
be sterile anymore



Of course, when you touch a woman you will get germs on your gloves, but do not move germs from one part of her body to another. For example, if you touch a woman's anus where there are many germs, do not put your fingers inside the vagina with the same gloves. Germs from the anus can make a woman sick if they get into the vagina or womb.

After you use a pair of gloves one time, throw them away, or sterilize them before you use them again.

### 1c. Wear Protective Clothing

Midwives must protect themselves from germs and infection. Germs that cause AIDS, hepatitis B and hepatitis C can infect you if an infected person's blood gets into a cut or opening in your skin — even a cut so small that you cannot see it.



- Keep blood and other body fluids off your clothing and skin, and if they do get onto you, wash them off right away with soap and water.

You do not need expensive equipment to keep body fluids off your skin, out of cuts, and out of your mouth and eyes.

- Wear an apron or an extra shirt to keep fluid off your body. Protect your eyes with eyeglasses or plastic goggles. Cover your feet (wear shoes) so that you do not step into blood or other fluids.
- Wash all your clothing after any blood, waters, or other body fluids gets on it. If you get body fluids in your eyes or mouth, rinse them for several minutes with clean water or saline (water with a little salt added).

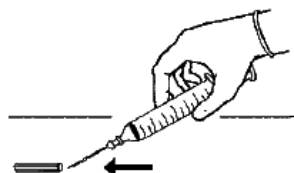
### 1d. Be careful with needles

If a syringe is used to give an injection, or a needle was used for sewing a vaginal tear, the needle has blood on it. If you accidentally stick yourself with that used needle, you will be exposed to germs.

- Carry needles carefully with the point away from your body. Do not leave needles lying around. **Use each needle only once.**

#### How to avoid puncturing your skin with a needle

Do not use your hand to put the cap on the needle.



Instead, use the needle to pick up the cap.



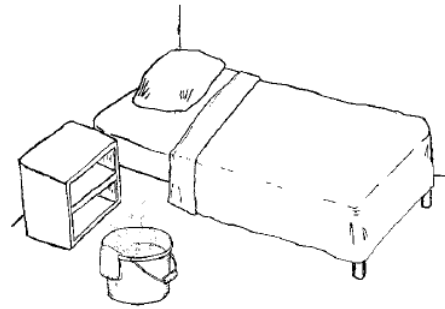


**Note:** If you do get stuck by a needle, immediately wash the area with soap and water or alcohol and dispose of the needle properly. Do not use it on another person.

## 2. Clean the space and bedding

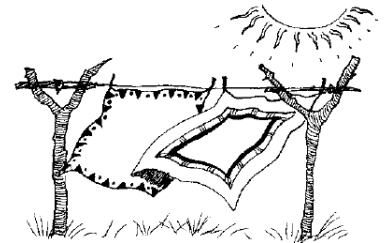
### 2a. Clean the space

- The home should be cleaned carefully — especially the area where the baby will be born or where procedures such as a pelvic exam will be done.
- Sweep these areas free of dust and dirt, and wash surfaces with soap and water. Put your tools or birth kit on a clean surface.
- Move animals out of the house and do not do any medical procedures in places where animals sleep or pass stool, or where people urinate or pass stool. If the floor in the house is made of animal waste (dung), do not let the woman's body or any of your tools touch the floor. Dung has many germs in it that can easily spread to pregnant women. You can cover the floor with clean straw, cloth, or plastic.



### 2b. Clean or sterilize the bedding

- Wash cloth for covering the bed (bedding) in soap and water, and dry it thoroughly by hanging it in the sun or ironing it.
- Do not dry bedding on the ground; it will pick up germs.



### Store bedding to keep germs away

If you are not going to use the bedding right away, keep it clean and dry until you are ready to use it. Put it in a clean bag or wrap it in clean paper and store it in a clean, dry place.

**Note:** Do not store bedding that is damp or wet. Germs will come back!

### Other kinds of underpadding

Sometimes there is no bed or bedding. The birth or procedure happens on the floor. In these cases, it is useful to have some kind of underpadding. This protects the baby and the mother from the germs and dirt that are on the floor.

- Find a way to clean the underpadding before it is used. For example, banana leaves can be washed with a disinfectant solution, and then





smoked or dried in the sun. Cloth rags or sacks can be boiled and then dried.

- **Spread the plastic given in your kit over the clean bedding or underbedding.**


### 3. Clean and sterilize tools

All the tools used at a birth, examination, or procedure must be cleaned and sterilized. Cleaning and sterilizing the tools gets rid of germs. This protects women from getting sick.


#### 3a. Soak your tools

Tools that have been used must be soaked for at least 10 minutes in 0.5% bleach solution.

**How to make a disinfecting 0.5% bleach solution**



Use 1 part of 5% bleach



9 parts of clean water

Mix them in a container and 0.5% bleach solution will be ready.

- Mix just enough solution for 1 day. **Do not use it again the next day.** It will not be strong enough to kill germs anymore.

#### 3b. Clean your tools

- Make sure that all tools and equipment you use at a birth or a procedure are clean.
- Wash them well after each birth, using a brush to remove any blood or dirt in the hinges or rough edges of your tools.
- Clean off any rust, and get rid of tools that are dull or damaged.
- Protect yourself by wearing heavy rubber gloves when you clean your tools.



**Carefully wash all the dirt off your tools**

After everything is washed, any tools that you use inside a woman's body must also be sterilized to kill germs.



### 3c. Sterilize your tools

To sterilize means to kill all the germs on something. If your tools are sterilized, they will not spread germs to women when you use them. This will protect women from getting infections.

#### **What do we mean when we say “sterile”?**

Sterilize means kill **all** the germs that cause infections. To sterilize a tool you must use boiling or pressure steaming.

Disinfect means to kill **most** of the germs that cause infections. Some soaps and cleaning products are called “disinfectant.” But to disinfect medical tools or instruments you cannot simply clean something with a disinfectant soap — you must boil, steam, or soak the tool in disinfectant chemicals. This kind of disinfection is called High Level Disinfection (HLD).

- Sterilize everything that will go inside a woman’s body, will cut her skin, or will be used to cut the cord at birth.

#### **Sterilize these items using the electric steriliser:**

- scissors
- clamps or haemostats
- gauze
- compress cloths
- bulb syringe or mucus trap
- speculums, in some cases

**Note:** You do not need to sterilize tools that are used only on the outside of the body. Stethoscopes, measuring tape, and blood pressure cuffs must be clean but do not need to be sterile.

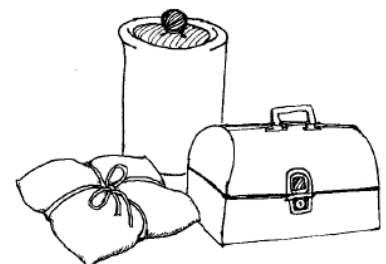
When you sterilize a tool, the germs on it are killed and it is safe to use. But if that tool touches anything (including the bed, a table, or you!) it is no longer sterile. Germs from whatever it touched are on it, and those germs can cause an infection when the tool is used.

After sterilizing tools, let them dry. Do not touch them, or they will not be sterile anymore!

Use sterilized tongs, chopsticks, or spoons to pick the tools out of the pot. Move them directly to a sterilized container. Remember, if the tool touches anything, including your hands, it is no longer sterile.

#### **Storing tools and supplies**

At some births there will be plenty of time to sterilize your tools and equipment at the mother’s house. But at other births, you may not have time. For this reason, try to sterilize your tools and equipment at home and keep them in a sterilized container





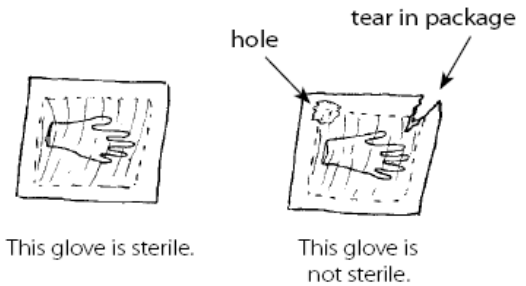
in your kit. A metal box or pot with a tight-fitting lid is best. Do not touch the inside of the container.

### Some equipment needs special care

#### ***Sterile packets***

Gauze, compresses, gloves, and other equipment sometimes come in sterile packets. Because the inside of the packet is sterile too, you can use this equipment directly out of the packet.

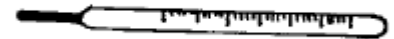
But remember: once you take something out of its sterile packet and use it, or if the packet gets wet or gets holes in it, the equipment is not sterile anymore.



Things in sterile packets are meant to be used only once and then thrown away (disposable).

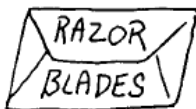
#### ***Thermometers***

- Wash the thermometer in soap and rinse with cool, clean water before and after you use it. Do not use hot water because the thermometer may break.



#### ***Razor blades***

Razor blades for cutting cords come inside of a sterile packet in your delivery kit.

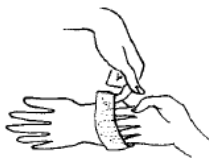


- Never reuse razor blades — dispose off after cutting the cord.

#### ***Gloves***

Most plastic gloves can be boiled or steamed, but some will fall apart in the water.

- Get strong gloves that can be boiled and reused a few times.



Only touch the inside of the glove.

- Before boiling or steaming gloves, turn the cuff inside out. After sterilizing a glove, touch only the inside part of it. If you touch the outside, it will not be sterile anymore.

• If the gloves you have cannot be boiled, wash them carefully and soak them in bleach or medical alcohol. Then rinse them in clean water before using them again.

#### ***Mucus bulb (bulb syringe)***

- When you wash out a mucus bulb, make sure to fill it with soapy water and then squeeze the water out.





- Do this several times. Then rinse it out well. If you sterilize the mucus bulb by boiling, make sure to let water into the inside of the bulb before boiling and then squeeze out all the water afterward.

## 4. Get rid of wastes safely

There are three different kinds of waste after a birth or procedure:



These wastes carry germs and can spread infections to you and to people in the family and community. Wear gloves when you touch wastes, and get rid of them carefully.

### **Body wastes**

The simplest way to dispose of body wastes is to bury them deep in the ground.

In many communities, families bury the placenta, sometimes with other special objects. Burying the placenta is an important ritual for many people, and is also a way to protect the community from germs that may grow in the placenta.

### **Sharp wastes**

Sharp wastes must be put into a container so they will not injure anyone who finds them. A container made of metal or heavy plastic, with a lid or tape to close it, works well.

When the container is half full, add bleach if possible, then seal it closed and bury it deep in the ground.



### **Other wastes**

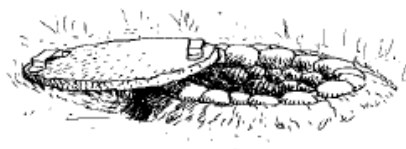
Other wastes, like plastic gloves or cloth soaked in blood, should be disinfected and then buried deep in the ground. You can disinfect them by soaking them in bleach for 10 minutes.

**WARNING! Do not burn plastic gloves, syringes, or any other plastics.** Burning plastic wastes is dangerous — when plastic burns, it makes smoke and ash that is very poisonous.



## **Burying wastes**

Find a place away from where people get their drinking water and away from where children play. Dig a safe waste pit to bury wastes.





## Monitoring Tool

CMW supervisor should visit the home where birth has taken place as soon as possible after the delivery and check with the family if the CMW did the following.

If possible to observe directly, she should attend some deliveries with the CMW.

#	Activity (Ask the family, if CMW.....)	Yes	No	Comment
1.	Cleaned the area where baby was born.			
2.	Swept the area free of dust and dirt and washed surface with soap and water.			
3.	Spread washed (with soap and water) and sun dried or ironed covering sheet on the bed or underpadding			
4.	Spread the plastic sheet provided in the kit over the clean bedding.			
5.	Washed hands with soap and water for 3 minutes.			
6.	Rinsed soap off hands with clean running water			
7.	Dried her hands in the air instead of using a towel			
8.	Wore gloves before touching the mother's genitals or any blood or body fluids			
9.	Wore an extra shirt or apron to keep fluid off her body			
10.	Protected her eyes with eye glasses or plastic goggles			
11.	Covered her feet with shoes			
12.	Used needles and syringe once only			
13.	Used a new blade for cutting the cord			
14.	Sterilized scissors, clamps, haemostats, gauze, compressed clothes, bulb syringe or mucous traps and speculum before delivery			
15.	These were boiled for at least 20 minutes after the water started boiling			
16.	Or she brought sterilized tools from her home, packed in a container			
17.	Used items are in sterile packets in delivery kits only once and then disposed them off			



18.	Washed thermometer with soap and rinsed with cool clean water, before and after use			
19.	Disposed body waste, sharp wastes and other wastes safely by burying them in a place away from where children play			







# Annex VII – Guidelines for Infection Control in BHU/RHC







# Infection Control Management Project

## Volume 1: Guidelines for

## Infection Control in BHU/RHC

4. Protocols

5. Reference Text

6. Tool for Monitoring

**February 2012**

**Adapted by AAA Team from:**

1. Performance Standards for Primary Health Care At Rural Health Care At Rural Health Centres/Basic Health Units, Prepared by Pride Project, USAID, JHPIEGO, International Rescue Committee, Management Sciences for Health
2. Practical Guidelines for Infection Control In Health Care Facilities, WHO, 2004
3. Safe Management of Bio-medical Sharps Waste in India, WHO, 2005
4. Safe Management of Wastes from Health-Care Activities (1999): WHO, 1999.
5. The National Infection Control Guidelines, 2006. The National AIDS Control Program, Ministry of Health, Pakistan
6. WHO Poster, How to Handwash & How to Hand rub, October 2006









All staff of BHU/RHC MUST:

1. Ensure **cleanliness**.
2. Ensure an adequate **supply of clean water** for drinking and healthcare.
3. Maintain **hand hygiene**, for preventing cross-contamination (person to person or contaminated object to person).
4. Have **personal protective equipment** available (caps, masks, aprons, eyewear, gloves, closed-toe shoes) and use it appropriately.
5. Prevent **needle/sharp injuries**, use containers for sharps disposal and dispose these safely.
6. Ensure that **clean supplies** are available at all sites (gauze, cotton wool, instruments, plastic containers etc).
7. Ensure that **antiseptics and disinfectants** are available and are used appropriately.
8. Perform point-of-use **decontamination of instruments** and other items.
9. Have a separate area for **instrument cleaning**, where instruments and items are properly cleaned.
10. Ensure proper **instrument processing**, with facilities for HLD and sterilization.
11. Develop and maintain **shelf-life system** to store HLD and sterile items
12. Ensure proper collection and cleaning of **soiled linen**.
13. Follow **waste** handling, collection and disposal guidelines properly.



## • **List of Acronyms**

BHU	Basic Health Unit
HLD	High Level Disinfection
OT	Operating Theatre
PPE	Personal Protective Equipment
PUR	Trade name for water purification product
RHC	Rural Health Centre



## Reference Text

### Standard Precautions as advocated by WHO for health care facilities

“Standard” precautions involve work practices that are essential in providing high level protection to health care personnel, patients and visitors.

These include, but are not limited to the following:

- Practicing hand hygiene;
- Using personal protective equipment in all procedures, especially when handling blood, body substances, excretions and secretions;
- Appropriate handling of patient care equipment and soiled linen;
- Preventing needlestick and sharp injuries;
- Environmental cleaning and managing spills; and
- Appropriately handling all kinds of waste.

#### 1. Ensure cleanliness

Keep all areas of the facility clean including: the registration area, examination room/s, labour room, and recovery room, and ward/s, instrument processing area, laboratory, pharmacy and toilets.

There should be NO dust, cobwebs, blood, trash, used needles and syringes, bandages, on the floor, walls, roof, or on fixtures and furniture.

Ensure routine cleaning as it is important to maintain a clean and dust-free environment. There are usually many micro-organisms present in dirt, and routine cleaning helps in eliminating it.

- Clean only by wet mopping. Dry sweeping e.g. by using *jharoo* (broom) should not be done. Using commonly available neutral detergent solution improves the quality of cleaning.
- Clean all areas visibly contaminated with blood or body fluids immediately with detergent and water.
- Clean all horizontal surfaces and toilet areas daily.

- **Ensure an adequate supply of clean water for drinking and healthcare**

The BHU/RHC should have provision for regular supply of adequate water.





- For drinking, store water in clean containers and do not allow hands to enter the storage tanks or containers.
- Purify water through products like Musaffa, PUR, Aquatab, etc.
- If the facility has water storage tanks, cleaned on a six-monthly basis.
- For scrubbing before surgery, use purified water.



**Single Stage Water Purifier  
(Two in One)**



**Three Stage Water Purifier**



**Dual Stage Water Purifier**

**Options for Musaffa use (from the website <http://www.jamals.com/musaffa/index.html>)**

## 2. Maintain hand hygiene

Handwashing mechanically removes soil and debris from the skin, and reduces the number of microorganisms that can be transferred to other patients and the health care worker. **Using plain soap and clean water is as effective as washing with “antimicrobial” soaps.** In addition, plain soap causes less skin irritation.

Popular commercial products (such as Safeguard, Bodyguard, and Lifebuoy) have no proven extra efficacy than normal soap. These may alter hand flora increasing resistance of organisms.

Hand hygiene can be performed with soap and water, or with the use of alcohol hand rub.

Hand hygiene should be done **before**:

- Examining a client/patient
- Wearing gloves for any routine procedure/examination

Hand hygiene should be done **after**:

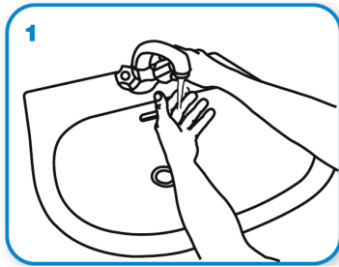
- Having contact of any kind with a client.
  - Handling soiled instruments and other items,
  - Touching mucous membranes, blood, or other body fluids (secretions or excretions), and
  - Removing gloves
  - Any other situation in which hands may become contaminated
- **Before performing hand hygiene**, remove ALL wrist and hand jewellery. Cover cuts and abrasions with waterproof dressing. Keep fingernails short, clean and free from nail polish.
  - **When visibly soiled, wash hands** with soap and water, otherwise use **hand rub**.

## Method of Handwashing



Wash hands when visibly soiled! Otherwise, use hand rub! If hand rub is not available, then do wash hands, as mentioned before.

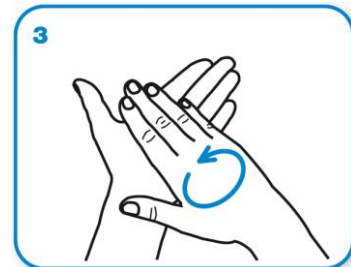
Duration of procedure: Allow at least 40-60 seconds every time you wash hands



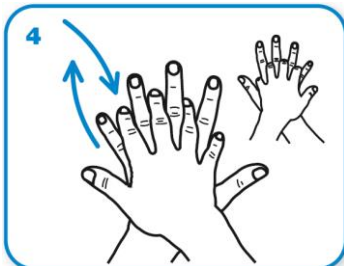
Wet hands with water



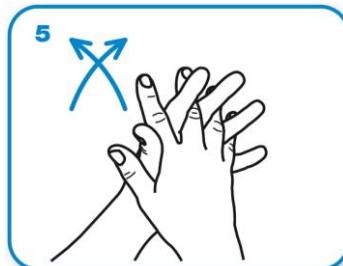
Apply enough soap to cover all hand surfaces



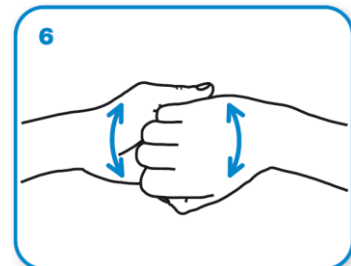
Rub hands palm to palm



Right palm over left dorsum (back of hand) using fingers of the other hand and repeating on the other side



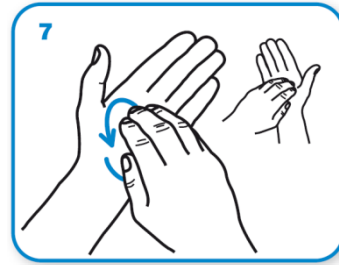
Palm to palm using both hands' fingers between each other



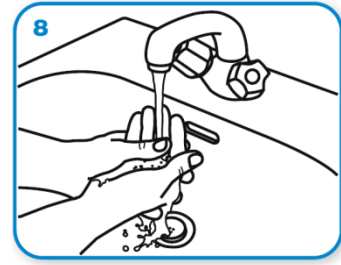
Hook/hold backs of fingers with opposing palms and rub against each other,



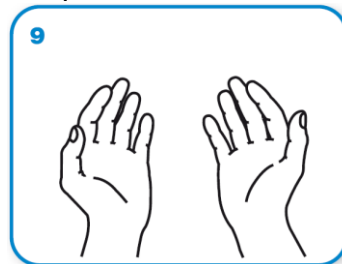
Rub left thumb on right palm in a circular manner, and repeat on the other side



Rub in a circular manner, backwards and forwards with fingers tightly held together of right hand on the left palm and repeat on the other side



Rinse hands properly with water; and air dry them



And your hands are safe

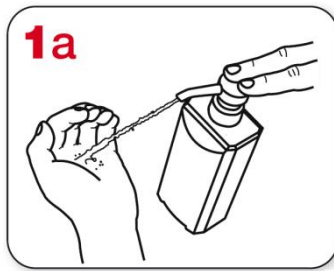


**Perform antiseptic hand rub** before touching each patient. Using an antiseptic hand rub is more effective in killing microorganisms present on the skin from before, or that have been acquired from other patients or the environment than handwashing with antimicrobial agents or plain soap. Further, it is quick and convenient to perform, and gives a greater initial reduction in hand flora. Antiseptic hand rubs also contain a small amount of an emollient such as glycerin, propylene glycol, or sorbitol that protects and softens skin.

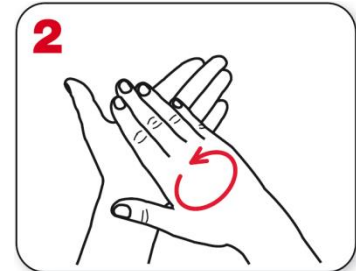
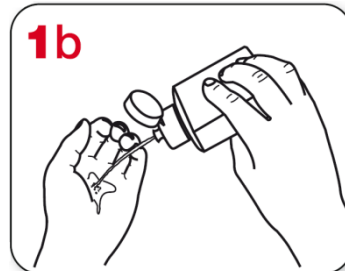
### Method of Handrub

Wash hands only when visibly soiled! Otherwise, use handrub!

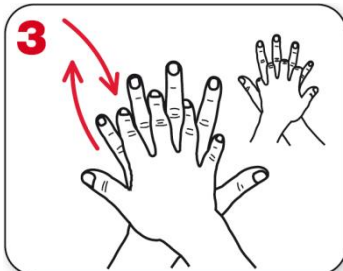
Duration of procedure: allow at least 30 seconds.



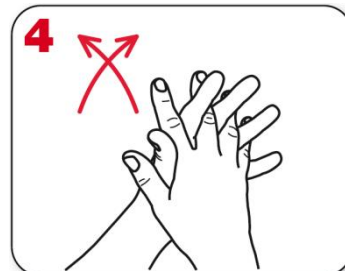
Apply a handful (2-3 ml) of alcohol hand rub in a cupped hand and cover all surfaces



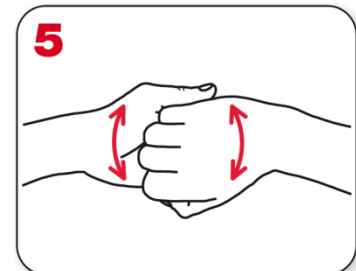
Rub hands palm to palm



Right palm over left dorsum (back of hand) using fingers of the other hand and repeating on the other side



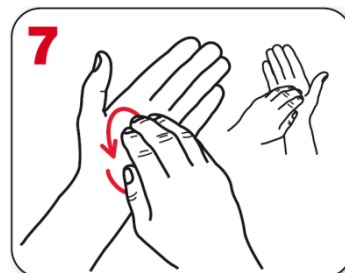
Palm to palm using both hands' fingers between each other



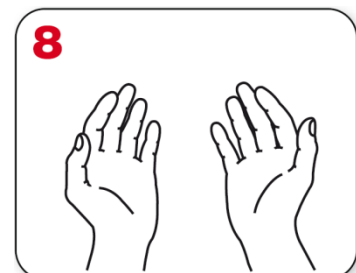
Hook/hold backs of fingers with opposing palms and rub against each other,



Rub left thumb on right palm in a circular manner, and repeat on the other side



Rub in a circular manner, backwards and forwards with fingers tightly held together of right hand on the left palm and repeat on the other side



Allow your hands to air dry if needed,  
Your hands are now safe

### Making antiseptic handrub



A non-irritating, antiseptic hand rub can be made by adding glycerin, propylene glycol, or sorbitol to alcohol (2 ml in 100 ml of 60-90 percent ethyl or isopropyl alcohol solution). Use 5 ml (about 1 teaspoonful) for each application, making sure that it comes into contact with all surfaces of the hands. Rub hands together vigorously, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers, until the solution has evaporated and the hands are dry. Allow at least 15-30 seconds.

- DO NOT USE HAND RUB in case where hands are visibly soiled, or grossly contaminated with dirt or organic material. They must be washed with soap and water.
- Dry hands in air. Do not use towels (unless single use disposable towels are available).

### **Protecting hands from drying effects of handrub**

A hand cream or any vegetable oil can be applied to protect skin from the drying effects of using handrub. Rarely, handrubs can cause allergies or irritation, in which case, try a different product, or use plain soaps.

## **3. Have personal protective equipment (PPE) available and use it appropriately**

Personal Protective Equipment means all protective barriers that are essential for protecting patients/clients from micro-organisms, and all health care staff.

- PPE should be available for use at ALL times. . This includes, but is not limited to gloves, masks, eyewear (face shields, goggles and glasses), caps, gowns, aprons and other items.
- PPE is must for use by ALL staff (doctors, paramedics and other staff) for any situation where they may have contact with blood, body fluids, excretions or secretions. The staff must be properly trained in appropriate use of PPE.

- **Principles for the use of PPE**

The following principles guide the use of personal protective equipment:

- Do NOT share personal protective equipment.
- Chose PPE according to the risk of exposure.

Change PPE completely, as needed and thoroughly wash hands each time you leave a patient to attend to another patient or another duty.



***Use of gloves is an extremely important practice for health worker safety, and preventing cross infection amongst patients. Use new gloves for each patient.***



- Discard used PPE in appropriate disposal bags.

- **Gloves**

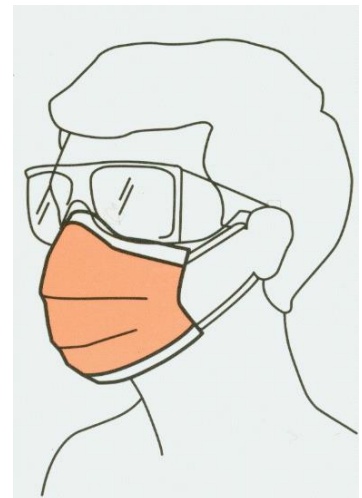
Gloves protect hands of health care workers from infectious materials. They also protect patients from microorganisms on health care workers' hands.

- Wear clean non-sterile gloves when touching blood, body fluids, secretions, excretions or mucous membranes.
- Change gloves between tasks/ procedures on the same patient to prevent cross-contamination between different body sites. Hand hygiene is essential between such tasks.
- Remove gloves immediately after use, and use new gloves before attending to another patient.
- Perform hand hygiene immediately after removing gloves. Use plain soap, antimicrobial agent, or antiseptic hand rub.
- Elbow length gloves should be used wherever more quantity of body fluid is expected, e.g. during deliveries and C-Sections.
- Disposable gloves should not be reused, but should be immediately disposed.

- **Masks**

Masks are worn to contain moisture droplets expelled when health care workers and surgical staff speak, cough, or sneeze. They also prevent accidental splashes of blood or other contaminated body fluids from entering the health care worker's nose or mouth.

- Use masks that are large enough to cover the nose, lower face, jaw, and facial hair.
- Use masks that are made of fluid-resistant materials, or they would not be effective in serving both purposes.
- Wear surgical masks rather than cotton material or gauze masks.
- Do not reuse disposable masks.



***It is most important to use masks that are fluid resistant***

- **Eyewear**

Eyewear is extremely important as it protects health care workers from accidental splashes of blood or other body fluids by covering the eyes. Many infections including Hepatitis B virus can be acquired through this route. Eyewear includes clear face visors, plastic goggles, safety glasses, etc. Prescription glasses or glasses with plain lenses also are acceptable, if they are large enough to offer proper coverage.

- Put on eyewear during any task in which an splashes into the face can occur, or is likely (e.g., surgical procedures and during cleaning of instruments).
- Routinely decontaminate eyewear. Different eyewear may require different cleaning methods. For special eyewear such as face visors and goggles, follow the instructions from the company, since use of chemicals may damage it permanently.
- Put on eyewear in routine for all minor and major surgical procedures.



- **Gowns and aprons**

Clean, non-sterile gowns should be worn to protect the health care worker's skin and prevent soiling of clothes during procedures that are likely to generate splashes of blood, body fluids, secretions or excretions, such as incision and drainage of abscess. Surgical gowns made of fluid-resistant materials are important in keeping blood and other body fluids, such as amniotic fluid, away from health care workers, particularly during delivery and in surgical procedures. Lightweight cotton gowns offer little protection.

- Use gowns made of impermeable material such as plastic or rexin.
- If using a cotton gown, wear a plastic apron on top of the gown to protect exposure to blood, body fluids, secretions and excretions.
- Wear gowns and aprons, as needed, in routine, if significant fluid is expected, for example during deliveries and C-sections.
- If a large spill occurs, the best thing to do is to take a bath by showering immediately, or as soon as possible, after completing the operation or procedure.

- **Caps**

Caps cover the hair and scalp so that hair and skin flakes are not shed into the wound during surgical procedures, and to protect the worker from body fluid splashes and sprays.



*Use caps that are large enough to cover all hair*

- **Footwear**

Footwear is worn to protect feet from injury by sharps or fluids, especially in the operating theatre (OT).

- Keep OT shoes/slippers entirely separate for use by OT staff only.
- Clean OT shoes/slippers, and keep them free of contamination from blood or other body fluids.
- Wash and decontaminate ALL OT shoes/slippers with 0.5% Chlorine solution at the end of the day, or as needed.
- Do NOT wear OT shoes/slippers outside the theatre.



- Clean, decontaminate and thoroughly dry any shoe/slipper taken out of the OT. Do NOT allow the shoes/slippers inside the OT again, unless it is thoroughly cleaned, decontaminated and dried.

#### 4. Prevent needle/sharp injuries, use appropriate containers and dispose these safely

Any item that may cause puncture or cuts is defined as a "sharp." These comprise of needles, syringes, scalpels, blades, glass. Be especially careful to prevent injuries when using sharps.

- **Important Guidelines**

- Use needle and syringe ONLY ONCE.
- Minimize handling.
- DO NOT pass directly from hand to hand.
- **Do not recap or bend or cut needles**, prior to disposal.
- **Do not disassemble** the needle and syringe after use.
- Dispose used disposable syringes and needles, scalpel blades and other sharp items in a **puncture-resistant container with a closed lid**.

- **Making and using puncture-resistant sharps containers**

Puncture-resistant sharp containers can be made from a cardboard box, used tin box, or hard plastic bottles that can be properly closed.

- Make only a small opening in the box for disposing sharps.
- Containers should be closed and immediately replaced when three-quarters ( $\frac{3}{4}$ ) full.
- Place sharp containers in ALL patient care and laboratory areas where they are easily accessible to health workers, e.g. in dressing/injection rooms, vaccination rooms, examination rooms, labour rooms, wards and laboratories.



*Puncture-resistant sharp containers can be made from a cardboard box, used tin box, or hard plastic bottles that can be properly closed*



## **5. Ensure that clean supplies are available at all sites**

Make clean supplies available at all necessary sites within the facility, in ready to use form. These include gauze or cotton wool, instruments, and pick-up forceps in separate dry containers.

## **6. Ensure that antiseptics and disinfectants are available and are used appropriately**

- **Antiseptics**

Antiseptics include alcohol (spirit), 60-90% ethyl or isopropyl alcohol, chloroxylonol (trade name: dettol), or chlorhexidine gluconate 2-4% (trade name: Savlon), or iodine preparations such as povidon-iodine (trade name: Pyodine).

- **Disinfectants**

Disinfectants include chlorine solution or powder.

- The facility store should have sufficient amounts of antiseptics and disinfectants.
- There should also be sufficient amounts of commonly used detergents that do not have acid, ammonia or ammonium
- Other supplies include mops, buckets, cleaning cloth and cleaning clothes for personnel, if needed.

## **7. Perform point-of-use decontamination of instruments and other items**

Decontaminate instruments and other items properly, immediately after use, and before cleaning, at the site of use. This is known as "point-of-use decontamination," which is an important first step in the cleaning of instruments.

- The decontamination should be done with 0.5% chlorine solution.
- Prepare new chlorine solution at the beginning of each day.
- Prepare 0.5%-Chlorine solution by mixing 1 part of 5% bleach with 9 parts of water.
- Use plastic containers for soaking instruments and other items in the 0.5% chlorine solution, for at least 10 minutes, before taking it to the washing/preparation room.
- Carry items taken to the preparation room in a leak proof container.
- Metallic instruments can easily corrode if left for more than 10 minutes, while some instruments will require other chemical/s for decontamination.

## **8. Have a separate area for instrument cleaning**

In the BHU/RHC, the area for cleaning of instruments must be separate from procedure areas.

- **Important guidelines for maintaining space**

- Use at least 1 deep sink/basin with running water for washing instruments and a counter, or a separate space for instrument drying,



- Keep clean items on one side of the room and dirty items on the other, to ensure that that dirty and clean items do not have any contact, or chance of mixing. Clearly label dirty and clean areas in the space in local language.
- Store clean items in a closed shelf.
- Do not allow contaminated linen and medical waste into the room/space for instrument cleaning/processing.
- Keep area free from spills and water on the floor, and ensure there are no electric items near the water area.
- **Important guidelines for personnel**
  - Wear proper PPE, including utility gloves, eyewear protection or face shield, plastic apron and gumboots (or toe covered, impermeable shoes, if gumboots are not available).
  - Use a soft brush with detergent (without acid or ammonia) water and 0.5% chlorine solution.
  - Scrub instruments and other items under the surface of water to completely remove blood and other materials.
  - For items with multiple parts, disassemble completely taking care not to injure hands. Clean grooves, teeth and joints with a soft brush.
  - Rinse all items thoroughly with water.
  - Air dry the items and instruments.
  - Decontaminate utility gloves if needed.
  - After handling each batch of instruments, remove gloves and perform hand hygiene by proper hand washing (with running water and soap for 30 seconds, and let them air dry).
  - Decontaminate, clean and dry PPE equipment, at the end of the cleaning; or at the end of the day; or as needed.

## 9. Ensure proper instrument processing, with facilities for HLD and sterilization

Instrument processing is the process of cleaning, disinfecting and sterilizing re-usable instruments and items at the facility. All processes could be done in separate areas, or organized under one unit, department or area of the facility.

- **Important guidelines for space**
  - Keep instrument processing area well illuminated.
  - Maintain at least one autoclave/boiler in working order.
  - Store sterile and high level disinfection (HLD) supplies and equipment in closed or locked cabinets, and limit access to only authorized personnel

In BHU/RHC, follow either the HLD or sterilization process.

- **HLD at BHU/RHC**

Boiling is a good HLD process and should be done as follows:

- Immerse all clean and disassembled instruments totally in water
- Close the lid of the container



- Once temperature is reached when a rolling boil starts (bubbles can be seen rolling towards the centre of the boiler), keep instruments for 20 minutes in boiling water
- After 20 minutes, remove the instruments with HLD or sterile forceps and store them in HLD containers
- Do not leave boiled instruments in water that has stopped boiling.

- **Sterilization at BHU/RHC**

Use an autoclave or an autoclave pressure cooker in working order, with a working thermometer and pressure gauge.

- Ensure that instruments are properly prepared and placed in the sterilizer
  - Laid out in a metal box with holes or wrapped in two double layers of muslin, or cotton cloth, or two layers of Kraft paper.
  - Allow sufficient space between packets/boxes for steam to circulate.
  - All jointed and sliding instruments are unlocked and disassembled properly.
  - A 7-8 cm space exists between the packets and the upper portion (in case of a vertical autoclave) or the front portion (in case of a horizontal autoclave).
- The material is exposed to temperature of 121°C (250°F) and a pressure of 1.5 atm (106 kPa or 15 lbs/in<sup>2</sup>) for a period of 30 minutes in the autoclave.
- The material is exposed to a pressure of 70-90 lbs for a period of 35 minutes (in the autoclave pressure cooker).
- The material is dry when removed within 2 weeks.
- Unwrapped items are used immediately.

## 10. Develop and maintain shelf-life system to store HLD and sterile items

Develop and maintain a shelf-life system for storing of sterile and HLD items.

- Label sterile packs and/or containers with expiration dates, such that their cleaning is done on a regular basis and their usage is safe and effective.
- Ensure sterile packs are free of tears, dampness, excessive dust and gross oil.

- **Ensure proper collection and cleaning of soiled linen**

- **Important guidelines for collecting, sorting and transporting linen**

Take extreme care during sorting and collection of linen. Linen such as large drapes and towel drapes from the OT, and procedure areas frequently contains sharps (scalpels, sharp-tipped scissors, needles and syringes, suture needles and sharp-tipped towel clips).

- **DO NOT SHAKE LINEN** during collection, sorting or in an attempt to dry. This spreads microorganisms, and can even cause injuries due to items sent flying, which were attached to the linen.



*Use different coloured plastic bags for soiled linen collection, and transport to sorting and washing areas.*



- Do NOT try to pre-sort, pre-soak or wash linen at the point-of-use, e.g. in patient care areas (wards, procedure areas).
- Wear appropriate PPE, including utility gloves (elbow length), eye protection, impermeable apron and gumboots/closed toe shoes, when collecting linen.
- Collect linen in leak proof containers/plastic bags.
- **Transport linen** in proper trolleys with compartments for keeping soiled linen.
- Use and maintain a separate trolley for OT, or other area where heavily soiled linen is expected. Linen from wards is not usually heavily soiled.
- Keep trolley clean by decontamination, cleaning and drying as needed, and at least once daily, before taking out for linen collection.
- **Guidelines for maintaining processing space and washing linen**
  - Designate and clearly label the soiled linen area.
  - Keep soiled linen in designated area until taken to the laundry/area.
  - DO NOT SHAKE linen. Be careful during sorting as sharps may be present in the linen.
  - Carefully sort all linen in bags properly, before washing and drying linen.
  - Consider all cloth items (e.g. surgical drapes, gowns, wrappers) used during a procedure as infectious. Even if there is no visible contamination, items must be washed properly.
  - Use appropriate PPE for safety, including eyewear (face visor or goggles) to save from contaminated water and chemicals, utility gloves, impermeable gowns and aprons, and gum boots.
  - Wash with common detergent (without ammonia, ammonium, acids, whitening agents, or enzymes) mixed with chlorine bleach.
  - Remove gloves and PPE at the end of the session.
  - Perform hand hygiene by properly washing hands with soap and water.
  - Decontaminate the PPE equipment appropriately.

## 11. Follow waste handling, collection and disposal guidelines properly

The first priority for all BHUs and RHCs is to reduce the amount of waste, and avoid mixing of general waste (paper, empty juice box, toffee wrappers, packaging) with infectious waste (e.g. dressings).

- Waste management is not only related to managing waste inside the facility, but also in the outside environment, for example where people meet, or wait during visiting hours.
- Keep the grounds outside the facility clean to avoid littering. Trash bins should be placed in sufficient numbers, and at all appropriate places for general waste.
- **Important guidelines in collection of waste**
  - Use appropriate PPE, by wearing utility gloves, eye protection and gumboots or toe covered, impermeable, enclosed shoes.
  - Collected waste in leak proof containers.
  - Empty containers or transport them for disposal when three-quarters full. Do not collect waste till the top of the container as it is dangerous in spilling and causing injuries.
  - Human waste, such as the placenta, must be placed in double bags in the leak proof container.



- Remove gloves immediately after disposing waste, and perform hand hygiene by washing hands with plain soap and water.
- Keep waste collection area clean and free of spills.

The waste should be disposed in the following manner:

<b>General Waste</b>	Discard in community dustbin
<b>Contaminated Liquid waste</b> (blood, urine, faeces and other body fluids)	Empty in a toilet or sink from which they could be drained into a sewer system.  Decontaminate the toilet/sink with 0.5% Chlorine solution, and rinse with water after the waste has been emptied.
<b>Sharps containers</b>	Incinerate or bury.
<b>Solid waste</b> (used dressings and other materials contaminated with blood and organic matter)	Incinerate or bury.

- **Guidelines for incinerating waste:**
  - Transport waste to the area, just before burning.
  - Burn waste in a small designated area.
  - While burning, observe that flames are visible till ashes are seen.
  - Ash from the incinerated material should be disposed by burying.
  - There should be no waste lying around in the surrounding grounds.
- **Guidelines for burial of waste**
  - Keep the burial site at least 50 meters away from any water source, or water catchment area.
  - Keep burial site in an area free from floods, and where flooding cannot potentially occur.
  - Limit access of the burial site to other staff, community and domestic animals.
  - Line the burial site with a material having low permeability (for example clay), to check for potential seepage.
  - The pit should be 1 meter in length and breadth, and 2 meters deep.
  - Keep disposed waste covered with 10-15 cm of dirt/sand.
  - Keep 50-60 cm as the final layer of dirt/sand.
  - The burial pit should last for 30-60 days at most.
  - Keep burial grounds free from any kinds of waste.
- **Disposal of Sharp Containers by burial**
- **(a) Sharps pit:**
  - Ensure disinfection of blades, needles and other sharps before disposal.
  - Dispose blades and needles waste in a circular or rectangular pit.
  - Dig a rectangular or circular pit and line it with brick, masonry or concrete rings.
  - Cover pit with a heavy concrete slab which is penetrated by a galvanized steel pipe projecting about 1.5 m above the slab, with an internal diameter of up to 20 mm.
  - When the pit is full it can be sealed completely, after another has been prepared.



- **(b) Encapsulation:**

As per WHO (1999), encapsulation is recommended as the easiest method for the safe disposal of sharps.

- Collect sharps in a puncture-proof and leakproof container till it is three quarters full.
- Pour a material such as cement or clay until the container is completely full.
- After drying the material, seal the container and send for final disposal at a landfill site.



## Monitoring Tools for BHU/RHC

Performance Standard	Verification Criteria	Yes/No	Comments
<b>Cleanliness of the Facility</b>	Verify absence of visible dust, cobwebs, blood, trash, used needles and syringes in the following areas		
	• Admission/registration		
	• Examination room		
	• Labour or birth room		
	• Postpartum area		
	• Instrument processing areas		
	• Lab or pharmacy		
	• Toilet areas		
	• Around sinks		
	• Waiting area		
	• No BHU/RHC waste in the surrounding area of the facility		
<b>1. Adequate supply of safe water for drinking and other uses</b>	Observe the provision of water for the BHU/RHC		
	• Tap water available		
	• Overhead and underground water tanks are clean		
	• Water is brought and kept in containers		
	• Water containers are clean		
	• Drinking water is purified and kept properly		
<b>2. Hand Hygiene is practiced</b>	• Last water testing done on .....		
	Verify and observe if		
	• Soap is available		
	• Antiseptic hand rub is available		
	• Hand rub/Handwash is performed before touching each patient		
	• Handwash is done after situations where hands are contaminated		
<b>3. Type and use of Containers for Sharps</b>	Verify whether:		
	• The sharps containers are puncture-proof (cardboard box, hard plastic containers)		



	or cans that are closed) with only small opening for disposing of syringes with needle		
	<ul style="list-style-type: none"> <li>• Sharp containers are all less than <math>\frac{3}{4}</math> full</li> </ul>		
	<ul style="list-style-type: none"> <li>• Empty and new containers are nearby and ready for use with 0.5% chlorine solution in the following areas</li> </ul>		
	<ul style="list-style-type: none"> <li>○ Examination room</li> </ul>		
	<ul style="list-style-type: none"> <li>○ Labour and birth room</li> </ul>		
	<ul style="list-style-type: none"> <li>○ Wards</li> </ul>		
	<ul style="list-style-type: none"> <li>○ EPI vaccination room</li> </ul>		
	<ul style="list-style-type: none"> <li>○ Pharmacy or lab area</li> </ul>		
<b>4. Availability and usage of Personal protective equipment</b>	Verify whether the following are available and ready for use:		
	<ul style="list-style-type: none"> <li>• Disposable gloves</li> </ul>		
	<ul style="list-style-type: none"> <li>• Caps</li> </ul>		
	<ul style="list-style-type: none"> <li>• Gowns for labour and delivery/surgery</li> </ul>		
	<ul style="list-style-type: none"> <li>• Eye wear</li> </ul>		
	<ul style="list-style-type: none"> <li>• Close-toed shoes</li> </ul>		
<b>5. Availability of clean supplies</b>	Verify whether:		
	<ul style="list-style-type: none"> <li>• Gauze and cotton is stored in dry containers without an antiseptic</li> </ul>		
	<ul style="list-style-type: none"> <li>• Instruments and other items are stored in dry containers without antiseptics</li> </ul>		
	<ul style="list-style-type: none"> <li>• Pick-up forceps are stored in dry containers without antiseptics</li> </ul>		
<b>6. Availability of Antiseptics and Disinfectants</b>	Verify whether the following are available in storeroom in sufficient amounts:		
	<b>Antiseptics:</b>		
	<ul style="list-style-type: none"> <li>• Alcohol (spirit), ethyl or isopropyl alcohol</li> </ul>		
	<ul style="list-style-type: none"> <li>• Chlorhexidine gluconate (2-4%) (e.g. Savlon) or</li> </ul>		
	<ul style="list-style-type: none"> <li>• Iodine preparations (1-3%) (e.g. Lugol's) or</li> </ul>		
	<ul style="list-style-type: none"> <li>• Pyodine</li> </ul>		
	<b>Disinfectant:</b>		
	<ul style="list-style-type: none"> <li>• Chlorine solution</li> </ul>		



<b>7. Decontamination of Instruments</b>	Verify whether		
	<ul style="list-style-type: none"> <li>Concentration of chlorine solution is 0.5%:</li> </ul>		
	<b>Liquid Chlorine:</b>		
	<ul style="list-style-type: none"> <li>If using a concentration of 32%, 1 part bleach for 63 parts water or</li> </ul>		
	<ul style="list-style-type: none"> <li>If using a concentration of 5%, 1 part bleach to 9 parts water</li> </ul>		
	<b>Powder Chlorine</b>		
	<ul style="list-style-type: none"> <li>If using Calcium hypochlorite (35%), 14 g bleach powder for 1 litre water</li> </ul>		
	<ul style="list-style-type: none"> <li>If using calcium hypochlorite (70%), 7 g bleach for 1 litre water</li> </ul>		
	<ul style="list-style-type: none"> <li>A new chlorine solution is prepared at the beginning of the day</li> </ul>		
	<ul style="list-style-type: none"> <li>Plastic containers are used for decontamination</li> </ul>		
	<ul style="list-style-type: none"> <li>Instruments and other items are soaked in the 0.5% chlorine solution for at least 10 minutes</li> </ul>		
<b>8. Separate Allocated Instrument Cleaning Area for</b>	<ul style="list-style-type: none"> <li>Items are taken to prep room in bucket or leak proof containers</li> </ul>		
	Verify whether		
	<ul style="list-style-type: none"> <li>Area for cleaning instruments is separated from the procedure areas</li> </ul>		
	<ul style="list-style-type: none"> <li>Dirty and clean items do not have contact</li> </ul>		
	<ul style="list-style-type: none"> <li>There is at least one deep sink/basin with running water for washing instruments</li> </ul>		
	<ul style="list-style-type: none"> <li>There is a counter/separate space for instruments to dry</li> </ul>		
	<ul style="list-style-type: none"> <li>A closed shelf area exists for storing clean items</li> </ul>		
	<ul style="list-style-type: none"> <li>Contaminated linen or medical waste are not brought into this room</li> </ul>		
	<ul style="list-style-type: none"> <li>No electric items are near the water area</li> </ul>		
	<ul style="list-style-type: none"> <li>No spills or water on the floors</li> </ul>		
	<ul style="list-style-type: none"> <li>Clean items are on one side</li> </ul>		



	of the room, dirty items on the other		
<b>9. Cleaning of Instruments and Other Items</b>	Verify whether the person cleaning the instruments complies with the following steps:		
	<b>Wears:</b>		
	• Utility gloves		
	• Eyewear protection or face shield		
	• Plastic apron		
	• Gumboots or enclosed shoes		
	<b>Uses:</b>		
	• Soft brush		
	• Detergent (liquid or powder, without acid or ammonia)		
	• 0.5% chlorine solution in the detergent water		
	• Scrubs instruments and other items under the surface of water, completely removing all blood and other foreign matter		
	• Disassembles instruments and other items with multiple parts, and cleans in the grooves, teeth and joints with a brush		
	• Rinses the instruments and other items thoroughly with clean water		
	• Allows instruments and other items to air-dry, or dries with a clean towel (if autoclaving)		
	• Washes and with running water and soap for 10-15 seconds and dries		
<b>10. Instrument Processing</b>	Verify whether instrument processing area:		
	• Is well illuminated		
	• Has at least one autoclave/boiler in working order		
	• Has an area to store sterile and/or HLD supplies, instruments and equipment with limited access to the storage area or closed cabinets		
<b>11. Sterilization/HLD Process is performed Properly</b>	Verify whether the HLD cycles listed below are followed:		
	<b>Boiling</b>		



	<ul style="list-style-type: none"> <li>All cleaned, disassembled instruments are totally immersed in water before lid is closed</li> </ul>		
	<ul style="list-style-type: none"> <li>The lid is closed</li> </ul>		
	<ul style="list-style-type: none"> <li>Do not add anything to the pot after timing starts</li> </ul>		
	<ul style="list-style-type: none"> <li>Instruments are boiled for <b>20</b> minutes <u>starting from the time a rolling boil begins</u></li> </ul>		
	<ul style="list-style-type: none"> <li>After 20 minutes, instruments are removed with HLD or sterile forceps and stored in HLD containers</li> </ul>		
	<ul style="list-style-type: none"> <li>Boiled instruments are not left in water that has stopped boiling</li> </ul>		
	<b>OR Sterilization</b>		
	<ul style="list-style-type: none"> <li>The autoclave or an autoclave pressure cooker is available and in working order with: <ul style="list-style-type: none"> <li>Working thermometer</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>Working pressure gauge (autoclave pressure cooker)</li> </ul>		
	<ul style="list-style-type: none"> <li>Instruments are properly prepared and placed in the sterilizer <ul style="list-style-type: none"> <li>Laid out in a metal box with holes or wrapped in two double layers of muslin or cotton cloth or two layers of Kraft paper</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>Sufficient space between packets/boxes exists to allow steam to circulate</li> </ul>		
	<ul style="list-style-type: none"> <li>All jointed instruments are in an unlocked position and instruments composed of sliding parts are disassembled</li> </ul>		
	<ul style="list-style-type: none"> <li>A 7 to 8 cm space exists between the packets and the upper portion (in the case of a vertical autoclave) or the front portion (in case of a horizontal autoclave)</li> </ul>		
	<ul style="list-style-type: none"> <li>The material is exposed to temperature of 121°C (250°F)</li> </ul>		



	and a pressure of 1.5 atm (106 kPa or 15 lbs/in <sup>2</sup> ), for a period of 30 minutes (in the autoclave pressure cooker)		
	<ul style="list-style-type: none"> <li>The material is exposed to a pressure of 17-19 lbs for a period of 35 minutes (in the autoclave pressure cooker)</li> </ul>		
	<ul style="list-style-type: none"> <li>The material is dry when removed following sterilization</li> </ul>		
	<ul style="list-style-type: none"> <li>Wrapped sterile instruments are used within 2 weeks</li> </ul>		
	<ul style="list-style-type: none"> <li>Unwrapped items are used immediately</li> </ul>		
<b>12.Shelf-life System is adopted</b>	Verify whether		
	<ul style="list-style-type: none"> <li>Sterile packs and/or containers have expiration dates on them</li> </ul>		
	<ul style="list-style-type: none"> <li>The sterile packs are free of teams. Dampness, excessive dust and gross oil</li> </ul>		
<b>13.Soiled linen is Collected and Cleaned Properly</b>	Verify whether		
	<ul style="list-style-type: none"> <li>Wears: <ul style="list-style-type: none"> <li>Utility gloves</li> <li>Eye protection</li> <li>Gumboots or enclosed shoes</li> </ul> </li> </ul>		
	<ul style="list-style-type: none"> <li>Collects soiled linen in leak proof containers/plastic bad without being pre-soaked</li> </ul>		
	<ul style="list-style-type: none"> <li>Brings linen to the laundry in closed containers (buckets, plastic bags or carts) for sorting, washing and drying</li> </ul>		
	<ul style="list-style-type: none"> <li>Cleans linen using detergent without acid, ammonia or ammonium and mixed with chlorine bleach in the water</li> </ul>		
	<ul style="list-style-type: none"> <li>Washes hands with soap and water after removing gloves and other personal protective equipment</li> </ul>		
	<ul style="list-style-type: none"> <li>Maintains laundry area clean and free of spills (walls, tables, floors)</li> </ul>		
<b>14.Waste Collection</b>	Verify whether the person collecting waste complies with the following steps:		
	<ul style="list-style-type: none"> <li>Wears: <ul style="list-style-type: none"> <li>Utility gloves</li> </ul> </li> </ul>		



	○ Eye protection		
	○ Gumboots or enclosed shoes		
	• Collects waste in leak proof containers		
	• Collects waste the container is $\frac{3}{4}$ full		
	• Assures all tissue samples or placentas are double bagged in leak-proof containers		
	• Sufficient dustbins outside the facility (in the grounds) exist for general waste to avoid littering		
	• The grounds (outside of the facility) are free of hospital waste		
	• Maintains waste collection area clean and free of spills (walls, tables, floors)		
	• Collection person washes hands with soap and water after removing gloves and other personal protective equipment		
<b>15. Waste Disposal</b>	Verify whether:		
	• Contaminated liquid waste (blood, urine, faeces and other body fluids) are disposed of in the following manner:		
	○ Emptied into a toilet or sink from which water can be drained into a sewer system		
	○ The sink is rinsed with water after the waste has been emptied		
	• Containers with sharps are incinerated		
	• Solid waste (used dressings and other materials contaminated with blood and organic matter) are incinerated/buried		
	• The person in charge of waste wears eye protection and utility gloves		
	<b>If the waste is incinerated, verify whether:</b>		
	• The waste is burned in a		



	small designated area		
	• The waste is transported to the area just before burning		
	• During incineration, visible flames occur and last until ashes are seen		
	• Ash from incinerated material is disposed off by burying		
	• That no waste is lying around the grounds		
	<b>OR</b>		
	<b>If the waste is buried in a pit, verify whether</b>		
	• The area is not accessible to other staff, the community and domestic animals		
	• The burial site is lined with a material of low permeability (e.g. clay)		
	• The burial site is at least 50 meters away from any water source and it is located in an area free of floods		
	• The pit is about 1 meter square and 2 meters deep		
	• The disposed waste is covered with 10-15 cm of dirt each day		
	• The final layer of dirt is 50-60 cm		
	• The burial pit lasts for 30-60 days maximum		
	• There is no waste lying around the grounds		
	<b>OR</b>		
	<b>If the waste is encapsulated, verify whether</b>		
	• The sharps are collected in puncture resistant and leak proof container		
	• When the box is $\frac{3}{4}$ full, pour a material such as cement or clay until completely filled		
	• The material has hardened		
	• The container is land filled or buried		







## Annex VIII – Training needs







**Table 1:** Training needs by type of health care provider

#	Training required	CMW	LHW	Pharm. Tech.	LHV	BHU doctor	RHC doctor
1	Strengthening skills in BCC	Yes	Yes	Yes	Yes	Yes	Yes
2	Nutritional assessment	-	-	Yes	Yes	-	-
3	Prevention of malnutrition	Yes	Yes	Yes	Yes	Yes	Yes
4	Management of malnutrition	-	-	-	-	Yes	Yes
5	Hygiene promotion	Yes	Yes	Yes	Yes	Yes	Yes
6	Promoting safe drinking water measures at home	Yes	Yes	-	Yes	-	-
7	Testing of water	-	-	-	-	-	Yes
8	ANC: calcium supplementation, treatment of worm infestation	Yes	Yes	-	Yes	Yes	Yes
9	Newborn care during the first day: Vitamin K injection	-	-	-	-	Yes	Yes
10	Child health: developmental milestones	-	Yes	-	Yes	Yes	Yes
11	Adolescent health	-	Yes	Yes	Yes	Yes	Yes
12	Immunisation	-	-	Yes	-	-	-
13	Managing fractures and dislocations	-	-	-	-	Yes	Yes
14	CPR	Yes	-	Yes	Yes	Yes	Yes
15	Identification for visual and hearing disability	-	Yes	-	Yes	Yes	Yes
16	Identification of goitre	Yes	Yes	Yes	Yes	Yes	Yes
17	Primary eye care	-	Yes	Yes	Yes	Yes	Yes
18	Mental health	-	-	-	-	Yes	Yes
19	Oral hygiene	-	Yes	Yes	Yes	Yes	Yes
20	Infection control: universal precautions	Yes	Yes	Yes	Yes	Yes	Yes
21	Referral services	Yes	Yes	Yes	Yes	Yes	Yes
22	In use of the monitoring tools	-	-	Yes	-	-	-